

**Agriculture Department in the Service of
Farming Community,
Jammu Division, J&K State**

(Note of Information)
2014-15

**Directorate of Agriculture, Jammu
Government of Jammu & Kashmir
Krishi Bhawan, Talab Tillo, Jammu - 180002**

Introduction

The Department of Agriculture Jammu has the basic mandate to provide scientific and technical know-how to the farmers of the State for sustainably boosting crop production and productivity to meet the nutritional requirement and economic well being of the people. It has continued with its endeavor over the years to serve the needs of not only the farmers who grow food, fiber and shelter material and constitute the largest section of the workforce (70 percent of the population of Jammu region), but also the entire population of the region including the floating population which is comprised of tourists, pilgrims, para-military forces and migratory labour.

The measures adopted by the Department in this direction include popularization of elite quality hybrid seeds and High Yielding Variety seeds of crops among farmers. Judicious use of chemical and non-chemical fertilizers, plant protection cover is also being promoted besides farm mechanization, irrigation augmentation through bore wells and water harvesting tanks, protected cultivation through polygreen houses and shade net houses, establishment of income generating enterprises like mushroom production units, beekeeping units, etc. The Department is facilitating the farmers in diversification of their cropping systems and intensification of cropping cycle.

Investments are also being made in agri-infrastructure such as Seed Multiplication Farms, Seed Processing Plants, Seed Testing, Seed Certification through Seed certification Agency, Quality Control Laboratories for testing of Chemical Fertilizers and pesticides, Soil Testing Laboratories, Plant Health Clinics, Protected cultivation in Naturally ventilated polyhouses, Agriculture Engineering Workshops, Extension and ICT systems, Law Enforcement, etc. to provide effective services to farmers in field.

Aims & Objectives

The principal Aims & Objectives of the Department are as under:

- To enhance production and productivity of crops and agro-based produce sustainably;
- To ensure efficient use of resources by farmers, and
- To ensure access of farmers to improved technology and inputs through effective transfer of technology programmes.

Functions

The department endeavours to propagate among the farming community adoption of improved and quality inputs like seeds, organic and inorganic crop nutrients and plant protection materials, machinery and equipments, protected cultivation measures, etc. For sustainable enhancement of agriculture production and productivity it is imperative to promote judicious use of natural resources like land (soil), water and agro-climatically and agri-ecologically appropriate cropping systems, ultimately using them to mitigate the

problems arising out of climate change, These activities are being operationalized through various wings and sections of the Department as briefed below:

S. No.	Activity/Intervention	Wing/ Scheme of the Department
1.	Soil Survey and Management of Soil & Water	Soil Survey Scheme, Soil Conservation wing
	Soil Analysis	Soil Testing Labs & Extension Functionaries
2.	Seed Augmentation & Distribution	Inputs wing & Extension Functionaries
	Seed Production at Farms/ Seed Villages	Inputs wing, Seed Certification Scheme, Extension functionaries
3.	Promoting need based Application of Chemical Fertilizers, Organic Manures, Bio-fertilizers, Integrated Nutrient Management (INM), etc.	Extension functionaries
4.	Promoting need based application of Chemical Pesticides & use of Organic measures, Bio-pesticides, Integrated Pest Management (IPM) providing plant health care services through Plant Health Clinics, etc.	Extension functionaries, staff of Plant Health Clinics (Static and mobile)
5.	Enhancing Farm Power By Promoting Machinery & Equipments, Tools, Protected cultivation, Micro-irrigation, etc. & their fabrication	Divisional level and District level Agriculture Engineering Workshops, Extension functionaries
6.	Training and Education	Extension wing
	Information, Publicity and e-governance	Extension wing
7.	Ensuring quality inputs to farmers	Quality Control through analytical services for inputs in Seed Labs, Fertilizer Quality Control Lab., Pesticide Quality Control Lab.,
8.	Enforcement of Fertilizer Control Order (1985), Seed Act (1965), Insecticides Act (1968), etc.	Through Law Enforcement wing
9.	Vegetable farming, Protected cultivation, Potato Farming, Apiculture, Mushroom Cultivation, Saffron, Condiments, Spices, Fodder Production, etc.	Through Vegetable and Potato Development Schemes, Mushroom & Spawn Production Schemes, Assistant Entomologist & Apiculture Development wings, Saffron Development Scheme, Agrostology Scheme and Extension functionaries

The Department is also facilitating the farmers in making them aware about the Kissan Credit Card Scheme (KCC) and Crop Insurance Programmes of the Government and in filling up application forms and their processing with the concerned Banking agencies and Crop Insurance Companies so as to address their economic concerns.

Land use pattern and characteristic features

Following are some of the characteristic features of Jammu region which are relevant to agriculture:

- Net Cultivated area = 3.97 lakh ha
- Gross Cultivated Area = 7.15 lakh ha
- Net area irrigated = 1.09 lakh ha (24%)
- Av. land holding size = 0.76 ha
- No. of Operational Holdings = 5.88 lakhs
- Percentage of Small/ Marginal Farmers = 92%
- Area under un-cultivable land = 4.56 lakh hect
- Area under cultivable wastelands = 1.09 lakh hect
- Area under pastures = 0.83 lakh hect

Strengths

- Special Tasting and Aromatic Traditional Basmati Rice grown in R.S.Pura and surrounding areas
- Special tasting Rajmash pulse grown in hill districts of Jammu division
- Black Zeera grown in the remotest areas of the State
- High potential for production of virus free potato seed in high altitude Temperate areas of the State
- Great scope for area expansion under Quality & high value Peas & Vegetables Grown in Temperate areas of the State
- Saffron, the pride of J&K, also grown in Kishtwar district

Weakness

- A large percentage of land holdings is small and fragmented
- About 72.48 percent of net cultivated land is un-irrigated and only about 27.52 percent is irrigated
- Vast drought prone areas, specifically in Doda, Kishtwar, Ramban, Udhampur & Reasi districts contributing to low and fluctuating yields
- Largely fragile soils in Hilly Region which are susceptible to erosion and have low production potential
- Steep slopes in the hills reduce potential for mechanization & irrigation
- Limited available post harvest management infra-structure contributes to high level of crop spoilage, perishability & low capacity of value addition
- The prevailing marketing system is inadequate and unorganized contributing to lower returns to farmers & greater say of middle-men
- Far off Markets for export of Specialty Agricultural products to outside the State inhibit entrepreneurship among farmers

Agro-climatic Zones and Agri-ecological situations of Jammu Region

From the strategic and development point of view the area under agriculture in the Jammu region of J&K State can be broadly categorized into irrigated and un-irrigated areas which are spread over the lower Sub-tropical plains, higher temperate areas and the intermediate areas.

The irrigated areas are mainly concentrated in the lower Sub-tropical plains of Jammu, Kathua, Samba and Rajouri districts due the Ranbir, Pratap and Ravi-Tawi Canal Irrigation Systems, etc, (approximately 82%). The systems have been supplemented by tube-wells/other wells irrigation (approximately 7%), tanks/springs, etc. (approximately 3%), and others including micro-irrigation, etc. (8%). Irrigation in the temperate and intermediate areas in the remaining districts is confined to only a few isolated belts.

The district-wise net sown area and irrigated area during the year 2012-13 is tabulated below:

S No	District	Net Sown Area (Hect)	Net Irrigated Area (Hect)	%age Irrigated
1	Jammu	91095	56079	61.56
2	Kathua	60543	20641	34.09
3	Samba	28365	7520	26.51
4	Rajouri	53082	4805	9.05
5	Poonch	27617	3719	13.47
6	Kishtwar	17503	2870	16.40
7	Doda	30581	2775	9.07
8	Udhampur	44631	7810	17.50
9	Reasi	25364	1698	6.69
10	Ramban	18423	1400	7.60
	Total	3,97,204	1,09,317	27.52

Cropping Systems

The major crops grown in Jammu region and the normal area coverage under each is given below:

S.No.	Crop	Area (*000 hectares)
1	Rice	114.86
2	Maize	205.81
3	Wheat	243.09
4	Other Cereals	11.98
5	Pulses	33.26
6	Oil Seeds	39.12
7	Vegetables	28.09
8	Fodder	38.88
	Gross Sown Area	715.05

Cropping systems in Irrigated Area

About one lakh hectares of the net cultivated area under paddy, of which about forty thousand (40,000) hectares is under Basmati rice alone during Kharif season, is under irrigation.

- Red rice in some areas of Doda district and Palam, Banji/Japan 1561, K-78, Sankh kind of rice in specific hilly pockets of Udhampur like Bain, Sudhmhadev, Panchari, Dudu, Jakhad, Basantgarh, Ghordi, Satyalta etc. are specifically grown for local consumption.
- A sizable chunk of irrigated area is under intensive cultivation of vegetable hybrids and the temperate and exotic varieties of vegetables. Among vegetables, purple knolkhol peculiar to villages of Hanga and Radish in villages of Kansar in Bhandarwah area are important from seed production point of view. Similarly, locally grown carrot (Nantes), summer/ kharif season peas, beet root and Hak-sag (Khanyari/GM Dari) have a good potential in Ramban district being nearer to Kashmir market.
- Maize for green cobs and baby corn is also gradually picking up in the irrigated areas.
- The main irrigated Rabi crops are wheat, fodder berseem, mustard and gobhi-sarson, vegetables and potato.

Cropping Systems in Un-Irrigated Areas:

The un-irrigated areas in Jammu division are spread over all the districts and constitute about 72% of the net-cultivated area of about 3.97 lakh hectares. These include the large drought prone tracts of Doda, Kishtwar, Ramban, Reasi, Udhampur and Rajouri districts and pose a major challenge not only to the farming community, but also to the technologists and extension functionaries in the State Agriculture Universities and the Department. Fortunately for the region, these areas are a home for several prized and high value agricultural products and thus offer a good opportunity for livelihood and income augmentation to local populace.

- In the Kharif season Maize occupying an area of above 2.10 lakh hectares and in Rabi season wheat occupying an area of about 2 lakh hectares are the major crops of un-irrigated areas in all the districts.
- Un-irrigated rice is cultivated in about 0.30 lakh hectares of Kathua, Samba and Udhampur districts.
- About 90% of the area under the rice and wheat crops is covered under high yielding varieties.
- About 25% area under maize in this region is covered under hybrids.
- The drought tolerant crops like Bajra and Barley are grown in an area of around 10 thousand hectares each in specific pockets.
- Cultivation of local cultivars of Rajmash in higher temperate areas of all districts of Jammu region except Samba and Jammu district, Kulth (horse gram) in Kathua and Doda districts, moth (cowpeas) in specific pockets of Rajouri and Poonch districts, garlic (*ganthia thom*) in higher intermediate areas of Udhampur, Kathua and Poonch districts have special value, and even higher if cultivated organically.
- The Doda and Kishtwar districts have a wide range of local high value crop cultivars among which prominent are saffron of Kishtwar, drought tolerant lesser millets like Salan, Kangani (Kishtwar and Paddar area), Cheena grown in low rainfall areas.
- Local white maize cultivars, local mash, rajmash, summer peas, potato, Kulth (horse gram) and Lentil too have a high potential in the districts.

Zonalization at micro-level

The agro-climatically distinct zones in Jammu region may be categorized broadly into the following six sub agro-climatic conditions and fourteen agri-ecological situations based on irrigation status and pre-dominant cropping systems which require distinct and specialized treatment to harness the potential sustainably:

Name of Agro-climatic Zone	Sub-region	Predominant Cropping System	Districts Covered
Sub-tropical	Irrigated	Basmati rice, wheat, fodder, oilseeds growing	Areas of Jammu, Kathua, Samba,
		Non-Basmati rice, wheat / fodder/pulses / oilseeds growing	Areas of Jammu, Kathua, Samba, Udhampur, Rajouri, Reasi
		Vegetable based cropping system (including Ginger / Turmeric)	Areas of Jammu, Kathua, Samba, Udhampur, Rajouri, Reasi
		Sugarcane based cropping system	Small areas of Jammu

	Rainfed / Un-irrigated	Maize / wheat based cropping system	Areas of Jammu, Kathua, Samba, Udhampur, Rajouri, Reasi
		Millets / Bajra / fodder / wheat based cropping system including Vegetables (mainly cucurbits)	Areas of Jammu, Kathua, Samba, Udhampur, Rajouri, Reasi
Temperate	Irrigated	Rice based / Rice (mono-cropped)	Areas of Ramban, Doda, Kishtwar, Kathua, Reasi, Udhampur, Rajouri, Poonch
		Vegetable based (cucurbits, etc.)	Areas of Ramban, Doda, Kishtwar, Kathua, Reasi, Udhampur, Rajouri, Poonch
	Un-irrigated	Maize based / Maize (mono-cropped) + Rajmash	Areas of Ramban, Doda, Kishtwar, Kathua, Reasi, Udhampur, Rajouri, Poonch
		Saffron & Zeera clusters	Kishtwar
		Potato based / Potato (mono-cropped)	Ramban, Udhampur
Minor Millets based	Doda, Kishtwar		
Intermediate	Irrigated	Rice based (including wheat / fodder/ vegetables / Ginger / Turmeric / pulses / oilseeds growing)	Areas of Ramban, Doda, Kishtwar, Kathua, Reasi, Udhampur, Rajouri, Poonch
	Unirrigated	Maize based (including wheat / fodder/ vegetables / pulses / oilseeds growing)	Areas of Ramban, Doda, Kishtwar, Kathua, Reasi, Udhampur, Rajouri, Poonch

Production and requirement of Food grains

The daily food grains requirement of humans as per the recommendations of the Advisory Committee of the Indian Council for Medical Research (ICMR) for balanced diet for Indians based on the concept of “least cost” is given below:

Food Items	Adult Man's Requirement (Unit in grams)			Adult Woman's Requirement (Unit in grams)		
	Sedentary	Moderate at Work	Heavy Work	Sedentary	Moderate at Work	Heavy Work
Cereals	460	520	670	410	440	575
Pulses	40	50	60	40	45	50
Total	500	570	730	450	485	625

The Jammu division of J&K State had a **population of 53,78,538** as per 2011 Census, plus the pilgrims, tourists, labour, workers, Defence personnel, Central Govt. employees from outside State for whom the **food grain requirement of 11.539 lakh mts. has been calculated** as given below **on the basis of the average 525 g. per capita per day food grains** recommended for the sedantry, moderate and heavy workers, children and other age groups:

S.No.	Particulars	Norms	Annual Food grain requirement (lakh mts.)
1	Total estimated population	5378538 numbers * 365 days * 525g.	10.307
2	Estimated Defence Personal	3,00,000 numbers * 365 days * 525g	0.575
3	Pilgrim Tourists (Vaishnodevi Ji)	1 Crore numbers annually * 3 days * 525g	0.158
4	Other tourists (Kashmir)	18 lacs numbers * 2 days average * 525g	0.019
5	Central Govt. Employees and other employees /worker from other States	2,50,000 numbers * 365 days * 525g	0.480
6	Total	-	11.539

The **net cultivated area under field crops in Jammu region** as reported by the Directorate of Economics and Statistics **ranged between 382.51 thousand hectares and**

400.954 thousand hectares during the period 2005-06 and 2012-13 and the gross cultivated area ranged between 674.14 thousand hectares and 728.967 thousand hectares respectively.

The total production of food grains in the region has hovered between 860.90 thousand Mt to 1267.80 thousand Mts during the years 2005-06 to 2012-13. The production showed an increase from 1009.10 thousand Mt to 1267.80 thousand Mt during the period 2005-06 to 2008-09, but during the year 2009-10 it plummeted to 860.90 thousand Mt due to adverse weather conditions. In the following years, the production registered an ascending trend and during the year 2012-13 it recovered to 1226.104 thousand Mt. The final annual estimates of crop area coverage and production for the Rabi 2013-14 season and the year 2014-15 are still awaited, but the repeated occurrence of adverse weather conditions during the period have created an adverse impact on the production and productivity of crops. Following is the table showing area, production and yield data for various major crops grown in Jammu region of J&K State.

Year-wise Area, Production and yield of major cereal crops in Jammu Division since 2009-10

(Area in 000 Ha, Production in 000 M.T and Yield in Qtl/Ha)

Year	Rice			Wheat			Maize		
	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield
1995-96	107.740	201.700	18.721	238.180	392.800	16.492	202.460	452.700	22.360
2009-10	115.939	162.800	14.042	283.996	285.260	10.045	222.156	384.786	17.321
2010-11	122.049	191.200	15.666	286.201	441.977	15.443	218.319	409.811	18.771
2011-12	121.682	224.250	18.429	291.387	495.731	17.013	225.388	400.930	17.788
2012-13	121.162	219.045	18.079	289.391	461.593	15.950	221.773	410.953	18.530
2013-14	131.033	230.322	17.932	not received from Rev Dept			215.966	392.941	18.19
2014-15	not received from Rev Dept								

Area coverage, production and yield of pulses, oilseeds and vegetables in Jammu division during 2013-14 and 2014-15 as per Departmental estimates is given below:

Crop	2013-14			2014-15		
	Area	Production	Yield	Area	Production	Yield
	('000 hect.)	('000 mts)	(qtls/hect)	('000 hect.)	('000 mts)	(qtls/hect)
Pulses	31.69	13.88	4.38	33.26	16.63	5.00
Oilseeds	39.89	44.80	11.23	39.12	45.40	11.64
Vegetables	31.79	686.49	215.90	32.69	662.40	202.63

Productivity level of Food grains

The existing food grain productivity level reported in the region is around 18 qtl per hectare and through intensive agricultural practices and higher technology interventions in the irrigated and un-irrigated / mountainous areas, it can be raised to 20 qtl per hectare to achieve a higher satisfactory production level of 1400 thousand Mts to feed the population of this region.

Issues in yield assessment

The data generated by the Revenue Department negate the justified claims of higher crop productivity level achieved by farmers through use of improved technology, seeds of HYV quality seeds and hybrids, fertilizers, plant protection measures, etc.

- Ironically, the Revenue Data shows increasing cropped area despite a lot of diversion of cultivated & cultivable lands for non-agricultural purposes,
- Departmental crop cuts and Study by the SKUAST Jammu/ SAMETI Jammu confirmed higher productivity as compared to estimates of Revenue Department,

Possible solutions:

- Special Crop Cut Experiments required on pilot basis for validation of data,
- Assistance may be had from the Department of Remote Sensing / Department of Science and Technology to arrive at realistic estimates.

Measures for Production and Growth Enhancement

The Department is progressively adopting and disseminating improved technology interventions to mitigate and face the consequences and influences of agri-eco adversities, climate change, and the brisk globalization process.

Through investments in agri-infrastructure such as Seed Multiplication Farms and the Seed Processing Plant,, Quality Control Laboratories, Soil Testing Laboratories, Plant Health Clinics, Agriculture Engineering Workshops, Training cum Demonstration Centres for Mushroom and Apiculture, Extension and ICT systems, etc. and by providing assistance to farmers through subsidies on critical inputs the Department is facilitating the farmers in production and marketability of the produce.

Some of the salient interventions in this regard are briefed here under:

A. Seeds

i. **Strengthening of Quality Seed Production and Distribution System**

The quality seed production and distribution system of the Department is being supervised and managed by the Joint Directorate of Agriculture Inputs while the quality control checks are being observed by the Divisional Seed Certification wing, Seed Analyst and Law Enforcement agency of the Department. **The Department has a total of 27 Seed Multiplication Farms (SM Farms) of which 2 are large mechanized and 25 are small farms.** The large farms viz. Chinore and Chakroi are focusing mainly on the cereals while the smaller farms at Sanasar, Gool, Ishkunda, Kotli Mian Fateh, Tethar, Talab Tillo, Majhalta, Barmal, Lamberi, etc. are devoted mainly to potato, pulses, oilseeds, vegetables, fodder. One farm each at Berwar, and Atholi in Kishtwar is devoted to saffron and Cumin (Black Zeera) seed production. These are briefly described as under:

- **Seed Multiplication Farm, Chinore:** The Area coverage under seed crops at this large mechanized 2642 acre Seed Multiplication Farm, Chinore has been enhanced though marginally to 2539 acres in 2013-14 from 2507 acres in 2009-10, but the seed production has been increased to 20297.23 qtl from 5158.06 qtl during the same period through improvement in irrigation facilities, layout and mechanization under RKVY coupled with human resource management. The Farm is now running in operational profit since 2011 for the fourth consecutive year.
- **Seed Multiplication Farm Chakroi:** The other large mechanized and prestigious Seed Multiplication Farm Chakroi is being revived and strengthened for quality seed production of traditional Basmati rice of R.S. Pura, Jammu Division under the Special Task Force Project. The area coverage under seed crops in 2013-14 rose to 875 acres from 526 acres in 2009-10 and the Seed Production rose to 3426.36 qtl in 2013-14 from 623.75 qtl in 2009-10.
- **Other Big and Small Seed Multiplication Farms:** There are The total cropped area of Seed Multiplication Farms of the Department (including small farms) has been increased to 3740 acres in 2013-14 as compared to 3328 acres in 2009-10. Through strenuous efforts put in by the Department with assistance from various Centrally Sponsored and State Sector Schemes the total seed production has increased to 25058.40 qtls in 2013-14 from 6551.97 qtls in 2009-10.

As may be seen from the table given below, these **farms are functioning mainly under un-irrigated conditions as the cultivable irrigated area of SM Farms of the department is just 20.77 per cent** while 79.33 per cent area is totally rainfed, thus contributing to low production and productivity.

S.No	Name of Farm	Cultivable area (In Acre)		Total
		Irrigated	Un-irrigated	
1	Chinore	300	1965	2265
2	Chakroi	300	536	836
3	Small Farm	110	207	317
	Total	710	2708	3418

The Area and Production details of these farms during 2013-14 viz-a-viz the base year 2009-10 are given in the following table:

S.No	Farm	Area sown (in acre)						Seed Production (in Qtl.)					
		2009-10			2013-14			2009-10			2013-14		
		Kharif	Rabi	Total	Kharif	Rabi	Total	Kharif	Rabi	Total	Kharif	Rabi	Total
1	Chinore	261	2246	2507	338.2	2201	2539.2	1494.81	3663.25	5158.06	2297.23	17890	20187.23
2	Chakroi	118.4	408	526.4	300	575	875	347.55	276.2	623.75	1226.36	2008	3234.36
3	Small Farm	185	110	295	190.2	136	326.2	401.21	338.2	739.41	784.81	432	1216.81
	Total	564.4	2764	3328.4	828.4	2912	3740.4	2243.57	4277.65	6521.22	4308.4	20330	24638.4

Note: With an additional area under the crops and enhancement of yields at these farms over the years, the requirement of funds has also got enhanced for added pre-and post-harvest management, cost of transportation, packing material and other field operations.

- **Procurement of Certified seeds of Wheat & Paddy from Seed Villages at farmers' field:**

To augment the availability of quality seeds for the farmers from local resources, the programme of certified seed production and procurement from duly laid out Seed Villages in farmers' field was revived during 2013-14. Under the programme the farmers are continuously being trained in seed production, and provided production incentive over and above the MSP for the procured quantity after proper inspections and lab analysis as per norms. The table given below shows the quantity of locally adapted Seed of paddy and wheat of Certified category produced at farmers' field under technical supervision of the department and procured under Seed Village Programme during the year to augment its supplies at cheaper rates.

S.No.	Kind	Procurement (qtls)
1	Paddy	51.60
2	Wheat	7500.00
	Total	7551.60

- **Distribution of High Yielding Variety Seeds and quality Hybrid Seeds**

The Department has been consistently providing location and time specific Hybrid seeds of Paddy and Maize to farmers on a large scale on subsidized costs. These seeds have generally sustained the onslaught of adverse weather conditions like heavy windstorms and rains and contributed to not only the sustained, but even the higher yields.

Against **no distribution of Hybrid paddy seed by the Department during the year 2009-10, the quantity of hybrid paddy seed distributed amongst the farmers during 2014-15 was 697 qtls.** The distribution of **hybrid maize seed during 2014-15 recorded a substantial increase to 12,688qtls from 5093 qtls in 2009-10.**

Similarly, there has been a phenomenal increase during the period in **wheat seed distribution from 32,861 qtls to 63,246 qtls.** The following Quantity of open pollinated high yielding variety and hybrid seeds has been distributed amongst the farmers since 2009-10:

Distribution of Seeds by Agriculture Department Jammu														(in Qtl.)		
Year	Category	Paddy	Maize	Wheat	Oil Seeds			Fodder			Pulses			G.		
		Kharif	Kharif	Rabi	Kharif	Rabi	Total	Kharif	Rabi	Total	Kharif	Rabi	Total	Total		
2009-10	Certified	2140	61	32861	06	141	147	70	1188	1258	101	44	145	40155		
	Hybrid	0	5093													
	Total	2140	5154	32861		+88										
2010-11	Certified	2336	11	41453	7	225	232	150	1154	1304	108	29	137	49493		
	Hybrid	10	4010													
	Total	2346	4021	41453												
2011-12	Certified	2605	20	37595	9	246	255	100	2195	2295	120	118	238	47458		
	Hybrid	417	6821													
	Total	3022	6841	37595												
2012-	Certified	2816	33	37345	14	449	463	240	3333	3573	210	247	457	47748		

13	Hybrid	670	6884											
	Total	3486	6917	37345										
2013-14	Certified	3334	0	53341	18	410	428	463	4430	4893	180	237	417	72174
	Hybrid	696	9065											
	Total	4030	9065	53341										
2014-15	Certified	3495	0	63246	0	507	507	820	6882	7730	241	333	574	88937
	Hybrid	697	12688											
	Total	4192	12688	63246										
2015-16 (Target)	Certified	4000	50	75000	20	700	720	1000	8000	9000	300	500	800	106320
	Hybrid	800	15950											
	Total	4800	16000	75000										

- **Seed Replacement Rate:**

By pumping in a greater quantity of latest generation certified and hybrid seed into the supply chain the Percentage Seed Replacement Rate achieved in Jammu Division during last 5 years has increased substantially as given in the table below:

Season	Crop	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16 (tgt)
Kharif	Rice	13.24	14.98	18.68	23.08	24.95	26.32	30.00
	Maize	12.37	14.98	21.75	18.40	24.44	32.10	40.00
	Pulses	2.58	2.90	3.83	5.52	5.50	06.75	08.00
	Oilseeds	2.88	2.63	4.50	7.38	8.30	NA	10.00
	Fodder	1.55	4.94	40.62	55.00	85.89	87.97	90.00
Rabi	Wheat	15.86	29.95	26.05	26.48	32.07	35.00	40.00
	Pulses	0.76	0.61	1.74	4.38	3.12	6.42	08.00
	Oilseeds	6.63	11.73	22.53	30.41	22.98	32.00	40.00
	Fodder	5.40	3.55	23.80	22.30	29.23	35.00	40.00

The tentatively estimated percentage SRR achieved in the State during 2014-15 is as under:

Crop	Qty of quality seed distributed (from all sources viz. Deptt Seed Production Farms, Seed Village Programmes, Seed Corporations & Companies, Farmer to Farmer (in qtls)	Likely area coverage (in hect.)	SRR % (Tentatively estimated)
Rice	42117	2,71,000	38.74
Maize	13139	3,05,800	33.19
Wheat	90948	2,56,000	35.52

B. Quality control of Seeds

Seed is the basic and the most vital input for sustenance of agriculture. A multi pronged strategy is being followed as per the Seed Act 1966 to produce, test, procure and distribute quality seed to the farmers. The Chief Agriculture Officer is the licensing authority for seed sale outlets of the respective district.

The distribution of seeds to farmers is being carried out by about **327 duly licensed private retail seed dealers** spread out in different districts of Jammu division. **Besides, there are 184 permanent and 532 seasonal (Total = 716) retail seed outlets of the Department** in Jammu division that are mandated to provide quality seed to the farmers.

a. Quality checks by the Divisional Seed Certification wing of the Department

While the Breeder Seed of requisite variety is procured from the research institutions on basis of indents and availability placed by the concerned with the Seeds Division, Deptt of Agriculture & Coop., Ministry of Agriculture, Govt. of India its multiplication and conversion into Foundation and Certified categories is carried out at the SM Farms and in Seed Villages where regular/periodic inspections are carried out at specific stages of crop growth, harvesting, processing, packing and tagging by the Divisional Seed Certification Officer and Seed Certification Assistants of the wing to guide the producer and post harvest management staff and to ensure that the minimum and maximum prescribed standards for seed production are being maintained as per the provisions of the Act.

A summary of the progress in this regard at SM Farms, in Private Sector and at Seed Villages for the last 2 years is as under:

S.No.	Particulars	Unit	2013-14				2014-15			
			SM Farms	Seed Villages	Pvt	Total	SM Farms	Seed Villages	Pvt	Total
1	Area Offered for Seed Production	Hect	4196	3982	0	8178	4048	2899	0	6947
2	Area Inspected	Hect	4196	3982	0	8178	4048	2899	0	6947
3	Area Accepted	Hect	4109	2451	0	6560	3618	349	0	3967
4	Area Rejected	Hect	87	1531	0	1618	430	2550(Under Priogress)	0	2980
5	Inspections conducted	Numbers	It varies from crop to crop, as it is 2 to 3 in pulses, oilseeds, cereals and 3 to 5 in vegetables and potato							
6	Quantity of Seed Tagged	Qtls	43343.625				4529.68 (Under Progress)			

b. Quality control over Seed by Law Enforcement wing

The Enforcement Inspectors of the law Enforcement wing of the Department in different districts of the province carry out regular and surprise inspections of seed wholesale and retail stores under the supervision of Assistant Director (Enforcement) Jammu and collect the seed samples randomly as well as on specific complaints and prosecute the offenders of Seeds Act 1966 under the relevant provisions and in the Court of Law. A summary of the progress in this regard for the last 5 years is as under:

Particulars	Units	2010-11	2011-12	2012-13	2013-14	2014-15
Drawal/ Analysis of Samples	Nos.	685	683	853	734	736
Inspection of Production Units	Nos.	1103	1335	1323	1664	1062
Number of persons obtained Certified Licence	Nos.	38	19	74	131	75
Prosecution Launched	Nos	08	05	08	19	04
Order for Stop Sale/ Seizure issued	Nos	11	06	08	19	04
Court cases decided	Nos	07 (fine of Rs. 3500 only imposed)	03 (fine of Rs. 3000 only imposed)	08 (fine of Rs. 2700 only imposed)	18 (fine of Rs. 7900 only imposed)	04 (fine of Rs. 1750 only imposed)

c. Quality control in State Seed Testing Lab

The samples of seed produced at the Farms and in the Seed Villages, duly procured from the companies and corporations, privately brought seed samples and the Seed

Samples collected by the Law Enforcement wing of the Department for testing various quality parameters prescribed under the Seed Act 1966 are analyzed by Seed Analyst in the **State Seed Testing Lab at Talab Tillo Jammu** and those not meeting the prescribed seed purity, viability and vitality norms are rejected so that these may not be used for sowing by the farmers To ensure that these are not sold by unscrupulous elements in the market, they are charged, preventive action taken and prosecuted before the Court of Law. A summary of the progress in this regard for the last 2 years is as under:

Particulars	Units	2010-11	2011-12	2012-13	2013-14	2014-15
Testing of Seed Samples:						
Service Samples	Nos.	8	4	20	20	153
Official Samples	Nos.	640	553	891	2964	2753
Certified Samples.	Nos.	576	772	1090	4480	4924
• Moisture Test	Nos.	634	2003	2581	1856	1940
• Seed Health Test	Nos.	1937	2003	2585	1856	1940

C. Vegetable Improvement Scheme

- One of the thrust programmes of the Department is the vegetable improvement and development. The wing is headed by Agronomist who works under the supervision of the Joint Director of Agriculture (Inputs).
- The gross area under cultivation of vegetables in Jammu division is presently about 32,000 hectares with production estimate of 6.90 lakh Mts. Hybrid vegetable seed is being promoted to a considerable extent now for area expansion.
- The Vegetable Improvement Scheme collects the demand of different varieties of improved vegetable seeds from different districts based on their performance and manages their production, procurement and distribution through the Inputs and the Extension wings of the Department.
- Presently, only the JPAE Farm at Talab Tillo and the Temperate Vegetable Seed Production Farm at Tethar, Banihal are under the direct control of the Vegetable Agronomist, however some vegetable seed is produced at Chinore and other farms also.
- The year round availability of vegetables at affordable prices is afflicted with the major constraints of lack of protected cultivation, collection centres, processing facility, inappropriate packaging, slow transport systems and inadequate storage facilities.
- To come to grips with the situation, the Directorate of Agriculture Jammu has initiated steps in organization of Vegetable Producers' Company in peri-urban clusters of Jammu under the National Vegetable Initiative through the interventions supported by Small Farmers Agri-business Consortium (SFAC).
- The SFAC engaged institution, M/S Actech Information Systems has formed the Farmers' Producers Company at Jammu, Udhampur and Reasi under the title of Jammu Oriental Fresh Farmers' Producers' Company.
- It has enrolled more than 3400 farmers who have been constituted into 194 Farmers' Interest Groups for the purpose.

D. Mushroom Development

- The Department of Agriculture, Jammu is promoting mushroom cultivation as an Agro based Cottage Industry.
- In this direction, the **Mushroom Demonstration cum Training Centres at Jammu, Udhampur, Kathua, Samba and Doda** under the respective Mushroom Development Officers are providing regular trainings, demonstrations, technology dissemination and consultancy to young entrepreneurs.
- **Presently, there are about 781 Mushroom growers and 252 Dhingri growers in Jammu Division.**
- Mushroom cultivation is picking up in Ramban, Reasi, Rajouri and Poonch districts also, but remains largely confined to areas surrounding cities where availability of raw material and marketing facilities exist.
- Also important is the development of high yielding species and strains of Mushrooms viz., White Button, Dhingri, Milky mushrooms for diverse climatic conditions.
- The current annual mushroom production in Jammu region is estimated at around 6000qtls.
- **The cultivation is generally taken as a single crop of White Button, mushrooms during winter months from October –November to March –April, but Dhingri cultivation is also becoming popular during January to April and Milky mushrooms during May-June.**
- The mushrooms are mainly grown on compost prepared by long method and an average yield of 8-10 kgs /100 Kgs compost is obtained. However, **infrastructure is ready for pasteurized compost making involving short method.**
- A Spawn Production Lab at Jammu produces mushroom spawn which is provided to farmers through advance bookings by the Spawn Production Officer at Divisional level.
- The current status of mushroom production in Jammu region is tabulated here under:

Year	Kind	Spawn Bottles Supplied	Trays/ Blocks established	Production (Qtl.)
2009-10	White Button	67277	138000	4701
	Dhingri	8748	17414	180
2010-11	White Button	77277	154554	5410
	Dhingri	11665	23074	207
2011-12	White Button	90327	179456	5823
	Dhingri	11449	22678	160
2012-13	White Button	102032	203374	5624.27
	Dhingri	11770	23525	117.07
2013-14	White Button	72485	115695	3750.170
	Dhingri	6300	12695	161.903
2014-15	White Button	50826	241348	3784.05
	Dhingri	1697.25	17828	136.45

E. Bee keeping

- The Department is promoting Honey Bee keeping as an employment generating and remunerative enterprise among the farmers and the unemployed youth through its 22 Demonstration cum training Centers in different districts.
- There is one Assistant Entomologist (Apiculture) Jammu and 3 Apiculture Development Officers at Udhampur and Rajouri and Doda running the programme.

- The flora of the Jammu region is sufficient to manage around 1.37 lakh bee colonies. There are about 545 beekeepers and 30925 bee-colonies in Jammu Division and efforts are being made to utilize the potential by training and developing bee breeders and providing incentives to bee keepers.
- The status of Bee keeping in Jammu region is given as under:

Year	Pattern of Assistance	Bee hives/ colonies provided (Nos.)	Production of honey (Qts.)	Achievement (Rs. In Lakhs)	
				Financial Outlay	Expenditure (lacs)
2009-10	50% subsidy on Beehives/Bee Colonies.	1500	1321.51	6.00	5.61
2010-11	-do-	198	554.06	10.00	10.00
2011-12	do-	427	701.29	9.00	8.50
2012-13	do-	364	790.60	9.00	8.78
2013-14	do-	234	1279.532	7.00	7.00
2014-15	do-	99	1737.29	9.00	3.80

F. Soil Testing and Soil Survey

- Soil Survey and Soil Testing are the foundations of scientific agriculture leading to land use planning, choosing area specific crops, and recommending application of fertilizers and amendments to soils.
- In this endeavor, the Divisional Soil Survey Officer, Jammu and the Agriculture Chemist Jammu are actively involved through the one Soil Survey Lab at Jammu and 17 Soil Testing labs.
- The Department has **8 Static and 9 mobile Soil testing laboratories** catering to different districts of the division.
- These labs are engaged in collection and analysis of soil samples from the field for time bound preparation of Soil Health Cards which are to be provided to each and every farming family within 3 years under the Soil Health Card Scheme of the National Mission on Sustainable Agriculture announced by the Prime Minister of India.
- The status of soil testing scheme in Jammu region is given as under:

Particulars	Units	2010-11	2011-12	2012-13	2013-14	2014-15
Soil samples collected	Nos	37656	33863	35550	44329	38727
Soil samples analysed	Nos	29845	34513	35367	27535	32195
Soil Health Card Distribution	Nos	14751	25147	35280	38047	35463

G. Fertilizers

- The Director Agriculture Jammu is notified as the Controller of Fertilizers for the State.
- Urea, DAP and MOP are the main fertilizers being used by farmers of the region, but efforts are being made to promote Single Super Phosphate, Mixed Fertilizers (NPK), Neem coated Urea ,Micro-nutrients like Zinc Sulphate and Gypsum also.

- The main supplying companies in the State are the NFL (National Fertilizers Ltd.), IFFCO, Chambal Fertilizers and Chemicals Ltd.(CFCL), Indian Potash Ltd., and Tata Chemicals Ltd. The handling agencies for these fertilizers are JAKFED, JK AIDC, Self Reliant Cooperative Societies, Cooperative Marketing Societies and Individual dealers who are responsible for making fertilizers available to the farming community through the network of licenced retail fertilizer dealers.
- Fertilizer allocations to the State are made by the Department of fertilizers, Ministry of Chemicals and Fertilizers, Govt of India on monthly basis on the basis of the requirement projected during the Zonal Conference held at the beginning of each crop season by the Ministry of Agriculture, GOI but cash and carry is the underlying principle.
- Railways are involved in transportation of fertilizers into the State up to the designated rake point and the further transportation up to the dealers level is being made by the companies on FOR destination basis. No fertilizer can enter the State by road without prior permission.
- The fertilizer distribution system in J&K State stands streamlined to enable fertilizer dealers to get fertilizers on cash and carry basis at their doorstep without incurring any cost on freight or transportation. The F.O.R System is working smoothly.
- The total supply of fertilizers to farmers of the Jammu Division since 2009-10 is given hereunder:

Fertilizers Supplied in Jammu Division (in Mts)				
Year	Urea	DAP	MOP	Total
2009-10	36938	22410	521	59869
2010-11	47612	21342	1317	70271
2011-12	44676	23394	198	68268
2012-13	49756	19456	518	69730
2013-14	51339	24076	248	75663
2014-15	49890	22141	818	72849

H. Quality Control of Fertilizers

- The distribution of Fertilizers to farmers is being carried out by about **948 duly licensed retail fertilizer dealers** spread out in different districts of Jammu division. Whereas the Jt. Director of Agriculture Extension Jammu is licensing authority for wholesale fertilizer dealership, the Chief Agriculture Officer of the respective district is the licensing authority for retail fertilizer sale outlets.

a. Quality check of Fertilizers through Asstt Director, Enforcement

To exercise quality control over different kind of chemical, organic and bio fertilizers notified by Govt. of India under the Fertilizer Control Order – 1985 (FCO-1985), the Department is working through its Law Enforcement wing headed by Asstt Director (Enforcement) at the Divisional level and his staff consisting of Enforcement/ Fertilizer Inspectors at the railway rake point Jammu and in different districts

- The Fertilizer Inspectors carry out regular and surprise inspections of fertilizers at the railway rake point just on arrival of the consignments and also at the wholesale and retail stores under the supervision of Assistant Director (Enforcement) Jammu.

- They collect the samples randomly as well as on specific complaints, check these for spuriousness or misbranding, get these duly analyzed in the notified Fertilizer Quality Control Lab and prosecute the offenders under the relevant provisions of Fertilizer Control Order 1985 and in the Court of Law.
- A summary of the progress in this regard for the last 5 years is as under:

Particulars	Units	2010-11	2011-12	2012-13	2013-14	2014-15
Drawal/ Collection of samples:	Nos	1415	1265	1416	1275	1291
Inspection of Manufacturing/ Distribution Units	Nos.	1049	1554	1700	1924	1275
Persons provided License	Nos.	83	52	100	222	95
Prosecutions launched	Nos	02	04	-	-	-
Order for Stop Sale/ Seizure issued	Nos.	02	48	51	65	01
Court case decided	Nos	-	-	01 (Fine of Rs.16200 imposed)	01	01

I. Quality control through Agriculture Chemist/ Fertilizer Quality Control Lab

- The Department has one notified Fertilizer Quality Control Lab, at Talab Tillo Jammu headed by Agriculture Chemist.
- The Fertilizer/Research Analysts having the prescribed qualification undertake the analysis of samples brought to them confidentially as per the FCO – 1985 and based the analysis reports the prosecutions are carried forward by the Law Enforcement wing.
- A summary of the progress in this regard for the last 2 years is as under:

Particulars	Units	2010-11	2011-12	2012-13	2013-14	2014-15
Collection/ Receipt of samples:	Nos.	926	1485	1552	651	635
Analysis of samples:	Nos.	849	1323	1437	626	542

J. Plant Protection

- Director Agriculture Jammu is the Appellate Authority for Plant Protection Chemicals and the Plant Protection Officer, Jammu is the Licensing Authority for the pesticide manufacturing units and wholesale/ retail pesticide dealers under the Insecticides Act 1968.
- The pesticides approved by the Central Insecticides Board (CIB) and the active ingredients recommended by the State Agriculture University are recommended for use against crop pests by the Department functionaries.
- The pesticide distribution system is mainly through duly licensed private pesticide dealers.

K. Quality Control of Pesticides through Enforcement

- Presently, the distribution of pesticides to farmers is being carried out by about **780 duly licensed retail pesticide dealers** spread out in different districts of Jammu division.

- To exercise quality control over different kind of pesticides notified by Govt. of India under the Insecticides Act – 1968, the Department is working through its Law Enforcement wing headed by Asstt Director (Enforcement) at the Divisional level and his staff consisting of Insecticide/Enforcement Inspectors in different districts
- The Enforcement/ Insecticide Inspectors carry out regular and surprise inspections of insecticides at the manufacturing units, the wholesale and retail stores under the supervision of Assistant Director (Enforcement) Jammu.
- They collect the samples randomly as well as on specific complaints, check these for spuriousness or misbranding, get these duly analyzed in the notified Pesticides Testing Lab and prosecute the offenders under the relevant provisions of Insecticides Act 1968 and in the Court of Law.
- A summary of the progress in this regard for the last 5 years is as under:

Particulars	Units	2010-11	2011-12	2012-13	2013-14	2014-15
Collection/ Drawal of samples:	Nos.	392	427	405	698	796
Inspection of Manufacturing Units	Nos.	846	1093	1117	1578	953
Licenses Issued	Nos	108	-	-	02	66
Prosecutions launched	Nos	08	12	34	29	17
Order for Stop Sale/ Seizure issued	Nos.	08	12	34	29	18
Court case decided	Nos	08 ((Fine of Rs.65, 000 imposed)	08((Fine of Rs.1, 10, 000 imposed)	36 ((Fine of Rs.4,94,000 imposed)	15((Fine of Rs.1,90,200 imposed)	1

L. **Quality check through Agriculture Chemist/ Pesticide Testing Lab**

The Department has one notified Pesticide Quality Control Lab, at Talab Tillo Jammu headed by Agriculture Chemist.

- The Pesticide/Research Analysts having the prescribed qualification undertake the analysis of samples brought to them confidentially as per the Insecticides Act 1968 and based on the results of the analysis; the prosecutions are carried forward by the Law Enforcement wing.
- A summary of the progress in this regard for the last 2 years is as under:

Particulars	Units	2010-11	2011-12	1012-13	2013-14	2014-15
Collection/ Receipt of samples:	Nos.	209	271	268	269	218
Analysis of samples:	Nos	200	284	268	239	163

M. **Agriculture Engineering**

- The Department of Agriculture Jammu has an Agriculture Engineering wing which has the engineers working at SM Farms, in the Bio-gas wing and in the Agriculture Engineering Workshops.
- One Divisional level Agriculture Engineering Workshop headed by Agriculture Research Engineer (ARE) established at Talab Tillo Jammu has branches at other district level workshops functioning at Udampur and Doda.
- The ARE is also the officer in-charge of the **Seed Processing Plant** of the Department at Talab Tillo, Jammu.
- These workshops are mainly fabricating manually drawn and animal drawn farm machinery and equipments like ploughs, harrows, garden rakes, kitchen garden tools,

seed storage bins, winnowing fans and chaff cutters, etc. besides assembling structures for protected cultivation of vegetables, nursery plants, etc.

- The wing, in association with the extension functionaries of the Department have promoted a number of latest kind improved farm machinery among the farming community through Machinery Melas in which exhibition and demonstrations have been organized before large gatherings of the farming community. These include Paddy Transplanter, Reaper cum Binder, Baler, Seed cum fertilizer drill, Rotavator, Laser Leveller, Potato digger, and other locally suited machinery and equipments.
- The distribution of improved agriculture implements and bins during last 5 years is as under:

Particulars	Units	2010-11	2011-12	1012-13	2013-14	2014-15
Distribution of improved agriculture implements/biss:	Nos.	8286	11058	9338	9278	8814

N. Kissan Credit Cards

- In the campaign to provide KCCs by the Banks to all the 5.47 lakh farm operating families, 4.67 lakh application forms have been got filled up by the Department from the farmers and handed over to the Banks till date in Jammu region. Out of these 2.62 lakh KCC cards have been issued by the banks as per following details:

1	No. of Farm Operating Families (FOF's)	5,46,790
2	No. of FOF's didn't opt. for KCC	80201
3	Remaining FOF's targeted for 100% KCC coverage	466589
(A)	Progress of Agriculture Department	
1	No. of KCC cases application filled	466589
2	No. of KCC forms handed over to Revenue Department	466589
(B)	Revenue Department	
1	KCC cases cleared by Revenue Department	421548
2	KCC cases pending with Revenue Department	45041
3	KCC cases rejected by Revenue Department	0
(C)	Bankers	
1	KCC cases handed over to Banks by Agriculture Department	420659
2	KCC cases sanctioned by Banks	346510
3	No. of cases pending with Banks	19699
4	KCC cases rejected by Bank	54450
5	No. of KCC cases disbursed by the Bank	245393
6	Credit Disbursed (Amount in Cr.)	576.40

O. Agriculture Extension

- The Joint Directorate of Agriculture Extension Jammu and the Farmers Training Centre Jammu are driving the extension programmes of the Department through the Chief Agriculture Officers, District Agriculture Officers (Extension) and other Extension Functionaries.
- Farmers are being regularly deputed to research institutions and centres of excellence outside the state to secure first hand information on new technologies and interventions in agriculture field.
- The farmers have attended National Convention on Next Frontier of Agri Business and Technology, Kissan Mela at Ludhiana and Solan., Vibrant Gujarat Samelan in Gujarat, Global Agri Connect in New Delhi, Krishi Vasant Mega Fair at Nagpur,

International Agri and Horti Expo New Delhi, and visited a number of collaborative projects in agriculture in Delhi, Haryana, Uttarakhand and Karnataka states during the past five years.

- With the above interventions in extension and development in Agriculture sector the State Government is targeting sustainable increase in production and productivity of crops and diversification in farming systems for improved economic returns to farmers.

Centrally Sponsored Schemes

The interventions implemented by various wings of the Department are being facilitated through financial support from the Centrally Sponsored Schemes and State Plan Schemes. Up to the year 2013-14 the popularization of quality hybrid seeds of rice, maize and vegetables, good quality High Yielding Variety seeds of paddy, wheat, pulses, oilseeds, fodder and vegetables, chemical and non-chemical fertilizers, farm mechanization, plant protection cover, irrigation augmentation through bore wells, water harvesting tanks, micro-irrigation systems, protected cultivation, supplementary income generating enterprises like mushroom production, beekeeping etc. were being facilitated largely through the Centrally Sponsored Schemes, viz:

1. Rashtriya Krishi Vikas Yojana (RKVY) having components of National Mission on Saffron (NMS) and National Vegetable Initiative for Urban Clusters (NVIUC),
2. National Food Security Mission (NFSM) having the components Wheat and Rice,
3. Macro Management of Agriculture (MMA) – (now abandoned)
4. Integrated Scheme for Oilseeds, Pulses and Maize (Maize only in J&K State) – ISOPOM
5. Horticulture Mission for North-East and Himalayan states (HMNEH)
6. Development and Strengthening of Infrastructural facilities for Quality Seed Production and Distribution – (Seed Village Scheme)
7. Agriculture Mechanization through Trainings, Testing and Demonstrations
8. National Mission on Micro-Irrigation (NMMI)
9. National Bamboo Mission (NBM)
10. Support to State Extension Programme for Extension Reforms through Agriculture Technology Management Agencies (ATMA) and
11. National Agriculture Insurance Scheme (NAIS)
12. Kissan Credit Card (KCC) Scheme.

However, the Govt. of India has now brought about a convergence amongst various schemes and their components through various amendments, modifications and revisions in guidelines. Implementation of the following revised schemes has now been initiated from the financial year 2014-15:

1. Revised Rashtriya Krishi Vikas Yojana (RKVY), which has the following other components being implemented by the Directorate of Agriculture, Jammu:
 - a. National Mission on Saffron (NMS)
 - b. National Vegetable Initiative for Urban Clusters (NVI UC)
2. National Food Security Mission now has the following components:
 - a. Wheat
 - b. Rice
 - c. Coarse cereals (Maize)
 - d. Pulses

3. Mission for Integrated Development of Horticulture (MIDH) for promotion of holistic growth of vegetables, root & tuber crops, mushrooms, spices, and bamboo through the following Sub-Schemes by this Directorate in Jammu region:

Sl. No.	Sub Scheme	Target group / area of operation
1.	HMNEH	All states in NE and Himalayan Region.
2.	National Bamboo Mission	All states & UTs

4. National Mission for Oilseeds and Oilpalm (NMOOP), which has the following Mini Missions for implementation by Agriculture Department Jammu:
- MM I on Oilseeds (to be implemented by Agriculture Directorate)
 - MM III on TBOs (Pertains to Hort./ Forests)
5. National Mission for Sustainable Agriculture (NMSA), which has the following components:
- Rainfed Area Development (RAD)
 - Soil Health Management (SHM)
 - On Farm Water Management (OFWM)
 - Soil Health Card Scheme (SHC Scheme)
 - Parampragat Krishi Vikas Yojana (PKVY)
 - Climate Change and Sustainable Agriculture Modeling & Networking (CCSAMN)
6. National Mission on Agriculture Extension Management (NMAET), which comprises of the following components;
- Sub Mission on Agricultural Extension (SMAE)
 - Sub Mission on Seed and Planting Material (SMSP) including Seed Village Programme
 - Sub Mission on Plant protection and Plant quarantine (SMPP) – guidelines not received as yet).
 - Sub Mission on Agriculture Mechanization (SMAM)
7. National e-Governance Plan – Agriculture (NeGP-A)
8. National Crop Insurance Programme (NCIP), which has Weather Based Crop Insurance Scheme (WBCIS): The Weather Based Crop Insurance Scheme (WBCIS) has been implemented in Jammu division during Kharif 2014 season in Jammu, Kathua and Samba districts for Paddy (basmati) crop on pilot basis
9. Kissan Credit Card Scheme.

For implementation of the above Schemes the Govt of India has prepared detailed operational guidelines which are available on the website of the Department of Agriculture & Cooperation, Ministry of Agriculture, Govt. of India “agricoop.nic.in”. A brief description of these schemes is given below:

1. Rashtriya Krishi Vikas Yojana (RKVY) :

This is primarily a district based scheme formulated on basis of Comprehensive District Agriculture Plans (c-DAP). It provides flexibility to states to formulate projects based on District specific needs keeping in view the resources and scope. Various projects related to production growth and Infrastructure & assets have been taken up under the scheme which includes major projects namely Basmati, Rajmash, Organic Farming, Strengthening of Seed Multiplication Farms, Mushroom Production, Apiculture Development, Creation of Irrigation Infrastructure, Biogas unit etc .

a. National Mission on Saffron:

National Mission on Saffron is a sub scheme of Rashtriya Krishi Vikas Yojana, It was launched in the State in 2010-11. The programme has been launched with the main objectives to increase quality production of saffron and its marketing The project was launched in an 120 hect of traditional area in Kishtwar district of Jammu division. The

major intervention under the scheme includes Rejuvenation/Replanting , Quality corn production in public nurseries, Creation of irrigation Infrastructure, Enhancing Production Quality through Solar Dryers, Saffron Mechanization, Transfer of technology through Trainings and laying out of adaptive trials in nontraditional areas.

b. National Vegetable Initiative for Urban Clusters

This project was launched under Rashtriya Krishi Vikas Yojana during the year 2011-12 under which the clusters of vegetable cultivation have been taken up in and the Jammu City to boost the production of vegetables & assure availability of vegetables at affordable rates keeping in view the safety & good quality. The initiative aims at providing end-to-end linkage in vegetable production, marketing and processing with back-up support by the Small Farmers Agri Business Consortium (SFAC). The various interventions namely Promotion of Farmer Associations/Groups, Base line survey, High Yielding Varieties (HYV) Vegetable seed and Seedling production, Organic Farming, Vermicompost Units and Vermibeds, Vegetable Cultivation in Open Condition, Protected Cultivation through Green Houses ,Integrated Nutrient Management (INM)/ Integrated Pest Management (IPM), Post Harvest Management and Marketing by creating infrastructure such as collection centers, cold storage , Refer vans , Onion Storage Structures, Motorized Vending Carts , Static Vending Carts etc and Training of Farmers have been taken up under the scheme. From 2015-16 this Sub - scheme is being emerged with Rashtriya Krishi Vikas Yojana (Normal).

2. National Mission on Agricultural Extension and Technology (NMAET)

This Centrally Sponsored Scheme includes following sub-Mission:

a. Sub Mission on Agricultural Extension (ATMA):

The scheme is devoted to extend the reach of new and improved Agricultural technology to the farthest corner of the State with a participatory approach. Awareness programmes, Training camps, Crop Demonstrations Exposure visits, Exhibitions, Kissan Ghoshties, Farmers Scientist interactions and Farm schools (FS) are key elements of the scheme. Under the scheme Strategic Research and Extension Plan (SREP) has been developed with the support of Agriculture and allied Departments, KVK and various other stakeholders.

b. Sub- Mission on Seeds and Planting Material (SMSP)

The Sub –Mission on Seeds and Planting Material of Centrally Sponsored Scheme under “National Mission on Agricultural Extension and Technology (NMAET)” covering the entire gamut of seed production chain from production of seed to supply of certified seeds to the farmers, to provide support for creation of infrastructures conducive for development of the seed sector.

The major focus of the scheme is on enabling the farmers to produce quality seed of new and improved varieties of crops and train them in its proper storage. Foundation/ Certified seed is provided to farmers on 50% subsidy for quality seed production, The farmers are trained in quality seed production, storage and protection,

The farmers are advised to share the seed so produced among fellow farmers so as to reduce dependence on fresh purchase every year and improves the quality of farm saved seed.

The major sub component covered under the scheme namely Seed Village Programme, National Seed Reserve for contingency plan , Strengthening of Seed Quality Control labs, Support to Seed Certification Agency, Seed Treatment, Strengthening of Seed Farms, Seed Processing unit, Seed Storage, Transport subsidy etc .

c. Sub- Mission on Agricultural Mechanization

The Sub- Mission on Agricultural Mechanization of Centrally Sponsored Schemes National Mission on Agricultural Extension and Technology (NMAET) extended to this State during the year 2014-15

The scheme lays primarily focus on creating awareness by organizing trainings/ Demonstrations, Increasing the reach of farm mechanization to small and marginal farmers by providing subsidies , Promoting ‘**Custom Hiring Centers**’ to offset the adverse economies of scale arising due to small landholding and high cost of individual ownership ,Establishment of Farm Machinery Banks for Custom Hiring, Promotion of Farm Mechanization in Selected Villages and Ensuring performance testing and certification at designated testing centers.

3. National Mission on Oilseeds and Oilpalm (NMOOP)

The scheme ISOPOM restructured as **National Mission on Oilseeds and Oilpalm (NMOOP)** during 2014-15 and is under implementation on yearly basis to boost production and productivity of Oilseed in the Division.

Various interventions such as distribution of quality seed of Oilseeds , Organization of training programmes , Farmer Field School (FFS) on Integrated Pest Management (IPM) , Providing of Plant Protection Chemicals, Biofertilizers, weedicides , PP equipments and Improved Farm Implements etc on subsidy have been taken up under the scheme to promote the oilseeds crop in Jammu Division.

The scheme has been implemented in a mission mode through active involvement of the various stakeholders with main strategies which includes increasing Seed Replacement Rate (SRR) with focus on Varietal Replacement, increasing irrigation coverage and introducing diversification through intercropping and cultivation oilseed crop in fallow land.

4. National Mission on Sustainable Agriculture:

This scheme was launched in the state during 2014-15 with the objectives to enhance agricultural productivity especially in rainfed areas focusing on integrated farming, water use efficiency, soil health management and synergizing conservation. Besides, promoting location specific improved agronomic practices through soil health management, enhanced water use efficiency, judicious use of chemicals, crop diversification, progressive adoption of crop-livestock farming systems and integrated Farming System (IFS) based approaches like Agri- horti , crop-sericulture, agro-forestry, fish farming etc. This scheme include following programmes.

a. Rainfed Area Development Programme:

Under this programme cluster based approach is being adopted for development and conservation of natural resources along with farming system. Eleven number of clusters has been identified for its development in Jammu Division under the programme. Under this component appropriate farming system by integrating multiple component of agriculture

such as crops, horticulture, livestock, fishery, forestry with agro based income generating activities and value addition is being adopted . Besides, soil test/soil health card based nutrient management practices, farmland development, resource conservation and crop selection conducive to local agro climatic condition is also being promoted under this component.

b. Soil Health Management (SHM):

This Programme aim at promoting location as well as crop specific sustainable soil health management including residue management, organic farming practices by way of creating and linking soil fertility maps with macro-micro nutrient management, appropriate land use based on land capability, judicious application of fertilizers and minimizing the soil erosion/degradation. Assistance will be provided for various improved package of practices based on land use and soil characteristics, generated through geographical information system (GIS) based thematic maps and database on land and soil characteristics through extensive field level scientific surveys.

c. Soil Health Card:

This scheme was launched in the state from 2014-15 to promote the soil testing services, issue of soil Health Cards and development of Nutrient Management Practices. The following are the major objective under the scheme;

- To issue soil health cards within 3 years to 6.44 lakhs farmers of the Jammu Division, so as to provide a basis to address nutrient deficiencies in fertilization practices. After three years The same process shall be adopted to cover all the families during the next three year for re-issuing the Soil Health Card.
- To strengthen functioning of Soil Testing Laboratories (STLs) through capacity building, involvement of agriculture students and effective linkage with Indian council of Agricultural Research (ICAR) / State Agricultural Universities (SAUs)
- To diagnose soil fertility related constraints with standardized procedures for sampling uniformly across states and analysis and design taluqa / block level fertilizer recommendations in targeted districts.
- To develop and promote soil test based nutrient management in the districts for enhancing nutrient use efficiency.
- To build capacities of district and state level staff and of progressive farmers for promotion of nutrient management practices.

d. On Farm Water Management (Component of NMSA)

The “On Farm Water Management” is one of the sub components of Centrally Sponsored Scheme National Mission on Sustainable Agriculture an alternative to the National Mission on Micro Irrigation was launched in the State during the year 2014-15.

The scheme lays primarily focus on Enhancing **water use efficiency** by promoting efficient on-farm water management technologies and equipment, Assistance is extended for adopting water conservation technologies, efficient delivery and distribution systems by way of installation of Drip/ Sprinkler sets, conservation of water on farm itself, farm ponds and for the efficient use of water.

e. Climate Change and Sustainable Agriculture Monitoring, Modeling and Networking (CCSAMMN):

This scheme provide creation and bidirectional (land/farmers to research/scientific establishments and vice versa) dissemination of climate change related information and knowledge by way of piloting climate change adaptation/mitigation research/model projects in the domain of climate change smart sustainable management practices and integrated

farming system suitable to local agro-climatic conditions. A consortium approach shall be evolved with various stake holders including knowledge partners like state Agricultural Universities (SAUs), Krishi Vigyan Kendras (KVKs), Indian Council of Agricultural Research (ICAR) Institutes etc. by the State Government to provide single window service/knowledge provider system for the benefit of farming community. Climate change related monitoring, feedback, knowledge networking and skill development will also be supported under this component. Budhal Block in Rajouri District is identified under this project as pilot basis to study the affect of climate change.

f. Paramparagat Krishi Vikas Yojana

This is a Traditional Farming Improvement Programme and is being launched in J&K state during 2015-16 to support and promote organic farming and thereby improving soil health. This will encourage farmers to adopt eco-friendly concept of cultivation and reduce their dependence on fertilizers and agricultural chemicals to improve the yield .Cluster approach shall be adopted to implement the scheme.

5 National Food Security Mission

- The National Food Security Mission (NFSM) was launched in the state during the year 2011-12 covering only Rice crop in three districts. At present the mission is covering four crops namely Rice, Wheat, Pulses and Maize.
- Pulses and Maize is under implementation in all the 22 districts of the state where as Rice and wheat is under implementation in the eight districts each in the state.
- The scheme lays primarily focus on increasing production and productivity of rice, wheat, pulses and coarse cereals (Maize), Restoring soil fertility and productivity at the individual farm level, Enhancing farm level economy (i.e. farm profits) to restore confidence amongst the farmers.
- The major interventions under the mission are Cluster Demonstration, Distribution of HYV/ Hybrid seed, Plant and soil protection management, Resource conservation Techniques / Tools, Efficient water applications & Tools, Trainings and local initiatives.

5. Mission for Integrated Development of Horticulture

Mission for Integrated Development of Horticulture (MIDH) is a Centrally Sponsored Scheme for the holistic growth of the horticulture sector covering fruits, vegetables, root & tuber crops, mushrooms, spices, flowers, aromatic plants, and bamboo. The mission launched in the state during 2014-15. The Mission has the following sub-schemes, which are under the implementation in Agriculture Jammu Division:

a. HMNEH (Horticulture Mission for North East & Himalayan States):-

The scheme was launched in the state during the year 2003-04 as a Technology Mission and latter on it was renamed as Horticulture Mission for North East & Himalayan States. It primarily lay focus on Seed production /Area expansion of Vegetables, Creation of Water Harvesting Structures, Mushroom (Spawn/ Compost making unit), Protected Cultivation ,Organic Farming, Pollination support through bee Keeping, Horticulture Mechanization & Human resource development.

b. National Bamboo Mission: -

- The scheme was launched in the state during the year 2008-09 in the three districts and latter on it was extended to six districts in the Jammu division.
- The objective of the scheme is to increase the coverage of area under bamboo both in forest and non-forest areas; with appropriate varieties to enhance yields and to promote marketing of bamboo based handicrafts.
- The activities primarily lays focus on Plantation development, establishment of Nurseries, Human resource development, Irrigation and Pest Control.

7. National e-Governance Plan-Agriculture (NeGP-A)

The NeGP –A was launched in the state during 2014-15 with the aims at improving delivery of Government services to citizens/farmers and businesses with the vision ‘to make all Government services accessible to the common man in his locality, through common service delivery outlets and ensure efficiency, transparency & reliability of such services at affordable costs to realise the basic needs of the common man.”

Setting up of Common support infrastructure, Good Governance, Centralized Initiatives and Decentralized implementation, Public Private Paternship (PPP), Programme approach at National and State level etc. are the key elements of the scheme.

8. National Crop Insurance Programme (NAICP)

Under this programme, the **Weather Based Crop Insurance Scheme (WBCIS)** has been implemented in the state with the aims to mitigate the hardship of the insured farmers against the likelihood of financial loss on account of anticipated crop loss resulting from incidence of adverse conditions of weather parameters like rainfall, temperature, High speed wind, Hail storms, frost, humidity etc. Due to climate change, agriculture like elsewhere has become a riskier business activity; so as to safeguard the farmers consequentially from the vagaries of extreme climatic conditions, WBCIS is being implemented for **Paddy** and **Maize** crops during the *Kharif* 2015 whereas the **wheat crop** shall be covered during Rabi 2015-16. An area of 1.00 lakh Ha is proposed to be covered for each crop across the districts of Jammu Division.

The financial Status of various Centrally Sponsored schemes for the years 2013-14 and 2014-15 is given in Annexure I.a. & I.b. herewith.

State Plan:

Some financial support is provided through untied grant of the State Plan funds and also in the shape of the mandatory State matching Share for different CSS Schemes Some of the State Sector schemes and programmes being implemented in the region are given hereunder:

<u>S.No.</u>	<u>Subsidy Schemes</u>
1	(0120) Subsidy on plant material.
2	(0680) National Agriculture Insurance scheme (subsidy)
3	(0820) Macro Management of work Plan and ATMA(CSS)
4	National Mission on Oilseeds & Oilpalms(Subsidy)
5	Soil Health Management(Subsidy)*
	Projectized Schemes (New Works)
1	Ongoing Works
2	Maintenance of Capital Assets

The financial Status of various Plan schemes for the years 2013-14 and 2014-15 is given in **Annexure II** herewith.

1. Notable initiatives and Achievements 2013-14 and 2014-15

i. Promoting Hybrid Maize: Initially the Agriculture Department Jammu provided 50% subsidy on hybrid seed of maize in the Districts of Poonch, Reasi, Rajouri and Ramban Districts besides Nagseni block of Kishtwar district under RKVY. Now, 50% assistance on seed is being provided to farmers throughout the division for enhancing maize production under NFSM - Coarse Cereals and RKVY Schemes. With the growing popularity of hybrids the opportunities for enhancing productivity and production are also increasing and so is the marketable surplus.

ii. Fertilizers and Nutrients

a. Fertilizers: The fertilizer distribution system in J&K State stands streamlined by the department. The allocations are made as per the demand at Block level to enable fertilizer dealers to get fertilizers at their doorstep without incurring any cost on freight or transportation.

b. Organic Farming: Organic farming has been introduced in an area of 3175 hectares in specific pockets of Rajouri, Poonch, Kishtwar, Doda, Udhampur, Kathua and Jammu Districts under “adoption and certification of organic farming” programme of RKVY. National Vegetable Initiative and Horticulture Technology Mission Schemes are also promoting the programme successfully since 2011-12 in specialty crops like rajmash, saffron, basmati rice, vegetables and spices through reputed service providing agencies of the country.

c. Vermi compost units: 1365 number of Vermi compost units have been constructed under Technology Mission and Rashtriya Krishi Vikas Yojna schemes during the period with an assistance of Rs.409.00 lakhs to the beneficiaries.

d. Bio-gas Units: 300 bio-gas units have been constructed till date under Rashtriya Krishi Vikas Yojna with an assistance of Rs.94.45 lakhs to the beneficiaries as per following details.

S.No.	Year	Unit	Physical	Fin. (Rs in lakhs)
1	2010-11	Nos.	20	6.30
2	2011-12	Nos.	30	9.40
3	2012-13	Nos.	150	47.25
4	2013-14	Nos.	91	28.66
5	2014-15	Nos.	9	2.84
Total			300	94.45

iii. Creation of water resources:

a. Irrigation Pump sets: An assistance of Rs.441.42 lakhs has been provided to the farmers for purchase of 5527 numbers of Irrigation Pump Sets on 50% subsidy for irrigation at critical stages of growth in different crops.

- b. Water harvesting Structures: 365 big and small ponds/tanks have been constructed in the dry lands and the tail ends of canal irrigated areas, with an assistance of Rs.335.08 lakhs to the beneficiaries.
- c. Community Tanks and Bore wells: 7 Community Water Harvesting Tanks/Bore Wells and 313 number of bore wells have been established during the period involving subsidy of Rs. 120.78 lakhs and Rs.207.52 lakhs to provide irrigation at critical stages of crop growth.

iv, Agriculture Mechanization:

a. Agri Business Centers (ABCs): An innovative scheme of Agri Business Centers (ABCs) has been introduced under RKVY to provide farm machinery to economically weaker farmers who can't afford to purchase the latest and high cost machinery. Assistance has been provided to individuals, societies and groups of farmers to provide custom hire services on such machines for popularization of farm mechanization. The Department has provided support for establishment of 25 Nos of Agri Business Centers till date with back ended subsidy of Rs 125.00lakhs as per following details:

S.No.	Year	Unit	Physical	Fin. (Rs in lakhs)
1	2010-11	Nos.	5	25.00
2	2011-12	Nos.	3	15.00
3	2012-13	Nos.	7	36.00
4	2013-14	Nos.	7	33.68
5	2014-15	Nos.	3	15.02
Total			25	125.00

- b. A Centrally Sponsored Scheme for Strengthening & Development of Farm Mechanization through Training, Testing and Demonstration was subsequently introduced which has been subsumed under the Sub-Mission for Agricultural Mechanization.

v. Agro based Cottage Industries

- a. Mushroom Units: An assistance of Rs. 92.25 lakhs has been provided to farmers' entrepreneurs for establishment of 133 new mushroom units with assistance @ Rs.75000/- Unit of 100 trays or 50% ;of the cost whichever is less and Rs. 72.75 lakhs for strengthening of 292 old mushroom units with assistance @ Rs.25000/- Unit of 100 trays or 50 of the cost whichever is less, till date as detailed below in Table I and Table 2 respectively:

Table 1

S.No.	Year	Unit	Physical	Fin. (Rs in lakhs)
1	2010-11	Nos.	20	12.95
2	2011-12	Nos.	29	21.55
3	2012-13	Nos.	21	15.75
4	2013-14	Nos.	36	27.00
5	2014-15	Nos.	27	15.00
Total			133	92.25

Table 2

S.No.	Year	Unit	Physical	Fin. (Rs in lakhs)
1	2009-10	Nos.	110	27.50
2	2010-11	Nos.	92	23.00
3	2011-12	Nos.	25	6.25
4	2012-13	Nos.	22	5.50
5	2013-14	Nos.	28	7.00
6	2014-15	Nos.	15	3.50
Total			292	72.75

b. Bee Keeping Units:

The Department has provided assistance on 50 percent of the cost to the farming community for strengthening and establishment of 474 Apiculture Units till date with financial assistance of Rs. 92.36 lakhs during the last five years.

S.No.	Year	Unit (of 10 Colonies each)	Physical	Fin (Rs. In Lakhs)
1	2009-10	Nos.	62	12.31
2	2010-11	Nos.	85	17.41
3	2011-12	Nos.	105	17.64
4	2012-13	Nos.	102	20.94
5	2013-14	Nos.	105	20.98
6	2014-15	Nos.	15	3.09
Total			474	92.36

Each unit comprises of 10 Bee-hives/Bee colonies. Six Bee Breeders have also been equipped to perform mass breeding and multiplication. The honey production in Jammu region has gone up from around 790 qtls in 2009-10 to 1737.29 qtls. in 2014-15.

c. National Vegetable Initiative for Urban Clusters: The centrally sponsored scheme “National Vegetable Initiative for Urban Clusters” introduced during 2011-12 to provide end-to-end linkage in vegetable production, marketing and processing with back-up support by the Small Farmers’ Agri Business Consortium (SFAC) for base-line survey, formation of Farmers’ Producers Organizations in the vegetable clusters in peri-urban areas of Jammu. Major achievements under the scheme include:

- i. The Actech Information Systems engaged by the SFAC facilitated in forming the Farmers’ Producers Company under the title of Jammu Oriental Fresh Farmers’ Producers’ Company. For the administrative convenience, this company has been duly trifurcated and now the company has the registered headquarters at Jammu, Reasi and Udhampur. It has enrolled more than 3400 farmers who have been constituted into 170 Farmers’ Interest Groups.
- ii. 17 Motorized Vending Carts have been provided to farmers with an assistance of Rs.50, 000 each for direct marketing,
- iii. 27 Onion Storage Units have been established at Farmers’ Field with an assistance of Rs. 50, 000 each and
- iv. Hi-tech Green House of 1000 sq.m. area has been established at farmer’s field for protected cultivation with an assistance of Rs.5.20 lakhs.

vi. Plant Health Clinics: The Department has 4 Mobile and one Stationary Plant Health Clinics for diagnosis of crop diseases and pests. 219 samples have been diagnosed during 2014-15 and appropriate recommendations provided to farmers.

Outcome:

The social standing and economy of a majority of farmers of the State has grown faster in recent years. Not only this, the interventions in value addition of agricultural produce through RKVY Scheme have captured the imagination of farming community and success stories in post harvest management have been created.

The salient initiatives and achievements of the Department under Centrally Sponsored Schemes during last three years since 2009-10 are given here under:

S.No	Activity assisted by the Department of Agriculture Jammu	Units	Achievement
1	Farm Machinery Provided to farmers		
	a. Tractors	Nos	352
	b. Plant Protection Equipments (Manual)	Nos	4099
	c. Rotavators	Nos	423
	d. Power Thresher	Nos	42
	e. Sprinkler Sets	Nos	93
	f. Laser Land Leveler & Power machinery	Nos	17
	g. Diesel Plough (Diesel operated Hill plough)	Nos	148
	h. Zero Till Seed Drill	Nos	54
	i. Other Farm machinery	Nos	900
2	Adoption and Certification of Organic Farming	Hect	3175
3	Irrigation Pump sets provided to farmers	Nos	3391
4	Vermi compost Units established	Nos	643
5	Vermibeds provided to farmers	Nos	400
6	Bore wells Installed	Nos	242
7	Water Harvesting Structures constructed	Nos	48
8	Community Bore wells/Water Harvesting Tanks estd./ water bodies developed	Nos	8
9	Bee keeping units (10 colonies each) established	Nos	222
10	Bee breeders developed	Nos	2
11	Apiculture diagnostic van introduced	Hect	1
12	New Mushroom Units established	Nos	84
13	Existing Mushroom Units strengthened	Nos	65
14	Bio gas Units estd. (mainly for enrichment of organic manure)	Nos	250
15	Agri Business Centers established	Nos	17
16	Bower Systems Structures established for climbing type vegetables	Hect	5.7
17	Number of Samples of cereal, pulses, oilseeds, vegetables, fruits & other crops diagnosed by Plant Health Clinic, Talab Tillo, Jammu	Nos	1048
18	Cumulative number of Soil Health Cards provided to farmers	Nos	1,71,000

Constraint

Inadequate State Matching Share: A large percentage of population being dependent upon Agriculture, the investment requirements in this sector are high, but the Sector has remained in the grip of a vicious cycle of “low investment, low output and low returns”. The allocations from the State Plan funds have remained meagre. The grants from some of the Centrally Sponsored schemes being tied up with the matching contribution from the State Plan remain inadequately accessed as revealed from the table given below.

Table: Central: State Sharing Pattern, Approved Plan (AP), Funds Received (R) and Shortfall (SF) during the year 2013-14 and 2014-15 under the Centrally Sponsored Schemes in respect of Agriculture Department Jammu (Fin. Unit : Rs. In lakhs)

S.No	Name of Scheme	Funds Sharing Pattern	Year 2013-14			Year 2014-15		
			AP	R	SF	AP	R	SF
1	Extension Reforms Scheme (ATMA)	CS = 90	782.82	347.04	435.77	823.51	122.39	701.11
		SS = 10	113.65	36.78	76.87	131.50	24.75	106.75
		Total = 100	896.47	383.82	512.64	955.01	147.14	807.86
2	ISOPOM-Maize	CS = 75	112.27	112.27	0.00	-	-	-
		SS = 25	37.09	32.64	4.44	-	-	-
		Total = 100	149.36	144.91	4.44	-	-	-
3	National Mission on Micro irrigation	CS		2.19	-	-	-	-
		SS		0.50	-	-	-	-
		Total		2.69	-	-	-	-
4	National Agri Insurance Scheme/ National Crop Insurance Programme (WBCIS)	CS	-	-				
		SS	-	5.00				
		Total	-	5.00				
5	Sub -Mission on Agriculture Mechanization	CS	-	-	-	48.69	-	-
		SS	-	-	-	16.23	-	16.23
		Total	-	-	-	64.92	-	-
6	Submission on Seed and Planting Material	CS	-	-	-	584.54	-	-
		SS	-	-	-	48.72	-	48.72
		Total	-	-	-	633.26	-	-
7								
i	Soil Health Management	CS	-	-	-	235.5	-	-
		SS	-	-	-	37.33	-	37.33
		Total	-	-	-	272.83	-	-
ii	On Farm Water Management	CS	-	-	-	60.00	-	-
		SS	-	-	-	2.05	-	2.05
		Total	-	-	-	62.05	-	-
	Grand Total	CS	895.09	471.50	435.77	1752.24	122.39	701.11
		SS	150.74	74.92	81.31	235.83	24.75	211.08
		Total	1045.83	546.42	517.08	1988.07	147.14	912.19

During the year 2013-14, the approved Central Plan outlay under the Extension Reforms Scheme (ATMA), ISOPOM-Maize and National Mission on Micro Irrigation was Rs.895.09 lakhs and to fully access the same Rs. 150.74 Lakhs only was required, but Rs.461.50 lakhs of the Central Share could be accessed as the State Share availability was Rs. 74.92 Lakhs only. Thus, there was a short fall of Rs.435.77 Lakhs on account of Central Grant due to Short availability of Rs. 81.31 Lakhs of State Plan Share of funds.

For the year 2014-15 as well, the availability of State Share of funds was not adequate to enable the Directorate of Agriculture Jammu to be eligible to fully receive and utilize the approved Central Plan funds.

For the year 2015-16 also, the State Share requirement shall be too high as per revised criteria and allocation of the same shall be urgently required.

Human Resource

The Department is in existence in the State for the last more than 60 years. The Gazetted cadre comprises of trained manpower holding B.Sc Agri, M.Sc Agri, B.Tech/M.Tech. in Agri Engg. and Ph.D Agri qualification assisted by the Non Gazetted Executive and Ministerial cadres which are also trained in respective fields. The existing organizational chart of the trained Graduate, Post graduate and Doctorate staff of the Agriculture Department in Jammu region is briefly described in the following table:

Classification Of Posts Jammu Division									No. Of Posts
Class - I									
Director									1
Class - II									
Joint Director (Extension)			Joint Director (Input)		Joint Director (Slub)				3
Class - III									
1. Chief Agri. Officer (10)	2. Divisional Soil Survey Officer (1)	3. Agriculture Chemist (1)	4. SMS Grade -I (Ext) (4)	5. Dy. Director (C) (1)	6. Agri. Research Engineer (1)	7. Agronomist (1)	8. Agri. Economist (1)	Dy. Director Trgs. (1)	21
Class - IV									
Plant Protection Officer (1)				Project Officer - Dry Land (1)					2
Class - V									
1. Distt. Agri. Officer (8)		11. Farm Management Specialist (1)			21. Asstt. Bio-Chemist (1)				95
2. Asstt. Director - Law Enf. (1)		12. Apiculture Dev. Officer (3)			22. Spawn Prod. Officer (1)				
3. ADO- Veg. (5)		13. Mushroom Dev. Officer (4)			23. Asstt. Agrostologist (2)				
4. PDO (1)		14. Asstt. Botanist (1)			24. Asstt. Entomologist (1)				
5. Farm Manager (2)		15. Training Officer (M) (1)			25. Asstt. Soil Conservation Officer (10)				
6. Unit Manager (2)		16. Training Officer (F) (1)			26. Asstt. Soil Cons. Officer (Engg) (3)				
7. DSCO (1)		17. Asstt. Agri. Chemist (1)			27. Asstt. Engineer (3)				
8. Seed Analyst (1)		18. Asstt. Soil Chemist (6)			28. SMS-II (29)				
9. Agri Inf. Officer (1)		19. Asstt. Soil Survey Officer (2)							
10. Saffron Dev. Officer (1)		20. Agronomy Specialist (1)							
Class - VI									
1. SMS - III (Ext) (64)		2. Sub-Divisional Agri Officer (26)			3. Programme Officer (1)				91
Class - VII									
Agriculture Extension Officer & Equivalent (313)									313

The Ex-Cadre Posts available in different Departments is given below:

S.No	Department	Name of Post	Office
1	Animal Husbandry	Fodder & Forage Dev. Officer - 02 No (District Level)	1- Directorate AHD 2- Belicharana
		Agriculture Assistant - 04	1- Belicharana 2- Hakkal 3- Ponichak 4- Lam Nowshera
2	Sheep Husbandry	Fodder & Forage Dev. Officer - 01 No (District Level)	1-Panthal 2-Lam Nowshera

		Agriculture Assistant - 01	
3	Education Deptt.	Subject Matter Specialist (III) -06	Reasi, Chenani, R.S Pura Ponichak, Basohli & Billawar
4	Irrigation Deptt.	Agriculture Assistant - 01	Jammu.

Summary:

District Level officers	= 03
Subject Matter Specialist (III)	= 06
Agriculture Assistant	= 07

The career promotion aspects of the trained human resource sector in the Department need special attention. Some faults in the service rules have prompted quite a number of litigations amongst the cadre over the years, putting a spanner in the process of holding regular DPCs for their proper promotions and adjustments. A large number of vacancies have occurred in the gazetted cadre which has its cascading effect down below the ranks. A brief detail of the posts sanctioned, filled and vacant in the Department is placed hereunder for kind perusal:

Category	Sanctioned strength	Filled	Vacant
Gazetted	539	396	143
Non Gazetted	1868	1303	565
C-IV	662	548	114
TOTAL	3069	2247	822

Despite extreme odds, it goes to the credit of the functionaries of the Department that they have established a much closer rapport with the farming community and the improved inputs and technology are being popularized on a faster scale, though much needs to be done yet.

Need for Re-organization

The last re-organization of the Department took place about three decades back. Agriculture Sector has since then grown manifold in the areas of knowledge, science and technology. Need is being felt for an early fine-tuning of infrastructural facilities and quicker provision of all kinds of relevant scientific and technological knowledge and inputs to the farmers at their doorstep to offset ill-effects of natural and man-induced phenomena of climate-change, global warming; shrinking land holdings, depleting water and forest resources, etc. due to the growing needs of ever-growing human and livestock population

Introduction of a number of Centrally Sponsored Schemes (CSSs) like RKVY (including National Vegetable Initiative for Urban Clusters), MIDH, NMAET (including Seed Village and ATMA bodies), NFSM, etc., have necessitated revisiting our present organizational set-up so as to make it more effective and farmer-friendly in its working and more efficient in respect of its delivering and monitoring systems.

Cabinet decision No: 262/25/2010 dated: 10-12-2010 and Government Order No: 296-F of 2010 dated: 21-12-2010 envisages revisiting of the organizational hierarchy and its rationalization for optimal output. The said order also requires the department to redeploy the personnel from areas where their utility levels are not optimum to areas where their services can be gainfully utilized.

Almost a majority of the state departments have been re-organized and their official cadres redeployed on a hierarchical pattern based on panchayat, block/tehsil and district levels as the units of development.

The new cadre of Village Agriculture Extension Assistants (VAEA)

The State Department of Agriculture has created 2642 posts at Panchayat level for regularization of qualified and trained ReZ staff possessing B.Sc Agri, M.Sc Agri and Ph.D Agri degree, as Village Agriculture Extension Assistants w.e.f., 1st of April 2014 to strengthen the reach of extension and development activities. The government has thus, initiated the process of deploying Agricultural Technocrat staff at Panchayat level, but the measure requires properly addressed in the Service Rules of the Department.

A proposal for reorganization of the Department has been submitted to the Administrative Department earlier on the following lines:

1. Panchayat be taken up as basic unit of development in Agriculture Department.
2. Block as a higher unit instead of existing Sub-Division.
3. Re-designation of posts appropriately at different levels.
4. SMS posts at various levels to be rationalized and redeployed so that their services are gainfully utilized.
5. Provision of staff for new districts.
6. Decentralization and devolution of powers.
7. Equitable distribution of work.
8. No new creation of posts. and
9. Meager financial implications.

Amendments have also been proposed to the prevailing Non-gazetted Service (Recruitment) Rules of 2004.

Annexure IV: Financial Status of State Sector Plan for the years 2013-14 and 2014-15 :

(Rs in Lacs)

S.No.	Year	Allocation			Expenditure		
		Revenue	Capital	Total	Revenue	Capital	Total
1.	2013-14	1021.32	241.910	1263.23	968.119	198.936	1167.055
2.	2014-15	1400.00	736.69	2136.69	912.32	161.80	1074.12

Brief Description of various schemes

1. Revival of State Seed Farms :-

(Rs. in Lacs)

S.No.	Year	Allocation	Expenditure
1.	2013-14	54.25	37.720
2.	2014-15	57.25	47.413

2. Strengthening of Seed Testing Laboratories:-

(Rs. in Lacs)

S.No.	Year	Allocation	Expenditure
1.	2013-14	12.13	7.100
2.	2014-15	7.00	6.244

3. Strengthening of Soil Testing Laboratory:-

(Rs. in Lacs)

S.No.	Year	Allocation	Expenditure
-------	------	------------	-------------

1.	2013-14	8.00	6.280
2.	2014-15	8.00	8.00

4. Technology Dissemination:- (Rs. in Lacs)

S.No.	Year	Allocation	Expenditure
1.	2013-14	5.00	3.70
2.	2014-15	5.00	3.14

5. Promotion of Apiculture:- (Rs. in Lacs)

S.No.	Year	Allocation	Expenditure
1.	2013-14	7.00	7.00
2.	2014-15	9.00	5.732

6. Promotion of Mushroom:- (Rs. in Lacs)

S.No.	Year	Allocation	Expenditure
1.	2013-14	9.00	9.00
2.	2014-15	9.00	8.276

7. ATMA:- (Rs. in Lacs)

S.No.	Year	Allocation	Expenditure
1.	2013-14	50.00	36.61
2.	2014-15	49.50	34.58

8. National Agriculture Insurance Scheme:- (Rs. in Lacs)

S.No.	Year	Allocation	Expenditure
1.	2013-14	5.00	5.00
2.	2014-15	5.00	0.00

9. ISOPOM/National Mission on Oil Seeds and Oil Palms:- (Rs. in Lacs)

S.No.	Year	Allocation	Expenditure
1.	2013-14	(ISOPOM) 36.00	32.646
2.	2014-15	(NMOOP) 11.50	4.57

10. Subsidy on Plant Material:- (Rs. in Lacs)

S.No.	Year	Allocation	Expenditure
1.	2013-14	19.00	18.740
2.	2014-15	9.00	4.00

11. Physical Infrastructure under Projectised:- (A) Financial :- (Rs. in Lacs)

S.No.	Year	Allocation	Expenditure
1.	2013-14	35.53	35.140
2.	2014-15	65.66	29.82

(B) Physical:- Number of Ongoing/ New works under projectised :-

S.No.	Year	Ongoing works	New works	Completed	In Progress
1.	2013-14	4	5	5	4
2.	2014-15	4	2	5	1