सत्यमेव जयते

Annual Report
2014-15

Protection of Plant Varieties and Farmer's Rights Authority
Department of Agriculture, Co-operation & Farmers Welfare
Ministry of Agriculture anf Farmer Welfare, Government of India
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Foreword

It is a great pleasure for me to present the Annual Report of the Protection of Plant Varieties and Farmers' Rights (PPV&FR) Authority, Ministry of Agriculture and Farmers' Welfare, Government of India, New Delhi for the year 2014-15. The mandate of the Authority is to provide effective legal system for protection of plant varieties, rights of farmers, plant breeders and to encourage the seed industry and to recognize the farmers in respect of their contribution made for conserving, improving and making available the plant genetic resources for development of new varieties of plants.The grant of certificate of registration by Authority is a legal instrument for proprietary of the company / individual, whichstimulates investment for Research &Development, and motivates for development of new varieties with desired traits and facilitate the growth of the seed industry to ensure production and availability of high quality seeds/ planting material to the farmers. India is among the first few countries of the world to enact the PPV&FR Act on the *sui generis* system as per our national requirements. The Act fulfils our international obligations to the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) of the World Trade Organization and commitments to the spirit of ITPGRFA.

The Authority has developed a legal framework for an effective system for protection of plant varieties, the rights of farmers, researchers and plant breeders during the last about one decade. The Authority has created system and processes for the protection of different categories of plant varieties and established Plant Varieties Registry, National Gene Bank, Field Gene Banks, DUS network for testing, created databases of extant varieties, Varieties of Common Knowledge (VCK) and registered varieties. The Authority publishesvarious publications like Plant Variety Journal of India, Newsletter, technical bulletins, pamphlets on various areas, FAQsand developed short documentary films on the functions and activities of the Authority. A Farmers' Cell has been established to provide assistance to the farmers in the registration of their varieties and undertakes training–cum- awareness program for promoting the Conservation and Sustainable use of Plant Genetic Resources. Legal Cell defends the interests of the Authority in courts cases. The Authority has expanded its registration basket to 92 crops / species from existing 79 species.

During the reporting year, one Review meeting of the DUS Centres / Projects was held at Junagadh Agricultural University, Junagadh with Nodal and Co-nodal scientists of the DUS centres / projects to take stock of development and to resolve their problems, if any. The Authority has conducted 361, a record number of training-cum-awareness programmes in close cooperation with KVK network throughvarious institutions / NGOs across the length and breadth of the country.A special drive on awareness was also undertaken in agro-biodiversity hotspots areas especially in Northern Eastern Region. The Authority also participated in the Kisan Mela, Kisan Utsav at various places including IARI, Pusa, New Delhi,Chittur, Kerala, DRI, Chitrakoot, KVK, Gonda and Pragati Maidan showcasing its activities through exhibitions, posters and charts, publications and pamphlets / fliers depicting the functions of PPV&FR Authoritywhich were freely distributed.During the reporting year, a number of foreign delegations visited the Authority and Indian delegation also attended meetings at Rome & London. The Authority also finalized a list of successful applicants for "*Plant Genome Saviour Community Awards 2012-13 and the list of eligible applicants for Farmers' Rewards& Recognitions 2012-13*" is being under consideration.

I feel privileged in placing on record the able guidance and direction provided by the Hon'ble Union Minister of Agriculture and Food Processing Industries Shri Radha Mohan Singh jifor the growth and development of the Authority. I also acknowledge the keen interest shown by Hon'ble Minister of States for Agriculture Shri Mohanbhai Kalynjibhai Kundariya.

I am also equally indebted to Shri Siraj Hussain, Secretary, Department of Agriculture, Cooperation & Farmers Welfare and Dr. S. Ayyappan, Secretary, DARE & Director General, ICAR for their guidance, leadership and their constant support. I express my sincere gratitude to Shri Avinash Kumar Srivastava, Additional Secretary, Department of Agriculture, Cooperation & Farmers Welfare& Shri Rajesh Kumar Singh, Joint Secretary (Seeds) for their keen interest and valuable support to the Authority. I gratefully acknowledge the contributions of the Hon'ble members of the Authority and other officers who have served various Committees / Task Forces with dedication and helped the Authority in touching the new horizon.

I am also thankful to Nodal Officers of the DUS Centres of the Indian Council of Agricultural Research (ICAR), State Agricultural Universities (SAUs), Council of Scientific and Industrial Research (CSIR), Indian Council of Forest Research and Education (ICFRE) for providing untiring selfless services and continuous support to Authority for achieving its goals. With deep sense of sincere gratitude, I wish to convey my thanks to the officers of the Department of Agriculture, Cooperation & Farmers Welfare, Ministry of Agriculture& Farmers Welfare,ICAR, ICFRE, CSIR, Ministry of Law and Justice, Ministry of Environment, Forest and Climate Change for their continuous support & guidance from time to time. I am also thankful to Director, Indian Agricultural Research Institute (IARI), New Delhi & National Bureau of Plant Genetic Resources (NBPGR) and their Divisions for successfully shouldering various responsibilities entrusted by the Authority. I acknowledge with thanks the services of our esteemed bankers i.e. State Bank of India and Syndicate Bank for their financial services and support. I am highly grateful for the CAG for their timely support, guidance and direction.

I appreciate and compliment the editorial team for an effective coordination and timely compilation of the Annual Report.

(R.R. Hanchinal)

Acknowledgement

I would like to express my sincere gratitude to Dr. R.R. Hanchinal, Chairperson, PPV&FR Authority for his valuable support, motivation and enthusiasm and comprehensive views in the preparation of the Annual Report 2014-15 of the Authority.

I owe my special words of appreciations to Shri D.S. Misra, Joint Registrar for his sincere efforts in writing, compiling and synthesizing manuscript continuously for the last four years for the Authority. My appreciation goes to Shri Dipal Roy Choudhury, Joint Registrar for his critical comments and valuable suggestions in shaping the Annual Report of the Authority.

I am also thankful to all the Registrars for providing necessary inputs in the preparation of Annual Report. I am equally grateful for the inputs provided by all the officers of the Authority including both Dr. A.C. Sarma,Deputy Registrars, Guwahati and Shri Umakant Dubey, Deputy Registrar, Ranchi, Shri D.S. Raj Ganesh and Shri Rabi Raman Pradhan, Legal Advisors, Dr. D.S. Pilania, Technical Assistant, Mrs. Shipra Mathur, Shri Shyam Narayan, Shri Sanjay Gupta, Shri Arvind Kumar Rai, all Computer Assistantsand other officers of the Registry in particular. I am also thankful to other Consultants Shri T.D. Tiwari, Shri Roshan Lal and Shri B.K. Bansal. Special word of thanks are also due for their commendable job done by Dr. Amit Dixit, Shri Suneet Kumar, Shri Ravindra Kumar, Mrs. Vijaya Choudhary, Mrs. Manisha, Ms. Jyoti Jaiswal, Mrs. Jasbir Madan, all Plant Variety Examiners. I am equally thankful to Mrs. Bhawna Ohri,Shri B.B. Dawer, Shri Sunil Kumar, Ms. Neeta and Shri Yadram for providing their regular inputs and secretarial assistance.

My special words of thanks goes to Shri Jatin Kumar, Office Assistant for giving his excellent support in the secretarial assistance in typing, formatting and giving a beautiful shape to the Annual Report of the Authority 2014-15 in a time bound manner. The Authority is highly thankful for the support and cooperation received from the Department of Agriculture, Co-operation&Farmrs Welfare and also from Indian Council of Agricultural Research (ICAR).

We sincerely cherish the partnership that PPV&FR Authority has built overtime with DUS Centres / Projects at various institutes / centres of the ICAR, SAUs, CSIR & ICFRE for their best co-operation and providing timely &valuable inputs for the preparation of this Annual Report.

(R.C. Agrawal)
Registrar General

Executive Summary

India is one of the members to the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) of the World Trade Organization (WTO). Article 27 (3)(b) of the TRIPS states that members may also exclude from patentability plants and animals other than micro-organisms, and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes. However, members shall provide for the protection of plant varieties either by patents or by an effective ***sui generis*** system or by any combination thereof. India enacted the Protection of Plant Varieties and Farmers' Rights (PPV&FR) Act in 2001 (53 of 2001) by adopting *suigeneris* system. The main objective of the PPV&FR Act is to provide for the establishment of an effective system for protection of plant varieties, the rights of farmers and plant breeders and to encourage the development of new varieties of plants of economic importance. It is a unique Act, which fulfills the spirit of International Treaty on Plant Genetic Resources for Food & Agriculture on one hand and conforms to the provisions of UPOV, 1978 Convention on the other. It also strikes a balance between the rights to breeders and the farmers as per the national requirement. For the purpose of this Act, the PPV&FR Authority was established on 11 November,2005. The Authority has put in place the processes for implementation of different provisions of the Act including the registration of plant varieties, farmers' rights, National Gene Fund, National Gene Bank etc.

So far, the Government of India notified 92 crops species on the recommendations of PPV&FR Authority for plant variety registration. During the reporting period, the Authority has notified 33 genera species.Twenty DUS guidelines of various genera / species have also been published in the Plant Variety Journal of India. These crop species represent flowers, fruits including dry fruits, vegetables, seed spices, cereals, beveragesand forestry.

The Authority received 2251 applications belonging to four categories of new (344), extant (188), farmers' (1717) and EDV (2). The maximum number of applications belonged to farmers' category including one new variety submitted by a farmer (1718), followed by private (393) and public (140).Highest numbers of applications were received for cereals (1159), followed by vegetables (279), pulses (222), millets (195), oilseeds (142), fiber crops (88), spices (67), fruits (61) and others (38).Rice (1097) topped the list of registration with highest number of applications, followed by Maize (132), Cotton (81), Pigeon pea (53), Pearl millet (50), Mango (48), Wheat (47), Brinjal (46) and Okra (37).

EVRC recommended 102 applications for the purpose of registration under extant variety category notified under the Seeds Act, 1966. Out of 102 varieties, 46 belonged to ICAR, 41 to State Agricultural Universities (SAUs)and 15 to the private sector. Passport data of the recommended varieties were published in the Plant Variety Journal (PVJ) of India for information of general public and also for inviting oppositions, if any, within 90 days of publication.

Four hundred eighty five (485) candidate varieties of various crops were tested in the first year at different DUS test centres during *Kharif* 2013 and *Rabi* 2013-14. It includes 236 new varieties, 188 VCKs and 61 farmers' varieties. In addition, 208 varieties belonging to new category were under second year of testing. Seventy nine candidate varieties has completed two years of DUS testing under new variety category. The Authority supported 133 DUS centres including new projects across the country at institutes of ICAR, Council of Scientific and Industrial Research (CSIR), Indian Council of Forestry Research and Education (ICFRE) and State Agriculture Universities (SAUs). An amount of ₹624.47 lakh was released to DUS centres / projects for strengthening of laboratory and field facilities to carry out DUS testing, maintenance breeding and development of DUS criteria / testing guidelines.

Out of 842 certificates of registration issued, 111 belonged to New category, 215 to Extant Notified, 55 to Extant VCK, and 461 to farmers' category. The highest number of certificates were issued in Rice (540), followed by Sorghum (48), Mustard (41), Cotton (35), Sunflower (29), Wheat (27), Groundnut (21), Potato (13), Maize, Pigeon pea & Pearl millet (08 each**),** Green gram & Soybean(07 each), Brinjal & Coconut (06 each), Chickpea (05), Black gram, field pea & Safflower (04 each), Kidney bean & Linseed (03 each), Castor, Rapeseed, Tomato & Turmeric (02 each) and Cabbage, Garlic, Jute, Lentil, Okra, Sesame & Sugarcane (01 each).The National Register of Plant Varieties is maintained at the Headquarters of the Authority at New Delhi and its copy at Guwahati and Ranchi. All the registered varieties under extant, new and farmers' category were duly documented in the said Register.

The Authority has established National Gene Bank for the conservation of seeds of the protected varieties. In addition, four Field Gene Banks have been established at Dr. Balasaheb Sawant Konkan Krishi Vidhyapeeth, Dapoli, Maharashtra; Birsa Agricultural University, Ranchi, Jharkhand; Regional Horticultural Research Station at Mashobra of Dr. Y. S. Parmar University of Horticulture & Forestry, Solan, Himachal Pradesh for asexually/ vegetatively propagated crops and Central Arid Zone Research Institute (CAZRI), Jodhpur for arid zone species.

The Authority has established a numbers of Task Force committees to finalize the DUS testing guidelines to enlarge the registration basket of the Authority. The crops covered

are aonla, amaranth, bael, bamboo, betel vine, carnation, cowpea & guinea grass, chillies,cucurbits,chironji, datepalm, elephant foot yam & taro,jamun, jatropha, karanj, noni,neem, oat, pinus, paprika, small millets, spinach & ridge gourd, sweet pepper, tamarind and teak.

The Authority has developed databases and maintains Indian Information System as per DUS guidelines (IINDUS). It also maintains database of Notified and Released Varieties of India (NORV) in collaboration with NBPGR, New Delhi and is maintaining these databases for the selection of most similar reference varieties, and verifies the denomination and notification details. The Authority is keeping an eye for developing own portal which shall have all the functionalities of content management system to maintain its website in dynamic manner with role based access.

Two meetings of the Authority were held and important decisions were taken regarding several techno- legal and administrative matters including approval of the extant notified varieties for registration,approval of the annual account of the Authority and conferring of Plant Genome Saviour Community Awards, 2012-13.

The Legal Cell of the Authority pursued the cases filed in different Courts. Thrity sixcases were pending,out of which 9 were disposed off and the remaining 27 cases are still pending against the Authority. Four notifications were published in the Gazette of India wherein 33 genera / species were notified. The Right to Information (RTI) Cell received 21 applications either directly or through transfer from other Departments seeking information under RTI Act, 2005. The information sought was made available within the stipulated timeframe. The Authority received two Parliament questions and information along with draft replies were sent to the Department of Agriculture, Cooperation& Farmers Welfare.

Farmers' Cell of the PPV&FR Authority implemented the provisions of the farmers' rights as enshrined in the Act and provided funds to various institutions, DUS centres, ZPDs, KVKs and other stakeholders for conducting training-cum-awareness programmes across the country. The Authority participated in farmers' fairs, agriculture fairs held at various places including at IARI, Pusa, New Delhi and Pragati Maidan to disseminate the information on Farmers' Rights, registration of varieties including farmers' varieties and important provisions of PPV&FR Act, 2001. Special drive of awareness was undertaken in the North-Eastern Hill areas to mobilize farmers for registration of their traditional and farmers' varieties including landraces. The support of KVK system of ICAR network was also taken. The eligible applications for Plant Genome Saviour Community Awards 2012-13 were finalized. Proposals for Plant Genome Saviour Community Awards 2013-14 were invited through advertisements published in the important newspapers of the country as well as on the website of the Authority. The Authority was consulted by the Department of Agriculture, Cooperation & Farmers Welfare on various technical matters, including International affairs relating to bilateral cooperation, ITPGRFA, CBD, UPOV, WIPO and other international instruments/Conventions.

During the period of report, Dr. R.R. Hanchinal visited Mexico and Rome in connection with official meetings. A Germandelegation visited India and had a meeting in the PPV& FR Authority on Bilateral Co-operation in the areas of Protection of Plant Varieties.Dr. Kent J. Bradford, Distinguished Professor from University of California, USA had a courtesy call with Professor R.R. Hanchinal.Dr. Sanjay Rajaram, India born and Mexican citizen, who was chosen for a prestigious and coveted World Food Prize for 2014 visited PPV&FR Authority on 23 June, 2014.

The Authority received ₹1600 lakh as grants-in-aid from Department of Agriculture, Cooperation & Farmers Welfare, during the year 2014-15, and utilized ₹1585.98 lakh after adjusting unspent balance of Rs.0.09 lakh of previous year leaving a balance of ₹14.11 lakh as on 31 March, 2015. The Annual Report of Authority were timely forwarded to the Department of Agriculture, Cooperation & Farmers Welfarefor placing before both the houses of Parliament. The Annual Accounts of the Authority for the year 2013-14were finalized and audited within the prescribed time schedule and placed before both the houses of the Parliament within statutory time limit.

Chapter 1. General Background

Plant breeding is of vital importance to the survival and growth of humankind. Plant Genetic Resources are the raw material for the development of new varieties of plants. Plant breeders provide an essential link in the transfer of basic research technology into agriculture and horticulture. Plant breeding, if it is to contribute more than the making of genetically minor changes to existing varieties, and if it is to exert responsible stewardship over germplasm resources, is dependent upon long-term financial support, discovery research, education, planning and vision. It is important to provide an increased level of funding for plant breeding so that biological resources can be utilized with increasing effectiveness to ensure continued agricultural productivity with enhanced environmental harmony. The Plant Breeders' Rights (PBR) are the means to create an environment within which private investors are induced to provide funding for plant breeding including associated long term support needs for germplasm and technology resources. PBR can help provide a return on the investment in resources by a number of means.

Enforcement of legal protection for innovation in plant breeding by the plant breeders and farmers/farming communities in producing suitable varieties of economic plants, provide incentive for research, promote trade and regulate use of plant genetic resources. The issue of plant variety protection through enforcement of plant breeders' rights was brought into major focus by the General Agreement on Tariffs and Trade (GATT) that culminated into the establishment of the World Trade Organization (WTO) in 1995. India, having ratified the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) of WTO, had obligations to comply with its provision for giving effect to Article 27(3) (b) relating to protection of plant varieties.

The Government of India enacted the Protection of Plant Varieties and Farmers' Rights (PPV&FR) Act in 2001 (53 of 2001) to provide for the establishment of an effective sui generis system for protection of plant varieties, the rights of farmers and plant breeders and to encourage the development of new plant varieties of economic importance. The PPV&FR Rules were notified on 12 September, 2003 and amended from time to time, thereafter.Subsequently, for the purposes of the Act, the Government of India having exercised the powers conferred under the section 3 (1) of this Act, established the Protection of Plant Varieties and Farmers' Rights Authority on 11 November, 2005 vide Gazette notification SO 1588(E).

1.1 Objectives of the PPV&FR Act, 2001

The objectives of the Act are as under:

- to establish an effective system for protection of plant varieties, the rights of farmers and plant breeders and to encourage the development of new varieties of plants.
- to recognize and protect the rights of the farmers in respect of their contribution made at any time in conserving, improving and making available plant genetic resources for the development of new plant varieties.
- to protect plant breeders' rights to stimulate investment for research and development both in the public and private sector for development of new plant varieties.
- to facilitate the growth of seed industry in the country that will ensure the availability of high quality seeds and planting material to the farmers.

1.2 Salient Features of the Act

The Act is based on a ***sui generis***system and is unique in sense that it concurrently recognizes the rights of breeders, farmers, farming communities and researchers. It confers exclusive rights upon the breeder or his successor, his agent or licensee, to produce, sell, market, distribute, import or export of the registered variety. As far as farmers' rights are concerned, the Act recognizes a farmer as cultivator, conserver and breeder and provides that the farmers' variety can also be registered. Further, the Act provides for compulsory license of a registered variety, if the seeds/propagating material is not available to the public at a reasonable price or quantity. Any person or group of persons or any organization can also claim for benefit sharing, if the plant genetic material belonging to them is used in the development of a registered variety. The researchers are conferred the right to use any registered variety for conducting experiment or research and the use of a variety by any person as an initial source of variety for the purpose of creating the other varieties. India is a pioneer country where a national legislation has been enacted to establish and secure Farmers' Rights. The Act also recognizes the past, present and future contributions of the farming communities and provides an opportunity for the award to farming communities/farmers for their contributions in agro-biodiversity conservation.

1.3 PPV&FR Authority

The Authority is a body corporate, having perpetual succession and a common seal with the power to acquire, hold and dispose of movable and immovable properties and to contract, and shall by the said name sue and be sued. The Headquartersof the Authority is at New Delhi and functioning from a leased space in the premise of ICAR in the Societies Block, National Agricultural Science Centre Complex, Dev Prakash Shastri Marg, Pusa Campus, New Delhi. The Authority consists of a Chairperson and fifteen members as on 31 March, 2015.

1.4 Plant Variety Registration

The PPV & FR Authority has finalized the distinctiveness, uniformity and stability (DUS) test guidelines for registration of 92 crop species covering cereals, pulses, millets, oilseeds, spices, vegetables, flowers and fibre crops. The Authority has issued 842 certificates of registration for plant varieties (under new, extant notified and farmers' variety category) during the reporting period (as on 31 March, 2015). To attract more applications, the Authority regularly organizes /supports training-cum-awareness programmes and capacity building for the benefit of different stakeholders.

The PPV&FR Authority has also established network of DUS test centres across the country to verify the claims of candidate varieties by applicants, maintenance breeding, multiplication of reference/ example varieties/ the varieties notified under section 5 of the Seeds Act, 1966 and generation of database for varietal characteristics as per crop specific DUS guidelines. In addition, DUS tests for the candidate varieties are conducted at crop specific centres. The data recorded as per the DUS test guidelines is submitted by these centres to Authority for further analysis. The Authority, in consultation with the ICAR institutes and SAUs has identified potential crop species of economic importance and supports projects for the development of the new DUS guidelines. The Authority has established its National Gene Bank, field gene bank(s) across the country. It regularly publishes Plant Variety Journal of Indiaand maintains the National Register of Plant Varieties at Headquarters and its branch offices.

1.5 Plant Breeders' Rights

Plant Breeders' Rights is one of the pivotal provisions of this Act with far reaching implications in the context of Indian agriculture and global scenario. The breeder also enjoys provisional protection of his/her variety against any abusive act committed by any third party during the period between filing of application for registration and the final decision taken by the Authority.Similarly, researcher's rights is also granted. However, for repeated use of a registered variety as an initial source of variety for developing a new variety, the authorization of the breeder of the registered variety is necessary. The plant variety protection as enshrined in the Act, follows a broad principle of internationally recognized system of DUS and novelty for a new variety. Any person can apply for registration in any of the following:

- New variety of such genera and species as specified under section 29(2) of the Act.
- Extant variety,
  - Notified under section 5 of Seeds Act, 1966,
  - Variety of common knowledge (VCK),
  - Farmers' variety
    - Traditionally cultivated and evolved by the farmers in their fields,
    - Wild relative or landrace of a variety about which the farmers possess common knowledge.
- Essentially derived variety (EDV).

1.6 Farmers' Rights

The Act provides following rights to the farmers:

- **Right on seed**: To save their own seed from their crop and use it for sowing, re-sowing, exchanging, sharing with and selling to other farmers provided that farmer will not be entitled to sell branded seed of a protected variety[**(Section 39(1)(iv)].**
- **Right to register their varieties**: Traditional varieties developed or conserved by farmers and new varieties developed by them are eligible for registration[**(Section39(1)(i)]**.
- **Right to have compensation:** In case the registered variety does not fulfil the claims made by the proprietor / breeder, he is eligible for the compensation on account of losses suffered**(Section 41)**.
- **Right to have reasonable seed price:** Farmers have the right to access seed of registered varieties at a reasonable and remunerative price. When this condition is not met, the breeder's exclusive right over the variety is suspended under the provision concerning **compulsory licensing**, and the breeder is obligated to license the seed production, distribution and sales of the variety to a competent legal entity **(Section 47)**.
- **Right for reward and recognition**: Farmers engaged in the conservation of genetic resource of landraces and wild relatives of economic plants and their improvement through selection and preservation of plant genetic resources are eligible for such rewards and recognition**(Section 39(1)(iii)& 45)**.
- **Right for Benefit Sharing:** Eligible for benefit sharing **i**n case of important role of Farmers' varieties for breeding new plant varieties**(Section 26)**.
- **Protection of innocent infringement:** If a farmer can prove before court that he or she was not aware of the existence of any rights at the time of an infringement on any such rights, as stated in the PPV&FR Act, he or she will not be charged **(Section 42)**.
- **Authorization of Farmers' varieties**:When farmers' varieties, whether extant or new are used by a third party as source material for the development of an essentially derived variety, the farmers need to provide prior authorization for its commercialization **(Section 43)**.

- **Exemption from fees:** Under PPV&FR Act farmers have the privilege of being exempted from payment of any kind of fees or other payments that are normally payable for variety registration; tests for distinctness, uniformity and stability (DUS) and other services rendered by the PPV&FR Authority; as well as for legal proceedings related to infringement or other causes in courts, tribunal, etc.**(Section 44).**

1.7 Registration of Varieties

An Application for registration of a plant variety and its denomination can be made under the following categories:

- **New Variety (N):** On the date of filing of application for registration if the variety has been commercialized for period of less than one year then it is a new variety.
- **Extant Variety(EV):** Consists of the following categories namely**:**
  - **a. Extant variety notified under section 5 of Seeds Act, 1966:** Varieties notified under Section 5 of the Seeds Act, 1966 are eligible for registration under this category.
  - **b. Farmers' variety(FV):**Traditionally cultivated and evolved by the farmers in their fields and includes wild relative or landrace or a variety about which the farmers possess common knowledge.
  - **c. Variety of Common Knowledge(VCK):** Varietieswhich are not notified under Section 5 of the Seeds Act, 1966 and are in commercial chain for more than a year.
  - **d. Public domain variety:** These varietiesare not eligible for registration as they are already in public domain.
- **Essentially Derived Variety(EDV):** A variety predominantly derived from an initial variety, or from a variety that itself is predominantly derived from such initial variety, while retaining the expression of the essential characteristics that result from the genotype or combination of genotypes of such initial variety.

1.8 Period of field-testing of varieties

The application is processed and the applicant is required to deposit DUS test fees.After receipt of necessary fees and seeds the variety is sent to DUS test centre for DUS test. The period of DUS testing is as follows:-

- **a. New Varieties:** Two similar crop seasons at two locations**.**
- **b. Farmers' Variety and VCK:** One crop season at two locations**.**
- **c. Extant variety notified under section 5 of Seeds Act, 1966:** No DUS testing is required but variety is processed by an EVRC, which recommends for registration.
- **d. EDV:** DUS testing is not mandatory but field test is required to ascertain character claimed**.**

After the receipt of DUS test result, the application is processed and if the claimed character and characters qualified in DUS test are same the variety proceeds for advertisement. If the claimed character and character qualified in DUS test are different the applicant is required to amend the application.The application is advertised in Plant Variety Journal of India inviting opposition within a period of three months from the date of publications. If no opposition is filed or if opposition filed is rejected, the variety proceeds for registration. The period of protection is as follows**:**

1.9 Protection Period and Number of crop species notified for registration

Field Crops- 15 years

Trees & Vines- 18 Years

Extant variety is notified under section 5 of Seeds Act, 1966- 15 years from date of notification under the Seeds Act, 1966.

Number of crops / species eligible for protection – 92

1.10 Rights Conferred to the breeder

The registration gives exclusive right to **produce, sell, market, distribute,export or imports** the variety and its denomination, which is subject to farmers' rights that farmers can use seeds of registered variety in an unbranded manner.

1.11 Rewards to Farmers / Farming Communities

Section 45(2) of the Act read with Rules 70 (2) (a) of PPV&FR Rules, 2003 provides for support and reward, from National Gene Fund, to farmers, communities of farmers, particularly the tribal and rural communities engaged in conservation, improvement and preservation of genetic resources of economic plants and their wild relatives, particularly in areas identified as agro-biodiversity hotspots. To operationalize these provisions, ***Plant Genome Saviour Community Award*** was instituted in 2009-10. Annually a maximum of five such awards can be conferred and it consists of Rs. ten lakh in cash, a citation and a memento. Besides, ten individual ***Plant Genome Saviour Farmer Reward*** of Rs.one lakh each, citation and memento and Twenty ***Plant Genome Saviour Farmer Recognition*** certificates were also instituted for farmers. The selection of awardees is made by a high-levelcommittee of experts/scientists headed by an eminent scientist/bureaucrat.

2. Progress of Plant Varieties Registry

2.1 Publication of DUS Test Guidelines for crop species

In exercise of its powers, the Central Government during 2014-15, has notified the 33 crops with their genera and species eligible for registration of varieties under the PPV&FR Act, 2001 (**Table 1**) as under:

Table 1: Genera / Species notified for registration

S. No.	English Name	Hindi Name	Botanical Name
1	Almond	बदाम	Prunus dulcis (Mill.) D.A. Webb
2	Apple	सेब	Malus domestica Borkh
3	Apricot	खुबानी	Prunus armeniaca L.
4	Indian jujube (Ber)	बेर	Ziziphus mauritianaLamk.
5	Bottle Gourd	लोकी (घिया)	Lagenaria siceraria (Mol) Standl.
6	Bitter Gourd	करेला	Momordica charms& L.
7	Barley	जौ	Hordeum vulgare L.
8	Casurina	जंगली सरू	Casuarina junghuhnianaMiq.
9	Cucumber	खीरा	Cucumis sativus L.
10	Coriander	धनिया	Coriandrum sativum L.
11	Cherry	चेरी	Prunus avium L.
12	Grapes	अंगूर	Vitis spp.
13	Eucalyptus	सफेदा	Eucalyptus tereticornis Sm.
14	Eucalyptus	सफेदा	Eucalyptus comaldulensis Dehmb
15	Fenugreek	मेथी	Trigonella foenumgraecum L.
16	Orchid	आर्चिड	Cattleya Lindl.
17	Orchid	मोथआर्चिड	Phalaenopsis Blume
18	Pear	नाशपाती	Pyrus communis L.
19	Pumpkin	कद्दू	Cucurbita moschata Duch.ex Poir.
20	Pomegranate	अनार	Punica granatum L.
21	Walnut	अखरोट	Juglansregia L.
22	Tea	चाय	Camellia sinensis
23	Tea	चाय	C. assamicass-plasiocalyx.
24	Tea	चाय	Camellia assamica
25	Acid Lime	नींबू	Citrus aurantifoliaSwingle
26	Mandarin	संतरा	Citrus reticulata Blanco
27	Sweet Orange	मौसमी	Citrus sinensis (L) Osbeck
28	Bougainvillea	बोगनविलिया	Bougainvillea Comm. Ex Juss
29	Banana	केला	Musa spp.
30	Canna	कैना	Canna L
31	Gladiolus	ग्लेडिओलुस	Gladioulus L.
32	Muskmelon	खरबूजा	Cucumis melo L.
33	Watermelon	तरबूज	Citrullus Lanatus (Thunb)) Mansf.

These crop species represent cereals, vegetables, flowers, fruits, beverage, seed spices and forest species. Enlarging the registration basket of the Authority will providelegal protection to above genera and species and also an opportunity for diversification of agriculture and boosting the trade in these crops.

2.2 Applications received

The Authority received 2251 applications, representing 56 crops for seeking plant variety protection under the Act (Fig 1 and 2). The applications belonged to new (343), extant (189) farmers' (1717) and Essentially Derived Variety (EDV) (02) category.

Category wise applications received		Sector wise applications received	
New	343	Public	140
Extant	189	Private	393
EDV	02	Farmer	1718
Farmer	1717	**Total**	**2251**
Total	**2251**		

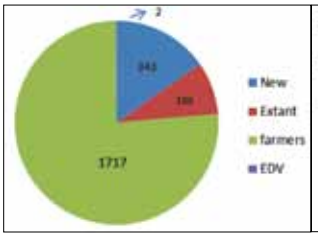


Fig-1: Category wise applications received

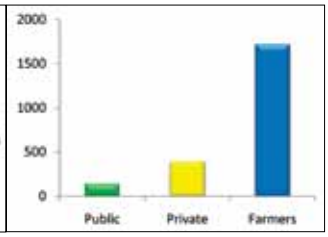


Fig-2: Sector wise applications received

The applications received during the year seeking registration of 56 genera / species belonged to 28 plant families (Table 3) as under:

Table 3. List of crops with plant families received for registration

S. No.	Plant Family	Crops
1	Poaceae	Wheat, Rice, Pearl millet, Maize, Sorghum, Sugarcane and Barley
2	Fabaceae	Chickpea, Pigeon pea, Fieldpea, Green gram, Black gram, Kidney bean, Soybean, Lentil and Groundnut
3	Malvaceae	Cotton and Okra
4	Tiliaceae	Jute
5	Solanaceae	Brinjal, Tomato and Potato
6	Brassicaceae	Indian mustard, Rapeseed, Cabbage and Cauliflower
7	Zingiberaceae	Small cardamom, Turmeric and Ginger
8	Asteraceae	Sunflower and Safflower
9	Euphorbiaceae	Castor
10	Anacardiaceae	Mango
11	Arecaceae	Coconut
12	Amaryllieae	Onion
13	Rosaceae	Rose and Apple
14	Piperaceae	Black pepper
15	Pedaliaceae	Sesame
16	Orchieae	Orchid
17	Linaceae	Linseed
18	Alliaceae	Garlic
19	Rutaceae	Acid lime and Sweet orange
20	Musaceae	Banana
21	Cucurbitaceae	Bitter gourd, Bottle gourd, Cucumber and Pumpkin
22	Apiaceae	Coriander
23	Fabaceae	Fenugreek
24	Rhamnaceae	Indian jujube (Ber)
25	Lythraceae	Pomegranate
26	Lamiaceae	Menthol mint
27	Vitaceae	Grapes
28	Juglandceae	Walnut

Applications were received for cereals, coarse cereals, pulses, commercial crops, oilseeds, vegetables, spices, flower and fruits. Highest numbers of applications were received for cereals (1291) followed by vegetables (298), pulses (203), oilseeds (158), fiber crops (88), millets (63), fruits (62) and others (88) as indicated in Table 4 as under.

Table 4. Crop wise details of applications received for registration

Crops	Public Sector	Private Sector	Farmers' Variety	Total
Acid lime	-	-	02	02
Apple	-	-	01	01
Banana	-	-	02	02
Barley	-	03	12	15
Bitter gourd	03	21	10	34
Black gram	-	-	33	33
Black pepper			01	01
Bottle gourd	01	09	21	31
Brinjal	04	20	22	46
Cabbage	01	09	02	12
Castor	-	-	04	04
Cauliflower	-	03	04	07
Chickpea	-	-	35	35
Coconut	15	-	01	16
Coriander	-	-	11	11
Cucumber	02	06	10	18
Diploid cotton	04	-	-	04
Fenugreek	-	-	08	08
Field pea	02	-	17	19
Garlic	04	-	12	16
Ginger	-	-	18	18
Grapes	-	-	04	04
Green gram	-	-	27	27
Groundnut	03	-	03	06
Indian jujube (Ber)	-	-	02	02
Mustard	02	05	25	32
Rapeseed	01	-	17	18
Jute	02	-	05	07
Kidney bean	-	-	24	24
Lentil	-	-	31	31
Linseed	01	-	22	23
Maize	08	51	73	132
Mango	-	-	48	48
Menthol mint	-	-	01	01
Okra	12	19	06	37
Onion	08	-	04	12
Orchid	-	-	01	01
Pearl millet	02	44	04	50
Pigeon pea	-	04	49	53
Pomegranate	-	-	01	01
Potato	-	05	09	14
Pumpkin	-	-	21	21
Rice	30	68	999	1097
Rose	-	04	01	05
Safflower	01	-	02	03
Sesame	02	-	17	19
Small cardamom	-	-	02	02
Sorghum	-	06	07	13
Soybean	11	-	04	15
Sugarcane	03	-	11	14
Sunflower	00	22	-	22
Sweet orange	-	-	01	01
Tetraploid cotton	04	73	-	77
Tomato	05	16	10	31
Turmeric	-	-	27	27
Walnut	-	-	01	01

Crops	Public Sector	Private Sector	Farmers' Variety	Total
Wheat	09	05	33	47
Total	**140**	**393**	**1718**	**2251**

Rice (1097) topped the list of registration with highest number of applications followed by Maize (132), Cotton (81), Pigeon pea (53), Pearl millet (50), Mango (48), Wheat (47), Brinjal (46), Okra (37) and Chickpea (35).

2.3 Registration of New/Essentially Derived Varieties

Out of 343 new variety applications received during 2014-15, 40 applications were from public sector/SAUs, 302 from private sector and only one farmer's variety also filed under new category. Two applications of EDV were also received from the private sector. The applications filed under New/EDV variety were examined by the Plant Varieties Registry and clarification (s) were sought wherever necessary. It was observed that most of the clarification(s) generally pertain to the proof of sale of the varieties, proof of legal acquirement of parent material, source of parental material, details in technical questionnaire (grouping/ distinct/other characters), pedigree/genealogy, breeding techniques, comparison with reference varieties etc. The Authority has been availing various fora to address these issues to make the breeders aware of the necessary details to further streamline and expedite the registration process in time bound manner.

So far, two applications for registration has been rejected. One application of the public sector was also dropped for protection due to completion of 15 years of protection period from the date of its notification under the Seeds Act, 1966. Applicants of the candidate varieties fulfilling all requirements were directed for the payment of the prescribed fees for registration and DUS tests, submission of specified quantity of seed material along with seed analysis report as per crop specific DUS test guidelines. Thereafter, seed samples were sent to the respective centres to take up DUS test for two similar crop seasons at two locations.

2.4 Registration of Extant Varieties

The extant varieties include varieties notified under section 5 of the Seeds Act, 1966 (54 of 1966), or farmers' varieties, or a variety about which there is common knowledge. The Act defines that a farmer means any person who:

(i) Cultivates crops by cultivating the land himself, or

(II) Cultivates crops by directly supervising the cultivation of land through any other person, or

(III) Conserves and preserves, severally or jointly, with any person any wild species or traditional varieties, or

(iv) Adds value to such wild species or traditional varieties through selection and identification of their useful properties.

Farmers' variety means a wild relative or landrace of a variety about which the farmers possess the common knowledge. Variety of Common Knowledge (VCK) is a variety which is not released and notified under the Seeds Act, 1966 but is well documented through publications and is capable of satisfying the definition of variety, or (ii) the candidate variety should either has an entry in the official register of varieties or in the course of being made, or (iii) the candidate variety should find inclusion in a reference collection or is having a precise description in a publication, or (iv) by any other means a variety has become a matter of common knowledge and the variety is under cultivation or marketing at the time of filing the application for registration.

During the reporting period, 1906 applications were received for registration under extant varieties. It includes 84 applications under notified category, 105 under variety of common knowledge and 1717 farmers' varieties. In accordance with the Regulation 6 of the PPV& FR Regulations, 2006 framed under the Act, the Authority has constituted an Extant Variety Recommendation Committee (EVRC) to examine the applications of varieties released under the Seeds Act, 1966 and to make recommendation to the Registrar on the suitability of these varieties for registration.

2.4.1 Expert Committee on Essentially Derived Variety (EDV)

The Competent Authority has approved the continuation of the committee led by Prof. B.S. Dhillon, Vice Chancellor, PAU, Ludhiana on registration of Essentially Derived Varieties (EDVs) till 6 October, 2015. One hundred seventy eight applications were received under EDV category and only one application of cotton variety with denomination VICH-5 BG II has been granted certificate of registration. Twoapplications have been rejected due to similar denomination. Out of remaining 175 applications, 112 applications have been tested during 2014-15 for recording observations on efficacy of Bt.gene for insect pest resistance in comparison with the Initial Varieties (IVs).

2.4.2 Extant Variety Recommendation Committee (EVRC)

The Authority has constituted a seven members EVRC to examine and recommend for registration of suitable varieties with **Dr. A. R. Pathak,** Vice-Chancellor, Junagadh Agricultural University as Chairman and **Dr. Kisan E. Lawande,** Former Vice Chancellor, Dr. BSKKV, Dapoli;**Dr. G. N. Hazarika,** Director of Research, Assam Agricultural University, Jorhat; **Dr. B.C. Virakthmath,** FormerProject Director, DRR, Rajendranagar, Hyderabad;**Dr. B. Singh,** Project Coordinator (Vegetables), IIVR, Varanasi;**Dr. M. Ramasami,** CMD, Rasi Seeds (P) Ltd.; and **Shri Prakash Gouda S. Patil,**farmer's representative from Bijapur, Karnataka.During the reporting period, EVRC

recommended 102 applicationsand for the purpose of registration under extant variety category notified under the Seeds Act, 1966 in three meetings. Out of 102 varieties, 46 belonged to ICAR, 41 to State Agricultural Universities (SAUs), 15 to the private sector. The crop wise position of varieties recommended is given as under:

Table 5: Status of crops/ species recommended for registration by EVRC

S. No.	Crops	Number	S. No.	Crops	Number
1	Black gram	2	15	Groundnut	7
2	Bottle gourd	1	16	Indian mustard	4
3	Bread wheat	1	17	Kidney bean	1
4	Brinjal	1	18	Maize	1
5	Cabbage	1	19	Okra	10
6	Cauliflower	1	20	Onion	4
7	Chickpea	2	21	Pearl millet	3
8	Coconut	6	22	Rapeseed	1
9	CottonDiploid	4	23	Rice	22
10	Cotton Tetraploid	5	24	Soybean	11
11	Durum Wheat	2	25	Sugarcane	1
12	Field pea	2	26	Tomato	5
13	Garlic	2		**Total**	**102**
14	Green gram	2			

Passport data of the recommended varieties were published in the *Plant Variety Journal of India* (PVJ) for information of stakeholders and also for inviting objections, if any, within 90 days of publication. Thereafter, applicants were directed to submit specified quantity of seed material for medium term storage in the National Gene Bank during the period of protection.

The registration of extant varieties notified under the Seeds Act, 1966, is an important provision for protecting crop varieties mainly bred under National Agricultural Research System (NARS) at ICAR / SAUs/ other research organizations / industry and tested through multi-location trials under All India Co-ordinated Research Project (AICRP). These varieties have already been released by the **Central Seed Committee (CSC)** functioning under the Department of Agriculture, Co-operation & Farmers Welfare, Ministry of Agriculture & Farmers Walfare, Government of India. It is a kind of recognition of the untiring devotion of the plant breeders mainly in the public sector and by extending this provision, plant breeders/ institutes can legally protect their varieties, can license and earn royalties/revenues which in turn can be ploughed back in future R&D activities.

S. No.	Crops	No. of Applications
1.	Cereals	25
2.	Fibres	9
3.	Millets	4
4.	Oilseeds	23
5.	Plantation	6
6.	Pulses	9
7.	Sugarcane	1
8.	Vegetables	25
	Total	**102**

2.5 Progress of Registration of Varieties

During 2014-15, the Authority issued 842 certificates of registration for 32 crop species as shown in Table 6(***Annexure-XI)*** *as under:*

Table 6. Details of certificate issued crop wise

S. No.	Crops	Number of certificates	S. No.	Crops	Number of certificates
1	Black gram	04	18	Maize	08
2	Brinjal	06	19	Okra	01
3	Cabbage	01	20	Pearl millet	08
4	Castor	02	21	Pigeon pea	08
5	Chickpea	05	22	Potato	13
6	Coconut	06	23	Rice	540
7	Cotton	35	24	Safflower	04
8	Field pea	04	25	Sesame	01
9	Garlic	01	26	Sorghum	48
10	Green gram	07	27	Soybean	07
11	Ground-nut	21	28	Sugarcane	01
12	Mustard	41	29	Sunflower	29
13	Rapeseed	02	30	Tomato	02
14	Jute	01	31	Turmeric	02
15	Kidney bean	03	32	Wheat	27
16	Lentil	01		**Total**	**842**
17	Linseed	03			

The highest number of certificates were issued in Rice (540), followed by Sorghum (48), Mustard (41), Cotton (35) and Sunflower (29).Out of 842 certificates of registration issued during 2014-15, 111 belonged to New category, 215 to Extant Notified, 55 to Extant VCK, and 461 to farmers' category.

2.6 DUS Test Centres

2.6.1 AICRP on Pearl millet, Jodhpur

AICRP on Pearl millet is theNodal centre for DUS testing in Pearl millet. Sixty varieties including B lines (21), R lines (17) and hybrids (22) were studied for DUS characteristics and maintained (B and R lines only) at AICRP on Pearl Millet, Jodhpur and MPKV, Rahuri as under:

Table7: Progress of maintenance breeding / characterization

Name of the species	No. of varieties	Source(own released/ICAR/ SAU)
Pennisetum glaucum (L). R. Br.	60	Released hybrids(Public & Private) and Parental lines/B lines from Public & ICRISAT

DUS testing was undertaken during *Kharif* 2014. Nineteen candidate varieties for second year and thirty six candidate varieties for first year along with twenty two reference/example varieties were tested at AICRP on Pearl Millet, Mandor, Jodhpur and MPKV, Rahuri as under:

Table 8: Progress of varieties under DUS testing

Crops	New		Total	Date of Monitoring	Chairman
	1st yr	2nd yr			
Pearl Millet	34	25	59	1 October, 2014	Dr. H.P. Yadav, Project Coordinator

The status of applications filed and certificates issued in respect of pearl millet is as under:

Table9: New / VCK / Extant notified / farmers variety

Crops	Variety notified under Seeds Act, 1966 (since 1992)	Application filed for registration	Certificates issued	Remarks
Pearl millet	65 (Public Sector only)	45	33	Pending: 5 Not considered: 3 Undecided: 4

2.6.2 Seed Technology Research Unit (STRU), MPKV, Rahuri

Sorghum, Pearl millet and Chickpea areearmarked for DUS testing byMPKV, Rahuri. The progress of DUS testing,during the reporting period, is as under:

Table 10: Progress of DUS testing

Crops	New		Total	Ref.	Date of Monitoring	Monitoring Team
	1st yr	2nd yr				
Kharif Sorghum	10	9	20	25	29 Sep. 2014	Dr. J.V. Patil: Chairman Dr. Hariprasanna: Nodal Officer (DUS)Indian Institute of Millets Research, Hyderabad Dr. V.R. Shelar, Nodal Officer(DUS) STRU, MPKV, Rahuri
Rabi Sorghum	4	3	7	9	27 Jan., 2015	
Pearl millet	34	25	59	18	14 Oct., 2014	Dr. Balwant Singh Rajpurohit: Nodal Officer(DUS), AICPMIP, Jodhpur Dr. V.R. Shelar, Nodal Officer(DUS testing) STRU, MPKV, Rahuri

Sorghum:

(a) *Kharif* season

Monitoring of DUS testing of Sorghum was done on 29September, 2014.The observation of the monitoring are as under:

- The conduct of trial was good and recommended plant population was maintained in all the entries and plots.
- Appropriate reference varieties were selected based on the grouping and planted side by.
- All the character (quantitative and qualitative) have been recorded by observing guidelines for conduct of test trials.

b) *Rabi* season

The observation of the monitoring are as under:

- Recommended plant population was maintained in all the entries and plots.
- Appropriate reference varieties were selected based on the grouping chacteristics and planted sideby.
- All the character (quantitative and qualitative) have been recorded by following guidelines for conduct of test trials.
- Looking to severity of bird damage the monitoring team recommend the permanent bird protection measures.

Pearl millet:

The monitoring of DUS testing of Pearl millet was done on 14 October, 2014 and the team was satisfied with the conduct of trial and selection of reference varieties as per the grouping characters.The team was fully satisfied with the recording of observations on the various DUS characters throughout the crop season.

2.6.3 Institute of Forest Genetics and Tree Breeding (IFGTB), Coimbatore

Eucalyptus and Casuarina

Preparatory works for registration of clones of Eucalyptus and Casuarina have been initiated with the major activities like establishing Germplasm bank, recording observations on the morphological characters, identification of land for establishment of DUS centre at Coimbatore and Neyveli, propagation of sufficient number of plants of example varietiesfollowed by planting in the test block, characterization and development of database of clones and DUS character matrix.The Germplasm Bank of Casuarina and Eucalyptus clones present in IFGTB premises was maintained. The trial was also observed for DUS characters in both Casuarina and Eucalyptus clones. Reference varieties of Eucalyptus and Casuarina clones planted in the *In-vitro* Vegetative Multiplication Garden for quick multiplication of these plants for placing the DUS tests.

2.6.4 Indian Institute of Pulses Research (IIPR), Kanpur

Chickpea is earmarked to AICRP on chickpea at IIPR, Kanpur serving as Nodal centre for the purpose of DUS testing. The progress of maintenance breeding/ characterization is as under:

Crop	No. of Varieties	Source
Cicer arietinum	PBG 5, RVG 203, RVG 202, GNG 1969, Vikash, CSJ 515, C 235, Viswash, RSG 963, JG 16, JGK 3, GNG 1292, JAKI 9218, JG 11, HK 2, PBG 4, KWR 108, AKGS 9303-1, Virat, HC 5, CSJK 6, HC 3, JGK 1, JG 315, PBG 1, L 550, L 555, JG 130, Himali, PKV Kabuli 2, GNG 1958, RSG 931, HK 4, RVKG 101, RSGK 6, ICCV 2, PBG 3, RSG 945, RVG 201, Vishal, JG 14, AKGS 1, L 552, BGD 112, RSG 991, K 850, Rajas, PKV Kabuli 4, CSJK 21, RSG 902, JG 6, Vijay, KPG 59, RSG 895, GNG 663, HK 1, GNG 1499, Pant G 186, GNG 1488, RSG 888, RSG 974, ICCV 10, Gulak 1, CSJD 884, GNG 1581, Vihar, RSG 896, HC 1, Kripa, RSG 973, PG 12, PDG 5, Radhey, GPF 2 , JG 515, Annegiri 1, Avrodhy, DCP 92-3, RSG 10, CSG 8962, GG 2, Pusa 72, RSG 11, GCP 105, ICCV 37, Chaffa, NDG 11-11, NBeG 452, GL 769, PBG 1, GG 3, Pusa 547, RSG 44, GNG 146, RSG 2, PDG 3, Pusa 261, PDG 4, Pusa 212, Sadabahar, Pusa 391, AKG 9303-12, Pusa 240, JG 218, Dahod Yellow, Pusa 362, Vaibhav, BGM 413, RSG 807, Pusa 209, BG 256, Pusa 244, GNG 469, RSG 959, JSC 35, Digvijay, Pant G 114, H 82-2, GCP 101, Pusa 329, Pusa 1108, IPCK 2004-29, Pusa 267, GLK 26155, Pusa 1105, L 551, CSJK 54, HK 98-155, GNG 1491, BGD 128, CSJK 77, RVSJK 102, JKG 3, Phule G 0027, Pusa 1088	
	BG 5028, BG 2085, BG 5023, BG 1103, BG 2023, BG 3022, BG 1053	ICAR

With regards to DUS testing, there was only 3 varieties including one each new variety in 1st year and 2nd year testing and one farmers' variety. Newly released variety GNG 1581 was grown with seven reference varieties namely BG 256, BG 261, DCP 92-3, GPF 2, H 82-2, Pant G 114 and HC 3. Newly released variety PKV 4 was grown with seven reference varieties namely KAK 2, BGD 128, RVKG 101, JKG 3, IPCK 2002-29, HK-2 and BG 1053. Farmers' variety Anand Chana was grown with seven reference varieties namely H 82-2, RSG 44, Annegiri 1, Dahod Yellow, C 235, Radhey and RAU 52. As per DUS test guidelines, these varieties were grown in 8 rowed plots in 3 replications. Crop was good and population was sufficient in plot of each variety. Observation on various characteristics was recorded during different crop growth stages. Dr. R. R. Hanchinal, Chairperson, PPV&FRA visited on 26 February, 2015.

2.6.5 Central Potato Research Institute (CPRI), Shimla

The Centre has maintained 48 CPRI released potato varieties and 62 reference varieties in field at CPRI Campus, Modipuram. Besides, 204accessions comprising

of 46 CPRI varieties, 29 UPOV varieties, 18 exotic varieties, 7 state varieties and 104 indigenous collections were maintained *in-vitro* at germplasm repository at CPRI, Shimla. A collection of new varieties, one accession from Lahul Spiti (HP), two from Imphal (Manipur) and 39 from East Khasi Hills (Meghalaya) were collected during the reporting year and added to reference collection maintained *in vitro* at CPRI. With regards to DUS testing i.e. Kufri Garima, Kufri Gaurav from CPRI, 9 exotic varieties viz., Kastelli, Panamera, Lucinda, Taurus, CRISPS4ALL, Sagitta, Memphis, Evora and HZD 01-58 were done along with the respective reference varieties viz., Kufri Pukhraj, Kufri Jyoti, Kufri Jawahar, Lady Rosetta, Atlantic, Santana and K. Frysona were characterized and tested for DUS.

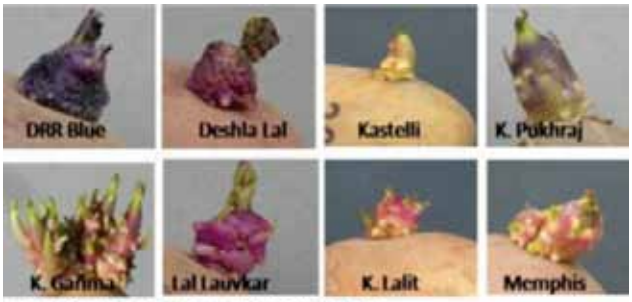


Fig. 1: Sprouts of different potato varieties

Fig. 2: Leaves of different potato varieties

Fig. 3: Tubers of different released and reference potato varieties

Forty eight released potato varieties of CPRI and 62 reference varieties were evaluated / characterized. Observations were recorded on sprout characters, plant vegetative and tuber characters as per standard DUS descriptors for characterization. Yield components (total and marketable yields and tuber numbers) were also recorded at harvest (at 90 days crop duration). Photographs of sprouts and leaves and tubers of all the reference varieties were also taken. The tuber materials of above varieties were retained for next year evaluation/characterization/ maintenance purpose. The progress of DUS testing at the Nodal centre and Co-nodal centre is as under:

Table 11: Status of varieties under DUS testing

New		FV	Total	Date of Monitoring	Chairman
1st yr	2nd yr				
9	2 (Public)	1	12	CPRS, Jalandhar: 4 February, 2015 CPRIC, Meerut:10 March, 2015	Dr. P.S Naik, Former Director IIVR, Varanasi

2.6.6 Central Potato Research Station (CPRS), Jalandhar

DUS testing was carried out on nine new varieties in 1st year trials and two varieties in 2nd year trial. The nine new varieties viz., Memphis, Sagitta, Evora, Crisp4all, Panamera, Lucinida, Castelli, Taurus, HZD 010-58 were tested in first year trial.Two varieties viz., Kufri Gaurav and Kufri Garima in second year trials were from public institute. For the sprout characters, observations were taken 30 days after withdrawing from cold store on these varieties along with reference varieties viz. Santana, Atlantic, Kuri Frysona, Lady Rosetta, Kufri Pukhraj, Kufri Jyoti, Kufri Jawahar, Kufri Pushkar, on the following characteristics:

Light sprout: Predominant color

Light sprout: Shape

Light sprout: Intensity of anthocyanin coloration at base of sprout

Light sprout: Intensity of anthocyanin coloration at sprout tip

Light sprout: Pubescence base

Light sprout: Length of apical sprout (cm)

These eleven varieties were planted in the field along with above reference varieties and observations on foliage characters were recorded 50 days after planting as under:

Stem: Solidity Stem: Cross section Stem: Predominant color Stem: Secondary coloration Stem: Distribution of secondary color	Plant: Foliage structure Plant: Wing Plant: Wing type Plant: Height of main stem (cm)	Leaf: Structure Leaf: Anthocyanin coloration of rachis Leaf: Anthocyanin coloration of midrib Leaf: Length (cm) Leaf: Width (cm) Leaf: Leaflet (lateral) shape Leaflet: Waviness of margin Leaflet: Glossiness of upper side Leaflet: Pubescence of blade at apical rosette

Foliage maturity was recorded 90 days after planting. Observations on tuber characters were recorded 115 days after planting for the characters viz., Tuber: Predominant skin color, Tuber: Secondary skin color, Tuber: Distribution of secondary skin color, Tuber: Skin type, Tuber: Shape, Tuber: Depth of eye, Tuber: Predominant color of flesh, Tuber: Secondary color of flesh and Tuber: Distribution of secondary color of fleShri The observation taken on tuber characters on 5 February, 2015 were also monitored by

a team comprising Dr. P.S. Naik,Former Director IIVR, Varanasi as the Chairman of the DUS Monitoring and Mr. Dipal Roy Choudhury, Joint registrar, PPV&FRA.

2.6.7 Central Institute for Cotton Research (CICR), Regional Station, Coimbatore

CICRRegional Station at Coimbatore is theNodal centre for cotton DUS testing. All the four species of cultivated cotton(*Gossypium hirsutum, G.barbadense, G.arboreum, and G.herbaceum*) are earmarked for the purpose. The progress of maintenance breeding/ characterization, during the reporting year is as under:

Table 12: Progress of maintenance breeding / characterisation

Name of the species	No. of varieties	Source
G.hirsutum	129	ICAR/SAU
G.barbadense	4	ICAR/SAU
G.arboreum	27	ICAR/SAU
G.herbaceum	4	ICAR/SAU

The progress of DUS monitoring is as under:

Table 13: Status of DUS testing

Crop	New		VCK	FV	EDV IV (if any)	Total	Date of Monitoring	Chairman
	1st yr	2nd yr						
Cotton	68	33	53	1	45	200	22-23 Dec, 2014	Dr. K. Rathinavel, Principal Scientist and Nodal Officer, CICR (RS), Coimbatore

Monitoring of Distinctiveness, Uniformity and Stability testing of cottonwas conducted on 22-23December,2014. Monitoring was organized by Dr. K. Rathinavel, Principal Scientist and Nodal Officer (DUS), CICR (RS), Coimbatore. Research Associate, and Project Assistant assisted the scientists for verification of claimed characters of each entry in all the trials, recording of observations and data thereof. Ten representatives from various private seed industry participated during the monitoring and assessed their respective varieties, hybrids, parental lines for expression of morphological characters. During the winter, fifty nine new tetraploid candidate varieties were tested for second year of testing, sixty eight new tetraploid candidate varieties for first year testing, four new diploid candidate varieties for second year testing, fifty four new tetraploid varieties of common knowledge for first year testing and one farmers' variety along with 53 reference varieties were grown. The trials werelaid out and observations were recorded. The report of the monitoring of DUS trials was submitted to PPV&FRA.The latest status of registration of cotton varieties with PPV&FR Authority is as under:

Table 14: New / VCK / Extant notified / farmers' variety

Crops	Variety notified under the Seeds Act, 1966 (since 1992)	Applications filed for registration	Certificates issued
G.hirsutum	Extant New	58 5	27 2
G.arboreum	Extant New	23 3	13 1
G.herbaceum	Extant	3	3

2.6.8 Central Institute for Cotton Research (CICR), Nagpur

During the reporting year, five different trials were sown for DUS characterization at CICR, Nagpur. EDVs, VCK, New genotypes under first year of testing; genotypes under second year of testing and genotypes of EDV, new, VCK received later in the season. The data on hypocotyl pigmentation, leaf and flower characters, boll and plant growth characters were recorded in three replications of all the above genotypes. Further recording of observations on seed and lint were recorded. Once completed, these data will be compiled for further analysis. The EDVs and their initial varieties were closely observed for all DUS traits till boll maturity.Those which were different in any one of the trait were not considered as EDVs. Only those which were similar (13 EDVs) in all traits were included for further Bt. testing by ELISA. The results revealed segregation for Bt. gene in some BGII hybrids as well as absence of either one gene in few other BG II hybrids. Variation was observed within same genotype for few traits such as boll shape, leaf appearance, stigma exertion etc. Thirty reference varieties released by ICAR and SAU system were maintained for the purpose of DUS testing, which is a paramount for the successful conduct of DUS test. The progress of DUS testing and its monitoring is as under:

Table 15: Progress of varieties under DUS testing

Crop	New		VCK	EDV IV	Total	Date of Monitoring	Chairman
	1st yr	2nd yr					
Cotton	54	30 (2 genotypes of G. arboretum)	53	49	186	18 November, 2014	Dr. K. Rathinavel
Total	54	30	53	49	186		

The trials were laid out as per the protocol and sufficient plant population was maintained for each variety. The crop growth was recorded as satisfactory with very good expression of morphological characters in most candidate varieties. Some genotypes observed to be highly susceptible to sucking pests in spite of regular plant protection measures adopted. The recording was done very rigorously for pollen and petal color for comparison with the claims of each candidate variety.

2.6.9 Punjab Agricultural University (PAU), Ludhiana

PAU, Ludhiana has been earmarked as the Nodal centre for cotton and wheat DUS testing under the scheme During *Kharif*, 2014, 108 cotton varieties were received for testing, including 86 candidate varieties as per details as under:

Table16: Progress of DUS testing in Cotton

Crop	New		VCK	EDV	IV	Total	Date of Monitoring	Chairman
	1st yr	2nd yr						
Cotton	19	22	6	18	18	83	9 September, 2014	Dr. K.R. Kranthi, Director, CICR, Nagpur

Trials were sown on 20-24May, 2014 as per the DUS test guidelines of PPV&FRA. Proper care was taken to conduct the trial by timely plant protection measures. The monitoring team under the Chairmanship of Dr. K.R. Kranthi, Director CICR, Nagpur and Dr. K. Rathinavel, Nodal Officer DUS project, CICR (RS), Coimbatore visited the field trial of DUS on 9 September, 2014 in the presence of Dr. Geeta Bassi, the Co-Nodal Officer of PAU, Ludhiana Centre. Other team members were as under:

i. Dr. A. H. Prakash, Project Coordinator and Head, CICR, Coimbatore.

ii. Dr. Suman Bala Singh, Head Division of Crop Improvement, CICR, Nagpur.

iii. Dr. M.V Venugopalan, Head, PME Cell, CICR Nagpur.

iv. Dr. Blaise, Head, Division of Crop Production, CICR, Nagpur.

To know the efficacy of Bt. gene, effect of different Bt. cotton cultivars of EDVs & IVs on the mortality of 1st instar larvae of *Helicoverpa armigera*was conducted in the IPM Laboratory of Department of Entomology, PAU, Ludhiana.The leaves of different Bt. cotton cultivars in five replications were fed to 1st instar larvae at 24 hour intervals throughout their development.

2.6.10 Chaudhary Charan Singh Haryana Agricultural University (CCSHAU), Hisar

HAU, Hisar is one of the DUS centres for cotton & chickpea. Eighty six candidate varieties of cotton and three candidate varieties of chickpea were grown with 43 reference varieties of cotton and 17 reference varieties of chickpea for comparing anddata were recorded. The progress of DUS testing, during the reporting period, was as under:

Table 17: Progess underDUS testing

Crop	New		VCK	EDV IV (if any)		Total	Date of Monitoring	Chairman
	1st yr	2nd yr		EDV	IV			
Cotton	19	22	6	18	18	83	11 Sep, 2014	Dr. K.R. Kranthi, Director, CICR, Nagpur
Chickpea	1	1	1	-	-	3	-	-
Total	20	23	7	18	18	86		

Technical Progress:

All the candidate varieties tested were diploid and tetraploid cotton belonged to private sector however the candidate varieties tested in respect of chickpea were from public sector.The layout and maintenance of the DUS trials wassatisfactory. The crop growth and expression of morphological characters were good in most of the candidate varieties. The data were recorded and datasheets were maintained properly. The fields was weed free and the plants were healthy capable of expressing all the morphological traits in most of the plots, however some plots which were sown late showed high incidence of cotton leaf curl virus disease.The crop was in reproductive stage. The incidence of whitefly was above Economic Threshold Level (ETL).The overall performance, the crop growth, the

method of conducting trial and recording of observations was excellent and encouraging.The monitoring team was fully satisfied with the overall performance and maintenance of DUS trials.

2.6.11 Directorate of Rapeseed& Mustard Research (DRMR), Bharatpur

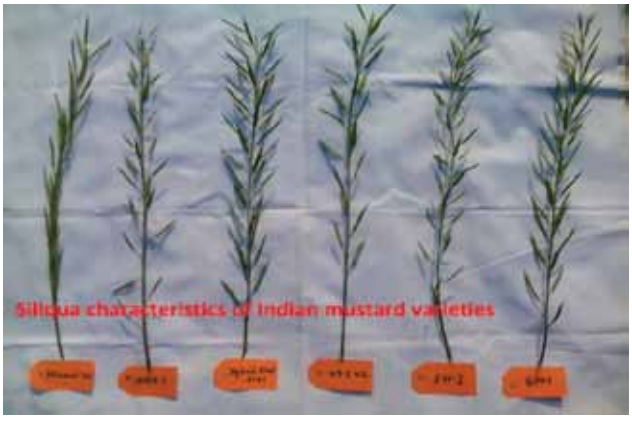
The Centre has maintained 117 varieties of Brassica group as per details given as under:

Name of the species	No. of varieties	Source
Brassica juncea	81	ICAR/SAU
Brassica carinata	04	ICAR/SAU
Brassica rapa	26	ICAR/SAU
Brassica napus	06	ICAR/SAU

Table 18: Progress of DUS testing

Crop	New		VCK	FV	Total	Date of Monitoring	Chairman
	1st yr	2nd yr					
Indian mustard	3	1	3	6	13	4 March, 2015	Dr. K.H. Singh, Principal Scientist, DRMR, Bharatpur
Rapeseed	-	-	-	7	7		
Total	3	1	3	13	20		

Twenty varieties of rapeseed & mustard were planted in three different dates due to receipt of the seed in different dates. Rapeseed variety JENG XARIAH had plants of Indian mustard (*B. juncea*) as well. Segregation for plant height, siliqua angle and other traits was observed in farmers' varieties namely, Kartika, Swetasari, Baghi sarson, Luthi sarson and Sarson Loothi. Another farmer's variety, Swetasari also had mixtures of two different ecotypes yellow sarson and toria of B. rapa. Sterile plants were observed in Hybrid Mustard 5121.



In addition, 117 varieties were maintained following selfing /sibbing mating system. All observations were recorded and data analysis was carried out. Certificates of registration were issued in respect of two extant varieties however, awaited for one each new and VCK variety each.

2.6.12 Dr. Panjabrao Deshmukh Krishi Vidyapeeth (PDKV), STRU, Akola

It is one of the DUS testing Centres for pigeon pea and safflower. The Nodal centre for pigeon pea isAICRP on Pigeon pea at IIPR, Kanpur and for safflower the Nodal centre is at Directorate of Oilseeds(DOR), Hyderabad. During the reporting period, 24varieties of safflower and 63 varieties of pigeon pea were grown for characterization and maintenance as under:

Safflower (24)	Pigeon pea (63)
A-1, JSF-1, Nira, NARI-NH-1, GMU-2369, A-2, JSI-7, Mangira, NARI-H-15, NARI–38, A-300, JSI-73, Sharda, DSH-129, SSF–658, AKS-207, JSI-97, PBNS-12, MMS, Bhima, JSI-99, JLSF-414, C2829-5-3A-6, Girna, NARI-6, PBNS-40, MSV-10-1-5	UPAS-120, Vamban-1, TAT-10, AK-101, Manak, GT-100, GS-1, MA-6, Paras, CO-6, LRG-38, MA-3, AL-201, GT-101, TS-3, MAL-13, AL-15, ICPL-8863, ICPL-85063, NDA-1, PUSA-992, TTB-7, BDN-2, Pusa-9, PUSA-855, AKT-8811, LRG-30, DA-11, PUSA-84, WRP-1, BSMR-736, Azad, PUSA-33, JKM-7, PT-221, Amar, PUSA-991, BSMR-853, BDN-708, Birsa Arhar-1, PUSA-2001, ICPL-87119, CO-5 Bahar, PUSA-2002-02, GT-1, HY-3C, T-7, ICPL-151, C-11, Vamban-2, CO-7, ICPL-87, GAUT-00IE, ICPL-332, JKM-189, CORG-9701, JA-4, TV-1, PKV-TARA, GC-11-39, T-15-15, AK-022

The progress of DUS testing is given in Table as under:

Table 19: Status of Pigeon pea DUS testing

Crop	New		VCK	FV	Total	Date of Monitoring	Chairman
	1st yr	2nd yr					
Pigeon pea	10	02	02	05	19	26 December, 2014	Nodal Officer, DUS Centre, Dr. PDKV, Akola

2.6.13 Central Plantation Crop Research Institute (CPCRI), Kasaragod

Coconut (*Cocos nucifera* L.) is earmarked to CPCRI for DUS testing by PPV&FR Authority. The progress of maintenance breeding / characterisation is as under:

Name of the species	No. of varieties	Source
Coconut	11	ICAR-CPCRI

Observations on growth parameters *viz.* seedling height, petiole length, girth of seedling, number of leaves in crown, leaflet count, leaflet length, leaflet breath were recorded on seedlings of 11 reference coconut varieties, field planted during 2013, for generation of DUS test data. For development of database on released/extant coconut varieties the observation on fruit characters, namely quantity of tender nut water, weight, color, shape in polar and equatorial view of fruit, length and breadth of the fruit, husk thickness shape, length, breadth of husked fruit, thickness and weight of shell, fresh endosperm thickness, husked fruit weight, husk weight, dry endosperm weight were recorded on selected reference varieties. Further, to identify new descriptors suitable for DUS characterization a study on inflorescence characters such as lengths of inflorescence, inflorescence bearing portion, inflorescence stalk, girth of inflorescence stalk, number of spikelets, length of spikelet, length, breadth and circumference, of female flower, number of male flowers in 4 cm length of spikelet; weight of male flowers; length of the basal portion of the spikelet (from base to first female flower); length of male flower bearing portion of the spikelet; length, breadth and L/B ratio of female flower was undertaken in the dwarf reference varieties. Analysis of variance indicated significant differences among the varieties indicating scope for utilization in varietal discrimination.

About 40 healthy seed nuts of selected reference/ released /extant coconut varieties viz. COD, WCT, Kalpa Pratibha, Kalpa Dhenu, Kalpa Mitra, Kalpa Haritha, Kalpatharu, SNRT, Chandra Kalpa, Kera Chandra, Kalparaksha, GBGD, LMT, Spicata Tall, MOD, CGD, MYD were sown in polybags for generation of seedlings for DUS testing and seedling observation.

In case of registration of coconut varieties, certificates of registration have been issued for six extant notified varieties and one for new category and two for extant notified are pending. Seven applications in the category of farmers have also been recommended for testing. Five applications of VCK category have been recommended for On-site DUS testing and one is pending.

2.6.14 Indian Institute of Horticultural Research (IIHR), Hasserghatta, Bengaluru

Rose

One hundred ten varieties were under maintenance breeding and characterization was made as per DUS testing guidelines. Ten of them were IIHR varieties, 22 were from ICAR system and 78 other commercial varieties.

Table 20: Status of DUS testing

Crops	VCK	Total	Date of Monitoring
Rose	2 varieties	2	18 November, 2014

DUS center: Two varieties were tested for uniformity & distinctness as compared to reference varieties. DUS testing was in naturally ventilated poly house. To facilitate DUS testing in roses, another centre at AICRP, NARP, Pune has been identified from the current year.

National Rose Repository: Tested lines were multiplied and added to National Rose Repository for maintenance. Ten commercial spray roses were added to the Rose Repository. Three cut flower rose varieties were added to the repository under poly house cultivation. Two hundred thirty two varieties were maintained in the National Rose Repository and sixteen varieties are being maintained under poly house cultivation. Digital rose repository was maintained both in terms of data and photos. Considering the rose cultivation in India, attempts are made to reclassify roses based on the basis of commercial importance. Area under loose flower production is being extended in India with the new varieties. Accordingly, rose varieties are reclassified into loose flower production and for cut flower production.

2.6.15 Directorate of Onion and Garlic Research (DOGR), Rajgurunagar, Pune

The Centre is responsible for the maintenance of reference varieties of onion and garlic and their DUS testing. The progress of DUS testing was as under:

Table 21: Progress of varieties undergone DUS testing

Crop	New		VCK	FV	Total	Date of Monitoring	Chairman
	1st yr	2nd yr					
Onion	1	-	4	-	5	13 February, 2015 & 17 April, 2015	Dr. K. E. Lewande, Former VC, Dr. BSKKV, Dapoli
Garlic	-	-	-	3	3		
Total	1	-	4	3	8		

In case of onion, one new variety and three extant varieties from DOGR and six extant varieties were from private sector whereas in garlic all five were from farmers. (JR-I)

Technical progress

The Center is maintaining 39 varieties of onion during*Rabi* and 10 during *Kharif* season and 18 varietiesof garlic. Out of these varieties, long day onion and garlic varieties were maintained at CITH, Srinagar; multiplier type onion varieties were maintained at TNAU, Coimbatore and remaining varieties were maintained at DOGR, Pune and IARI, New Delhi. The onion varieties were maintained as per the mandate during *Kharif* and *Rabi* seasons whereas garlic varieties were maintained during Rabi season.

Evaluation of DUS *Kharif* Onion varieties

Ten *Kharif* onion varieties viz., Agrifound Dark Red, Arka Kalyan, B-780, Bhima Raj, Bhima Red, Bhima Shubra, Bhima Shweta, Bhima Dark Red, Bhima Super and N-53 were sown on 21 June, 2014 and transplanted on 12 August, 2014 on raised beds.

Evaluation of DUS *Rabi*Onion varieties

Thirty nine *Rabi* onion varieties were sown on 18 November, 2014 and transplanted on 11 January, 2015. Crop was harvested and all the observations were taken.

Evaluation of DUS Garlic varieties

Eighteen garlic varieties viz., Bhima Omkar, Bhima Purple, G-1, G-41, G-50, G-282, G-323, G-386, GG-2, GG-3, GG-4, Godawari, Ooty Local, Phule Baswant, Rani Bennuar Local, Sikkim Local, Silkuei Local and Leh Local along farmers' varieties were planted on 20 October, 2014 and all the observations were recorded.

2.6.16 Indian Institute of Oilseeds Research (formerly DOR), Hyderabad

DOR was assigned for DUS testing for Castor (*Ricinus communis* L.), Sunflower (*Helianthus annuus* L.) & Safflower (*Carthamus tinctorious* L.) and the progress of maintenance breeding / characterization & DUS testing is given as under:

Table 22: Status of reference varieties under maintenance

Crops	No. of reference varieties
Castor	3
Sunflower	3

Table 23: Progress of varieties under DUS testing

Crop	New		VCK	Date of Monitoring	Chairman
	1st yr	2nd yr			
Castor	1	Nil	5	-	-
Sun-flower	28	3	Nil	4 February, 2015	Dr. D.M. Hegde, former Project Director, DOR
Total	**29**	**3**	**5**		

Monitoring Team visited the Sunflower DUS trial on 4 February, 2015 under the Chairmanship of Dr. D. M. Hegde, former Project Director, Directorate of Oilseeds Research, Hyderabad along with representatives from four private seed companies. The team was satisfied with the expression of claimed characteristicsand data recording.

2.6.17 Directorate of Rice Research, (DRR) Hyderabad

IIRR formerly known as DRR is the principal Nodal centre for DUS testing in rice. During the period under report, the centre has undertaken maintenance breeding / characterization as under:

Name of the species	No. of varieties	Source
Rice	140	DRR/ICAR

The progress of DUS testing is shown in the Table as given under:

Table 24: Progress of varieties under DUS testing

Crop	New		VCK	FV	Total	Date of Monitoring	Chairman
	1st yr	2nd yr					
Rice	62	13	7	248	329	4 Novem-ber, 2014	Dr. L.V. Subba Rao

Out of 62 new varieties, 5 belonged to new category from Public sector and all 9 VCKs from private sector. There were 248 farmers'varieties. The farmers' varieties were sown late and thus the photosensitive varieties appeared to be of short duration and the expression of varietal morphology was also not adequate. The monitoring of DUS trial was made under the Chairmanship of Dr. L.V. Subba Rao on 4 November, 2014.Dr. R.R. Hanchinal visited DUS testing plots at DRR farm at ICRISAT Campus on 13 September, 2014.

2.6.18 Assam Agricultural University (AAU), Jorhat

It is one of the DUS centres of Rice (*Oryza sativa* L)for DUS testing as well for the farmers' varieties in the North-Eastern Region. The progress of maintenance breeding and characterization is as under:

Table 25: Progress of variety under maintenance breeding / characterization

Name of the species	No. of varieties	Source
Oryza sativa L	15	Own released & SAU

Table 26: Status of varieties under DUS testing

Crop	FV	Date of Monitoring	Chairman
Rice	391	2 December, 2014	Dr. S. R. Dhua, Former Principal Scientist, CRRI, Cuttack

Monitoring progress

Out of 391samples of farmers' varieties received, 27 did not germinate, when sown in the field. In a few more cases, there was poor crop establishment even after transplanting; the population size was not adequate for GoT. Ultimately, only 353 varieties were subjected to GoT. About 10% of the varieties were in maturity while two of them did not complete flowering. The observations of vegetative and reproductive stages were recorded. Overall management of the experiments was good. It was suggested that the varieties of almost similar duration could be put together in the sub-groups for GoT. Grow out Testing of 353 farmers' varieties were completed on 62 characters. The centre has filed 20 farmers' varieties of rice which were also undergone GoT.

2.6.19 Department of Seed Science and Technology (DSS&T), Tamil Nadu Agricultural University, Coimbatore

Rice, Sunflower, Black gram and Green gram are earmarked for DUS testing to the TNAU. DUS testing was conducted for 12 rice entries including panicles for uniformity test. All the morphological characteristics were documented. The observation on seed morphological and chemical traits were recorded and sent to Authority. Similarly, sunflower DUS testing was conducted for

39 sunflower entries. All the morphological traits were characterized and documented. The observation on seed morphological traits recorded. The progress of DUS testing is as under:

Table 27: Progress of DUS testing in Rice and Sunflower

Crop	New		FV	Ref varieties	Panicles for uniformity test	Total	Date of Monitoring	Chairman
	1st yr	2nd yr						
Rice	3	-	3	4	2	12	21 January, 2015	Dr. L.V. Subba Rao, Principal Scientist & Nodal Officer, DRR Hyderabad,
Sunflower								
Hybrids / A Line	28	3	-	13	-	44	27 February, 2015	Dr D. M. Hegde, Chairman, & Former Project Director, DOR, Hyderabad Dr. Mangesh, Scientist, DOR, Hyderabad
R line	7	1		4	-			
*Black gram	-	-	3	-	-	3	-	-
*Green gram	-	-	3	-	-	3	-	-
Total	38	4	9	21	2	62		

* The blackgram and green gram entries did not perform well at the center. The failure may be due to non-adoptability of the varieties to this agro climatic zone and heavy winter prevailed during crop period (December,2014-January, 2015)

Monitoring progress:

a. Rice

Field was well maintained with good crop growth. Data was recorded as per the technical guidelines and most of the claims made by the applicant matched with the observations. DUS tests was conducted well.

b. Sunflower

Conducting of DUS trials were laid systematically and there was excellent expression of all the entries with good plant stand. At TNAU monitoring of the DUS trial was conducted after 60-65 days after sowing . In order to avoid the soil-borne diseases, the DUS site was shifted to adjacent plot.

2.6.20 Pearl millet Research Station, Junagadh Agril. University, Jamnagar

The Pearl millet Research Station at Jamnagar undertakesDUS testing of Castor (*Ricinus communis* L.) on regular basis. During the reporting year, 6 varieties and 11castor hybrids were undergone DUS testing.The hybrid trial comprised of 2 entries (1 new, 1 VCK) along with 4 reference varieties and trial consisted of 4 VCK candidate entries along with 7 reference entries which were sown on 26 August, 2014 at Pearl Millet Research Station, JAU, Jamnagar. The expression of the crop and plant stand was found to be satisfactory and observations were recorded properly. The monitoring team consisting of Dr. N. Mukta and Dr. C. Lavanya, visited castor DUS trials at Pearl Millet Research Station, JAU, Jamnagar on 27 November, 2014.

Visits of VIPs:

Sr. No.	Name of Visitors	Date	Purpose
1	Dr. C. J. Dangaria, Director of Research, Junagadh Agricultural University, Junagadh	28 December, 2014	To visit the DUS expt. & Pearl millet Research Station
2	Dr. A. R. Pathak, V. C., JAU, Junagadh	27 January, 2015	To visit the Pearl millet Research Station, JAU, Jamnagar.
3	Dr. Desai, Director of Research, JAU, Junagadh		

2.6.21 Indian Institute of Wheat and Barley Research (IIWBR), Karnal

IIWBR, Karnal is the Nodal center for wheat (Bread wheat, Durum wheat and other *Triticum sp*.) and barely. The IIWBR is maintaining reference collection of wheat varieties. The species wise detail is given under:

Name of the species	No. of varieties	Source
T. aestivum	338	Released varieties (after 1965)
T. durum	51	Released varieties (after 1965)
T. dicoccum	06	Released varieties (after 1965)
Triticale	06	Released varieties (after 1965)
Old Cultivars	73	Released varieties (before 1965)

The progress of DUS trials in wheat during 2014-15 is as under:

Crop	New		FV	Total	Date of Monitoring	Chairman
	1 st yr	2 nd yr				
Bread Wheat	**1**	**5**	**19**	**25**	30 March, 2015	Dr. J.P. Tandon (Former ADG (FFC), ICAR, New Delhi
Durum Wheat	**-**	**1**	**1**	**2**		
Total	**1**	**6**	**20**	**27**		

Twenty seven varieties of wheat including 20 farmers' varieties, 6 private sectors and one new variety from public sector were tested for DUS against 87 reference varieties. The monitoring was carried out under the Chairmanship of Dr. J.P. Tandon, Former ADG (FFC), ICAR, New Delhi along with Nodal officer Dr. Sushila Kundu, Principal Scientist, IIWBR, Karnal and Shri D.S. Misra, representative of PPV&FRA, New Delhi. The crop was in the early dough stage and most of the candidate varieties of DUS trials expressed the claimed characteristics at the time of monitoring and observations were recorded accordingly. The variation in various DUS characters was observed in candidate varieties namely Pushkar plus, Mundal, Ajeet 110, Jeeven, Gehun, Jharna, Bhagat 1, JP 168, Astha Gold and Sharbati.

Barley

During *Rabi* season 2014-15, 86 genotypes of barley (*Hordeum vulgare* L.) were grownand evaluatedin

RCBD design in 3 replications at Karnal and Durgapura centresfor recording 32 descriptors for developing DUS test guidelines. Task Force under the Chairmanship of Dr. S.C. Gulati, Former Principal Scientist, IARI, New Delhi had two meetings and finalized the DUS testing guidelines for barley in consultation with technical officers of the Authority and the experts. The members of the Task Force consisted of Dr. R.P.S. Verma, Principal Scientist & Principal Investigator (Barley Network),IIWBR, Karnal; Dr. Sushila Kundu, Principal Scientist, IIWBR, Karnal; Dr. Mahesh Shrimali, In-charge AICW&BIP, ARS (RAU), Durgapura, Jaipur and Dr. S. R. Vishwakarma, NDUA&T, Faizabad. It was decided that Directorate of Wheat Research, Karnal to serve as a Nodal centre and Narendra Dev University of Agriculture & Technology, Faizabad and Agriculture Research Station, (Swami Keshwanand Rajasthan Agriculture University), Durgapura, Jaipur as Co-Nodal centres for DUS testing.

2.6.22 Indian Agricultural Research Institute (IARI), Regional Station, Indore

The Center has maintained 130 varieties of wheat including80 breadwheat, 46 durum wheat and 4 dicoccum wheat which were procured from IIWBR, Karnal / ICAR / SAUs. The status of DUS testing of wheat during the reporting year is as under:

Table 28: Progress of varieties under DUS testing

Crop	New	FV	Total	Date of Monitoring	Chairman
Wheat	1	19	20	18 March, 2015	Dr. J.P. Tandon (Former ADG (FFC), ICAR, New Delhi

Joint observations were made for all the descriptors given by the applicants in the field. The conduct and management of the DUS trials was satisfactory. The monitoring was conducted for 20 varieties. Variations were observed in all farmers' varieties for one or other characters and were not found uniform.

During the reporting period, Dr. Bassi Fillipo, Durum Breeder, ICARDA, Syria; Dr. A. K. Joshi, South Asia Co-ordinator, CIMMYT, Kathmandu, Nepal and Dr. Alister, Consultant, CIMMYT, Mexico visited the station.

2.6.23 Govind Ballabh Pant University of Agriculture and Technology (GBPUA&T), Pantnagar

The progress of maintenance breeding in sorghum (*Sorghum bicolor* (L.) Moench) including forage sorghum is as under:

Table 29: Progress of varieties under maintenance breeding/ characterization

S. No.	Source	Reference varieties
1	GBPUA&T, Pantnagar	UP Chari 2, Pant Chari 3, Pant Chari 4, Pant Chari 5, Pant Chari 6, Pant Chari 7, Pant Chari 8, Pant Chari 9
2	IARI, New Delhi	Pusa Chari 615, Pusa Chari 1002, Pusa Chari 1001, Pusa Chari 121, Pusa Chari 23
3	HAU, Hisar	HC 136, HC 171, HC 260, HC 308, HJ 513, SSG 59-3
4	GAU, Surat	GFS 5, GFS 4, CSV 21 F, GJ 39, GJ 37, SURAT 1
5	Farmers' variety	Rampur Local
6	VCK	Gwalior Local, Rajasthan Local, Jalna Local, Golden Local
7	Madhya Pradesh	MP Chari
8	DSR, Hyderabad	SPV 1616, RS 29, RS 673, SPV 462, CSV 15, CSV 17, 2219 B, CS 3541, M 35-1, C 43, MANT 1
9	MPKV, Rahuri	SSV 84
10	ICRISAT, Hyderabad	MR 750
11	RVSKVV, Indore	IMS 9B
12	PDKV, Akola	104 B, AKMS 14 B, AKR 150
13	JNKVV Jabalpur	JJ 741, JJ 1041
14	UAS, Dharwad	DSV 4

Maintenance Breeding

Maintenance breeding of fifty one sorghum genotypes including forage sorghum reference varieties, sorghum example varieties, extant varieties, farmers' varieties and varieties of common knowledge was done by planting single plant progeny rows (SPPR) of each genotype . The planting for maintenance breeding was done on 18 June, 2014. All plants in each SPPR were covered by pollination bags before flowering to maintain genetic purity. At the time of harvesting, selection for true to the type plants between rows was practiced rejecting aberrant/ non-uniform and unhealthy rows. Each selected plants from selected rows were harvested and threshed individually to maintain genetically pure seed stock of each reference variety/example variety/VCK/FV for next year planting for maintenance as well for use in the DUS trial as the reference variety, if needed.

2.6.24 Indian Institute of Millets Research (Formerly DSR), Hyderabad

Sorghum

During the period under report, two field trials were conducted during *Kharif*, 2014 and *Rabi* 2014-15 for examining the DUS for candidate varieties of sorghum. Nineteen candidate varieties were tested for DUS traits in the *Kharif* season and seven candidate varieties were tested in the *Rabi* season along with the corresponding reference varieties. Maintenance breeding was undertaken for 56 reference and example varieties (varieties/parental lines/hybrids) during *Rabi*2014-15 under enforced selfing/ controlled pollination.

Table 30: Status of variety under maintenance / characterisation

Name of the species	No. of varieties	Source
Sorghum bicolor (L.) Moench	115	ICAR and SAU

Table 31: Progress of DUS testing

Crop – Sorghum	New		FV	Total	Date of Monitoring	Chairman
	1st yr	2nd yr				
Kharif 2014	6 (2Pvt+ 4Pub)	9 (7Pvt+ 2Pub)	4	19	24 September, 2014	Dr. J.V Patil
Rabi 2014-15	3 (1Pvt+ 2Pub)	3 (Pvt)	1	7	7 February, 2015	Dr. J.V Patil
Total	9(3Pvt+ 6Pub)	12 (10Pvt+ 2Pub)	5	26		

Brief observations during monitoring:

***Kharif* 2014**

The trials were sown on right time and the layout and maintenance of the trials was satisfactory. The plant stand was also satisfactory. The overall crop growth and expression of morphological characters were very good in almost all of the candidate varieties. The Nodal officer selected appropriate reference varieties for some of the candidate varieties and farmers' varieties based on grouping characters. In some of the candidate varieties like GK 4009 (4), DGJ 027 (2), DGJ 025 (1), Vayunowka Jonna (3) and Pelala Jonna (3) (all 1st year entries); KSR 6173 (1), KSR 6171 (2), KSR 6178 (2) and KSMS 283 (1) (all 2nd year entries), there were slight difference in the observed and claimed traits. The candidate variety DGJ 025 appeared like sweet sorghum or *Rabi* entry. In case of CSV 28 some plants were medium in height with early flowering while majority were tall and late flowering.

Dr. R.R. Hanchinal, Chairperson, PPV&FRA visited the DUS testing trials on 2August, 2014. Dr. Hariprasanna K., Nodal Officer along with Dr. JV Patil, Director, DSR also accompanied the field visit and explained the DUS testing trials for different candidate varieties. The crop was in booting to early flowering stage.

***Rabi* 2014-15**

The trials were sown on right time and the overall crop growth and expression of morphological characters were satisfactory in all the candidate varieties. Some of the candidate varieties like CSV 26 (1), DGJ 025 (1), Aparna (1), KSR 6313 (3) and KSR 6310 (3), there was slight difference in the observed and claimed traits. KSR 6310 had slightly less compact panicle density compared to KSR 6313. Both had bold and lustrous grains.

Table 32: Status of registration of New / VCK / Extant notified

/ farmers' variety

Crop	No. of Varieties	No. of Varieties	No. of applications filed			Certificates issued	Pending applications	Remarks
			Extant	Notified	New VCK			
Sorghum	184	58	41	32	27	61	40	7 = applications closed 3 = O3 issued 7 = Under DUS Testing 23 = Under processing

2.6.25 Division of Vegetable Sciences, Indian Agricultural Research Institute (IARI), New Delhi

The Centre has been assigned DUS testing in cauliflower and cabbage. The status of DUS testing under the period of report is as under:

Table 33: Progress of vegetables under DUS testing

Crop	New		VCK	Total	Date of Monitoring	Chairman
	1st yr	2nd yr				
Cauliflower	6	1	1	8	19 December, 2014	Dr. P. Kalia, Prof. & Head, Vegetable Division, IARI, New Delhi
Cabbage	-	-		-		

Brief observations during monitoring:

In cauliflower, seven entries (six new, one VCK) have undergone DUS testing at Division of Vegetable Science, IARI, New Delhi. One entry (new) SCF-5057 was evaluated in early group and five new entries (SCF-5016, SCF-5008, SCF-5022, SCF-5029 and SCF-5033) and one VCK entry (NCFD-7122) in mid-early group were tested for DUS characteristics. DUS testing report for 2014-15 was submitted to PPV&FRA.

German delegation along with Chairman PPV&FRA,

Joint Director (research), IARI visited DUS cauliflower trial plots on 16 December, 2015.

Progress in Onion and Garlic DUS testing

The latest status of maintenance breeding / characterisation in respect of onion *Alliumcepa* L. and garlic *Alliumsativum* L. is as under:

Name of the species	No. of varieties	Source
Allium cepa L.	35	Own released/ICAR/SAU
Allium sativum L.	12	ICAR/SAU

The progress of DUS testing during the reporting period is as under:

Table 34: Progress of varieties under DUS testing

Crop – Sorghum	New		VCK	FV	Total	Date of Monitoring	Chairman
	1st yr	2nd yr					
Garlic	3	-	-	3	3	30 March, 2015	Dr. P. Kalia Dr Anil Khar Dr. S. Islam
Onion	5	-	5	-	5		
Total	8	-	-	-	-		

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In onion, five entries Bhima Dark Red, Bhima Shakti, Gota, Bhima Shweta and Bhima Shubra were evaluated alongwith other check varieties of onion. It was observed that most of the varieties were having medium green foliage with no foliage cranking. Due to unfavourable weather, the height of the plants and number of leaves were less than the usual and the bulb size was also not upto the potential. Most of the bulbs were medium to small in size.

In Bhima Dark Red, Bhima Shakti and Gota color varied from light red to dark red and the bulb color and shape was not uniform. Further, the adherence of skin was very poor. In Bhima Shweta and Shubra, color was white and skin adherence was strong. Further bulbs were uniform in color with no segregation in bulb color.In *Rabi* season, three farmers' varieties supplied by farmers were evaluated alongwith the local checks in a randomised block design with three replications. In onion, five varieties were evaluated along with local checks

2.6.26 Regional Station (Vegetables) Katrain, Kullu Valley

The Station has been earmarked as DUS centre for Cabbage & Cauliflower.Fourteencabbage varieties namely Golden Acre, Pusa Mukta, Pusa Drum Head, Pusa Ageti, Pride of India, Pride of Asia, Kinner Red, Pusa Cabbage-1, 83-1, RRM, MR-1, 6A, KTCBH-81 and C-121 were characterised and their maintenance breeding was in progress. Ten snowball cauliflower varieties namely Pusa Himjyoti, Himlata-1, Himlata-2, Mukutmani, Autumn Giant, Pusa Snowball-1, King King, Snowball-16, Pusa Snowball K-1 and Pusa Snowball K-25 were characterised and they were maintained.

Table 35: Status of maintenance breeding / characterisation

Name of the species	No. of varieties	Source
Cabbage	14	Own/ICAR/SAU
Cauliflower (snowball group)	12	Own/ICAR/SAU

Cauliflower (Snowball): DUS testing of two candidate varieties of cauliflower namely SCF-5061 and SCF-608 was done with reference varieties Pusa Snowball K-1, Pusa Snowball-1, Pusa Snowball K-25 and Snowball-16. Recording of observations on reproductive characteristics was in progress. As far as DUS testing is concerned the same was undertaken during the reporting year in cauliflower as under:

Table 36: Progress of DUS testing in cauliflower

Crop	New	Total
	1st yr 2nd yr	
Cauliflower	1. SCF-5061 2. SCF-608	2

The centre has also applied for registration of cabbage (Pusa Cabbage-1) as an extant notified variety.

2.6.27 Regional Station (Rice), Karnal

The Regional Station is a Co-nodal centre for DUS testing in rice and maintained 12 reference varieties of rice for maintenance breeding / characterisation. The progress

of DUS testing during the reporting year is as under:

Table 37: Progress of varieties under DUS testing

Crop	New		FV	Total	Date of Monitoring	Chairman
	1st yr	2nd yr				
Rice	08	01	04	13	14 November, 2014	Dr. S.S. Atwal , Head, IARI, RS, Karnal

DUS testing of nine candidate varieties *viz*., (i) Nirmal-306 (NR-306) (ii) NR-09 (Sairam) (iii) Nirmal-366 (NR-366) (iv) NP-4008 (v) NPH-4002 (vi) NPH-4008 (vii) NP-4004 (viii) INH97288 and (ix) Pusa Basmati 1509 along with thirteen reference varieties and Grow out Test (GoT) of four farmers' varieties *viz*., (i) Sukara (ii) Basmati Ravi No.1 (iii) NAUR-1 and (iv) GNR-2 were undertaken at Regional Station, Karnal during *Kharif,* 2014. Out of these nine varieties, eight were under first year testing and one Pusa Basmati 1509 was under second year of testing.In addition, twelve reference varieties were raised in maintenance breeding block and seed of seven were retained after varietal maintenance.

2.6.28 Indian Institute of Vegetable Research (IIVR), Varanasi

The Centre is responsible for DUS testing in vegetables viz. tomato, brinjal, okra, cauliflower, cabbage, vegetable pea, French bean, pumpkin, bottle gourd, bitter gourd and cucumber. The status of maintenance breeding and characterization for each of the above vegetables is as under:

Tomato

Eighty one tomato reference varieties collected from different centres were maintained. These varieties were collected from various centers *i.e.* I.A.R.I., New Delhi (8); I.A.R.I., Regional Station, Katrain (2); I.I.V.R., Varanasi (5); B.C.K.V., Kalyani (1); C.S.A.U.A.&T. Kanpur (7); D.A.R.L., Pithoragadh(1);UAS, Dharwad (1); G.B.P.U.A.&T., Pantanagar (3); H.A.U., Hisar (3); H.A.R.P., Ranchi (5); I.I.H.R., Bengaluru (6); J.A.U., Junagadh (3); K.A.U., Vellanikkara (3); N.D.U.A.&T., Faizabad (5); ICAR Res. Comp. for N.E.H. Region, Meghalaya (1); O.U.A.&T., Bhubaneswar (10); P.A.U., Ludhiana (9); T.N.A.U., Coimbatore (1); Y.S.P.U.H.F., Solan (1); MPKV, Rahuri (2); SKUAS&T, Jammu (1);VPKAS, Almora (1); others (3).

Brinjal

Eighty nine brinjal reference varieties collected from different centres were maintained. These varieties were collected from various centers *i.e.* I.A.R.I., New Delhi (12); I.I.V.R., Varanasi (6); A.P.H.U., Rajendranagar, Hyderabad (2); C.S.A.U.A.&T. Kanpur (8); J.A.U., Junagadh (3); G.B.P.U.A.&T., Pantanagar (1); H.A.R.P., Ranchi (10); I.I.H.R., Bengaluru (9); J.N.K.V., Jabalpur (10); K.A.U., Vellanikkara (2); O.U.A.&T., Bhubaneswar (4); P.A.U., Ludhiana (3); P.D.K.V., Akola (1); R.A.U., Samastipur (2); T.N.A.U., Coimbatore (7); BCKV, Kalyani W.B. (2); Others (7).

Okra

Thirty eight okra varieties were collected from different centres for maintained as reference varieties for DUS Testing. These varieties were collected from various centers *i.e.* I.A.R.I., New Delhi (3); I.I.V.R., Varanasi (12); J.A.U. Junagadh (3); H.A.U., Hisar (5); M.P.K.V., Rahuri (2); P.A.U., Ludhiana (3); C.S.A.U.A.&T. Kanpur (3); R.A.U. Sabour (1); IIHR, Banglore (2); K.A.U., Vellanikkara (1); O.U.A.&T., Bhubaneswar (2) etc. The details of the reference varieties is as under:

S. N.	Varieties	S. N.	Varieties	S. N.	Varieties
1.	ARKA ABHAY (IIHR-SEL-4)	14.	HRB-55	27.	PUSA MAKHMALI
2.	ARKA ANAMIKA (IIHR-10)	15.	JBS-2	28.	PUSA SAWANI
3.	AZAD BHINDI-1	16.	KASHI LALIMA	29.	SB-2
4.	AZAD BHINDI-2	17.	KASHI LEELA (IIVR-11)	30.	SB-8
5.	AZAD BHINDI-3	18.	KASHI SATDHARI	31.	SUSHTHIRA (AE-286-1)

S. N.	Varieties	S. N.	Varieties	S. N.	Varieties
6.	BO-13	19.	NO.-136	32.	UTKAL GAURAV (BO-2)
7.	CO-2	20.	NO.315	33.	VARSHA UPAHAR
8.	D-1-87-5	21.	PANT A-4	34.	VRO-3 (KASHI MOHINI)
9.	GJO-3	22.	PARBHANI KRANTI	35.	VRO-4 (KASHI MANGALI)
10.	GO-2	23.	PHULE UTKARSH (GK-IV-3-3-3)	36.	VRO-5 (KASHI VIBHUTI)
11.	GO-3 (JNDOL-3-1)	24.	PUNJAB PADMINI	37.	VRO-6 (KASHI PRAGATI)
12.	HISAR NAVEEN (HRB-107-4)	25.	PUNJAB-7	38.	VROR-159
13.	HRB-231	26.	PUNJAB-8		

Cauliflower:

Ten cauliflower varieties were collected from AICRP (VC) centres of reference varieties for DUS Testing. These varieties were collected from various centers *i.e.* These varieties were collected from various centers *i.e.* I.A.R.I., New Delhi (2); I.A.R.I., Regional Station, Katrain (6); I.I.V.R., Varanasi (2) The crop was raised during the winter season of 2014-15 however only early and mid-group varieties were evaluated and sib-mating for maintenance. The list of reference variety is as under:

S. N.	Varieties	S. N.	Varieties
1	CCS-80	6	PSB-16
2	Kashi Agahani	7	PSB-1
3	Kashi Kuwari	8	Pusa Deepali
4	PSB K-1	9	Pusa Shakti
5	PSB K-25	10	Pusa Sharad

Cabbage:

Six cabbage reference varieties collected from different AICRP (VC) centres were collected for DUS testing. ***These varieties were collected from I.A.R.I., Regional Station, Katrain. ??? (JR-I)***

S. N.	Varieties	S. N.	Varieties
1.	Golden Acare	4.	Pride of India
2.	KGMR-1	5.	Pusa Dru Head
3.	Kinner Red	6.	Pusa Mukta

The crop was raised during the winter season of 2014-15. The data were recorded as per the DUS guidelines in the hill area.

Vegetable pea:

Forty two garden pea varieties were collected from different centres for maintained as reference varieties for DUS Testing I.A.R.I. (RS) Katrain (2); I.I.V.R., Varanasi (5); IIHR, Bengaluru (3); D.A.R.L., Pithoragarh (1); N.D.U.A.&T., Faizabad (5); G.B.P.U.A.&T., Pantnagar (3); H.A.U., Hisar (1); H.A.R.P., Ranchi (2); P.A.U., Ludhiana (5); MPKV, Rahuri (1); Dr. YSPHU&F, Solan (1); V.P.K.A.S., Almora (10); C.S.A.U.A.&T. Kanpur (3) etc. The crop was raised during the *Rabi* season of 2014-15. The off-type plants were rouged out and only true to type were maintained for further seed extraction. Seeds were extracted from each variety and stored after drying and seed treatment.

French bean:

Twenty four French bean varieties were collected from different centres to be maintained as reference varieties for DUS Testing. These varieties were collected from centers *like* I.A.R.I., New Delhi (2);I.A.R.I., Regional Station, Katrain (3); I.I.V.R. Varanasi (1); Dr.YSPH&F, Solan (4); MPKV, Rahuri (1), B.H.U., Varanasi (2); C.S.A.U.A.&T., Kanpur (1); C.H.E.S., Ranchi (3); V.P.K.A.S., Almora (3); IIHR, Bengaluru (3); IIPR, Kanpur (1) etc.

S.N.	Varieties (Bush Type)	S.N.	Varieties (Pole Type)
1.	Arka Anoop	1.	HAFB-2
2.	Arka Bold	2.	HAFB-3
3.	Arka Suvidha	3.	Kentuchi Wonder
4.	Azad Rajmah-1	4.	Laxmi
5.	Contender	5.	Phule Suyesh
6.	HUR-137	6.	Pusa Hemlata
7.	HUR-15	7.	Pusa Himalya
8.	IPR-96-4	8.	RCMFB-1
9.	Kashi Param	9.	SVM-1
10.	PDR-14	10.	Swarnalata
11.	Pusa Parvati	11.	UHFB-30
12.	Swarna Priya		
13.	VL Bean-2		
14.	VL Boni Bean-1		

Pumpkin:

Twenty one pumpkin varieties were collected from AICRP (VC) centres and evaluated as example varieties for preparation of DUS Test guidelines. These varieties were collected from various centres *i.e.*I.A.R.I., New Delhi (2); I.I.H.R., Bengaluru (1); I.I.V.R., Varanasi (6); A.A.U., Anand (1); C.S.A.U.A.&T. Kanpur (1); C.H.E.S., Ranchi (3); PAU, Ludhiana (1); N.D.U.A.&T. Faizabad (3); K.A.U., Kerala (1) and T.N.A.U., Coimbatore (2).The followings varieties were raised during *Kharif*, 2014 and Summer, 2015.

S. N.	Varieties	S. N.	Varieties	S. N.	Varieties
1.	ARKA ABHAY (IIHR-SEL-4)	14.	HRB-55	27.	PUSA MAKHMALI
2.	ARKA ANAMIKA (IIHR-10)	15.	JBS-2	28.	PUSA SAWANI
3.	AZAD BHINDI-1	16.	KASHI LALIMA	29.	SB-2
4.	AZAD BHINDI-2	17.	KASHI LEELA (IIVR-11)	30.	SB-8
5.	AZAD BHINDI-3	18.	KASHI SATDHARI	31.	SUSHTHIRA (AE-286-1)
6.	BO-13	19.	NO.-136	32.	UTKAL GAURAV (BO-2)
7.	CO-2	20.	NO.315	33.	VARSHA UPAHAR
8.	D-1-87-5	21.	PANT A-4	34.	VRO-3 (KASHI MOHINI)
9.	GJO-3	22.	PARBHANI KRANTI	35.	VRO-4 (KASHI MANGALI)
10.	GO-2	23.	PHULE UTKARSH (GK-IV-3-3-3)	36.	VRO-5 (KASHI VIBHUTI)
11.	GO-3 (JNDOL-3-1)	24.	PUNJAB PADMINI	37.	VRO-6 (KASHI PRAGATI)
12.	HISAR NAVEEN (HRB-107-4)	25.	PUNJAB-7	38.	VROR-159
13.	HRB-231	26.	PUNJAB-8		

Bottle gourd:

Thirty one bottle gourd varieties were collected from AICRP (VC) centres and evaluated as example varieties for preparation of DUS Test guidelines. These varieties were collected from various centers: I.A.R.I., New Delhi (4); I.I.V.R., Varanasi (6); I.I.H.R., Bengaluru (1); A.A.U., Anand (1); B.C.K.V., Kalyani W.B. (1); C.S.A.U.A.&T. Kanpur (2); SKUA&T, Jammu (2); H.A.U., Hisar (1); P.A.U., Ludhiana (2); G.B.P.U.A.&T., Pantnagar (2); N.D.U.A.&T, Faizabad (6); M.P.K.V., Rahuri (1); RAU, Samastipur (1) and T.N.A.U., Coimbatore (1).The followings varieties were raised during *Kharif*, 2014 and Summer, 2015.

S. N.	Varieties	S. N.	Varieties	S. N.	Varieties
1	ABG-1	12	NDBG-132	23	VR-1
2	Arka Bahar	13	NDBG-619	24	VR-2
3	CO-1	14	Pant Lauki-1	25	VRBG-136
4	GH-22	15	Pant Lauki-3	26	VRBG-6
5	Jora Botta	16	Punjab Komal	27	VRBG-7
6	Kalyanpur Long Green	17	Punjab Long	28	Samrat
7	Kashi Ganga	18	Pusa Naveen	29	JBG-50
8	KBGR-12	19	Pusa Samridhi	30	JBG-51
9	Narendra Dharidar	20	Pusa Sandesh	31	NDBG-10
10	Narendra Jyoti	21	Pusa Santusthi		
11	Narendra Rashmi	22	Rajendra chamtkar		

Bitter gourd:

Twenty five bitter gourd varieties were collected from AICRP (VC) centres and evaluated as example varieties for preparation of DUS Test guidelines.. These varieties were collected from various centers: I.A.R.I., New Delhi (4); I.I.H.R., Bengaluru (1); I.I.V.R., Varanasi (2); B.C.K.V., Kalyani W.B.(1); C.S.A.U.A.&T. Kanpur (2); K.A.U., Vellanikkara (1); N.D.U.A.&T, Faizabad (2), M.P.K.V., Rahuri (3); P.A.U., Ludhiana (1); Dr. YSPH&F, Solan (1), T.N.A.U., Coimbatore (1); HARP, Ranchi (2). DARL, Pithoragarh (1); G.B.P.U.A.&T., Pantnagar (2); Others (1). The followings varieties were raised during*Kharif*, 2014 and Summer, 2015.

S. N.	Varieties	S. N.	Varieties	S. N.	Varieties
1	Arka Harit	10	Kashi Urvashi	19	Punjab-14
2	BBGS-09-01	11	Meghna-2	20	Pusa Do Mausami
3	CO-1	12	NDBT-7	21	Pusa Vishesh
4	DARL-43	13	NDBT-9	22	Sel-1
5	DBGS-37	14	Pant Karela-1	23	Sel-5
6	HABG-21	15	PBIG-02	24	Solan Hara
7	HABG-22	16	Phule green gold	25	VR-333
8	Hirkani	17	Phule Ujawala		
9	Kalyanpur Baramashi	18	Preethi (MC-84)		

Cucumber:

Twenty four cucumber varieties were collected from AICRP (VC) centres and evaluated as example varieties for preparation of DUS Test guidlines. These varieties were collected from various centers: I.A.R.I., Regional Station, Katrain (1); H.A.R.P., Ranchi (3); B.C.K.V., Kalyani(1); G.B.P.U.A.&T., Pantnagar (3);M.P.K.V., Rahuri (2); P.A.U., Ludhiana (1); Dr. YSPH&F, Solan (2), SKUA&T, Jammu (1); I.I.V.R., Varanasi (3); C.S.A.U.A.&T. Kanpur (1); Others (6). The followings varieties were raised during *Kharif*, 2014 and Summer, 2015.

S. N.	Varieties	S. N.	Varieties	S. N.	Varieties
1	Phule Shubhangi	9	Kalyanpur Green	17	VRC-26
2	Punjab Naveen	10	JLG (Kabira)	18	VR-101
3	Swarna Ageti	11	Pant Khira-1	19	DC-54
4	Swarna Poorna	12	Cucumber Long Green	20	DC-78
5	Swarna Sheetal	13	PCUC-09	21	Seven Star
6	Himangi	14	PCUC-10	22	Dev Kamal
7	K-75	15	KTCS-07	23	Goa Local
8	K-90	16	No-374	24	Gujrat Cucumber Long

The crop was raised during the *Kharif* season of 2014 and Summer, 2015 with proper maintenance and selfing programme. The off-types plants were rouged out and only true to type plants were maintained for further seed extraction.

Brief observations during monitoring:

- DUS Testing of 122 brinjal, 74 tomato, 10 cauliflower, 51 okra, 11 bottle gourd, 17 bitter gourd, 3 cucumber and 5 pumpkin varieties along with its reference varieties.
- Four varieties were not uniform *i.e.* NBJ-29, HYBRID-744, NBJ-39 and NBJ-98 in brinjal and 3 farmers' varieties *i.e.* Deshi-2, Deshi Kumro and Deshi Kumra in pumpkin and one variety with denomination as Deshi Lao in bottle gourd.

Sixteen applications were filed for registration as per details given below in the Table.

Name of Institute	Crops	Names
Junagadh Agricultural University, Junagadh	Tomato (2)	Gujrat Tomato-1 (GT-1), Junagadh Tomato-3 (JT-3)
	Brinjal (3)	Gujarat Junagadh Brinjal-2 (GJB-2), Gujarat Junagadh Brinjal-3 (GJB-3), Junagadh Brinjal Green Round-1 (JBGR-1)
	Okra (2)	Gujarat Okra Hybrid-2 (GOH-2), Gujarat Junagadh Okra-3) and Gujarat Junagadh Okra Hybrid (GJOH-3)
Indian Institute of Vegetable Research, Varanasi	Okra (8)	Shitla Uphar (DVR-1), Shitla Jyoti (DVR-2), Kashi Bhairo (DVR-3), Kashi Vibhuti (VRO-5), Kashi Pragati (VRO-6), Kashi Satdhari (IIVR-10), Kashi Lila (IIVR-11) and Kashi Kranti (VRO-22)
	Vegetable pea (1)	Kashi Kranti (VRO-22)

2.6.29 Jawaharlal Nehru Krishi Vishwa Vidyalaya (JNKVV), Jabalpur

Sesame and Niger

The Centre has been entrusted DUS testing in respect of Sesame and Niger as Nodal centre. The centre has maintained 85 varieties of Sesame and 15 varieties of Niger mostly procured from the SAU System or ICAR own bred.

Table 38: Progress of varieties under DUS testing

Crop	Farmers' Variety	Total	Date of Monitoring	Chairman
Sesame	Reg/2014/499	4	31 May, 2014	Chairman Dr. S.K. Rao, Dean, Faculty of Agriculture, JNKVV, Jabalpur (MP) Member Dr. Deepak Sharma, Principal Scientist, IGKV, Raipur
	Reg/2013/645			
	Reg/2014/889			
	Reg/2014/484			

Brief observations during monitoring:

Field trials of four farmers' varieties of sesame were grown along with the reference varieties as per the DUS guidelines of PPV &FRA. One farmer variety i.e. K-Balisara-LAKTIMACHIwas observed extremely good having good plant type, medium height, good capsule bearing habit, narrow leaves(High harvest Index), and good branching habit. Overall crop condition was satisfactory and DUS testing experiment was preciselyconducted. During the reporting period, Dr. K.S. Varaprasad, Project Director, IIOR, Hyderabad visited the University and inspected the DUS trials.

2.6.30 National Research Centre for Orchids (NRCO), Pakyong, Sikkim

The crops/species earmarked for the center are Orchids (*Cymbidium, Dendrobium, Vanda, Phalaenopsis, Cattleya, Oncidium and Paphiopedilum)* and the status of maintenance breeding/characterization is as under:

Name of the species	No. of varieties	Source
Cymbidium	30	Variety of Common Knowledge
Dendrobium	14	
Vanda	23	
Phalaenopsis	50	
Cattleya	10	
Oncidium	40	
Paphiopedilum	8 (species)+ 1 (hybrid)	Species (For Initial characterization)

Status of Orchid *Paphiopedilum*:

Seventy six morphological descriptors of

Paphiopedilum were finalized and DUS Test Guidelines of *Paphiopedilum* was under progress.

2.6.31 Sugarcane Breeding Institute Research Centre (SBIRC), Agali, Palakkad

For maintenance breeding, 189 reference varieties were clonally produced and maintained in the field. Two farmers' varieties; Dhyaneshwar-16 and Shiddhgiri-1234 were planted in polybags and later transplanted to field for grow out testing. Three test varieties Co 0403, Co 06027 and Co 06030 along with seven reference varieties were planted in the polybags initially and were planted in field as per DUS test guidelines in March, 2015. The status of DUS testing is as under:

Table 39: Details of DUS testing of candidate varieties

Crop	New	FV	Date of monitoring
	1st year		
Sugarcane (tropical)	3	2	Planted in March 2015. Monitoring will be conducted next year

2.6.32 Sugarcane Breeding Institute (SBI), Coimbatore

During the reporting year, SBI maintained 183 reference varieties of sugarcane for maintenance breeding and characterization. Three applications of new variety of sugarcane tropical and two farmers' varieties undergone for DUS testing in first year and planting was done in March, 2015. Monitoring will be undertaken in the next year. Twenty VCK and seven new varieties of sugarcane were filed and 20 certificates of registration were issued by the Authority and the remaining seven for new variety category are pending.

2.6.33 Indian Institute of Sugarcane Research (IISR), Lucknow

It is one of the principal DUS Centres for sugarcane (*Saccharum L.*) for the varieties developed and recommended for cultivation in the Northern India. The progress of maintenance breeding and characterization is as under:

Name of the species	Number of varieties	Source (own released/ICAR/SAU
Saccharum L.	142 (Including clone of AICRP(s)	All

DUS testing: None, but seedlings of two farmers'varieties (DESI No-1 and DESI No-2) of which seed material was received during January, 2015 and subsequently seedlings were raised, was transplanted in the field to conduct Grow out Test (GoT) in the next season. Seed material of two sugarcane varieties Co 05011 and Co 0237 was received for DUS

Testing in the month of February, 2015 and seedlings along with 7 reference varieties were raised in polybags and will be transplanted in field very soon. DUS Testing data (2012-13& 2013-14) of three candidate varieties (Co 0118, Co 0238 and Co 0239) along with 10 reference varieties in the prescribed format has been sent to PPV&FR Authority.

2.6.34 Seed Research and Technology Centre (SRTC), Prof. Jayashankar Telangana State Agricultural University, Rajendranagar, Hyderabad

The Centre has been earmarked for DUS testing in respect of maize, green gram and black gram by the Authority since inception. During the reporting period, the progress of DUS testing undertaken is as under:

Table 40: Progress of DUS testing

Crop	New		VCK	FV	Total	Date of Monitoring
	1st yr	2nd yr				
Maize						1 October, 2014
Hybrids	30	21	8	7	66	
Inbreds	16	6	8		30	
Black gram Kharif Rabi				 5 3	 8	
Green gram Kharif Rabi				 9 3	 12	
Total	46	27	16	27	116	

Maize, Black Gram and Green Gram

The trials were conducted and the observations on the traits were duly recorded. In most of the cases, the expression of traits was as per the claim made by the concerned breeders. However, in case of OPVs *viz* Pant Sankul Makka-3 and Partap kanchan-2, variations observed in the expression of claimed traits. Further, in candidate entries namely, Jhinti Biri, Papibiri, Gavran and Kalamah flowering was not observed.

2.6.35 University of Agricultural Sciences (UAS), Dharwad

Cotton, Wheat and Soybean are identified for DUS Testing for UAS, Dharwad. The progress of maintenance breeding of above crops is as under:

Table 41: Status of varietal maintenance using as reference varieties

Name of the species	Source(own released/ICAR/ SAU)	No. of varieties
G. hirusutum	UAS, Dharwad	Abhaditha
	Navasari Agricultural University	Anjali
		Deviraj
		G.cot-18
	Gujarat	JLH-168
	Coimbatore	Kanchana
	Khandwa, MP	Khandawa
	UAS, Bengaluru, Karnataka.	Laxmi

Name of the species	Source(own released/ICAR/ SAU)	No. of varieties
	TNAU, Tamil Nadu	MCU-10
	CICR, Coimbatore	Sumangala
	Regional Agriculture Research centre, Guntur	Narashima
	TNAU,CBE	MCU-9
	ANGRAU, Guntur.	NH-545
	UAS, Dharwad	RMPBS-155
	Coimbatore	Suman
	CICR,CBE	Surabhi
Durum wheat	Indore	HI 8381
	Pune	MACS 2846
	Ludhiana	PBW 34
	Ludhiana	PDW 34
	Ludhiana	PDW 215
	Ludhiana	PDW 274
	Hissar	WH 896
	ARNEJ	A 28
	Vijaypur	BIJAGA YELLOW
	NIPHAD	Baxi 288-18
	Ludhiana	PDW 291

The progress of DUS testing is as under:

Table 42: Status of varieties underDUS testing

Crop	New		VCK	FV	EDV IV	Total	Date of Monitoring	Chairman
	1st yr	2nd yr						
Cotton	68	33	53	1	45	200	18-19 December, 2014	Dr. Shreekanth S Patil, UAS, Dharwad
Soybean	1			1		2		
Wheat	1	1				2		
Groundnut				1		1	14 October, 2014	Dr. Mrinal Kuchlan, Scientist, DSR, Indore
Sesamum				3		3		
Total	70	34	53	6	45	208		

Cotton: During the reporting period, DUS testing was made in four trials.

Trial-I:Evaluation of DUS characteristics of Cotton varieties at UAS, Dharwad during *Kharif*, 2014

About 33 candidate varieties were evaluated for 2 years.About 49 new candidate varieties were evaluated for DUS Characteristics of Cotton for 1st year during *Kharif* 2014-15. Except three genotypes, there was not any deviation in DUS characteristics between the observed and claimed. However in NCS-1001 BG-II, 8 plants out of 60 (13.33%) recorded deviation in anther filament and petal spot (absent) as against claimed (present).

Trial-II: Evaluation of DUS Characteristics of Cotton for 1st year at UAS, Dharwad during *Kharif,* 2014

About 49 new candidate varieties were evaluated for 1st year. Except three genotypes there was not any deviation in DUS characteristics between observed and claimed. However in NCS-1001 BG-II, 8 plants out of 60 (13.33%) recorded deviation in anther filament and petal spot (absent) as against claimed (present). As many as ten plants out of 60 recorded deviation in leaf hairiness in PRCH-2257 (16.66%, medium) as against claimed (dense). JK1039 BG-II recorded poor germination resulted in insufficient number of plants for recording observations.

Trial-III: Evaluation of EDVs at UAS, Dharwad during *Kharif,*2014

As many as 67 essentially derived varieties were evaluated. All the EDVs were claimed as Bt. cotton resistant to cotton bollworms. There were 14 and 22 genotypes were BG-I and BG-IIrespectively. The presence of Cry-1 Ac and Cry 2Ab genes wasconfirmed with PCR using gene specific primers. Expression of Bt. protein was also estimated through quantitative ELISA tests. There was no deviation in presence of two genes from the claim. Similarly, based on ELISA tests, there was no deviation in expression of cry protein from the claims. Although these EDVs were found positive for cry genes and cry proteins. Based on presence of fruiting bodies and number of actual bolls harvested indicates the shedding of squares. Shedding of squares in Bt. cotton is because of incidence of pests like mirid bug, it indicates that these EDVs seems to be susceptible to mirid bug.

Trial-IV: Evaluation of Variety of Common Knowledge of *G. hirsutum* cotton at UAS, Dharwad during *Kharif*, 2014.

Twenty sevenvarieties of common knowledge were evaluated for DUS characteristics. There were no deviation for any DUS characteristics in any of the genotypes observed and claimed.

Wheat:Two genotypes viz. GG-04 (for second year trial) and Bansi local (for first year trial) were evaluated for DUS characteristics. There was not any deviation between observed and claimed DUS characteristics for both the genotypes.

Soybean:NSO-83 soybean candidate variety was evaluated for DUS characteristics as first year trial. There was no deviation between observed and claimed DUS characters for NSO-83 candidate.

Dr. R.R. Hanchinal Chairperson, PPV&FRA and Dr. Rajendra Prasad, Direcor, DSR, Mau visited the DUS trials on 8 March, 2015

2.6.36 C.S. Azad University of Agriculture & Technology (CSAUA &T), Kanpur

It has been serving as Co-nodal centre in respect of wheat, rapeseed & mustard and linseed. Under the reporting period, the centre has maintained 15 varieties of wheat and 12 varieties of rapeseed & mustard.The present status of DUS testing is as under:

Table 43: Status of DUS testing

Crop	New		VCK	FV	Date of Monitoring	Chairman
	1st yr	2nd yr				
Wheat	-	3	-	-	-	Dr. K.H.Singh, Principal Scientist, DRMR, Bharatpur
Rape seed & Mustard	3	-	3	13	3 March, 2015	

With regard to monitoring of DUS trials the team expressed their satisfaction for conduct of DUS trials as per the DUS norms prescribed for the crop and the performance of was excellent. However, there was lodging due to untimely rain in the month of March, 2015. The brief technical progress in respect of both the crops are as under:

Brief Technical Progress:

Rapeseed & Mustard

Thirty one entries (19 candidate varieties & 12 reference varieties) of mustard crop were timely sown and data on twenty three characters were recorded in all entries meant for DUS testing. All the required precautions were taken in maintenance breeding for maintaining the genetic purity. The crop was harvested on 12 March, 2015 and harvested seed of each entry waskept in proper storage at ambient condition. The monitoring of this crop was accomplished on 3 March, 2015 under chairmanship of Dr K.H.Singh, DRMR, Bharatpur.

Wheat

Eighteen entries (3 candidate varieties& 15 reference varieties) of wheat crop were sown on 1 December, 2014. The data on thirty nine characters were recorded in all entries meant for DUS testing. All the precautions were taken in maintenance breeding for maintaining the genetic purity.

2.6.37 Indian Institute of Maize Research (IIMR formerly DMR), New Delhi

During the year 2014-15, eight applications under new category (six hybrids and two composites) have been filed for registration. Seed, seed analysis report and DUS test fee of the six applications have been submitted and replies to the queries raised have also been submitted. One hybrid and three OPVs have been registered and annual registration fees of 58 cultivars (36 hybrids and 22 OPVs) have been paid for their intellectual property maintenance. The centre has also maintained 79 reference varieties under maintenance breeding and characterization which were sourced mainly from the AICRP (Maize) centres.

During *kharif* 2014, DUS testing was done at five locations namely IIMR, New Delhi; SRTC, Hyderabad; VPKAS, Almora; PAU, Ludhiana and NEH region, Umiam respectively. One hundred eleven candidate entries including 48 new hybrids, 2 OPVs, 16 VCKs, 22 FVs and 23 new inbred lines were tested. Of these 48 new hybrids, 2 OPVs, and 23 new inbred lines were tested at IIMR, New Delhi and SRTC, Hyderabad. Whereas 16 VCKs were evaluated at two locations namely SRTC, Hyderabad and PAU Ludhiana. Twenty two FVs were evaluated under grow out test at two locations. Of these, 7 were tested at SRTC, Hyderabad and PAU, Ludhiana and 15 at VPKAS, Almora and NEH region, Umiam respectively.

In order to expedite varietal registration, three additional locations have been identified for conducting DUS tests in maize. These are **PAU, Ludhiana,VPKAS, Almora** and **ICAR Research Complex for North Eastern Region, Umiam**. Accordingly, during *Kharif* 2014, eight trials comprising candidate entries (111) and references varieties were dispatched to these centres as per the details as under:

Table 44: Status of varieties under DUS testing

New Hybrids				New Inbreds		VCK		FV	OPVs		Total	Date of Monitoring
1st yr		2nd yr		Private		Private			Public			
Public	Private	Public	Private	1st yr	2nd yr	Hybrids	Inbreds		1st yr	2nd yr		
2	26	5	15	17	6	10	6	22	1	1	111	7 October, 2014 at Almora 9 October, 2014 at DMR 11 October, 2014 at Ludhiana
28		20		23		16		22	2		111	

Hybrid DUS trial 2014		Inbred DUS trial 2014		Variety of Common Knowledge	FVs grow out test
New (1st Year Testing)	New (2nd year testing)	New (1st Year Testing)	New (2nd year testing)	(VCK)One year testing	
Public –bred hybrids (2)	Public –bred hybrids (5)	Proprietary Inbreds (17)	Proprietary Inbreds (6)	Proprietary hybrids (6)	FVs (22)
PMH 3, TNAU Maize Hybrid Co 6	DHM 119, DHM 113, DHM111, PMH5, Rajendra Hybrid Makka3	PH 7PH, PH1BFR, PHBFE, PH 15K0, PH 1WA2, BIO82015HI, BY 778-nm , PHBET, PH17H, KML 2078, KML 2006 , KML 5253 , NM 183, NM 250, NM 199, CZ 170 nm, PH 9 JM	KML 2286, KML 2293, BIO101271, BYO70NM, M3434, PC 1001NM	PAC 745, Bisco 1102, Bisco 2225, RMH 3022, NMH -459, NMH -2277	Makka, Makka Bansi, Jindhara Makai, Budha Makai, Safed Lalk, Vinod, Jayanti, Magudam Mami, Magudam Borok, Mimban Charhang, Mimpui, Mimban Sen,Mimpui Var, Pukazo Var,Mimban Dum, Mimpui Sen, Mimban Var, Pukazo

Hybrid DUS trial 2014		Inbred DUS trial 2014		Variety of Common Knowledge	FVs grow out test
New (1st Year Testing)	New (2nd year testing)	New (1st Year Testing)	New (2nd year testing)	(VCK)One year testing	
Public –bred hybrids (2)	Public –bred hybrids (5)	Proprietary Inbreds (17)	Proprietary Inbreds (6)	Proprietary hybrids (6)	FVs (22)
Proprietary hybrids (26)	Proprietary hybrids (15)			Proprietary Inbreds(10)	
NMH -920 , NMH -1247, TMMH 809, TMMH 801, TMMH 802, HTMH5101 SONA, KMH 1411, KMH -3110, KMH -6681, GK 3090, KING II, PAC 753, PAC 751, RMH3033, TMMH 805, BIO 9211, BIO 032, BIO 719 , BIO 605, BIO 237, P 3546, P 3533, P 3542, D 4141, NMH-803, MM 2100	P 3396, P1864, P3580, P 3436, P 3303, P3522, P 3570, P 3377 P 3373,KMH 25 K 45,KMH 2589,NM734, Indra 17 , Bisco X 5141 , Bisco 506			NM 206, NM-130, NM-119, NM-58, NM-85, SYN-CO-NP 5063, SYN-CO-NP 5038, SYN-CO-NP 5088 , NM-115, NM -61	Eng , Pukazo Sen ,Imkonda Choigi, Imkonda Maimi, Mokonda Toima
OPVs(1)	OPVs (1)				
Pratap Kanchan 2	Pant Sankul Makka 3				

The details of 111 candidate entries as per locations are given as below:

Centre	New			VCK		FV
	Inbred	Hybrids	OPVs	Inbred	Hybrid	
DMR, Delhi	23	48	2	-	-	-
SRTC, Hyderabad	23	48	2	10	6	7
VPKAS, Almora	-	-	-	-	-	15
PAU, Ludhiana	-	-	-	10	6	7
NEH Region, Umiam	-	-	-	-	-	15

The trials were conducted and managed excellently. All the candidate entries recorded recommended plant stand necessary for proper expression of traits. The OPVs (Pant Sankul Makka3 and Pratap Kanchan 2) displayed upto 30% heterogeneity in traits viz., plant length (up to flag leaf), tassel: time of anthesis (on middle third of main axis, 50% of plants), ear: time of silk emergence (50% plants), ear: anthocyanin coloration of silks (on day of emergence). During the reporting year, Dr. S. Ayyappan, Secretary, DARE and DG, ICAR and Dr. S. Maurya, ADG (IP&TM) visited the DMR, New Delhi.

2.6.38 Vivekanada Parvatiya Krishi Anusandhan Sansthan (VPKAS), Almora

Maize, Soybean and Rajmash are earmarked for DUS testing at Almora. The progress of maintenance breeding and characterization made during the reporting year is as under:

Table 45: Status of varieties under maintenance breeding / characterisation

S No.	Crop Species	Source of Varieties	Name of the varieties
1.	Soybean	ICAR	12 (DS 228, DS 97-12,Pusa 16, Pusa 20, Pusa 22, Pusa 24, Pusa 37, Pusa 40, NRC 2, NRC 7, NRC 12, NRC 37)
		Own	7 (VL S 1, VLS 2, VLS 21, VLS 47, VLS 59, VLS 63, VLS 65)
		Others (specify)	72(ADT 1,Alankar, Ankur, Birsa Soya 1, Bragg, CO 1, CO 3, CO Soya 2,Durga, Gujrat Soya 1, Gujrat Soya 2, Gaurav, Hara Soya, Hardee, Improved Pelican, Indira Soya 9, JS 2, JS 71-05, JS 75-46, JS 76-205, JS 79-81, JS 80-21, JS 90-41, JS 93-05, JS 95-60, JS 97-52, JS 335, KB 79, KHSB 2, Kalitur, Lee, LSB 1, MACS 13, MACS 57, MACS 58, MACS 124,

S No.	Crop Species	Source of Varieties	Name of the varieties
			MACS 450, MAUS 1, MAUS 2, MAUS 32, MAUS 47, MAUS 61, MAUS 61-2, MAUS 71, MAUS 81, Monetta, Palam Soya, PK 262, PK 308, PK 327, PK 471, PK 416, PK 472, PS 564, PS 1024, PS 1029, PS 1042, PS 1092, PS 1241, PS 1347,PS1368, Punjab 1, RAUS 5, Shilageet, Shivalik, SL 96, SL 295, SL 525, SL 688, TAMS 38, TAMS 98, Type 49)
2.	Maize	Own	15 Hybrids (Vivek Hybrid 4, Vivek Hybrid 5, Vivek Hybrid 9, Vivek Hybrid 15, Vivek Hybrid 17, Vivek Hybrid 21, Vivek Hybrid 23, Vivek Hybrid 25, Vivek Hybrid 27, Vivek Hybrid 33,VivekHybrid 39, VivekHybrid 43, Vivek Hybrid 45, Him 129, VivekQPm 9) 17 Inbreds (CM 126, CM 127, CM 128, CM 129, CM 141, CM 145, CM 152, CM 153, CM 212, CM 502, V 25, V 335, V 341, V 345, V 346, V 351, V 372, V 373, VQL 1, VQL 2, VQL 17) 6 Composites (Vivek Sankul Makka 11, Vivek Sankul Makka 31, Vivek Sankul Makka 35, Vivek Sankul Makka 37, VL amber Pop Corn, VL Baby Corn 1)
3	Rajmash	ICAR	IPR 98-5, IPR 98-3-1
		Own	VL63, VR 125

Maize: Forty varieties including hybrids (12 entries) and inbreds (8 entries), farmers' varieties (20 entries)from North Eastern region were raised. Hybrids and inbreds were characterized for 30 DUS traits. The farmers' varieties were characterized for only 16 traits. Only one farmers' variety MAGDUM BOROK, which was the earliest maturing variety, could be characterized for 30 traits.

Rajmash: Three varieties of rajmash (one farmers' varieties chitkabra lal jhulu sawant, along with two reference varieties IPR98-5 and IPR 98-3-1) were raised for grow out test and were characterized for 22 DUS traits as per national test guidelines. Monitoring of Grow out test of farmers' variety of maize at VPKAS was conducted on 7 October,2014. Monitoring was done in the presence of Dr. Jyoti Kaul, Nodal officer, DUS project on maize and Dr. Rajesh Khulbe, PI Maize Improvement Programme, VPKAS, Mrs. Shephalika Amrapali, scientist in charge, DUS project, co-nodal center,VPKAS, Almora. Observations on distinctness and uniformity were made on 15 candidate varieties, along with 5 reference varieties.

Fifteen farmers' varieties were evaluated in grow out test in *kharif,* 2014.Each entry was evaluated at the standing crop stage for traits *viz*, tassel traits (time of anthesis in 50% plants, presence of anthocyanin coloration of glume), ear traits (time of silk emergence in 50% of plants, presence of anthocyanin coloration), plant traits(plant height, ear placement) etc for which considerable variation was observed. The observations were recorded as per the majority of the plants exhibiting a particular trait. The most of the entries except Mimban Charang, displayed 50% anthesis / silking. The earliest entry was Magdum Borok which flowered by 46 days while Puakzo Var, Mimban Dum, Mokonda Toima are very late and have flowered in first week of October. One entry which is also the earliest entry showed tassel seed formation.Monitoring of grow out test of rajmash was done by the institute monitoring team on 16th September, 2014 at peak flowering to initial pod formation stage. The trial was found to be satisfactory. Dr. R. R.Hanchinal, Chairperson PPV&FR Authority, New Delhi visited Almora on 7 January, 2015.

2.7 National Review Meeting of DUS Centres / Projects

2.7.1 Brainstorming Session

A brainstorming session to review the DUS procedure and financial support mechanism was held under the Chairmanship of Prof. S. K. Datta, DDG (Crop Sciences), ICAR on 5 December, 2014 at NASC Complex, New Delhi. Apart from Prof. R. R. Hanchinal, Chairperson; Dr. R. C. Agrawal, Registrar General, Registrar(s) and other officers of the Authority several other dignitaries, including Dr. Atanu Purakasyastha, Joint Secretary (Seeds), Department of Agriculture, Cooperation & Farmers Welfare; Dr. Indu Sharma, Project Director (Wheat); Dr. O. P. Yadav, Project Director (Maize), Dr. S. Rajendra Prasad, Project Director (Directorate of Seed Research); Dr. N. K. Dadlani, Director(NSAI); representatives from Seed Industry, Nodal officers (DUS) and several other scientists from ICAR Institutes / SAUs and officials from Department of Agriculture, Cooperation & Farmers Welfare participated. The objective of this Brainstorming session was to elicitate the functioning of DUS centres and to identify a variety in its early stage by synchronizing the concept of DUS-VCU system under All India Coordinated Research Project (AICRP). There was lively discussion among scientists and free exchange of views on the manner of maintenance of DUS centres and DUS testing. It was decided that a Committee consisting of Dr. R. K. Chowdhary, Former Project Coordinator (NSP) as Chairperson along with Dr. O. P. Yadav, Project Director (Maize), IARI, New Delhi and Dr. N.K. Dadlani from NSAI will examine the issue of DUS testing and maintenance of centres.

2.7.2 9th DUS Review meeting held at JAU, Junagadh during 9-10 March, 2015

9thReview Meeting of DUS Centres/projects was held on 9-10 March, 2015 at Junagadh Agricultural University, Junagadh to review the financial and technical status of the DUS Centres / Projects being funded by the Authority and to rectify the constraints faced by them, if any. The representative of DUS Centres/Projects made brief presentations on the progress and the constraints that they were facing. There were six sessions which were chaired by different senior scientists viz., Dr. N. Krishnakumar, DDG

(Hort.), ICAR; Dr. S.A. Patil, Former Director of IARI; Dr. N.B. Singh, Dr.YSPHUF, Solan; Dr. J.S. Chouhan, JS (Seeds); and Dr. P.L. Salimath, Vice Chancellor, UAS, Raichur.

Recommendations

- IIHR, Bengaluru and IIVR, Varanasi will submit applications seeking plant variety protection for the remaining of the varieties as notified under the Seeds Act,1966.
- Descriptors may be developed for wild/distant species in field crops/vegetables where from novel traits for biotic/abiotic stress, quality etc. are being incorporated.
- Remaining budget for 2014-15 will be released to DUS centers/projects.
- Documentation of farmers' varieties, updation of registered varieties database/ IINDUS and creation of database for 57 notified species where database do not exist and constitution of Task Force for oat, cowpea and guinea grass. It was suggested that in case of cowpea, reference varieties from different types(vegetable/pulse/fodder) may be included and centre(s) for vegetable types can be included and for representation of different agro-ecological regions for cultivation and usage.
- Revisit ofDUS Guidelines for Rice, Wheat, Maize, Sorghum, Pearl Millet and Cotton.
- A Workshop on statistical concepts in DUS testing may be conducted by the Authority.
- Common reference varieties may be grown and maintained at Nodal/Co-Nodal centers and data on maintenance breeding must be submitted by Nodal centers by 30 April, 2015. NARS shall ensure registration of their varieties having commercial importance.
- ICAR shall take up the issues regarding non availability of descriptors in release proposals in case of extant notified varieties(ENVs), registration of parental lines, denomination and raise issues to work out the modalities for royalty/benefit sharing to breeders by NARS/NSC, SSCs. Public sector's institutes may help in mentoring farmers/communities in filing applications seeking PVP& PGSC awards and resource persons from DUS centers may also participate.

2.8 National Gene Bank

The National Gene Bank of PPV&FR Authority was established at the old Campus of National Bureau of Plant Genetic Resources (NBPGR), Pusa, New Delhi. PPV&FR Authority is managing the rented facility for safe custody under Medium term storage. The working of medium term facility is being monitored by the technical experts of NBPGR.The temperature of medium term storage is maintained at ±4°C and the relative humidity has been adjusted to 35%. The relative humidity and

temperature of the medium-term storage (MTS) module and the DUS test repository are recorded everyday by the electrician and major problems, if any, arebrought to the notice of technical personnel at NBPGR. Technical help was offered time to time to the Authority official for packaging, sealing and processing the variety samples for DUS test. True ("orthodox") seeds of registered varieties under the medium term storage conditions and the seed samples for varieties undergoing DUS test/grow out test are being stored. Section 27 of the PPV&FR Act, 2001 provides for the National Gene Bank and prescribes that the breeder shall be required to deposit such quantity of seeds or propagating material including parental line seeds of registered variety in the National Gene Bank. Further, as per the PPV&FR Rules 2003, the samples of seeds and propagules shall present the maintainable standards of genetic purity, uniformity and germination, sanitary and phyto-sanitary standards. The mandated activities are significantly different in comparison to any *ex-situ* germplasm bank such as storage under medium term, seed handling, re-packaging, dispatch for field-testing at DUS test centers required for plant variety protection, evaluation of seed quality parameters etc. and the legal necessities are to be followed. The seeds stored for registered varieties can also be utilized for resolving dispute settlement, compulsory licensing and other such issues as deemed fit under the requirements of the Act.

2.8.1 Medium Term Storage of Seeds of Registered Varieties

Seed samples of 853 extant varieties notified under section 5 of the Seeds Act, 1966; 149 VCK & EDV varieties, 227 of new varieties, and 543 farmers' varieties are being kept in seed cabinets designed specifically for seed storage. These are being kept under controlled climatic conditions at 4^0C temperature with 30±5 % relative humidity to ensure that seed samples are physiologically viable for a long duration. The seed samples of registered varieties are stored up to the period of protection and viability will be checked at prescribed intervals as per crop specific standards and requirement. Following seeds of registered varieties kept in MTS at National Gene Bank of PPV&FRA were tested after 5 years of their storage.

Table 46: Varieties monitored for viability and moisture content of seeds of various registered crop conserved at National Gene Bankduring 2014-15

S. No.	Crops	No. of varieties samples	Previous Moisture Range (%)	Previous Germination Range (%)	Present Moisture Range	Present Germination Range
1	Black gram	9	8.8 - 9	63 – 90	9.98 - 12.47	34 - 98
2	Lentil	9	8.8 - 9	74 - 96	6. 8 - 10.98	68 - 100
3	Kidney bean	3	8.6 - 9	88 - 95	8.07 - 10.27	48 - 100
4	Green gram	15	8 - 9.6	64 - 97	9.6 - 11.4	72 - 100
5	pea	11	8 - 10.2	75 - 98	6.43 - 10.97	74 - 100
6	Chickpea	1	8.3	93	10.02	100
7	Cotton	48	2.8 - 11.7	90 - 75	6.26 - 11.94	48 - 100
8	Jute	1	5	90	9.75	100
9	Pearl Millet	40	10.9 - 7.6	75 - 97	7.93 - 11.12	78 - 100
10	Sorghum	13	8.3 - 11.5	75 - 92	8.54 - 12.44	64 - 100
11	Maize	42	7.99 - 13.4	80 - 100	5.93 - 15.10	0 - 100
12	Bread Wheat	56	7.4 - 12	91- 98	7.8 - 11.46	90 - 100
13	Rice	4	-	-	11.5 - 12.58	0 - 90

Table 47: Progress of seed samples of registered varieties conserved in the National Gene Bankunder medium term storage condition

S. N.	Crops	DUS Test Repository (STS) (Candidate varieties for DUS test kept at 22°C) SEED RECEIVED A					Medium Term Storage (4°C) CERTIFICATE ISSUED B					GRAND TOTAL (A+B)
		New	VCK +EDV	Farmer	Extant Notified	Total (A)	New	VCK +EDV	Farmer	Extant Notified	Total (B)	
1	Bread Wheat	14	6	29	2	51	11	3	3	106	123	174
2	Brinjal	103	114	6	1	224				7	7	231
3	Cabbage	8	1			9				1	1	10
4	Castor	6	2			8	1	1		4	6	14
5	Cauliflower	35	11		1	47				2	2	49
6	Chickpea	2		13		15				39	39	54
7	Cotton	371	272 155	2	7	807	43	17+1		77	138	945
8	French Bean									2	2	2
9	Pea	2	2	5	1	10				24	24	34
11	Green Gram	3	3	14	1	21				29	29	50
12	Groundnut			2		2				31	31	33
13	Jute	6	1	4		11	4			10	14	25
14	Lentil			17		17				11	11	28
15	Linseed			9	2	11				5	5	16
16	Maize	189	43	42		274	35	25		74	134	408
17	Mustard	10	9	18	1	38		8	1	49	58	96
18	Okra	65	38	4	1	108						108
19	Onion	1	11	2	1	15				1	1	16
20	Pearl Millet	115	15	4	1	135	17	21		48	86	221
21	Pigeon Pea	20	5	28		53	2	1	3	20	26	79
22	Rapeseed			2		2				12	12	14
23	Rice	220	33	1909	18	2180	54	30	535	146	765	2945
24	Safflower			1		1				6	6	7
25	Sesame			11	2	13				5	5	18
26	Sorghum	70	35	7	1	113	38	29	1	37	105	218
27	Soybean	2	1	2	7	12				14	14	26

S. N.	Crops	DUS Test Repository (STS) (Candidate varieties for DUS test kept at 22°C) SEED RECEIVED A					Medium Term Storage (4°C) CERTIFICATE ISSUED B					GRAND TOTAL (A+B)
		New	VCK +EDV	Farmer	Extant Notified	Total (A)	New	VCK +EDV	Farmer	Extant Notified	Total (B)	
28	Sunflower	82	12			94	22	13		9	44	138
29	Tomato	99	97	4		200				2	2	202
30	Urdbean	1	1	25		27				16	16	43
31	Kidney Bean			11		11				6	6	17
32	Coriander			3		3						3
33	Bitter Gourd		19	3		22						22
34	Pumpkin			10		10						10
35	Bottle Gourd		8	4	1	13						13
36	Cucumber		6			6						6
38	Barley			1		1						1
	Total	**1424**	**900**	**2192**	**48**	**4564**	**227**	**149**	**543**	**733**	**1712**	**6275**

2.8.2 Short Term Storage of Seeds of varieties under DUS testing

Conducting of DUS test(s) as per the statutory provisions are as under:

- Two years and at two locations for varieties under new category;
- One year at two locations for varieties of common knowledge (VCK); and farmers' varieties;

The applicant is required to submit quantities of seeds as per crop specific standards along with registration and DUS test fee for new and VCK category. For farmers' varieties, the applicant is also required to submit only the prescribed quantities of seeds as farmers are not required to pay any fee for DUS testing/ grow out test.

Seed samples of new varieties (1435), VCK (900) & EDVs (both including parental materials), extant notified (48) farmers' varieties (2204) are being maintained under short term storage as on 31 March, 2015. Representative seed samples are sent to DUS test centres and rest of the samples are kept for contingency. The seed packets are stored at 20±2°C till the process of grant of registration is over. However, once a candidate variety is eligible for grant of registration certificate, applicants are advised to supply fresh seed samples for storage under medium term condition.

2.8.3 Seed Standards

Applicants are required to submit seeds sealed in triple layer aluminum foil pouch(s) of prescribed size with proper labeling as under:

- Denomination of candidate variety,
- Application acknowledgement number as allotted by the plant varieties registry,
- Category(new/extant/VCK/farmers' etc),
- Year of harvest, and
- Seed quality parameter (moisture %, germination % and physical purity %).

The entire seed lot shall be equally divided in ten (for new varieties) or five (for VCK or Farmers' varieties) or two (extant varieties notified under the Seeds Act, 1966) seed packets/pouches. Seed lots must adhere to the prescribed standards as per the crop specific DUS guidelines. An illustrative list for seed standards for some of the major crops are given in Table 24 as under:

Table 48: Seed Standards for medium term storage and DUS testing

S. No	Crop	Seed Requirement Candidate / Parental line Hybrid (each) in gm unless otherwise mentioned		Germination %	Moisture %	Physical Purity %	Tentative Season – Months for seed submission for DUS testing	Prescribed size of seed packets (mm)
1	Rice	3000	1500	80	11-12%	98	*Kharif*–March-Apr	230x300
2	Bread Wheat	3000	1500	95	8-9%	98	Rabi-Aug	230x300
3	Maize	3000	1500	80 (inbred/ SCH) 90 (var/DCH)	8-10%	98	*Kharif*-Mar-Apr *Rabi*- Aug	230x300
4	Sorghum	3000	1500	80(inbred/ SCH) 90(var/ DCH)	10-12%	98	Kharif- March Rabi-Aug	230x300

S . No	Crop	Seed Requirement Candidate / Parental line Hybrid (each) in gm unless otherwise mentioned		Germination %	Moisture %	Physical Purity %	Tentative Season – Months for seed submission for DUS testing	Prescribed size of seed packets (mm)
5	Pearl millet	1000	500	80(inbred/ SCH) 90(var/ DCH)	10-12%	98	Kharif-March	165x220
6	Chickpea	2000(desi) 3000(kabuli)	n.a.	80	8-9%	98	Rabi-Aug	230x300
7	Green gram	1000	n.a.	80	8-9%	98	Kharif -March	230x300
8	Black gram	1000	n.a.	80	8-9%	98	Kharif-March	165x220
9	Field pea	2000	n.a.	80	8-9%	98	Rabi-Aug	230x300
10	Kidney bean	3000	n.a.	80	8-9%	98	June-July	230x300
11	Lentil	1000	n.a.	80	8-9%	98	Rabi-Aug	230x300
12	Pigonpea	2000	1500	80	8-9%	98	Kharif-Mar	230x300
13	Cotton	2000	1000	75	10	98	Kharif- North- Feb Peninsular- South- May	230x300
14	Cotton	2000	1000	75	10	98	Kharif- North- Feb Peninsular- South- May	
15	Cotton	1500	750	75	10	98		
16	Cotton	1500	750	75	10	98		
17	Jute	1000	500	85	9	97	Pre-Kharif-early Jan	165x220
18	Jute	1000	500	85	9	97	Pre-Kharif-early Jan	
19	Indian Mustard	500	250					
20	Karan rai	500	250					
21	Rapeseed-Mustard	500	250	85	8	98	Aug-Sept	165x100
22	Gobhi sarson	500	250					
23	Groundnut	3000(Spanish & Valencia) 8000(kernel) for Virginia bunch and runner type	1500 4000	80	9	98	Kharif: May-June Rabi:Aug-Sep	300x450
24	Soybean	3000	-	70	9	98	Apr-May	230x300
25	Sunflower	3000	2000	70	9	98	July-Aug	230x300
26	Safflower	3000	1500	80	9	98	June-July	230x300
27	Castor	6000	2500	70	10	98	April-May	300x450
28	Sesamum	500	250	80	9	97	April -May	165x100
29	Linseed	500	250	85	9	98	Jul-Aug	165x100
30	Tomato	15(open field) 8 (Greenhouse)	same	85	8	98	April- May	165x100
31	Brinjal	15(open)	15 (open)	85	8	98	April- May	165x100
32	Okra	200	-					
33	Cauliflower	15	15	*	*	*	April- May	165x100
34	Cabbage	15	15	*	*	*	April- May	165x100
35	Onion	100 1200 bulblet (multiplier) 50 bulbs(MS lines)	50	70	*	*	As per respective sowing seasons	
36	Garlic	2000 viable clove	-	*	*	*	Aug-Sep	-
37	Duram wheat	3000	1500	95	8-9%	98		
38	Dicoccum wheat	3000	1500	95	8-9%	98		
39	Other Triticum sp	3000	1500	95	8-9%	98	Same as wheat	230x300
40	Isabgol	250	-	95	8-9%	98		

S . No	Crop	Seed Requirement Candidate / Parental line Hybrid (each) in gm unless otherwise mentioned		Germination %	Moisture %	Physical Purity %	Tentative Season – Months for seed submission for DUS testing	Prescribed size of seed packets (mm)
41	Bitter gourd	300 gm or 1500 no	-	80	8	98	April	230x300
42	Bottle gourd	250 gm or 1500 no	-	80	8	98	April	230x300
43	Cucumber	50 gm or 1500 no	-	80	8	98	April	230x300
44	Pumpkin	200 gm or 1500 no	-	80	8	98	April	230x300
45	Barley	1500	1000	95	8	98	Aug-Sep	230x300
46	Coriander	250	-	80	8-9%	98	Aug-Sep	165x100
47	Fenugreek	250	-	80	8-9%	98	Aug-Sep	165x100
48	Muskmelon	100 gm seed for open field cultivation	-	80	8	98		
49	Watermelon	150 gm seed for open field cultivation	-	80	8	98		
50	Papaya	20 gm for gynodioecious varieties & 40 gm for dioecious varieties in both season	-	60	7% for ambiant storage	98% for varieties & 90% for Hybrids		
51	China aster	2 gm each in two packets	-	60	6-9%	98		
52	Chilli, sweet Pepper and Paprika	15 gm for Open polinated crop & 10 gm for Hybrid and Parental line	-	85	8	98		

*as per breeder seed standards

2.9 Field Gene Banks

2.9.1 Dr. Y.S. Parmar University of Horticulture and Forestry, Regional Horticultural Research and Training Station, Mashobra, Shimla

Regional Horticultural Research and Training Station is one of the field banks which have been mandated for field repository for temperate fruits i.e. apple, sweet cherry, pear and walnut. The latest status of maintenance and collections blocks in respect of fruits is as under:

Maintenance Breeding Blocks

S. No	Fruit Crop	Varieties (No.) added into previous year	Varieties (No.) added in the current year	Total varieties No*.	Source
1.	Apple	249	19	268	SAUs – HP, J&K and Uttrakhand ICAR - NBPGRI, Phagli & CITH, Srinagar Deptt. of Hort. (HP) - Progeny-cum-Hort (HP). Demonstration Orchards
2.	Pear	64	11	75	-do-
3.	Sweet cherry	45	1	46	SAUs – HP, J&K

*3 plants per variety

b) Variety collections (Reference varieties) blocks

S. No	Fruit Crop	Varie-ties (No.) till 31.3. 2014	Varie-ties (No.) added during 2014-15	Total varie-ties No*.	Col-lec-tions*	Source
1.	Apple	103	7	110	242	SAUs – HP, J&K and Ut-trakhand ICAR - NB-PGR, Phagli, CITH, Sri-nagar Deptt. of Hort. - PC-DOs (HP)
2.	Pear	23	2	25	46	SAUs – HP ICAR - NBPGR, Phagli CITH, Srinagar Deptt. of Hort. - PC-DOs, (HP)
3.	Sweet cherry	26	1	27	41	SAUs – HP, J&K ICAR - CITH, Srinagar

*2-4 plants per collection

During the reporting period, the maintenance breeding blocks and variety collection blocks of fruit crops were enriched by additional of new varieties collected from different sources. Observations on apple fruit characters - fruit size, length, diameter, length/ diameter ratio, shape, ribbing, crowning at calyx end, bloom of skin, greasiness, ground color, relative area of over color, intensity of over color, hoe of over color, area of russet around stalk attachment, area of russet on check, area of russet around eye basin, number of lenticels, length of stalk, thickness of stalk, depth of stalk, width of stalk cavity, depth of eye cavity, color of flesh and aperture of locules were recorded. Fruit characters of sweet cherries analyzed were fruit size, shape, pistil end, suture, length of stalk, thickness of stalk, color of skin, flesh and juice, sweetness, juiciness, stone size, stone shape and fruit weight/ weight of stone ratio. Dr. R.R. Hanchinal, Chairperson, PPV&FRA visited this Centre on 27 July, 2015.

2.9.2 Dr. B. S. Konkan Krishi Vidyapeeth (BSKKV), Dapoli

Dr. BSKVV,Dapoli has been assigned a project "**Collection, maintenance, evaluation and development of descriptors of fruits, plantation crops and tree spices through Live Repository**". The Mango, Citrus, Turmeric, Banana, Black pepper, Cardamom, Jackfruit and Nutmeg are the mandated crops for the field gene bank. The status of collection made by the field gene bank is as under:

Table 49: Status of New collections of mango

S. No.	Source	Variety
1	Shri Siddhishaha Ahmed Khan, Murud Janjira, District Raigad.	Alphonso (Noorpari)
2	Shri Anant Bhagoji Kadam, Mhalunge	Ratamba
3	Shri Ramesh Ganpat Kadam, Mhalunge	Raiwal-1
4	Shri Anil Paranjape, Aurangabad	Raiwal-2, Keli amba, Goti amba-1, Goti amba-2, Amrut, Raiwal-3
5	CES, Wakawli, Rukhi block, Taluka-Dapoli, Dist-Ratnagiri	Barmasi, Shrikhandya, Wakawli local, Khobri amba, Patlachavalkya

During the reporting year, the centre has identified 31 mangoes and 50 ecotypes collected from Sindhudurg, Ratnagiri and Goa region. The status of crops under maintenance is as under:

Table 50: Status of crops under maintenance

Sr. No.	Crop	No. of varieties/ Ecotypes	Location
1	Mango	18 Varieties (Ref. block 1)	Ratnagiri, Sindhudurg, Goa region, Andhra Pradesh and Gujarat.
		17 Varieties in (Ref. block 2)	
		90 Ecotypes (Ref. Block1 & 2)	
		18 Varieties (Nursery)	
		52 Ecotypes (Nursery)	
2	Tur-meric	13 Ecotypes	Kerala and Maharashtra
		31 Varieties	AICRP spices, Dr. BSKKV, Dapoli.
3	Carda-mom	4	Karnataka and Indian Cardamom Research Institute, Myladumpara, Kerala.
		1	Cardamom Research Station, Appangala
4	Citrus	3 Species	National Research Centre for Citrus, Nagpur
		1 Species	Dr. B. S. Konkan Krishi Vidyapeeth, Dapoli.
5	Black pepper	6	Pepper Research Station, Panniyur, Kerala.
6	Banana	30	National Research Centre for Banana, Trichi, Tamil Nadu.

Germplasm maintenance:-

Plantation of following candidate varieties of Jackfruit seeds received from Mr. Ciby George, Kallingal House, Pattikkad, Dist.Thrissur, Kerala a Plant Genome Saviour Farmers Rewardee, 2012 by PPV&FRA, is done at Tetawli block as under:

Crop	Variety	No. of seeds received	Date of sow-ing	Sur-vival	No. of plants planted	Date of planting
Artocarpus heterophyllus (Jackfruit)	KOOZHA-1	30	5 June, 2013	14	10	10 December, 2013
	VARIKKA-1	07		4	4	
	VARIKKA-2	19		0	0	

The University has also endorsed three applications of farmers' varieties of rice and okra.During the reporting year, Dr. R. R. Hanchinal, Chairperson, PPV & FRA, New Delhi visited on 10 January, 2014 and Dr. K. E. Lawande &Dr. B. Venkateswarlu, Hon. Vice Chancellors, Dr. B S.KKV, Dapoli also visited on 30 January, 2014 and 11 February, 2015 respectively.

3. Activities Related to Farmers

The PPV&FR Act, 2001 is a new legislation on IPR in plant varieties requires massive awareness amongst the farmers, breeders, scientists and other relevant stakeholders. The Authority believes in close association with the farmers, researchers, plant breeders, scientists, students, NGOs, and public and private organizations to disseminate its awareness. During the past eight years, Authority has released funds for training-cum-awareness programmes, Kisan Melas, Kisan Utsavs, Agricultural Fairs, International conferences on agriculture, National seminars and agricultural workshops to sensitize the stakeholders. In order to create awareness amongst the farmers about their rights, as envisaged under the PPV&FR Act, 2001, Farmers' Cell has been established in the Authority. The Farmers' Cell looks after the implementation of provisions of the Farmers' Rights pro-actively. The Cell is also responsible for recommending financial assistance for training–cum–awareness programmes and other project activities after scrutiny and examinations of proposals received from various stakeholders. The highlights of some of training programmes organized/supported during the period under report are as under:

- More than361training-cum-awareness programmes were organized through SAUs/ICAR institutes, Government Departments and NGOs with financial support from the Authority as per details in ***Annexure-VII***. The details of some of the training-cum-awareness programmes conducted have been summarized in Chapter–8 separately.

The Authority has participated in number of Farmers' Fairs, Exhibitions, National & International Workshops organized by various Organizations. The highlights of some of the events participated by the Authority are as under:

- Brainstorming Session on "**Take it to Farmers, the Farmers' Rights through Awareness**" at NASC Complex, New Delhi. The PPV&FR Authority convened a Brainstorming Session on "**Take it to Farmers the Farmers' Rights through Awareness**" on 24 June, 2014 at New Delhi. Dr. S. Ayyappan, Director General, ICAR & Secretary, DARE was the Chief Guest at the inaugural function. Dr. Sanjay Rajaram, Dr. A.K. Sikka, DDG (Extension), ICAR, Dr. AtanuPurkayasta, Joint Secretary (Seeds), Department of Agriculture, Cooperation & Farmers Welfare, Dr. Prem N. Mathur, Regional Director, Asia-Pacific, Bioversity International were the Guests of Honours. The objective of the Brainstorming Session was to disseminate the awareness of the farmers' rights in the PPV&FR Act to the grass root level and make the PPV&FR Act farmer centric. Custodian farmers, seed savers and tribals are the main stakeholders and educating them about their rights is the essential for their welfare. To achieve the above objectives, the Authority requires the support and co-operation of all the extension machinery of the ICAR & the Department of Agriculture, Cooperation & Farmers Welfareand in particular the KVKs which are present in all the districts. At the inaugural function, Dr. S. Ayyappan felicitated Dr. Sanjay Rajaram, who has been chosen for a prestigious and coveted World Food Prize for the year 2014. On this occasion the Zonal Project Directors of all the eight zones of the country attended meeting along with the Director of Extension of the several SAUs, Director of Research, Directors of the ICAR Institutes &representatives from MSSRF, BAIF, DRI, Chitrakoot and NSFI, Gurgaon.

The Authority acknowledges the importance of partnership and synergies of different stakeholders including KVKs who are providing technological solutions and extension mechanism for agriculture development. KVKs are playing a very important role in expanding its reach for generating and disseminating new knowledge to its wide range of stakeholders in the production and food value chain. During the daylong session, the strategies were framed under the guidance of Dr. A.K. Sikka, DDG

(Extension), ICAR to involve the KVKs particularly in the agro-biodiversity hotspots for enhancing the awareness about the PGSC awards, rewards & recognitions, registration of the farmers' varieties, benefit sharing and compensation. DG, ICAR and DDG (Extension), ICAR assured their full co-operation to the Authority.

At the end of the session, it was decided that Rs.6.40 lakh will be allocated to the Zonal Project Directors (ZPDs) for conducting two training programmes for each of the eight zones to train the trainers. The ZPDs will prepare a list of KVKs based on the Agro bio-diversity hotspots and submit to the Authority for allocating of funds on the basis of above criteria and an amount of Rs. 2 crores will be given for conducting 250 trainings across eight zones throughout India to sensitize the farmers, group of farmers & farming communities including tribals about the PPV&FR Act.

- **Navara Utsav-2014** was celebrated as part of awareness creation and promotion of Kerala's unique medicinal and healthy rice Navara. An Exhibition was also organized on 17 July, 2014 at Govt. College, Chittur, Kerala. In this programme Ms. Aruna Sundarajan, Managing Director, KSIDC, Mr. P.H.Kurian, Principal Secretary, Govt. of Kerala, Dr. R.R.Hanchinal, Chairperson, PPV&FRA along with Dr. R.C.Agrawal, Registrar General participated and Professor M.S Swaminathan, eminentAgriculture Scientist was the Chief Guest on this occasion.

- A National workshop on "**Enhancing Understanding & Implementation of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) in India**" was organized on 17-18 November, 2014 at Deendayal Research Institute, Chitrakoot.This workshop was jointly organized by Protection of Plant Varieties and Farmers' Rights Authority;Department of Agriculture, Co-operation& Farmers Welfare, Govt. of India; ICAR-National Bureau of Plant Genetic Resources; Food and Agriculture Organization of the United Nations and Deendayal Research Institute, Chitrakoot. The objective of the workshop was to enhance the awareness of stakeholders about ITPGRFA and incentives / disincentives for inclusion of material under the Multilateral System (MLS) and ways to overcome these disincentives, if any. In addition to the workshop, a National Agro-biodiversity Exhibition of seeds, planting material and the agro-products of the farmers, traditional farmers' varieties, landraces, folk varieties conserved by farmers, NGOs, KVKs, SAUs etc. as side event, was centre of attraction.

Shri Avinash Kumar Srivastava, Additional Secretary, Govt. of India, Ministry of Agriculture& Farmers' Welfare was the Chief Guest and Shri Ganesh Singh, Member of Parliament and Parliamentary Secretary was the Guest of Honour. The programme was jointly inaugurated by Shri Ganesh Singh, Member of Parliament, Satna; Shri Avinash Kumar Srivastava, Additional Secretary, Govt. of India; Shri R.K. Singh, Joint Secretary (Seeds); Dr. S.K. Patil, Vice-Chancellor, IGKVV, Raipur; Prof. N.C. Gautam, Vice-Chancellor, MGCGVV, Chitrakoot; Dr. P.N. Mathur, Regional Director, Bioversity International, Dr. SubhashDasgupta, Chief Technical Officer, FAO, Regional Office, Thailand, Dr. R.R. Hanchinal, Chairperson and Dr. R.C. Agrawal, Registrar General, PPV&FRA.The two days' workshop was conducted in six sessions and chaired and co-chaired by different eminent scientists. Presentations were made on the various topics relevant to the conservation of Plant Genetic Resources for Food and Agriculture (PGRFA), policy issues, legal aspects, germplasm exchange, Multilateral System (MLS), role of CGIAR centres, farmers' rights and their awareness under International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA). MSSRF, Chennai, Humana People to People India and BAIF, Pune, reputed NGOs, working for the welfare of the farmers highlighted the outcome and experiences of implementation of their projects. A panel discussion on incentive or disincentives for inclusion of Plant Genetic Resources in MLS and ways to disincentive was chaired by Dr. S.K. Patil, Vice-Chancellor, IGKVV, Raipur and a number of scientists from ICAR including Mrs. Sunita K. Shreedharan, SKS Law, Associates highlighted observations/comments on the subject. The Workshop was successful in bringing awareness of the various stakeholders about the implementation of ITPGRFA and its importance of conservation and sustainable use of PGRFA in day today life.

❖ **Workshop on Women Empowerment at KVK, Gopalgram, Gonda:** Atraining-cum-awareness programme on empowerment of women for conservation and preservation related activities of the Plant Genetic Resources was organized at Lal Bahadur Shastri, KVK, Gonda with the support from PPV&FR Authority on 11 February, 2015. More than 300 farm women attended this training-cum- awareness program. Dr. R.R. Hanchinal, Chairperson, PPV&FRA was the Chief Guest, Dr. Bharat Pathak, General Secretary, DRI, Chitrakoot graced the occasion. Ms. Mamta Gupta, Ms. Ruchi Modi, Dr. Rekha Sharma, Dr. Anita Mishra, Gynaecologist, Joint Director Agriculture, Dy. Director Agriculture & Horticulture, Shri Ram Krishna Tiwari, Secretary, DRI, ICAR Zonal Project Director, Kanpur, Dr. Atar Singh, Dr. Ravi Prakash, Registrar, PPV&FR Authority were also present. On this occasion, Chief Guest in his keynote address explained the farmers' rights under the PPV&FR Act and highlighted Plant Genome Saviour Awards, rewards and recognitions constituted by the Govt. of India for the farming communities. Dr. Ravi Prakash, Registrar explained the process of filing of applications forms for registration of farmers' varieties. Other issues like compensation, benefit sharing were also addressed. An Exhibition on Traditional crop varieties was also organized where many local farm women displayed their seeds and other agro products. Women farmers were advised to conserve the local traditional varieties of different crops and get them registered with the Authority in their own interest.

❖ **Farmers' Awareness programme, Niphad, Nasik**

The ICAR-Indian Institute of Wheat and Barley Research organized a training-cum-awareness programme on Protection of Plant Varieties and Farmers' Rights Act, 2001 (PPV&FRA) at Agricultural Research Station Niphad, Nasik on 2 March, 2015 under the Chairmanship of Dr. T.A. More, Hon'ble Vice Chancellor, MPKVV, Rahuri, while Dr. R.S. Patil, Director (Research), MPKVV was the Guest of honour. Dr. Sushila Kundu, Principal

Scientist, DWR, Karnal in her talk covered the historical perspectives, objectives and various provisions of the Act. She also covered registration of plant varieties and DUS testing procedure, National Gene Fund, Plant Genome Saviour Community Awards and Benefit Sharing. Dr. Arun Gupta, Principle Scientist, DWR highlighted the Rights of the Farmers in the Act including save, use and re sow of seed, benefit sharing, registration of farmers' varieties, compensation and compulsory licensing. Dr Randhir Singh in his talk covered the various aspects of front line demonstration at farmers field and informed the farmers about the precautions to be taken by them while using farm implements especially sprayer. Experts from the ARS, Niphad delivered talk on wheat production and protection technologies including improved varieties, package of practices and disease and pest management in wheat.

Dr. TA More, Vice Chancellor and Dr. Patil, Director (Research), MPKV, Rahuri in their addresses informed the farmers about various technology developed by the University in order to mitigate the impact of climate change. Some progressive farmers also shared their views on the awareness programme. More than 100 farmers from Yevla and Niphad areas attended the programme.

❖ PPV&FR Authority participated in the Krishi Mela organized by IARI, Pusa, New Delhi in its campus from 10-12 March, 2015.During the three days festival, farmers of the neighbouring states visited the fair and got an opportunity to see the latest technologies/ agro-products developed by IARI and upgraded their knowledge. PPV&FR Authority arranged a stall and displayed its activities through charts, posters and various publications brought out for the farmers and

other stakeholders. It was estimated that over a lakh visitors participated in the Krishi Mela during the three days. Dr. Tejbir Singh, Shri. Rabi Raman Pradhan, Dr. D.S. Pilania and Shri. Tammu Stephen participated.

❖ Farmers' Awareness programme at Nanihari, Saharanpur

The Indian Institute of Wheat and Barley Research (IIWBR) organized Farmers' awareness programme on 28 March, 2015 on Protection of Plant Varieties and Farmers' Rights Act, 2001 (PPV&FRA) at village Nanihari (Sahranpur), Uttar Pradesh located at the boundary of Uttarakhand and Haryana.Progressive farmers Mr.

Surender Singh and Mr. Balendera Singh. Dr. R.R. Hanchinal, Chairperson PPV&FRA as Chief Guest, in his talk covered various provisos of PPV&FRA, 2001 namely general functions of the Authority, registration procedure of the plant varieties, DUS testing, gene fund, Plant Genome Saviour Award and Benefit-Sharing. Dr. Indu Sharma,

Director, IIWBR, Karnal presided the function and urged the farmers to register their unique local landraces and farmers varieties with the Authority. She also covered disease management practices in wheat aspects in her talk.

Dr. Ravi Prakash, Registrar highlighted the rights of the farmers. Drs. Arun Gupta, K Venkatesh and Anita Meena covered IPR issues, improved wheat varieties and various improved production technology in wheat, respectively. Chief Agricultural Officer, Saharanpur informed the farmers about various schemes of their Department. Some progressive farmers also shared their views on organic farming, processing and value addition. The programme was jointly conducted by Dr.Sushila Kundu, DWR and Dr. Randhir Singh. More than 120 progressive farmers from adjoining villages attended the programme. Mr. Balendra and Surendra Singh also maintaining arboreta of different medicinal plants and conserving various landraces of agri-hort crops. All the dignitaries and progressive farmers visited his arboreta in the afternoon session.

❖ Deendayal Research Institute, Krishi Vigyan Kendra , Ganiwan- Chitrakoot

Deendayal Research Institute, Krishi Vigyan Kendra, Chitrakoot has organized one day training-cum-awareness programme to educate the progressive farmers on PPV&FR Act 2001 on 13 April, 2015**.** Prof. R.R. Hanchinal, Chairperson PPV&FRA; Dr. P.N.Mathur, Regional Director (Asia Pacific), Bioversity International, New Delhi, Shri. Vishnu Datt Sharma, Vice Chairman, NYK, Govt. of India, Dr. Umesh Sharma, Chairman, Veterinary Council of India, New Delhi, Dr. S.L.Goswami, VC, Banda University of Agriculture &Technology, Banda, Dr. Bharat Pathak, General Secretary, Deendayal Research Institute were participated. Shri Abhay Mahajan, Organizing Secretary, Deendayal Research Institute were also present.

The 1st technical session was started with presentation based on rules for farmers' varieties registration, its process, legal requirements and rights of farmers. The 2nd session was organized in open ground where approximately 650 participants were gathered. The Awareness session was started with lightening of lamp in front of the pictures of Rastrarishi Nanaji Deshmukh and Pt.Deendayal Upadhyay. Dr. Bharat Pathak, General Secretary, DRI chaired the

programme. After self-introduction and welcome speech by Dr. Narendra Singh, PC, KVK, the guest key speakers delivered their speeches and remarks on this aspect.Dr. Ravi Prakash, Registrarhighlighted the outlines, objectives and expected outcomes from the programme. He assured the gathering to provide allfacilities which are required for registration of their varieties or local technologies either individually or community based. Dr. P.N. Mathur, Regional Director (Asia Pacific), Bioversity International also addressed the farmers regarding varietal importance and possible use of local genetic material for climate challenges.

Prof. R.R. Hanchinal, Chairperson, PPV&FRA, Chief Guest discussed in detail on farmers' perspective and responsibilities of Authority. He briefly outlined the activities taken by Authority and their impact on farmers' community in the country. He also quoted some example of the farmers who were benefited from the Authority.An exhibition was also organized in which a huge collection of farmers' varieties seeds and technologies were displayed with KVK, exhibits. The guests and farmers visited the exhibition. The collection of coarse grain and white brinjal were the centre of attraction in exhibition. Besides, training-cum-awareness programmes Authority assigned some of the projects on the conservation of traditional and farmers' varieties in some agro biodiversity hotspots as under:

❖ Additional DUS centres for Farmers' Varieties of Rice

Taking into consideration that there is an increase in number of applications being filed by farmers from different regions especially in rice, it was decided to establish additional DUS Centres for efficient conduct of Grow-out-Tests in a meeting, which was held on 15 April, 2014 under the Chairmanship of Prof. R.R. Hanchinal, Chairperson of PPV & FR Authority. Accordingly, it was felt essential to establish five additional DUS centres (Nodal or Co-Nodal centres) for rice at different regions in the country. The region-wise additional DUS centres are as under:

S. No.	Zone	Particulars	No. of Farmers' Varieties of Rice received for GoT/ Characterization
1	North-Eastern Region	ICAR Research Complex for N.E.H Region, Jharnapani, Nagaland	270
		ICAR Research Complex for N.E.H Region, Imphal, Manipur	109
2	Central Region	Indira Gandhi Krishi Vishwavidyalaya, Raipur, M.P	145
3	Western Ghats	Regional Agricultural Research Station, Karjhat, Dist. Raigad, Maharashtra	30
		Zonal Agriculture Research Station (ZARS), VC Farm, Mandya, Karnataka	107

1. Genetic diversity of farmers' rice varieties collected from different parts of Odisha at CRRI, Cuttack

Objectives: The main objectives of the project are:

- ❖ To identify the farmers' varieties in terms of phenotypic performance and establishment of genetic profile.
- ❖ To create database for appropriate utilization of information/material generated during the project duration and also to generate additional information on endophyte-association with these farmers' varieties.

Achievements:

Six hundred seven farmers' rice varieties collected from different areas of Odisha, were grown in CRRI research farm during *Kharif*, 2012 and 62 morphological traits were recorded. Three of the studied traits (leaf ligule, male sterility and presence of amylose in endosperm) did not reveal any difference among farmers' rice varieties. The number of variables within a trait studied varied from 2 (anthocyanin coloration, anthocyanin coloration of leaf sheath, leaf auricle, leaf collar, anthocyanin coloration of leaf, leaf ligule, culm attitude, male sterility, anthocyanin coloration of nodes, anthocyanin coloration of internodes, awn of panicle, presence of secondary branching in panicle, phenol reaction of lemma, presence of amylose in endosperm and aroma in decorticated grain) to 8 (color of lemma and palea and color of decorticated grain). These traits harbored a total of 193 variables with an average of3.679+1.544 per trait. The number of effective variables was highest for length of decorticatedgrain (4.152), whereas a lowest value was recorded for leaf auricles, leaf collar and presence ofsecondary branching in panicles, which corresponded well with the expected heterozygosityvalues for these traits.

The Nei's genetic diversity varied from 0.003 (leaf auricle, leaf collar and presence ofsecondary branching in panicle) to 0.759 (length of decorticated grain) with an average of0.405+0.206. The traits like leaf ligule, male sterility and presence of amylose in endosperm didnot show any diversity among varieties. The Shannon's information index varied from 0.012(leafauricle, leaf collar and presence of secondary branching in panicle) to 1.492 (length ofdecorticated grain and shape of decorticated grain) with an average value of 0.729. It iswellcorresponded with the value of Nei's genetic diversity. The genetic distance varied from 0.058(Ganjam Gedi1 and Ganjam Gedi2, Hunar and Hundar2, Hunar and Jhali, Mahipal6 andMahipal10, Ratahchudi and SankarChini) to 1.572 (Dhoba Sarian and Dhusura) with an averageof 0.538+0.193.The neighbor-joining tree constructed based on Nei's genetic distance groupedthe 607 genotypes into 3 major clusters (I, II and III) and few independent clusters. Cluster I washighly diverse with 6 sub clusters (Ia, Ib, Ic, Id, Ie, If) followed by cluster III having 5 subclusters (IIIa, IIIb, IIIc, IIId, IIIe) cluster II (3 sub clusters i.e. IIa, IIb, IIc).

2. Collection, documentation and registration of farmers' varieties of Chhattisgarh

Project

छत्तीसगढ़ राज्य जैव विविधता का हॉट स्पाट है। छत्तीसगढ़ के प्रमुख आदिवासी बाहुल्य सुदूर जनजातीय क्षेत्रों जैसे– बस्तर, अम्बिकापुर, जशपुर, कोरिया, बलरामपुर, जगदलपुर, दंतेवाडा, नारायणपुर, बीजापुर, कोंडागॉव, धमतरी एवं रायगढ़ आदि क्षेत्र जैविक सम्पदा से परिपूर्ण है, जहां कृषको द्वारा अपनी ही पारम्परिक प्रजातियों की खेती की जाती है, जिससे उन बहुमूल्य जैव विविधता का संरक्षण हो पाया है। यहां के कृषको का जीवन–यापन एवं संस्कृति इन्ही पारम्परिक किस्मों से ही जुड़ी हुयी है, जिससे यहां की जैविक सम्पदा का संरक्षण हो पाया है। छत्तीसगढ़ के बस्तर भू–भाग भारत वर्ष मे स्थित 22 जैव विविधता विपुल क्षेत्रों में 9वें स्थान पर है। यहां पर विभिन्न फसलों की विपुल जैव विविधता मौजूद है, जिसे संरक्षित किया जाना अति आवश्यक है।

छत्तीसगढ़ मे यह अधिनियम इंदिरा गॉधी कृषि विश्वविद्यालय के सान्निध्य मे बहुत ही सुचारू रूप से चल रही है। यहॉ पर पहले से ही कृषक प्रजातियों का संग्रहण, प्रलेखन एवं जागरूकता कार्यक्रम किया जा रहा था, जिसे देखते हुए पौधा किस्म संरक्षण कृषक अधिकार प्राधीकरण के द्वारा वर्ष 2014–15 से दो परियोजनाएं चलायी जा रही है। पहली परियोजना तीन वर्ष हेतु एवं दूसरी परियोजना सतत जारी रहेगी। यह भारत का एकमात्र ऐसा को–नोडल केन्द्र है जो केवल कृषक प्रजातियों का ही परिक्षण करता है। दोनो परियोजनाओं का विवरण क्रमशः निम्नवत है।

1- NRrhlx< jkT; dh d"kd izrkfr;ksa dk lxzg.k] izy[ku ,oa izfrdj.k

इस परियोजना के अंतर्गत छत्तीसगढ़ मे जैवविविधता की कुछ हॉट–स्पॉट की पहचान की गयी है, जहॉ पर फसल जैव–विविधता से भरपूर है। इनमे से कुछ हॉटस्पॉट निम्नलिखित है।

rkfydk Øekd 51&ftykokj gkWVLikWV

Øe la-	ftyk	gkWVLikWV {k= ¼xkao ,oa Cykd½
1	जगदलपुर	बरसूर (बस्तर)
2	कोंडागांव	मरदापाल
3	कांकेर	छुरिया (नरहरपुर)
4	धमतरी	बगरूमनाला एवं गट्टासिली (केरेगांव)
5	रायगढ़	रतनपुर (धरमजयगढ़), हमीरपुर (तमनार)
6	जशपुर	मैनी एवं बम्बा (बगीचा)
7	सरगुजा	नखना (बतौली), मैनपाट (सरगुजा)
8	ब्लरामपुर	समरसोठ
9	कोरिया	कटघोरी (सोनहठ)

छत्तीसगढ़ मे अभी तक कुल 947 फसल प्रजातियों का पंजीकरण के लिए भेजा जा चुका है। जिनमें से 578 प्रजातियों का पंजीकरण संख्या प्राप्त हो गयी है तथा इनमें से कुल 145 किस्मो का वर्ष 2014 में डी.यू.एस. (कै) परिक्षण हो चुका है। इंदिरा गांधी कृषि विश्वविद्यालय द्वारा विकसित धान की कुल 16 प्रजातियों का भी पंजीकरण कराया जा चुका है।

इस अधिनियम के अंतर्गत छत्तीसगढ़ मे बहुत सारी ऐसी फसल प्रजातियों का संग्रह/संरक्षण किया गया है, जो पूरे विश्व मे दुर्लभ है, जैसे– हुन्डार– सबसे छोटे दाने वाली धान, लाजनी सूपर–2– सबसे पतली लाल धान, कोरमा– हरा धान वाली किस्मों को पंजीकरण हेतु भेजा गया है। विभिन्न औषधीय गुणवत्ता युक्त एवं सुगंधित धान की किस्में साथ ही साथ विभिन्न सब्जीवर्गीय फसलें जो कि बहुत ही अनूठी, दुर्लभ एवं अत्यन्त उपयोगी है। छत्तीसगढ़ राज्य मे जिलेवार कृषक प्रजातियों की पंजियन हेतु फसलों की संख्या तालिका क्रमांक–2 मे दिया गया है।

rkfydk Øekd 52&Qly izrkfr;ksa dk C;kjk

Øe la-	ftyk	gkWVLikWV {k= ¼xkao ,oa Cykd½
1	राजनंदगांव	11
2	मुगेली	4
3	कोरिया	16
4	जशपुर	30
5	रायगढ़	25
6	कांकेर	5
7	नारायणपुर	2
8	जांजगीर	7
9	बिलासपुर	2
10	बलरामपुर	22
11	बीजापुर	39
12	सरगुजा	22
13	दंतेवाडा	68
14	धमतरी	213
15	कोंडागांव	112
	dqy la[;k	578

2- d"kd izrkfr;ksa dk Mh- ;w- ,l- ifj{k.k ¼ifj;kstuk ik/kk fdLe lqj{k.k ,oa d"kd vf/kdkj ikf/kdj.k dh dUnzh; {k=h; ;kstuk dk vUrxZr½

इसके अन्तर्गत 145 कृषक प्रजातियों का डी. यू. एस. परिक्षण 62 लक्षणों (कैरेक्टर) का किया गया, जिसमें छत्तीसगढ़ एवं झारखण्ड की कृषक प्रजातियॉ शामिल थी। इनमे 21 रिफरेन्स प्रजातियों को भी शामिल किया गया, जो इं. गॉ. कृ. वि. वि. रायपुर की पंजीकृत प्रजातियों में से ली गयी थी। कुल मिलाकर

इस वर्ष धान की कुल 166 प्रजातियों का परिक्षण इस परियोजना के अंतर्गत किया जा चुका है। परिक्षण के दौरान 11 उच्च उपज वाली प्रमुख प्रजातियों का चयन करके अतिरिक्त सुक्ष्म पोषक तत्वों का परिक्षण किया गया जिसमे जिंक, लोहे और प्रोटीन की मात्रा सामान्य से अधिक थी जिनका विवरण तालिका संख्या–3 मे दिया गया है।

rkfydk Øekd 53&çkVhu ,o l{e rRo dh ek=k fdLe okj

Øe l-	/kku itkfr	ikVhu ifr'kr ek=k tyMky fo/kh }kjk	ikVhu ifr'kr Qkfyu ykoh fo/kh }kjk	l{e rRo dh ek=k (ug/mg)	
		vkl r ek=k			
				ftd dh ek=k	ykg dh ek=k
1	दिगम्बर धान	6.250	8.16	18.35	6.51
2	धधमैनी धान	6.290	7.56	16.84	4.59
3	सफेद ललक	7.035	7.30	21.85	4.54
4	सिक्कसाल धान	7.221	7.45	20.2	6.63
5	तेवन धान	6.890	8.25	17.9	7.11
6	कॉवा–4	7.960	7.81	27.48	9.42
7	चौलाई बाबा	6.706	7.12	25.11	7.16
8	केन्दुमुडी	6.515	8.78	22.52	6.9
9	भजना	6.660	6.61	21.42	5.14
10	कदम फूल	6.696	7.44	18.73	6.7

इन प्रजातियों की गुणवत्ता देखते हुए इनकी अतिरिक्त जॉच में कीट एवं व्याधि का भी मुल्यांकन किया गया जिसमे 8 प्रजातियॉ भूरा माहू के प्रति प्रतिरोधक एवं एक प्रजाति तना छेदक के लिए सहनशील है।

पौधा किस्म संरक्षण एवं कृषक अधिकार प्राधिकरण के अध्यक्ष, डॉ हंचिनाल एवं रजिस्ट्रार जनरल डॉ. आर. सी. अग्रवाल द्वारा समय–समय पर निरीक्षण किया जाता रहा है। 6 सितम्बर 2014 को इं. गॉ. कृ. वि. वि. रायपुर के डी. यू. एस. परिक्षण प्रक्षेत्र का डॉ हंचिनाल द्वारा निरीक्षण किया गया। जिनका सुझाव हमारे केन्द्र के विकास में सर्वोपरि सहभागिता रही है। इनके मार्गदर्शन में इं.गा.कृ.वि.वि. रायपुर किसानों को प्रोत्साहन एवं जागरूकता फैलाने हेतु कृषि विज्ञान केंन्द्रो को भी शामिल किया है। इस प्रकार छत्तीसगढ़ के दूरस्थ नक्सल प्रभावित क्षेत्रों जैसे–बीजापुर, कोंडागांव एवं जशपुर तक भी किसानों में जागरूकता आ गयी है, जो कि हॉटस्पाट बस्तर का अभिन्न अंग है।

3.1 National Gene Fund

The National Gene Fund was constituted by the Department of Agriculture,Cooperation& Farmers Welfare, Ministry of Agriculture& Farmers Welfare, Government of India under the PPV&FR Act, 2001 by giving an initial contribution of Rs. 50.00 lakh to the Authority. The Authority is operating and maintaining a separate account for the purpose. The contributions in the National Gene Fund include:

- Benefit sharing received from the breeder of a variety or an essentially derived variety registered under the PPV&FR Act, 2001,
- Annual fee received by PPV & FR Authority,
- Compensation deposited and
- Contributions by National and International organizations

As per the Act the National Gene Fund can be applied for meeting:

- Any amount payable by way of benefit sharing,
- Compensation payable,
- The expenditure for supporting the conservation and sustainable use of genetic resources including *in situ* and *ex situ* collections and for strengthening the capability of the Panchayat in carrying out such conservation and sustainable use; and
- The expenditure of the schemes relating to benefit sharing.

Table 54: Status of National Gene Fund during 2014-15

Items	Amount (₹)
Opening balance as on 01 April, 2014	2,37,12,272
Contribution to Gene Fund	85,00,000
Annual fee received	53,16,755
Bank interest	18,40,174
Other Income	24,750
Total	3,93,93,951
Less: Administrative expenses	762
Closing balance as on 31 March, 2015	**3,93,93,189**

3.2 Plant Genome Saviour Community Awards, Rewards and Recognitions

The Authority has constituted five **Plant Genome Saviour Community Awards** of rupees ten lakh each w.e.f. 2009-10 to be awarded every year to the eligible farming communities engaged in the conservation and preservation of plant genetic resources. The Authority has also instituted ten **Plant Genome Saviour Farmers' Awards** of rupeesone lakh each and 20 **Recognition certificates** per year. The advertisement for these awards was published in the National dailies on 27 September, 2014 and the last date for receiving the application was extended upto 27 March, 2015 due to poor response. The applications received were examined and finalized but during the reporting year no such awards, rewards and recognitions were conferred. The summary of these awards conferred so far by the Authority to the farmers and the farming communities are summarised as under:

Table 55: Details of Plant Genome Saviour Awards, Reward & Recognition

S. No	Name of the Award	2007-08			2008-09			2009-10			2010-11			2011-12			2012-13		
		Total Application Received	State Participated	Total Award Given	Total Application Received	State Participated	Total Award Given	Total Application Received	State Participated	Total Award Given	Total Application Received	State Participated	Total Award Given	Total Application Received	State Participated	Total Award Given	Total Application Received	State Participated	Total Award Given
1	Plant Genome Saviour Community Recognition Certificate	Nil	5	5	15	Nil	4				19	11	7						
2	Plant Genome Saviour Community Award							20	11	2	19	11	4	27	11	4	28	15	-
3	Plant Genome Saviour Farmers' Reward													30	13	10	80	20	-
4	Plant Genome Saviour Farmers' Recognition													30	13	15			

4. Development of DUS Test Guidelines

4.1 Task Force on Development of DUS Test Guidelines

During the reporting period, a number of DUS test guidelines for fruits, vegetables, flowers, seed spices,beverageand forestry plants were finalized and approved by respective Task Force. Simultaneously many Task Force committees were also constituted for validation of the DUS descriptors for developing of the DUS test guidelines for Aonla,Bael, Betelvine, Chilli,Elephant Foot Yam & Taro, Guava & Litchi, Marigold and Noni. Morphological characters have traditionally formed the basis of varietal descriptions and for the examination of novelty. These characteristics are information for PVP applications along with pedigree. These morphological characters are measured on qualitative and quantitative scale, which makes the data. These data are omnipresent in plant breeding and in agriculture. They do not require sophisticated labs to make them available. This characteristic along with their data is transformed as criteria for the purpose of Distinctiveness, Uniformity and Stability. The highlights of the development of DUS testing guidelines for some of the crop species are as under:

Meetings of the Task Force

- **Meeting of Task Force for "Validation of DUS descriptors for Canna and Gladiolus":** The second Meeting was held at NBRI, Lucknow on 29 April, 2014. Dr. R.R. Hanchinal, Dr. R.C. Agrawal & Dr. Tejbir Singh participated in the meeting. Dr. A.K. Goyal, Chief Scientist & PI, (Canna) and Dr. Sudharsan Kumar, Principal Scientist and PI, (Gladiolus) presented the draft DUS guidelines for their respective crops. Dr. Gautam Kalloo, former DDG (Horticulture), ICAR chaired the meeting. Other members Dr. U.G. Nalavadi, Former Director, Post Graduate Studies and & Prof. (Hort.) UAS, Dharwad, Dr. R.L. Mishra, Former Project Coordinator, New Delhi and Dr. R.K. Roy, Sr. Principal Scientist & PI (Bougainvillea), NBRI were present. DUS test guidelines of Canna and Gladiolus were finalized on the basis of observations and comments received from the members. The guidelines of canna and gladiolus were published in PVJ for June & July, 2014 respectively.
- **Meeting of Task Force for "Validation of DUS descriptors for developing DUS guidelines for Watermelon and Muskmelon"**: The final meeting of the Task Force for validation of DUS test guidelines for Watermelon and Muskmelon was held on 8 May, 2014 at New Delhi under the Chairmanship of Dr. Brahma Singh, Advisor, World Noni Research Foundation (WRNF), Chennai. The other members included were *viz.* Dr. K.V. Peter, Director, WRNF, Chennai, Dr. Mathura Rai, Former Director, IVRI, Varanasi; Dr. S. K. Sharma, Director, CIAH, Bikaner; Dr. D. P. Singh, Former ADG (Vegetables) ICAR; Dr. P. S. Sirohi, Former Head, Division of Vegetable, IARI, New Delhi; Dr. Sudhakar Pandey, Former ADG (Horti.), ICAR & Senior Scientist, Dr. B. Singh, Project Coordinator (Vegetables), IVRI, Varanasi; Dr. B. R. Choudhary, Scientist Horticulture (Veg. Science), CIAH, Bikaner; Dr. E. Sreenivas Rao along withofficers of the Authority. Chairperson and Registrar General were also present. Hon'ble members discussed and finalized the DUS guidelines for both the crops i.e. Watermelon and Muskmelon. Dr. B.R. Choudhary, Scientist Horticulture (Veg. Science) and Dr. Sudhakar Pandey, Senior Scientist, IIVR, Varanasi jointly made presentation. These were published in the PVJ of July, 2014.
- **Meeting of the Task Force "Validation of DUS test guidelines for Noni (*Morindacitrifolia*)": T**he first meeting was conducted under the Chairmanship of Dr. Kirti Singh, Chairperson, World Noni Research Foundation on 8-9 September, 2014 at Chennai. Dr. R. R. Hanchinal; Dr. R. C. Agrawal; Dr. Tejbir Singh; Dr. D. R. Singh, Principal Scientist & Head & PI of the Noni, Central Island Agricultural Research Institute (CIARI), Port Blair; Dr. Anurudh K. Singh, Former Head of the Conservation Division, NBPGR, New Delhi; Dr. T. Marimuthu, Additional Director, Dr. P. Rethinam, Former Executive Director, APCC participated in the meeting**.** The committee desired that noni is a newly introduced crop with lots of medicinal value and no popular varieties are available and also no referral DUS test guidelines even in UPOV are available. Therefore, the members should take utmost care to develop the DUS test guidelines on the basis of theirown experience and knowledge taking into consideration of optimum number of suitable identifiable heritable characteristics andkeeping in mind that noni is a perennial tree.
- **Task Force for "Validation of DUS test guidelines for flowers and fruits":** The Authority has assigned validation of DUS test guidelines for some of the important flowers viz., Jasmine, Tuberose, China aster, Papaya & Custard Apple to IIHR, Bengaluru. Task Force committees were constituted for developing of DUS test guidelines for these flowers and fruits under the Chairmanship of Prof. M. Kannan, Professor of Horticulture, Department of Floriculture and Landscaping, HC&RI, Tamil Nadu Agriculture University, Coimbatore for Jasmine & Tuberose, Dr. T. Manjunatha Rao, Principal Scientist & Head, Division of Ornamentals, IIHR, Bengaluru for China

aster and Dr. C.P.A. Iyer, Former Director, IISR, Calicut for Custard apple. The meetings of these Task force committees were held at IIHR, Bengaluru on 7-8 October, 2014 and the DUS test guidelines were discussed in respective Task force meetings and finalized the guidelines for Jasmine, Tuberose, China aster and Papaya. Dr. R. R. Hanchinal, Chairperson, PPV&FR Authority; Dr. Manoj Srivastava and Dr. Tejbir Singh, Registrars, PPV&FR Authority were also present. The above guidelines were published in December, 2014. The guidelines for custard apple are likely to be finalized next year.

- **Task Force for "Validation of DUS test guidelines for Peach, Plum & Strawberry"**: The second meeting of the Task Force was held on 21November, 2014 at New Delhi for finalizing the DUS test guidelines for Peach, Plum & Strawberry under the Chairmanship of Dr. J. P. Tiwari, Former Dean, College of Agriculture, G. B. Pant University of Agriculture & Technology, Pantnagar. Dr. S. N. Pandey, Former ADG (Hort.) ICAR, Dr. Nazeer Ahmed, Director, Central Institute of Temperate Horticulture, Srinagar and Dr. K.K. Srivastava, Senior Scientist, CISH, Lucknow respectively. Dr. K. Kumar, Principal Scientist, Dr. Y. S. Parmar University of Horticulture & Forestry, Nauni, Solan, Dr. S. Rajan, Director (Acting) CISH, Lucknow and Dr. Manoj Srivastava, Registrar, PPV&FR Authority, New Delhi as a Member Secretary. Dr. R. R. Hanchinal, Chairperson, PPV&FR Authority and Dr. R. C. Agrawal, Registrar General, PPV&FR Authority attended the meeting along with the Technical Officers of the Authority. The Task Force finalized the DUS test guidelines for three fruits i.e. Peach, Plum & Strawberry and also published in the PVJ for December, 2014.
- **Task Force for "Validation of DUS test guidelines for Marigold"**: The first meeting of the Task Force for developing DUS test guidelines for Marigold was held on 22 December, 2014 in the Bioversity International, New Delhi under the Chairmanship of Dr. P. N. Mathur, Coordinator South Asia Office, Bioversity International, New Delhi. The Task Force desired that the IARI and IIHR, Bengaluru should share the information relating to reference varieties with each other and validate the data on the observation recorded on the quantitative and qualitative traits with respect to development of DUS guidelines.
- **Task Force for "Validation of DUS test guidelines for Chilli, Sweet pepper & Paprika":** The first meeting of the Task Force developing DUS test guidelines for Chilli, Sweet pepper & Paprikawas held on 10 January, 2015 at Indian Institute of Horticulture Research, Bengaluru for finalizing the DUS test guidelines under the Chairmanship of Dr. M Mahadeveppa, Director, JSS Rural Development Foundation, Bengaluru. Dr. K. V. Peter, Director, World Noni Research Foundation; Dr. V. A. Parthasarathy, Former Director, & Emeritus Scientist, IISR; Dr. O. P. Dutta, Former Head and Principal Scientist, Division of Vegetable Sciences, IIHR, Bengaluru; Dr. K Madhavi Reddy, Principal, Division of Vegetable Crops, Indian Institute of Horticulture Research, Bengaluru; Dr. Pritam Kalia, Head, Division of Vegetable Sciences, IARI, New Delhi; Dr. Lohitaswa, Prof & Head, Deptt. of Genetics and Plant Breeding, College of Agriculture & Dr. Tejbir Singh, Registrar PPV&FR Authority, New Delhi were present. The Task Force finalized DUS guidelines for Chilli, Sweet pepper & Paprika after a lengthy discussion.
- **Meeting of the Task Force for "Finalization of DUS test guidelines for *Bambusa balcooa* and *Dendrocalamus hamiltonii*"** was held on 12 August, 2014 at New Delhi. The Task Force discussed the descriptors identified and suggestions were made by the members to review and finalize DUS guidelines in the next meeting, keeping in mind the prominent species grown in North-Eastern Region as well as other parts of the country.
- **Task Force on Documentation, Indexing and Cataloguing of Farmers' Varieties**: The Task Force developed the general guidelines for "**Documentation, Indexing and Cataloguing of Farmers' Varieties**" on 23 July, 2014.Task Force also finalized the format for collection of information on farmers' varieties.

Fruits

4.1.1 Central Institute for Subtropical Horticulture (CISH), Rehmankhera, Lucknow

Jamun (*Syzygiumcuminii*Skeels)

The status of maintenance breeding / characterisation of accession of Jamun for the purpose of development of DUS guidelinesis as under:

Name of the species	No. of Accessions	Source (own released/ ICAR/SAU)
S. cuminii	18	Own released

Qualitative characteristics of fruit

The considerable differences in the fruit shape were recorded among different accessions / varieties. According to shape of fruit different accessions/ varieties were grouped according to shape of fruit. The observation on the fruit apex was recorded inflattened and depressed among different accessions/varieties. The selected accessions were also grouped according to the seed content as seeded and seedless fruits.

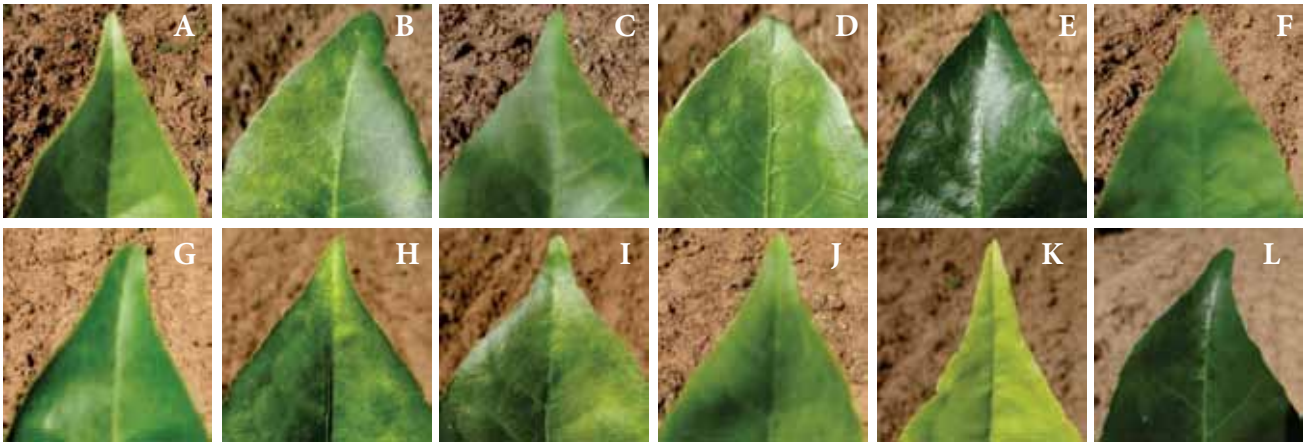
Characteristics	Example varieties/ accessions	Descriptor
Mature fruit shape	Goma Priyanka, Konkan Bahadoli, CISH J-25, CISH J-085, CISH J-577, CISH J-580, CISH J-585, KJP95, KJP86, KJPKM-II	Oblong
	Gokak –1, Gokak-2, Gokak-3	Elliptic
	CISH J-42, CISH J-37, CISH J-576, CISH J-579	Ovoid
	CISH J-35, CISH J-23	Round
Mature fruit apex	Goma Priyanka, Konkan Bahadoli, Gokak-1, Gokak-2, Gokak-3, CISH J-25, CISH J-23, CISH J-35, CISH J-085, CISH J-577, CISH J-580, CISH J-585, KJP95, KJP86, CHESJ-1, CHESJ-3, CHESJ-4, CHESJ-5, CHESJ-6, KGPKM-II	In flattened
	CISH J-42, CISH J-37, CISH J-576, CISH J-579	Depressed
Seed Content	CISH J-37, Goma Priyanka, Gokak-1, Konkan Bahadoli, CISH J-585, CISH J-35, CISH J-085, CISH J-577, CISH J-580, CISH J-23, CISH J-579, CISH J-576, CISH J-25, KJPKM-II	Seeded
	CISH J-42	Seedless

4.1.2 Central Horticultural Experiment Station (CHES–CIAH-ICAR), Vejalpur (Godhra), Panchmahal

Bael (*Aegle marmelos* Correa)

Twelve varieties of Bael maintained at the centre *viz*. Narendra bael-5, Narendra bael-7, Narendra bael-9, Narendra bael-16, Narendra bael-17, Pant Aparna, Pant Shivani, Pant Urvashi, Pant Sujata, CISHB-1, CISHB-2 and Goma Yashi were evaluated. These varieties were evaluated for morphological and quality characters and wide genetic diversity with respect to plant morphological characters was observed among the varieties *viz*. leaf characters, petiole length, petiolule length, inter nodal distance, foliage, bark color, bark splitting pattern, fruiting pattern and fruit physico-chemical characters during the period under report.

Variability in stem bark color and splitting pattern was observed among the varieties, it was found yellowish grey in CISHB-1, Pant Shivani, NB-5 and NB-17; greyish yellow in Pant Sujata, Pant Urvashi and Goma Yashi; blackish grey in NB-9 and NB-16, yellowish in Pant Aparna and CISHB-2 whereas it was grey in NB-7. All the varieties showed more or less similar splitting pattern of bark which was irregular intersecting striations having either small rectangular or square triangle blocks. The shape variation among the leaves of various bael varities were noted. The color of fully ripened fruit varied from orange to yellow, yellowish green in some varieties. The fruit shape also show great diversity in fruit style end stem end cavities. Fruit rind surface varies from smooth to rough. The study on arrangement of leaves on the shoots (phyllotaxy) revealed that among the various bael varieties, the tristichous (1/3 phyllotaxy) was commonly noted in CHESB-2, Pant Urvashi, Pant Sujata, NB-5, NB-16, NB-17 and Goma Yashi, whereas the pentastichous (2/5 phyllotaxy) was observed in CHESB-1, Pant Aparna, Pant Shivani, NB-7 and NB-9 type, however the phyllotaxy was found specific to each variety. The variety NB-7 had the longestleaf (26.06cm) as compared to other varieties whereas the shortest leaf was measured in NB-9 (15.35 cm). The length of central leaflet lamina was observed the maximum in NB-7 (20.05 cm) and it was the minimum in NB-9 (9.71 cm). The length and width of right and left lateral leaflet lamina was found the maximum in NB-7 (15.00 cm x 8.27 cm) and (14.52 cm x 8.56 cm), while it was recorded the minimum in NB-16 (7.03 cm x 3.50 cm) and (7.32 cm x 3.30 cm). The leaf thickness in various cultivars was ranged between 0.03-0.06 cm. The mean leaf thickness was observed 0.04 cm in NB-7, NB-16 and NB-17 under rainfed condition. The central petiolule length was measured highest in CISHB-2 (3.96 cm) and it was lowest in Goma Yashi (1.50 cm). The central petiolule width varied from 3.8 mm to 8.0 mm. In all the varieties, lateral petiolule of both the leaflets had more or less small stalk which ranged between 0.3-0.7cm which could be designated as sessile in almost all the varieties.



Petiole length was recorded the maximum in NB-7 (5.73 cm) followed by Goma Yashi (4.50cm), Pant Sujata (4.32 cm) and NB-17 (4.25 cm) whereas it was measured the minimum in CISHB-1 (2.97 cm) followed by NB-5 (2.56 cm) and Pant Shivani (3.12 cm). Petiole thickness ranged between 0.10 cm to 0.29 cm. The range of inter nodal distance varied between 3.00-4.56 cm in all the varieties.

Flower characters

Floral characters of bael varieties showed considerable differences for all the characters studied. Physical composition of bael fruit consisted of shell, seed, fibre and pulp percentage varied between 11.76-26.80, 0.80-5.05, 2.23-4.14 and 63.45-85.14 respectively in different varieties of bael. The highest percentage of shell and total seed were computed 26.80 and 5.05 in NB-16, whereas the shell and seed percentage was minimum in Goma Yashi (11.76) and CISH-B-2 (0.80), respectively. The minimum fibre (2.23) and maximum pulp (85.14) percentage were obtained in the Goma Yashi, while the maximum fibre (4.14%) and minimum pulp (63.45%) were recorded in NB-17 and NB-16, respectively in all the varieties studied for physical composition. Fruit weight was recorded highest in NB-7(4.25 kg), whereas the lowest in NB-16 (0.43 kg). Fruit length (19.59 cm) was found to be highest in CISH-B-2 and Pant Shivani and lowest in NB-16 (10.61).

Chemical qualitative attributes involve fruit acidity which was estimated highest in Pant Urvashi (0.49%) and lowest in Goma Yashi (0.30%). The maximum Vitamin 'C' content was found in Goma Yashi (21.03 mg/100 g) followed by NB-5 (20.63 mg/100 gm) and minimum in Pant Sujata (17.13 mg/100 gm) followed by Pant Aparna (17.15 mg /100 g). Total phenol was estimated highest in CISH-B-1 (2.75%) followed by CISH-B-2 (2.65%) and the lowest in Pant Urvashi (2.34%). The total soluble solids in pulp and mucilage were recorded highest in Goma Yashi (37.45°brix) and Pant Urvashi (49.50°brix), respectively. Total sugar was found maximum in NB-9 (19.98%) followed by Pant Aparna (19.93%) whereas the same was recorded the minimum in Pant Urvashi, NB-7 (16.15%) and NB-17 (16.60%).

4.1.2 Central Sericultural Research and Training Institute (CSRTI), Central Silk Board, Mysore (Mulberry)

A project entitled – **"Validation of Distinctness, Uniformity and Stability (DUS) descriptors for Mulberry (*Morus* spp.) for Developing DUS test Guidelines"** was entrusted to the CSRTI, Mysore. Mulberry is propagated clonally to maintain true to type varietal characteristics because of high out-breeding behavior, heterozygosity and perennial nature of the crop. The entire genetic variability of mulberry germplasm (1065 acc.) was surveyed and tentatively 57 descriptors including morphological and reproductive charactersboth qualitative and quantitative were shortlisted along with their states of expression.

Sixteen mulberry varieties of common knowledge were utilized for characterization using the identified descriptors and validation of Distinctness, Uniformity and Stability (DUS) in mulberry. Observation on the states of expression of different descriptors was carried out in three growth cycles representing different seasons. Based on the result, 47 descriptors which were most suitable for the development of DUS test guidelines were finally selected. Thirty one example varieties for different states of expression of all the selected descriptors were tentatively listed and being validated.

4.1.3 Indian Institute of Horticulture Research (IIHR), Bengaluru

Papaya and Custard Apple

"Developing national repository and creating facilities for DUS testing in Papaya and Custard apple."

DUS guidelines consisting of 22 traits were finalized in the Second Meeting of the Task Force for validation of DUS test guidelines for Papaya and Custard apple was held on 8 October, 2014 under the Chairmanship of Dr. R.R. Hanchinal, Chairperson, PPV&FRA. Nineteen Reference varieties were maintained at the Nodal and Co-nodal centres. Similarly, DUS guidelines of Custard apple based on 34 traits were also finalized. Ten Reference varieties were maintained in the Field Gene Bank. The draft guidelines of both the crops were submitted to PPV & FRA. The DUS guidelines of papaya were finalized approved and published in the PVJ of December, 2014. DUS guidelines of custard apple is under finalization.

4.1.4 Central Institute for Arid Horticulture (CIAH), Bikaner

Date palm

Forty-two date palm varieties including exotic varieties were maintained in field repository and evaluated for morphological characters. The observations on spathe emergence, opening of spathe and flowering were recorded in 30 reference varieties during the reporting year.Since other varieties are still in vegetative phase, however, fruiting, bunch characters and quality parameters could not be assessed due to administrative reasons. Hence, data

on fruiting characters is to be recorded during next year of study for development of draft DUS test guidelines.

Observation on spathe emergence revealed that due to prolong low temperature during winter season, the spathe emergence was delayed for 10-15days among date palm varieties due to rains, low temperature during February-March and change in climatic conditions. The date of spathe emergence, date of completion of emergence, opening of spathe, date of pollination and spathe size (length &width) in date palm varieties were recorded. Early spathe emergence/opening was observed in last week of January in Muscat, Nagal, Sayer varieties followed by Khairpur Pakistan. Variation in spathe size was also observed from 14.2 - 47.8 cm. Maximum length of spathe was observed in Saidy variety followed by Sabiah and Bikaner local. However, the minimum length of spathe (15.0 cm) was observed in Hayani variety. The maximum width of spathe was in Halawy and Bikaner local (10.0 cm) while minimum was in Medjool and Nagal Hilali. Pollination was done manually when spathe was opened. A wide genetic diversity with respect to plant morphological characters was observed among the date palm varieties.

In addition to quantitative characters, qualitative characters like length of bunch, weight, number of strands/ bunch also showed variation among the varieties. At *doka*stage of harvesting, fruit color varied from yellow to reddish, light yellow-greenish, red and dark red in some varieties, thus, the date palm varieties can be identified using qualitative as well as quantitative characters of vegetative and fruit parameters. During the year, several dignitaries *viz.*Dr. N. K. Krishna Kumar, DDG (Hort.) ICAR, New Delhi; Dr. S. Ganeshan, Head, PGR Division, IIHR, Bengaluru, Dr. J. S. Chauhan, ADG (Seeds), ICAR, Dr. S. D. Sikhamany, Former Vice-Chancellor, Horticulture Univ. West Godavari; Dr. S.K Malhotra, Horticulture Commissioner GOI, Ministry of Agriculture and Farmers' Welfare, visited the centre. Group of farmers from different parts of country viz. Gujarat, Rajasthan and Madhya Pradesh and trainees of ICAR-winter school, short course, Scientists from different organizations, visited the experimental Block of date palm. The entrepreneurs who wanted to take up date palm cultivation in Rajasthan also visited the farm.

4.1.5 Date palm Research Station, Sardarkrushinagar Dantiwada Agricultural University, DRS (SKDAU), Mundra, Gujarat

Date palm Research Station, Mudra serves as Co-nodal centre for developing the DUS descriptors for date palm for the purpose of DUS testing. The main centre is CIAH, Bikaner. The observations on morphological characters *viz*. leaf size, leaflet angle, thorns, spathe size in 15 exotic varieties were recorded during the reporting year.

Among the varieties, the highest leaf length (4.76 m) was observed in Saidy and the lowest of 2.95 m was observed in Mejnaz. The length of the leaflet varied from 33.52 cm (Halawy) to 49.84 cm in Zaglool. The folding angle of leaflet ranged from 15.6 to 30.4 in Khalas and Barhee, respectively. In all varieties, the front shape of the leaflet is pointed with majority of the spines were arranged singly. The spines in groups were observed in varieties *viz*. Zaglool, Barhee and Khasab. The highest number of spines (31.4) was observed in Barhee variety and it was lowest in Khasab (5.4). The length of spine varied from 5.12 cm in Khadrawy variety to the maximum of 9.64 cm in Khasab. The distance between two spines was maximum in Khadrawy and minimum in Khalas. The length of rachis varied from 2.75 m in Mejnaz to the highest of 4.93 m in Saidy. Among the exotic varieties the spathe length was highest in Zaglool (58.2 cm) and minimum in Khadravy variety (30.8 cm). The spathe initiation started on 1st February in Shamran and 5th March in Dayri. The period of spathe initiation ranged between 7-34 days in Hatemi and Saidy respectively. Highest number of strands per bunch was observed in Zaglool (85) and lowest in Sayer (38.2). The pattern *i.e*. strand initiation was erect in all varieties. The fruit characteristics *viz*. number of berries/ strand, fruit color, shape, size, stone length, stone diameter, stone shape, pulp: stone ratio, pulp thickness etc. will be recorded ensuing season i.e. in the month of June-July when fruit matures.

Small millets

4.1.6 University of Agricultural Sciences (UAS), GKVK, Bengaluru

Task Force on "Developing DUS test guidelines for small millets": A Task Force under the Chairmanship of Dr. K. Narayana Gowda, Former Vice-Chancellor, UAS, GKVK, Bengaluru had its first meeting on 12 September, 2014 at GKVK, UAS, Bengaluru to examinethe DUS descriptors for finger millet, proso millet, kodo millet, little millet, barnyard millet and foxtail millet for the purpose of developing DUS guidelines. After a long deliberationit was decided that preparation of guidelines for two millets namely finger millet and foxtail millet may be taken up on priority.The other notified centres will continue to work on other important small millets and would finalise the DUS Test guidelines for all the important small millets and may include the taxonomic traits and sketch diagrams for the important traits. Dr. R.R. Hanchinal, Chairperson and Dr. Manoj Srivastava, Registrar, PPV&FRA were present. Later, theTask Force in its second meeting held in New Delhi in February, 2015 finalized DUS testing guidelines for finger millet and foxtail millet and requested the PrincipalInvestigatorto expedite the guidelines for the remaining millets. The guidelines for these two small millets were published in PVJ of February, 2015. Dr. R.R. Hanchinal was also present in the meeting and emphasized the relevance of developing DUS guidelines in small millets. Looking to the difficulty in handling so many varieties in Finger millet, he advised to concentrate only on the varieties which have been released in past 15 years.

He also advised to include all qualitative characters but no considerationto grain yield.

Dr. A. Seetharam expressed the need to develop guidelines to facilitate differentiation of similar varieties and advised to take the help of taxonomists on consultation service for detailed characterization. He opined that only the stable characters which are heritable and do not have effect of environmental factors may be considered for DUS guidelines. He suggested PPV & FR Authority to extend time limit for finalizing characters other than Finger millet & Foxtail millet. Dr. Krishna Gowda advised to classify varieties based on duration, response to photoperiod and temperature. DNA finger printing & use of molecular markers play a major role in distinguishing morphologically similar varieties, he added.Dr. M.V.C. Gowda narrated the work done till now and data collected. Dr. Ravishankar, Geneticist presented the crop wise guidelines along with photograph. Dr. Manoj Srivastava advised to include reference varieties for all the characters and changes to be made in recording scoring, as it should be continuous. He also mentioned to include diagrammatic representations of essential characters wherever necessary. Finally, Dr. K. Narayana Gowda, Chairman, requested for early finalization of the DUS guidelines for Finger millets and Foxtail millet and advised to consult taxonomist for detailed characterization as suggested in the meeting.

Flowers

4.1.7 National Research Centre for Orchids (NRCO), Pakyong, Sikkim

Status of DUS Guidelines in *Oncidium*

Forty hybrids of *Oncidium* were evaluated for development of DUS test guidelines using common descriptors. Out of 60 common descriptors developed, plant type, leaf number/basal leaves/ pseudo-bulb, flower size: width in front view, mainpetalcolor, petal color pattern, lip main color and lip color pattern were used for grouping of hybrids. Plant type (Table 1), flower length and width in front view (Fig.1) petal color pattern (Table 2.) and lip color pattern (Fig. 2) of *Oncidium* orchids are given below:

Table 56: Plant type in Oncidium

Characteristics	State	Example hybrids
Plant type	Without pseudobulb	Tolu. Jairak Firm Ruddy, Tolu. Jairak Firm 'Fuscous', Tolu. Jairak Firm' Deep Red', Ianopsis Utriculariodes, Tolu. Jairak Firm 'Butterfly', Tolu. Jairak Firm 'Chocolate Drop', Tolu. Jairak Rainbow 'Coral', Tolu. Jairak Rainbow 'Rosy', Tolu. Popoki, ONC. Baipai, Tolu. Jairak Rainbow 'Charming', Tolu. Jairak Firm 'Strawberry', ONC. Popki Red
	With pseudobulb	ONC. Sharry Baby Sweet Fragrance, ONC. Sweet Sugar, Colm. Wildcat Carmera, Colm. Wildcat Bobcat, ONC. Taka Yellow

The different shades of petal color pattern in *Oncidium* are indicated in table given below.

Table 57: Petal color pattern in *Oncidium*

States	Example hybrids
Uniform	ONC. Hawai Yellow, Colm. Wildcat Yellow, ONC. Sweet Sugar, Brassidium Butterfly, ONC. Big White, ONC. Pink Small Flower, ONC. Pink/ Yellow
Shaded	ONC. Kampangsean Snow, ONC. Blue, ONC. Red, Ianopsis Utriculariodes, ONC. Red Mini Little Cherry, ONC. Sharry Baby Sweet Fragrajnce, ONC. Popki Red
Blotched	ONC. Big White, ONC. Blue, ONC. Lucky Goldstar, ONC. Baipai
Brindled	ONC. Hawai Yellow, ONC. Ramsey Orange, Colm. Wildcat Yellow ONC. Sweet Sugar, Brassidium Butterfly, Colm. Wild Cat Carmera
Striped	ONC. Pink Small Flower, Ianopsis Utriculariodes, ONC. Red Mini Little Cherry
Edged	ONC. Red Mini Little Cherry, Colm. Wildcat Bobcat

DUS Test Guidelines of *Oncidium* was published in PVJ in April, 2014 and notified in October, 2014.

4.1.8 Indian Institute of Horticulture Research (IIHR), Bengaluru

Marigold

One hundred thirty seven varieties were characterized for the purpose of preparing DUS testing guidelines and to identify the example varieties. Eighty two varieties of *Tagetes erecta* and 29 varieties of *Tagetes patula*were assessed for selection of distinct characters. Eighteen varieties had undergone maintenance breeding. Thirty seven characters have been identified for DUS testing of marigold. Maximum variability has been noticed for flower characters. Draft DUS testing guidelines has been prepared and example varieties have been identified. IIHRMO-2 was found to be suitable as example for distinct notes of 17 characters. Similarly, IIHRMO-4, IIHRFm-1 and Arka Bangara were found to be suitable as example for distinct notes of 9, 13, 12 characters respectively.

Tuberose

The Authority has established Nodal DUS Centre at IIHR, Bengaluru and Division of Floriculture & Landscaping, IARI, New Delhi as Co-nodal centre for tuberose (*Polianthes tuberosa* L.). A reference collection of 16 genotypes of tuberose were evaluated as per UPOV guidelines for various morphological traits at IIHR. Some of the important grouping characteristics for which observations were recorded included leaf variegation, pigmentation on leaf base on abaxial side, bud color, flower type and shape, inflorescence length, stigma type, stigmatic lobes, pigmentation on peduncle, days taken for flowering and number of locules in fruit. Observations were also recorded for other qualitative and quantitative

characteristics, both vegetative and floral like bract length, flower tube length, tepal thickness and flower tube diameter.

The varieties could be classified as variegated/ non-variegated, single/double, greenish/pinkish budded types. There was wide variation with respect to pigmentation on base of leaf and peduncle. Flower shape varied from tubular to narrow funnel and Broad funnel. Based on length of Inflorescence, they could be categorized as short, medium and long. Both pin type and thrum type could be recorded among the genotypes along with variation in the number of stigmatic lobes. Some varieties exhibited earliness for flowering while others were late. All the genotypes possessed trilocular ovaries while cultivar Arka Nirantara was unique in possessing both trilocular and tetralocular ovaries in association with tetrafid stigma. Wide variation was observed for flower length, flower diameter, flower opening, number of rows of tepals, Rachis length, flower tube length, bract size and seed setting ability. Second meeting of the Task Force for finalizing the DUS test guidelines for tuberose was convened on 7-8 October, 2014 at IIHR, Bengaluru. Dr. M. Kanan, Chairman of the Task Force and Dr. Jawharlal, Prof. Horticulture TNAU, Coimbatore attended the meeting. Dr. C. Kameshwara Rao, Former Prof.,Bengaluru University was a special invitee. Chairperson and Registrars, PPV&FRA also present in the meeting. The draft guidelines of tuberose was finalized and submitted to the PPV&FRA.

Jasmine

The progress of Nodal centre at IIHR for Jasmine is as under:

Name of the species	No. of reference varieties	Source
Jasminum sambac	23	ICAR, SAU and local collections
J. auriculatum	6	SAU and local collections
J. multiflorum	3	ICAR and local collections
J. grandiflorum	2	ICAR and SAU

The second Task Force Meeting was held at IIHR, Bengaluru on7 October, 2014 and draft DUS testing guidelines prepared for *Jasminum* spp. submitted to the Authority. Accordingly, the guidelines have been prepared and approved by the Task Force for *Jasminum sambac, Jasminum auriculatum* and *Jasminum multiflorum.* The guidelines were also published in the PVJ in December, 2014.

Crossandra

Eight genotypes were characterized for 24 characters as per DUS test guidelines. Observations were recorded to prepare draft guidelines. Fifty accessions were collected and planted for recording variability and in turn. The progress of maintenance breeding/ characterization is as under:

Name of the species	No. of reference varieties	Source
Crossandra undulifolia Salisb.	8	Own released (4) and others (4)

Betelvine

Indian Institute of Horticulture Research (IIHR), Bengaluru is serving as Nodal centre and Bidhan Chandra Krishi Viswavidyalaya (BCKV) as Co-Nodal Centre for developing DUS guidelines for Betelvine (*Piper betle* L.). The progress of maintenance breeding/characterization in betel nut under the reporting period is as under:

Name of the species	No. of reference varieties	Source (own released / ICAR / SAU)
Betel vine (Piperbetle L.)	Maintenance:110	AICRP centres and own collections (3released, 37FV/VCK/ Germplasm)

One hundred ten germplasm of betelvine collected from different AICRP centres and through secondary sources and explorations were maintained under Areca nut support at CHES, Hirehalli. Five new land races were augmented to the existing collection. With reference to Draft DUS guidelines characterization of 40 germplasm lines was carried out for all. Data on putative DUS traits recorded both at Nodal centre and Co-nodal centre were critically examined and final draft DUS guidelines were prepared. The draft DUS guidelines were submitted to the Authority. Example varieties were identified for all the traits (Nodal and Co-Nodal centres). Digitization of the allqualitative DUS traits has been carried out.

Vegetables

4.1.9 Indian Institute of Horticulture Research (IIHR), Bengaluru

Amaranth, Palak and Ridge Gourd

The Institute has been assigned project for developing DUS guidelines for Amaranth, Palak and Ridge gourd by the Authority in the previous year. The progress of maintenance breeding/ characterization is as under:

Table 58: Status of Maintenance Breeding / Characterization

Name of the species	No. of reference varieties	Source	
Vegetable Amaranth (*Amaranthus tricolor* L.)	19	Own (IIHR)	Arka Arunima, Arka Samraksha, Arka Suguna, Arka Varna,
		ICAR	Pusa Kiran, PusaKirti, Pusa Lal Chauli
		SAU	Renusree, Arun, Co-1, Co-2, Co-3, Co-5, RNA1,

Name of the species	No. of reference varieties	Source	
		Local varieties	Canara Local, Chilka Arve, Dontina Soppu, Koyyaarve and White stem Amaranth
Palak (*Beta vulgaris var.* bengalensis L.)	5	Own (IIHR)	Arka Anupama
		ICAR	Pusa Bharati and All Green
		SAU	HS-23, Co-1
Ridge gourd (*Luffa acutangula* L.)	9	Own (IIHR)	ArkaSujat, ArkaSumeet,
		ICAR	PusaNasdar, PusaNutan,
		SAU	Deepti, Jaipur Long, PhuleSucheta, GARG-1 and Co-1

Bottle Gourd& Bitter Gourd

The institute has been assigned another project entitled "**Developing DUS test guidelines for Bottle gourd (*Lagenariasinceraria*) and Bitter gourd (*Momordicacharantia*)**". During the reporting year, the institute has maintained and characterized 35 reference varieties of Bottle gourd and Bitter gourd are as under:

Table 59: Status of varietal maintenance and characterization

Crops	No. of varieties	Reference Varieties
Bottle gourd	18	PusaSamrudhi, PusaSantusti, Pusa Naveen, PusaSandesh, Kashi Ganga, KBGR-12, ABG-1, ArkaBahar, IIHR-19-1, Narendra Rashmi, Narendra Jyoti, Narendra Dharindar, NDBG-619, NDBG-132, Kalyanpur Long, Pant Lauki-3, Punjab Komal and Punjab Long
Bitter gourd	17	Pusa Vishesh, Pusa Do-Mausami, Sel.5, MC-84, Sel.1, ArkaHarit, Hirkani, Phule Green Gold, PhuleUjwala, Meghana-2, Kohinoor (F1), Preethi, NDBT-9, Kalyanpur Baramashi, NDBT-7, HABG-1, Co-1

As far as progress of DUS testing is concerned the centre has undertaken DUS testing for 25 entries of VCK and 3 entries of Farmers' Varieties.

Chilli, Sweet Pepper & Paprika

It is a new project entrusted to IIHR, Bengaluru for developing the DUS guidelines for the Chilli, Sweet pepper and Paprika. The progress of maintenance breeding/ characterisation in respect of above vegetables is as under:

Name of the species	No. of varieties	Source
Capsicum annuum L.	95	Own, ICAR & SAU

The Draft DUS test guidelines for chilli, sweet pepper & paprika were finalized in the meeting of the Task Force on 10 January, 2015 under the chairmanship of Padma Bhushan Dr. M. Mahadevappa, Former Chairman, ASRB, ICAR, New Delhi. The DUS guidelines for chilli have already been published in the Plant Variety Journal of india of February, 2015.Dr. R. R. Hanchinal, Chairperson, PPV&FRA, New Delhi visited on 8 October, 2014 to review the ongoing DUS projects at IIHR, Bengaluruand later Dr. Mahadevappa, Former VC, UAS, Dharwad also visited IIHR, Bengaluru.

4.1.10 Indian Agricultural Research Institute (IARI), Division of Vegetable Science, New Delhi

A project proposal entitled "**Formulation and validation of DUS testing guidelines for amaranth, palak and ridge gourd**" was assigned to Vegetable Division of IARI, New Delhi as Co-nodal Centre and IIHR, Bengaluru as Nodal Centre. The status of development of DUS guidelines for each of the crop is as under:

Amaranth

The last *Kharif*seasontrial of twenty one Amaranth varieties was analyzed. Based on the descriptor quantitative characters were evaluated. Leaf length of Renusree showed maximum length (13.92 cm) and IC 551606 showed minimum (7.09 cm) among twenty one varieties of Amaranth. According to leaf width Co-1 showed maximum (11.06 cm) and IC 551607 showed minimum (4.73 cm), Plant height Co-1 gave maximum height (154.21 cm) and Co-5 gave minimum (45.87 cm) among varieties. According to days taken to flowering IC 551608 took minimum and Pusa Lal Chaulai took maximum days.

Palak

Six varieties were sown in the field for evaluation under DUS project. Based on the descriptor quantitative characters were evaluated. Leaf length of PusaHarit showed maximum length (32.60 cm) and ArkaAnupama with minimum (28.97 cm) among 6 varieties of Palak. According to leaf blade length PusaHarit showed maximum length (18.52 cm) and ArkaAnupama showed minimum (15.79 cm), leaf blade width PusaHarit gave maximum leaf width (10.30 cm) and Pusa Bharti gave minimum leaf width (9.12 cm) among varieties. According to days taken to bolting, ArkaAnupama took minimum and PusaHarit took maximum days.

Ridge gourd

During the last seasontrial, the data of 8 varieties of ridge gourd were analysed. Based on the descriptor, quantitative characters were evaluated and leaf length in PusaNutan showed maximum length (14.36 cm) and Co - 1 showed minimum (11.02 cm) among 8 varieties of ridge gourd. According to leaf width PusaNutan showed maximum length (19.00 cm) and PusaNasdar showed minimum (15.01 cm), PusaNutan gave maximum ovary length (6.60 cm) and PhuleSucheta gave minimum ovary length (4.78 cm) among varieties. PusaNutan shows minimum fruit length (24.62 cm) and ArkaSujat shows maximum fruit length (28.43 cm) as indicated in table given below:

Table 60: Quantitative traits of Ridge gourd

Sl. No	Variety/ cultivar	Peduncle length (cm)	Fruit: length (cm)	Fruit: diameter/ girth (cm)	Seediness (No. of seeds at the time of seed extraction)	Seed : length	Seed : width	100 seed weight (g)
1.	ArkaSujat	12.59	28.43	11.33	68.32	1.28	0.75	13.36
2.	ArkaSumeet	No fruit setting						
3.	CO 1	No fruit setting						
4.	Garg 1	6.39	25.41	14.92	57.76	1.32	0.76	14.46
5.	Jaipur long	6.25	25.97	12.19	67.54	1.34	0.82	17.82
6.	Phule Sucheta	7.72	26.61	11.78	60.32	1.31	0.83	16.29
7.	PusaNasdar	7.74	25.99	16.09	60.48	1.22	0.71	12.36
8.	PusaNutan	5.61	24.62	12.42	68.72	1.25	0.74	12.39

4.1.11 Indian Institute of Vegetable Research (IIVR), Varanasi

This is a new project assigned to IIVR, Varanasi for developing the DUS guidelines for pointed gourd, IIVR and BCKV, Kalyani as Nodal and Co-nodal Centres respectively. Thirty pointed gourd varieties/germplasm were collected from different centres were maintained. Data was recorded on 26 morphological characters.These varieties were collected from various centres: IIVR, Varanasi (9), BCKV, Kalyani (16), NDUA&T, Faizabad, (4), H.A.R.P., Ranchi (1).

S. N.	Varieties	S. N.	Varieties	S. N.	Varieties
1	Narendra Parwal-260	11	VRPG-12	21	BCPG -16
2	Narendra Parwal-504	12	VRPG-25	22	BCPG -17
3	Narendra Parwal-520	13	VRPG-26	23	BCPG -19
4	Narendra Parwal-307	14	VRPG-38	24	BCPG -21
5	SwarnaAlankar	15	BCPG -1	25	BCPG -24
6	Kashi Alankar	16	BCPG -3	26	BCPG -25
7	Kashi Shuphal	17	BCPG -4	27	BCPG -26
8	IIVR-PG-1	18	BCPG -5	28	BCPG -27
9	IIVR-PG-2	19	BCPG -6	29	BCPG -29
10	IIVR-PG-3	20	BCPG -14	30	BCPG -31

The crops will be maintained for further data recording and multiplication. The characters have been identified for inclusion in the guidelines. The draft guidelines are under finalization and likely to be developed by next year.

Under utilized crops

4.1.12 National Bureau of Plant Genetic Resources (NBPGR), New Delhi

Amaranth, Buckwheat and Faba bean

NBPGR, New Delhi has been assigned a project on **"Development of guidelines for the conduct of test for distinctiveness, uniformity and stability on grain amaranth, buckwheat and faba bean"**. The status of

maintenance breeding/characterisation for development of DUS guidelines is as under:

Table 61: Details of Reference Varieties

Crops	Reference varieties
Amaranth	IC 038129, IC 038256, IC 047439, IC 038373, IC 038192, IC 042371, IC 095564, IC 038378, ICAMHP, GA-2, GA-3, PRA-1, PRA-2, PRA-3, Annapurna, Durga, VL-101, VL-102, GA-1, BGA-2, Suvarna, GA-2
Buckwheat	IC 202226, IC 204085, Sangla B-1, IC 014889, IC 108514, IC 412722, IC 026594, EC 323730, EC 288737, Himpriya, Shimla B-3, Shimla B-1, Sangla B-214, Sangla B-301,PRB-1,VL-7,
Faba bean	Vikrant, PRT -12, RFB -3, Patna – 1, Patna – 2, Patna – 3, Patna – 4, Patna – 5, Patna – 6, Patna – 7, IC-593728, IC-593720, IC-593717, IC-593716, IC-593715, IC-593708, IC-593709, IC-593700, IC-593689,IC-593682, IC-593677, IC-593670, IC-593666, IC-593667

Table 62: Progress of varieties under characterization

Crops	New		VCK
	1st year	2nd year	
Amaranth	21	22	Annapurna, Durga
Buckwheat	14	16	Himpriya, VL-7, PRB-1, Shimla B-1,
Faba bean	24	24	Vikrant, PRT 12

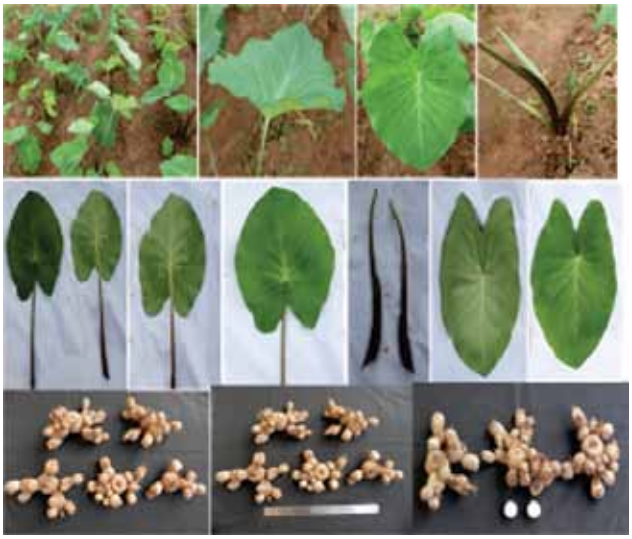
About 22 accessions of amaranth, 16 accessions of buckwheat and 24 accessions of faba bean were sown in RBD design. All the data regarding agro-morphological and quality traits (quantitative and qualitative characters) have been recorded for two years at two locations for grain amaranth, buckwheat and faba bean. The reference variety for each trait has been identified. The grouping of varieties for uniformity and stability of characteristics has to be done for DUS testing.

Root crops

4.1.13 Regional Centre of Central Tuber Crops Research Institute (CTCRI), Bhubaneswar

Sweet Potato & Cassava

Sweet potato and Cassava are the two root crops earmarked for the Centre for developing DUS guidelines. The Centre has been assigned the responsibility of development of DUS facility and establishment and maintenance of varietal gene bank of sweet potato and cassava at CTCRI and Regional Centre. The progress of maintenance breeding/characterisation and progress of development of DUS guidelines made during the reporting year is as under:



Name of the species	No. of reference varieties	Source
Sweet potato	38 released varieties of sweet potato	ICAR/SAU
Cassava	12 released cassava varieties	ICAR/SAU

Draft guidelines for DUS testing are under development and finalization.

Elephant foot yam (*Amorphophallus paeoniifolius*) and Taro (*Colocasia esculenta*)

A project for the development of DUS guidelines for Elephant foot yam and Taro has been entrusted to CTCRI. The progress of maintenance breeding/characterisation and development of DUS guidelines is as under:

Name of the species	No. of varieties	Source
Taro	21 released varieties and pre released breeding lines	ICAR/SAU
Elephant foot yam	18 released varieties and pre released breeding lines	ICAR/SAU

Elephant foot yam

The Regional Centre established varietal gene bank with 21 varieties of Taro and 18 varieties of Elephant foot yam. Centre developed and submitted DUS guidelines for taro and elephant foot yam based on the data recorded on various characteristics / observations at Regional Centre as well as BCKV, Kalyani on primary, secondary and tertiary, essential as well as optional characteristics. Water storage and drip irrigation facilities, were created to cover 2700 sq.mt area for the maintenance of varietal gene bank of taro and elephant foot yam.

Seed Spices

4.1.14 National Research Centre on Seed Spices (NRCSS), Tabiji, Ajmer

Fennel and Cumin

The NRC on Seed Species has been given additional projects for "***validation of DUS descriptors for development of DUS guidelines for fennel and cumin***". The guidelines of coriander or fenugreek have already been developed and

the same have been notified and eligible for registration. The progress of maintenance and characterization of fennel and cumin during the reporting period is as under:

Name of the species	No. of varieties	Source
Coriandrum sativum	24	own released/ ICAR/SAU
Trigonelllafoenum-graecum	18	own released/ ICAR/SAU

Aromatic Plants

4.1.15 Directorate of Medicinal and Aromatic Plants Research (DMAPR), Boriavi, Anand

The Directorate has already developed the DUS guidelines for Isabgol (*Plantago ovata* Forsk.) and 11 reference varieties were under maintenance breeding and characterization. In Isabgol, three new characteristics viz., leaf type, bract type and height of the plant were newly identified. Example varieties for the new characteristics were DMAPR PO 19 (wavy or curled leaf type), DMAPR PO 12 (elongated bracted spike) DMAPR PO 17 (straight leaf type), DMAPR PO 20 (dwarf plant type) and DMAPR PO 21 (tall plant type). One farmer's varieties of coriander has also undergone DUS testing during the reporting year. The Directorate has also been given additional assignment of developing the guidelines for DUS testing in Kalmegh (*Andrographis paniculata* (Burm. f.) Wall. ex. Nees.

DUS descriptors for characterization in Kalmegh (*Andrographis paniculata*) were finalized and submitted to the PPV& FR Authority.The trials were conducted at DMAPR and AICRP MAP&B, BCKV, Kalyani for two years. DUS descriptors were identified in 14 morphological characters and 21 example varieties. The major characteristics considered were leaf color (dark green, green Group, yellowish green Yellow green; leaf lamina (long narrow or short narrow, long broad or short broad); leaf lamina: shape (Linear lanceolate, Lanceolate, Elliptical, Ovate and Ovate elliptical/Ovate - lanceolate); Shoot apex (tender leaves grouped at apex or tender leaves were not grouped at apex); Leaf: Lamina curvature (inwardly curved or outwardly curved); Leaf: Lamina surface (Wrinkled, smooth); Leaf at primary nodes (Broad or Normal); Flowering Pattern (Early i.e., Anthesis initiation at <70DAT, Medium i.e. Anthesis initiation at 80-110 DAT or Late i.e., Anthesis initiation at > 110 DAT); Inflorescence type: Flower buds distantly arranged i.e., long inflorescence or Flower buds closely arranged i.e., Short inflorescence; Branching pattern (open or close); Plant: Growth habit (Erect, Drooping/Lodging); Stem internode Length (Normal or Compact); Plant canopy shape (Pyramidal, Pyramidal2 , Round, Vase, Broadly columnar/ Oval); Plant: Height (Short or Tall); Leaf andrographolide content (High : >3.5%, Medium : 2.00 to 3.5, Low : <2.0%).

Forestry

4.1.16 Himalayan Forest Research Institute (HFRI), Shimla

Pinus and Deodara

Pinus *(Pinus roxburghii)*and Deodar (*Cedrus deodara)* are the two forestry species for development of DUS guidelines for registration of these two forestry species under the PPV&FR Act, 2001. As per the recommendations of the Task Force, field surveys of South and North-Eastern states were carried out to study Chir Pine and deodar populations. The observations with regard to distribution of the species and on morphometric traits were recorded. The selected populations were also assessed for their wood quality parameters. The wood samples from selected populations of deodar and chir-pine were collected and were analyzed for wood traits at Dr. YS Parmar, UHF, Nauni, Solan. The draft DUS guidelines for conifers will be finalized in the next meeting of the Task Force.

4.1.17 Institute of Forest Genetics & Tree Breeding (IFGTB), Coimbatore

Tectona & Melia

Teak (*Tectona grandis*)

Principal investigator and his team visited farmers plantations present in Tamil Nadu and observed for variation in tree morphological characters. The team visited teak farmers plantation including ChengampallyPerumanallur, Sempatty, Sathiyamangalam, Anaikkatti, Krishnakiri, Pallagoundanpalayam,Karaikal, Tanjore and Karur. Also visited the natural teak plantations present in Cherrupuzha, Nellikutha, and Parambikulam. In addition, team also visited the Clonal Seed Orchard of teak at Top Slip, Tamil Nadu and Walayar, Kerala. Study on the natural and plantations of teak showed that the variability within a plantation was found to be low with respect to all the leaf, bark flower and fruit characters. Some degree of variability was observed in the natural populations. The tree stem form, leaf, branching habits and reproductive characters were found to be discriminating characters.

Melia (*Melia dubia*)

In case of *Melia dubia*, preliminary studies were conducted for validation of DUS descriptors for DUS guidelines. Variation in morphological characters in leaf, stem, bark and reproductive structures were studied. Studies were also conducted in clonal trials for quantifying the uniformity and stability of the selected morphological traits. Dr. R. R. Hanchinal, Chairperson, and Dr. R.C. Agrawal, Registrar General, Protection of Plant Verities and Farmers' Rights Authority visited the centre on 16 July, 2014 and had a review meeting to have a firsthand information of development of DUS descriptors for the Melia and Teak. Shri. T. P. Raghunath, Group Coordinator (Research) welcomed Dr. R. R. Hanchinal, Chairperson and Dr. R.C. Agrawal, Registrar General. Prospective species for DUS characterization was presented by Dr. N. Krishna Kumar, Director, IFGTB. DUS testing guidelines for Teak by were presented Dr. V. Sivakumar, *Melia dubia* by Dr. Rekha Warrier and Eucalyptus and Casuarina by Dr. A. Nicodemus. Dr. R. C. Agrawal, Registrar Generalsaid that many forest trees needs registration and hence DUS characters need to be developed keeping availability of already available Clonal varieties in mind. Dr. R. R. Hanchinal, Chairperson, PPV&FRA emphasized that the registration process must be initiated without further delay in already notified species like Eucalyptus and Casuarina

4.1.18 Dr. Y.S. Parmar University of Horticulture & Forestry, Solan

Willow (*Salix species*)

Dr. Y. S. Parmar University of Horticulture and Forestry, Nauni, Solan has been assigned a project **"Establishment of Clonal Bank (Nursery) and DUS specific characterization of willow (Salix species) germplasm"** during the past year. Fifteen known clones of *Salix* were chosen from collection of introduced clones at UHF Nauni. Material was raised in the nursery for multiplication. In February, 2014 replicated trial of 15 clones was established at three sites viz. University Campus (Solan), Regional Station, Dhaulakuan and Regional Station, Bajaura. DUS guidelines for *Salix* are under development and finalization. The progress of maintenance breeding / characterisation is as under**:**

Name of the species	Reference varieties	Source
Salix species	PN731, SE-63-016, PN227, SI-64-017, SI-63-007, J799, Kashmiri (Salix alba) NZ1140, 131/25, J194, J795, AUSTREE V-99, *Salix tetrasperma, S. Acmophylla,* Indian tree willow	SAU

Poplar (*Populus species*)

This is an earlier project assigned to the University entitled **"Establishment of Clonal bank (Nursery) and Development of DUS specific characterization of Poplar germplasm"** project, with the objectives to establish clonal bank of poplar clones and development of DUS specific descriptors.

During the reporting period, 15 known clones of poplar were collected from SAU's, Forest Department and Private organisation. Material was raised in the nursery for multiplication. In February, 2014 replicated trial of 15 clones was established at three sites namely University

Campus (Solan), Regional Station, Dhaulakuan and PAU, Ludhiana. Several important characteristics for inclusion in the DUS guidelines have been identified. The DUS guidelines are under development and validation at the three sites and likely to be finalized in the next year.

Mulberry

"Development of distinctness, Uniformity, and Stability (DUS) descriptors for Mulberry (*Morus* sp.) and its validation project has been assigned to the Central Sericultural Research and Training Institute, Central Silk Board, Ministry of textile, Govt. of India, Mysore with the following objectives:

- To develop and validate descriptors for mulberry for developing DUS guidelines.
- Identify distinctiveness and specific morphological and biochemical/ molecular markers and stability.
- To characterize the extent of variability.
- Develop database for the descriptors of mulberry to add on to INDUS.

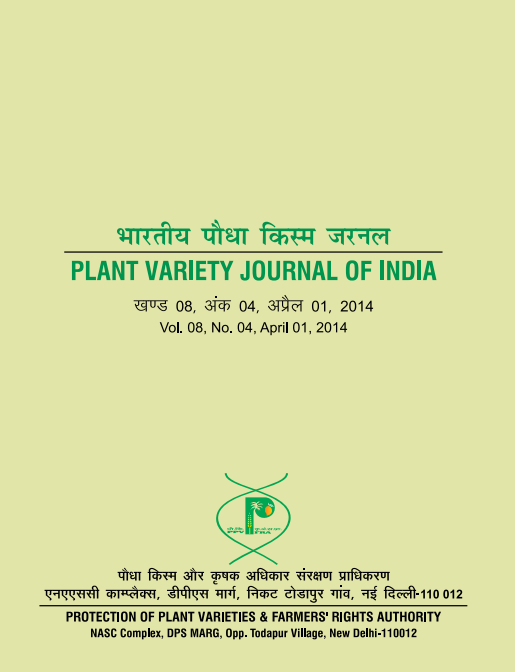
4.2 Project Appraisal Committee (PAC)

The second meeting of the **PAC** was held on 22 December, 2014 at New Delhi under the Chairmanship of Dr. P. N. Mathur, Regional Director, Bioversity International, New Delhi; Dr. N. K. Krishna Kumar, DDG (Hort.), ICAR; Dr. J. S. Chouhan, ADG (Seeds), ICAR and Dr. Malvika Dadlani, Consultant, Bioversity International and the Chairperson and Registrar General also participated in the meeting. Out of sixteen projects proposals received, the PAC approved only four projects for financial assistance and desired that three projects from Maharashtra, Himachal Pradesh and Kashmir to be revised by the concerned for consideration. Rest of the nine projects were rejected. Funds were released to three projects only as under:

S. No.	Project	Name of PIs & Centre	Amount (Rs. lakh)
1	Development of DUS testing criteria and establishment of National Gene Bank for Arecanut (*Areca catechu* L.)	Dr. K.S. Ananda, CPCRI, Kerala	9.00
2	Development of morphological descriptors and DUS test guidelines for Cashew (*Anacardium occidentale* L.)	Dr. M. Gangadhara Nayak, DCR, Puttur, Karnataka	6.00
3	Establishment of Varietal Gene Bank and Development of Standards of DUS testing in Yam bean (*Pachyrhizus erosus*) and Greater yam (*Dioscora alata*)	Dr. Archana Mukherjee, CTCRI, Bhubaneshwar	9.00

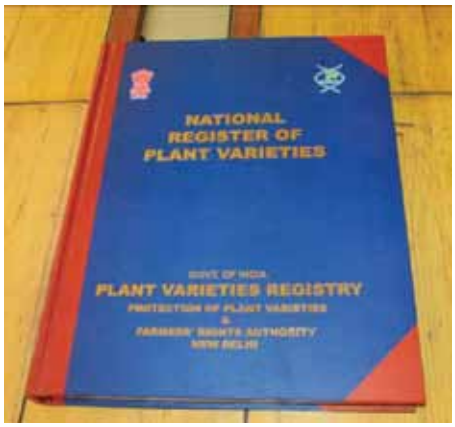
5. Plant Variety Journal of India, National Register of Plant Varieties and Publications of the Authority

In accordance with Rule 2(g) of PPV&FR Rules, 2003 the Authority publishes its official journal "***Plant Varieties Journal of India***" (PVJ) as a monthly bilingual (Hindi & English) publication and made available to public on the first working day of each month on its official website as well as in the hard copy. This Journal has the equivalent status of a Gazette under the Regulations, 2006. The contents of Journal includes official and public notices, Gazette notifications, passport data of plant varieties along with photographs, DUS test guidelines of different crop species, details of certificate of registration and other related matters.



5.1 National Register of Plant Varieties

The PPV&FR Authority in compliance with section 13 of the PPV&FR Act, 2001 has opened the National Register of Plant Varieties at the Headquarters of the Plant Varieties Registry. It contains complete details of the names of all the registered plant varieties along with the names and addresses of the respective breeders, denomination, specifications, salient features etc. During the period of reporting, 842 varieties including 111 new varieties, 215 extant notified varieties, 55 Extant VCK and 461 belonging to Farmers' Varieties which have been registered. A copy of the National Register of plant varieties maintained at Headquarters has also been provided to branch offices at Guwahati and Ranchi.



5.2 Publications of the Authority

In addition to *Plant Variety Journal of India,* which ispublished regularly in bilingual mode, i.e. in Hindi as well as in English the brochures on PPV &FR Act, 2001 and Farmers' Rights were published and distributed in meetings, training-cum-awareness programmes, workshops etc. The other brochures and posters, annual report and other publications were published by the Authority in Hindi language too. The Authority maintains its website in bilingual mode. DUS test guidelines were published regularly by the Authority in both the languages. During the current year, 20 crop specific guidelines have been published and sent to Department of Agriculture& Co-operation forrecommending their Gazette notification. These crop species represent ornamental plants, vegetables, coarse cereals and fruits. The letters and official communications received in Hindi were replied in Hindi. The officers of the Authority also delivered their lectures in Hindi and English as per the requirement of the audience / occasion.

The PPV& FR Authority, NBPGR and Department of Agriculture, Co-operation& Farmers Welfare, Ministry of Agriculture & Farmers Welfare jointly organized two days National Workshop on **"Enhancing understanding & Implementation of the International Treaty on Plant Genetic Resources for Food and Agriculture**" under the aegis of Food and Agriculture Organization of the United Nations, Regional Office for Asia and Pacific, Bangkok, Thailand on 17-18 November, 2014 at Deendyal Research Institute, Chitrakoot. Authority brought out and published a Handbook for this workshop and thereafterits report/ proceedings was preparedfor onward submission to FAO, Regional Office and distribution among the participants. Besides, Authority published four issues of the Quarterly Newsletter for the general information of its stakeholders.

5.3 Library

The Authority has been maintaining asmalllibrary for the reference of the staff/employees. It has 652 books (bilingual in Hindi and English) as on 31 March, 2015 on various subjects including general agriculture, horticulture, intellectual property rights, plant breeding, bio-diversity conservation, genetics, seed science and technology, literature, Rules and Regulations for Central Govt. employees, legal matters etc. The library also subscribed to journals on agriculture, legal and administration. The Library also hosts **69** publications of the Authority on general and crop specific DUS test guidelines, Plant Genome Saviour Community Award's guidelines and application form, agro-biodiversity hotspots and several awareness generation materials on farmers' rights. Authority's several publications are bilingual in Hindi and English.

6. Development of Databases, IINDUS, NORV, Website and Information and Communication Technology (ICT)

6.1 Databases

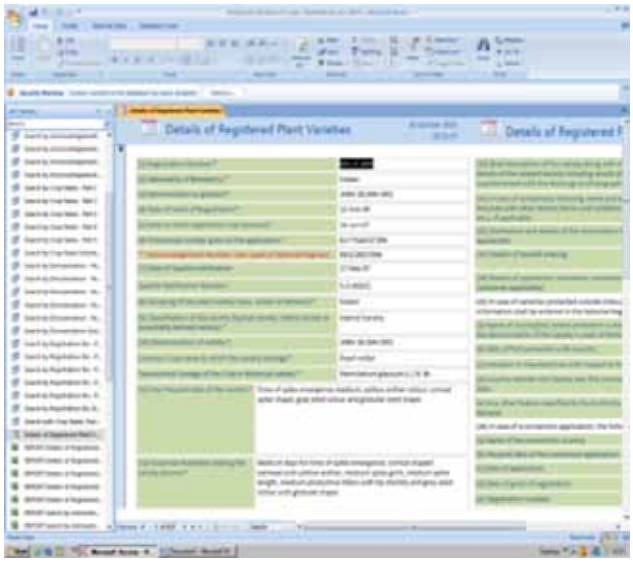
The Authority has maintained and updated its databases namely Indian Information System as per DUS Guidelines (IINDUS) and Notified and Released Varieties of India (NORV) for the selection of most similar reference varieties for DUS/GoT trials and also used for verifying the denomination and notification status. NORV database contains the details of the released plant varieties by the Central Variety Release Committee (CVRC), Agricultural Research Institutes and State Agriculture/Horticulture Department etc. and are used for the verification of the release details of the varieties claimed under the extant notified category.

6.2 Website

The website of the Authority (*www.plantauthority.gov.in)* is maintained in bilingual and contains information regarding Plant Variety Registry related information, list of crop species eligible for registration, DUS guidelines, draft DUS guidelines, list of DUS-Centre, fees, forms, seed / planting material requirement, status of applications, Gazette notifications, Plant Variety Journal information etc. Apart from this the homepage of the website also contains information regarding members of the Authority; overview of the PPV&FR Act, 2001; publications; important judgments, news items of the Authority, video films, photopedia, vacancies, announcements, tenders and other relevant information and regularly updated. Various applications forms required by the users have also been made available in the website.

6.3 National Register of Plant Varieties in digital format

The database of all the registered varieties in the PPV&FR Authority is maintained in a Register known as National Register of Plant Varieties as mentioned in Para 5.1 of Chapter–5 of PPV&FR Act, 2001.The same database is also maintained in digital form in e-National register. The software one can search data by registration number/crop name/ denomination and can generate report. There are many important entries like registration number, nationality of breeder, date of grant of registration certificate, denomination as granted, date of Gazette notification, essential characters making the variety distinct etc. in this software. The data backup of this software can be taken in any external storage devices.



6.4 Information and Communication Technology (ICT)

The database of all the registered varieties in the PPV&FR Authority is maintained in a Register known as National Register of Plant Varieties in hard copies as well as in digital form in e-National register. It is updated on regular basis. Authority also gives a copy of tenders on India Government Tender Information System (http://tenders.gov.in), update General Pool Residential Accommodation (http://gpra.nic.in), quarterly reports of RTIs (http://cic.gov.in), New Pension System Contributions Accounting System (https://npscan-cra.com/CRA/) , Representation of Reserved Categories in Posts and Services in Govt. of India Monitoring System (http://www.rrcps.nic.in/). Authority also maintains an e-National Register of the Registered Varieties. The Authority is also trying to fulfill the concept of national e-governance and has taken initiatives in this regard.

7. Administrative Matters (Legal Cell & RTI matters)

7.1 Legal Cell

The Legal Cell of the Authority has successfully defended all cases filed against the Authority. Further, in case of quasi-judicial proceedings before the Registry and Authority, legal inputs were rendered and daily order sheets were dispatched to the parties promptly. During the reporting period, none of the orders passed by Authority or Registrar were set-aside. The Hon'ble Delhi High Court by Order dated 9 January, 2015 has disposed of the W.P. (C) Nos.4330/2012, 4365/2012, 4366/2012, 6199/2012 and 7853/2012upholding the Order dated 24.05.2012 of the Ld. Registrar and The Hon'ble Andhra Pradesh High Court by Order dated 13.02.2015 has disposed of the W.P. Nos. 26824/2009, 26825/2009, 26826/2009 and 26855/2009 with directions.

During the reporting period, 36 cases were pending against the Authority out of which nine were disposed off, and 27 cases are still pending against the Authority as on 1 April, 2015. The details of forum and number of cases pending for adjudication are tabulated here under:

Central Administrative Tribunal	High Courts	Supreme Court
8	17	2

The following Gazette Notifications were published:

Gazette Notification S.O. 1093 (E) dated 15 April, 2014 notification on the crop species Pomegranate, Orchid, Eucalyptus, Casurina, Bitter Gourd, Bottle Gourd, Cucumber, Pumpkin, Barley, Coriander, Fenugreek, Almond, Apple, Pear, Apricot, Cherry, Walnut, Grapes, Indian jujube (Ber) for the purpose of registration of varieties.

Gazette Notification S.O. 2664(E) dated October 16,2014 regarding notification on the crop species Tea (3 species), Acid Lime, Mandarin, Sweet Orange, Bougainvillea, Banana, Orchid for the purpose of registration of varieties.

Gazette Notification S.O. 205(E) dated January 21,2015 regarding notification on the crop species Canna, Gladioulus, Muskmelon and Watermelon for the purpose of registration of varieties.

7.2 Parliamentary and other related matters

During the reporting year, the Authority received two Parliament questions from the Department of Agriculture, Cooperation& Farmers Welfare for seeking information / material relating to Authority for preparing the draft replies. Comments were also provided on Cabinet Notes received from various Departments including Ministry of Environment, Forest& Climate Change.

7.3 Rights of Information (RTI)

As per RTI Act, 2005, the Authority has nominated officers and first Appellate Authority for furnishing information to the concerned persons. The Details of the designated officers are available on Authority's website under the menu heading RTI. Compliance of provision contained under section 25 (2) of RTI Act, 2005 for submission of information to Chief Information Commissioner (CIC) is being done. During the period, the Authority received 21 applications either directly or through transfer from other Departments seeking information under RTI Act, 2005. The information sought was made available within the stipulated time. There is no single application pending before first Appellate Authority or Chief Information Commissioner (CIC).

8. Training–cum–awareness programmes

The PPV&FR Act, 2001 isa legislation on IPR in Agriculture requiring awareness amongst the farmers, breeders, scientists and other relevant stakeholders. The Authority believes in close cooperation with the farmers, researchers, plant breeders, scientists, students, NGOs, and public & private organisations. During the past ten years, Authority has released funds for training-cum-awareness programmes, Kisan Melas, Kisan Utsavs, agriculture fairs, International conferences on agriculture, National seminars and agricultural workshops. In order to create awareness amongst the farmers about their rights, as envisaged under the PPV&FR Act, 2001. A Farmers' Cell has been established in the Authority, whichlooks after the implementation of provisions of the Farmers' Rights as enshrined in the Act. The Cell is also responsible for extending financial assistance for training–cum–awareness programmes organised by various organisations/ stakeholders.

During the reporting period, the Authority organised about 361 awareness programmes, Workshops, Seminars and Exhibitions across the country aboutits activities and provisions of PPV&FR Act, 2001 to sensitize the farmers and other stakeholders in protecting their rights with respect to the contribution made by them in conserving, improving and making Plant Genetics Resources (PGR), available for the development of new plant varieties of plants in close cooperation with KVKs/ICAR Institutes/ SAUs/Government departments and NGOs.

Table 63: Details of programmes

S. N.	Stakeholder/ Organizations	Number
1	KVKs	299
2	SAUs	17
3	ICAR Institutes	12
5	Zonal Project Directors	11
6	NGOs	2
7	Symposium	1
8	Participation in Exhibitions	6
9	Participation in Seminars	6
10	Participation in Workshops	5
11	Participation in the International Conferences	2
	Total	**361**

8.1 Participation in Exhibitions

The Authority participated in several events and arranged its stall displaying various activities through posters, charts, literatures, brochures & pamphlets, DUS guidelines and others published materials. A short documentary film on the provisions of the PPV&FR Act "**Nukkad Natak**" and activities of the Authority was also shown to the participants during Exhibitions, which was highly appreciated by the farmers as under:

- **"National Conference & Exhibition on PPV&FRA"** from 4-5April, 2014 at Maharaja Agarsen College, Ghaziabad.
- **"10th International Agriculture & Horti. Expo, 2014"** from 25-27July, 2014 at Pragati Maidan, New Delhi.
- **"National level Farmers' Fair and Exhibition-Krishi Vijya-2014"**from 27-29 September, 2014 at Rajmata Vijairaje Sciendia Krishi Vishwavidyalaya, Gwalior.
- **ITPGRFA Workshop & Exhibition** on 17-18 November,2014 at Deendayal Research Institute, Chitrakoot, Satna.
- Pusa "**Krishi Vigyan Mela**" from 10-12 March, 2015 at IARI, New Delhi.

8.2 Impact of Training programmes

The Authority organised number of training-cum-awareness programmes about PPV&FR Act, 2001 throughout India with active collaboration with KVKs, ICAR institutes and SAUs during the reporting year, which was attended by a larger number of delegates including officials from Department of Agriculture, Cooperation & Farmers Welfare, Krishi Vigyan Kendras, States Agricultural Universities, NGOs, Entrepreneurs, Faculty and research students and also progressive farmers. It provided great opportunity to the farmers for sensitization of registration of their varieties and creating awareness about the farmers' rights, conservation, protection and preservation of PGR for sustainable uses and other important provisions of the PPV&FR Act, 2001.

As a result, during the reporting period, the Authority received 1718 applications for registration in farmers' varieties for several cropsspecies. The Awareness programmes also reflected in filing the large numbers of applications (101) for Plant Genome Saviour Awards, Rewards and Recognitions. The awareness programme at KVKs, ICAR Institutes/ State Agricultural Universities helped in getting more applications (532) in Extant/New Variety category and the interface meeting with private seed companies encouraged filing more applications (713). The highlights of some of the training-cum-awareness programmes are as under:

Zone-I

8.2.1 Training-cum-awareness Programmes at Krishi Vigyan Kendra, Chamba:

The programme was conducted by Kendra on "**Protection of Plant Varieties and Farmers' Rights Act, 2001**"on 18 April, 2015 at KVK Chamba and basically aimed at dissemination information on provisions of Protection of Plant Varieties and Farmers' Rights Act, 2001 with special emphasis on Breeders, Farmers' and Community Rights and DUS Test guidelines of cereals, pulses, oilseeds, etc. The training was attended by more than 100 participants including the officials from line departments (Deputy Director, Agriculture, Project Director ATMA Chamba) KVK, Govt. and NGO sector personnel of district Chamba, representatives of innovative/ progressive farmers from different blocks of Chamba district viz., Chamba, Mehla, Salooni and Bharmour. Dr Krishan Kumar, Professor, Fruit Breeding and Genetics, Dr YS Parmar University of Horticulture &Forestry, Nauni, Solan was the Chief guest and main speaker Dr Kumar covered the genesis of plant variety protection and implications at the global level.

8.2.2 Awareness-cum-training Programme at Krishi Vigyan Kendra, Mandi:

To create awareness among farmers on Protection of Plant Varieties and Farmers' Rights Act, 2001, one day awareness-cum-training programme was organized by Krishi Vigyan Kendra, Mandi under the aegis of CSKHPKV, Palampur on 19 April, 2015, in a remote area of Thaltukhot in Mandi district. About 270 farmers and farmwomen participated. Dr. K Katoch, Hon'ble Vice

Chancellor, CSKHPKV Palampur was the Chief guest and Prof. Atul, Director Extension Education, presided over the function. Resource person Dr. Satish Guleia, Principal Scientist (Plant Breeding) made a key note address and highlighted the provisions of the Protection of Plant Varieties and Farmers' Rights Act. On this occasion, an exhibition on farmer's varieties was also organized which was overwhelmingly appreciated by the farmers. Prof. Atul highlighted the university programmes and desired that farmers must take benefits of such programmes for higher profitability. He appreciated the role being played by KVKs in upscaling of the scientific technologies to the farming communities.

8.2.3 Training-cum-Awareness Programme at Krishi Vigyan Kendra, Shikohpur, Gurgaon

In this programme, the Subject Matter Specialists (SMSs)/Project Coordinators (PCs) of KVK Gurgaon, Rewari, Jhajjar, Rohtak, Sonepat, Faridabad and Delhi including 24 farmers from all parts of Gurgaon district participated. Dr. Anjani Kumar,Programme Coordinator of KVK Gurgaon,welcomed all the participants and briefed about objectives of PPV&FR training programme, conducted on behalf of Zonal Project Directorate (Zone-I). Dr. Ravinder Nath Padaria, Principal Scientist of Agril. Extension Division (IARI) explained the importance of PPV&FR Act, 2001 in detail. He also advised the farmers to take the benefits provided in the Act by registering their varieties conserved over generations who are engaged in preserving different plant varieties by their own experiences. He emphasized the SMS and PCs to identify such farmers in their respective areas and to

encourage them for registration. During the training, a handout containing registration of farmers' varieties under PPV&FR Act wasprovided to all participating members for their information.

Zone-II

8.2.4 Training-cum-Awareness Programme at Krishi Vigyan Kendra, Lakhisarai

Krishi Vigyan Kendra (KVK), Lakhisaraiorganized one day Training-cum-Awareness Programme on provisions of Protection of Plant Varieties & Farmers Rights Act (PPV&FRA), 2001 on 7November, 2014. More than 85 farmers from Lakhisarai and neighboring districts were present. Besides, Dr. R.K.Sohane, Directorate(Extn.) BAU, Sabour; Sh. Uma Kant Dubey, Deputy Registrar, Ranchi;Dr. A.K. Sinha, Programme coordinator, KVK Lakhisarai, Dr. Chandan Roy, Nodal officer, PPV&FRA,BAU Sabour also graced the occasion.

Dr. A.K.Sinha, (PC) KVK Lakhisarai, welcomed all the participants and Shri Umakant Dubey, Dy. Registrar delivered a lecture on broad activities & different provisions of PPV&FR Act, 2001 with special focus on Plant Variety registration including farmers' variety registration, breeder's rights, researcher's rights, community rights and farmers' rights; different awards, rewards for farmers for their work in conservation & preservation of plant genetic resources. PC, SMSs and farmers were keen to enquire about farmers' variety registration and different awards and clarifications were given to their queries with utmost satisfaction. The **"Nukkad natak on Farmers' Rights**" and A**gro-Biodiversity Hotspots**short documentaries were also shown in the workshop.

8.2.5 Training-cum-Awareness Programme at Kalyan KVK, Purulia

Kalyan KVK, Purulia organized two days training-cum-awareness Programme on different provisions of Protection of Plant Varieties & Farmers Rights Act, 2001 on 20-21October, 2014. Dr.S.L.Perumal, Chief-Co-ordinator, Kalyan KVK,Purulia(W.B); Dr. M.K. Bhattacharya,Programme Co-ordinator, KVK,Purulia(W.B);ShriUmaKantDubey,DeputyRegistrar, Ranchi;Mr. Dibyendu Das,DDA (Admin.),Purulia,Govt of W.B. were presentwith more than 60 farmers of Purulia and neighboring districts.Deputy Registrar delivered lecture on broad activities & different provisions of PPV&FR Act, 2001 with special focus on plant variety registration including farmers' variety registration, breeder's rights, researchers rights, community rights and farmers' rights; different awards, rewards& recognitions for farmers for their contributions in conservation & preservation of Plant Genetic Resources. The Nukkad natak on **Farmers' Rights**" and **agro-biodiversity hotspots**documentary was also screened in the workshop.

8.2.6 Sensitization Workshop organized by ZPD, Zone II, Kolkata

A one-daysensitization workshop on provisions of **"Protection of Plant Varieties & Farmers Rights Act (PPV&FRA), 2001**" was organized at ICAR-ZPD-II, Kolkata on 15 October, 2014. There were Programme Co-ordinators, Subject Matter Specialists of 30 KVKs of Zone-II & many farmers of the KVKs of the zone were present. Dr. H.K.De, Principal Scientist, ICAR-Zonal Project Director, Kolkata welcomed all the participants in the workshop, Dr.P.P. Pal, Principal Scientist, ICAR -Zonal Project Director, Kolkata presented the report on KVKs participation in PPV&FR, activities through KVKs. Deputy Registrar,Ranchi delivered lecture on broad activities & provisions of PPV&FR Act, 2001 with special focus on Plant Variety registration including farmers'variety registration, breeders' rights, researchers'

rights, community rights and farmers' rights & different awards, rewards for farmers for their work in conservation &preservation of plant genetic resources.

8.2.7 Joint Visit of Chairperson and Registrar General

Visit to BAU, Ranchi

Chairperson and Registrar General PPV&FRA, New Delhi visited branch office Ranchi on 6 June, 2014. During the visit, both the officers inspected the Field Gene bank atBirsa Agricultural University, Kanke R-anchi.Dr. R.P Singh, Director (Seed & Farm), Birsa Agricultural University, Ranchi, Dr. (Smt) Supriya Singh, Co-Principal Investigator (Co-PI) of the DUS Project, Umakant Dubey, Deputy Registrar, Branch Office Ranchi and Dr. Pramod Kumar, JRF of the Project were also present. Chairperson reiterated for the collection of varieties of mandated crops of the Eastern India and their registration with Authority.

8.2.8 Visit of ICAR Research Centre for Eastern Region Research Complex Plandu, Ranchi

Chairperson and Registrar General with Deputy Registrar, Branch office Ranchi visited ICAR Research Centre for Eastern Region Research Complex Plandu, Ranchi on 7 June,2014.Dr AK Singh, Head, ICAR Research Centre,Shri Ravi Pandey and Dr. Rathi, Senior Scientist, NBPGR Regional Station were also present. They also visited NBPGR Regional station, Plandu Ranchi and were appraised on germplasm collection on Bel, Jackfruit and other collection at the station. Shri Ravi Pandey and Dr. Rathi, Senior Scientist, NBPGR Regional Station were also present.

8.2.9 Training-cum-awarenessat BAU, Ranchi

Dr. R.R Hanchinal, Chairperson, PPV&FRA addressed University scientists, plant breeders, researchers, students and other stakeholders about different provisions of PPV&FR Act, 2001 with special focus on Plant Breeder's Rights and Farmers' Rights under PPV&FR Act, 2001 viz. registration of varieties including farmers' varieties and DUS test, grow out test, protection period, farmers' rights, benefit sharing, compulsory license, national gene bank, field gene bank, national gene fund and different awards and rewards given to farmers for their work in conservation &preservation of plant genetic resources. The students were keen to enquire clarification on various issues.

8.2.10 Training-cum-awareness programme at KVK, Dakshin Dinajpur

A training-cum-awareness Programme on **PPV&FR Act, 2001** was organized by the Dinajpur KVK, UBKV, West Bengal on 13 November, 2014 in Matiash, a remote village near international border of Hilli block, Dinajpur District. The programme was aimed for popularization of the Act to protect the plant variety resources and educate the farmers' rights for greater interest of the rural farming communities of India. Approx. 200 progressive farmers, farmwomen & rural youths participated.Dr. Ratul Barman, Asstt. Professor (Plant Genetics & Breeding), UBKV, Dr. Sankar Saha, SMS (Agronomy), Mr. S. Singha, SMS (Plant Protection), DDKVK attended and delivered their valuable information about the details of this innovative useful concepts with active interaction with the stakeholders. The programme was successful and greatly impacted on the audience too as per feedback.

Zone-III

8.2.11 Programme at KVK Changlang, Arunachal Pradesh

The Programme organized by KVK, Changlang on 22 January, 2015 in the Community Hall, Diyun was inaugurated by Mr. D. Gadi, EAC, Diyun , Changlang District. Mrs. Pravawati Deori, Chairperson, Anchal Samitee and Mr. M. P. Singh, ADO, Diyun were also present. Mr. D. Gadi, EAC, Diyun in his inaugural speech appreciated the PPV & FR Authority and KVK, Changlang for organizing such an important programme at Diyun for the first time and requested the farmers to apply for registration for their unique crop varieties. Mrs. Pravawati Deori and Mr. M.P.Singh, ADO, Diyun assured to help the farmers for protecting their unique wealth of crop varieties.Dr. Jitu Moni Das, SMS (Animal Science) helped in demonstrating the farmers about filling up the application form for registration. Dr. Narendra Kumar, PC, Dr. Jitu Moni Das, SMS (Animal Science), Mr. M. P. Singh, ADO also interacted with the participants in the interaction session. The programme was attended by 108 farmers from different communities *viz.*, Singpho, Deori, Khamti, Chakma, Hajong, Mossang etc. staffs of Agriculture Department, Diyun.

8.2.12 Programme at KVK, Chirang (Assam)

Anawareness-cum-training Programme on 6 February, 2015 organized by KVK, Chirang was held in KVK, Chirangand inaugurated by Mr. R.K. Majumdar, IAS, Deputy Commissioner, Chirang District, (Bodoland Territorial Autonomous Council), Assam. Dr. S.K. Paul, Chief Scientist, RARS Gosaigaon, Mr. Dayal Das, District Agricultural Officer, Chirang District, Mr. Lakheswar Roy, Sub-Divisional Agricultural Officer, Bongaigaon, Dr. R. Ojha, Assoc. Professor, S.C. Singha College of Agriculture, Bahalpur (AAU) and Mr. Dilip Saikia, IFFCO were also present. Dr.Kameswar Das, Programme Coordinator, KVK, Chirang briefed about the objectives of the programme. Mr. R.K. Majumdar, Deputy Commissioner, Chirang in his inaugural speech appreciated the PPV & FR Authority and KVK, Chirang for organizing such an important programme. Dr. R. Ojha, Assoc. Professor, S.C. Singha College of Agriculture, Bahalpur (AAU) stressed to conserve and protect the bio diversity of the district.

8.2.13 Programme at KVK East Khasi Hills, Meghalaya

Smt. D.Syiemiong, Director of Agriculture, Govt. of Meghalaya inaugurated the programme organized by KVK East Khashi Hills on 11February, 2015. Smt. H. Lyngdoh, District Horticulture Officer, East Khasi Hills District and Smt. I. M. Pasweth, District Agriculture Officer, East Jayantia Hills District in their speeches encouraged the farmers for registration of their unique crop varieties. Different provisions of PPV & FR Act, 2001 were explained to the farmers by the Deputy Registrar. Farmers' Variety Application Form, PGSC, PGSF Application Form were demonstrated to the farmers. Dr. K.D. Kharkogor, I/C, Programme Co-ordinator and Mr. R.C. A. Sangma, SMS (Agro) addressed farmers in Khasi language. Smt. A. Lyngdoh, SMS (Hort) and Mr. S. Marbaniang SMS (Agro.) of KVK East Khasi Hills district served as interpretators in the training. The translated speech of the Deputy Registrar into Khasi language helped in interaction with the farmers. A translated writeup on PPV&FR Act, 2001 in Khasi language was distributed among the farmers.

8.2.14 Workshop at Government Agriculture College, Tripura

Deputy Registrar, Guwahati delivered a lecture on Protection of Plant Varieties & Farmers' Rights and IPR Workshop for students of Government Agriculture College, Tripura on 21 February, 2015. The workshop was organized by Tripura State Council for Science & Technology (TSCSC), Agartalala. The workshop was inaugurated by Mr. S. Kumar, IFS, Secy., TSCSC, Govt.

of Tripura. Dr. M. Dutta, Joint Director, ICAR Tripura and Dr. R. K. Saha, Dean, College of Fisheries, Agartala (Central Agriculture University) graced the occasion. Speakers requested the students and faculty members to take keen interest in protecting the unique wealth of varieties belonging to the state by registering the varieties with the PPV & FR Authority. Dr. Debashis Sen, Principal, Government Agriculture College, Tripura requested the students and the teachers to help the farmers in registering their varieties.Different provisions of PPV & FR Act, 2001 were explained by the Deputy Registrar during the technical session. The students and the teachers actively participated in the interaction programme. An IPR Cell was also inaugurated by Mr. S. Kumar at Government Agriculture College, Tripura in the presence of the invited guests, students and teachers.

8.2.15 Awareness-cum-Training Programme at KVK Namthang, South Sikkim

Dr. A.C. Sarma, Deputy Registrar, Guwahati attended the training-cum-awareness Programme at KVK Namthang, South Sikkim on 24 July, 2014. The inaugural session was participated by Ms. Devi Maya Baraily, Zila Up-Adakshya, South Sikkim as Chief Guest. Mr. Chandan Kapoor, Scientist, ICAR Sikkim and Mr. Tilak Gajmir, Programme Co-ordinator,KVK Namthang also addressed the audience. Shri L.P Siwal, ADO and Shri D.P. Gurung, Horticulture Development Officer of Namthang, Dr. C.N. Bhutia, Dr. R. Ghatak, Shri I.P. Sivakoti, Shri Pravesh Sivakoti and Mrs. Yangchenla Bhutia ,Subject Matter Specialists of the KVK, Namthang and Mr. Tilak Gajmir, Programme Co-ordinator, KVK Namthang also participated in discussion. The Programme witnessed 62 farmers including some of the progressive farmers like Shri Gopi Nath Koirala, Shri Kailash Rana and Shri Tulshi Das Rai also delivered their brief speeches.

8.2.16 Training-cum-Awareness Programme at KVK Sonitpur, Assam:

The programme was held on 6 November, 2014 at Hem Baruah H.S. School, Ghoramari and inaugurated by Shri Kamal Basumatary, Former M.L.A Borsola

L.A.C, Assam and graced by Programme Co-ordinator and scientists of KVK Sonitpur, several farmers and NGO members. Training on various aspects of PPV&FR Act, 2001 was highlighted by the Deputy Registrar.While discussion and interaction was on with the farmers, they were also demonstrated to fill up the application forms for registration.Dr. P.C. Deka,Programme Co-ordinator, KVK Sonitpur, Mrs. Popy Borah SMS (PP) and Mr. A.K. Sarma SMS (Agro.) also interacted with the farmers. A question answer session was also conducted and the queries of the farmers were answered. The farmers took keen interest and assured of applying for registration of the notified farmers' varieties.

8.2.17 Training-cum-Awareness Programme at KVK Nagaon, Assam

The programme was held on 27 November, 2014 at KVK Nagaon. Mr. Pritom Rongpi, District Agricultural officer, Nagaon inaugurated the programme. Details of PPV& FR Act, 2001 were elaborated to the participants comprising of scientists, officers and farmers by Dr. A.C. Sarma, Deputy Registrar. Dr. N.S. Barua and Dr. R.N. Sarma, both Professors of Plant Breeding and Genetics, Assam Agricultural University, Jorhat were also invited and delivered their presentations on Plant Breeders'Rights and Farmers' Rights respectively. Dr. P.K.Deb Choudhury, Sr. Scientist, Regional Agricultural Research Station, Shillongoni, (AAU) interacted with farmers for submission of applications for registration. The programme was

attended by 81 participants including scientists, officers and farmers. Dr. B. Guha, Programme Coordinator, KVK, Nagaon, Mr. Biren Saikia, Assistant Director of Agriculture, Nagaon, Mr. N. Gogoi, Sr. ADO and Mr. R. Dutta, ADO and the scientists of the KVK also interacted with the farmers.

8.2.18 Training-cum-Awareness Programme at KVK Kamrup

The Zonal Project Directorate, Zone-III, Umiam, Meghalaya organized a three days programme during 18-20 December, 2014 on "**Protection, Management and Conservation of Agro-Biodiversity in North East Region: Strategies and Issues**" at KVK, Kamrup, Kahikuchi, Assam. Dr. S. Paul, Scientist, ZPD-III, Umiam as the Course Director of the training programme. The first day, i.e. 18 December, 2014 was devoted for awareness cum training programme on "Provisions of the Protection of Plant Varieties and Farmers' Right Act (PPV & FRA), 2001. About eighty two participants comprising of scientists from ICAR, professors, KVK scientists, NGOs, farmers and rural youth actively participated in the programme. Dr. S. Paul, Course Director in his welcome address stated the importance of the programme in light of the present scenario of climate change. Deputy Registrar explained to the participants the importance and different aspects of protection of plant varieties and other farmers' rights. The technical sessions consisted of lectures and practical exercise on different thematic areas. The farmers were given detail training on PPV&FR Act. Dr. R. Bordoloi, Principal Scientist, Zonal Project Directorate, ICAR Umiam and Dr. D.N. Kalita, Programme Coordinator, KVK, Kamrup also delivered their speeches and requested the farmers to file applications for registration of the notified crops.

8.2.19 Training-cum-Awareness Programme at KVK Barpeta, Assam

The programme was held on 30 December, 2014 at KVK Barpeta located at Howly and attended by farmers of Barpeta district, Village Level Extension Workers of Agricultural Department, NGOs, members of Assam Mahila Society, students and professors of Botany Department, B.H. College,Howly and the scientists of KVK Barpeta. Dr. Kulranjan Deka, Principal, District Institute of Education and Training (DIET), Howlyas Chairman of the discussion. Mrs. T.S. Begum, I/c Programme Coordinator, KVK Barpeta discussed on PPV& FR Act. Deputy Registrar, Guwahati elaborated the details on PPV & FR Act, 2001. Dr. Anjan Kumar Borah, SMS (Soil Science), KVK Barpeta highlighted regarding farmers rights. He assured 16 applications of the notified varieties for registration. Mr. Ratul Das, Farm Manager, KVK Barpeta; Dr. A.K. Sarma, Director, CRIJAF, Sorbhog (ICAR);Dr. S.K. Sarma of Veterinary and Animal Husbandry Department, Assam; Mrs. Anjuma Gayan, SMS , KVK Barpeta also interacted with the farmers.

8.2.20 Seed Workshop at Bioversity International, New Delhi

A training "**On Farm Seed Storage with the help of Desiccants**" was held on 9-10 December, 2014 at Bioversity Internetional, New Delhi wherein Dy. Registrar, Guwahati partcipated. Dr. Malavika Dadlani, Dr. Paul Quek and Dr. Arnab Gupta of Bioversity International, Dr. K. Keshavalu and Dr. Amtul Raheem of ANGRAU provided the detailed training on use of desiccants, Community Seed Bank Management and documentation. Dr. R.R. Hanchinal, Chairperson, PPV&FRA encouraged the participants with his presentation on Community Seed Bank. Dr. P.N. Mathur, Regional Director, Bioversity Internetional, New Delhi also interacted with the participants.

8.2.21 Regional Workshop of Bioversity International

Regional workshop of Bioversity International for the project entitled **"Mainstreaming agro biodiversity conservation and utilization in agricultural sector to ensure ecosystem services and reduce vulnerability"** was organised on 2 May, 2014 at Guwahati. PPV&FRA was also one of the partners to implement its project activities in the North East. The workshop was attended by Dr. R.R. Hanchinal, Chairperson, PPV&FRA, New Delhi, Dr. P. N. Mathur, Regional Director of Bioversity International, New Delhi, Mr. T.K. Madan of Bioversity International, Dr. V. Ramanatha Rao and Dr. M. Dadlani, Consultants, Bioversity International, Dr. D.K. Hore, Consultant, ISBD, Imphal, Dr. I.S. Bisht, Principal Scientist, NBPGR, New Delhi also participated.

Zone-V

8.2.22 Training-cum-awareness programme at Krishi Vigyan Kendra, Jalgaon Jamod

Krishi Vigyan Kendra, Jalgaon Jamod organized a training-cum-awareness programme on**"Protection of Plant Varieties and Farmers' Rights Act, 2001"**at KVK Campus on 29 November, 2014. Programme was chaired by Hon'ble Dr. Swati Wakekar, Director, Satpuda Education Society and Hon'ble Mr. Anil Bonde, SDAO, Khamgaon was Chief guest. Resource person Dr. Dinkar Deshmukh, Dy. Director (Seed), Dr. PDKV Akola delivered lecture on Protection of Plant Varieties and Farmers' Rights Act, 2001 and Dr. Preeti Sonkambale, Seed Research Officer

Dr. PDKV Akola delivered lecture on DUS Testing in Protection of Plant Varieties and Farmers' Rights Act, 2001.

On this occasion Mr. Anil Gabhane, Programme Co-ordinator welcomed Chief Guest, dignitaries, farmers and other stakeholders. Chief guests, resource persons and farmers appreciated KVK for organizing such unique and useful programme. Resource person from Dr. PDKV, Akola appreciated for display of rare seed samples of various crops. About126 participants participated in this programme out of which 48 progressive farmers, 36 farm women, 42 extension functionaries and other stakeholders were present.

8.2.23 Training Programme at Krishi Vigyan Kendra, Kasturbagram, Indore

A one-day training-cum-awareness programme on "**Protection of Plant Varieties and Farmers' Rights Act, 2001**" with special reference to wheat was organized on 24 January, 2015 at Krishi Vigyan Kendra, Kasturbagram, Indore in collaboration with **IARI–Regional Station, Indore**. Around 200 participants including farmers, members of farmers' organizations, NGOs, training organizers from various KVKs, officials from seed certification agency and State Department of Agriculture, Madhya Pradesh participated in the programme. Dr. A. M. Rajput, Dean, College of Agriculture, Indore participated as Chief Guest along with Sushri Chatura Raskar, Secretary, Kasturbagram. Mr. S. C. Agrawal, Joint Director (Agriculture), Indore; Dr. A. N. Mishra, Head & Principal Scientist, IARI-RS, Indore; Dr. Mrinal K Kuchlan (Nodal Officer-Soybean); Dr. B.U.Dupare, Senior Scientist (Extension) both from DSR, Indore; Dr. S. V. Sai Prasad (Nodal officer –IARI-RS, Indore); Dr. A.K. Singh, Principal Scientist, IARI-RS and other scientists from IARI-RS - Indore imparted the training covering several important issues such as essence of PPV & FR Act, 2001; plant variety protection and seed laws; procedures for registration of varieties; wheat and soybean production technologies and other related aspects. Participants showed lot of interest and enthusiasm to know about "**Farmers' Rights and Procedures for Plant Variety Registration**."

Zone-VI

8.2.24 Training programme at Krishi Vigyan Kendra, Navsari Agricultural University

Krishi Vigyan Kendra, Navsari Agricultural University, Navsari organized an awareness programme on Protection of Plant Varieties and Farmer's Right Act, 2001 on 20 March, 2015. The inaugural function was graced by Shri. Sankarbhai Vasava, President, President, Zilla Panchayat Sichhai Samitee, Dediapada; in presence of Dr. Vinod Kumar Koushik, Director, IRE&CA, Dediapada; Dr. B. K. Davada, Associate Professor, Main Sorghum Research Center, Surat; and Dr. J. H. Rathod, Programme Coordinator, KVK Dediapada; Dr. R. K. Patel, Assistant Professor, Department of Plant Breeding & Genetics, NAU, Navsari; Dr. K. G. Modha, Assistant Professor, Department of Plant breeding & Genetics, Navsari and other dignitaries.

Dr. Vinod Kumar Koushik, Director, IRE&CA, Dediapada said that protection of plantvarieties is very important in context of climate change. There are some paddy varieties having mouthful taste and fragrance. Farmers have to protect such varieties for the future generations. Our country was dependent for food imports started before independence. But green revolution changed this situation due to awareness of new production technologies by our farmers and higher food production. The economy of our country has improved. This is because of our farmers efforts. He advised that farmers should take more and more benefitsout of PPV&FR Act.

Dr. R.K. Patel gave a lecture on information on People's Biodiversity Register (PBR), GATT, Novel variety, Licensing system, Farmers' Rights and legal provisions under PPV&FRAct. He had thrown light on the farmers' rights, difficulties and the prerequisites for filling application form for registration with PPV & FRA.

8.2.25 Training programme at Krishi Vigyan Kendra, Junagadh Agricultural University, Targhadia (Rajkot)

Krishi Vigyan Kendra, Junagadh Agricultural University, Targhadia(Rajkot), organized a training-cum-awareness programme on "***Protection of Plant Varieties***

and Farmers' Rights Act, 2001" in association with PPV & FRA, Ministry of Agriculture& Farmers Welfare, New Delhi. The inaugural function of this awareness programme was graced by Dr. K. N. Akabari, Research Scientist, Main Dry Farming Research Station, North Saurashtra Agro climatic Zone, Targhadia-Rajkot; Dr. V. P. Chovatia, Principal and Dean, College of Agriculture, JAU, Amreli and Dr. B. B. Kabaria, PC, Krishi Vigyan Kendra, Targhadia, Rajkot.

8.2.26 Training-cum-awareness programme conducted by Krishi Vigyan Kendra, Mangal Bharti, Vadodra

- **On campus awareness programme**: One on campus training was organized on 20 February, 2015 at KVK. About 125 farmers of 10 villages of three blocks were participated in the Awareness programme on PPV & FRA, 2001. KVK scientists delivered lectures on different aspects of PPV & FR Act, 2001, DUS test, procedure for registration etc. The KVK also published a booklet and pamphlet in vernacular language on PPV & FRA, 2001 and distributed to the participants freely.
- **Off campus awareness programme**: Three off campus awareness programme on PPV & FRA, 2001 were organized in villages Dani (23February, 2015), Pochamba (24 March, 2015) of Naswadi Block and Vagetha (28 February, 2015) of Sankheda Block. In these three programmes, 145 farmers and farm women participated. KVK scientists tried to aware the participant regarding PPV & FRA,2001. Representatives from District Agriculture Office were present and educated the farmers about conservation of their traditional varieties and agricultural practices which were given good sustainable agricultural production in context of climate change.

Zone-VII

8.2.27 Training programme at DEE, OUAT, Bhubaneswar

A training-cum-awareness programme on Protection of Plant Varieties and Farmers' Rights Act was held on 22 January, 2015 at OUA&T, Bhubaneswar. In this programme 104 farmers from Khurda, Puri and Nayagarh districts along with 24 Officers and six Resource persons participated. Prof. S.S. Nanda, Dean Extension Education emphasized the importance of protection & conservation of old traditional varieties of paddy, pulses, oilseeds, vegetables, fruits and forest species for the benefit of the farmers. He also highlighted about the many special traits of local paddy varieties of undivided Puri district and recollected his past experience on these varieties. Thereafter, farmers visited the OUA&T Instructional farm and demonstration plots.

Zone-VIII

8.2.28 Training programme at Krishi Vigyan Kendra, University of Agricultural Sciences, Dharwad

Krishi Vigyan Kendra, University of Agricultural Sciences, Dharwad in collaboration with Protection of Plant Varieties and Farmers' Rights Authority, New Delhi organized capacity building training programme for farmers and stakeholders of Dharwad district on "**Protection of Plant Varieties and Farmers' Rights Act**" on 30 january, 2015 at KVK, Dharwad. Chief Guest for the programme Dr. H.S. Vijaykumar, Director of Education, UAS, Dharwad inaugurated the programme and addressed the gathering. He suggested the farming community to organize and avail the facilities of the Authority. Dr. N.K. Biradarpatil, Special Officer (Seeds), UAS, Dharwad enlightened the farmers on objectives and importance of registration of plant varieties and delivered lecture on

importance of Protection of Plant Varieties and Farmers' Rights Act. More than 150 farmers of Dharwad district participated in the training programme.

8.2.29 Awareness Programme on Protection Plant Varieties and Farmers' Rights

An awareness programme on "***Protection of Plant Varieties and Farmers' Rights***" was conducted at Palakkad on 18 March, 2015. Two hundred and two famers from various parts of Palakkad attended the programme. Programme Coordinator Dr. M. C. Narayanankutty welcomed the group and gave brief description about the programme. Shri T. N. Kandamuthan, President, District Panchayth of Palakkad inaugurated the programme. Shri K.E. Haneefa, Standing Committee Chairman presided over the function. Smt. Shobana, Principal Agricultural Officer, Palakkad, Smt. Usha, Project Director, ATMA addressed the gathering.

Plant Genome Saviour Community Award winner, Shri B. Pradeesh of Akampadam Chimpachala Padasekhara Samithy, Thenkurissi shared his experiences and stressed that Palakkad farmers should come forward to conserve traditional varieties of crops. Plant Genome Saviour reward winner farmerShri Ciby George, Kallingal farm, Pattikkad also shared his experience in production and distribution of high yielding varieties of nutmeg (Kallingal 1 to 11).Mr. Abdul Nazar Paruthur, Mr. Brammadathan Namboodiri Pattambi and Mr. Krishnankutty Master shared their experiences and on various aspect of farming. Preliminary information on unique plant varieties conserved by farmers were collected. KVK Palakkad assured to take follow up and examine the possibility of registration of varieties identified in their area.

8.2.30 Awareness-cum-training programme at Krishi Vigyan Kendra, Gonikoppal

Awareness-cum-training programme on PPV & FRA, 2001was organized at KVK demonstration farm at Athur**on** 13 January, 2015. More than 250 farmers, representatives from Forestry College, Ponnampet; officials from Department of Agriculture, Horticulture, ATMA, Bhoochetana, NGO representatives working for

agriculture, Press and media representatives from all the three taluks of Kodagu district participated in the programme. Mr. B. Prabhakara, Subject Matter Specialist (Horticulture), KVK, Gonikoppal outlined about the programme.

Dr. A.T. Sadashiva, and Head, Division of Vegetable crops, IIHR, Bengaluru explained about the role and importance of **Protection of Plant Varieties and Farmers' Rights Act,** and stressed on the farmers' rights and provisions for registering farmers' varieties. Dr. T.S.Aghora, Principal Scientist, Division of Vegetable crops, IIHR, Bengaluru presented the DUS guidelines in various vegetables in detail. Dr. S.J. Anke Gowda, Principal Scientist and Head, CRC, Appangala spoke on DUS testing in cardamom, black pepper, turmeric and ginger. An exhibition was also organized to exhibit black pepper and rice varieties identified by the farmers.Some farmers namely Mr.Poonacha, Mr. Muthappa, Mr. Nanaiah and Mr.Ramesh displayed their varieties collection.

8.2.31 Farmers' Awareness programme at Nanihari, Saharanpur

The Indian Institute of Wheat and Barley Research (IIWBR) organized Farmers' awareness programme on 28 March, 2015 on "***Protection of Plant Varieties and Farmers' Rights Act 2001***" at village Nanihari (Sahranpur), Uttar Pradesh located at the boundary of Uttarakhand and Haryana. Progressive farmer Mr. Surender Singh and Mr. Balendera Singh organized the programme . Dr. R.R. Hanchinal, Chairperson PPV&FRA was Chief Guest and discussed various provisions of PPV&FRA, 2001 namely general functions of the Authority, registration procedure of

the plant varieties, DUS testing, gene fund, Plant Genome Saviour Award and Benefit-Sharing. Dr. Indu Sharma, Director, IIWBR, Karnal presided the function and urged the farmers to register their unique local landraces and farmers varieties with the Authority. She also covered disease management practices in wheat.

8.2.32 Visit to IIPR, Kanpur

Chairperson attended training-cum-Awareness program at IIPR, Kanpur on 26 February, 2015 as Chief Guest and made a presentation on "**Plant Varieties Protection: Importance and Procedures**". He also gave a presentation on "**Take it to the Farmers' – Farmers' Rights through awareness programs**" at the ZPD, Kanpur. He also visited the DUS Centre of pulses at IIPR, Kanpur.

Another training programme on Protection of Plant Varieties and Farmers' Rights Act, 2001 was organized by Indian Institute of Pulses Research, Kanpur in collaboration with Protection of Plant Varieties and Farmers' Rights Authority, New Delhi for farmers and other stakeholders on 26 February 2015. The programme was inaugurated by Prof. R.R. Hanchinal, Chairperson, Authority in the presence Dr. P.K. Singh, Pr. Scientist, IISR, Lucknow; Dr. Ravi Prakash, Registrar, PPV&FRA, New Delhi; and the programme was presided by Dr. N. P. Singh, Director, IIPR, Kanpur. The training programme was attended by about ninety nine farmers from Kanpur dehat, Fatehpur and Jalaun district of Uttar Pradesh along with two subject matter specialists from Krishi Vigyan Kendra , Bageshwar and Nainital, scientists and technical officers of IIPR, Kanpur.

Prof. R.R. Hanchinal elaborated on the need of protection of plant varieties in the present global context. Dr. N. P. Singh, Director, welcomed all the stakeholders and emphasized on the scope for registering farmers' varieties. He suggested all participants to take appropriate steps for creating awareness about the provisions of protection of plant varieties and farmers rights to other stakeholders at their own level.

During the technical session, Dr. Ravi Prakash, Registrar, Protection of Plant Varieties and Farmers' Rights Authority, New Delhi deliberated on the functions of PPV&FR Authority and the rules and regulations for registration of plant varieties. Dr. P.K. Singh, Principal Scientist, Indian Institute of Sugarcane Research, Lucknow presented farmers' perspective of PPV&FR Act, 2001. Dr. Sanjeev Gupta, PC (MULLaRP) deliberated on the importance of protection of plant varieties with reference to pulse crops, while Dr. S.K. Chaturvedi, Head (Crop Improvement Division),urged farmers to register their varieties with the Authority. Dr. Uma Sah and Dr. S.K. Singh encouraged farmers to make maximum possible use of the information gained during the training programme for their benefit.

8.2.33 Training-cum-Awareness at BAU, Ranchi

Dr.R.R Hanchinal, Chairperson PPV&FRA, New Delhi on 7 June, 2014 addressed University Scientists, Plant breeders, Researchers, students and other stakeholders about provisions of PPV&FR Act, 2001 with special focus on Plant Breeders' Rights and Farmers' Rights and provisions of PPV&FR Act, 2001 national gene fund and different kinds of awards and rewards given to farmers for their work in conservation & preservation of plant genetic resources. Students and the research fellow / faculty were keen and asked the questions about Plant variety registration, breeders, researchers and farmers' rights and different awards.

8.2.34 Indian Institute of Sugarcane Research (IISR), Lucknow

A training-cum-awarenessprogramme wasorganized under "**Kisan Vigyan Samagam**" organized by IISR, Lucknow at Indian Institute of Farming System Research, Modipuram, Meerut on 23 January, 2015. The event was inaugurated by Dr. Sanjeev Kumar Balyan, Hon'ble Minister of State for Agriculture, Govt. of India. The programme was attended by more than 500 farmers, officials from State Government, Scientists & Researcher's from IISR,Lucknow, IIFSR,Modipuram, SVPUA&T, Modipuram and other stakeholders from sugar industry etc.

8.2.35 Vivekanada Parvatiya Krishi Anusandhan Sansthan (VPKAS), Almora

A training-cum-sensitization workshop on **"Protection of Plant Varieties and Farmers' Rights Act, 2001**" was organized on 6-8 January, 2015 by ICAR-Vivekanand

Parvatiya Krishi Anusandhan Sansthan, Almora at its experimental farm, Hawalbagh for the hill farmers of Uttarakhand to create awareness among breeders as well as farming community about their rights and importance of registration of plant varieties.

Prof.R.R.HanchinaL, Chairman, PPV&FR Authority was the Chief guest of inaugural session. He inaugurated the workshop and released three publications of the institute. In his inspirational inaugural address, he highlighted the importance of diversity in Plant Genetic Resources and role of farmers and farming community in its evaluation and conservation. He encouraged both the breeders and the farmers for registration of their plant varieties. He stressed on the protection of farmers' varieties and requested research institutions and scientists to help farmers in getting their varieties registered. He also informed about "Plant Genome Saviour Community Awards Rewards and Recognition". Herequested farmers to come forward and apply for the same. Besides, he also informed the house about the recent developments in relation to registration and protection of plant varieties under PPV&FR Act, 2001.

Other distinguished guest speakers includedDr. H.S. Chawala Head, Division of Genetics and Plant breading, GBPUA&T, Pantnagar; Dr. S.K. Verma, Officer In-charge, NBPGR R/S Bhowali; Dr. Arun Gupta, Principle Scientist, Genetic Resource Unit, IIWBR Karnal; Dr. J. C. Bhat former Director, VPKAS, Almora and Dr. S. K. Pant, former Principle Scientist, VPKAS, Almora. The lectures on IPR, PPV&FR Act, 2001, Conservation and Utilization of Agro-biodiversity in Uttarakhand and other related issues were delivered. Around 80 participants were present including farmers from Kapkot, Mukteshwar and Almora; and scientific, administrative and technical staff of VPKAS.

8.2.36 KVK, Nagpur

KVK organized a training-cum-awareness programme on "**Protection of Plant Varieties and Farmers' Right Act,2001**" for **100** farmers and stakeholdersof Umred and Kuhi talukas' of Nagpur district in two batches of 50 farmers each at KVK training hall, Nagpur on 26-27 March, 2015. This programme was sponsored by PPV & FRA, Ministry of Agriculture& Farmers' Welfare, Govt. of India, New Delhi. Dr. Shanti Patil, Asstt. Professor, College of Agriculture (Dr. PDKV), Nagpur, Dr. V. Santhy, Sr. Scientist, CICR, Nagpur and Shri H. B. Kumbhalkar, KVK, Nagpur were resource person. Dr. U. V. Galkate, SMS, KVK, CICR, Nagpur coordinated this programme.

8.2.37 Indian Agricultural Research Institute (IARI), Regional Station, Indore

A one-day training-cum-awareness programme on "**Protection of Plant Varieties and Farmers' Rights Act, 2001"** with special reference to wheat and soybean was organised on 24 January, 2015 at KVK, Kasturbagram, Indore. More than 200 participants including farmers, members of farmers' organisations, NGO's, training organizers from various KVK's and State Department of Agriculture, Madhya Pradesh participated in the programme. This was followed by useful interaction between farmers and scientists during which queries were replied and related issues were further explained to them. The programme was concluded with field visits to DUS trials.

8.2.38 Indian Institute of Rice Research (IIRR), Hyderabad

IIRR organised one day **"Awareness Workshop onRegistration of Plant Varieties and Farmers' varieties."** at IIRR, Rajendranagar, Hyderabad on 18 March 2015.More than 70 members were participated in the training programme from various disciplines.This program was sponsored by PPV&FR Authority, New Delhi to create awareness among the Agricultural Officers of Department of Agriculture, Assistant Professors/Scientists from SAUs, NGOs and progressive farmers. These program were intended to provide awareness about the functions of PPV&FRA, Farmers' Rights, Community recognition awards, registration of farmers' varieties etc.

8.2.39 ICAR-Indian Institute of Wheat & Barley Research, Karnal

One day farmer's awareness programme on Protection of Plant Varieties and Farmers' Rights related issues was organized by Indian Institute of Wheat & Barley Research (IIWBR), Karnal at Nithara, Morena, Madhya Pradesh in collaboration with ZARS & KVK, Morena under the assistance of Protection of Plant Varieties and Farmers' Rights Authority, New Delhi on 17 March, 2015. A

team of the following scientists participated in the above programme:

- Dr. Jogendra Singh, Sr. Scientist Barley Network
- Dr. Lokendra Kumar, Sr. Scientist Barley Network
- Dr. Vishnu Kumar, PI, DUS Barley
- Dr. SS Tomar, Assoc. Director Research (ZARS, Morena)
- Dr. Dharvendra Singh (KVK, Morena)

Dr. Vishnu Kumar, PI DUS barley, briefed about the agenda items and PPV&FRA. Dr. Kumar introduced the PPV & FR issues in general and highlighted the support and system existing in India. Drs. Jogendra Singh and Vishnu Kumar gave details of status of PPV&FR in barley and modern technologies of barley cultivation. Dr. Lokendra Kumar mentioned the scope of malt barley cultivation in **"Contract Farming System"** with private industry as being followed in Rajasthan, Punjab and Haryana. Drs. Jogendra Singh and Lokendra Kumar also interacted over use of good quality seed of improved varieties.

Dr. Vishnu Kumar interacted with farmers and wished that they will take up registeration of their varieties of barley, wheat and other crop developed with their traditional wisdom and experience or preserved the crop diversity over a longer period in the region, if any. Barley being the traditional crop of the region has bright chance of having farmers' local varieties for registration. He also discussed about Plant Genome Saviour Community Awards and Farmers rewards and recognitions. During this awareness programme, the crop related queries of the farmers were discussed and Farmers' Rights, Breeder's Right, National Gene Fund, Variety Registration Process, Grow out Test, Plant Genome Saviour Community Awards etc. were discussed in depth with the participants.More than hundred farmers including young farmers participated in the awareness programme indicating that the keen interest in such issues.

9. General Activities of the Authority

During the reporting period, the Authority organized several events and meetings on important issues relating to its affairs and official business. Presently, the Authority has two branch offices at Guwahati and Ranchi to facilitate farmers and other stakeholders for registration of their varieties for protection near their vicinity. Chairperson also visited several places on the invitations of different organizations / agencies. The Authority also convened several meetings at Headquarters and outstation for various offical purposes. The highlights of some of the events are as under:

9.1 Foundation Day of the Authority

Tenth Foundation Day of the Authority was celebrated on 11 November, 2014 at NASC Complex, New Delhi. Dr. R.R. Hanchinal, Registrar General welcomed all the officers and staff on the occasion and summarised the progress of the Authority especially during the last one year. On this day, he addressed the staff and congratulated and appreciated for their excellent services extended in the progress of the Authority and urged the staff to work together as a team for the future progress of the Authority to take it to new heights.Dr. R.C. Agrawal, Registrar General also addressed to the gathering and requested that all officers and staff together should work as one family in team spirit to earn name and fame for the Authority.

9.2 Progress of Hindi use in official work

Hindi Pakhwada Diwas was celebrated and the Authority organized Nibandh Pratiyogita on 11 September, 2014 and the topic was **"**ijthijkxr çtkfr;ksa dk j[kj[kko o fodkl esa efgykvksa dk ;ksxnku**".** Fourteen officials of the Authority enthusiastically participated in this Pratiyogita and the award were conferred persons to the following:

uke	in	ijLdkj	:i;s
श्री सुनीत कुमार	तकनीकी परीक्षक	प्रथम	500/–
श्रीमती रितु यादव	कार्या. सहायक	द्वितीय	300/–
श्री श्याम नारायण प्रसाद	कप्यूटर सहायक	तृतीय	200/–
श्री राज गणेश	विधि सलाहाकार	संत्वाना	100/–
डॉ. धर्मेन्द्र सिंह पिलानियाँ	तकनीकी सहायक	संत्वाना	100/–
डॉ. अमित दीक्षित, श्री. टी. स्टीफन, श्री. रवीन्द्र कुमार, श्रीमती मनीषा गौतम,	तकनीकी परीक्षक	संत्वाना	100/–
श्री सुनील कुमार सिंहए श्री रामवीर सिंह, श्री अंकित कुमार	कार्यालय सहायक	संत्वाना	100/–
श्री. भूपेंद्र कुमार, श्री मनोज कुमार	चतुर्थ श्रेणी कर्मचारी	संत्वाना	100/–

9.3 Vigilance Awareness Week of the Authority

The staff of the Authority joined in pledging their support to fight corruption and being vigilant as part of the **Vigilance Awareness Week (27 October–1November, 2014**). An essay writing competition (Bilingual) was also organised on 31 October, 2014. The topic was"**Combating Corruption–Technology as an Enabler**" (Hk"Vkpkj lekdkyk çkn;ksfxdh ,d lcy dk :i). Five officials of the Authority participated and the awards were given to the following officers:

S. No.	Name & Designation	Prize
1	Shri D.S. Rajganesh, Legal Advisor	1st
2	Shri D.S. Misra, Joint Registrar	2nd
3	Shri Suneet Kumar, Technical Examiner	3rd

- Four days training program on "**Climate Change and food security vulnerability assessment: Toolkit for assessing community level potential for adaptation for climate change**" was organized by Bioversity International, New Delhi on 23-26 November, 2014. Dr. Jyoti Jaiswal and Dr. Meenakshi Bhardwaj, Plant Variety Examiners were deputed for the andtraining programme.

9.4. Swatch Bharat Abhiyan

The staff members of the Authority join together and participated whole-heartedly in the **Swatch Bharat Abhiyan**, a call made by the Hon'ble Prime Minister of India Shri Narendra Modi on 2 October, 2014. The staff took a pledge to keep the office, home and nearby premises clean and to avoid littering. Thereafter, they undertook the cleaning of the whole of the office and its premises.

9.5 Branch office, Guwahati

The Branch Office, Guwahati of Protection of Plant Varieties and Farmers' Rights Authority started functioning from the campus of Assam Agricultural University, Khanapara, Guwahati from 20 May, 2011. Branch office is headed by Dr. A.C. Sarma, Deputy Registrar and supported by Dr. A.K. Singh, Senior Technical Officer.

Applications / Seed Samples Received

During the reporting period, two hundred fifty three applications were received for different crops under various categories and after preliminary examination, these were sent to Head Office for further necessary action. One hundred five seed samples of rice and other crops for DUS / GoT were received at Guwahati and sent to Headquarters.

- **Regional Workshop of Bioversity International:** A regional workshop on project entitled **"Mainstreaming agro biodiversity conservation and utilization in agricultural sector to ensure ecosystem services and reduce vulnerability"** was jointly organized by PPV&FR Authority and Biodiversity International on 2 May, 2014 at Hotel Gateway Grandeur, G.S Road, Guwahati.

The Workshop was graced by Dr. R.R. Hanchinal, Chairperson, PPV&FRA, New Delhi, Dr. P. N. Mathur, Regional Director of Bioversity International, New Delhi, Mr. T.K. Madan of Bioversity International, Dr. V. Ramanatha Rao and Dr. M. Dadlani, Consultants, Bioversity International, Dr. D.K. Hore, Consultant, ISBD, Imphal, Dr. I.S. Bisht, Principal Scientist, NBPGR, New Delhi.

The Workshop was also participated by distinguishing scientists and leading NGOs of the North Eastern Region. The participants finalized three sites at Assam and Nagaland for the proposed project. Later Dr. R.R. Hanchinal, Chairperson, PPV&FRA accompanied by Dr. P.N. Mathur had discussion with Dr. K.M. Bujarbaruah, Vice Chancellor, Assam Agricultural University at Khanapara on 2 May, 2014. The discussion was centred on Grow out Tests of farmers' varieties of rice, registration of varieties and other technical matters. The Vice Chancellor assured his all support and co-operation.

- **Visit to Rice DUS Test Centre:** Deputy Registrar visited Assam Agricultural University, Jorhat on 31 May, 2014. Discussion was held with Dr. P. Borah, Nodal Officer DUS Test for rice and other scientists for Grow out Tests of farmers' varieties of rice. A discussion was also held with Dr. G.N. Hazarika, Director of Research, Assam Agricultural University, Jorhat where Dr. P. Borah and Dr. Akashi Sarma, Nodal and Co-Nodal Officer, Dr. P.K. Baruah, Professor and Head Plant Breeding and Genetics, AAU, Jorhat took part in the discussion. Director of Research of AAU, Jorhat suggested the scientists for smooth running of the Grow out Tests.

- **Visit to ICAR Complex for NEH area Nagaland:** Deputy Registrar visited ICAR Nagaland, Jharnapani on 5 June, 2014 in connection with Grow out Tests of farmers' varieties of rice at the newly created centre. Dr. Bidyut C. Deka, Joint Director, ICAR Nagaland, Dr. Anamika Sharma, Programme Co-ordinator and Dr. Kollam Rabi, SMS (Agro) of KVK, Dimapur took part in discussion and assured his co-operation for Grow out Tests of farmers' varieties.

DUS Monitoring

Deputy Registrar, Guwahati attended DUS Monitoring for jute at CRIJAF, Barrackpore and CSRSJAF Bud Bud, West Bengal on 2-3 September, 2014 respectively. The other members of the monitoring team were Dr. D.K. Dey, Former Prof &HOD, BCKV, West Bengal (Chairman) and Dr. Jiban Mitra, Principal Scientist (PBG), CRIJAF, Barrackpore. Dr. P.G. Karmakar, Director and Dr. S. Satpaty, Head, Division of Crop Protection, CRIJAF, Barrackpore also participated. Dr. S. Biswash, Scientist-in-Charge, CSRSJAF Bud Bud was present during the monitoring on 3 September, 2014.

Grow out Tests of Farmers' Varieties

Monitoring of the Grow out Tests of farmers' varieties of rice were done at Assam Agricultural University, Jorhat, ICAR Nagaland and ICAR Manipur under the Chairmanship of Dr. S.R. Dhua, CRRI, Cuttack. Dr. A.C. Sarma, Deputy Registrar, Guwahati as under:

Date of Monitoring	Grow out Test Centres	Number of varieties
4 December, 2014	A.A.U, Jorhat, Assam	354
5 December, 2014	ICAR Nagaland, Jharnapani, Medziphema	270
6-7 December, 2014	ICAR Manipur, Lamphelpat	109

Awareness-cum-training Programmes

Awareness-cum-Training programmes on PPV &FR Act, 2001 were mostly organized by the KVKs in entire North Eastern Region and highlights of some of the programmes areas follows:

❖ **Training-cum-Awareness Programme at Lowar Subansiri District (Arunachal Pradesh)**

A training–cum-awareness programme was conducted on 9 February, 2015 organized by the KVK. About 192 farmers from different farmers club from Hapoli, Siiro, Hari, Bulla, Dutta, Monipoliyang etc. participated. Mr. Gamwang Hoche, District Training Officer, PD, ATMA, Lower Subansiri District, Govt. of Arunachal Pradesh was present as Chief guest.Dr. A.C. Sarma, Deputy Registrar, Guwahati and Dr. M. Srivastava, Assoc. Prof., Central Agricultural University, Pasighat explained different provisions of PPV & FR Act, 2001 to the farmers.Dr. A.N. Tripathi, Programme Coordinator, the scientists of KVK and Mr. Koj Harming, ADO also participated in the interaction programme with the farmers. The farmers assured of submitting applications for different crops for registration.A news column was also published in The Arunachal Times in its issue 11 February, 2015.

❖ **Programme at KVK Ri Bhoi (Meghalaya)**

KVK Ri Bhoi organized a training-cum-awareness program on 21 March, 2015 which was inaugurated by Dr. A.K. Tripathi, I/C ZPD, Zone III (ICAR). Dr. A.K. Mishra, I/C Officer–in Charge, NBPGR Regional Station Shillong was present. They motivated and encouraged the local farmers to come forward to register their unique varieties. During the technical session, the different provisions under the PPV & FR Act, 2001 were explained including Farmers' Rights, Registration Procedure, DUS testing, Plant Genome Saviour Community Awards, Rewards& Recognitionsto the participants by the Deputy Registrar.

Dr. S.K. Baishya, Programme Co-ordinator and Scientists of the KVK took part in interaction programme with the farmers. Doordarshan Kendra Shillong telecasted an interview of the Deputy Registrar on the subject.

Besides, above programmes Deputy Registrar, Guwahati also participated in the other such training-cum-awareness programme as under:

i. KVK Namthang, South Sikkim on 24 July, 2014
ii. KVK Nagaon on 27 November, 2014
iii. KVK, Kamrup on 18 December, 2014
iv. KVK Barpeta on 30 December, 2014
v. KVK Changlang on 22 January, 2015
vi. KVK East Khasi Hills on 11 February, 2015
vii. KVK Kamrup on 16 March, 2015

9.6 Branch Office, Ranchi

PPV&FRA Branch office Ranchi is situated in the premise of Computer Centre of the Birsa Agriculture University, Kanke, Ranchihaving the territorial jurisdiction of Jharkhand, Chhattisgarh, Bihar, West Bengal, Odisha and Andaman & Nicobar Islands and functional since May, 2011. Presently, Shri Umakant Dubey, Deputy Registrar is serving since April, 2013.The mandate of branch office is to participate in training-cum-awareness programmes/meetings/seminars convened by various departments research institutions/agricultural universities/ KVKs/Organizations/ Govt. agencies in their jurisdiction for dissemination of knowledge relating to PPV&FR Act, 2001 including Farmers' Rights, Plant Genome Saviour Community Awards, Rewards & Recognitions, and popularization & motivation of registration of farmers' varieties etc. by the locale & tribal populations.

Applications / Seeds Samples Received

During the reporting period, Branch office received 718 applications under various categories for registration and also received 288 seed samples of different crops for DUS and Grow out Test (GoT). After preliminary examination, they weresent to the Headquarters for further processing.

- **Participation in Training-cum-Awareness Programme:** Kisan Ghosti organized at Gram-Sadam, Panchyat Sadan, and at another placeBariatu, PanchyatBariatu, in Gola Block, Ramgarh, Jharkhand on 7 April, 2014 by Agricultural Technology Management Agency (ATMA), Deptt. of Agriculture, Jharkhand. Deputy Registrar delivered lecture on provisions of PPV&FR Act, 2001 and different awards and rewards given to farmers for their commendable work in conservation & preservation of plant genetic resources. The farmers were keenly interested in the registration of varieties and Plant Genome Saviour Community awards/ rewards and recognitions. There was an interactive session wherefarmers sought clarifications on several key areas about farmers' rights.
- **Coordination with organizations for providing Utilization Certificates (UCs):** Deputy Registrar branch office has made sincere efforts for collecting Utilization Certificates (UCs) for funds released by Authority for Training-cum-Awareness programmes to various organisations including KVKs to fecilitate early audit of the account of the Authority.
- **Co-ordination with organizations for filing of applications for Registration:** Deputy Registrarmade sincere efforts for filing of applications for registration from different organisations / stakeholders including farmers.
- **Participation in Training-cum-Awareness Programme:** Deputy Registrar participated in one day training cum-awareness programme organized by Holy Cross Krishi Vigyan Kendra (KVK) Hajaribagh on 27 September, 2014. Apart from farmers of Hajaribagh & Latehar, 112 farmers were present from neighboring districts. Sister Joslin, Directress, Holy Cross, KVK, Hajaribagh and their staff and officers were present. Deputy Registrar delivered a lecture on PPV&FR Act, 2001 with special focus on Plant Variety registration including farmers' varieties; awards and rewards & recognitions given to farmers for their work in conservation & preservation of Plant genetic resources. The farmers present in the training programme were enthusiast about registration of farmers' varieties and Plant Genome Saviour Community Awards, Plant Genome Saviour Farmer Rewards and Recognitions. There was an interactive session with the farmers. The farmers were keen to enquirethe questions about farmer variety registration. The "**Film on Farmers' Rights**" was also shown to farmers. About 35 farmers also exhibited their seeds and planting material being conserved.Besides, Deputy Registrar, Ranchi also participated in twenty one Training-cum-Awareness Programmes in the territorial jurisdiction conducted in various KVKs during the above period.
- **Visit of Shri R.K. Mishra, Additional Commissioner (Seed):** Shri R.K. Mishra, Addl. Commissioner (Seed),Department of Agriculture, Cooperation & Farmers Welfare, Ministry of Agri. Govt. of India visited Ranchi on 15-16 January, 2015. During his visit the progress made by the branch office since

its establishment was reviewed and discussed with reference to registration of farmers' varieties and training-cum-awareness programme. He was keen to know the details of certificates issued to the stakeholders of the region and motivation of farmers for taking proactive role in recording the bio-diversity of region. During this visit he also availed an opportunity to visit Field Gene Bank at Birsa Agri. University Campus Ranchi. On this occasion Dr. R.P. Singh, Director (Seed & Farm) and Dr. Supriya Singh, Co-Principal Investigator (Co PI) were also present.

- **Training-cum-Awareness Programme:** Vikas Bharti Krishi Vigyan Kendra, Gumla organized one day Training cum-Awareness Programme on "**Salient Provisions of Protection of Plant Varieties & Farmers' Rights Act, 2001**" on 29 January, 2015. Deputy Registrar, Ranchi with Dr. R.P. Singh "Ratan" Director (Extension), Birsa Agricultural University, Ranchi, Dr.Sanjay Kumar, Programme Coordinator (PC), Krishi Vigyan Kendra, Gumla, Shri Mahendra Bhagat, Treasurer Vikas Bharti, Gumla, Smt. Savitri Devi, Pramukh,Vishanpur, Gumla,Shri Bhikari Bhagat, Social worker, Block Technical Manager (BTM), Deptt. of Agriculture, Gumla, and more than 150 farmers participated programme.
- **Training-cum-Awareness Programme:** Krishi Vigyan Giridih, Birsa Agricultural; University, Ranchi organised one day Training-cum-Awareness Programme on Protection of Plant Varieties & Farmers' Rights Act, 2001 on 26 February, 2015. Deputy Registrar with Dr.Sushil Prasad, Additional Director (Extension), Birsa Agriculture University, Ranchi,Dr. B.K.Bhagat, Zonal Research Station (ZRS) Dumka, Dr. J.K. Lal, Programme Coordinator, Krishi Vigyan Kendra, Giridih,District Agriculture Officer Giridih,District Horticulture Officer, Giridih,District (DSCO) Giridih and more than 100 farmers attended the said training-cum-awareness programme.
- **Participation in Programme of Quality Seed Production, Processing, Storage & Marketing in Birsa Agricultural University:** Two days training Programme on Quality Seed Production, Processing, Storage & Marketing organized by Birsa Agriculture University, Ranchi, Directorate of Extension Education on 5-6 February, 2015, ShriU.K.Dubey, Deputy Registrar with Dr.R.P.Singh Ratan, Director (Extension Education), BAU, Ranchi, Dr.R.P.Singh, Director (Seed & Farm), BAU, Ranchi,Dr. Devendra Prasad, Chairman, Entomology, Birsa Agriculture University, Ranchi, Dr.P.K.Dutta,Deputy General Manager,NABARD,Ranchi,Dr.Superiya Singh,DSF, Birsa Agricultural University, Ranchi Dr.Ashok Kumar,Programme Coordinator,Simdega and about 25participants including programme co-coordinator and Subject Matter Specialists of all Krishi Vigyan Kendra (KVK) of Birsa Agricultural University attended the said programme.
- **Kisan Mela-Agrotech, 2015 organized at Birsa Agriculture University, Ranchi:** Branch Office Ranchi Participated in three day "**Agrotech, 2015 Kisan Mela"**organized by Birsa Agriculture University Ranchi on 14-16 March, 2015 and about 157 farmers and other stakeholders visited the stall.
- **Training-cum-Awareness Programme:** Krishi Vigyan Kendra Pakur, of Birsa Agricultural University, Ranchi organized one day Training-cum-Awareness Programme on of Protection of Plant Varieties & Farmers' Rights Act, 2001 on 19 March, 2015. Deputy Registrar attended the said programme along with more than 100 farmers of Pakur and neighboring districts.

Dr. Sushil Prasad, Additional Director (Extension), Birsa Agriculture University (BAU), Ranchi, Dr. V.K. Bhagat, Zonal Research Station (ZRS) Dumka, Shri U.K. Dubey, Deputy Registrar, PPV&FRA, Ranchi, Dr. Rajesh Kumar, Programme Coordinator, Krishi Vigyan Kendra Pakur, Shri Mithilesh Kumar, District Agriculture Officer, Pakur, Dr. Vinod Kumar, Subject Matter Specialist, Soil Science, KVK Pakur, Dr. Pankaj Kumar, SMS Animal Science, KVK Pakur were also present.

9.7 Meetings of PPV&FR Authority

Meetings	Date	Venue
20th Meeting of the Authority	17 April, 2014	Board Room, IGH, NASC Complex, New Delhi
21st Meeting of the Authority	31st Ocotber, 2014	

9.7.1 Major decisions

- Finalization of DUS test guidelines of seven crops species viz. Tea with three species, Acid lime, Mandarin, Orange and Oncidiumorchid.
- Non-refund of DUS test fee to the applicants in case of withdrawal of applications or seeds from DUS testing.
- Finalization of lease deed between PPV&FRA and Indian Agricultural Research Institute (Indian Council of Agricultural Research) regarding the lease out of 10,480 sqm. land to PPV&FRA for construction of official building of PPV&FRA and the MOU executed between PPV&FRA and National Rainfed Area Authority, New Delhi.
- Change in Accounting Policy of DUS Test fee to the DUS centres.
- Delegation of powers to dispose of benefit sharing proceedings under section 10 of PPV&FR Act, 2001 to Chairperson or his nominee for adjudicating and disposing of the matter in accordance with law.

- Proposed schedule of the Appointing Authority, disciplinary Authority and Appellate Authority in respect of the employees of the Authority.
- Approval of the recommendations made by 22-25th Extant Variety Recommendation Committee meetings.
- DUS test fees of Rs.40,000 for Barley and Rs.50,000 for all other crops as notified vide S.O. 1903 (E) dated 16 April, 2014 in the Gazette of India.
- Approval of DUS test guidelines of crop species viz. Canna, Gladiolus, Muskmelon, Watermelon, Peach, Japanese plum, Jasmine, Papaya, China aster, Tuberose and Strawberry.
- Approval of Annual Report of the Authority and Annual Accounts of the Authority for 2013-14.
- Approval of the Plant Genome Saviour Community Awards, 2013.
- General guidelines for On-site DUS testing.

9.8 Construction of Authority Bhawan

The construction of the Authority Bhawan is subjected to number of clearances from the Civic Authorities which are under consideration with different agencies. The detailed outline is as under:

Layout Plan

- Application for approval to be submitted to Town Planning Department of North Municipal Corporation of Delhi.
- North MCD will put up the case to Lay out Scrutiny Committee (LOSC) for initial clearance.
- After obtaining clearance from LOSC North MCD will forward the case to:Delhi Fire Service (DFS) for their approval and Delhi Urban Art Commission (DUAC).
- After obtaining approval from DFS/DUAC, the case will be put up to the Standing Committee for final approval of Layout Plan.

9.9 Staff Welfare and News

- Shri Nitesh Kumar Verma, Computer Assistant wastransferred on deputationat Director General of Foreign Trade (DGFT) of the Ministry of Commerce and Industry, Govt. of India, New Delhi and relieved on 25 June, 2014.

9.10 Participation by Dr. R.R. Hanchinal, Chairperson, PPV&FRA

- **XXIX Annual Group Meeting of AICRP-National Seed Project (Crops)** was held at SKUA&T, Srinagar (J & K) on 26 April, 2014. Dr. R.R. Hanchinal, Chairperson chaired Technical Sessions and spoke on **"Implications of Plant Variety Protection on Seed Industry"**. Later on the day, he inspected the DUS trials at CITH, Srinagar. During the review meeting with the Director, CITH and scientists, he interacted on several issues and discussed with the Director (Research) for promotion and conservation activities of PGR and registration of the local farmers' varieties of Kashmir valley and Ladakh region.
- केन्द्रीय उपोष्ण बागवानी संस्थान, लखनऊ अनेक साझेदारों के साथ दिनांक 28.. 29 जून, 2014 को आम में मूल्य श्रृंखला प्रबंधन के सहभागिता मुद्दे, आम विविधता एवं किसान गोष्ठी विषय पर दो दिवसीय सेमिनार का आयोजन किया। इस सेमिनार का विषय–वस्तु आम की मूल्य श्रृंखला को सक्षम बनाने हेतु इसके उत्पादन, तुड़ाई पूर्व एवं आपूर्ति श्रृंखला प्रबंधन से संबंधित समस्याओं का विश्लेषण कर निदान करना प्रासंगिक एवं समयानुकूल है। इसके अंतर्गत राष्ट्रीय एवं विश्व स्तर की उत्पादकता, गुणवत्ता एवं खाद्य सुरक्षा से संबंधित मुद्दों पर विमर्श किया। भारतीय परिदृश्य में बृहत स्तर पर लघु जोत वाले बागवानों, सजग उपभोक्ताओं वाले घरेलू बाजार तथा विश्व स्तर पर व्याप्त खाद्य सुरक्षा एवं संगरोध की समस्याओं का समाधान करने की आवश्यकता पर जोर दिया। स्पष्ट रुप से ये सभी विकट चुनौतियाँ मूल्य श्रृंखला को सक्षम बनाने हेतु बेहतर उत्पाद गुणवत्ता प्रबंधन के द्वारा समस्याओं का समाधान किया जा सकता है। उपरोक्त बैठक में डा. आर.आर. हंचिनाल, अध्यक्ष, पौधा किस्म कृषक अधिकार सरंक्षण प्राधिकरण, नई दिल्ली माननीय अथिति के रूप मे उपस्थित रहे। उन्होने अपने अध्यक्षीय भाषण में वैज्ञानिकों एवं आम के कास्तकारों को पौधा किस्म एवं कृषक अधिकार सरंक्षण अधिनियम के प्रावधानों के विषय में जानकारी प्रदान की। इस बैठक में वैज्ञानिकों ने आम उत्पादन के क्षेत्र में विभिन्न विषयों पर व्याख्यान प्रस्तुत किए।
- Chairperson made a brief presentation on the activities of the PPV&FR Authority to the Shri Radha Mohan Singh, Hon'ble Union Minister of Agriculture on 21 July, 2014 at Krishi Bhawan, New Delhi. The presentation touched upon the functioning / achievements of the Protection of Plant Varieties and Farmers' Rights Authority since inception.
- Meeting with Vice-Chancellor and senior scientists and officers of Dr. Y.S. Parmar University of Agriculture & Technology, Palampur on 26-27 July, 2014. The focus of the discussion was confined to the conservation of Plant Genetic Resources activities undertaken by the University in Himachal Pradesh. He visited the DUS centres for poplar, willow, carnation and also visited the Regional Research Station & Field Gene Bank at Mashobara and reviewed the status of apple, peach and cherry repository.
- Dr. R.R Hanchinal, Chairperson visited the Sorghum DUS testing trials at the Directorate of Sorghum Research (DSR), Hyderabad on 2 August, 2014. DSR, Hyderabad is the Nodal centre for DUS testing

in sorghum. Dr. Hariprasanna K., Nodal Officer along with Dr. J.V. Patil, Director inspected the DUS testing trials for different candidate varieties taken up. Two trials were conducted during *kharif,* 2014 season. Under 1st year of testing, 11 candidate varieties comprising of seven new and four farmers' varieties were characterized along with 16 reference varieties. Out of seven new candidate varieties, four were from Public sector and three belonged to Private sector. Under 2nd year of testing, nine candidate varieties (seven from Private and two from Public sector) were characterized along with nine reference varieties. The crop was in booting to early flowering stage. Dr. Hanchinal highly appreciated the field layout, management and maintenance of the trials, and expressed satisfaction on the overall conduct of sorghum trials for DUS testing.

- Two meetings of National Advisory Board on Management of Genetic Resources (NABMGR) of the NBPGR was held on 16 June & 3 September, 2014 at New Delhi under the Chairmanship of Dr. R.S. Paroda, Former DG (ICAR) & Chairman, TAAS. Chairperson, PPV&FRA participated in the both the meetings. The Chairperson, PPV&FRA made a presentation on "**Status of Gene Fund, Registration of Varieties, Geographical Indication (GI) of Basmati Rice**" on 16 June, 2014. In an other meeting discussion was held on sharing of germplasm available at NBPGR and NARS with other countries and private sector seed companies in India and consequent revisiting the Material Transfer Agreements (MTAs) for sharing germplasm with private sector and also for export of germplasm to other countries under bilateral program.
- Participated a meeting on "**Global Crop Diversity Trust of ITPGRFA"**convened by the office of Hon'ble Union Minister of Agriculture at Krishi Bhawan on 8 September, 2014.
- Annual General Body Meeting of National Seeds Association of India (NSAI) was held at Hyderabad on 13 September, 2014. Chairperson, PPV&FR Authority was invited as a Special Guest to deliver a lecture on "**Commercial Exploitation of Registered Varieties**" in the post AGM session. About 60 representatives of the Private Seed Companies participated in the event. Chairperson also visited DRR, Hyderabad on 14 September, 2014 to inspect the DUS trials and participated in the interaction meeting with the trainees from Bangladesh, India and Nepal. He highlighted his views on Protection of Plant varieties and IPR related issues under IRRI-India programme at ICRISAT, Hyderabad.
- Participated in a special meeting with overseas experts on regulatory affairs in agriculture organized by **ABLE-AG** and Bioversity International on 23 September, 2014 at the PPV&FR Authority office, New Delhi.
- Delivered a special lecture on **"Indian System of Plant Variety Protection"** and efforts made by the Authority in finalizing the descriptors for DUS testing in Noni crop at the Ninth National Symposium "**Noni for Everyone**" on 27 September, 2014 at ICAR Research Complex, Goa.
- The Chairperson made a presentation on "**Achievements in Implementation of PPV&FR Act, 2001 in Zone VII**" at the ICAR Regional committee Meeting for Zone VII (Chhattisgarh, MP, Maharashtra, Goa) at Indira Gandhi Krishi Vishwavidyalaya, Raipur on17-18 October, 2014.
- Participated in the "**Indian Horticulture Congress-2014**" organized at TNAU, Coimbatore and delivered a plenary lecture on **"Current IPR issues in relation to Horticultural Production and Trade"** with special emphasis on the PPV& FR Act, 2001 on 6-9 November,2014.
- Participated in the Expert consultation as Chief Guest on Harmonization of Seed Movement, Regulations and procedures organized by CABI office at New Delhi. The Chairperson chaired a session on "**Wrap up and Way Forward**" on 25 November, 2014.
- A team of officials from PPV&FR Authority and Bioversity International consisting Chairperson, PPV&FRA, Dr. P.N. Mathur, Dr. Malvika Dadlani visited **"Plant Genome Saviour Awardee Community**" at Jawahar Block in Maharastra on 13 January, 2015 for supporting their efforts in conservation of farmers' varieties of rice, small millets, vegetables and tuber crops. Modalities for establishment of Community Seed Banks with the support from PPV&FR Authority, Bioversity International and BAIF was also discussed during the meeting.
- Dr. R.R. Hanchinal served as the moderator for panel discussion on "**Seed Sector (PPV&FR) policies and advancements in seed sector especially molecular science and biotechnology**" on 19 January,2015 organized by Satguru Management Consultants at New Delhi.

- Served as Chief Guest at the Annual Convocation and prize distribution function of PAU, Ludhiana on 28 January, 2015. In his convocation address, the Chairperson spoke about the importance of Intellectual Property Rights in Agriculture and protection of plant varieties.
- Participated in the 4th National Seminar on "**Law, Science and Technology: The Way Forward**" and gave a presentation on Plant Variety Protection & Conservation of Plant Genetic Resources for sustainable use in Agriculture at Institute of Law, Nirma University, Ahmedabad
- **Indian Seed Congress**, the annual forum organized by NSAI, was emerged as a much awaited event to project the latest trends and views of the Seed Industry sector; voiced their concerns; deliberated on the new technological advances and the barriers to technology development and introduction; showcased new product ranges and services and network for better business development. **Indian Seed Congress 2015**, at Agra was the sixth edition of the mega Seed Industry by the NSAI. Congress attracted participation by representatives of all major stakeholders including industry (seed & allied), policy makers, developmental agencies, scientific community and farmers' organizations. The Congress delegates included industry leaders from more than 15 countries.
- Participated in the 17th Indian Agricultural Scientists and Farmers Congress on "**Agri-Innovation for Enhancing Production & Rural Employment**" as the Chief Guest and Member of the Advisory Committee organized by Bioved Research Institute of Agriculture & Technology at Allahabad and gave a presentation on PPV&FR Act, and conservation of PGR on 21 February, 2015.
- Visited the Bastar region to see the PGR Activities of Tribal Communities and also to work out the modalities to establish community seed bank. He also visited IGKV, Raipur to review the progress of grow out testing pertaining of the Farmers' varieties on 22-23 Februrary,2015
- Participated workshop to discuss the on-going Project activities being undertaken by Bioversity International in collaboration with Indian partners under ICAR-Bioversity Work plan 2012-16 held on 12 March, 2015 at New Delhi. Chairperson, PPV&FRA made a presentation on **"PPV&FR Authority and Bioversity International - Collaborative Activities"**.
- Participated in the State level Seed Diversity Fair of Chhattisgarh, establishment of Community Gene bank for Bastar region and Zonal workshop on Farmers' Rights organized jointly by PPV&FRA, Bioversity International, ICAR-ZPD VII and IGKVV on 13 March, 2015 at IGKVV, Raipur. Meeting was also attended by the Hon'ble Minister of Tribal Community Development, Govt. of Chhattisgarh and the Director General, Bioversity, Rome. He alsoparticipated meeting convened by Hon'ble Chief Minister of Chhattisgarh for establishment of Community Banks in the Tribal Regions.
- Chairperson was invited as the Chief Guest in the "**Workshop on IPR & Related Issues in Uttar Pradesh: Present Scenario and Future Needs**" and delivered a lecture "**Protection of Plant Varieties and Farmers' Rights**" in technical session organized by the UP Council of Agricultural Research on 27 March, 2015 at Lucknow.

9.11 Participation by Registrar General

- Participated as an expert in a meeting related to **"Database Design for the data generated through Maharashtra Gene Bank activities"** at Indian Institute of Science Education and Research, Pune on 22 May, 2014.
- Participated as Chief Guest in the Inaugural session of the **"One day awareness workshop on Consortium for e-Resources in Agriculture (CeRA)"** on 29 September, 2014 at NASC Complex, New Delhi.
- Participated in one day Zonal Level Training-cum-Awareness Programme of PPV&FRA for Gujarat KVKs organised at Anand Agricultural University, Vadodara on 8 October, 2014. On same day, also participated in another training-cum-awareness programme on PPV&FR Act, 2001 organised at Anand Agriculture University, Anand. It was inaugurated by Dr N.C. Patel, Hon'ble Vice-Chancellor of AAU and attended by 40 participants including Project Coordinator of Zone-VI, KVKs. During the training he explained in detail about the provisions of the PPV&FR Act, 2001.
- Made a presentation on "**Role and Scheme of PPV&FRA in promoting Farmers' Innovation**" at the Model Training program on ***Extension strategies for up-scaling of farmer led Innovation*** organised by the Directorate of Extension, Ministry of Agriculture& Farmers' Welfareat Division of Agri. Extension, IARI, New Delhi on 14 October, 2014.
- Delivered a lecture on "**Registration of Plant Varieties under PPV&FR Act, 2001**" at National Bureau of Plant Genetic Resources, New Delhi jointly sponsored by Directorate of Extension, Department of Agriculture, Co-operation & Farmers Welfare, Model Training Course (MTC) on "**Role of Germplasm Diversity in Nutritional Security**" on 27 November, 2014.
- Delivered a lecture on "**Protection of Plant Varieties and Farmers' Rights**" in the International training Programme on Importance of Statistical and

Experimental Designs, Data Analysis and Biometrical Techniques in Agricultural Research held at IASRI, Pusa on 5 January, 2015.

- Registrar General was invited and made a lecture on PPV&FR Act, 2001 related to farmers innovations during a session on "**Farmer-led innovations, specialty and secondary agriculture for rural prosperity**" in National Seminar on Sustainable Rural Livelihood– Technological and Institutional Perspective at Sher-e-Kashmir University of Agricultural Science & Tech., Jammu on 8January, 2015.
- Participated in a seminar on "**Intellectual Property Management and Agriculture in the area of PPV & FRs**" organised by the UP Council of Agricultural Research at Lucknow on 22 January, 2015.
- Participated in an awareness programme on "**Awareness creation of farmers' varieties collection, conservation and registration**" at KVK, Rajnandgaon, Raipur on 13 March, 2015.
- Participated in a workshop on "**Consolidating CEBPOL–Sharing of Experiences on ABS**" at National Biodiversity Authority, Chennai on 3 February, 2015
- Participated in an Interactive session on '**Plant Genetic Resources–Importance for present and future'** led by Padma Bhushan Dr. R.S. Paroda at NBPGR, New Delhi on 5 February, 2015
- Participated in the discussion held on issues related to development of protocols for evaluation of performance of varieties and development of IT platform for registration of varieties under the Seeds Bill, 2004 under the Chairmanship of Addl. Secretary (AKS) in Krishi Bhawan, New Delhi on 11 February, 2015.
- Participated "**Training-cum-Awareness programme on Protection of Plant Varieties and Farmers' Rights Act**" and the foundation day celebration of ICAR-Directorate of Seed Research, Mau on 16 February, 2015.
- Participated in the 17th Annual Conference of Society of Statistics, Computers and Applications (SSCA) which was coordinated by Birla Institute of Management and Technology (BIMTECH) at Bhubaneshwar on 23 February, 2015.
- Participated in a DST sponsored national training on "**Agro-biodiversity conservation and sustainable livelihood**" at MSSRF, Regional centre, Jeypore wherein he delivered a lecture on "**Indian policies related to agro-biodiversity**". He also visited the MSSRF Regional Centre, Jeypore and interacted with the Director about the conservation activities undertaken by one of the awardees of the Plant Genome Saviour Community Awards.
- Participated in the training-cum-awareness programme on PPV&FRA at Bidhan Chandra Krishi Vishwavidyalaya on 28 February, 2015. He also visited Gontra Samaya Krishi Unnayem Samiti Limited in the adjoining village, Gontra, a co-operative set up for the "**Establishment of Seed Village**". The Society also demonstrated integrated farming system in natural low land eco system in this area.

9.12.1 Joint Participation by Chairperson and Registrar General

- **Review meeting at IIHR, Bengaluru:** Chairperson and Registrar General, PPV&FR Authority visited Bengaluru on 12 June, 2014 in connection with a review meeting with the director and the principal investigators of various projects assigned by Authority to the various departments of the institute. Chairperson took stock of all the projects to take the first-hand knowledge and progress made in each of the projects for development DUS guidelines of flowers, fruits and vegetables. Chairperson also visited GKVK, UAS, Bengaluru in connection with reviewing progress of work under various projects including small millets assigned to the University.
- National Academy of Biological Sciences (NABS), Chennai during the Inaugural Function of NABS National Seminar on "**Biodiversity Conservation– Status, Future and Way Forward"** held on 19 July, 2014 at KS Rangasamy College of Technology, Tiruchengode, Tamil Nadu conferred the NABS-Life Time Achievement Award, 2013 to the Chairperson, Dr. R. R. Hanchinal for the significant contributions made by him in the area of crop improvement and seed production technology. Dr. R.C. Agrawal, Registrar General was also present in the seminar and delivered a lecture. They discussed with the Principal of the KSR Group and the Head of Biotechnology Centre regarding possibility of collaboration for taking up awareness program in their zone.

- Chairperson and Registrar General visited Sher-e-Kashmir University of Agricultural Sciences & Technology (SKUAS&T) at Srinagar (J&K) and had the courtesy call with the Vice-Chancellor, Director (Research) and Director (Extension Education) on 26 August, 2014. During the meeting Chairperson emphasized the need to enhance the awareness of the PPV&FR Act, 2001 and the farmers' rights in the state. The Vice-Chancellor and the officers of the University assured their full support & co-operation and promised to make special efforts in collaboration with PPV&FRA for registration of the extant varieties and farmers' varieties from the Kashmir valley. Vice-Chancellor also emphasized the need to conduct such training-cum-awareness programmes in the valley and requested for financial support. He assured that he will personally look into the matter and undertake a special drive to ensure registration of traditional and farmers' varieties including landraces. Chairperson also visited Central Institute for Temperate Horticulture (CITH), Srinagar on 27 August, 2014 to take the stock of development for DUS guidelines of strawberry, peach and plum which were under finalization. He requested for early finalization of these guidelines in the next meeting of Task Force.
- Chairperson and Registrar General participated in the 23rd Meeting of ICAR Regional Committee held at PAU, Ludhiana on 14 November, 2014. The Regional Committee meet was organized jointly by Punjab Agricultural University and Central Soil Salinity Research Institute, Karnal at the campus of the PAU, Ludhiana. Chairperson made a presentation on "**Achievements in Implementation of PPV&FR Act, 2001**". About 125 senior officers including Agricultural Secretaries of the States, Vice-Chancellors of Agricultural / Veterinary Universities, Deputy and Assistant Director Generals of ICAR, Directors of different institutes of ICAR and Heads of Regional Stations of ICAR institutes, Non-governmental agencies and progressive farmers participated in the Regional Committee meeting.
- Chairperson along with the Registrar Generalparticipated in the Zonal Conference of ICAR at NASC Complex, New Delhi on 21 January, 2015 wherein the Chairperson made a presentation on "**Indian Legislation on Plant Varieties, Protection & Conservation of PGR**".
- **6th Indian Seed Congress 2015** wasorganized by the National Seeds Association of India at Agra on 13-14 February, 2015 wherein Chairperson made a presentation on "**Impact of PPV&FR Act on Indian Seed Industry."** The National Seed Association of India, the apex organization representing the Indian Seed Industry, continued to strive to meet all the farmers' needs by understanding their requirements and developing research strategies to address the problems being faced by the present generation. The Indian Seed Congress provides a platform for the Seed Industry to interact closely with technology developers, sector development officials and policy makers.

9.12.2 Other Meetings

- Project Review Committee meeting relating to the Plant Authority Bhawan discussed the current status and way forward for the construction of the Authority Bhawan on 9 July, 2014. Uttar Pradesh Rajkiya Nirman Nigam (UPRNN), the consultants to the project, was requested to get all the necessary clearances required on fast track basis. Meeting of Plant Authority Bhawan with Aadharshila Designs Pvt. Ltd. was held on 6 August, 2014 regarding the clarification for construction of office/administrative building including staff quarters.
- The Registrar General along with Joint Secretary (Seeds) and Additional Commissioner (Seeds) attended the 30th Authority (special) Meeting of the National Biodiversity Authority on 11 July, 2014 wherein draft Access and Benefit Sharing guidelines were discussed.
- Dr. Manoj Srivastava, Registrar and Shri Dipal Roy Choudhury, Joint Registrar visited BAU, Ranchi on 11 July, 2014 to assess the progress made in the Field Gene Bank established at the University. The team examined the status of reference varieties grown of Mango, Banana, Citrus and other crops, interacted with Dr. R. P. Singh, Director (Seeds and Farms), BAU, Ranchi. Recommendations were made after discussion with concerned scientists and suggestions were made towards strengthening of the activities, documentation and characterisation of the collected varieties. Later, both the officers visited the Branch office of the Authority and interacted with Shri UmaKant Dubey, Deputy Registrar who has appraised about different activities of the branch office.
- Dr. Manoj Srivastava was invited by Forest Research Institute (FRI), Dehradun to deliver a lecture on "**Registration of Plant Varieties & Clonal material**" on 18 July, 2014 for IFS officers. The program was organised by ICFRE for the IFS MCT programme and sixty officers from all across the country with 7-8 year experience participated in the programme.
- XXII Meeting of ICAR Regional Committee of three states, namely Uttar Pradesh, Bihar and Jharkhand was held on 5 September, 2014 at Indian Institute of Sugarcane Research, Lucknow - Officers of Development Departments, Vice-Chancellors, Directors of ICAR Research Institutes, Zonal Coordinators coming within the jurisdiction of this Regional Committee pertaining to the three states along with Programme Coordinators of the respective Zones participated. Chairperson made a presentation regarding the participation of those states in the

registration of extant varieties including farmers' varieties and new varieties as well.

- XXI Zonal Workshop of KVKs (Zone VII viz. MP, Chhattisgarh and Odisha) and National Symposium on **"Integrated farming system for sustainable livelihood"** held on 6-7 September, 2014 at Indira Gandhi Krishi Vishwavidyalaya (IGKV), Raipur, Chhattisgarh. Chairperson chaired the Technical Session "**Interface of PPV&FRA with KVK**", in which the Registrar General made a presentation on PPV&FRA. Chairperson and Registrar General visited an interior village viz. Kara kholi, Nagari Block, Dhamtari District, Raipur where the Authority in collaboration with IGKV, Raipur made efforts to conserve 268 varieties in the farmers' fields (*in-situ and* on-farm conservation) and trying to establish community seed banks. On this occasion visit to DUS test centre and a meeting with local farmers who have conserved local varieties in different crop species was also arranged by the University.
- **"National Seed Congress 2014 on Quality Seeds for Agril. Sustainability & Food Security",Dept. of Agriculture, Cooperation& Farmers Welfare, Ministry of Agriculture & Farmers' Welfare, New Delhi-**jointly organised by the Department of Agriculture, Cooperation & Farmers Welfare, Ministry of Agriculture & Farmers Welfare, New Delhi and MP Rajya Beej & Farm Vikas Nigam at Bhopal on 25-27 September, 2014. Chairperson, PPVFRA was the lead speaker in the technical session and Chairman of the Tech. Session II and spoke on **"Commercial Aspects of PPV&FR Act, 2001".** The Registrar General also delivered a lecture on 27 September, 2014 on conservation of farmers' and traditional varieties under PPV&FR Act, 2001.
- **Meeting to review of DUS Test Policy of the PPV&FRA:** A meeting was held with DDG (CS), ICAR for reviewing of DUS Test Policy of PPV&FRA on 20 October, 2014. After detailed discussion amongst members. It was concluded that the convergence of AICRP trials conducted by ICAR and DUS test trial by PPV&FRA is not feasible and thus the existing system of conducting DUS test trials may continue. It was also stressed that the monitoring of the DUS testing should be stringent and involves suitable crop-based experts and technical officers of the PPV&FRA. Therefore, efforts should be made for capacity building of the scientists involved in the conduct of DUS test and conversation / preservation and maintenance of reference varieties for future.
- **Meeting on Testing of Essentially Derived Varieties (EDV):** A Meeting under the Chairmanship of Dr. D.P. Biradar, Vice Chancellor, UAS, Dharwad to discuss on technical issues involving testing of EDV for the purpose of registration under the Act was held at New Delhi on 5 June, 2014. The Committee has given recommendation regarding manner and method of testing of EDV filed for registration in PPV&FRA. The meeting was attended by Dr. B.M. Khadi, Director of Research, UAS, Dharwad, Dr. S.S. Siwach, Director of Research, CCSHAU, Hisar, Dr. A.H. Prakash, PC & Head and Dr. Rathinavel, Nodal Officer, CICR, Coimbatore, Dr. Arvind Kapoor, Rasi Seed, represented the Private Seed Industry whereas, Dr. Keshav Kranti, Director, CICR, Nagpur was the special invitees. Chairman and Registrar General attended the meeting along with Registrars, Joint Registrars & other Technical Officers.

10. International Co-operation

The Indian PVP legislation has special provisions relating to applications for registration from citizens of foreign countries on the basis of principle of reciprocity where any country who does not accord to citizens of India the same rights in respect of the registration and protection of a variety, as it accords to its own nationals, no national of such country shall be entitled, either solely or jointly with any other person to apply for the registration of a variety or be entitled to get a variety registered under the Act. Since, India is not member to the UPOV andtherefore, the Netherlands, Germany are exploring Bilateral Cooperation with India in the field of agriculture and allied area through Department of Agriculture, Cooperation& Farmers Welfare,Ministry of Agriculture & Farmers Welfare, Govt. of India, New Delhi.

India is member to the many International Conventions and Treatiesand founder member of the International Treaty on Plant Genetic Resources for Food & Agriculture (ITPGRFA). The Joint Secretary (Seeds), Ministry of Agriculture& Farmers' Welfareis the National Focal Point of the ITPGRFA and the activities are executed primarily by the National Bureau of Plant Genetic Resources (NBPGR), New Delhi under the administrative control of Indian Council of Agricultural Research (ICAR). The Authority pays the biennial contribution to the ITPGRFA on behalf of the Govt. of India. The Authority participates in the Governing Body Sessions / Meetings and technical programmes of the International Treaty and UPOV. India's membership to the UPOV is under consideration and has been given the status of observer. The details of foreign visitors and the visits of Indian delegation during the reporting period are as under:

10.1 Foreign Visits

- **Participation in Ad-hoc Open ended Working Group of the ITPGRFA at Geneva, Switzerland:** Dr. R. C. Agrawal, Registrar General participated in the said meeting and consultations held at Geneva, Switzerland from 13-16 May, 2014. Indian delegation was led by Dr. Atanu Purkayasta, Joint Secretary (Seeds) and Director, NBPGR as member also participated. The meeting focused on enhancing the functioning of the Multilateral System (MLS) of Access and BenefitSharing (ABS) fund, work undertaken by the Ad-hoc Committee on the Funding Strategy and its development, revisiting the SMTA, methodology for enhancing monetary benefit sharing and creating strategies for future meetings of the Working Group**.**
- **Bill & Melinda Gates Foundation in collaboration with USAID** organized a Convention on "**Multiple Pathways for Promoting Commercial and Sustainable Production and Delivery of Early Generation Seed of Food Crops in Sub-Saharan Africa**" in London on 23 March, 2015. Prof. R.R. Hanchinal, Chairperson was invited to participate in the Convention and delivered a presentation on "**A step towards quality seed security -A success story of UAS, Dharwad**" and the discussion focused on multiple pathways for promoting commercial and sustainable food production and delivery in Sub-Saharan Africa.

10.2 Foreign Visitors

- **Dr. Kent J. Bradford, Distinguished Professor from University of California, USA**: Dr. Kent J. Bradford, Distinguished professor from University of California, USA had a courtesy call to the Chairperson, PPV&FRA on 26 May, 2014. Both the scientists, discussed the issues of common interest relating to the implementation of Protection of Plant Varieties and Farmers' Rights Act and conservation & sustainable use of Plant Genetic Resources. Dr. Bradford showed sample of the humidicator (indicator for relative humidity) that they were promoting for use in the test fields and also a software "**Drying beads calculator**", which is also available on the website.

- **Dr. Sanjay Rajaram:** Dr. Sanjay Rajaram, India born and Mexican citizen, has been chosen for a prestigious and coveted World Food Prize for the year 2014 visited Prof. R.R. Hanchinal, Chairperson, PPV&FR Authority on a courtesy call on 23 June, 2014. He is an eminent plant breeder, International Agricultural Scientist, great scholar and mentor, who headed wheat breeding project at International Centre for Wheat & Maize (CIMMYT) for several decades and closely worked with Dr. N.E. Borlaug, a Noble Laureate. He has developed 480 high yielding disease and stress resistant wheat varieties that have been grown on 58 million hectare in 51 counties increasing world wheat production by more than 200 million tons.

- **Ministry of Environment, Forest and Climate Change, Govt. of India** has been facilitating the preparation of a new Indo-German Technical Cooperation Project on "**Capacity Development for Effective Implementation of the ABS Mechanism in India"** by National Biodiversity Authority in partnership with Deutsche Gesellschaft fur Internationale Zusammenarbeit (GIZ). The Technical Co-operation preparation Mission Team members Mr Hartmut Meyer and Mr. T. C. James met the Chairperson and Registrar General of PPV&FRA and discussed the various provisions related to benefit sharing in the PPV&FR Act on 31 July, 2014.
- **Ms.Ursala Hozhauser, Counsellor-Food and Agriculture, Embassy of Germany, New Delhi**. Discussed on various aspects related to areas of mutual cooperation between the two countries in the field of plant variety protection and farmers' rights on 13 August, 2014 as a follow up of the high-level German delegation meeting with officers of PPV&FR Authority and Joint Secretary (Seeds) scheduled to be held in December, 2014.
- Dr. R.C. Agrawal, Registrar General delivered a talk on "**Plant Breeders' Rights, UPOV and PPV&FR Act, 2001**" in the International Course on "**Plant Genetic Resources and Seeds**" jointly organized by MSSRF and Wageningen University and Research Centre, the Netherlands at Chennai on 9-10 November, 2014.
- **German Delegation Visit**: A two member German delegation viz., Mr. Lutz Tenner, Ministry of Agriculture& Farmers Welfare, Food &Consumer Protection and Dr. Hermaan Freudenstein, Federal Plant Variety Office, Berlin, Germany visited India from 15-18 December, 2014. The delegation had a fruitful meeting in the PPV&FR Authority in connection with Bilateral Co-operation in the Plant Variety Protection, Plant Breeders Rights, DUS testing and Capacity Building on 16 December, 2014 and also with other stakeholders i.e. NBPGR, New Delhi and NSAI, New Delhi. The delegation was taken to the field visit at IARI, New Delhi to give them first-hand information about the system of DUS testing. Presentations were

made in the area of their interest particularly the DUS testing system in fruits, vegetables, cereals and ornaments by the concerned DUS centres of ICAR. The progress of the above meetings with the officials of the both sides was reviewed by Dr. Atanu Purkayastha, Joint Secretary (Seeds), Ministry of Agriculture& Farmers' Welfare on 17 December, 2014 and discussed the areas of Mutual Co-operation. Both sides expressed their interest in intensifying the co-operation in the common areas of mutual benefits.

- **"7th Indo-French Joint working Group Meeting"** Co-Chaired by Shri D.K. Jain, Addl. Secretary and Mr. Patrice De Laurens, Head of International Relations Service, MoA, France was held at NASC Complex, New Delhi on 14 January, 2015 wherein areas of mutual interest were discussed and identified. From PPV&FR Authority side, Registrar General represented and expressed the official views on Bilateral Co-operation with France on matters pertaining to the Authority.
- **Dr. Walter Simon de Boef, Senior Program Officer, Bill & Melinda Gates Foundation** Prof. R.R. Hanchinal, Chairperson discussed "**promoting of Commercial & sustainable food and delivery of early generation seed of food crops in Sub-Saharan Africa**" under the USAID program on 25 February, 2015 at Protection of Plant Varieties & Farmers' Rights Authority, New Delhi.

Besides, the Authority has provided comments to the Department of Agriculture, Cooperation& Farmers Welfare, Ministry of Agricutlure & Farmers Welfare on matters relating to International co-operation in agriculture especially on Plant Variety Protection, Plant Breeders' Rights, DUS testing and Capacity Building as under:

- India-Kazakhstan Inter–Governmental Commission (IGC) on Trade, Economic, Scientific, Technology, Industrial and Cultural Cooperation
- India-Mexico Bilateral Co-operation in plant variety protection, plant breeders' rights and DUS testing.
- Extension of work plan with Cambodia.
- Bilateral Co-operation between India and South Africa in the field of Protection of Plant Varieties.
- Meeting of the Sixth Session of the Indo-French, Joint Working Group (JWG) on Agriculture held on 5 December, 2013 in Paris.
- Meeting of Hon'ble Agriculture Minister with HE Mr. Grahame Morton, High Commissioner of New Zealand, New Delhi on bilateral relations for his new assignment in New Delhi.
- Action taken on the Protocols of India-Belarus (i) 1st JWG on Trade & Investment on 23 July, 2013 and (ii) India-Belarus Inter-Governmental Commission for Economic, Trade, Industrial, Scientific, Technological and Cultural Co-operation (IGC) held on 24 July, 2013 in New Delhi.
- Second session of India Serbia Joint Economic Committee (JEC) at Belgrade on 19 September, 2014.
- 4th Indo-German Joint Working Group on Agriculture.
- Meeting of Hon'ble Agriculture Minister with HE Mr. Gerry Ritz, Canadian Minister of Agriculture and Agri-Food on bilateral Cooperation in respect of agriculture and allied sectors between India and Canada in September, 2014.
- Draft Agreement on Agriculture Co-operation between India and Azerbaijan.
- Bilateral co-operation between India and Germany on Plant Variety Protection, DUS testing and Plant Breeders' Rights.

11. Provisional Financial Statements of the Authority for 2014-15

The financial statements were prepared under the historical cost convention in accordance with Generally Accepted Accounting Principles (GAAP), the applicable mandatory Accounting Standards (AS) issued by the Institute of Chartered Accountants of India (ICAI) and relevant presentational requirements for Central Autonomous Bodies as prescribed by the Controller General of Accounts (CGA). The Authority follows the accrual system of accounting in respect of all items of expenditure & income except where otherwise stated. A copy of Balance sheet as on 31 March, 2015, Income & Expenditure Account and Receipt & Payment Account for the year ended 31 March, 2015 are enclosed.

The audited accounts along with the audit report and management reply were approved in the 21 PPV&FR Authority meeting held on October, 2015_____ at New Delhi.

In compliance with section 62(2) of PPV & FR Act, 2001, the accounts of the Authority were submitted to the Comptroller and Auditor General of India (CAG).The Audit by CAG is completed. The audited accounts along with audit report and management reply shall be sent to the Ministry separately for placing before both the houses of Parliament. The Authority received ₹ 1600 lakh as grants-in-aid from Department of Agriculture, Cooperation & Farmers Welfare, during the year 2014-15 and utilized ₹ 1585.98 lakh after adjusting unspent balance of ₹ 09 lakh of previous year leaving a balance of ₹14.11 lakh.

Balance Sheet as on 31st March, 2015

(Amount in ₹)

CORPUS / CAPITAL FUND AND LIABILITIES	Current Year	Previous Year
CORPUS / CAPITAL FUND	192,005,727	150,485,802
RESERVES AND SURPLUS	-	-
EARMARKED/ENDOWNMENT FUNDS	-	-
SECURED LOANS AND BORROWINGS	-	-
UNSECURED LOANS AND BORROWINGS	-	-
DEFRERRED CREDIT LIABILITIES	-	-
CURRENT LIABILITIES AND PROVISIONS	111,907,885	57,212,802
TOTAL	**03,913,612**	**207,698,604**
ASSETS		
FIXED ASSETS	29,548,719	28,846,845
Less: Accumulated Depreciation	22,926,480	21,004,948
NET FIXED ASSETS	6,622,239	7,841,897
CAPITAL WORK IN PROGRESS	17,838,219	17,838,219
INVESTMENTS-FROM EARMARKED / ENDOWNMENT FUNDS	-	-
INVESTMENTS-OTHERS	-	-
CURRENT ASSETS,LOANS ADVANCES ETC.	279,453,154	182,018,488
MISCELLANEOUS EXPENDITURE (to the extent not written off or adjusted)	-	-
TOTAL	**303,913,612**	**207,698,604**

Income and Expenditure Account for the Year Ended 31st March, 2015

(Amount in ₹)

Income	AUTHORITY FUND		GENE FUND	
	Current Year	Previous Year	Current Year	Previous Year
Income from Sales/ Services	-	-	-	-
Grants/Subsides	159,247,151	150,023,396	8,500,000	8,500,000
Fees/Subscriptions	23,434,050	18,696,550	5,316,755	1,905,498
Income from Investments	-	-	-	-
Income from Royalty,Publication etc.	-	-	-	-
Interest Earned	9,089,595	5,183,817	1,902,950	1,361,096
Other Income	592,111	42,417	24,750	-
Increase/(Decrease) in stock of Finished goods and works in progress	-	-	-	-
Deferred Income(Depreciation on fixed asset)	1,964,351	3,151,754	-	-
Prior period Adjustment A/c **(Annexure-A)**	-	-	(62,776)	-
TOTAL (A)	**194,327,258**	**177,097,934**	**15,681,679**	**11,766,594**
EXPENDITURE				
Establishment Expenses	44,366,494	41,080,100	-	-
Other Administrative Expenses etc.	42,938,870	42,033,831	-	6,110,817
Expenditure on Grants , Subsidies etc.	76,977,128	64,397,379	-	-
Interest	8,223	1,321	762	-
Depreciation including Impairement Loss(Net Total at the year-end-corresponding to Schedule 8)	1,964,351	3,151,754	-	-
Prior period Adjustment A/c **(Annexure-A)**	1,021,682	12,032,641		
TOTAL(B)	**167,276,748**	**162,697,026**	**762**	**6,110,817**
Balance being excess of Income Over Expenditure (A-B)	**27,050,510**	**14,400,908**	**15,680,917**	**5,655,777**
Transfer to special Reserve(Specify each)	-	-	-	-
Transfer to /from General Reserve	-	-	-	-
BALANCE BEING SURPLUS (DEFICIT) CARRIED TO CORPUS/CAPITAL FUND	**27,050,510**	**14,400,908**	**15,680,917**	**5,655,777**

Receipts and Payments for the Year Ended 31st March, 2015

(Amount in ₹)

RECEIPTS	Current Year	Previous Year	PAYMENTS	Current Year	Previous Year
1. Opening Balances			**1. Expenses**		
a) Imprest (Cash In hand)	15,000	10,000	a) Establishment Expenses	31,387,246	26,969,070
b) Bank Balances			b) Administrative Expenses	18,864,275	27,393,982
State Bank of India(Including Mod)	31,854,153	16,184,501	**2. Payments made against funds**		
Syndicate Bank	2,629,758	5,828,425	a) Existing DUS Centres (Annexure - B & C)	33,598,052	39,385,671
Remmitance in Transit	34,372	3,739	b) New DUS Centres (Annexure - D & E)	26,558,725	23,061,424
SBI (Gene Fund)	16,010,435	11,288,001	c) Referral Labs (Annexure - F)		1,183,254
Guwahati Bank	14,409	17,160	d) Field Gene Bank (Annexure - G & H)	2,914,030	4,630,000
Ranchi Bank	2,498	14,825	**3. Expenditure on fixed Assets and Capital Work in Progress**		
2. Grants received from Government of India	160,000,000	151,196,000	a) Purchase of Fixed Assets(Authority)	752,849	704,129
3. Interest Received On Bank deposits			b) Expenditure on Capital Work-in-Progress		
Gene Fund	1,250,057	541,753	**4. Advance to Training Centres (Annexure -I)**	25,526,098	19,881,163
Authority Fund	6,438,698	1,694,768	**5. Advance to outsiders (Annexure-J)**	2,086,244	676,050
5. Advance for construction of Plant Protection Bhawan	50,000,000		**6. Refilling of Franking Machine**	100,000	250,000
6. Refund of Advance from Training Centres (Annexure - M)	490,995	827,471	**7. Contribution to Organization/institutions**	3,139,654	-
7. Refund of Advance from NEW DUS Centres	159,869		**8. Advance to Staff (Annexure-K)**	2,293,693	2,937,484
8. Fees / Subscriptions/ Other Income			**9. Finance Charges**	8,985	1,777
Application/Registration Fee Received	4,274,000	4,972,000	**10. Payments against advance received**	-	50,000
PVJ Fees	106,100	59,200	**11. Fixed Deposit**	148,241,286	72,200,000
Fees for Notice of Opposition	4,500	53,000	**12. Reversal of Stale Demand Draft**	60,000	-
Annual Fees (Including Share from sale of Seeds)- Gene Fund	5,040,755	1,791,498	**13. Statutory Liabilities Paid (Annexure -L)**	4,558,621	4,358,258
Sale of Old Newspapers,Scrap	7,044	2,233	**14. Closing Balances**		
DUS Test Fee Received	18,957,000	13,619,500	Imprest (Cash In hand)	44,593	15,000

RECEIPTS	Current Year	Previous Year	PAYMENTS	Current Year	Previous Year
Other Income	25,296	5,666	Authority 25000		
Sale of Publications	1,890	17,220	Ranchi Branch 19593		
Claim Received against Vehicle Insurance	-	9,867	b) Bank Balances		
Fees for Granting Extension		4,500	i) State Bank of India (Including Mod)	64,978,652	31,854,153
Amount received for various fees	1,970,000		ii) Syndicate Bank	7,453,097	2,629,758
9. Refund of Advance from Staff (Annexure- N)	692,199	427,222	iii) Bank in Transit	19,630	34,372
10. Encashment of FD	96,113,152	65,624,338	iv) SBI (Gene Fund)	24,157,718	16,010,435
11. Reversal of Stale Cheques	302,262	-	v) Guwahati Bank	19,910	14,409
15. Security Deposit	-	50,000	vi) Ranchi Bank	3,024	2,498
16. Assistance from FAO for organizing International Workshop	371,940	-			
TOTAL	**396,766,382**	**274,242,887**	**TOTAL**	**396,766,382**	**274,242,887**

12. Citizen's Charter

Vision

Ensure an effective system for protection of plant varieties, the rights of the farmers, plant breeders and encourage the development of new varieties of plants.

Mission

Protection of intellectual property rights of plant varieties to stimulate plant variety innovations and also to recognize and reward the farmers for their contributions in conserving and preserving the plant genetic resources and traditional varietal wealth.

Objectives

- To provide an effective system for protection of plant varieties and rights of farmers, plant breeders and researchers.
- To protect plant breeders' rights and to stimulate investment for Research & Development and evolution of new varieties.
- To recognize the farmers in respect of their contributions made for conserving, improving and making available plant genetic resources for development of new plant varieties.
- To facilitate the growth of seed industry to ensure production and availability of high quality seeds and planting material to the farmers.

Functions

- Encourage the development of new varieties of plants and to protect the rights of the farmers and the plant breeders.
- Establishment of National Gene bank for orthodox seed and field gene bank for perennial crops.
- Registration of new and extant varieties of plants.
- Developing characterization and documentation of registered plant varieties.
- Documentation, indexing and cataloguing of farmers varieties.
- Compulsory cataloguing facility for all varieties of plants.
- Ensuring seeds of varieties registered under the Act are available to farmers and providing for compulsory license, if needs arise.
- Ensuring maintenance of National Register of plant varieties.
- Utilization of Gene Fund for supporting the conservation and sustainable use of plant genetic resources and capacity building of the panchayats in carryings out such conservation and sustainable use and meeting the expenditure of the schemes relating to benefits sharing and compensations to the stakeholders

Stakeholders

Protection of Plant Varieties and Farmers' Rights is a unique subject involving diverse activities, initiatives and stakeholders. The stakeholders of Protection of Plant Varieties and Farmers' Rights Authority are Central Government, State Governments, Union Territories, Research Organizations including State Agricultural Universities, Seed Industries, NGOs and above all the farmers including tribal farming communities.

Services offered

- Providing IPR protection to plant varieties bred by farmers, researchers / plant breeders through registration.
- Maintaining National Register of Plant varieties with details of plants varieties and the rights of respective breeders are available.
- To provide compensation to the farmers in case a registered variety does not perform as per the claim made by the breeders.
- Benefit sharing to the communities / farmers for the contribution / sharing of plant genetic resources.
- To create awareness and capacity building for the rights of plant breeders and farmers towards implementation of PPV & FR Act.
- Developing plant varieties database to stakeholders.
- To support and reward farmers, community of farmers, particularly the tribal and rural communities engaged in conservation, improvement and preservation of genetic resources.

Grievances Redressal Mechanism

Registrar General, PPV and FR Authority has been designated officer for redressal of public grievances and can be addressed to:

Registrar General
Protection of Plant Varieties and Farmers' Rights Authority
S-2, A Block, NASC Complex, Opp. Todapur Village
New Delhi -110012.
Ph: 011-25843316. Fax: 011-25840478.
E mail: rg-ppvfra@nic.in
www.plantauthority.gov.in

RTI Cell

Chief Public Information Officer

Dr. Ravi Prakash
CPIO
Protection of Plant Varieties and Farmers' Rights Authority
Govt. of India, Ministry of Agriculture & Farmers Welfare
Department of Agriculture,Co-operation & Farmer Welfare
NASC Complex, DPS Marg, Opp. Todapur Village,
New Delhi-110 012
Tel: +91-11-25843853
Email: prakash.ravi@nic.in

Dr. R.C. Agrawal
Appellate Authority
Protection of Plant Varieties and Farmers' Rights Authority
Govt. of India, Ministry of Agriculture &Farmers Welfare
Department of Agriculture, Co-operation& Farmers Welfare
NASC Complex, DPS Marg, Opp-Todapur Village,
New Delhi-110 012
Tel: +91-11-25843316
Email: rg-ppvfra@nic.in

Members of the Authority (1 April, 2014 to 31 March, 2015)

1. Chairperson of the Authority: Dr. R.R. Hanchinal

Ex officio members

2. Dr. J. S. Sandhu, Agriculture Commissioner, Department of Agriculture & Cooperation, Ministry of Agriculture, Govt. of India, Krishi Bhavan, New Delhi
3. Dr. Swapan Kumar Datta (up to January, 2015), Dr. J. S. Sandhu (w.e.f. 2 February, 2015)Deputy Director General (Crop Science), Division of Crop Science, Ministry of Agriculture, Govt. of India, Krishi Bhavan, New Delhi
4. Dr. AtanuPurkayastha (01.08.2014)&Shri R.K. Singh (26.09.2014), Joint Secretary (Seeds), Department of Agriculture & Cooperation, Ministry of Agriculture, Govt. of India, Krishi Bhawan, New Delhi
5. Dr. S.K. Malhotra w.e.f. 20 October, 2014, Department of Agriculture & Cooperation, Ministry of Agriculture, Govt. of India, Room no 238, Krishi Bhawan, New Delhi
6. Dr. K.C. Bansal, Director, National Bureau of Plant Genetic Resources, Pusa, DPS Marg, New Delhi
7. Dr. K. S. Charak, Scientist 'G'/ Adviser, Department of Biotechnology, Ministry of Science & Technology, Govt. of India, Room No. 709, 7th Floor, Block- 2, CGO Complex, Lodhi Road, New Delhi
8. Shri Hem Pande, Additional Secretary, Ministry of Environment & Forests, Govt. of India, Room No. 621, Paryavaran Bhawan, CGO Complex, Lodi Road, New Delhi
9. Sh. Inder Kumar, Joint Secretary & Legal Advisor, Department of Legal Affairs, Ministry of Law & Justice, Room No.416, A wing, 4th Floor,Shastri Bhawan, New Delhi
10. Shri. P. Chengal Reddy, Secretary General, Consortium of Indian Farmers Association, Flat No.209, Vijaya Towers, Shanti Nagar, A C Guards, Hyderabad
11. Shri MayaramNetam, Vrindavan Colony, House No. 1/21,Jagadalpur, Bastar, Chattisgarh
12. Dr. Usha Barwale, Maharashtra Hybrid Seeds Company Limited,Post Box No.76, Jalna, Maharashtra
13. Dr. B. S. Dhillon, Vice Chancellor, Punjab Agriculture University,Ludhian, Punjab
14. Mrs. NeelamTyagiLaxmi Jan KalyanSewaSansthan, Rawli Road, Jeetpur, Gali No. 5,Muradnagar, Ghaziabad, Uttar Pradesh
15. Dr. Sudhir Kumar Goel, I.A.S., Principal Secretary (Agriculture), Government of Maharastra, Annex Bldg., Mantralaya, Mumbai
16. Mr. Debasish Panda (30/9/2014), Mr. Amit Mohan Prasad (7.11.2014) Principal Secretary (Agriculture), Government of Uttar Pradesh, BahukhandiBhawan, Sachivalaya,Lucknow

Member Secretary (ex officio)

17. Dr. R.C. Agrawal, Registrar General, PPV&FR Authority, New Delhi

Annexure-II

Sanctioned Posts at PPV&FR Authority

(As on 31st March, 2015)

Headquarters (New Delhi)	**Posts sanctioned**
Name of the Post with pay scale	
Chairperson	
₹ 80,000/- (fixed)	1
Registrar General	
₹ 67000-79000/- (HAG)	1
Registrar	
₹ 37400-67000/- with GP 8700/-	3
Financial Advisor	
₹ 37400-67000 with GP 8700/-	1
Joint Registrar	
₹ 15600-39100 with GP 7600/-	2
Deputy Registrar	
₹ 15600-39100 with GP 6600/-	1
Legal Advisor	
₹ 15600-39100 with GP 6600/-	2
Senior Accounts Officer	
₹ 15600-39100 with GP 6600/-	1
Senior Technical Officer	
₹ 9300-34800 with GP 4600/-	3
Technical Assistant	
₹ 9300-34800 with GP 4200/-	1
Computer Assistant	
₹ 9300-34800 with GP 4200/-	6
Sub Total	22
Branch Offices (Guwahati & Ranchi)	
Deputy Registrar	
₹ 15600-39100 with GP 6600/-	2
Plant Variety Examiner	
₹ 15600-39100 with GP 5400/-	2
Senior Technical Officer	
₹ 9300-34800 with GP 4600/-	2
Executive Assistant	
₹ 9300-34800 with GP 4200/-	2
Sub Total	8
Total	30

Annexure-III

Details of Human Resources Head Office & Branch Office

Name of the post and its incumbent	Filled posts	Vacant posts
Chairperson Dr. R.R. Hanchinal	1	-
Registrar General Dr. R.C. Agrawal	1	-
Registrars 1. Dr. Manoj Srivastava 2. Dr. Tejbir Singh 3. Dr. Ravi Prakash	3	-
Financial Advisor Shri J. P. Singh	1	-
Joint Registrars 1. Shri D.R. Choudhury 2. Shri D.S. Mishra	2	-
Deputy Registrar	-	1
Legal Advisors 1. Shri D.S. Raj Ganesh 2. Shri R.R. Pradhan	2	-
Senior Accounts Officer	-	1
Senior Technical Officer	-	3
Technical Assistant Dr. D.S. Pilania	1	-
Computer Assistants 1. Shri Arvind Kumar Rai 2. Shri Sanjay Kumar Gupta 3. Mrs Shipra Mathur 4. Shri. Nitesh Kumar Verma 5. Shri Shyam Narayan Prasad	5	1
Branch Office Guwahati 1. Deputy Registrar, Dr. A.C. Sarma 2. Plant Variety Examiner 3. Senior Technical Officer: Dr. A.K. Singh 4. Executive Assistant	1 - 1 -	- 1 - 1
Branch Office Ranchi 1. Deputy Registrar, Shri Uma Kant Dubey 2. Plant Variety Examiner 3. Senior Technical Officer 4. Executive Assistant	1 - - -	- 1 1 1
Sub Total	19	11
Total	30	

Statement showing funds released to Existing DUS Centres during 2014-15

S. No	Name of DUS Centre	Crop	Amount (Rs. in lakh)
1	Assam Agricultural University, Jorhat	Rice	9.00
2	Acharya NG Ranga Agricultural University, Hyderabad	Maize, Blackgram	6.22
3	ChoudharyCharan Singh, HisarAgricultural University , Hisar	Cotton, Chickpea	5.00
4	Central Plantation crops Research Institute, Kasaragod Kerala	Coconut	12.67
5	Central Potato Research Institute, Shimla	Potato	5.45
6	Central Rice Research Institute, Cuttack	Rice	15.53
7	Central Institutefor Cotton Research, Nagpur	Cotton	11.50
8	Central Institute for Medicinal and Aromatic Plants, Lucknow	Medicinal Plants	4.56
11	Central Research Institute for Jute and Allied Fibres Research, Barrackpore & Budbud	Jute	5.21
12	ChandraSekhar Azad University of Agricultural and Technology, Kanpur	Mustard, Wheat	3.47
13	Medicinal & Aromatic Plant Research, Anand	M&A plants	6.98
14	National Research Centre for Citrus, Nagpur	Citrus	0.50
15	Directorate of Maize Research, New Delhi	Maize	21.55
16	Directorate of Soybean Research, Indore	Soybean	4.99
17	Directorate of Oilseed Research, Hyderabad	Sunflower, Castor	7.56
18	Directorate of Rice Research, Hyderabad	Rice	21.91
19	Directorate of Sorghum Research, Hyderabad	Sorghum	7.25
20	Directorate of Wheat Research, Karnal	Wheat	8.62
21	Directorate of Wheat Research, Karnal	Barley	2.71
22	GovindBallabh Pant University of Agricultural &Technology, Pantnagar	Sorghum	2.59
23	Indian Institute of Agricultural Research, Division of Vegetable Science, New Delhi	Onion and Garlic	1.56
24	Indian Institute of Pulses Research, Kanpur	Chickpea, Pigeon pea	9.22
25	Indian Institute of Pulses Research, Kanpur	Mungbean, Urdbean, lentil, Mullarp	4.08
26	Indian Institute of Spices Research, Kozhikode	Spices	3.49
27	Indian Institute of Vegetable Research, Varanasi	Okra, Brinjal, Tomato, Cabbage, Cauliflower	25.50
28	Indian Institute of Sugarcane Research, Lucknow	Sugarcane	4.30
29	Junagadh Agricultural University, Jamnagar	Castor	0.90
30	Jawaharlal Nehru Krishi Viswavidyalaya, Jabalpur	Field Pea, Linseed	0.66
31	Kerala Agricultural University, Thrissur	Orchids	5.50
32	Project Coordinator(Pearl Millet), Mandore(RAU, Bikaner)	Pearl Millet	7.05
33	MathmaPhule Krishi Viswavidyalaya, Rahuri	Sorghum, Pearl Millet	3.09
34	MathmaPhule Krishi Viswavidyalaya, Rahuri(Pune Station)	China aster	2.00
35	National Research Centre for Grapes, Pune	Grapes	2.34
36	National Research Centre for Orchids, Sikkim	Orchids	5.85
37	Directorate of Groundnut Research, Junagarh	Groundnut	5.80

S. No	Name of DUS Centre	Crop	Amount (Rs. in lakh)
38	Directorate of Onion and Garlic Research, Rajgurunagar	Onion and Garlic	3.49
39	Directorate of Rapeseed and Mustard Research, Bharatpur	Rapeseed and Mustard	5.06
40	National Research Centre for Seed Spices, Ajmer	Seed Spices	5.48
41	Punjab Agricultural University, Ludhiana	Wheat, Cotton	8.01
42	Project Coordinator(Cotton), CICR Regional Station, Coimbatore	Cotton	17.50
43	Project Coordinator (Linseed), CSAU&T,Kanpur	Linseed	1.09
44	JNKVV, Jabalpur	Sesame and Niger	4.41
45	Panjab Rao Deshmukh Krishi Viswavidyalaya, Akola	Chickpea	11.08
46	Regional Station, IARI, Karnal	Rice	3.66
47	Regional Station, IARI, Katrain	Cabbage and Cauliflower	4.56
48	Sugarcane Breeding Institute, Karnal	Sugarcane	1.67
49	University of Agricultural Sciences, Dharwad	Cotton, Wheat	14.65
50	Vivekananda Parvatiya Krishi Anusandhan Shala, Almora	Rajma, Soybean, Maize	4.37
51	Tamil Nadu Agricultural University, Coimbatore	Cotton, Sunflower	6.35
	Total		**335.99**

Annexure – V

Statement showing funds released to NewDUS Centres/ Projects during 2014-15

S. No	Name of the New DUS Centre	Crop	Amount (Rs. in lakh)
1	Bidhan Chandra Krishi Visavidyalaya, Kalyani	Pointed gourd	3.84
2	Bidhan Chandra Krishi Visavidyalaya, Kalyani	Betel vine	1.53
3	Bidhan Chandra Krishi Visavidyalaya, Kalyani	Yam and Taro	1.95
4	Central Agricultural Research Institute, Port Blair	Noni	6.93
5	Central Arid Zone Research Institute	Pomegranate	2.50
6	Central Institue for Arid Horticulture, Bikaner	Bael	2.00
7	Central Institute for Arid Horticulture, Bikaner	Chironji and Tamarind	2.76
8	Central Institute for Arid Horticulture, Bikaner	Jamun	2.74
9	Tamil Nadu Agricultural University, Coimbatore	Small millet	2.00
10	Central Institute for Arid Horticulture, Bikaner	Datepalm	2.00
11	Central Institute for Subtropical Horticulture, Lucknow	Aonla	1.50
12	Central Institute for Subtropical Horticulture, Lucknow	Jamun	4.11
13	Central Institute for Tropical Horticulture, Srinagar	Strawberry	0.73
14	Dr. B S Konkan Krishi Viswadidyalaya, Dapoli	Nutmeg	3.16
15	Dr.Y.S.Parmar University of Horticulture & Forestry, Solan	Poplar	2.27
16	Project Coordinator(Small millet), University of Agricultural Sciences, GKVK Campus, Bangalore	Small millet	3.50
17	Acharya NG Ranga Agricultural University, Hyderabad	Small millet	5.50
18	Central Tuber Crops Research Institute, Trivandrum	Sweet potato and Cassava	4.48
19	Central Tuber Crops Research Institute, Regional Station, Bhubaneshwar	Sweet potato and Cassava	10.20
20	Central Tuber Crops Research Institute, Trivandrum	Yam and Taro	4.47
21	Central Sericultural Research and Training Institute, Mysore	Mulberry	2.50
22	Indian Grassland and Fodder Research Institute, Jhansi	Oat, Guniea grass	3.00
23	GovindBallabh Pant University of Agriculture & Technology, Pantnagar	Small millets (Oat and Cowpea)	5.63
24	Division of Vegtable Science, Indian Agricultural Research Institute, New Delhi	Bottle gourd	2.63
25	Division of Vegetable Science, Indian Agricultural Research Institute, New Delhi	Chilli	1.50
26	Division of Vegtable Science, Indian Agricultural Research Institute, New Delhi	Amaranth	3.11
27	Division of Floriculture& Landscaping, Indian Agricultural Research Institute, New Delhi	Marigold	4.88
28	ICAR Research Complex for NEH Region, Barapani	Colocasia	2.50
29	Institute of Forest Genetics and Tree Breeding, Coimbatore	Eucalyptus and Casuarina	1.50
30	Institute of Forest Genetics and Tree Breeding, Coimbatore	Teak	5.54
31	Jawaharlal Nehru Krishi Viswavidyalaya, Jabalpur	Small millets	2.00
32	National Bureau of Plant Genetics Research, New Delhi	Grain amaranth	2.00
33	National Botanical Research Institute, Lucknow	Canna	0.50

S. No	Name of the New DUS Centre	Crop	Amount (Rs. in lakh)
34	Punjab Agricultural University, Ludhiana	Cotton, Wheat	2.07
35	S.D.Agriculture University, SK Nagar	Pulse	2.00
36	Tamil Nadu Agricultural University, Coimbatore	Millets	4.00
37	Central Rice Research Institute, Cuttack(Genetic Diversity)	Rice	3.68
38	Tamil Nadu Agricultural University, Coimbatore	Jasmine	1.47
39	Central Institute for Subtropical Horticulture, Lucknow	Bael	1.20
40	National Botanical Research Institute, Lucknow	Bougainvillea	0.50
41	National Botanical Research Institute,Lucknow	Gladiolus	0.50
42	Central Institute of Temperate Horticulture, Srinagar	Peach & Plum	3.07
43	Gene Campaign ,New Delhi	Rice	4.40
44	Mahatma Phule Krishi Vidyapeeth,Rahuri	Cotton	10.00
45	Indira Gandhi Agricultural Viswavidyalaya, Raipur	Rice	6.60
46	University of Agricultural Sciences,Bangalore(Mandya)	Rice	5.00
47	Dr. BalasahebSawant Konkan Krishi Vidyapeeth, Dapoli	Rice	5.00
48	ICAR Research Complex for NEH Region,Barapani	Rice	10.00
49	Division of Vegetable Science, IARI, New Delhi	Radish and Carrot	7.73
50	Central Arid Zone Research Institute, Jodhpur	Horsegram, Moth bean, Clusterbean, Lathyrus	4.10
51	University of Agricultural Sciences, Dharwad	Horsegram, Mothbean, Clusterbean, Lathyrus	11.98
52	Mahatma Phule Krishi Vidyapeeth,Rahuri	Rose	4.50
53	Dr.Y.S.Parmar University of Horticulture & Forestry, Solan	Willow	5.00
54	SDAU,SK Nagpur, Regional Station ,Mundra	Datepalm	4.00
55	Sri Karan Narendra Agriculture University, Jobner	Barley	2.00
56	Indian Institute of Horticulture Research, Bangalore	Ornamental flowers, Papaya, Custard Apple, Amarnath, Palak, Ridge gourd, Betelvine, Mango & Strawberry	47.32
57	Indira Gandhi Agricultural Viswavidyalaya, Raipur	Grow out Test (Rice)	5.00
58	Tea Research Association, Tocklai	Tea	1.00
59	UPASI Tea Research Foundation, Coimbatore	Tea	1.00
60	Darjeeling Tea Research &Development Centre Tea Board, Kurseong	Tea	1.00
61	National Research Centre for Cashew, Puttar	Cashew	6.00
	Total		**265.58**

Annexure – VI

Statement Showing Funds released to Field Gene Bank(s)/ Gene Bank during 2014-15

S. NO	Name of Centers	Amount (In Lakh)
1	Birsa Agricultural University, Ranchi	6.64
2	Dr. Balasaheb Konkan Krishi Vidyapeeth, Dapoli	9.00
3	Central Arid Zone Research Institute, Jodhpur	2.00
4	Regional Horticultural Research and Training Station, Mashobra Dr. Y.S.Parmar University of Horticulture & Forestry	6.00
5	National Bureau of Plant Genetic Resources, New Delhi	5.50
	Total	**29.14**

Annexure – VII

Financial support to different Organizations for training-cum-awareness programmes during the year 2014-15

S. NO	Name of Beneficiary	Amount (In Lakh)
1	Acharya N. G. RangaAgricultural University,Rajendranagar, Hyderabad.	7.20
2	Anand Agricultural University, Anand	0.80
3	Assam Agricultural University, Jorhat	12.00
4	Banaras Hindu University, Varanasi	0.80
5	Bidhan Chandra KrishiViswaVidyalaya, Kalyani	0.80
6	BirsaAgricultural University, Bhagalpur	1.60
7	BirsaAgricultural, University, Ranchi	6.40
8	Central Agricultural Research Institute, Port Blair	0.80
9	Central Agriculture University,Imphal	2.40
10	Central Institute for Cotton Research, Nagpur	0.80
11	GraminVikasTrust,Noida	0.75
12	Dr. BalasahebSawant Konkan Krishi Vidyapeeth, Dapoli, Ratnagiri	1.60
13	Ch. SKK Vishwavidyalaya, Palampur	4.80
14	Gujarat Vidyapeeth, Deemed University, Ahmadabad	0.80
15	Sher-e-Kashmir University of Agricultural Sciences and Technology, Rajouri, Jammu	2.32
16	Indira Gandhi Agricultural University, Raipur	3.20
17	Indira Gandhi Agricultural University, Raipur	5.60
18	Jawaharlal Nehru Krishi Vishwavidyalya, Jabalpur	5.60
19	Karnataka Veterinary, Animal & Fisheries Sciences University, Bidar	0.80
20	MaharanaPratap University of Agricultural & Technology, Udaipur	4.00
21	SardarBallabhbhai Patel University of Agricultural & Technology, Meerut	3.20
22	SardarKushinagarDantiwala Agricultural University, Dantewada	0.80
23	Sher-e-Kashmir University of Agricultural Sciences and Technology, Srinagar	7.20
24	Tamil Nadu University of Veterinary & Animal Sciences, Chennai	0.80
25	University of Agricultural Sciences,Raichur	3.19
26	Swami Keshwanand Rajasthan Agricultural University, Bikaner	4.00
27	Central Rice Research Institute, Cuttack	1.60
28	Chandra Shekar Azad University of Agriculture & Technology, Kanpur	2.40
29	Deendayal Research Institute, Chitrakoot	2.40
30	Central Potato Research Institute, Shimla	1.60
31	Holy Cross Vocational Training Institute, Hazaribagh	0.80
32	ICAR Research Complex old Goa, Goa	0.80
33	National Research Centre for Agroforestry, Jhansi	0.80
34	Vivekananda Parvatiya Krishi AnusandhanSansthan, Almora	2.40
35	Central Arid Zone Research Institute, Jodhpur	1.55
36	Central Institute for Arid Horticulture, Bikaner	0.80
37	Central Marine Fisheries Research Institute, Kochi	0.80
38	Central Research Institute for Dryland Agriculture, Hyderabad	0.80

S. NO	Name of Beneficiary	Amount (In Lakh)
39	Central Tuber Crops Research Institute,Trivandrum	0.80
40	ICAR Complex for NEH Region, Umroi Road,Barapani.	3.20
41	ICAR Complex for NEH Region, Barapani	0.80
42	Indian Institute of Vegetable Research,Varanasi	1.60
43	Director of Agriculture & Food Production, Bhubaneswar	4.80
44	Central Plantation Crops Research Institute, Kasaragod	1.60
45	ICAR Complex for Central Coastal Agricultural Research Institute, Old Goa	0.80
46	Indian Institute of Horticulture Research, Bengaluru	0.80
47	Indian Institute of Spices Research, Kozhikode	1.60
48	Indian Agricultural Research Institute, New Delhi	0.80
49	GobindBallabh Pant University of Agricultural & Technology, Pantnagar	3.20
50	Indian Institute of Pulses Research, Kanpur	0.80
51	Indian Institute of Spices Research, Lucknow	0.80
52	Indian Institute of Vegetable Research, Varanasi	0.00
53	Junagadh Agricultural University, Junagarh	1.19
54	ICAR Research Complex for NEH Region, Tripura	0.80
55	Kerala Agricultural University, Thrissur	3.09
56	Mahatma Phule Krishi Viswavidyalya, Rahuri	2.40
57	Narendra Dev University of Agricultural and Technology, Faizabad	0.80
58	Odisha University of Agricultural & Technology, Bhubaneshwar	10.39
59	Directorate of Seed Research, Mau	0.80
60	Punjab Agricultural University, Ludhiana	2.40
61	IIWR (DWR), Karnal	2.40
62	Dr. PanjabraoDeshmukh Krishi Vidyapeeth, Akola	1.60
63	KVK, Kurnool	0.80
64	KVK, Majhgawan, Satna	1.60
65	RajmataVijayarajeScindia Krishi Vishwavidyalaya, Gwalior	6.32
66	Rajendra Agricultural University, Pusa	3.20
67	Vikas Bharti, Gumla	0.80
68	Tamil Nadu Agricultural University, Coimbatore	6.40
69	University of Agricultural Sciences, Dharwad College of Forestry, Sirsi	0.57
70	GKVK,University of Agricultural Sciences, (Hadonahalli, Kandali)	5.51
71	Uttar Banga Krishi Viswavidyalya, Cooch Behar, Pundibari	2.40
72	University of Agricultural Sciences, Dharwad	3.06
73	West Bengal University of Animal & Fishery Sciences, Kolkata	0.80
74	Dr. Y.S. Parmar University of Horticulture and Forestry, Solan	4.80
75	Zonal Projects Directorate -Zone -VIII , Bangalore	0.80
76	National Academy of Biological Science Chennai	2.00
77	Zonal Projects Directorate, ICAR Zone -I , Ludhiana	0.80
78	Zonal Projects Directorate, ICAR Zone -II, Kolkata	0.80
79	Zonal Projects Directorate, ICAR Zone -III, Barapani	0.80

S. NO	Name of Beneficiary	Amount (In Lakh)
80	Zonal Projects Directorate, ICAR Zone -IV, Kanpur	0.80
81	Zonal Projects Directorate, ICAR Zone -V, Hyderabad	0.80
82	Zonal Projects Directorate, ICAR Zone -VI, Jodhpur	0.80
83	Zonal Projects Directorate, ICAR Zone -VII, Jabalpur	0.80
84	Directorate of Agriculture, Govt. of Arunachal Pradesh, Kameng, lower Subansiri, Geku (Korak), Upper Subansiri	4.00
85	National Research Centre on Yak (ICAR), Dirang KVK (Momong)	0.80
86	KVK, Papumpare	0.80
87	National Research Centre for Pig, Rani, Guwahati (KVK Goalpara)	0.80
88	Joint Farming-cum-Pisciculture Co-operative Society,Utlou, Bishnapur	0.80
89	Directorate of Agriculture, Govt. of Manipur, Thoubal	0.80
90	Director of Agriculture Research and Education, Govt. of Mizoram.	2.40
91	Director of Agriculture, Govt. of Nagaland, Kohima.	1.60
92	Director of Agriculture, Govt. of Meghalaya, Shillong.	0.80
93	Director of Agriculture, Govt. of Sikkim	0.80
94	Director of Agriculture, Govt. of Tripura, Agartala.	0.80
95	Raja Avadesh Singh Memorial Society, Pratapgarh	0.80
96	SarpanchSamaj, New Delhi	0.80
97	Gram Nirwan Mandal Sarvodaya Ashram, Sokhodeora	0.80
98	ShramabhartiKhadigram, Jamui	0.80
99	VanvasiSeva Kendra, Bhabua	0.80
100	Ramkrishna Mission Ashram, Morabadi, Ranchi	0.80
101	PalliSiksha Bhawan, Bolpur, Shantiniketan	0.80
102	Kalyan, Purulia	0.80
103	Ramkrishna Mission Vivekananda University,Belur Math	0.80
104	SamtaSeva Kendra, Sitamarhi	0.80
105	Indian Veterinary Research Institute, Izatnagar, Bareilly	0.80
106	Grama Nava NirmanSamithi, Jayaprakashnagar, Jammikunta	0.80
107	Central Tobacco Research Institute, Rajahmundry	0.80
108	Siri Aurobindo Institute of Rural Development, Gaddipalli	0.80
109	Bhagavatula Charitable Trust, BCT Farm Complex, Visakhapatnam	0.80
110	Pravara Institute of Research and Education in Natural and Social Science, Ahmednagar	0.80
111	Deendayal Research Institute, Swami Ramtirath Nagar, New Delhi.	0.80
112	Satpuda Education Society, JalgaonJamod, Distt-Buldana	0.80
113	SantNamdevSevabhaviSanstha, Akola Road, Hingoli	0.80
114	Krishi Vigyan Kendra, Post. Gangapur, Latur	0.80
115	Dr. HedgewarSevaSamiti, Distt. Nandurbar	0.80
116	YashwantroChavan Maharashtra Open University, Nashik	0.80
117	Shabari Krishi Pratishthan, Solapur, Maharashtra.	0.80
118	Pragati Trust, Jaipur	0.80
119	Vidya Bhawan Society, Fatehpura, Udaipur	0.80
120	NavsariAgricultural University, Navsari	1.60

S. NO	Name of Beneficiary	Amount (In Lakh)
121	Society to Uplift Rural Economy, Barmer	0.80
122	Banasthali University, Tonk	0.80
123	LokbharatiGramvidyapith, Sanosara, Distt. Bhavnagar	0.80
124	Ambuja Cement Foundation, Kodinar	0.80
125	Mehsana District Education Foundation, GanpatVidyaNagar	0.80
126	Mangal Bharti, Golagamdi, Distt. Vadodara	0.80
127	Centre for Rural Development & Environment, Bhopal	0.80
128	Deendayal Krishi VikasAvamAnushandhanSamiti, Bhopal	0.80
129	K.H PatilAgricultural Sciences Foundation, Distt. Gadag	0.80
130	Mysore Resettlement and Development Agency(MYRADA), Bangalore	0.80
131	Taralabalu Rural DevelopmentFoundation, Devanagere, Karnataka.	0.80
132	Mitraniketan, Vellanad, Thiruvananthapuram	0.80
133	Christian Agency for Rural Development, Pathanamthitta	0.80
134	Gujarat Vidyapeeth, Ahmedabad	0.95
135	Agricultural Development Trust, Baramati, Pune	0.80
136	MarathawadaShetiSahaya Mandal, Aurangabad	0.79
137	ShramSadhana Amravati, Congress Nagar, Amrawati	0.80
138	RashtriyaSevaSamithi, SevaNilayam, Chittoor	0.80
139	JSS MahavidyaPeeth, Mysore	1.60
140	Sri Avinashilingam Institute of Higher Education & Home Science, Coimbatore	0.79
141	Directorate of Agriculture, Govt of Goa, Panji	0.80
142	Directorate of Agriculture, Pondicherry	0.80
143	UPASI, Coonoor, Nilgiri	0.80
144	BapoojiSewakSamaj, Kumily	0.80
145	Nagaland University, Zunheboto	0.80
146	Sam Higginbottom Institute of Agricultural Technology & Science, Allahabad	0.80
147	KSR College of Technology, Tiruchengode, Tamil Nadu.	1.60
148	National Institute for Micro Small & Medium Enterprises, Hyderabad.	0.80
149	Amity University, Noida	0.80
150	KVK, SCADA, Bhojpur	0.80
151	Bioved Research Institute of Agricultural and Technology, Allahabad	0.80
152	Deendayal Research Institute, Satna	1.60
	Total	**255.27**

Crop wise and Zone wise applications of Farmers' Varieties received during the year 01.4.2014 to 31.3.2015

S. No.	Crops/States	Assam	A.P.	Bihar	Chhattisgarh	Gujarat	Haryana	HP	Jharkhand	J&K	Karnataka	Kerala	Maharastra	MP	Manipur	Mizoram	Meghalaya	Punjab	Rajasthan	Sikkim	Tripura	Nagaland	Rajasthan	U.P.	W.B.	Total
1	Acid Lime										1		1													2
2	Apple							1																		1
3	Banana			2																						2
4	Barley								12																	12
5	Bitter Gourd			2	2				1		2										2				1	10
6	Black gram			3	11				22		1		1							1				4	5	48
7	Black Pepper											1														1
8	Bottle Gourd			6	4						2										4			3	2	21
9	Brinjal	2		5	5				7		2				1							2			5	29
10	Cabbage								1						1											2
11	Castor			1					2													1				4
12	Cauliflower			1					2														1			4
13	Chickpea			19	4				12			1														36
14	Coconut											1														1
15	Coriander			3	1						3										3				1	11
16	Cucumber				2						4		1									2			1	10
17	Durum Wheat													1										1		2
18	Fenugreek			3					4		1															8
19	Field pea			6	3				9		1		2												1	22
20	Garlic			5	2				3	1			1		1											13
21	Ginger			4					7						1	3						7		2	1	25
22	Grape												4													4
23	Green gram		1	3	8				10	1	1													2	3	29

S. No.	Crops/States	Assam	A.P.	Bihar	Chhattisgarh	Gujarat	Haryana	HP	Jharkhand	J&K	Karnataka	Kerala	Maharastra	MP	Manipur	Mizoram	Meghalaya	Punjab	Rajasthan	Sikkim	Tripura	Nagaland	Rajasthan	U.P.	W.B.	Total
24	Groundnut								2													1			1	4
25	Indian Jujube (Ber)			2																						2
26	Indian Mustard (Karan Rai)			1										1												2
27	Indian Mustard (Sarso)	4		3	6				20						1									2	6	42
28	Jute																							1	4	5
29	Kidney bean				8				3	4					6							1			3	25
30	Lentil	1		10	6				12	2	1		1	1										1	1	36
31	Linseed	1		14	2				7		1		1												1	27
32	Maize			8	9				43				2		4	5					5	17		4		97
33	Mango		8	13	1				4		10		3									1	1	37	1	79
34	Menthol Mint			1																						1
35	Okra			1	1				1		1		2												2	8
36	Onion			1											1										2	4
37	Orchid																					1				1
38	Pearl Millet								1		1													1	3	6
39	Pigeon pea			4	20				28																8	60
40	Pomegranate												1													1
41	Potato				2				5													1			2	10
42	Pumpkin			1	7				3		1										3	1			5	21
43	Rapeseed (Toria)			9					10																	19
44	Rice	207		78	375				192	11	1		45	96		18	185	1				47		25	241	1522
45	Rose																								1	1
46	Safflower								2		1															3
47	Small Cardamom											5														5
48	Sesame	1		4	3				2		1				1	3						4		1	7	27

S. No.	Crops/States	Assam	A.P.	Bihar	Chhattisgarh	Gujarat	Haryana	HP	Jharkhand	J&K	Karnataka	Kerala	Maharastra	MP	Manipur	Mizoram	Meghalaya	Punjab	Rajasthan	Sikkim	Tripura	Nagaland	Rajasthan	U.P.	W.B.	Total
49	Sorghum		2	2					2		2		2													10
50	Soybean								1				1		1	2						1				6
51	Sugarcane			2					2		4		2									1		2		13
52	Sweet orange										1															1
53	Tetraploid cotton																								1	1
54	Tomato			3	3				3				1											1	1	12
55	Turmeric			11					16						1							1		4	4	37
56	Wall nut									1																1
57	Wheat			2	3	1	1		14		1								1					9	2	34
	Total	**216**	**11**	**233**	**488**	**1**	**1**	**1**	**465**	**20**	**44**	**8**	**71**	**99**	**19**	**31**	**185**	**1**	**1**	**1**	**17**	**89**	**2**	**100**	**316**	**2420**

Crops with Genus and species under Registration (92)

S. No	Crop species	Botanical name
1	Rice / चावल	*Oryza sativa L*
2	Bread wheat/ गेंहूँ (चपाती)	*Triticum aestivum L.*
3	Durum wheat / डूयरमगेंहूँ	*Triticum durum Desf.*
4	Dicoccum wheat/ डिकोक्कम गेंहूँ	*Triticumdicoccum L.*
5	Other Triticum/ ट्रिटिकम प्रजातियाँ	*Triticum species*
6	Maize/मक्का	*Zea mays L.*
7	Sorghum/ज्वार	*Sorghum bicolor (L.) Moench*
8	Barley / जौ	*Hordeumvulgare L.*
9	Pearl millet/ बाजरा	*Pennisetum glaucum (L.) R. Br.*
10	Chickpea / चना	*Cicer arietinum L.*
11	Mungbean / मूंग	*Vigna radiata(L.) Wilczek*
12	Urdbean /उड़द	*Vigna mungo (L.) Hepper*
13	Fieldpea / मटर	*Pisum sativum L.*
14	Kidney bean/राजमा	*Phaseolus vulgaris L.*
15	Lentil / मसूर	*Lens culinarisMedik*
16	Pigeon pea/अरहर	*Cajanuscajan (L.)Millsp*
17	Indian mustard/ सरसो	*Brassica junceaL. Czern&Coss*
18	Karan rai /राई	*Brassica carinata A Braun*
19	Rapeseed/रेप्सीड	*Brassica rapa L.*
20	Gobhisarson / गोभीसरसों	*Brassica napus L.*
21	Groundnut / मूंगफली	*Arachishypogaea L.*
22	Soybean/सोयाबीन	*Glycine max (L.) Merrill*
23	Sunflower/ सूरजमुखी	*Helianthus annuus L.*
24	Safflower/कुसुम	*Carthamustinctorius L.*
25	Castor /अरंडी	*Ricinuscommunis L.*

S. No	Crop species	Botanical name
27	Linseed /अलसी	*Linumusitatissimum L.*
28	Diploid Cotton / कपास (द्वगुणित)	*Gossypiumarboreum L.*
29		*Gossypiumherbaceum L.*
30	Tetraploid Cotton / कपास (चतुर्गुणित)	*Gossypiumhirsutum L.*
31		*Gossypiumbarbadense L.*
32	Jute /पटसन	*CorchorusolitoriusL..*
33		*Corchoruscapsularis L.*
34	Sugarcane / गन्ना	*Saccharum L.*
35	Black pepper / कालीमिर्च	*Piper nigrum L.*
36	Coriander/ धनिया	*Coriandrum sativum L.*
37	Fenugreek/ मेथी	*Trigonellafoenumgrae cum L.*
38	Turmeric /हल्दी	*Curcuma Longa L.*
39	Ginger /अदरक	*ZingiberofficinaleRosc.*
40	Small cardamom/ छोटी इलायची	*Elettariacardamomum Maton*
41	Tomato /टमाटर	*Lycopersiconlycopersi cum (L.)Karsten ex. Farw.*
42	Brinjal / बैंगन	*Solanummelongena L.*
43	Okra / भिन्डी	*Abelmoschusesculentus (L.) Moench*
44	Cauliflower / फूलगोभी	*Brassica oleracea L. var. botrytis*
45	Cabbage /पत्तागोभी	*Brassica oleraceavar. capitata L.*
46	Bitter Gourd /करेला	*Momordtca charms& L.*
47	Bottle Gourd / लोकी (घिया)	*Lagenariasiceraria (Mol) Standl.*
48	Cucumber / खीरा	*Cucumis:sativus L.*
49	Pumpkin/कद्दू	*CucurbitamoschataDuch. ex Pair.*
50	Onion/प्याज	*Allium cepa L.*
51	Garlic/लहसून	*Allium sativum L.*

S. No	Crop species	Botanical name
26	Sesame /तिल	*SesamumindicumL..*
53	Chrysanthemum / गुलदाउदी	*Chrysanthemum L..*
54	Muskmelon / खरबूजा	*Cucumis meld L.*
55	Watermelon / तरबूज	*CitrullusLanatus (Thuni)) Mansf*
56	Mango / आम	*Mangiferaindica L.*
57	Pomegranate/ अनार	*Punicagranatum L.*
58	Apple/सेब	MalusdomesticaBorkh
59	Banana / केला	*Musa spp.*
60	Pear/नाशपाती	*Pyres communis L.*
61	Mandairn / संतरा	*Citrus reticulate Blanco*
62	Sweet Orange / मौसमी	*Citrus sinensis (L) Osbeck*
63	Acid Lime / नींबू	*Citrus aurantifoliaSwingle*
64	Grapes/अंगूर	*Vitis spp.*
65	Indian jujube (Ber)/बेर	*ZiziphusmauritianaLamk.*
66	Apricot/खुबानी	*Prunusarmeniaca L.*
67	Cherry/चेरी	*Prunusavium L.*
68	Almond/ बदाम	*Prunusdulcis (Mill.) D.A. Webb*
69	Walnut/अखरोट	*Juglansregia L.*
70	Isabgol /इसबगोल	*Plantago ovata Forsk.*
71	Potato /आलू	*Solanumtuberosum L.*
72	Menthol Mint /पुदिना	*Menthaarvensis L.*

S. No	Crop species	Botanical name
52	Rose/गुलाब	*Rosa spp. other than R. damascena*
73	Damask Rose/ गुलाब (इत्र)	*Rosa damascena Mill*
74	Periwinkle /सदाबहार	*Catharanthusroseus L. G Don*
75	Canna / कैना	*Canna L*
76	Gladiolus / ग्लेडिओलुस	*Gladioulus L.*
77	Brahmi / ब्राह्मी	*Bacopamonnieri L. Pennell*
78	Coconut /नारियल	*Cocosnucifera L.*
79	Bamboo Leaf Orchid or Boat Orchid/ साइमबिडम	*Cymbidium Sw.*
80	Spray Orchid or Singapore Orchid/जीवंती	*Dendrobium Sw.*
81	Orchid / ओर्चिड	*Oncidium Sw.*
82	Vanda or Blue Orchid/ रसना	*Vanda Jones ex R. Br.*
83	Orc hid/आर्चिड	*CattleyaLindl.*
84	Orchid/ मोथआर्चिड	*Phalaenopsisblume*
85	Bougainvillea / बोगनविलिया	*Bougainvillea Comm. Ex Juss*
86	Tea / टी	*Camellia sinensis*
87	Tea / टी	*Tea / Vh*
88	Tea / टी	*C. assamicassplasiocalyx.*
89	Eucalyptus/सफेदा	*Eucalyptus comaldulensisDehmb*
90	Eucalyptus/सफेदा	*Eucalyptus tereticornis Sm.*
91	Casurina/जंगली सरू	*Casuarinaequisetrolia L.*
92	Casurina/जंगली सरू	*Casuarinafunghuhnicoso Miq.*

Annexure – X

Certificates of Registration issued by the Authority during 2014-15

S. NO	Registration No.	Category of Variety	Denomination of the Candidate Variety	Crop	Name of applicant
1	82 of 2014	Extant (VCK)	TEJ	Rice	Bayer Crop Sciences AG
2	83 of 2014	Extant (VCK)	KSFH-7032	Sunflower	Kaveri Seed Company Limited
3	84 of 2014	New	NP-408	Rice	Nuziveedu Seeds Limited
4	85 of 2014	New	NP-252	rice	Nuziveedu Seeds Limited
5	86 of 2014	Farmer	KERALI	Rice	Niranjan Mohanta, Paidapatna, Block- Ghatagaon, Dist- Keonjhar, Odisha
6	87 of 2014	Farmer	RAJAMANI-S	Rice	Pradeep Patel, Kenadeed, Block-Jamankira, Dist- Sambalpur, Odisha
7	88 of 2014	Farmer	BABEIMETA	Rice	Sri Lingaraj Sethy, Bhuinpur, Block-Champua, Dist- Keonjhar, Odisha
8	89 of 2014	Farmer	KABIRANGI	Rice	Pitambar Mahanta, Kathaghar, Block- Patna, Dist- Keojhar, Odisha
9	90 of 2014	Farmer	JHITIPITI	Rice	Madhusudan Mohanta, Tentalapusi, Block-Patna, Dist- Keonjhar, Odisha
10	91 of 2014	Farmer	JHANKRA	Rice	Bijaya Lakra and others, Amgova, Block-Kutra, Dist- Sundargarh, Odisha
11	92 of 2014	Farmer	KALAGODA	Rice	Taranisen Behera and others, Ghantibud, Block-Sadarblock, Dist- Sundargarh, Odisha
12	93 of 2014	Farmer	SARIA-S	Rice	Bhima Rohidas and others, Kakudipalli, Block-Maneswar, Dist- Sambalpur, Odisha
13	94 of 2014	Farmer	MAHARAJI	Rice	Jatindra Prasad Das, Dharamgarh, Block-Dharamgarh, Dist- Kalahandi, Odisha
14	95 of 2014	Farmer	RAJKARANI	Rice	Soukilal Sahu and others, Sandhibahal, Block-Gaisilat, Dist- Baragarh, Odisha
15	96 of 2014	Farmer	JAYGOPAL	Rice	Dambarudhar Naik and others, Anlabhata, Block-Jaipatna, Dist- Kalahandi, Odisha
16	97 of 2014	Farmer	BADRANGI	Rice	Anam Munda, Paidapatna, Block-Ghatagaon, Dist-Keonjhar, Odisha
17	98 of 2014	Farmer	AMBAJHUKA	Rice	Johan Minz, Jharmunda, Block-Roinakhol, Dist-Sambalpur, Odisha
18	99 of 2014	Farmer	KANDING	Rice	Samesu Araka and others, Binida, Block-Ramanaguda, Dist- Raigada, Odisha
19	100 of 2014	Farmer	SETHKA	Rice	Dola Krushna Behera and others, Bankapur, Block-Khariar, Dist- Nuapada, Odisha
20	101 of 2014	Farmer	KARNGA	Rice	Santosh Dharua and others, Ghosa, Block-Kuchinda, Dist- Sambalpur, Odisha
21	102 of 2014	Farmer	GOTRA-B	Rice	Bibekananda Naik and others, Temra, Block-Kalmpur, Dist- Kalahandi, Odisha
22	103 of 2014	Farmer	DULAR	Rice	Buddhadev Chalan and others, Somanathpur, Block- K. Gumma, Dist- Malkangiri, Odisha
23	104 of 2014	Farmer	JIRKUBANJI	Rice	Madi Muka, Naligunthi, Block- Kalimela, Dist-Malkangiri, Odisha
24	105 of 2014	Farmer	MAHULATA	Rice	Lokanath Tarasia and others, Baramba, Block-Baramba, Dist- Cuttack, Odisha
25	106 of 2014	Farmer	KALACHUDI	Rice	Gopi Krisani and others, Ambapada, Block- Mathili, Dist- Malkangiri, Odisha

S. NO	Registration No.	Category of Variety	Denomination of the Candidate Variety	Crop	Name of applicant
26	107 of 2014	Farmer	KHURSUDI	Rice	Rabi Kumbhar, Kumbharguda, Block- Kalimela, Dist- Malkangiri, Odisha
27	108 of 2014	Farmer	DASARAGUNTHA	Rice	Madhusudan Sahu and others, Mardang, Block-Barkote, Dist- Deogarh, Odisha
28	109 of 2014	Farmer	RELJANGI	Rice	Surendra Hasda and others, Sanpuruna pani, Block- Koida, Dist-Sundargarh, Odisha
29	110 of 2014	Farmer	PORA	Rice	Dusmanta Ku Singh, Kaliabhata, Block- Jaipatna, Dist- Kalahandi, Odisha
30	111 of 2014	Farmer	MALKADUA	Rice	Bhikari Pradhan, Badmal, Block- Maneswar, Dist-Sambalpur, Odisha
31	112 of 2014	Farmer	KUNDO	Rice	Birupa pidi kaka and others, Golonda, Block-Gundori, Dist- Raigada, Odisha
32	113 of 2014	Farmer	KANDASURI	Rice	Subarao Nisika and others, Parikhiti, Block-Ramanaguda, Dist- Raigada, Odisha
33	114 of 2014	Farmer	PANDEY DHAN	Rice	Sukanti Padiami and others, Jharapalli, Block-Malkangiri, Dist- Malkangiri, Odisha
34	115 of 2014	Farmer	KONOR	Rice	Sarathi Mirda and others, Barididing a, Block -Jujumura, Dist- Sambalpur, Odisha
35	116 of 2014	Farmer	KANTACHUDI	Rice	Laxman Golleri and others, Kandhaguda, Block-Khairput, Dist- Malkangiri, Odisha
36	117 of 2014	Farmer	AGNYASAL	Rice	Golapa Patel and others, Balijori, Block -Tangarpali, Dist- Sundargarh, Odisha
37	118 of 2014	Farmer	ASUMA KUNDO	Rice	Ramo Dolei and others, Dahani, Block-Gudari, Dist- Raigada, Odisha
38	119 of 2014	Farmer	BAKKA	Rice	Sanjay Kumar Nayak and others, Talapadar, Block-Mathili, Dist- Malkangiri, Odisha
39	120 of 2014	Farmer	MAGURA	Rice	Rajendra Nag, Bhutibahal, Block-Gaisilet, Dist-Baragarh, Odisha
40	121 of 2014	Farmer	KANHEI	Rice	Damu Nayak and others, Dungiaput, Block- Mathili, Dist- Malkangiri, Odisha
41	122 of 2014	Farmer	CHHELIGUDI	Rice	Kushadhar Munda, Nuagan, Block- Champua, Dist- Keonjhar, Odisha
42	123 of 2014	Farmer	BASANTI BHOG	Rice	Satyabadi Dehuri and others, Thakur Niktimal, Block- Kuchinda, Dist- Sambalpur Odisha
43	124 of 2014	Farmer	BAGAR HUNDAR	Rice	Rabindra Sahu and others, Limagaon, Block-Kesinga, Dist- Kalahandi, Odisha
44	125 of 2014	Farmer	K-LALKAIN	Rice	Rabindra Sahu and others, Limagaon, Block-Kesinga, Dist- Kalahandi, Odisha
45	126 of 2014	Farmer	BARHAGALLI	Rice	Benudhar Khatua and others, Bindhanima, Block-Tigiria, Dist- Cuttack, Odisha
46	127 of 2014	Farmer	AGANI SALI	Rice	Chakradhar Naik, Satahalia, Block-Champua, Dist- Keonjhar, Odisha
47	128 of 2014	Farmer	BUTA CHUDI	Rice	Pitambhara Padiami and others, Jharapali, Block-Malkangiri, Dist- Malkangiri, Odisha
48	129 of 2014	Farmer	PANDAKAYA	Rice	Bipin Bihari Naik and others, Satahalia, Block-Champua, Dist- Keonjhar, Odisha
49	130 of 2014	Farmer	DASAHARA DHAN	Rice	Sanyasi Pidikaka and others, Deesarypoda, Block-Bissamcuttack, Dist- Raigada, Odisha
50	131 of 2014	Farmer	BAIDAHUNA	Rice	Santosh Kumar Nail and others, Chacharbhata, Block-Khariar, Dist- Nuapada, Odisha

S. NO	Registration No.	Category of Variety	Denomination of the Candidate Variety	Crop	Name of applicant
51	132 of 2014	Farmer	SADHANA	Rice	Paban Majhi and others, Pandigaon, Block-Kalampur, Dist- Kalahandi, Odisha
52	133 of 2014	Farmer	BHATTASAKULI	Rice	Ketan Sahu and others, Bankamba, Block-Kasipur, Dist- Raigada, Odisha
53	134 of 2014	New	Ranidhan (IET-19148)	Rice	Orissa University of Agriculture & Technology
54	135 of 2014	New	KSL-210011	Rice	Krishidhan Seeds Private Limited
55	136 of 2014	New	SYN_RI_NR_7356	Rice	Syngenta India Limited
56	137 of 2014	Extant (VCK)	JK Chamundi (JK CHB 211)	Tetraploid Cotton	J.K. Agri Genetics Limited
57	138 of 2014	New	Rasika Selection	Rice	Krishidhan Seeds Private Limited
58	139 of 2014	New	NP-742	Rice	Nuziveedu Seeds Limited
59	140 of 2014	Extant	Gujarat Til-4 (G-Til-4) (AT-159)	Sesame	Junagarh Agricultural University, Gujarat
60	141 of 2014	Extant	Vishwas (NUL-7)	Black gram	Nirmal Seeds Private Ltd.
61	142 of 2014	Extant	SKL-8 (SKL-11-28-29-55)	Rice	Dr. Panjabrao Deshmukh Krishi Vidyapeeth
62	143 of 2014	Extant	Phule-688 (RHC-688)	Tetraploid Cotton	Mahatma Phule Krishi Vidyapeeth, Rahuri
63	144 of 2014	Extant	ELM-079	Indian Mustard	Punjab Agricultural University
64	145 of 2014	Extant	WH-1021	Wheat	Haryana Agricultural University
65	146 of 2014	Extant	Pusa Mustard-21 (LES-1-27)	Indian Mustard	Indian Agriculture Research Institute, New Delhi
66	147 of 2014	Extant	JGKVR-2 (IET 19795)	Rice	Indira Gandhi Krishi Vishwavidyalaya Raipur (C.G.) Krishak Nagar, Labhandi, Raipur
67	148 of 2014	Extant	AGRANI (SEJ-2)	Indian Mustard	Indian Agriculture Research Institute, New Delhi
68	149 of 2014	Extant	IGKVR-1 (IET 19569)	Rice	Indira Gandhi Krishi Vishwavidyalaya Raipur (C.G.) Krishak Nagar, Labhandi, Raipur
69	150 of 2014	Extant	Co Pant 97222	Sugarcane	Indian Council of Agricultural Research
70	151 of 2014	Extant	Akshayadhan (IET 19367)	Rice	Directorate of Rice Research, Hyderabad
71	152 of 2014	Extant	Pusa Mustard-27 (EJ-17)	Indian Mustard	Indian Agriculture Research Institute, New Delhi
72	153 of 2014	Extant	Pusa Mustard-26 (NPJ-113)	Indian Mustard	Indian Agriculture Research Institute, New Delhi
73	154 of 2014	New	NPH-25	Rice	Nuziveedu Seeds Limited
74	155 of 2014	New	NP-3112	Rice	Nuziveedu Seeds Limited
75	156 of 2014	New	CSV 22	Sorghum	Indian Council of Agricultural Research
76	157 of 2014	New	CSV 23	Sorghum	Indian Council of Agricultural Research
77	158 of 2014	New	NPH-8899	Rice	Nuziveedu Seeds Limited
78	159 of 2014	New	CSV 18	Sorghum	Indian Council of AgriculturalResearch
79	160 of 2014	Extant (VCK)	SYN-RI-5017	Rice	Syngenta India Limited
80	161 of 2014	Extant	TG-51	Groundnut	Indian Council of Agricultural Research
81	162 of 2014	Extant	Ajay (CRHR-7) (IET-18166)	Rice	Indian Council of Agricultural Research

S. NO	Registration No.	Category of Variety	Denomination of the Candidate Variety	Crop	Name of applicant
82	163 of 2014	Extant	Aravali (RN-393)	Indian Mustard	Indian Council of Agricultural Research
83	164 of 2014	Extant	Padmini (LMH-62)	Linseed	Indian Council of Agricultural Research
84	165 of 2014	Extant	TG-37-A	Groundnut	Indian Council of AgriculturalResearch
85	166 of 2014	Extant	Parvati (LMH-16-5)	Linseed	Indian Council of Agricultural Research
86	167 of 2014	Extant	Pant Pili Sarson-1	Rapeseed (Toria)	Indian Council of Agricultural Research
87	168 of 2014	Extant	Nav Gold (YRN-6)	Indian Mustard	Indian Council of Agricultural Research
88	169 of 2014	New	KSL-333	Rice	Krishidhan Seeds Private Limited
89	170 of 2014	New	KBR-780	Pearl Millet	Kaveri Seed Company Limited
90	171 of 2014	Extant	Narendra-8002 (IET-15848)	Rice	Indian Council of Agricultural Research (ICAR)
91	172 of 2014	Extant (VCK)	CRMS 31A	Rice	Indian Council of Agricultural Research
92	173 of 2014	Extant	Phule Kusuma (JLSF-414)	Safflower	Mahatma Phule Krishi Vidyapeeth, Rahuri
93	174 of 2014	New	CSV 21F	Sorghum	Indian Council of Agricultural Research
94	175 of 2014	Extant	Naveen (R-749-2-2) (IET-14461)	Rice	Indian Council of Agricultural Research
95	176 of 2014	Extant	Sharda (LMS-4-27)	Linseed	Indian Council of Agricultural Research
96	177 of 2014	Extant	VL-Dhan-208 (VL-9632)	Rice	Indian Council of Agricultural Research
97	178 of 2014	Extant	WH-1025	Wheat	Haryana Agricultural University
98	179 of 2014	Extant	VL Dhan-207 (VL-97-9729)	Rice	Indian Council of Agricultural Research
99	180 of 2014	Extant	Sampada (IET 19424)	Rice	Directorate of Rice Research, Hyderabad
100	181 of 2014	Extant	KBSH-53	Sunflower	University of agricultural sciences, GKVK campus, Bangalore
101	182 of 2014	Extant	KBSH-41	Sunflower	University of agricultural sciences, GKVK campus, Bangalore
102	183 of 2014	Extant	PAU-881 (AL-1507)	Pigeon Pea	Indian Council of Agricultural Research
103	184 of 2014	Extant	KBSH-42	Sunflower	University of agricultural sciences, GKVK campus, Bangalore
104	185 of 2014	Extant	KBSH-44	Sunflower	University of agricultural sciences, GKVK campus, Bangalore
105	186 of 2014	Extant	Kufri Sadabahar (MS/93-1344)	Potato	Indian Council of Agricultural Research
106	187 of 2014	Extant	Kufri Shailja (SM/87-185)	Potato	Indian Council of Agricultural Research
107	188 of 2014	Extant	Swarna Shyamli	Brinjal	Indian Council of Agricultural Research
108	189 of 2014	Extant	Swarna Mani (HBR-1)	Brinjal	Indian Council of Agricultural Research
109	190 of 2014	Extant	NRCHB 101	Indian Mustard	Indian Council of Agricultural Research
110	191 of 2014	Extant	NRCDR-02	Indian Mustard	Indian Council of Agricultural Research

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111	192 of 2014	Extant	Swarna Pratibha (CH-309)	Brinjal	Indian Council of Agricultural Research
112	193 of 2014	Extant	GG-16 (JSP-39)	Groundnut	Indian Council of Agricultural Research
113	194 of 2014	Extant	Ganga-1 (Jamnatri)	Green Gram	Indian Council of Agricultural Research
114	195 of 2014	Extant	Vivek Matar-10 (VP 101)	Field Pea	Indian Council of Agricultural Research
115	196 of 2014	Extant	Swarna Shree	Brinjal	Indian Council of Agricultural Research
116	197 of 2014	Extant	BRG-2	PIgeon Pea	Indian Council of Agricultural Research
117	198 of 2014	Extant	WH 1080	Wheat	Haryana Agricultural University
118	199 of 2014	Extant	Ashirwad (RK-01-3)	Indian Mustard	Indian Council of Agricultural Research
119	200 of 2014	Extant	Vasundhra (RGL-2538)	Rice	Indian Council of Agricultural Research
120	201 of 2014	Extant	Girnar-3 (PBS 12160)	Groundnut	Indian Council of Agricultural Research
121	202 of 2014	Extant	PAU-911 (ML-1265)	Green Gram	Indian Council ofAgricultural Research
122	203 of 2014	Extant	CS 54 (CS 614-4-4-4)	Indian Mustard	CSSRI Karnal, Haryana
123	204 of 2014	Extant	Vardhan (IET 18940)	Rice	DRR Rajendranagar Hyderabad
124	205 of 2014	Extant	NRCHB 506	Indian Mustard	Indian Council of Agricultural Research
125	206 of 2014	Extant	Rajalaxmi (CRHR-5)	Rice	Indian Council of Agricultural Research
126	207 of 2014	Extant	Kufri Arun (MS/92-2105)	Potato	Indian Council of Agricultural Research
127	208 of 2014	Extant	Kufri Himalini (SM/91-1515)	Potato	Indian Council of Agricultural Research
128	209 of 2014	Extant	Kufri Himsona	Potato	Indian Council of Agricultural Research
129	210 of 2014	Extant	Kufri Kanchan	Potato	Indian Council of Agricultural Research
130	211 of 2014	Extant	Kufri Anand (MS/82-717)	Potato	Indian Council of Agricultural Research
131	212 of 2014	Extant	Kufri Girdhari (SM 193-237)	Potato	Indian Council of Agricultural Research
132	213 of 2014	Extant	Kufri Pushkar (JW-160)	Potato	Indian Council of Agricultural Research
133	214 of 2014	Extant	BIO 9544 (BIO 151)	maize	Bioseed Research India Private Limited
134	215 of 2014	Extant	Kufri Surya (HT/92-621)	Potato	Indian Council of Agricultural Research
135	216 of 2014	Extant	Kufri Giri Raj (SM/85-45)	Potato	Indian Council of Agricultural Research
136	217 of 2014	Extant	Kufri Khyati (J.93-86)	Potato	Indian Council of Agricultural Research
137	218 of 2014	Extant	Kufri Chipsona-3 (MP/97-583)	Potato	Indian Council of Agricultural Research
138	219 of 2014	Extant	Nandyal Cotton Hybrid-240	tetraploid Cotton	Acharya N.G. Ranga Agricultural University, Hyderabad
139	220 of 2014	Extant (VCK)	BGS 801	Sorghum	Bayer Biosciences Pvt. Ltd.
140	221 of 2014	NEW	JKSSH 02	Sorghum	J.K. Agri Genetics Limited
141	222 of 2014	NEW	NP-6013	Rice	Nuziveedu Seeds Limited
142	223 of 2014	NEW	26P26	Rice	Pioneer Overseas corporation

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143	224 of 2014	NEW	KSMS 263	Sorghum	Kaveri Seed Company Limited
144	225 of 2014	NEW	KJH 6363	Sorghum	Kaveri Seed Company Limited
145	226 of 2014	EXTANT (VCK)	PKV 809	Sorghum	Marathwada Agricultural University, Maharashtra
146	227 of 2014	EXTANT	UAS-415	Wheat	University of agricultural sciences
147	228 of 2014	EXTANT	UAS-304	Wheat	University of agricultural sciences
148	229 of 2014	EXTANT	DDK-1025	Wheat	University of agricultural sciences
149	230 of 2014	EXTANT	DDK-1029	Wheat	University of agricultural sciences
150	231 of 2014	EXTANT	UAS-428	Wheat	University of agricultural sciences
151	232 of 2014	FARMER	NRUPATI BHOG	Rice	Anand Hati and others, Ammunda, Block-Padampur, Dist- Bargarh, Odisha
152	233 of 2014	FARMER	GOBINDA BHOG	Rice	Shyamsundar Sister Nivedita Sangh (Regn. No.- S/1L/5721), 2001, Vill.+P.O. Shyamsundar, District- Burdwan, P.S.- Raina. PIN-713424, West Bengal
153	234 of 2014	FARMER	YUBARAJA	Rice	Achutananda Singh and others, Jamutbahal, Block- Gaisilat, Dist- Bargarh, Odisha
154	235 of 2014	FARMER	JHILLI-B	Rice	Gokul nanda Meher and others, Barikel, Block-Padampur, Dist- Bargarh, Odisha
155	236 of 2014	FARMER	MAHIPAL-B	Rice	Mahendra Bag and others, Sandhibahal, Block-Gaisilat, Dist- Bargarh, Odisha
156	237 of 2014	FARMER	RANGA HAGARI	Rice	Sukal Das Harijan and others, JamunaHandi, Block- Kotpad, Dist- Koraput, Odisha
157	238 of 2014	FARMER	HUNDAR-Ba	Rice	Shambhunath Sahu and others, Bhutibahal, Block-Gaisilat, Dist- Bargarh, Odisha
158	239 of 2014	FARMER	BHULO	Rice	Bedabyasa Samal and others, Tal, Block-Padampur, Dist- Bargarh, Odisha
159	240 of 2014	FARMER	JAYAPHULA	Rice	Dusmanta Patra and others, Lalupali, Block-Ambabhona, Dist- Bargarh, Odisha
160	241 of 2014	FARMER	KATHI DHAN	Rice	Samaru Deulupadia and others, Jagamput, Block-Similiguda, Dist- Koraput, Odisha
161	242 of 2014	FARMER	MAYURKANTHA-K	Rice	Birakishore Biswal and others, Mendhasala, Block-Bhubaneswar, Dist- Khurda, Odisha
162	243 of 2014	FARMER	CHINAMAL	Rice	Sukru Sa, Haldipali, Block- Sonepur, Dist-Subarnpur, Odisha
163	244 of 2014	FARMER	BANDA	Rice	Lakhi Khora and others, Dungiaput, Block-Mathili, Dist- Malkangiri, Odisha
164	245 of 2014	FARMER	DHULIA-OR	Rice	Ratnakar Pradhan and others, Nuagaon, Block-Remuna, Dist- Balasore, Odisha
165	246 of 2014	FARMER	MADIA	Rice	Gadadhar Nayak and others, Ghagarapal, Block-Remuna, Dist- Balasore, Odisha
166	247 of 2014	FARMER	NALIGUNTHA	Rice	Nishamani Behera and others, Balisahi, Block-Narasinghpur, Dist- Cuttack, Odisha
167	248 of 2014	FARMER	K-LUCHEI	Rice	Rama Naik and others, Jhuding Jore, Block-Th-Rampur, Dist- Kalahandi, Odisha
168	249 of 2014	FARMER	Khurdha-Bolagarh-BASUMATI	Rice	Pravakar Baliarsingh and others, Dighiri, Block-Bolagarh, Dist- Khurdha, Odisha
169	250 of 2014	FARMER	Sundargarh GUAKATI	Rice	Sebaka Sahu and others, Talita, Block- Bonai, Dist- Sundargarh, Odisha

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170	251 of 2014	FARMER	KARPURMOTI	Rice	Akhaya Ku Sahoo and others, Dingar, Block-Begunia, Dist- Khurdha, Odisha
171	252 of 2014	FARMER	KALAMA	Rice	Surendra Maharana and others, Mendhasala, Block-Bhubaneswar, Dist- Khurdha, Odisha
172	253 of 2014	FARMER	KARANJI	Rice	Putu Majhi and others, Ranidumer, Block-Th-Rampur, Dist- Kalahandi, Odisha
173	254 of 2014	FARMER	SORISHFUL	Rice	Dolagobinda Mahala and others, Bandhapali, Block- Dangarpali, Dist- Subarnapur, Odisha
174	255 of 2014	FARMER	GANJAMGEDI	Rice	Narendra Rout and others Nuagaon, Block- Banki, Dist- Cuttack, Odisha
175	256 of 2014	FARMER	JHULPAYA	Rice	Ganga Padiami and others, Dudamita, Block-Korukonda, Dist- Malkangiri, Odisha
176	257 of 2014	FARMER	PATINI-R	Rice	Upendra Pradhan and others, Nuagaon, Block-Remuna, Dist- Balasore, Odisha
177	258 of 2014	FARMER	GOVINDA DHAN	Rice	Chapadi Sama and others, Jagamput, Block-Similiguda, Dist- Koraput, Odisha
178	259 of 2014	FARMER	KAINSAPHUL	Rice	Pradeep Ku. Mishra and others, Sargol, Block-Tarabha, Dist- Subaranapur, Odisha
179	260 of 2014	FARMER	KAMALA SANKARI	Rice	Ashok Ku. Sahu and others, Bhutibahal, Block-Gaisilat, Dist- Bargarh, Odisha
180	261 of 2014	FARMER	DHUBA ASANA	Rice	Ramakanta Jena and others, Jamalpur, Block-Basta, Dist- Balasore, Odisha
181	262 of 2014	FARMER	KAKIRI	Rice	Govinda Parida and others, Nuagaon, Block-Remuna, Dist- Balasore, Odisha
182	263 of 2014	FARMER	CHAMPA-K	Rice	Minaketan Routray and others, Dia, Block- Tangi, Dist- Khurda, Odisha
183	264 of 2014	FARMER	SOLARI	Rice	Madhaba Sahu and others, Kotakana, Block-Balipatna, Dist- Khurdha, Odisha
184	265 of 2014	FARMER	BANGALI	Rice	Bhabagrahi Mangaraj and others, Jariput, Block-Khurdha, Dist- Khurdha, Odisha
185	266 of 2014	FARMER	PASAKATHI	Rice	Adwaita Khillar and others, Chhotiamba, Block-Athagarh, Dist- Cuttack, Odisha
186	267 of 2014	FARMER	BUTASORI	Rice	Bhagabana Padiami and others, Jharapalli, Block-Malkangiri, Dist- Malkangiri, Odisha
187	268 of 2014	FARMER	RADHAJUGAL	Rice	Mitrabhanu Singh and others, Jamutbahal, Block-Gaisilat, Dist- Bargarh, Odisha
188	269 of 2014	FARMER	MALPATRI	Rice	Gariba Mahakur and others, Gondabahal, Block-Ulunda, Dist- Subarnapur, Odisha
189	270 of 2014	FARMER	BAYABHANDA	Rice	Trilochan Panda and others, Badabana, Block-Badamba, Dist- Cuttack, Odisha
190	271 of 2014	FARMER	BAIKANI-C	Rice	Panchanan Sahoo and others, Balisahi, Block-Narasinghpur, Dist- Cuttack, Odisha
191	272 of 2014	FARMER	JANGALIJATA	Rice	Mahendra Barik and others, Nuagaon, Block-Remuna, Dist- Balasore, Odisha
192	273 of 2014	FARMER	JUBAFUL	Rice	Shakuntla Sahu and others, Bhutibahal, Block-Gaisilat, Dist- Bargarh, Odisha
193	274 of 2014	FARMER	BUROMAL	Rice	Mitheilal Amari and others, Jamutbahal, Block-Gaisilet, Dist- Bargarh, Odisha
194	275 of 2014	FARMER	MUNGAI	Rice	Purnachandra Mohanty, Odangi, Block- Sadar Balasore, Dist- Balasore, Odisha

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195	276 of 2014	FARMER	PIMPUDIBASA	Rice	Dipti Charan Pradhan and others, Rajas, Block- Balipatna, Dist- Khurdha, Odisha
196	277 of 2014	FARMER	GELHEIKANTI	Rice	Saroj Seth and others, Nathapali, Block- Gaisilet, Dist- Bargarh, Odisha
197	278 of 2014	FARMER	CHANDAN	Rice	Khusiram Bagh and others, Maradugochha, Block- Tarabha, Dist- Subarnapur, Odisha
198	279 of 2014	FARMER	GELHEI	Rice	Netra Sahu and others, Kutsira, Block- Tarbha, Dist- Subarnapur, Odisha
199	280 of 2014	FARMER	LADU	Rice	Braja Bihari Dasadhikari, Gopinathpur, Block- Bhagrai, Dist- Balasore, Odisha
200	281 of 2014	FARMER	RUPAPANI	Rice	Pramod Ku Patra and others, Balisahi, Block- Narasinghpur, Dist- Cuttack, State- Odisha
201	282 of 2014	FARMER	MENKA	Rice	Pulu Majhi and others, Nakrundi, Block-Th-Rampur, Dist- Kalahandi, Odisha
202	283 of 2014	FARMER	RAJAHANSA	Rice	Achyutananda Mallik and others, Balijoda Brahmapur, Block- Tangi, Dist- Cuttack, Odisha
203	284 of 2014	FARMER	NAILIKALAMALATA	Rice	Raidas Sardar and others, Badapokhari, Block- Tangi- Choudwar, Dist- Cuttack, Odisha
204	285 of 2014	FARMER	AKUL-B	Rice	Aneeta Sahu and others, Bhutibahal, Block- Gaisilat, Dist- Bargarh, Odisha
205	286 of 2014	FARMER	CHAMPISALI	Rice	Kapila Behera and others, Rasulpur, Block- Sadar Balasore, Dist- Balasore, Odisha
206	287 of 2014	FARMER	KALKATI-D	Rice	Sudarsan Tripathy, Langalkata, Block- Dunguripali, Dist- Subarnapur, Odisha
207	288 of 2014	FARMER	ODASIALI-B	Rice	Rabindra Sahu, Sadanandapur, Block- Basta, Dist- Balasore, Odisha
208	289 of 2014	FARMER	GANTHIA SIKILA	Rice	Kuber Dash, Fulmuthi, Block- Binka, Dist- Subarnapur, Odisha
209	290 of 2014	FARMER	LUHUDI	Rice	Daud Bhengra and others, Dehuripada, Block- Bamara, Dist- Sambalpur, Odisha
210	291 of 2014	FARMER	KANTHA KAMULA	Rice	Nakula Jena, Anandapur, Block- Anandapur, Dist- Keonjhar, Odisha
211	292 of 2014	FARMER	DHINKIASIALI	Rice	Jagat Jeevan Behera, Ana, Block- Hatadihi, Dist- keonjhar, Odisha
212	293 of 2014	FARMER	MAYURKANTHA-C	Rice	Prabhakar Behera and others, Muraripur, Block- Narsinghpur, Dist- Cuttack, Odisha
213	294 of 2014	FARMER	BALI BHUTA	Rice	Jagannath Sethi and others, Odangi, Block- Sadar Balasore, Dist- Balasore, Odisha
214	295 of 2014	FARMER	LUNDUKANKRIA	Rice	Jagadisha Pradhan, Janmura, Block- Sonepur, Dist- Subranapur, Odisha
215	296 of 2014	FARMER	Boudh-LUCHEI	Rice	Ganesh Ranbida and others, Katamsingh, Block- Boudh, Dist- Boudh, Odisha
216	297 of 2014	FARMER	KATKALA	Rice	Manmath Patra, Badas, Block- Baliapal, Dist- Balasore, Odisha
217	298 of 2014	FARMER	SUNAKHADI	Rice	Harihar Parida, Nuagaon, Block- Remuna, Dist- Balasore, Odisha
218	299 of 2014	FARMER	DO-BHAJONA	Rice	Ashok Ku. Sahu, Harsapur, Block- Sadar Keonjhar, Dist- Keonjhar, Odisha
219	300 of 2014	FARMER	RASPANJAR	Rice	Dhananja Das Adhikari, Gopinathput, Block- Bhogarai, Dist- Balasore, Odisha

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220	301 of 2014	FARMER	NIMEI	Rice	Debendra Jena and others, Mahadevsarai, Block-Basta, Dist- Balasore, Odisha
221	302 of 2014	FARMER	SITASALI	Rice	Radhashyama Giri, Kulida, Block- Basta, Dist-Balasore, Odisha
222	303 of 2014	FARMER	MAJHALI JHULI	Rice	Chakaradhar Bag and others, Ganeshpur, Block-Binka, Dist- Subarnapur, Odisha
223	304 of 2014	FARMER	DHUSURA	Rice	Gadadhar Samantaraya, Ramabilli, Block-Tangi, Dist- Khurdha, Odisha
224	305 of 2014	FARMER	KALAKAINCHA	Rice	Prabhat Ku. Dash and others, Dia (Kolha Sahi), Block- Tangi, Dist- Khurdha, Odisha
225	306 of 2014	FARMER	SAGIRI	Rice	Pankaja Mahanty, Kalia Khia, Block- Baliapal, Dist-Balasore, Odisha
226	307 of 2014	FARMER	MALJHALKA	Rice	Satrughan Pradhan, Janmura, Block- Sonepur, Dist- Subranapur, Odisha
227	308 of 2014	FARMER	BUNDE	Rice	Nepal Mallik, Haldipali, Block- Sonepur, Dist-Subranapur, Odisha
228	309 of 2014	FARMER	VELERI	Rice	Nakula Jena, Puskura, Block- Anandapur, Dist-Keonjhar, Odisha
229	310 of 2014	FARMER	ANKUL	Rice	Laxman Barik and others, Gendabahal, Block-Ulunda, Dist- Subarnpur, Odisha
230	311 of 2014	FARMER	LAGHUSANLI	Rice	Gopinath Samantaray and others, Ramabilli, Block-Tangi, Dist- Khurdha, Odisha
231	312 of 2014	FARMER	MUGUDHI-S	Rice	Bharamar Naik and others, Maradugochha, Block-Tarabha, Dist- Subarnapur, Odisha
232	313 of 2014	NEW	DSV 6 (CSV 25)	SORGHUM	Indian Council of Agricultural Research
233	314 of 2014	NEW	CSV 24SS	SORGHUM	Indian Council of Agricultural Research
234	315 of 2014	Extant	GG-14 (JSP-28)	Groundnut	Indian Council of AgriculturalResearch
235	316 of 2014	Extant	GG-7 (Gujarat Groundnut-7)	Groundnut	Indian Council of Agricultural Research
236	317 of 2014	Extant	Gujarat Junagadh Groundnut 9 (GJG-9) (J-69)	Groundnut	Indian Council of Agricultural Research (ICAR)
237	318 of 2014	Extant	GJG-HPS-1 (JSP-HPS-44)	Groundnut	Indian Council of Agricultural Research (ICAR)
238	319 of 2014	Extant	Gujarat Junagadh Groundnut 31 (GJG-31) (J-71)	Groundnut	Indian Council of Agricultural Research (ICAR)
239	320 of 2014	Extant	GG-8 (J-53)	Groundnut	Indian Council of Agricultural Research
240	321 of 2014	Extant	PAC 835 (PAC 80035) (IET 18178)	Rice	Advanta India Limited
241	322 of 2014	FARMER	K-PUAGI	Rice	Trilochana Rout, Brundabahal, Block- Golamunda, Dist- Kalahandi, Odisha
242	323 of 2014	FARMER	MALATA	Rice	Pitamber Mahanta, Kathashar, Block- Patna, Dist-Keonjhar, Odisha
243	324 of 2014	FARMER	RAJAMANI-K	Rice	Gajindra Dora and others, Kandama, Block—Lanjigarh, Dist- Kalahandi, Odisha
244	325 of 2014	FARMER	KALAMULIA	Rice	Bhakta Batsal Mangaraj and others, Bhatimunda, Block- Tangi-Choudwar, Dist- Cuttack, Odisha
245	326 of 2014	EXTANT	Pusa Vijay (NPJ-93)	Indian Mustard	Indian Agriculture Research Institute, New Delhi

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246	327 of 2014	EXTANT	Pusa Mustard 28 (NPJ-124)	Indian Mustard	Indian Agriculture Research Institute, New Delhi
247	328 of 2014	EXTANT	Pusa Mustard 22 (LET-17)	Indian Mustard	Indian Agriculture Research Institute, New Delhi
248	329 of 2014	EXTANT	Pusa Mahak (JD-6)	Indian Mustard	Indian Agriculture Research Institute, New Delhi
249	330 of 2014	EXTANT	Pusa EJ-9912-13	Indian Mustard	Indian Agriculture Research Institute, New Delhi
250	331 of 2014	EXTANT	Pusa Aditya (NPC-9)	Indian Mustard	Indian Agriculture Research Institute, New Delhi
251	332 of 2014	EXTANT	Pusa Karishma (LES-39)	Indian Mustard	Indian Agriculture Research Institute, New Delhi
252	333 of 2014	EXTANT	Pusa Mustard-25 (NPJ-112)	Indian Mustard	Indian Agriculture Research Institute, New Delhi
253	334 of 2014	EXTANT	Pusa Mustard-24 (LET-18)	Indian Mustard	Indian Agriculture Research Institute, New Delhi
254	335 of 2014	EXTANT	Pusa Swarnim (IGC-01)	Indian Mustard	Indian Agriculture Research Institute, New Delhi
255	336 of 2014	EXTANT	PKV Green Gold	GREEN GRAM	PDKV
256	337 of 2014	EXTANT	JAKI-9218	CHICKPEA	PDKV
257	338 of 2014	EXTANT	AKU-15	BLACK gram	PDKV
258	339 of 2014	EXTANT	Gulak-1 (Gulabi Akola-1)	CHICKPEA	PDKV
259	340 of 2014	FARMER	KANTHAMADHUA	Rice	Narotam Majhi and others, Achalkote, Block-Tigiria, Dist- Cuttack, Odisha
260	341 of 2014	FARMER	JHULIPUAGI	Rice	Prasanta Pradhan and others, Khuntalapali, Block-Ulunda, Dist- Subarnapur, Odisha
261	342 of 2014	FARMER	Koraput-Dasamantapur-ASAM CHUDI	Rice	Asutosh Nanda, Dasamantapur, Block-Baipariguda, Dist- Koraput, Odisha
262	343 of 2014	FARMER	DEULA BHOGA	Rice	Dambrudhar Majhi and others, Dakkata, Block—Th. Rampur, Dist- Kalahandi, Odisha
263	344 of 2014	FARMER	NILAPARI	Rice	Bhagatram Adbari and others, Pakanguda, Block-K. Gumma, Dist- Malkangiri, Odisha
264	345 of 2014	FARMER	MUGEI-B	Rice	Manmath Patra, Badas, Block- Baliapal, Dist-Balasore, Odisha
265	346 of 2014	FARMER	BIRAMANI	Rice	Indramani Panigrahi and others, Darlipada, Block-Thikpali, Dist- Nuapada, Odisha
266	347 of 2014	FARMER	HIRAN	Rice	Bihari Kata and others, Dhungiamunda, Block-Sinapali, Dist- Nuapada, Odisha
267	348 of 2014	FARMER	LATAMAHU	Rice	Mayadhar Sahoo and others, Godijharia, Block-Tigiria, Dist- Cuttack, Odisha
268	349 of 2014	FARMER	PUGAKALS	Rice	Sri. Ramachandra Madkami and others, Kichipalli, Block- Korukonda, Dist- Malkangiri, Odisha
269	350 of 2014	Extant	Dhara Mustard Hybrid-1 (DMH-1)	Indian Mustard	National dairy development board & university of south Delhi campus
270	351 of 2014	EXTANT	Jawahar Mustard-3 (JMM-915)	Indian Mustard	Rajmata Viajayaraje Scindia
271	352 of 2014	EXTANT	Jawahar Mustard-2 (JMWR-941-1-2)	Indian Mustard	Rajmata Viajayaraje Scindia

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272	353 of 2014	EXTANT	Malava Ratna (HD 4672)	Wheat	Indian Council of Agricultural Research (ICAR)
273	354 of 2014	EXTANT	HI 8627 (Malav Kirti)	Wheat	Indian Council of Agricultural Research
274	355 of 2014	EXTANT	POSHAN (HI 8663)	Wheat	Indian Council of Agricultural Research
275	356 of 2014	NEW	KSR 6203	SORGHUM	M/S Kaveri seed ltd.
276	357 of 2014	EXTANT	MACS 2971	Wheat	Indian Council of Agricultural Research
277	358 of 2014	extant	DPW 621-50 (PBW 621 and DBW 50)	Wheat	Indian Council of Agricultural Research
278	359 of 2014	EXTANT	Pant Soya-1092	Soybean	Indian Council of Agricultural Research (ICAR)
279	360 of 2014	extant	Pant Soybean-1225 (PS-1225)	SOYBEAN	Indian Council of Agricultural Research (ICAR)
280	361 of 2014	EXTANT	Pant Soybean 1347 (PS-1347)	SOYBEAN	Indian Council of Agricultural Research (ICAR)
281	362 of 2014	EXTANT	Phule Harit (RHRB-16)	BRINJAL	Mahatma phule krishi vidyapeeth Rahuri
282	363 of 2014	Farmer	K-Th-Rampur-ASAN CHUDI	Rice	Gopal Pujhari and others, Jages Padar, Block-Th-Rampur, Dist- Kalahandi, Odisha
283	364 of 2014	Farmer	RAGHUCHINAMAL	Rice	Gupteswar SHG, Reshma bibi and others, Raghuchinamal, Block- Boudh, Dist- Boudh, Odisha
284	365 of 2014	Farmer	ATHOGADIA	Rice	Dusmanta Rout and others, Simlipal, Block-Pallahara, Dist- Anugul, Odisha
285	366 of 2014	Farmer	BHUTIYA	Rice	Krupasindhu Barad and others, Gaudaput, Block-Odagaon, Dist- Nayagarh, Odisha
286	367 of 2014	Farmer	MAKADHANA	Rice	Bagun Ho, Block- Anandapur, Dist- Keonjhar, Odisha
287	368 of 2014	Farmer	RAMAKRUSHNA BILASHA	Rice	Gandharbha Sahoo and others, Kurudal, Block Baharpal, Dist- Anugul, Odisha
288	369 of 2014	Farmer	BAREI	Rice	Brajabandhu Majhi and others, Kukudi Pastipada, Block- Bhawanipatna, Dist- Kalahandi, Odisha
289	370 of 2014	Farmer	TURI KANHEI	Rice	Tankadhar Pradhan and others, Hatiadanda, Block- Kaniha, Dist- Anugul, Odisha
290	371 of 2014	Farmer	SURIYAKANTI	Rice	Tarunasen Biswal and others, Bagadari, Block-Pallahara, Dist- Anugul, Odisha
291	372 of 2014	Farmer	KALAKETAKI (KALAKRUSHANA)	Rice	Sri Gokul Chandra Pujhari, Narla, Block- Narla, Dist- Kalahandi, Odisha
292	373 of 2014	Farmer	NALI JAGANNATH	Rice	Pramod Barad and others, Gaudaput, Block-Odagaon, Dist- Nayagarh, Odisha
293	374 of 2014	Farmer	KUSUMA KUNDA	Rice	Upendra Kumar Sahoo and others, Biruda, Block-Nayagarh, Dist- Nayagarh, Odisha
294	375 of 2014	Farmer	PRUTHIRAJ	Rice	Bimal Patra, Matia, Block- Dharamgarh, Dist-Kalahandi, Odisha
295	376 of 2014	Farmer	KALAMA	Rice	Sisir Kumar Bhanja and others, Khatia, Block—Ranapur, Dist- Nayagarh, Odisha
296	377 of 2014	Farmer	GIDHAN PAKHI	Rice	Durman Majhi, Uchhla, Block- Jaipatna, Dist-Kalahandi, Odisha
297	378 of 2014	Farmer	B-HUNAR	Rice	Dhabaleswar Bhoi, Bad Dunguriguda, Block—Karlamunda, Dist- Kalahandi, Odisha
298	379 of 2014	Farmer	KALAKUSUMA	Rice	Nabaghana Bahuka, Balsinga, Block—Narla, Dist-Kalahandi, Odisha

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299	380 of 2014	Farmer	KADALIA CHAMPA	Rice	Haramohan Patra and others, Khairapati, Block—Nayagarh, Dist- Nayagarh, Odisha
300	381 of 2014	Farmer	JHALIAMENJU	Rice	Dhanmat Majhi and others, Dumerbahal, Block—Bhawanipatna, Dist- Kalahandi, Odisha
301	382 of 2014	Farmer	KALAMUGAJAI	Rice	Sanjaya Sahoo and others, Dalabehera sahi, Block- Anugul, Dist- Anugul, Odisha
302	383 of 2014	Farmer	Ngrh-BAIGANA MANJI	Rice	Jayakrushna Sahoo and others, Paderipatana, Block- Nayagarh, Dist- Nayagarh, Odisha
303	384 of 2014	Farmer	MALHUNDAR	Rice	Purusotam Rana, Baragaon, Block- Kantamal, Dist- Boudh, Odisha
304	385 of 2014	Farmer	PARIJATA	Rice	Balamakunda Mahakud and others, Ambagaon, Block—M. Rampur, Dist- Kalahandi, Odisha
305	386 of 2014	Farmer	LANDA	Rice	Moti Rana, Bramanimunda, Block—Karlamunda, Dist- Kalahandi, Odisha
306	387 of 2014	Farmer	BILEI KHUJI	Rice	Dayanidi Naik, Sargiguda, Block- Golamunda, Dist- Kalahandi, Odisha
307	388 of 2014	Farmer	KAKUDI MANJI-M	Rice	Dhurandar Dhakad and others, Khadimati, Block-Mathili, Dist- Malkangiri, Odisha
308	389 of 2014	Farmer	Boudh-RANISIALI	Rice	Achuta Rana, Biranarasinghpur, Block- Kantamal, Dist- Boudh, Odisha
309	390 of 2014	Farmer	K-Gunpur-KALAKRUSHNA	Rice	Chinna Rao Dishari and others, Gunpur, Block—Th- Rampur, Dist- Kalahandi, Odisha
310	391 of 2014	Farmer	NABABI (BASUMATI)	Rice	Hadibandhu Parida, Talasahi Begunia, Block--Begunia, Dist- Khurdha, Odisha
311	392 of 2014	Farmer	BHOGI	Rice	Shyama Pujhari and others, Gunpur, Block—Th-Rampur, Dist- Kalahandi, Odisha
312	393 of 2014	Farmer	LANDI	Rice	Kailash Ch. Behera and others, Sanagar, Block-Ranapur, Dist- Nayagarh, Odisha
313	394 of 2014	Farmer	PIPALBASA	Rice	Rabindra Kumar Parida, Trutiapada, Block--Bolgarh, Dist- Khurdha, Odisha
314	395 of 2014	Farmer	BUDHI	Rice	Lakia Majhi and others, Purunaguma, Block--Rampur, Dist- Kalahandi, Odisha
315	396 of 2014	Farmer	GORUKHIA DHAN	Rice	Suna Majhi and others, Latiaguda Jamguda, Block—Th- Rampur, Dist- Kalahandi, Odisha
316	397 of 2014	Farmer	CHIPTIPHAL	Rice	Amar Sing Majhi and others, Latiaguda Jamguda, Block—Th- Rampur, Dist- Kalahandi, Odisha
317	398 of 2014	Farmer	Rampur Local	Sorghum	Neeraj Kalyan Samiti, Gram Chakarpur, Block-Bazpur, Dist- Udham Singh Nagar, State-Uttarakhand
318	399 of 2014	New	TULASI-118	Cotton	M/S Tulasi Seeds Pvt. Ltd.
319	400 of 2014	New	TULASI-7	Cotton	M/S Tulasi Seeds Pvt. Ltd.
320	401 of 2014	Extant	PKV SUVARNA (AKDH-5)	Cotton	Dr. Panjabrao Deshmukh Krishi Vidyapeeth
321	402 of 2014	Extant (VCK)	25P25	Rice	Pioneer Overseas corporation
322	403 of 2014	Extant (VCK)	RS585	SORGHUM	Indian Council of Agricultural Research
323	404 of 2014	Extant (VCK)	104A	SORGHUM	Indian Council of Agricultural Research
324	405 of 2014	Extant (VCK)	27A	SORGHUM	Indian Council of Agricultural Research
325	406 of 2014	New	27P77	Rice	Pioneer Overseas corporation
326	407 of 2014	New	VBCH-1520 BG-II	Cotton	Centromere Biosolutions Pvt. Ltd,

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327	408 of 2014	Farmer	Ganjam-BASUMATIDHANA	Rice	Bhima Jani, At- Paluakhalla, Block- Senakhemund, Dist- Ganjam, Odisha
328	409 of 2014	Farmer	MAYURCHULIA	Rice	Sarat Ch. Nayak, At- Badangi, Block- Bhanjanagar, Dist- Ganjam, Odisha
329	410 of 2014	Farmer	RUPASALI	Rice	Haribol Barik and others, Gabagoda, Block-Bhuban, Dist- Dhenkanal, Odisha
330	411 of 2014	Farmer	NADALGHANTA	Rice	Sanjay Kumar Dandpat and others, At- Sunagadia, Block- Bisoi, Dist- Mayurbhanja, Odisha
331	412 of 2014	Farmer	JAGABALIA	Rice	Laxmidhar Muduli and others, At- Dina Udharan, Block- Pipli, Dist- Puri, Odisha
332	413 of 2014	NEW	Nirmal-30 (NPH-30)	Rice	Nirmal Seeds Private Ltd.
333	414 of 2014	NEW	CSH 24 MF	SORGHUM	Indian Council of Agricultural Research (ICAR)
334	415 of 2014	Extant	Phule Anuradha (RSV 458)	SORGHUM	Mahatma phule krishi vidyapeeth Rahuri
335	416 of 2014	Farmer	BALIADADHA	Rice	Rahasa Mohapatra and others, At- Nankera, Block- Kanas, Dist- Puri, Odisha
336	417 of 2014	Farmer	Angl-Kumbhibahal-GANJEIJATA	Rice	Kapila Pradhan and others, Kumbhibahal, Block-Pallahara, Dist- Anugul, Odisha
337	418 of 2014	Farmer	DHALA JEERA	Rice	Jatindra Pradhan, Bhanpure, Block-Narla, Dist-Kalahandi, Odisha
338	419 of 2014	Farmer	BALI BHAJANA-T	Rice	Rajesh Dandapat and others, At- Badsiajung, Block- Tiring, Dist- Mayurbhanja, Odisha
339	420 of 2014	Farmer	MATIAKHOJA	Rice	Sudhakar Swain and others, At- Palashapithia, Block-Bhuban, Dist- Dhenkanal, Odisha
340	421 of 2014	Farmer	NANHU	Rice	Phularani Dehury and others, At- Dihadol, Block-Parjing, Dist- Dhenkanal, Odisha
341	422 of 2014	Farmer	KANAKA CHAMPA	Rice	Kandia Nayak and others, Dihadol, Block-Parjing, Dist- Dhenkanal, Odisha
342	423 of 2014	Farmer	KALACHAMPA-D	Rice	Manmohan Dash and others, At- Karagola, Block-Kankadahed, Dist- Dhenkanal, Odisha
343	424 of 2014	Farmer	N-UMERCHUDI	Rice	Parsuram Nayak and others, Jatabal, Block-Papdahandi, Dist- Nabarangapur, Odisha
344	425 of 2014	Farmer	GUNJIMANIK	Rice	Sujit Kumar Behera and others, Kandarasuni, Block-Hindol, Dist- Dhenkanal, Odisha
345	426 of 2014	Farmer	SARASWATI	Rice	Purna ch. Parida and others, At- Podanga, Block-Pipli, Dist- Puri, Odisha
346	427 of 2014	Farmer	JADUMONI	Rice	Mangalu Jani, At- Paluakhalla, Block-Senakhemund, Dist- Ganjam, Odisha
347	428 of 2014	Farmer	KENDERABALI	Rice	Jogi Patra and others, At- Budhibili, Block-Kamakhyanagar, Dist- Dhenkanal, Odisha
348	429 of 2014	Farmer	SRI BALARAMA	Rice	Hadu Dalabehera, At- Kolathigaon, Block-Rangeilunda, Dist- Ganjam, Odisha
349	430 of 2014	Farmer	CHINAMALI-K	Rice	Sri Binod Singh and others, Borbhata, Block- M. Rampur, Dist- Kalahandi, Odisha
350	431 of 2014	Farmer	DHOIA BANKOI	Rice	Rajkishor Martha and others, At- Oupada, Block-Delang, Dist- Puri, Odisha
351	432 of 2014	Farmer	SITABHOG	Rice	Jatindra Prasad Das, Dharamgarh, Block-Dharamgarh, Dist- Kalahandi, Odisha
352	433 of 2014	Farmer	DHANAREKHA	Rice	Sri B Brundabana, At- Sunareddy, Block- Patrapur, Dist- Ganjam, Odisha

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353	434 of 2014	Farmer	DHANASHREE	Rice	Smt. S. Sarojini Rao, At- Sunapur, Block- Chikiti, Dist- Ganjam, Odisha
354	435 of 2014	Farmer	MALPA	Rice	Krushna Ch. Naik, Sargiguda, Block-Jaipatna, Dist- Kalahandi, Odisha
355	436 of 2014	Farmer	HUNDA	Rice	Natabara Nayak and others, At- Katapada, Block- Kanas, Dist- Puri, Odisha
356	437 of 2014	Farmer	Puri-CHAMPA-O	Rice	Rabindra Kumar Bhoi and others, At- Adheisa, Block- Satabadi, Dist- Puri, Odisha
357	438 of 2014	Farmer	RUKSAL	Rice	Narendra Naik and others, At- Birudihi, Block- Baripada, Dist- Mayurbhanja, Odisha
358	439 of 2014	Farmer	SAFARI	Rice	Prahallad Soura and others, Pandikot, Block- Papdahandi, Dist- Nabarangapur, Odisha
359	440 of 2014	Farmer	RATAN MALI	Rice	Kumar Harpal, Nasigaon, Block- Kesinga, Dist- Kalahandi, Odisha
360	441 of 2014	Farmer	BHATAMAKADA	Rice	Subash Chandra Sahu and others, Bikrampur, Block- Nabarangapur, Dist- Nabarangapur, Odisha
361	442 of 2014	Farmer	SARUCHINA	Rice	Alekha Nayak and others, At- Baulpur, Block- Odapada, Dist- Dhenkanal, Odisha
362	443 of 2014	Farmer	SALUGAJA	Rice	Lingaraja Panigrahi, At- Narayanapatna, Block- Bhanjanagar, Dist- Ganjam, Odisha
363	444 of 2014	Farmer	KHAJARA	Rice	Bijay Parida and others, At- Panchukera, Block- Satabadi, Dist- Puri, Odisha
364	445 of 2014	Farmer	LAKSHMIVILASH	Rice	Chandra Sekhar Behera and others, At- Bijabandali, Block- Muniguda, Dist- Raigada, Odisha
365	446 of 2014	Farmer	DHOIA MADHOI	Rice	Lingaraj Parida and others, At- Bolakana, Block- Delanga, Dist- Puri, Odisha
366	447 of 2014	Farmer	SALAFULA	Rice	Motilal Sahu, At- Raidandia, Block- Udala, Dist- Mayurbhanja, Odisha
367	448 of 2014	Farmer	LUNA	Rice	Sanjeeb Mohanta, At- Maitrapur, Block- Badasahi, Dist- Mayurbhanja, Odisha
368	449 of 2014	Farmer	KAKIRI	Rice	Ashok Behera, At- Pedasadi, Block- Kaptepada, Dist- Mayurbhanja, Odisha
369	450 of 2014	Farmer	SARUBHAJANA	Rice	Padmalochana Bindhani, At- Pedasadi, Block- Kaptepada, Dist- Mayurbhanja, Odisha
370	451 of 2014	Farmer	CHAMPANEULI	Rice	Dilip Kumar Behera and others, Rayamohanpur, Block-Hindol, Dist- Dhenkanal, Odisha
371	452 of 2014	Farmer	BRAHMANIBARI	Rice	Suratha Sahu, Deopali, Block-Larhanpur, Dist- Jharsuguda, Odisha
372	453 of 2014	Farmer	ICHHABATI	Rice	Dullobho Soura and others, Taragam, Block- Nabarangapur, Dist- Nabarangapur, Odisha
373	454 of 2014	Farmer	TAARES	Rice	Daman Marndi and others, At- Kalabadia, Block- Bangriposi, Dist- Mayurbhanja, Odisha
374	455 of 2014	Farmer	SANKARCHINI	Rice	Benudhar Sahoo and others, At- Gologadia, Block- Kankadahed, Dist- Dhenkanal, Odisha
375	456 of 2014	Farmer	SANLIMADHOI	Rice	Babrubahan Parida and others, At- Barada, Block- Kanas, Dist- Puri, Odisha
376	457 of 2014	Farmer	K- Langigarh-MAHIPAL	Rice	Hrushi Majhi and others, Laktakhaman, Block- Langigarh, Dist- Kalahandi, Odisha
377	458 of 2014	Farmer	NALIKALAMA	Rice	Deepak Kumar Choudhury, At- Mallaharpad, Block- Khanto, Dist- Mayurbhanja, Odisha

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378	459 of 2014	Farmer	PAHAD BHANGA	Rice	Sunaram Murmu and others, At- Andhari, Block-Rasagobindapur, Dist- Mayurbhanja, Odisha
379	460 of 2014	Farmer	GANGABALI	Rice	Modan Gouda, At- Gopalpur, Block- Soroda, Dist-Ganjam, Odisha
380	461 of 2014	Farmer	LABANGALATA	Rice	Dilip Behera and others, At- Karagola, P.S. Kankadahad, Dist- Dhenkanal, Odisha
381	462 of 2014	Farmer	GETHU-K	Rice	Parbat Chhatria, Sargul malpada, Block-Karlamunda, Dist- Kalahandi, Odisha
382	463 of 2014	Extant (VCK)	INDORE 12	SORGHUM	Indian Council of Agricultural Research
383	464 of 2014	Extant (VCK)	MS7A	SORGHUM	Indian Council of Agricultural Research
384	465 of 2014	Extant (VCK)	27B	SORGHUM	Indian Council of Agricultural Research (ICAR)
385	466 of 2014	Extant (VCK)	NBCH-206	Castor	Navbharat Seeds Pvt. Ltd.
386	467 of 2014	Extant	TLG-45	Ground nut	Indian Council of Agricultural Research (ICAR)
387	468 of 2014	Extant (VCK)	104B	SORGHUM	Indian Council of Agricultural Research (ICAR)
388	469 of 2014	Extant	GG-21 (JSSP 15)	Ground nut	Indian Council of Agricultural Research
389	470 of 2014	Extant (VCK)	AKR 354	SORGHUM	Indian Council of Agricultural Research
390	471 of 2014	Extant	Varshadhan (CRLC-899) (IET-16481)	Rice	Indian Council of Agricultural Research
391	472 of 2014	Extant (VCK)	MS7B	SORGHUM	Indian Council of Agricultural Research
392	473 of 2014	Extant (VCK)	Karishma NP111	Rice	Nuziveedu Seeds Limited
393	474 of 2014	Extant (VCK)	Silky-277	Rice	Krishidhan Seeds Private Limited
394	475 of 2014	Farmer	KANIAR	Rice	Sudhir Palatasingh and others, At- Kakharubasta, Block- Kanas, Dist- Puri, Odisha
395	476 of 2014	Farmer	PANIROHI	Rice	Subash Nayak, At- Talapada, Block- Badasahi, Dist- Mayurbhanja, Odisha
396	477 of 2014	Farmer	MOHAN BHOG	Rice	Sri Dhanurjaya Behera, Dhanshli, Block-Jaipatna, Dist- Kalahandi, Odisha
397	478 of 2014	Farmer	Ganjam-TULASIBASA	Rice	Bhaskar Pati, At- Bamkoi, Block- Patrapur, Dist-Ganjam, Odisha
398	479 of 2014	Farmer	DHUSURA	Rice	Sarat Ch. Behera and others, At- Budhibili, Block-Kamakhyanagar, Dist- Dhenkanal, Odisha
399	480 of 2014	Farmer	KABRI	Rice	Kishor Baskey and others, At- Kendua, Block-Bahalda, Dist- Mayurbhanja, Odisha
400	481 of 2014	Farmer	MUGDI-K	Rice	Surata Sahu, Khaliapali, Block-Karlamunda, Dist-Kalahandi, Odisha
401	482 of 2014	Farmer	CHUDI-D	Rice	Padman Sing Majhi and others, Dak kta, Block-Th-Rampur, Dist- Kalahandi, Odisha
402	483 of 2014	Farmer	PARBAT JIRA	Rice	Brusav Naik, Golamunda, Block- Golamunda, Dist-Kalahandi, Odisha
403	484 of 2014	Farmer	K-Balisara-LAKTIMACHI	Rice	Jaya Naik and others, Balisara, Block-Th-Rampur, Dist- Kalahandi, Odisha
404	485 of 2014	Farmer	TIKIMASURI	Rice	Udaya Nath Pradhan, At- Madan Mohanpur, Block-Digapahandi, Dist- Ganjam, Odisha
405	486 of 2014	Extant	PKV Kabuli-2	CHICKPEA	Dr. Panjabrao Deshmukh Krishi Vidyapeeth
406	487 of 2014	Extant (VCK)	RS 673	SORGHUM	Indian Council of Agricultural Research
407	488 of 2014	New	CR BORO DHAN 2	Rice	Indian Council of Agricultural Research
408	489 of 2014	Extant (VCK)	AKMS 14A	SORGHUM	Indian Council of Agricultural Research)

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409	490 of 2014	Extant (VCK)	2219 B	SORGHUM	Indian Council of Agricultural Research
410	491 of 2014	Extant (VCK)	Swadeshi 5	Diploid Cotton	Ankur Seeds(P) Limited
411	492 of 2014	Extant	NARI-H-15	Safflower	Indian Council of Agricultural Research
412	493 of 2014	New	NUA KALAJEERA	Rice	Indian Council of Agricultural Research
413	494 of 2014	Extant (VCK)	296B	SORGHUM	Indian Council of Agricultural Research
414	495 of 2014	New	CR DHAN 70	Rice	Indian Council of Agricultural Research
415	496 of 2014	Extant	NARI-NH-1 (PH-6)	Safflower	Indian Council of Agricultural Research
416	497 of 2014	Extant (VCK)	C43	SORGHUM	Indian Council of Agricultural Research
417	498 of 2014	New	KSF-260A	Sunflower	Kaveri Seed Company Limited
418	499 of 2014	Farmer	DAMODARBHOGA	Rice	Sita Dehuri and others, At- Palashapithia, Block-Bhuban, Dist- Dhenkanal, Odisha
419	500 of 2014	Farmer	KALAKADAMBA	Rice	Bichitrananda Jena and others, Govindapur, Block-Sadar, Dist- Dhenkanal, Odisha
420	501 of 2014	Farmer	LATACHAUNRI	Rice	Sarat Chandra Dandpat and others, At- Sunagadia, Block- Bisoi, Dist- Mayurbhanja, Odisha
421	502 of 2014	Farmer	SARUCHINAMALI	Rice	Gatikrushana Sahu and others, At- Talabarkote, Block-Sadar, Dist- Dhenkanal, Odisha
422	503 of 2014	Farmer	BISHNUPRIYA	Rice	Pranabandhu Patra and others, Kankada Soda, Block-Parjang, Dist- Dhenkanal, Odisha
423	504 of 2014	Farmer	KALAM KATHI	Rice	Madanmohan Naik and others, At- Badsiajung, Block- Tiring, Dist- Mayurbhanja, Odisha
424	505 of 2014	Farmer	MADHURISONA	Rice	Satrughana Nayak and others, At-Gobindanagar, Block- Chikiti, Dist- Ganjam, Odisha
425	506 of 2014	Farmer	LAXMI-P	Rice	Fakira Behera and others, At- Kusumeswar, Block-Satabadi, Dist- Puri, Odisha
426	507 of 2014	Farmer	BUDHAMUNDA	Rice	Sudhansu Ratha and others, At- Bhumpur, Block-Satabadi, Dist- Puri, Odisha
427	508 of 2014	Farmer	RANGASIULI	Rice	Chabinarayan Dehury and others, At- Bangalo, Block- Gondia, Dist- Dhenkanal, Odisha
428	509 of 2014	Farmer	MADHABI	Rice	Nrusingha Ch. Sahoo and others, At- Orissinga, Block- Gondia, Dist- Dhenkanal, Odisha
429	510 of 2014	Farmer	SANRASI	Rice	Shibnath Mohanta and others, At- Pansi, Block-Rarnan, Dist- Mayurbhanja, Odisha
430	511 of 2014	Farmer	MAKARKAND	Rice	Nabaghana Mahanta and others, At- Gopalpur, Block- Baripada, Dist- Mayurbhanja, Odisha
431	512 of 2014	Farmer	BASUDHA-R	Rice	Hadu Dalabehera and others, At- Kolathigaon, Block- Rangeilunda, Dist- Ganjam, Odisha
432	513 of 2014	Farmer	SARIAN-K	Rice	Purna Chandra Naik and others, Nunpur, Block—M. Rampur, Dist- Kalahandi, Odisha
433	514 of 2014	Farmer	DHOB LUCHE	Rice	Abhi Jani and others, Dangripadar, Block-Bhawanipatna, Dist- Kalahandi, Odisha
434	515 of 2014	Farmer	BHATAMALLI	Rice	Debo Amanatya and others, Dongerveja, Block-Nandahandi, Dist- Nabarangapur, Odisha
435	516 of 2014	Farmer	KUTIARASHI	Rice	Jubraj Jani and others, Dangripadar, Block-Bhawanipatna, Dist- Kalahandi, Odisha
436	517 of 2014	Farmer	KARPURAJIRA	Rice	Raghu Bag and others, Deypur, Block-Kalampur, Dist- Kalahandi, Odisha
437	518 of 2014	Farmer	PADMA KESHARI	Rice	Smt. Mamata Pradhan, At- Karchuli, Block-Buguda, Dist- Ganjam, Odisha

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438	519 of 2014	Farmer	MEHAR	Rice	Damu Saura and others, Dongerveja, Block- Nandahandi, Dist- Nabarangapur, Odisha
439	520 of 2014	Farmer	TULSIBAS	Rice	Birbal Dalpati and others, Batiaguda, Block- Kalahandi, Dist- Kalahandi, Odisha
440	521 of 2014	Farmer	K-BADAMAHIPAL	Rice	Binod Sahu and others, Kaliamal, Block- Bhawanipatna, Dist- Kalahandi, Odisha
441	522 of 2014	Farmer	ALEKHSORI	Rice	Biswanath Naik, Mahima, Block- Koksara, Dist- Kalahandi, Odisha
442	523 of 2014	Farmer	HALADIGUNDI-M	Rice	Jogendra Nath Naik and others, At- Chainbaingi, Block- Thakurmunda, Dist- Mayurbhanja, Odisha
443	524 of 2014	Farmer	MOTAHALKAL	Rice	Sukul Hembram and others, At- Paramananda, Block- Morada, Dist- Mayurbhanja, Odisha
444	525 of 2014	Farmer	NARDI	Rice	Sankar Naik and others, At- Chainbaingi, Block- Thakurmunda, Dist- Mayurbhanja, Odisha
445	526 of 2014	Farmer	PADARBANKI	Rice	Mangalu Jani and others, At-Paluakhalla, Block- Senakhemund, Dist- Ganjam, Odisha
446	527 of 2014	Farmer	SAMBALPURI	Rice	Tulashi Majhi and others, Jurakhaman, Block-M. Rampur, Dist- Kalahandi, Odisha
447	528 of 2014	Farmer	GANGARAM	Rice	Balabhadra Mohanta and others, At- Gambhariapal, Block- Sukruli, Dist- Mayurbhanja, Odisha
448	529 of 2014	Farmer	RAAS	Rice	Saharai Mohanta and others, At- Jhadadumania, Block- Badadeuli, Dist- Mayurbhanja, Odisha
449	530 of 2014	Farmer	BHALUSADI	Rice	Sri Gadadhar Majhi and others, At- Mankadajhola, Block- Kasipur Dist- Raigada, Odisha
450	531 of 2014	Farmer	BHUT MUNDI	Rice	Basanta Marandi and others, At- Paramananda, Block- Morada, Dist- Mayurbhanja, Odisha
451	532 of 2014	Farmer	NANDI	Rice	Dharmapada Gouda and others, At- Sana Anla, Block- Krushanaprasad, Dist- Puri, Odisha
452	533 of 2014	Farmer	DIMAPUR	Rice	Sibaram Gouda, At- Jhalia Gochha, Block- Bhanjanagar, Dist- Ganjam, Odisha
453	534 of 2014	Farmer	KALAHIRA	Rice	Padmanav Majhi, At- Sahebi, Block- Naktideul, Dist- Sambalpur, Odisha
454	535 of 2014	Farmer	HABIRA	Rice	Bipin Bihari Biswal and others, At- Palabasta, Block- Kakatpur, Dist- Puri, Odisha
455	536 of 2014	Farmer	KEUTIA	Rice	Maheswar Tarai and others, At- Kuapada, Block- Brahmagiri, Dist- Puri, Odisha
456	537 of 2014	Farmer	Jsg-KALAGIRA	Rice	Sarat Kumar Patel, Kirmira, Block- Kirmira, Dist- Jharsuguda, Odisha
457	538 of 2014	Farmer	DAL	Rice	Ghana Sahani and others, Niali, Block-Lanjigarh, Dist- Kalahandi, Odisha
458	539 of 2014	Farmer	ABHIRMAN	Rice	Nabaghana Mahanta and others, At- Gopalpur, Block- Baripada, Dist- Mayurbhanja, Odisha
459	540 of 2014	Farmer	LATACHAUNRI-M	Rice	Dusmanta Kumar Raut and others, At- Badhaldia kand, Block- Kuliana, Dist- Mayurbhanja, Odisha
460	541 of 2014	Farmer	DHOBA BHAJANA	Rice	Pratap Ch. Naik and others, At- Digposi, Block- Jarhipur, Dist- Mayurbhanja, Odisha
461	542 of 2014	Farmer	MAGURMANJI	Rice	Gauranga Ku Nayak and others, At- Ohala, Block- Nimapada, Dist- Puri, Odisha
462	543 of 2014	Farmer	GELHEIGUTI	Rice	Manju Naik and others, At- Rentapat, Block- Parjang, Dist- Dhenkanal, Odisha

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463	544 of 2014	Farmer	YADA	Rice	Satyabadi Biswal and others, Dumerguda, Block-M. Rampur, Dist- Kalahandi, Odisha
464	545 of 2014	Farmer	KANTA KAPURA	Rice	Janmejoy Giri and others, At- Bad Bhaliadiha, Block- Kuliana, Dist- Mayurbhanja, Odisha
465	546 of 2014	Farmer	RUPAPATIA	Rice	Gulia Hembram and others, At- Teltangia, Block- Bijatola, Dist- Mayurbhanja, Odisha
466	547 of 2014	Farmer	KATARAOLI	Rice	Basudeb Tarai and others, At- Kuapada, Block- Brahamagiri, Dist- Puri, Odisha
467	548 of 2014	Farmer	BRUNDABANA	Rice	Jay Prakash Roul and others, At- Silda, Block- Morada, Dist- Mayurbhanja, Odisha
468	549 of 2014	Extant	PBR-210	Indian Mustard	Punjab Agricultural University
469	550 of 2014	Extant	VSL-5	Indian Mustard	Indian Council of Agricultural Research
470	551 of 2014	Extant	Gujarat Groundnut-5 (GG.5)	Groundnut	Indian Council of Agricultural Research (ICAR)
471	552 of 2014	Extant	Varna	Turmeric	Indian Council of Agricultural Research (ICAR)
472	553 of 2014	New	CR SUGANDH DHAN-3	Rice	Indian Council of Agricultural Research (ICAR)
473	554 of 2014	Extant	PSH 569	Sunflower	Punjab Agricultural University
474	555 of 2014	Extant	Sona	Turmeric	Indian Council of Agricultural Research
475	556 of 2014	Extant	RS-2013	Cotton	Rajasthan Agriculture University, Bikaner
476	557 of 2014	Extant	RS-810	Cotton	Rajasthan Agriculture University, Bikaner
477	558 of 2014	New	VBCH-1516 BG-II	Cotton	Centromere Biosolutions Pvt. Ltd,
478	559 of 2014	Farmer	BANKOI-P	Rice	Prabhat Kumar Mantri and others, At- Odasamal, Block- Purisadar, Dist- Puri, Odisha
479	560 of 2014	Farmer	Puri-Gop-BANKOI	Rice	Sadhu Ch. Samantaray and others, At- Kharagan, Block- Gop, Dist- Puri, Odisha
480	561 of 2014	Farmer	GAHAMA FULA	Rice	Sashibhusana Patel and others, At- Bamphei, Block- Bamra, Dist- Sambalpur, Odisha
481	562 of 2014	Farmer	KARPURGUNDI	Rice	Rukman Gartia and others, At- A. Katapalli, Block- Dhankauda, Dist- Sambalpur, Odisha
482	563 of 2014	Farmer	Raigada - LOCAL BASUMATI	Rice	Rabindra Kando and others, At- Bariguda, Block- BissamCuttack, Dist- Raigada, Odisha
483	564 of 2014	Farmer	KADALIPENDI	Rice	Prasanta Pradhan and others, At- Dangapal, Block- Jujumura, Dist- Sambalpur, Odisha
484	565 of 2014	Farmer	Smb-JHULI	Rice	Satya Narayana Badhei and others, At- A.Katapalli, Block- Dhankauda, Dist- Sambalpur, Odisha
485	566 of 2014	Farmer	CHINA	Rice	Manabodha Patel and others, At- Mirdhapali, Block- Balangir, Dist- Balangir, Odisha
486	567 of 2014	Farmer	JATA	Rice	Haresh Patra and others, At- Saluadahar, Block- Suliapada, Dist- Mayurbhanja, Odisha
487	568 of 2014	Farmer	BAUDIACHAMPA-S	Rice	Bakuli Sahoo, At- Sahebi, Block- Naktideul, Dist- Sambalpur, Odisha
488	569 of 2014	Farmer	GAGANDHULI	Rice	Dinamani Nayak, At- Tikiba, Block- Tikiba, Dist- Sambalpur, Odisha
489	570 of 2014	Farmer	Smb-KARPURKRANTI	Rice	Nabin Kumar Patel and others, At- Jamankira, Block- Jamankira, Dist- Sambalpur, Odisha

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490	571 of 2014	Farmer	JALGUDI	Rice	Thomas Kujur, At- Jharpada, Block- Rairakol, Dist- Sambalpur, Odisha
491	572 of 2014	Farmer	HANDA	Rice	Ananda Ch. Swain and others, At- Kadobahal, Block- Naktideul, Dist- Sambalpur, Odisha
492	573 of 2014	Farmer	GUDUBA	Rice	Samiya Sabara and others, At- Patili, Block- Gunupur, Dist- Raigada, Odisha
493	574 of 2014	Farmer	BUBAILACHHA	Rice	Biswamitra Barik and others, At- Kudahansa, Block- Jamda, Dist- Mayurbhanja, Odisha
494	575 of 2014	Farmer	BELAMANJI	Rice	Basanta Pradhan, At- Dangapal, Block- Jujumura, Dist- Sambalpur, Odisha
495	576 of 2014	Farmer	KANDRAJHALI	Rice	Nabin Kalo and others, At- Ladangpali, Block- Jamankira, Dist- Sambalpur, Odisha
496	577 of 2014	Farmer	KHANDA SAGAR	Rice	Buddhadev Nayak and others, At- Ghantmal, Block- Rangali, Dist- Sambalpur, Odisha
497	578 of 2014	Farmer	Smb-SAPRI	Rice	Tikeswar Naik and others, At- Nuagan, Block- Jamankira, Dist- Sambalpur, Odisha
498	579 of 2014	Farmer	Smb-JAIPHULA	Rice	Surendra Dhurua and others, At- Sihiria, Block- Jamankira, Dist- Sambalpur, Odisha
499	580 of 2014	Extant	US312 (IET-19513)	Rice	Seed Works International Pvt. Ltd.
500	581 of 2014	Extant	TPG-41	Ground nut	Indian Council of Agricultural Research
501	582 of 2014	Extant	TG-38 (TG-38B)	Ground nut	Indian Council of Agricultural Research
502	583 of 2014	Extant (VCK)	296A	SORGHUM	Indian Council of Agricultural Research
503	584 of 2014	New	KSFH-9004	Sunflower	Kaveri Seed Company Limited
504	585 of 2014	Extant	AKAW-4627	Wheat	Dr. Panjabrao Deshmukh Krishi Vidyapeeth
505	586 of 2014	Extant	Rajendra Bhagwati	Rice	Rajendra Agricultural University
506	587 of 2014	New	KSF-282A	Sunflower	Kaveri Seed Company Limited
507	588 of 2014	Extant (VCK)	NS 203R	SORGHUM	Nuziveedu Seeds Limited
508	589 of 2014	Extant	NARI-6	Safflower	Indian Council of Agricultural Research
509	590 of 2014	Extant (VCK)	CRMS32A	Rice	Indian Council of Agricultural Research
510	591 of 2014	Extant	GG-6	Ground nut	Indian Council of Agricultural Research
511	592 of 2014	New	KSF-117A	Sunflower	M/S Kaveri seed ltd.
512	593 of 2014	New	KSF-003R	Sunflower	M/S Kaveri seed ltd.
513	594 of 2014	New	KSF-292 A	Sunflower	M/S Kaveri seed ltd.
514	595 of 2014	New	KSF-004 R	Sunflower	M/S Kaveri seed ltd.
515	596 of 2014	Extant	RAJDH-9	Cotton	Rajasthan Agriculture University, Bikaner
516	597 of 2014	New	KSF-290 A	Sunflower	M/S Kaveri seed ltd.
517	598 of 2014	New	KSF-149 A	Sunflower	M/S Kaveri seed ltd.
518	599 of 2014	Farmer	RAGHUSAIN	Rice	Prahllad Patra and others, At- Mundagam, Block- Kasipur, Dist- Raigada, Odisha
519	600 of 2014	Farmer	MALLIFULJHULI	Rice	Bibhuti Pradhan and others, At- Pardesara, Block- Agalpur, Dist- Balangir, Odisha
520	601 of 2014	Farmer	KHAJURIKANDHI	Rice	Gajendranath Soren and others, At- Jhaliamara, Block- Suliapada, Dist- Mayurbhanja, Odisha
521	602 of 2014	Farmer	TULASIMALI	Rice	Sahadev Miniaka and others, At- Paika ranipinda, Block- Muniguda, Dist- Raigada, Odisha

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522	603 of 2014	Farmer	BIRADIA BANKOI	Rice	Laxmidhar Tarai and others, At- Kuapada, Block- Brahmagiri, Dist- Puri, Odisha
523	604 of 2014	Farmer	DUBARAJ-S	Rice	Dillip Kumar Patel and others, At- Laida, Block- Rengli, Dist- Sambalpur, Odisha
524	605 of 2014	Farmer	KERASAL	Rice	Nabin Khadia and others, At- Niktimal, Block- Bamara, Dist- Sambalpur, Odisha
525	606 of 2014	Farmer	GANJEIKALI	Rice	Nand Kishore Pradhan and others, At- Barkote, Block- Barkote, Dist- Deoghar, Odisha
526	607 of 2014	Farmer	DHALA SHREE-B	Rice	Bhima Udurkulia, At- Mirdhapali, Block- Balangir, Dist- Balangir, Odisha
527	608 of 2014	Farmer	JHALKAKERI	Rice	Ananda Chandra Swain and others, At- Kadobahal, Block- Naktideul, Dist- Sambalpur, Odisha
528	609 of 2014	Farmer	JABAFULA	Rice	Ashok Pradhan, At- Kusuli, Block- Jamankira, Dist- Sambalpur, Odisha
529	610 of 2014	New	KSF-133 A	Sunflower	M/S Kaveri seed ltd.
530	611 of 2014	New	KSF-141 A	Sunflower	M/S Kaveri seed ltd.
531	612 of 2014	New	CR DHAN 10	Rice	Indian Council of Agricultural Research
532	613 of 2014	Extant	L-604	Cotton	Acharya N.G. Ranga Agricultural University, Hyderabad
533	614 of 2014	New	KSF-145 A	Sunflower	M/S Kaveri seed ltd.
534	615 of 2014	New	KSMS 241	SORGHUM	M/S Kaveri seed ltd.
535	616 of 2014	New	VBCH-1511 BG II	Cotton	Nusun Genetic Research Ltd.
536	617 of 2014	New	KSF-119 A	Sunflower	Kaveri Seed Company Limited
537	618 of 2014	New	VBCH 1017 (RACE BG)	tetraploid Cotton	Vibha Agrotech Limited
538	619 of 2014	Extant	Vivek Matar-8	Field Pea	Indian Council of Agricultural Research
539	620 of 2014	Extant	VL Tamatar-4	Tomato	Indian Council of Agricultural Research
540	621 of 2014	New	VBCH-1519 BG-II	tetraploid Cotton	Vibha Agrotech Limited
541	622 of 2014	Extant	Vivek Matar-9	Field Pea	Indian Council of Agricultural Research
542	623 of 2014	New	NPH-23	Rice	Nuziveedu Seeds Limited
543	624 of 2014	New	VBCH 1008 BG (MIST BG)	Cotton	Nusun Genetic Research Ltd.
544	625 of 2014	New	JKBH 768	Pearl Millet	J.K. Agri Genetics Limited
545	626 of 2014	New	KSF-270A	Sunflower	M/S Kaveri seed ltd.
546	627 of 2014	New	KDCHH-507 BG-I	tetraploid Cotton	Krishidhan Seeds Private Limited
547	628 of 2014	New	KSF-294A	Sunflower	M/S Kaveri seed ltd.
548	629 of 2014	New	KSF-016 R	Sunflower	M/S Kaveri seed ltd.
549	630 of 2014	Extant	VL Bean-2	Kidney bean	Indian Council of Agricultural Research
550	631 of 2014	Extant (VCK)	SYN-SF-207	Sunflower	Syngenta India Limited
551	632 of 2014	New	KSF-101 R	Sunflower	M/S Kaveri seed ltd.
552	633 of 2014	Extant	Vivek Matar 11 (VP 233)	Field Pea	Indian Council of Agricultural Research
553	634 of 2014	New	Vaishnavi (NR-241)	Rice	Nirmal Seeds Private Ltd.
554	635 of 2014	Extant	PKV Makaraud	Rice	Dr. Panjabrao Deshmukh Krishi Vidyapeeth

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555	636 of 2014	Farmer	HARIBHOGA	Rice	Biracnhi Nayak and others, At- Bhairpur, Block- Kamakhyanagar, Dist- Dhenkanal, Odisha
556	637 of 2014	Farmer	K-THAKURABHOG	Rice	Ghasiram Naik, Luhagaon, Block- Dharamgarh, Dist- Kalahandi, Odisha
557	638 of 2014	New	KSR 6194	SORGHUM	Kaveri Seed Company Limited
558	639 of 2014	New	463 A	SORGHUM	Indian Council of Agricultural Research
559	640 of 2014	New	HJ 513	SORGHUM	CCS Haryana Agricultural University,
560	641 of 2014	New	Sourav (CO-58)	Jute	Indian Council of Agricultural Research
561	642 of 2014	Extant	CSH-19R (SPH 1010R)	SORGHUM	Indian Council of Agricultural Research
562	643 of 2014	New	HD 2987 (Pusa Bahar)	Wheat	Indian Council of Agricultural Research
563	644 of 2014	Extant	SML-832	GREEN GRAM	Punjab Agricultural University
564	645 of 2014	Extant	DU-1	Black gram	University of Agricultural sciences
565	646 of 2014	Extant	Mash 479 (KUG 479)	Black gram	Punjab Agricultural University
566	647 of 2014	New	HD 2967	Wheat	Indian Council of Agricultural Research
567	648 of 2014	New	KSF-116B	Sunflower	M/S Kaveri seed ltd.
568	649 of 2014	New	KSF-279A	Sunflower	M/S Kaveri seed ltd.
569	650 of 2014	Extant	SWARNA VIJAYA	Tomato	Indian Council of Agricultural Research
570	651 of 2014	Extant	IPL-406	Lentil	Indian Council of Agricultural Research
571	652 of 2014	Extant (VCK)	IMS 9 B	SORGHUM	Indian Council of Agricultural Research
572	653 of 2014	Extant (VCK)	RS 29	SORGHUM	Indian Council of Agricultural Research
573	654 of 2014	New	KRL 213	Wheat	Indian Council of Agricultural Research
574	655 of 2014	New	HD 2985 (Pusa Basant)	Wheat	Indian Council of Agricultural Research
575	656 of 2014	Extant	ADT (R) 47	Rice	Tamil Nadu Agricultural University
576	657 of 2014	Extant	ADT (R) 46	Rice	Tamil Nadu Agricultural University
577	658 of 2014	Extant	NRCYS-05-02	Rapreseed	Indian Council of Agricultural Research
578	659 of 2014	Extant	PKV Moong 8802	GREEN GRAM	Dr. Panjabrao Deshmukh Krishi Vidyapeeth
579	660 of 2014	Extant	RRN-505 (RN-505)	Indian Mustard	Indian Council of Agricultural Research
580	661 of 2014	Extant	Prutha (Dh-86)	Groundnut	University of Agricultural sciences, Dharwad
581	662 of 2014	Extant	MACS-3125	Wheat	Indian Council of Agricultural Research
582	663 of 2014	Extant	Vasundhara (DH-101)	Groundnut	University of Agricultural sciences, Dharwad
583	664 of 2014	Extant	TGLPS-3 (TDG-39)	Grounnut	University of Agricultural sciences, Dharwad
584	665 of 2014	New	BCT 3701	Tetraploid Cotton	Bayer Biosciences Pvt. Ltd.
585	666 of 2014	Extant	BGD-103	CHICKPEA	University of Agricultural sciences, Dharwad
586	667 of 2014	Extant	GPBD5	Groundnut	University of Agricultural sciences, Dharwad
587	668 of 2014	New	NMH-713	Maize	Nuziveedu Seeds Limited
588	669 of 2014	Extant	GPBD-4	Groundnut	University of Agricultural sciences, Dharwad

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589	670 of 2014	Extant	Vallabh Basmati-21 (IET 19493) (MAUB-21)	Rice	Sardar Vallabhbhai Patel University of Agri. &Technology.
590	671 of 2014	Farmer	BHUDOKAKER	Rice	Jaga Mahananda and others
591	672 of 2014	Farmer	SUSHIL LAXMI	Chickpea	Balasaheb Appasaheb Patil
592	673 of 2014	Farmer	BADI KABERI	Rice	Arjuna Paraja and others, R/o Mahuli Block-Boipariguda, Dist- Koraput,Odisha
593	674 of 2014	Farmer	SURYKANTI	Rice	Manoranjan Jena, At-Bandalo, Block-Bhandaripokhari, Dist-Bhadrak, Odisha
594	675 of 2014	Farmer	MAKARAKAM	Rice	Sadananda Kanhar, At-Khajuripada, Block-Khajuripada Dist- Kandhamal, Odisha
595	676 of 2014	Farmer	TUMBA	Rice	Sh. Sagar Kahar, At- Mediakia, Block- Balliguda, Dist- Kandhamal,Odisha
596	677 of 2014	Farmer	KALASU	Rice	Rudra Patel and others, R/o Dhubalpada, Block-Patnagarh, Dist- Balangir, Odisha
597	678 of 2014	Farmer	MANEPURI	Rice	Laxmidar Badhek, R/o Thuntipipal, Block-Balisankara, Dist- Sundargarh, Odisha
598	679 of 2014	Farmer	PATHARA	Rice	Sumanta Pradhan and others R/o Balisahi, Block-Narasinghpur, Dist-Cuttack, Odisha
599	680 of 2014	Farmer	SALEKATHI	Rice	Premraj Rana and Others,At-Talgachha, Block-Balangir, Dist- Balangir,State- Odisha
600	681 of 2014	Farmer	HIRAKHANI	Rice	Chakradhar Nayak, At- Kolha, Block- Tihidi, Dist-Bhadrak,Odisha
601	682 of 2014	Farmer	BHUNDI-K	Rice	Nigamananda Swain and others, R/o Khandeipada, Block- Rajnagar, Dist-Kendrapada, Odisha
602	683 of 2014	Farmer	JHALI	Rice	Bidyadhar Thanapati and Others, At-Kundapathar, Block- Balangir, Dist- Balangir, Odisha
603	684 of 2014	Farmer	LODOSORA	Rice	Phugu Kujur and others, R/o Kadobahal, Block-Kuarmunda, Dist- Sundargarh, Odisha
604	685 of 2014	Farmer	Kanhav	Rice	Budhu Ch. Merli, At-Baidipali, Block- Balangir, Dist-Balangir, Odisha
605	686 of 2014	Farmer	DHOBGAINI	Rice	Kasal Bariha, At-Kansdol, Block- Gaisilat, Dist-Bargarh, Odisha
606	687 of 2014	Farmer	Nangudi	Rice	Bata Krushna Sahoo and others At- Jafarpur, Block- Jajpur, Dist- Jajpur,Odisha
607	688 of 2014	Farmer	KADELKERA	Rice	Gajendra Patel & Others, At-Kalobahal, Block-Tangarpali, Dist-Sundargarh, Odisha
608	689 of 2014	Farmer	JHUMER	Rice	Suren Pradhan and others, R/o Bhainsa, Block-Patnagarh, Dist- Balangir, Odisha
609	690 of 2014	Farmer	LAHUNI LUHUDI	Rice	Pabitra Bagh and others, R/o Filingibahal, Block-Sadar block, Dist- Sundargarh,Odisha
610	691 of 2014	Farmer	Khadiasola	Rice	Bichitra Mohalik, At-Baligaon, Block- Chandabali, Dist- Bhadrak, State-Odisha
611	692 of 2014	Farmer	BAIDI HUNDAR	Rice	Pabitra Dharua, At-Chanutmal, Block-Munibahal, Dist-Balangir, State-Odisha
612	693 of 2014	Farmer	MOTI	Rice	Kartika Kalsai, At-Dhubalpada, Block- Patnagarh, Dist- Balangir, State- Odisha
613	694 of 2014	Farmer	JIRADHAN	Rice	Marshel Xess and others R/o Patua, Block-Lathikata, Dist- Sundargarh,Odisha
614	695 of 2014	Farmer	KANDALAI	Rice	Sh. Johan Pradhan, At- Toperikia, Block-K.Nuagaon, Dist- Kandhamal,Odisha

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615	696 of 2014	Farmer	NADIASITA	Rice	Smt. Indra Sahu and others, R/o Kusumendi, Block- Chakapad, Dist- Kandhamal,Odisha
616	697 of 2014	Farmer	MUKTA KIARI	Rice	Tusarakanti Bal, At- Ghatapur, Block- Chandabali, Dist- Bhadrak,Odisha
617	698 of 2014	Farmer	Balangir-Mugdhi	Rice	Purna Ch Rout, At-Bandhan Bhadi, Block- Patnagarh, Dist- Balangir, State odisha
618	699 of 2014	Farmer	Bhatta	Rice	Dama Pujari, At-Tumudibandh, Block- Tumudibandh, Dist- Kandhamal, Stata- Odisha
619	700 of 2014	Farmer	Mugudhi Jhili	Rice	Anantaram Sahu, At-ChacherBeng, Block- Belpada, Dist- Balangir, Odisha
620	701 of 2014	Farmer	MOGRA	Rice	Chudamani Patel, At-Chanutmal, Block- Munibahal, Dist-Balangir, Odisha
621	702 of 2014	Farmer	Kapaanthi	Rice	Chhanda Padhan, At-Baidipali, Block- Balangir, Dist- Balangir, Odisha
622	703 of 2014	Farmer	Sareaa	Rice	Ganashyam Dharua, At-Dhandamunda, Block- Belpada, Dist- Balangir, State-Odisha
623	704 of 2014	Farmer	Pustak	Rice	Prasanna Pradhan, At-Ampali, Block- Balangir, Dist- Balangir, State-Odisha
624	705 of 2014	Farmer	Jhup Jhupa	Rice	Bharat Chandra Kumura,At- Jharbeda, Block- Gurundia, Dist- Sundargarh,Odisha
625	706 of 2014	Farmer	Ranisaheb	Rice	Prafulla Kumar Sahu,At- Beda Pada, Block- Bangomunda, Dist- Balangir,Odisha
626	707 of 2014	Farmer	PANIKOILI	Rice	Amrut Ranjan Giri and othersR/o Barkolikhala, Block- Mahakalapada, Dist-Kendrapada, Odisha
627	708 of 2014	Farmer	BIDU SANKARI	Rice	Anadi Sahoo, At- Dedgaon, Block- Bangomunda, Dist- Balangir,Odisha
628	709 of 2014	Farmer	CHAMARMANI	Rice	BASUDHA, Binodbati, P.O. Layekbandh, Bankura-722157,West Bengal
629	710 of 2014	Farmer	Mahulrani	Rice	Jubaraj Khamari, At-Kundapathar, Block- Balangir, Dist- Balangir, State-Odisha
630	711 of 2014	Farmer	SAMUDRA BALI	Rice	Talaram Balia and others, R/o Kasiguda, Block- Boipariguda, Dist- Koraput,Odisha
631	712 of 2014	Farmer	MAGRA-P	Rice	Mitrabhanu Rana and others, At-Surda, Block- Balangir,Dist- Balangir, Odisha
632	713 of 2014	Farmer	GORUMANI	Rice	Anandeswar Kanhar & OthersAt-Mediakia, Block- Ballisuda, Dist-Kandhamal,State- Odisha
633	714 of 2014	Farmer	SATHIA (Kala Sathia)	Rice	Biresh Chandra Dwivedi & otherAt-Betanda, Block- Rasulpur,Dist- Jajpur, Odisha
634	715 of 2014	Farmer	Balangir-Parijat	Rice	Meghanad Pradhan, At-Ratakhandi, Block- Deogaon, Dist- Balangir, State-Odisha
635	716 of 2014	Farmer	BHALUNKI	Rice	Pradip Jena, At-Barkolikhala, Block- Mahakalapada, Dist-Kendrapada, Odisha
636	717 of 2014	Farmer	Luchi	Rice	Murali Mahananda, At-Ampali, Block- Saintala, Dist- Balangir, Odisha
637	718 of 2014	Farmer	CHINAGIRI	Rice	Bijay Kumar Pal & Others, At-Kendudipi, Block- Danagadi, Dist-Jajpur, Odisha
638	719 of 2014	Farmer	Lalgundi	Rice	Jagannath Mahamallik, At-Dhubalpada, Block- Patnagarh, Dist- Balangir, Odisha
639	720 of 2014	Farmer	LANGUDI	Rice	Karunakar Bagati, At- Kumbhe Kela, Block- Saintala, Dist-Balangir, Odisha
640	721 of 2014	New	NMH-731	Maize	Nuziveedu Seeds Limited

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641	722 of 2014	New	KSMS 234	SORGHUM	M/S Kaveri seed ltd.
642	723 of 2014	Extant	DRMR 601 (NRCDR 601)	Indian Mustard	Indian Council of Agricultural Research (ICAR)
643	724 of 2014	Extant (VCK)	DYNA	Tetraploid Cotton	Vibha Agrotech Limited
644	725 of 2014	Extant	Vallabh Basmati 22 (MAUB-162)	Rice	Sardar Vallabhbhai Patel University of Agri. & Technology.
645	726 of 2014	Extant (VCK)	Saguna (NR-28)	Rice	Nirmal Seeds Private Ltd.
646	727 of 2014	New	G9650798	Tetraploid Cotton	Monsanto Genetics India Private Limited
647	728 of 2014	Extant	Varun (ACPR-94040)	Kidney bean	Indian Council of Agricultural Research
648	729 of 2014	New	KMH-3426	Maize	M/S Kaveri seed ltd.
649	730 of 2014	Extant	Arun (IPR 98-3-1)	Kidney bean	Indian Council of Agricultural Research
650	731 of 2014	Extant (VCK)	Palak	Indian Mustard	Nirmal Seeds Private Ltd.
651	732 of 2014	Extant	Malav Shakti (HI8498)	Durum wheat	Indian Council of Agricultural Research
652	733 of 2014	New	KSMS 237	SORGHUM	M/S Kaveri seed ltd.
653	734 of 2014	Extant	H-1300	Tetraploid Cotton	CCS Haryana Agricultural University, Hisar, Haryana
654	735 of 2014	Extant	H 1236	Tetraploid Cotton	CCS Haryana Agricultural University,Hisar, Haryana
655	736 of 2014	Extant (VCK)	PARASMANI-1+	Indian Mustard	M/S Shakti Vardhak Hybris Seeds Pvt. Ltd., Haryana
656	737 of 2014	New	TULASI-4	Tetraploid Cotton	M/S Tulasi Seeds Pvt. Ltd.
657	738 of 2014	Extant (VCK)	DURGA (NTL-30)	Pigeon Pea	Nirmal Seeds Private Ltd.
658	739 of 2014	Extant	H 1098-improved	Tetraploid Cotton	CCS Haryana Agricultural University,Hisar, Haryana
659	740 of 2014	New	C 5197	Tetraploid Cotton	Maharashtra Hybrid Seeds Company Limited
660	741 of 2014	Farmer	GANGA BHALU	Rice	Hajaru Mallik & Others, At- Fatamunda, Block: Padampur, Dist-Bargarh, Odisha
661	742 of 2014	Farmer	BENABAHAR	Rice	Jagabandhu Sahoo & Others At-Matiapada, Block-Baramba, Dist-Cuttack, Odisha
662	743 of 2014	Farmer	BIRU	Rice	Gopal Amat & others At-Musabira, Block-Lephripada, Dist-Sundargarh, Odisha
663	744 of 2014	Farmer	BADI	Rice	Champi Danu and others, R/o Bada Balsa, Block-Pottangi, Dist- Koraput, Odisha
664	745 of 2014	Farmer	RANGAMAHARAJ	Rice	Binod Kumar Sahu, At-Khajuripada, Block-Khajuripada, Dist- Kandhamal, Odisha
665	746 of 2014	Farmer	BIRIAJNA	Rice	Smt. Kamalini Samal, At- Dharampur, Block-Binjharpur, Dist- Jajpur, Odisha
666	747 of 2014	Farmer	BUDI BANKO	Rice	Ghanakesi Bhoi, At- Munibahal, Block- Munibahal, Dist- Balangir, Odisha
667	748 of 2014	Farmer	Udasiali	Rice	Tilak Gyanendra Behera, At--Brahmanigaon, Block- Basudevpur, Dist- Bhadrak, Odisha
668	749 of 2014	Farmer	MUTURA-B	Rice	Kanhei Panda, At-Brahmanigaon, Block-Basudevpur, Dist- Bhadrak, Odisha

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669	750 of 2014	Farmer	DASHARAGETI	Rice	Purnananda Behera, At- Brahmanigaon, Block-Basudevpur, Dist- Bhadrak, Odisha
670	751 of 2014	New	NBCH-2008-2	Castor	Navbharat Seeds Pvt. Ltd.
671	752 of 2014	Extant	H 432	Diploid cotton	CCS Haryana Agricultural University, Hisar, Haryana
672	753 of 2014	Extant (VCK)	Jawahar Jowar 1022	SORGHUM	Rajmata Viajayaraje Scindia Krishi Vishwavidyalaya
673	754 of 2014	Farmer	TULASIPHUL	Rice	Laldeo Singh & Others, At- Bausjore, Bloack-Nuagaon, Dist-Sundargarh, Odisha
674	755 of 2014	New	Vivek Sankul Makka 35 (VL 113)	Maize	Indian Council of Agricultural Research
675	756 of 2014	New	HM-11 (HKH-1237)	Maize	Indian Council of Agricultural Research
676	757 of 2014	Extant	Pusa Cabbage-1 (KGMR-1)	Cabbage	Indian Council of Agricultural Research
677	758 of 2014	Extant	BAUR 9502 (Shivani)	Indian Mustard	Birsa Agricultural University, Ranchi, Bihar
678	759 of 2014	Extant	Sattya (MH-2-15)	GREEN GRAM	Indian Council of Agricultural Research
679	760 of 2014	Extant	Pusa Mustard 29 (LET-36)	Indian Mustard	Indian Agriculture Research Institute, New Delhi
680	761 of 2014	Extant	Kalaparaksha (CCS-7)	Coconut	Indian Council of Agricultural Research
681	762 of 2014	Extant	DLSA-17	Diploid cotton	University of Agricultural sciences, Dharwad
682	763 of 2014	Extant (VCK)	Ladli	Indian Mustard	Shakti Vardhak Sees Pvt. Ltd.
683	764 of 2014	New	DBW 39	Breadwheat	Indian Council of Agricultural Research
684	765 of 2014	Extant (VCK)	Black Gold (NML-100)	Indian Mustard	Nirmal Seeds Private Ltd.
685	766 of 2014	Farmer	UJADANGA	Rice	Barnaba Pradhan, At-Rapadabadi, Block-Daringbadi, Dist-Kandhamal, Odisha
686	767 of 2014	Farmer	BAKURI	Rice	Udayanath Mallik, At-Arada, Block-Rasulpur,
687	768 of 2014	Farmer	Kuliha	Rice	Parsu Rout and others, At- Dharam Sagar, Block-Komna, Dist- Nuapada, Odisha
688	769 of 2014	Farmer	TUMBADHAN	Rice	Sanatan Pradhan & Others, At-Gunjigaon, Block-K. Nuagaon, Dist-Kandhamal, Odisha
689	770 of 2014	Farmer	Sankiri Banko	Rice	Swarna Haripal and Others, At-Banchhanagar, Block- Gaisilat, Dist- Bargarh, Odisha
690	771 of 2014	Farmer	Kaliasaru	Rice	Balmiki Padhi, At-Balligudu, Block- Kandhamal, Dist-Kandhamal, Odisha
691	772 of 2014	Farmer	Punia	Rice	Rabindra Bhukta, At-Nuapada, Block- Phiringia, Dist- Kandhamal, Odisha
692	773 of 2014	Farmer	NILABATI	Rice	Sarat Kumar Swain, At-Khandeipada, Block-Rajnagar, Dist- Kendrapada, Odisha
693	774 of 2014	Farmer	DUDHASARA	Rice	Sri Sankhali Naik, R/o Baria, Block- Jhumpra, Dist-Keonjhar, Odisha
694	775 of 2014	Farmer	SUANTUTI	Rice	Khama Gahir and Others, At-Jamsar, Block-Balangir, Dist- Balangir, Odisha
695	776 of 2014	Farmer	DHOB SARIAN	Rice	Hrusikesh Patel & Others, At-Amapali, Block-Balangir, Dist-Balangir, Odisha

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696	777 of 2014	Farmer	RABANA	Rice	Pravat Kumar Ray, R/o Iswar pur, Block- Dasarathpur, Dist-Jajpur, Odisha
697	778 of 2014	Farmer	BHAJANA	Rice	Jhatu Mahananda, At-Jamutbahal, Block- Gaisilat, Dist- Bargarh, Odisha
698	779 of 2014	Farmer	SELUAPANA	Rice	Kasinath Barik and others, At- Lunga, Block- Basudevpur, Dist- Bhadrak, Odisha
699	780 of 2014	Farmer	Laxmi Vilash	Rice	Biranchi Meher and Others, At-Belpada, Block- Belpada, Dist- Balangir, Odisha
700	781 of 2014	Farmer	DUMERFUL-B	Rice	Rudradhar Pradhan and others, R/o Bali Khama,Block- Belpada, Dist- Balangir, Odisha
701	782 of 2014	Farmer	BHUTA	Rice	Kailash Nayak and others, R/o Banja, Block- Sukinda, Dist- Jajpur, Odisha
702	783 of 2014	Farmer	Espit	Rice	Biswanath Patro an others, At- Alanaguda, Block- Dasamantapur, Dist- Koraput, Odisha
703	784 of 2014	Farmer	Bodo Holdi Ropa	Rice	Laxman Bodonaik and others At- Godihonior, Block- Lamtaput, Dist- Koraput, Odisha
704	785 of 2014	Farmer	Kalamara	Rice	Jaganatha Khara and others, At- Umbel, Block- Lamtaput, Dist- Koraput, Odisha
705	786 of 2014	Farmer	Mohipal	Rice	Upendra Naik and others At- Bakhlikhunti, Block- Boden, Dist- Nuapada, Odisha
706	787 of 2014	Farmer	Rango Lachai	Rice	Sadan Gurumai and others, At- Badapadar, Block- Nandapur, Dist- Koraput, Odisha
707	788 of 2014	Farmer	Nadia Rasa	Rice	Dullava Pujari and others, At- Kamara, Block- Boriguma, Dist- Koraput, Odisha
708	789 of 2014	Farmer	Koraput-Kundra-AsamChudi	Rice	Hari Khilo and others, At- Karan Guda, Block- Kundra, Dist- Koraput, Odisha
709	790 of 2014	Farmer	Umariachudi	Rice	Narahari Gouda and others, At- Kadalimunda, Block- Kundra, Dist- Koraput, Odisha
710	791 of 2014	Farmer	Bhatta Dhano	Rice	Prasad Pangi and others, At- Kusuma, Block- Pottangi, Dist- Koraput, Odisha
711	792 of 2014	Farmer	Mahakmati	Rice	Siddhartha Joshi and others, At- Deobahal, Block- Khariar, Dist- Nuapada, Odisha
712	793 of 2014	Farmer	Koraput-Kundra-Haldi Chudi	Rice	Damodar Pradhani and others, At- Pradhani Guda , Block- Kundra, Dist- Koraput, Odisha
713	794 of 2014	Extant	DDhC-11	Diploid cotton	University of Agricultural sciences, Dharwad
714	795 of 2014	Extant (VCK)	ALBELI-1	Indian Mustard	Shakti Vardhak Sees Pvt. Ltd.
715	796 of 2014	Extant (VCK)	Parasmani-8	Indian Mustard	Shakti Vardhak Sees Pvt. Ltd.
716	797 of 2014	Extant	Pusa Mustard 30 (LES-43)	Indian Mustard	Indian Agriculture Research Institute, New Delhi
717	798 of 2014	Farmer	Nuapada-Jaifulla	Rice	Jagadish Sahu and others, At- Saliha, Block- Nuapada, Dist- Nuapada, Odisha
718	799 of 2014	Farmer	Putiachina	Rice	Bharati Mahananda and Others, At-Jamutbahal, Block- Gaisilat, Dist- Bargarh, Odisha
719	800 of 2014	Farmer	Balangir-Thalbadh-Harishankar	Rice	Nandikishore Naik, At-Thalbadh, Block- Deogaon, Dist- Balangir, Odisha
720	801 of 2014	Farmer	Neheru	Rice	Bhagabana Palei and Others, Fuljhar, Block- Lahunipada, Dist- Sundargarh, Odisha
721	802 of 2014	Farmer	Sola	Rice	Dhruba Charana Sethy and Others, At-Mahisasur, Block- Rajnagar, Dist- Kendrapada, Odisha

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722	803 of 2014	Farmer	Nalilatakali	Rice	Maheswar Sahoo and Others, At-Bandhahuda, Block- Narasinghpur, Dist- Cuttack, Odisha
723	804 of 2014	Farmer	KUJA	Rice	Jayakrushna Bhoi and others, At-Baraghati, Block-Deogaon, Dist- Balangir, Odisha
724	805 of 2014	Farmer	Ratana Kanta	Rice	Panchanan Mohanta and Others, At-Kalarangi, Block- Jajpur, Dist- Jajpur, Odisha
725	806 of 2014	Farmer	Palasakathi	Rice	Rajendra Kisan, At- Nagdo, Block- Tileibani , Dist-Deogarh, Odisha
726	807 of 2014	Farmer	Nuapada Sinapali GELEI	Rice	Bikkram Kata and Others, R/0 Dhungiamunda, Block- Sinapali, Dist.-Nuapada, Orissa
727	808 of 2014	Farmer	Budhakakuri	Rice	Sudev Bakul, At-Baraghati, Block- Deogaon, Dist-Balangir, Odisha
728	809 of 2014	Farmer	Bhulushankari	Rice	Surendra Ku Sai, At-Bhalukunda, Block- Deogaon, Dist- Balangir, Odisha
729	810 of 2014	Farmer	Premjhuli	Rice	Dingara Mahananda and Others, At-Jamutbahal, Block- Gaisilat, Dist- Bargarh, Odisha
730	811 of 2014	Extant	JG-99-213 (Gujarat Garlic)	Garlic	Junagarh Agricultural University, Gujrat
731	812 of 2014	Farmer	SITARA SRINGAR	Indian Mustard	Shri. Hukum Singh Lodha, Vill- Sitara, Tehsil-Kumher, Dist-Bharatpur, Rajasthan
732	813 of 2014	Extant	GNR-2	Rice	Navsari Agricultural University
733	814 of 2014	Extant	Kalpa Sankara (CGD x WCT hybrid)	Coconut	Indian Council of Agricultural Research (ICAR)
734	815 of 2014	Extant	AAUDR-1 (IET-19258)	Rice	Anand Agricultural University, Gujrat
735	816 of 2014	New	KRL 210	Wheat	Indian Council of Agricultural Research (ICAR)
736	817 of 2014	Extant	NAUR-1	Rice	Navsari Agricultural University
737	818 of 2014	Extant	Kalpasree (Chowghat Green Dwarf)	Coconut	Indian Council of Agricultural Research (ICAR)
738	819 of 2014	Extant	GR-8	Rice	Anand Agricultural University, Gujrat
739	820 of 2014	Extant	Nua Chinikamini (IET 18394) (CR2580)	Rice	Indian Council of Agricultural Research (ICAR)
740	821 of 2014	Extant	Phalguni (IET 18720) (CRAC 2224-1041)	Rice	Indian Council of Agricultural Research (ICAR)
741	822 of 2014	Extant	Luna suvarna (IET 18697)	Rice	Indian Council of Agricultural Research (ICAR)
742	823 of 2014	Extant	PTB-52 (Aiswarya)	Rice	Indian Council of Agricultural Research
743	824 of 2014	Extant	Ph-348 (Yamuna)	Tetraploid Cotton	Marathwada Agricultural University, Maharashtra
744	825 of 2014	New	NPH-24	Rice	Nuziveedu Seeds Limited
745	826 of 2014	Extant	NH-545	Tetraploid Cotton	Marathwada Agricultural University, Maharashtra
746	827 of 2014	Extant	GAR-13 (IET-20930)	Rice	Anand Agricultural University, Gujrat
747	828 of 2014	Extant	Kalpa dhenu (IND 006S) (CCS-6)	Coconut	Indian Council of Agricultural Research
748	829 of 2014	Extant	GAR-1 (IET-21276)	Rice	Anand Agricultural University, Gujrat
749	830 of 2014	Extant	Kalpa Pratibha (IND 0168) (CCS-4)	Coconut	Indian Council of Agricultural Research (ICAR)

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750	831 of 2014	Extant	Luna sampad (IET 19470)	Rice	Indian Council of Agricultural Research (ICAR)
751	832 of 2014	Extant	Kalpa Mitra (IND 022S) (CCS-5)	Coconut	Indian Council of Agricultural Research (ICAR)
752	833 of 2014	New	KSL 120007	Rice	Krishidhan Seeds Private Limited
753	1 of 2015	Farmer	G-Padma	Rice	Hadu Dalabehera and others
754	2 of 2015	Farmer	Balangir-Ghasian-Kalakrushna	Rice	Chaturbhuja Agrawal
755	3 of 2015	Farmer	Haladi Sapuru	Rice	Gadua Kota and others
756	4 of 2015	Farmer	Padmabati	Rice	Hari Nayak and others
757	5 of 2015	Farmer	Mirchamati	Rice	Madhab Nag and others
758	6 of 2015	Farmer	Paradhan	Rice	Baidyanath Godobisi and others
759	7 of 2015	Farmer	Balangir-Barghati-Mahipal	Rice	Jayakrushna Bhoi
760	8 of 2015	Extant	Sahana (JK-276-8-2)	Tetraploid Cotton	University of Agricultural Sciences, Dharwad, Karnataka
761	9 of 2015	Extant	MAUS 158	SOYBEAN	Indian Council of Agricultural Research
762	10 of 2015	Extant	Prat(MAUS-61)	SOYBEAN	Indian Council of Agricultural Research
763	11 of 2015	Extant	MP-7792 (MH-1609)	Pearl Millet	Metahelix Life Sciences Limited
764	12 of 2015	Extant	Pusa 9712 (DS 9712)	SOYBEAN	Indian Council of Agricultural Research
765	13 of 2015	Extant	MP-7872 (MH-1610)	Pearl Millet	Metahelix Life Sciences Limited
766	14 of 2015	Extant	CO (R) 50 (IET 19321) (CB01001)	Rice	Tamil Nadu Agricultural University
767	15 of 2015	Extant	MAUS-81	SOYBEAN	Indian Council of Agricultural Research
768	16 of 2015	Extant	CO (R) 49	Rice	Tamil Nadu Agricultural University
769	17 of 2015	Extant	Godavari (NIDW-295)	Durum wheat	Mahatma phule krishi vidyapeeth Rahuri
770	18 of 2015	Farmer	BUDANGA	Rice	Sri Baleswar Mallick
771	19 of 2015	Farmer	KUNDA DHAN	Rice	Madhusudan Pradhan
772	20 of 2015	Farmer	DHOSARA	Rice	Surendra Keshari Ray and others
773	21 of 2015	Farmer	SAL JHANTI	Rice	Smt. Bhaleria Barla and others
774	22 of 2015	Farmer	MUTHISAMULI	Rice	Mahendra Mohalik
775	23 of 2015	Farmer	Sunamani	Rice	Abhi Khilo
776	24 of 2015	Farmer	Kataki Tampa	Rice	Sarat Gouda
777	25 of 2015	Farmer	BITI SAPRI	Rice	Radhe Shyam Majhi and others
778	26 of 2015	Farmer	Sikla	Rice	Bhima Madkami
779	27 of 2015	Farmer	Nuapada-Tarbod-SETKA	Rice	Goura Chandra Pradhan and others
780	28 of 2015	Extant (VCK)	UPMC 503	Sorghum	Indian Council of Agricultural Research
781	29 of 2015	New	SF 4048	Sunflower	Maharashtra Hybrid Seeds Company Limited
782	30 of 2015	New	Nirmal-150 (NPH-150)	Rice	Nirmal Seeds Private Ltd.
783	31 of 2015	New	JKBH 778	Pearl Millet	J.K. Agri Genetics Limited
784	32 of 2015	Extant (VCK)	AKASH (VBBH 350)	Pearl Millet	Vibha Agrotech Limited
785	33 of 2015	New	KSR 6192	Sorghum	Kaveri Seed Company Limited

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786	34 of 2015	New	SIGNET-44	Rice	Signet Crop Sciences India (P) Ltd.
787	35 of 2015	New	SIGNET-5051	Rice	Signet Crop Sciences India (P) Ltd.
788	36 of 2015	New	Suvarna (NSRR-259)	Sorghum	Nirmal Seeds Private Ltd.
789	37 of 2015	New	NP-208	Rice	Nuziveedu Seeds Limited
790	38 of 2015	New	MIJ-010	Sorghum	Devgen NV, Belgium
791	39 of 2015	New	NB-3 (Madhumati)	Rice	Nirmal Seeds Private Ltd.
792	40 of 2015	Extant	AKMS 14B	Sorghum	Indian Council of Agricultural Research
793	41 of 2015	New	Bajaura Makka 1	Maize	Indian Council of Agricultural Research
794	42 of 2015	Extant (VCK)	Parasmani-2	Indian Mustard	M/S Shakti Vardhak Hybris Seeds Pvt. Ltd., Haryana
795	43 of 2015	New	DGJ-014	Sorghum	Devgen NV, Belgium
796	44 of 2015	Extant (VCK)	MIHR-001	Rice	Devgen NV, Belgium
797	45 of 2015	New	Nirmal-101 (NPH-101)	Rice	Nirmal Seeds Private Ltd.
798	46 of 2015	Extant (VCK)	Ankur-Sonam	Rice	Ankur Seeds(P) Limited
799	47 of 2015	Farmer	LACHEIE	Rice	Krushna Saunta and others
800	48 of 2015	Farmer	Ranga Luchai	Rice	Jumbena Guntha
801	49 of 2015	Farmer	DUBRAJ BHOG	Rice	Smt. Marian Bage and others
802	50 of 2015	Farmer	Sundargarh-KRUSHNABHOG	Rice	Jayant Ku Singh and others
803	51 of 2015	Farmer	NALIDHUSURI	Rice	Bhagirathi Behera and others
804	52 of 2015	Extant (VCK)	MIHR-002	Rice	Devgen NV, Belgium
805	53 of 2015	New	SYN-SF-293	Sunflower	Syngenta India Limited
806	54 of 2015	New	SIGNET-5050	Rice	Signet Crop Sciences India (P) Ltd.
807	55 of 2015	Extant (VCK)	Ankur-Ravina	Rice	Ankur Seeds(P) Limited
808	56 of 2015	Extant (VCK)	Ajay (NW-72)	Breadwheat	Nirmal Seeds Private Ltd.
809	57 of 2015	Extant	IPM 02-3	GREEN GRAM	Indian Council of Agricultural Research (ICAR)
810	58 of 2015	Extant (VCK)	MANIK-NP 14	Rice	Nuziveedu Seeds Limited
811	59 of 2015	Extant (VCK)	JKCH 666	Cotton	J.K Agri Genetics Ltd., Hyderabad
812	60 of 2015	Extant (VCK)	JK ISHWAR (JKCH 634)	Cotton	J.K Agri Genetics Ltd., Hyderabad
813	61 of 2015	Farmer	Kharchia Local	Wheat	Farming community of kharchi village
814	62 of 2015	Farmer	BAIGANAMANJII-K	Rice	Braja Dansana and others
815	63 of 2015	Farmer	White Tuara	Pigeon pea	Som Panchyat (Representative farmer of Jhadol Block)
816	64 of 2015	Farmer	RICHA 2000	Pigeon pea	Raj Kumar Rathore
817	65 of 2015	Farmer	Erramachcha kandi	Pigeon pea	Biodiversity Management Committee, Jhari,
818	66 of 2015	New	KPP 008	Pigeon Pea	M/S Kaveri Seed Company Limited
819	67 of 2015	Extant	CSR-36 (Naina) (IET 17340)	Rice	Central Soil Solinity Reserch Institute, Karnal
820	68 of 2015	Extant	CSR 30	Rice	Central Soil Solinity Reserch Institute, Karnal
821	69 of 2015	New	KPP 006	Pigeon Pea	M/S Kaveri Seed Company Limited

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822	70 of 2015	Extant	Gujarat Okra Hybrid-2	Okra (Abelmoschus esculentum) (Abelmoschus esculentum)	Junagadh Agricultural University, Gujrat
823	71 of 2015	New	KSF-097R	Sunflower	M/S Kaveri Seed Company Limited
824	72 of 2015	Extant	JBGR-99-5	Brinjal	Junagadh Agricultural University, Gujrat
825	73 of 2015	Extant	NIDW-15 (Panchavati)	Durum wheat	Mahatma phule krishi vidyapeeth Rahuri
826	74 of 2015	Farmer	Sundargarh-LUNGDI	Rice	Isac Lakra and others
827	75 of 2015	Farmer	Kandhamal-JHALAKA	Rice	Anadi Pradhan
828	76 of 2015	Farmer	Sapiri	Rice	Abhiram Sabar and others
829	77 of 2015	Farmer	Balangir- Bhalukuna-LUCHE	Rice	Omprakash Pradhan
830	78 of 2015	Farmer	Balangir-Khaliapali-BHARATI	Rice	Bidyacharan Suna and others
831	79 of 2015	New	KBR 870	Pearl Millet	M/S Kaveri Seed Company Limited
832	80 of 2015	Extant	Phonghat-1	Rice	Indian Council of Agricultural Research
833	81 of 2015	Extant (VCK)	JK DURGA (JKCH 10)	Cotton	JK Agri. Genetics Ltd.
834	82 of 2015	New	KBMS 293	Pearl Millet	M/S Kaveri Seed Company Limited
835	83 of 2015	Extant	Karjat-6	Rice	Indian Council of Agricultural Research (ICAR)
836	84 of 2015	New	Vinay (NW-404)	Breadwheat	Nirmal Seeds Private Ltd.
837	85 of 2015	Extant	Karjat-184	Rice	Indian Council of Agricultural Research
838	86 of 2015	Extant	Karjat-5	Rice	Indian Council of Agricultural Research
839	87 of 2015	Extant	Karjat-7	Rice	Indian Council of Agricultural Research
840	88 of 2015	Extant (VCK)	44S01	Indian Mustard	Pioneer Overseas corporation
841	89 of 2015	New	KSR 6176	Sorghum	M/S Kaveri Seed Company Limited
842	90 of 2015	New	VIVEK SANKUL MAKKA 31	Maize	Indian Council of Agricultural Research

Acronyms

AICRP	All India Co-ordinated Research Project
BAU	Birsa Agricultural University
BMC	Biodiversity Management Committee
BCIL	Biotech Consortium India Limited
CAG	Comptroller and Auditor General of India
CARI	Central Agricultural Research Institute
CBD	Convention on Biological Diversity
CMD	Chairman-cum-Managing Director
CSIR	Council of Scientific and Industrial Research
CHES	Central Horticultural Experiment Station
CSSRI	Central Soil Salinity Research Institute
DAC	Department of Agriculture & Co-operation
DUS	Distinctiveness, Uniformity and Stability
EVRC	Extant Variety Recommendation Committee
ETL	
GATT	General Agreement on Tariffs and Trade
IARI	Indian Agricultural Research Institute
ICAR	Indian Council of Agricultural Research
ICFRE	Indian Council of Forest Research & Education
IINDUS	Indian Information System as per DUS guidelines
IPGRI	International Plant Genetic Resources Institute (Bioversity International)
ITPGRFA	International Treaty on Plant Genetic Resources for Food and Agriculture
KAU	Kerala Agriculture University
KVK	Krishi Vigyan Kendra
NASC	National Agricultural Science Centre

NGO	Non-Governmental Organization
NORV	Notified and Released Varieties of India
NSAI	National Seed Association of India
NRCPB	National Research Centre on Plant Biotechnology
NSRTC	National Seed Research and Training Centre
MSEZ	Mangalore Special Economic Zone Limited
OECD	Organization for Economic Co-operation and Development
PS	Principal Scientist
PD	Project Director
PGR	Plant Genetic Resources
PPV&FRA	Protection of Plant Varieties and Farmers' Rights Authority
PVE	Plant Variety Examiner
PVIS	Plant Variety Information System
PVJ	Plant Variety Journal of India
R&D	Research & Development
RTI	Right To Information
SAO	Senior Accounts Officer
SAU	State Agricultural Universities
STO	Senior Technical Officer
TRIPS	Trade Related Aspects of Intellectual Property Rights
UPOV	International Union of Protection of New Varieties of Plants
VCK	Variety of Common Knowledge
WTO	World Trade Organization