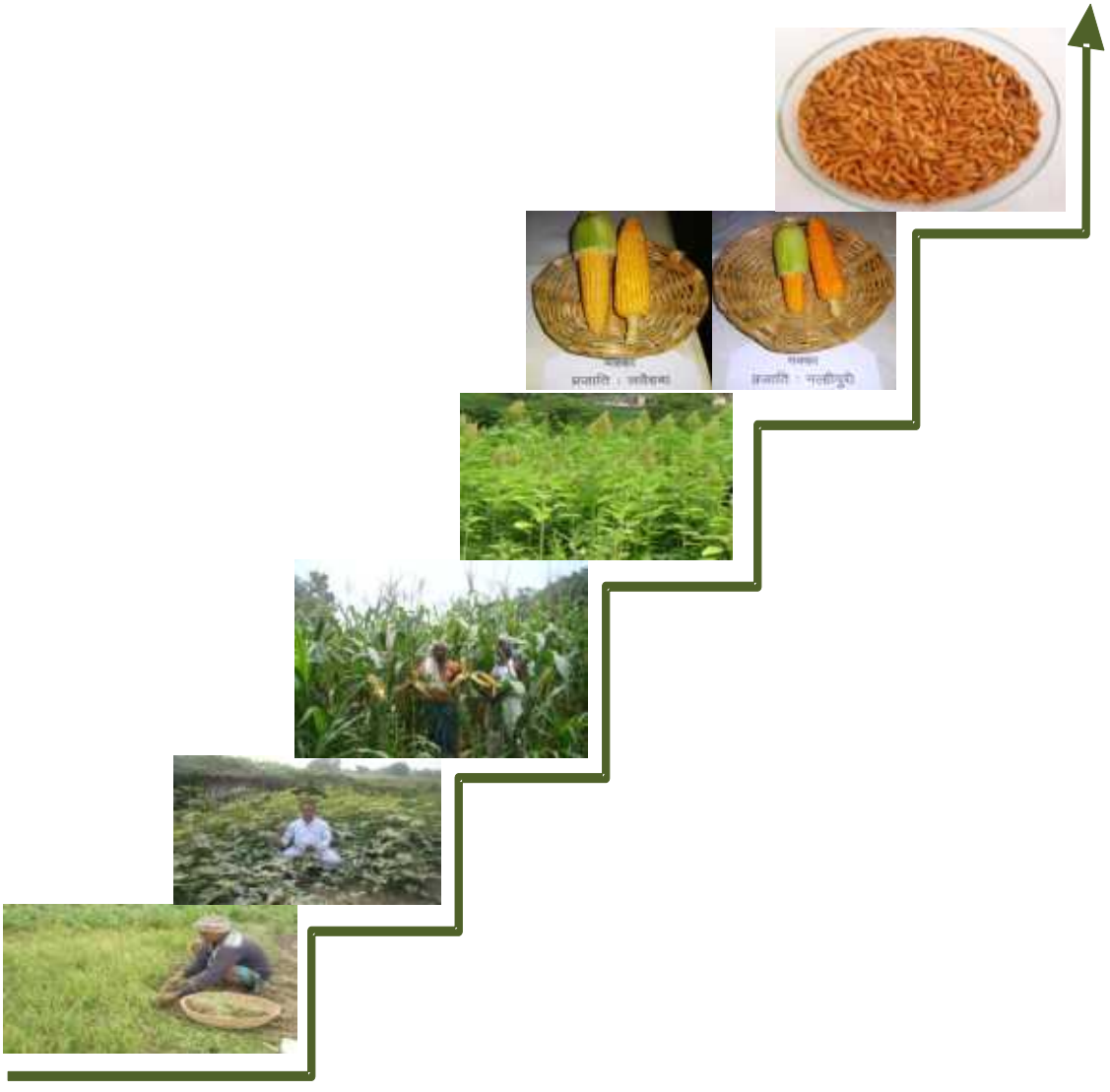
Steps up Farmer's Right with PPV & FRA and ICAR-ATARI KANPUR



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Foreward

Indian Council of Agricultural Research established a network of Krishi Vigyan Kendras (KVKs) in the country aiming them to work as knowledge and resource centers. India is signatory to world Trade Organization (WTO) including various inter-governmental agreements that directly after affect agriculture. The article 27(3)b of Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement envisages that the member countries shall protect the new plant varieties through patent on an effective *Sui – generis* system or a combination of both. Based on the need and wide consultation of policy makers, planners, experts, institutes and farmer's organizations, the Protection of Plant Varieties and Farmers' Rights Act (PPV & FRA) was enacted by the Govt. of India, in 2001.

The rules of this Act were notified in September 2003 with approval from Govt. of India and the Protection of Plant Varieties and Farmers' Rights Authority (PPV&FR Authority) which came into existence on November 11, 2005, bears sole responsibility for implementation of this act. Plant varieties seeking protection need to be registered with PPV & FR Authority, which has been commenced since April 2007. Registration of varieties and establishing legal right to market a newly breed variety would be depending upon the results of statutory testing – the DUS test. The DUS test ensures establishing the novelty, distinctiveness, uniformity and stability. Plant Variety Protection (PVP) systems have evolved since the introduction of the concept of essentially derived varieties (EDV) by biotechnology and genetic engineering, which has precisely made introduction of single desired gene into a variety possible.

I am extremely pleased to learn that the ICAR-ATARI, Kanpur in collaboration with the PPV&FR Authority is poised to bring out a publication entitled "Steps up Farmer's Rights with PPV&FRA and ICAR-ATARI Kanpur" I congratulate Dr. U. S. Gautam, Director and his team for their painstaking effort in bringing out this publication.

(R.R Hanchinal)

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New Delhi

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Message

India is rich in bio-diversity and there are many hot spots of flora and fauna in the country. The farmers have played a pivotal role in identifying, conserving and upgrading large number of germplasm. The indigenous materials preserved and practised by the farmers are great assets for sustainable agricultural development especially in context to climate change related abnormalities. Protection of Plant Varieties and Farmers' Rights Authority has developed legal framework for protecting plant varieties and farmers' rights in which Krishi Vigyan Kendras and Agricultural Technology Application Research Institutes are playing significant role by capacity building of farmers and registration of farmers' varieties. Further, characterisation, standardisation and upgradation of such genetic materials may provide a platform for bringing out potential technologies for different regions and in long run may be helpful in empowering farmers and protecting their rights on those materials.

I am happy that ICAR-ATARI, Kanpur and team of scientists are bringing out a publication in this respect. I congratulate the Director, Dr. U. S. Gautam and his team (Dr. Atar Singh, Dr. S.K. Dubey, Dr. Ajit Kr. Srivastava and Mr. Avanish Kumar Singh) for bringing out this publication.

(A.K. Singh)

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Preface

Host institutions wise KVKs have been identified to create awareness among the farming community to know their rights for collecting, conserving and registration of the plant varieties, which are unidentified. The host organization wise 50 KVKs identified out of which NDUA&T, Faizabad (07), CSAUA&T, Kanpur(11), SVPUA&T, Meerut (05), GBPUA&T, Pant Nagar (09), UUHF, Bharsar (02), ICAR (05) and NGOs (11). The programme outcome is 178 farmer's planting materials collected out of which 66 in cereals, 40 in Vegetable & Spices, 05 in Fruits, 22 in Oilseeds, 26 in Pulses, 18 in Millets and 01 in Dhaincha applied for registration in the PPV & FRA.

In this context, we are indebted to Prof. R. R Hanchinal Chairperson of PPVFRA, Govt. of India, New Delhi and Dr. A. K. Singh, Deputy Director General (Agril Extension), ICAR,New Delhi for inspiring and guiding us to bring out this publication consisting farmers' materials, which may be used by KVKs and other such organizations.

I appreciate the efforts of the Directors of Extension of SAUs and Directors of ICAR Institutes, Heads and Scientists of the KVKs of Uttar Pradesh and Uttarakhand for creating awareness programmes for benefiting the farming community. I sincerely thank to my colleagues Principal Scientists Dr. Atar Singh, Dr. S. K. Dubey, Dr. Ajit Kumar Srivastava Research Associate NICRA project and Mr. Avanish Kumar Singh for putting sincere efforts in preparing the document with useful information to the different stake holders.

(U.S. Gautam)

25 June, 2016
Kanpur

EXECUTIVE SUMMARY

The Lok Sabha passed the Protection of Plan Varieties and Farmers' Rights (PPV&FR) Bill on 9 August 2001 and the Rajya Sabha on 28 August 2001. It was assented to by the President of India on 30 October 2001. It has thus become a law of the land [PPV&FR Act (No. 52 of 2001)], to be implemented to guard the interests of the (i) breeders of plant varieties, and ii) farmers, who have been considered not just users of improved varieties but also as conservers and developers of their own varieties. This law has also attempted to regulate the activities of other players in the seed multiplication chain so that while rights on plant varieties are duly honored, the availability of quality seed to the farmer masses is also ensured. In conjunction with the revised Seed Bill, 2004 that is expected to be passed in the near future, it is considered that the Indian seed sector, and consequently agriculture production in India, will witness a qualitative change in the years to come. Therefore, all concerned with the Indian seed sector look forward to the implementation of these laws. The manner of implementation will determine the nature of impact on the seed sector.

India is predominating in agriculture and 12th mega biodiversity hot spot in the world. The farmers are playing major role to conversation of biodiversity in the country. There is a need **for develop an effective system for empowered to the farmers for their right for protecting the** plant varieties in the different part of the country. Looking the importance of the above programmes, the ICAR-Agricultural Technology Application Research Institute, Zone-IV, Kanpur and PPV & FRA, New Delhi has jointly launched the programme for creation of awareness among the Farmer's and other stake holders about the provision of Protection of Plant Varieties & Farmer Right Act, 2001 in 50 KVKs under Zone-IV.

The Ministry of Agriculture, Government of India established an effective system for the protection of plant varieties, the right of farmers and plant breeders and to encourage the development of new a varieties of plant it has been considered necessary to recognize and to protect the rights of the farmers in respect of their contributions made at any time in conserving improving and making available plant genetic resources for the development of new plant varieties the govt of India enacted "the protection of plant varieties and farmers rights (PPV&FR) Act 2001 SHUI generis system. India legislation is not only in conformity with international Union for the Protection on new varieties of Plants (UPOV). 1978 but also gave sufficient provisions to protect the interests of public/private sectors breeding institutions and the farmers in plant breeding activity and also provides to implement TRIPs in a way that supports the specific socio-economic interests of all the stakeholders including private, public sectors and research institutions, as well as resources-constrained farmers.

The programme outcome are 178 farmer's planting materials including 66 in cereals, 40 in Vegetable& Spices, 05 Fruit, 22 in Oilseeds, 26 in Pulses, 18 in Millets and 01 in Dhaicha applied for registration in the PPV & FRA.

INTRODUCTION

Several activities related to the implementation of PPV&FR Act were started, which gained momentum after 2001 when the law was finally passed. Broadly, the activities cover the following aspects: i) Preparation of rules, regulations and procedures of administration, ii) Establishment of the Authority to undertake the task, and iii) A system to properly characterize the existing varieties which will facilitate the testing of new varieties for the purpose of award of rights.

To implement through visions of the Act the department of Agriculture and cooperation Ministry of establishes the production of plant verities farmers 'Rights Authority on 11th November. 2005 the Chairperson is the chief executive of the authority besides the Government of India (GOI) eight them are ex-officio members a representing various departments/Ministries three from SAUs and the state government, one representative each for farmers Tribal Organization, seed industry and women organization associated with agriculture activities are nominated by the central government. The registrar general is the ex-officio member secretary of the Authority.

The question of Plant Variety Protection (PVP) (or Plant Breeder's Rights-PBR) was brought into worldwide focus by the Agreement on Trade Related (Aspects of) Intellectual Property Right (TRIPs), which is a part of the General Agreement on Tariffs and Trade (GATT) establishing the World Trade Organization (WTO) in 1995. It is largely universal agreement with 131 countries being the contracting parties. Article 27.3(b) of the Section on TRIPs in (GATT 1994) provides that (contracting) parties shall provide for the protection of plant varieties either by patents or by an effective sui generis system or any combination thereof. Thus, provision for an effective sui generis system by the contracting parties is the minimum requirement. A legislative framework for PVP is to be provided by the contracting parties in the specified time frame, by 1 January 2000 in developing countries (except least developed countries). The effectiveness of any sui generis system developed by any contracting parties is to be reviewed under the Agreement from November 1999. Being signatory to the Agreement, many developing countries, which were not hitherto having any such system, have either already initiated some form of system or are discussing the issue for putting a system in place.

Agro-climatic zones wise districts identified

There is 50 districts have been given responsibility to create the awareness among the farmers for collection the indigenous planting materials for registration at PPV&FRA. these KVKs are laying in the different agro-climatic zones are as under (Table 1)

Table : 1. Agro-climatic zones wise hot spots in Zone-IV and PPV & FRA Programme in selected KVKs districts:-

S.No	Agro-climatic zones	No. of District	Name of Districts
1.	Central Plain	11	Raebareli,Kannauj,Etawah, Sitapur-II LakhimpurKheri, Pratapgarh, Kaushambi, Lucknow, Allahabad, Auraiya & Unnao
2.	South Western Semi-Arid	02	Aligarh & Mainpuri
3.	Bundelkhand	06	Banda, Jhansi,Mahoba, Hamirpur,Lalitpur & Chitrakoot
4.	Eastern plain	05	Ballia,Chandoli, Varanasi, Ghazipur & SRD Nagar
5.	North Eastern Plain	05	Bahraich, Basti, kushinagar, Siddharthnagar & Gonda
6.	Vindhyan	02	Sonbhadra & Mirzapur
7.	Bhabhar & Tarai	02	Rampur & Bareilly
8.	Western plain	04	Saharanpur, Meerut, Baghpat & Muzaffarnagar
9.	Hill zone	13	Champawat, Almora, Chamoli, Haridwar, Rudraprayag, Nainital, Pithoragarh, Dehradun, Udham Singh Nagar, TehriGarhwal, PauriGarhwal, Uttar Kashi&Bageshwar
	Total	**50**	

Options for a *sui generis* system have been discussed by Leskien & Flitner (1997) but in the absence of any specified criteria, for judging the effectiveness, mentioned in TRIPs Section of the GATT Agreement, all thinking and developments point toward the system provided by the inter-governmental International Union for Protection of New Varieties of Plants (commonly known as UPOV –based on its initials in French – Union International pour la Protection des Obtentions Vegetales). UPOV provides a system already accepted and in operation in a large number of countries, and is making efforts to receive recognition under WTO. The Director General of the United Nations World Intellectual Property Organization (WIPO) is the Secretary General of UPOV.

The UPOV Convention has two main functions viz. i) it prescribes minimum rights that must be granted to plant breeders by its member States, that is to say, it specifies a minimum scope of protection; and ii) it establishes novelty, distinctness, uniformity and

stability, and the requirement of a suitable denomination as the standard criteria for the grant of protection. The UPOV Convention was signed in Paris in 1961, it entered into force in 1968. It was revised in Geneva in 1972, 1978 and 1991. The 1978 Act entered into force on 8 November 1981. The 1991 Act entered into force on 24 April 1998. A concise description of technical criteria for protection is UPOV (1996).

Currently, UPOV has 46 member States, with only two States i.e. Belgium and Spain bound by the UPOV's 1961 Act (as amended by the Additional Act of 1972), 29 States bound by the 1978 Act and 15 States bound by its latest 1991 Act. Among these, there are only States from Africa (Kenya, South Africa) and 2 only from Asia (China, Japan). A number of Latin American developing countries have also now become UPOV member States. Only UPOV's 1991 Act is open for becoming a UPOV member now and most of the UPOV member States are in the process of amending their laws to conform to the 1991 Act.

Both the 1978 and 1991 Acts have been discussed and debated for implementation in countries which so far are not members of UPOV. One important difference relevant in the present context between the 1978 and 1991 Act is that in the UPOV (1978) Act, a protected variety can be modified in a very limited respect e.g. by reselection, mutation, the addition of a gene etc. and provided the modified variety is clearly distinguishable' from the protected variety it can be separately protected without any obligation to the breeder of the protected variety. The UPOV (1991) Act provides that varieties that are "essentially derived" from a protected variety in this way can still be protected but cannot be marketed without the permission if the breeder of the protected variety from which they are derived. Varieties are "essentially derived" for this purpose only when they are virtually entirely constructed upon the basis of the protected varieties from which they are derived. Discussions are also alive on the issue of unprotected varieties already in public domain.

RIGHTS UNDER THE ACT

Breeders' Rights:-

Breeders will have exclusive rights to produce, sell marking distribute, import of export the protected variety, Breeder can appoint agent/licensee and May exercise for civil remedy in case of infringements of rights.

Researchers' Rights:-

Researcher can use any of the registered variety under the Act for conducting experiments of research; this includes the use of a variety as an initial source of variety for the purpose of developing another variety but repeated use need prior permission of the registered breeder.

Farmers' Rights:-

1. A farmer's who has evolved or developed a new variety is entitled for registration and protection in like manner as a breeder of a variety.
2. Farmer's variety can also be registered as an extant variety.
3. A farmers can save, use, re-sow exchange, share of sell his farm produce including seed of a variety protected under the PPV & FR Act, 2001 in the same manner as he was entitled before the coming into force of this Act provided farmers shall not be entitled to sell branded seed of a variety protected under the PPV & FR act, 2001.
4. Farmers are eligible for recognition and rewards for the conservation of plant genetic resources of land races wild relatives of economic plants.
5. There is also a provision for compensation to the farmers for non-performance of variety under section 39(2) of the Act, 2001: and.
6. Farmers shall not be liable to pay any proceeding before the authority or registrar or the tribunal of the high couth under the Act.

Crop material available: There is 40 crops materials are available for registrations.these materials have been collected by the KVKs. The details are given (Table 2)

Table : 2. Crop name with their number of registration material available

S. no.	Name of Crop	No. of Material for Registration
1.	**Rice**	**23**
2.	**Wheat**	**04**
3.	**Maize**	**14**
4.	**Sorghum**	**09**
5.	**Pearl millet**	**10**
6.	**Baley**	**04**
7.	**Ramdana**	**02**
8.	**Kodo millet**	**08**
9.	**Sawan/ Barnyard millet**	**04**
10.	**Kakun**	**06**
11.	**Pigeon pea**	**01**
12.	**Chickpea**	**03**
13.	**Lentil**	**06**
14.	**Soyabean**	**01**
15.	**Moong bean**	**03**
16.	**Urd bean**	**12**
17.	**Rapeseed & Mustard**	**09**

18.	**Sesame**	**10**
19.	**Linseed**	**03**
20.	**Dhaincha**	**01**
21.	**Pea**	**10**
22.	**Chilli**	**02**
23.	**Brinjal**	**01**
24.	**Van Bhindi**	**01**
25.	**Sponge gourd**	**03**
26.	**Ridge gourd**	**01**
27.	**Fenugreek**	**01**
28.	**Coriander**	**01**
29.	**Pointed gourd**	**01**
30.	**Garlic**	**01**
31.	**Bitter gourd**	**05**
32.	**Pumpkin**	**03**
33.	**Cucumber**	**01**
34.	**Arvi (Colocasia)**	**02**
35.	**Sweet Potato**	**02**
36.	**Zimikand (Elephantfoot)**	**01**
37.	**Turmeric**	**04**
38.	**Mango**	**03**
39.	**Papaya**	**01**
40.	**Aonla**	**01**
	Total	**178**

BIODIVERSITY CONVENTION

Over 90 percent of plant species for food and agriculture are located in the economically developing parts of the world namely, the Asian, African, Latin American and the Far East Islands. In a reversal of the normal economic pattern in the world, the richest nations are poor in plant genetic resources. For example the Western Europe, the North America and Australia are almost completely dependent for major food crops, on plant species originating in other regions of the world. The convention on Biological Diversity (CBD) has expressly provided for the right of indigenous communities (Article 8(i) of the CBD), and the International undertaking on plant Genetic Resources (IUPGR) has provided defined farmers' rights (CBD 1994 FAO 1983) inter alia affirm that "the past, present and future contributions of farmers in conserving, improving and making available the genetic resources is the basis farmer's rights. The International Treaty on Plant Genetic Resources (ITPGR) recognized the rights of farmers to save, use and exchange and sell farm saved seeds or propagating material. Therefore, it has become imperative on the part of the Government of India to **develop our sui genetic** (a Latin phrase meaning' of their own kind') system to provide a frame work for plant Variety Protection which satisfies the requirements of breeders, researchers and farmers with regard to use and exchange of seeds and plant material and also accord due recognition, credit and sharing of benefit with the conserver farmer for his role in conserving the agro-Rights Protection Authority, National Community Gene Fund, Compulsory Licensing and Protection of Public Interest Appellate Board among others. However issues related to protection of transgenic crops need clear-cut defining.

HIGHLIGHTS OF INDIAN PPVFR ACT, 2001

1. PVP Authority

- Protection of Plant Varieties and Farmers Rights (PVP) authority will be vested with necessary powers to perform all functions relating to the protection of plant varieties.
- The Authority will consist of Chairperson and 15 members, Chairperson to be appointed by the Central Government.
- A Standing Committee will advise the Authority on all issues including Farmers Rights.
- Registrar General will be the Ex-officio member secretary of the authority.

2. Registration of Plant Varieties

- Registration of New varieties, as notified by the Central Government.
- Registration of extant varieties, including varieties available in India which are notified under section 5 of the seed acts 1966/farmers variety/varieties about which there are common knowledge/variety which is in public domain.

3. Criteria for registration

- For new varieties – new, distinctiveness, uniformity and stability.
- For extant varieties – distinctiveness, uniformity, stability as specified/relaxed by the authority.

4. Registration and period of protection

- Certificate of registration issued by the registrar will prescribe the conditions of the entitlement.
- For new plant varieties – 15 years for annual crops and 18 years for trees and vines.
- For extant varieties – 15 years from the date of registration/date of notification in case of varieties notified under seeds act.
- One time renewal at the end of 6 years in case of annual crops and 9 years in case of trees and vines, on payment of prescribed fee.

5. Exclusion of certain varieties.

- Plant varieties can be excluded from registration in case where prevention of commercial exploitation of such varieties is necessary to protect public order or public morality or human, animal and plant life and health or to avoid serious prejudice to the environment.

- Registration of plant varieties will not be allowed if the variety in question involves any technology such as “genetic use restriction technology” and “Terminator Technology”, which is injurious to life or health of human beings, animals or plants.

6.Researchers right

- Use of any variety registered under this act will be allowed for conducting experiments or research and using it as an initial source for creating other varieties.

7. Farmers right

- Farmer who has bred or developed a new variety to be entitled for protection as a breeder of a variety.
- Farmers’ variety as part of the extant variety will be entitled for registration/protection.
- Farmer, who is engaged in conservation of genetic resources of land races, wild relatives etc., entitled for recognition and reward from the National Gene Fund.
- Farmers will be entitled to save, use, sow, re -sow, exchange, share or sell his farm produce including seed of a variety, protected under this act, with the exception that he will not be entitled to sell branded seed of a protected variety.
- National Gene Fund to be utilized for making payment for benefit sharing, compensation to communities etc., and supporting the activities relating to conservation and sustainable use of genetic resources.

8. Compulsory

- PVP Authority will have power to make order for compulsory license in certain circumstances when sufficient quantity of seeds of protected variety, at reasonable price, is not available.

9. Tribunal

- Plant variety protection appellate tribunal to be constituted to examine appeals from PVP Authority and registrar.
- Tribunal shall consist of a chairman and judicial and technical members.

10. Penalties

- Provisions for penalties against offences/infringement of plant breeders’ right.

11. Miscellaneous

- Provisions authorizing the Government of India to issue directions to PVP authority in the public interest.

Objectives of the PPV & FR Act, 2001:-

1. To establish an effective system of the protection of plant varieties. The rights of farmers and plant breeders and to encourage the development of new varieties of plants.
2. To recognize and protect the rights of farmers in respect of their contributions made at any time in conserving improving making available plant genetic resources for the development of new plant varieties.
3. To accelerate agricultural development in the country, protect plant breeder's rights: stimulate investment for research and development both in public & private sector for the development of new plant varieties.
4. Facilitate the growth of seed industry in the country which will ensure the availability of high quality seeds and planting material of the farmers.

General Function of the authority:-

1. Registration of new plant varieties, essentially derived varieties (EDV) and extant varieties.
2. Developing DUS (Distinctiveness, Uniformity and Stability) test guidelines.
3. Developing characterization and documentation of registered varieties.
4. Compulsory cataloging facilities for all variety of Plants.
5. Documentation indexing and cataloguing of farmers' varieties'
6. Recognizing and rewarding farmers, community of farmers, particularly tribal and rural community engaged in conservation, improvements, preservation of plant genetic resources of economic plants and their wild relatives.
7. Maintenance of the national register of plant varieties and.
8. Maintenance of national gene bank.

Host institutions wise list of KVKs:-

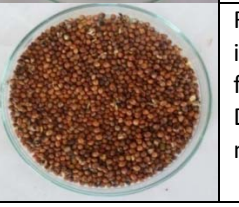
Host institutions wise KVKs have been identified to create awareness among the farming community to know their rights for collecting, conserving and registration of the plant varieties, which are un identified (Table 3)

Table : 3.Host institutions wise list of KVKs running the PPV&FR (Plant Variety Protection and Farmers Right) programme

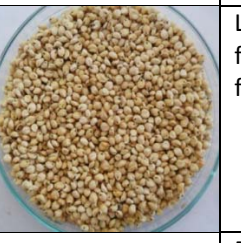
S. No.	KVK with Host Org.	S. No.	KVK with Host Org.
	NDUAT, Faizabad		**ICAR/EDN/NGO KVKs**
1	Bahraich	26	Chitrakoot
2	Basti	27	Allahabad
3	Ballia	28	Pratapgarh
4	Varanasi	29	Unnao
5	Siddharthnagar	30	Kaushambi
6	Sonbhadra	31	Auraiya
7	Chandoli	32	Ghazipur
	CSAUAT, Kanpur	33	Sitapur-II
8	Jhansi	34	Kushinagar

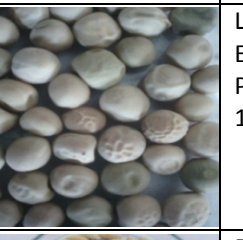
9	Raebareli	35	St. RavidasNgr
10	Aligarh	36	Bareilly
11	Kannauj	37	Lucknow
12	Etawah		**GBPUAT, Pantnagar**
13	Mainpuri	38	Champawat
14	Mahoba	39	Almora
15	Hamirpur	40	Chamoli
16	LakhimpurKheri	41	Haridwar
17	Lalitpur	42	Rudraprayag
18	Banda	43	Nainital
	SVPUAT, Meerut	44	Pithoragarh
19	Rampur	45	Dehradun
20	Saharanpur	46	Udham Singh Nagar
21	Meerut		**UUHF, Bharsar**
22	Muzaffarnagar	47	Tehri Garhwal
23	Baghpat	48	Pauri Garhwal
	ICAR/EDN/NGO KVKs		**ICAR KVKs**
24	Mirzapur	49	Uttar Kashi
25	Gonda	50	Bageshwar

List: 4. Information of collected materials:

S. No.	Name of Crop	Botanical Name	Photographs	Special characters
1.	Rice	*Oryza sativa*		Local cultivar, 90 days duration, Scented, Less irrigated, Delicious, Grain husk used for medicinal purpose
2.	Chilli	*Capsicum annuam*		Highly Bitter, Round, 30 years old, High productivity, Taste very good.
3.	Sorghum	*Sorghum bicolor*		Red color, Minimum input variety, Suited for dry land, Delicious and full of nutrition

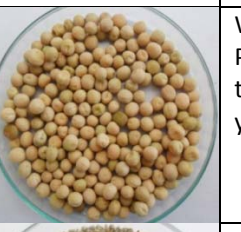
4.	Soybean	*Glycine max*		Local cultivar, Small bright grain, well suited for local climate, cultivated from past 12 years.
5.	Sponge Gourd	*Luffa cylindrica*		Desi, High productivity, Delicious, Minimum input requirement
6.	Maize	*Zea mays*		White color, Sweeter in taste , 120 days crop. December-March and July to October season
7.	Moongbean	*Vigna radiata*		Traditional variety, sowing March-May and July to September, 7-8q/ Acre
8.	Pointed Gourd	*Trichosanthes dioica*		Desikateela, Tasty, Nutritious, cultivated and preserved since 1990.
9.	Urdbean	*Vigna mungo*		Bhatmaas, 20years old, Local variety, frequently used as roasted grain,
10.	Rice	*Oryza sativa*		Local cultivar, Tasty, medium, Upland, Less irrigation, 18-20q/ Acre

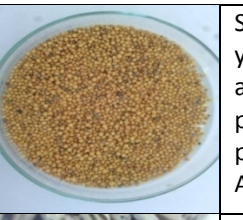
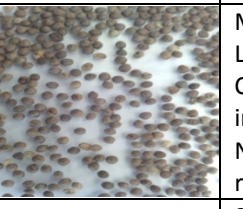
11.	Maize	*Zea mays*		Desi, Cultivated since last 15 years, good in chapatti making & popcorn.
12.	Urdbean	*Vigna mungo*		Long, Brownish-green, Local variety used from past 10 years
13.	Bread wheat	*Triticum aestivum*		Local variety, Used from past 8 years, good in chapatti making, Average production even under adverse situation
14.	Sorghum	*Sorghum bicolor*		Local variety, used for chapatti and fodder purposes.
15.	Lentil	*Lens culinaris*		Red color, cultivated since 15 years, cultivable in low productive area, Daal tasty
16.	Barley	*Hordeum vulgare*		Local variety, cultivated from past 20 years, No additional input requirement, Used in sattu making.
17.	Urdbean	*Vigna mungo*		Traditional variety, Suited as intercrop, drought tolerant, Tasty in nature

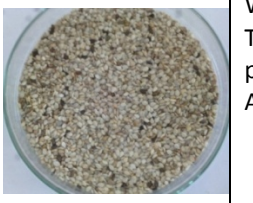
18.	Rice	*Oryza sativa*		Local variety, Fine grain, Productivity 25q/ Acre
19.	Bread wheat	*Triticum aestivum*		Local variety, Productivity 16-18q/ Acre, Grain setting even in strong wind heat.
20.	Sesame	*Sesame indicum*		Local variety, White, High tillering, Less diseases percentage, Productivity average 5q/ Acre
21.	Field Pea	*Pisum sativum*		Local variety, White, Easy cooking, Tasty, Productivity 1average 10 q/ Acre
22.	Cucumber	*Cucumis sativus*		Desi, Traditional, Flowering and fruiting more, High market demand, mosaic disese tolerant in rainy season, tasty
23.	Sesame	*Sesame indicum*		Local cultivar, cultivable as solo or intercrop with vegetables, Average productivity 7.5-8q/ Acre
24.	Pearl millet	*Pennisetum glaucum*		Desi, Traditional, Eaisily cultivable, good for fodder and bread making

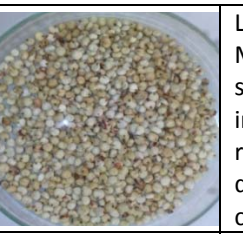
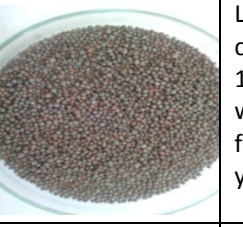
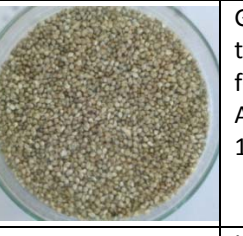
25.	Sponge gourd	*Luffa cylindrica*		Desi, long, Traditional, High prodctivity, best for kitchen gardening, Sweet & Tasty
26.	Urdbean	*Vigna mungo*		Long, Green, 15 years old variety, Average Productivity 7.5-8q Acre,
27.	Ramdana	*Amaranthus spp.*		30year old variety, Local, Used in Ramdanapatti, Bakery,
28.	Linseed	*Linum usitatissimum*		40years old variety, Small grain, Used in medicinal purposes
29.	Kakun	*Setaria italica*		25 years old variety, Tasty, Highly nutritious, Good for market.
30.	Pea	*Pisumsativum*		20 years old variety, Minimum input requirement, cultivable in variable situation
31.	Sesame	*Sesame indicum*		20 years old variety, Minimum input, average production 5q/ Acre.
32.	Chickpea	*Cicer arietinum*		Desi, 15 years old, Less disease, Minimum input requirement, Used in Sattu making

33.	Urdbean	*Vigna mungo*		Brown-Green, Traditional, Average Productivity 6.5-7q Acre,
34.	Urdbean	*Vigna mungo*		Dark Green, seed rate low-150g/beegha, disese less, average yield 5q/ Acre
35.	Rice	*Oryza sativa*		Ram gaudh, Suited for water-logged condition, yield 15q/Acre, Cultivated in tarai regeion, cultivated and protected from pas 20 years
36.	Barley	*Hordeum vulgare*		Desi, Easy marketebility, Used in sattu, cultivated and protected from pas 15 years. Yield of 12q/ Acre.
37.	Fenugreek	*Trigonella afoenum*		Produce in minimum input, No fertilizer, No pesticide, Best suited for kitchen gardening
38.	Rice	*Oryza sativa*		90 days crop, only 2 irrigation, Delicious, easy for potato field preparartion.Used in medicinal purpose, Nutritious, cultivated and protected from pas 20 years. Yield of 15q/ Acre
39.	Rice	*Oryza sativa*		90days crop, Disease less, Rainfed situation, less water requirement, Plant hieght up to 4 feet, Fooder more, Used for Laiyya, cultivated and protected from pas 20 years

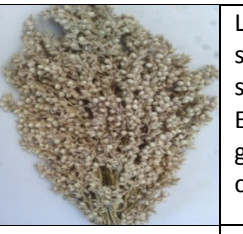
40.	Rice	*Oryza sativa*		120 days crop, variety is good for weed identification because lower tillers are red in color, Scented, Soft, cultivated and protected from past 16 years. Yield of 15q/ Acre
41.	Field Pea	*Pisum sativum var. arvense*		White, small grain, Powdery mildew tolerant. Average yield 7-8q/ Acre
42.	Pearl millet	*Pennisetum glaucum*		Height 11 feet, Good for fodder, Tasty, cultivated and protected from pas 10 years.average yield 3q/ Acre.
43.	Bitter gourd	*Momordica charmso*		Desi, Bitter % very less, 10kg/ Plant, Long duration fruiting, cultivated and protected from pas 8 years.
44.	Pumpkin	*Cucurbita moschata*		Big size 10-15 kg, Green and long, High demand in marriage purposes in villages, cultivated and protected from pas 22 years.
45.	Chilli	*Capsicum annuam*		Small, Highly bitterer, Productivity high, Easy marketability, cultivated and protected from pas 15 years.
46.	Sesame	*Sesame indicum*		White, average productivity 5-6q/ Acre, Long, 90 days

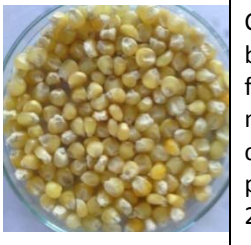
47.	Yellow Mustard	*Brassica juncea*		Shiny grain, High oil yielding, cultivated and protected from pas 10 years.average productivity 6-8q/ Acre.
48.	Barley	*Hordeum vulgare*		Scented, Medium size, Local cultivar, used in Sattu making
49.	Sorghum	*Sorghum bicolor*		White, High yielding, Commonly used in Chapati and Fodder purposes, Suited for Tarai areas (near river side).
50.	Kodo Millet	*Paspalum scrobiculatum*		Minimum input, Local cultivar, Commonly cultivated in flood prone areas, No input requirement.
51.	Pea	*Pisum sativum*		Small, Matari, without ploughing, cultivated in tarai areas (near river side), Easily cultivated, commonly known as poorer pulse.
52.	Maize	*Zea maize*		Local cultivar, traditional variety, Cultivable in degraded soil condition,
53.	Sesame	*Sesame indicum*		Black, High yielding, Good for market, Commonly demand in local villages. Average productivity 6-7q/ Acre.

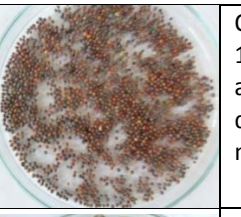
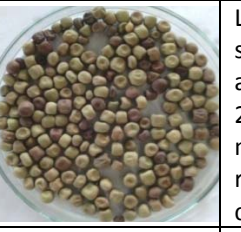
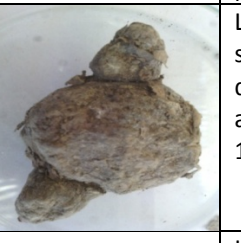
54.	Sawan/ Barnyard millet	*Echinochloa frumentaceae*		Early mature, Tasty, cultivated in tarai areas (near river side), minimum input requirement.
55.	Linseed	*Linum usitatissmium*		Local traditional variety, Minimum input requirement, cultivated and preserved from past 20 years, Used in medicinal purposes,
56.	Sesame	*Sesame indicum*		White, Less diseases, Traditional variety, productivity 7-8q/ Acre
57.	Kodo Millet	*Paspalum scrobiculatum*		Minimum input requirement, Traditional variety, easily cultivated in in tarai areas (near river side), used in bread & Bakery.
58.	Kakun	*Seta riaitalica*	] 	Local variety, easily cultivated in tarai areas (near river side), used in bread & Bakery, Highly nutritious.
59.	Rice	*Oryza sativa*		Local variety, Less diseases, 100-110 days duration, Less irrigated, suited for rain-fed
60.	Rice	*Oryza sativa*		Local variety, Medium, suited for upland/ rainfed situatation, 90-100 days duration, average productivity 23-25q/ Acre.

61.	Sorghum	*Sorghum bicolor*		Local cultivar, Multicut for fodder, small grain, grown in in tarai region (near river side), suited for different soil conditions.
62.	Lentil	*Lens culinaris*		cultivated since 20 years, Small grain, more no. of pod/ plants, less disese, Easy cooking.
63.	Lentil	*Lens culinaris*		Traditional variety, cultivated from past 13 years, Less disease, Easy production, suited for intercrop.
64.	Indian Mustard	*Brassica juncea*		Local cultivar, cultivated since 15-16 year, Intercropped with wheat, suited for local climate, yield of 16-18q/ ha.
65.	Rice	*Oryza sativa*		Traditional, cultivated from past 12 years, Medium, Yield of 25-28q/ Acre,
66.	Kakun	*Setaria italica*		Grown in dry-land, tasty, less water, less fertilizer, yield of 5q/ Acre, cultivated since 1998.
67.	Maize	*Zea mays*		Local cultivar, Red-Yellow, suited for dry-land, minimum water, ear on each node, farmers acceptability high.

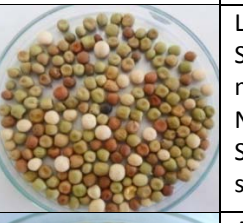
68.	Pearl millet	*Pennisetum glaucum*		Traditional, Desi, suited dryland and waste and barren land, cultivated and preserved from past 20 years. Used in Chapati making.
69.	Maize	*Zea mays*		Used as roasted grain by villagers, grain inside corn, better used in fodder, cultivated an preserved since 1980.
70.	Pearl millet	*Pennisetum glaucum*		Traditional variety, cultivated and preserved since 1996, suited for local climate, Easily cultivable, good for chapatti,
71.	Rice	*Oryza sativa*		Local cultivar, cultivated since 2004, Medium, Short duration, less irrigated. Yield of 22-24 q/ Acre.
72.	Sorghum	*Sorghum bicolor*		Local variety, cultivated and preserved since 1995, good for fodder and Chapatti,
73.	Maize	*Zea mays*		Local variety, suited for different soil conditions, cultivated and preserved since 1999, good for fodder and Chapatti,
74.	Rice	*Oryza sativa*		Local cultivar, cultivated and preserved since 2000, Medium, Tasty, Less water requirement, 120-125 days

75.	Sorghum	*Sorghum bicolor*		Local cultivar, grain small and in separated, flat floret, Easily cultivable, good fodder, cultivated since 1990.
76.	Kodo Millet	*Paspalum scrobiculatum*		Puwal used in winter to warm animal and farmers used as sheet, used as poorer diet by daily laborer, cultivated from past 30 years in tarairegeions.
77.	Kakun	*Setaria italica*		Less irrigated, suited for dry-land situation, Used as atta and chaval, cultivated since 1980.
78.	Maize	*Zea mays*		Minimum 3/ plant, 70-80 days, kharif/ rabi, tasty corn, sweet in taste, 15 years
79.	Pearl millet	*Pennisetum glaucum*		Local cultivar, Good animal feed specially for goat, Easily cultivable, farmers acceptability more.
80.	Chickpea	*Cicer arietinum*		Local cultivar, Early maturity compare to other variety, Less diseases, Cultivated and preserved from past 15 years.
81.	Urdbean	*Vigna mungo*		Brownish-green color, Local cultivar, Bold seeded, More no. of pods/ plant, Easy cooking, delicious, cultivated and preserved from past 20 years.

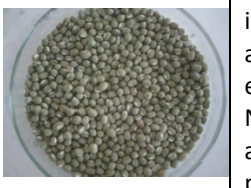
82.	Pearl millet	*Pennisetum glaucum*		Local cultivar, Brownish-black color, Best for chapatti, tasty, Best suited for dry-land/ rain-fed situation, cultivated since 1995.
83.	Urdbean	*Vigna mungo*		Local cultivar, Red-green color, small seeded, Daal very tasty, No. of pod and grain more compare to other, cultivated and preserved from past 20 years.
84.	Kodo Millet	*Paspalum scrobiculatum*		Local cultivar, grown in tarai / bhood regions, good for chapatti and rice, Minimum or no input requirement. Cultivated since 1996.
85.	Maize	*Zea mays*		Local cultivar, Creemy white color, best for chapatti and fodder, good marketebility, cultivated and preserved from past 20 years.
86.	Kodo Millet	*Paspalum scrobiculatum*		Local cultivar, Minimum or no irrigation requirement, Easy cultivation, farmers acceptibility more for human and animal diet. Cultivated and preserved since 1998.
87.	Mustard	*Brassica sp.*		Local cultivar, Suited for local climatic condition, oil cake quality good. Yield 15-16q/ Ha

88.	Rapeseed	*Brassica rapa*		Oil yielding high, 1200ml/2.5kg, used as intercrop, short duration, tasty, nutritious.
89.	Field Pea	*Pisum sativum*		Local cultivar, small seeded, cultivated and preserved since 2000, grown in minimum input requirement, Easy cooking, tasty
90.	Pumpkin	*Cucurbita moschata*		Desikaddu, size 10-12kg, commonly grown on chappar/ cottage, Local demand on occasions, cultivated and preserved since 1985.
91.	Bitter gourd	*Momordica charmso*		Local cultivar, commonly grown in kichen garden, High productivity, Delicious, cultivated and preserved from past 20 years.
92.	Zimikand	*Amorphophallus sp.*		Local cultivar, Small size, tasty and delicious, cultivated and preserved since 1997.
93.	Sponge gourd	*Luffa cylindrica*		Local cultivar, high productivity, very tasty, commonly grown in kitchen gardening, cultivated and preserved since 1998.
94.	Papaya	*Carica papaya*		Local cultivar, Fleshy, Luscious and Sweet, inside Orange-Yellow, Fruiting all season

95.	Rice	*Oryza sativa*		Local cultivar, fine grain, Less irrigated, average productivity 18-20 q/ Acre, Tasty
96.	Bitter gourd	*Momordica charmso*		Local cultivar, small size, Delicious, productivity high, grown in kitchen garden
97.	Rice	*Oryza sativa*		Lassilachipchipa in cooking, 120-130, less irrigated, easy cultivated, 12-28, tastly, medium,
98.	Rice	*Oryza sativa*		Upland, 90 days, root long, Fertilizer less, Delicious, Used in medicinal purpose, Nutritious, cultivated and preserved from past 30 years. Yield of 20-22q/ Acre,
99.	Rice	*Oryza sativa*		110-120 days, Tasty, Plian land, Used in medicinal purpose, Nutritious, cultivated and preserved from past 25 years. Yield of 20-22q/ Acre.
100.	Rice	*Oryza sativa*		Low land, 140-150 days, For flood prone area, Used in medicinal purpose, Nutritious, cultivated and preserved from past 40 years.productivity of 15q/Acre.
101.	Rice	*Oryza sativa*		Upland, 120-125 days, 20q/ Acre, Less irrigation. Less fertilizer, cultivated and preserved from past 30 years

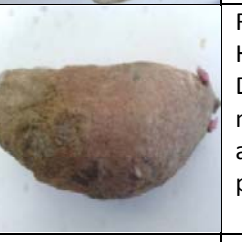
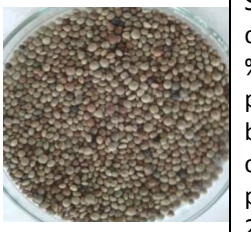
102.	Rice	*Oryza sativa*		Low land, 130-140 days, Less fertilizer, cultivated and preserved from past 25 years. productivity of 15- 17 q/Acre.
103.	Sawan/ Barnyard millet	*Echinochloa frumentaceae*		Local variety, Delicious, Used in kheer making, Easy cultivable, Cultivated since 1998, farmers acceptibility high.
104.	Pearl millet	*Pennisetum glaucum*		Local variety,suited for dry-land situation, used for chapatti and animal fodder, cultivated and preserved from past 20 years
105.	Rice	*Oryza sativa*		Local cultivar, maturity 110-120 days, medium, Tasty, cultivable in less irrigated conditions, cultivated and preserved from past 10 years
106.	Kakun	*Setaria italica*		Local cultivar, easily cultivated in all climatic conditions, Minimum or No input requirement, used as chapatti and chaval, cultivated and preserved since 1999.
107.	Field Pea	*Pisum sativum var. arvense*		Local cultivar, Shondhi daal, minimum water & Nutrint requirement, Suited for different soil conditions
108.	Rice	*Oryza sativa*		Ari-Mota, 90 days, 1-2 irrigation, small size, cultivated and preserved since 1995.Yield of 20q/ Acre.

109.	Dhaicha	*Sesbania sp.*		Local cultivar, Fast growing, Easy decompose
110.	Rice	*Oryza sativa*		Desi, long, for upland, 110, medium small grain, 15q/ Acre, Minimum fertilizer, less irrigation, delicious, cultivated and preserved since 1996.
111.	Rice	*Oryza sativa*		120-125 days, for upland, 110, medium small grain, 15q/ Acre, Minimum fertilizer, less irrigation, cultivated and preserved since 1990.
112.	Rice	*Oryza sativa*		Low land, 150-155 days, Bold grain, Flood prone area, Used in medicinal purpose, Nutritious, cultivated and preserved since 1992.Yield of 12-15q/Acre.
113.	Pearl millet	*Pennisetum glaucum*		Local cultivar, Long earhead, higher grain production, Well suited for all climatic condition, cultivated and preserved since 1990.
114.	Sorghum	*Sorghum bicolor*		Local cultivar, egg shaped bunch, full of grain, Easy to harvest, Farmers acceptability more, cultivated and preserved since 1980.

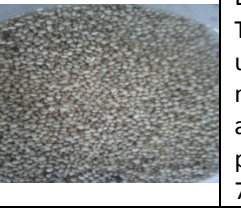
115.	Urdbean	*Vigna mungo*		Tiangle seeda, used as saaga purpose, tasty, production high, mix crop with mustard chickpea, cultivated and preserved from past 20 years. Yield of 12q/acre.
116.	Pea	*Pisum sativum var. sativum*		Desi, daal very tasty, easy cooking, disease less, cultivated and preserved from past 20 years.Yield of 12q/ Acre.
117.	Field pea	*Pisum sativum*		Commonly known as Keraen, very tasty, disease resistant variety, insect damage less, 10q/ Acre, cultivated and preserved from past 40 years.
118.	Ramdana	*Amaranthus sp.*		Local cultivar, no insect pest, cultivated in minimum inputs, Farmers acceptablity high, cultivated and preserved from past 30 years. High market demands.
119.	Urdbean	*Vigna mungo*		Local cultivar, Green in color, No. of pod and seed more, eaisily cultivable, Nutritious, cultivated and preserved from past 25 years.
120.	Pearl millet	*Pennisetum glaucum*		Local cultivar, Easily cultivable, No disease/ insect pest, cultivated and preserved from past 20 years.

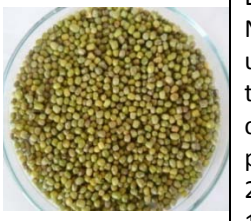
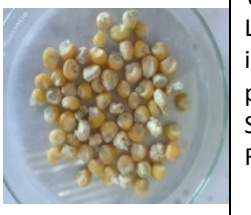
121.	Sesame	*Sesame indicum*		White, Yield 6q/Acre, Less disease, Easily cultivated, protect and preserved since last 25 years.
122.	Turmeric	*Curcuma longa*		Commonly known as Pansahiya, Less water, can cultivate without Hoeing, cultivated and preserved from past 40 years. Yield 75q/Acre,
123.	Turmeric	*Curcuma longa*		Commonly known as Bhinaga, 150q/ Acre, Attractive in appearance, Easy marketability, cultivated and preserved from past 38 years.
124.	Turmeric	*Curcuma longa*		Commonly known as Mooda, used in marriage, worship etc., easy marketability, cultivated and preserved from past 40 years.
125.	Turmeric	*Curcuma longa*		Local cultivar, Less water requirement, Disease very minute, used in tarai regions, cultivated and preserved from past 30 years.
126.	Bitter gourd	*Momordica charmso*		Less disease %, Cultivable in low fertile land, protect since last 25 years. Yield 50q/Acre.
127.	Sesame	*Sesame indicum*		Traditional variety, Cultivable in waste land, Easy marketability in local villages, cultivated and preserved from past 30 years. Yield 3.75q/ Acre.

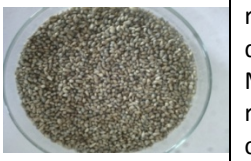
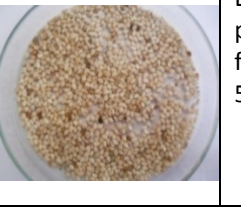
128.	Urdbean	*Vigna mungo*		Long seeded, green, Traditional variety, No. of pod and grain more, Farmers acceptability high, Daal tasty, cultivated and preserved from past 30 years.
129.	Sorghum	*Sorghum bicolor*		Local cultivar, White-reddish, good for chapatti and fodder, Cultivated in bhood/ tarai regions, cultivated and preserved from past 30 years.
130.	Maize	*Zea mays*		White, Protect since 100 years, used in sattu, daliya etc., farmers acceptability high,
131.	Maize	*Zea mays*		Red-Yellow, Good quality chapatti, cultivable with Castor, Pigeonpea, urd etc. very used in winter, cultivated and preserved from past 40 years.
132.	Maize	*Zea mays*		White-Yellow, Taste very good, minimum or no disease, cultivated and preserved from past 40 years.
133.	Barley	*Hordeum vulgare*		20Years old, cultivable in barren land, Minimum or no input requirement, Better used in sattu and feed for animals, cultivated and preserved from past 20 years.

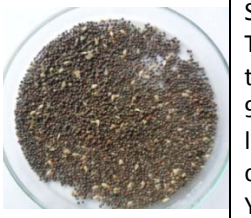
134.	Arvi	*Colocasia sp.*		Ttubers very large, Easy multiplication, Very Tasty, Round, Disease % very less, cultivated and preserved from past 35 years.
135.	Sweet Potato	*Ipomoea*		Yellow, Easily cultivable, Delicious and nutritious, cultivated and preserved from past 40 years.
136.	Sweet potato	*Ipomoea*		Red, Less disease %, Highly productive, Delicious and nutritious, cultivated and preserved from past 30 years.
137.	Lentil	*Lens culinaris*		Sandy-red, Local cultivar, Less disease %, better performance in bhood/ tarai regions, cultivated and preserved from past 20 years.
138.	Garlic	*Allium sativum*		30 Years old, good for stock, Blight disease resistance, Good medicinal value, used in fracture treatment,
139.	Arvi	*Colocasia sp.*		Long, easy multiplication & cultivation, Very good in taste, Production value high, cultivated and preserved from past 20 years,
140.	Amla	*Phyllanthus sp.*		Desi, Small, Less disease %, High medicinal value, Easy marketability, cultivated and preserved from past 30 years,

141.	Van Bhindi	*Abelmoshcus sp.*		Used in Jaggery preparation, cultivated and preserved from past 20 years,
142.	Sawan/ Barnyard millet	*Echinochloa frumentaceae*		Yellow-red, No diseases, Highly nutritious, Easily cultivable, Good medicinal value, cultivated and preserved from past 20 years,
143.	Wheat	*Triticum aestivum*		Local variety, Less disease %, grain setting even under warm wind flow, without additional input. 3.5q/ Acre yield.
144.	Sesame	*Sesame indicum*		Local cultivar, More no. of pods, Suited for local climate, Farmers acceptance high
145.	Wheat	*Triticum aestivum*		Local cultivar, Less disease/ pest %, Uniform grain setting, Suited for local climatic conditions, Average yield of 20q/ Acre.
146.	Rice	*Oryza sativa*		Local cultivar, Very tasty, scented, 140 days maturity, Suited in tarairegeion, No fertilizer demand, Yield of 13-14q/Acre.
147.	Rice	*Oryza sativa*		Local cultivar, Less water requirement, Minimum insect/ pest, Medium size grain, Less damage while processing. 90 days crop, small grain, heaviness grain,

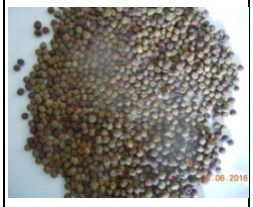
148.	Bitter gourd	*Momordica charmso*		Small, More no. of flowering and fruiting, very tasty, Commonly used in kitchen gardening, Best for stomach ach, cultivated and preserved from past 15 years
149.	Indian Mustard	*Brassica juncea*		Brown-Black, Local cultivar, Sowing as solo or intercropped with wheat, Yield 5-6q/ Acre. **Harvesting very easy**,cultivated and preserved from past 30 years.
150.	GobhiSarson	*Brassica napus*		Local cultivar, Used as Animal feed, leaf large, Cultivated and preserved from past 10 years old
151.	Moongbean	*Vigna radiata*		More flowering Multi-picking, disese no, insect no, cultivated and preserved from past 15 years.
152.	Linseed	*Linum usitatissimum*		Local cultivar, Small grain, Easily cultivable with FYM, Minimum or no disease/Pest, cultivated and preserved from past 25 years, High medicinal value, oil recovery 50%.
153.	Kakun	*Setaria italica*		Drought resistance, Tasty, commonly used in kheer making, cultivated and preserved from past 20 years, yield of 7.5q/ acre.

154.	Other oilseed	-		Commonly known as Gehua, Very easy and fast growing, No effect of snow/fog, grown with chickpea and linseed, oil 50% recovery, cultivated and preserved from past 40 years,
155.	Moongbean	*Vigna radiata*		Drought resistance, No flower shedding under high temperature, , cultivated and preserved from past 20 years, Yield of 15-16q/Acre
156.	Kodo Millet	*Paspalum scrobiculatum*		Drought resistance, No water requirement, Easily cultivable, cultivated and preserved from past 20 years,
157.	Chickpea	*Cicer arietinum*		Desi cultivar, grown from past 15 years, Less disease, easy production, cultivated and preserved from past 20 years,
158.	Maize	*Zea mays*		White-Yellow color, Local cultivar, Good in chapatti and popcorn making, Suited for Kharif, Rabi and Zaid.
159.	Kodo Millet	*Paspalum scrobiculatum*		Brown, drought resistance, No insect/pest, Suited for all types of soil, cultivated and preserved from past 20 years,

160.	Pearl millet	*Pennisetum glaucum*		Local cultivar, High yielding, drought resistance, no disease/ pest, Minimum input requirement. cultivated and preserved from past 14 years,
161.	Rice	*Oryza sativa*		Black, Scented, Tasty, fine grain, cultivated and preserved from past 10 years.yieldof 15q/ Acre.
162.	Rice	*Oryza sativa*		Scented, Fine grain, Tasty, Easily cultivable, cultivated and preserved from past 12 years.
163.	Sawan/ Barnyard Millet	*Echinochloa frumentaceae*		Tasty, drought resistance, used in kheer making, delicious, cultivated and preserved from past 20 years,
164.	Sorghum	*Sorghum bicolor*		Small grain, used in chapatti and fodder purposes, drought resistance, cultivated and preserved from past 20 years,
165.	Pumpkin	*Cucurbita moschata*		Delicious, quality produce, Round, Full of flesh, 4-5kg/ fruit, cultivated and preserved from past 20 years,
166.	Sesame	*Sesame indicum*		Less fertilizer, Less pest, Flowering and fruiting high, Yield 5q/ Acre,

167.	Urdbean	*Vigna mungo*		Produce with minimum input, Blue bull resistance, Yield 5-6q/ Acre, Very tasty.
168.	Coriander	*Coriandrum sativum*		Traditional, Scented, Commonly used in Kitchen garden
169.	Lentil	*Lens culinaris*		Local variety, Wilt resistance, plant small, Daal good, Average Productivity 4q/ Acre.
170.	Rapeseed	*Brassica rapa*		Short duration, Traditional variety, thin grain, oil %2.5/ 900ml, girtanahi, Leaf large, Intercrop with cane and wheat, Yield 5q/ acre.
171.	Mustard	*Brassica sp.*		Commonly known as Lahata Plant height 5-6 feet, Oil when used in sabji and daal gives very tasty flavour, Oil jhaardaar, nutritious, low production but no disease. Yield 4q/ Acre.
172.	Maize	*Zea mays* L.		➢ Not much affected in adverse weather condition. ➢ Its stem is used as fodder due to its succulent nature. ➢ Less affected due to insect & disease. ➢ Complete grain filling seen in corncob. ➢ Grain size is small but heavier in weight.

				➢ Corncob size 18-20 cm ➢ Average production 25 – 28 Q/ha ➢ It is suitable for Kharif Season.
173.	Maize	*Zea mays* L.		➢ Its stem is thicker than Malhipuri ➢ Less affected in heavy rainfall and high wind speed. ➢ Less affected due to insect & disease. ➢ corncob size 18-20 cm ➢ Average production 22-24 Q/ha ➢ It is suitable for Kharif Season.
174.	Ridge Guard	*Luffa acutangula*		➢ It is early maturing variety. ➢ Flowering start 40 – 45 days after sowing. ➢ Fruit size 30-35 cm & dark green in colour. ➢ Flesh is white & succulent. ➢ It performs better in adverse weather condition also. ➢ It is suitable for Zaid Season.
175.	Mango (Chadani)	Mangifera indica		• After ripen, storage quality (8-12 days) of mango is very high as compare to other variety . ➢ Hard in nature, there is no cracking after falling from mango tree.

176.	Brinjal (MB-8)	*Solanum melongena*		➢ Fruit size large, purple colour, weight of fruit is 1.1 -1.6 kg, ➢ The plant reaches about 3-4 feet tall
177.	Field Pea (Budhia Matar)	Pisum sativum		➢ Taste of Pulse quality is very good ➢ Blue Horse and wild pig cannot eat this crop. ➢ Vines often are 3 to 4 feet long.
178.	Mango (PS-1)	Mangifera indica		➢ Fruits are oblong ovate, 2.5 to 4 inches in length by 3.8 to 4.5 inches in width. ➢ The average fruit weight ranges from 100 to 200 grams. ➢ Immature fruits are green &Mature fruits are green yellow. ➢ The flesh is firm, yellow, juicy, sweet, and fiber.

Training under PPV & FRA Programme

KVK wise awareness programme: The PPV & FRA provided Rs. 80,000/- per KVK for 50 KVKs in the zone-IV Uttar Pradesh (37) and Uttarakhand (13). Awareness programme conducted across the KVKs and benefited 6500 participants. After awareness programme and exhibitions made the farmers know their rights for collecting the germplasms (178) from the different hot spot areas in the zones. The activities conducted at different locations of the KVKs their glimpses are given here for further record.

KVK Saharanpur

KVK Pratapgarh

KVK Chitrakoot

KVK Auraiya

KVK Haridwar

Photographs of Exhibition under PPV & FRA Programme

Paper Coverage of PPV & FRA Programme

अमर उजाला

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जागरूकता कार्यक्रम में किसानों को दिया गया प्रशिक्षण

19 फरवरी 2016

दैनिक राष्ट्रबोध

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मवाना अमर उजाला

02

कृषक अधिकार संरक्षण की जानकारी दी

FUTURE STRATEGY

1. Awareness of large number of farmer's about registration of planting material under PPV & FRA Act.
2. Training for KVK Scientists about PPV & FRA.
3. Abroad training of ATARI Scientist under PPV & FRA.
4. Increase the number of DUS testing Centre in each hot spot.
5. Increase the number of crop, varieties, medicinal plants, economic value plants for registration under PPV & FRA.
6. Training programme of farmer's, NGO and other stakeholder who are directly involved in the PPV & FRA programme for sustain the programmes.

Network of KVKs

भाकृअनुप–कृषि तकनीकी अनुप्रयोग संस्थान, कानपुर

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