RESEARCH ACHIEVEMENTS AND THEIR IMPACT

Mission :

The Directorate of Research, which is headed by the Director Agricultural Experiment Station (DAES), is solely responsible for overall supervision, guidance and co-ordination of need based and production oriented agricultural research in 26 districts belonging to seven revenue divisions viz; Faizabad, Basti, Devipatan, Gorakhpur, Varanasi, Azamgarh and Vindhyachal Dham of eastern U.P.

Service Area :

The Directorate of Research with its headquarter at Kumarganj (Faizabad) governs the research activities in three agro-climatic zones i.e., North Eastern plain zone (NEPZ), Eastern plain zone (EPZ) and Vindhyan zone (VZ). The university has seven research stations in different agro-climatic zones under its jurisdiction. These research stations are listed below.

NEPZ
* Crop Research Station (CRS) Ghaghraghat (Bahraich)- Main centre for Deep Water Rice Research .
* Crop Research Station (CRS) Bahraich- Centre for Maize, Jute, Mushroom & Agro-meterology research.
* Zonal Agril. Research Station (ZARS) Basuli (Mahrajganj) – Centre for crop research and seed production.

EPZ
* Main Campus, Kumarganj (Faizabad)- Centre for basic and applied research through different colleges in various disciplines of Agriculture, Horticulture and Forestry, Veterinary Science and Animal Husbandry, Fisheries, Agril. Eng. & Tech. and Biotechnology .
* Crop Research Station (CRS), Masodha (Faizabad)- Main Centre for Rice Research.
* Zonal Agricultural Research sub-station (ZARSS) Baribagh & Ankushpur (Ghazipur)- Centre for crops research

VZ
* Zonal Agricultural Research Station (ZARS) Tissuhi, (Mirzapur)- Centre for Pulses and Oilseed research.

Table-1 Crop Varieties Developed by NDUAT.

Crop	Name of varieties released/Identified	Total
Rice	Sarjoo-52, Narendra-1, Narendra-2, Narendra-80, Narendra-118, Narendra-97, Narendra-359, Jal Lahari, Jal Priya, Jal Nidhi, Barh Avrodhi, Narendra Usar Dhan-2, Narendra Usar Dhan-3, Narendra Sankar Dhan-2, Barani Deep, Narendra Sankar Usar Dhan-3, Narendra Dhan-8002, Narendra Dhan-2026 (Richa), Narendra Shushka Samrat (NDR-1045-2)*, Lalmati, NDR-2064, Narendra Narayani, Narandra Mayank, Narendra Jalpusp, Improved Swarna, Narendra Dhan- 3112-1, NDRK-5088, NDR- 9930111*, NDR- 9930077*, NDR – 9930017*, NDR–2065, NDR –6093, NDRK –50002	33
Wheat	Narendra Wheat-1012, Narendra Wheat-1014, Narendra Wheat-1076, Narendra Wheat-2036, Narendra Wheat-1067	5
Barley	Narendra Barley-1, Narendra Barley-2, Narendra Barley-3, Narendra Barley-4, Narendra Barley-1173, NDB-943	6
Mung	Narendra Mung-1, Narendra Mung-2*	2
Urd	Narendra Urd-1, Narendra Urd-2*	2
Pigeon Pea	Narendra Arhar-1, Narendra Arhar-2, Narendra Arhar-3*	3
Lentil	Narendra Masoor-1, Narendra Masoor-2*	2
Mustard	Narendra Rai-1, Narendra Sarson-2, Narendra Ageti Rai-4, Narendra Rai-8 (NDYR-8), NDYS-2018 (Jagrati)	5
Cauliflower	Narendra Gobhi-1	1
Brinjal	Narendra Brinjal-1, Narendra Hybrid Brinjal-1, Narendra Hybrid Brinjal-2, Narendra Hybrid Brinjal-3, Narendra Brinjal-2, Narendra Brinjal-3	6
Tomato	Narendra Tomato-1, Narendra Tomato-2, Narendra Tomato-5, Narendra Tomato-6, Narendra Tomato-3, Narendra Tomato-4, Narendra Tomato-7, Narendra Tomato-8	8
Vegetable Pea	Narendra Sabji Matar-1, Narendra Sabji Matar-2, Narendra Sabji Matar-3, Narendra Sabji Matar-4, Narendra Sabji Matar-5	5
Muskmelon	Narendra Kharbuja-1, Narendra Kharbuja-2	2
Colocasia	Narendra Arvi-1, Narendra Arvi-2, PKS-1*	3
Pointed gourd	Narendra Parwal-260, Narendra Parwal-307, Narendra Parwal-604	3
Banda	Narendra Banda-1, Narendra Banda-3*	2
Pumpkin	Narendra Agrim, Narendra Amrit, Narendra Abhooshan (NPH-1), Narendra Upcar	4
Bottle gourd	Narendra Sankar Lauki-4, Narendra Rashmi, Narendra Shishir, Narendra Dharidar, NDBG-104*, NDBG-132*, Narendra Madhuri, Narendra Shivani, NDBG–619	9
Turmeric	Narendra Turmeric-1	1
Okra	NDO-10*	1
Bittergourd	Narendra Barahmasi-1	1
Cowpea	Narendra Lobia-1, Narendra Lobia-2	2
Sweet Potato	Narendra Shakarkand-9, NDSP-10*	2
Elephant Foot	Narendra Zimikand-5*, NDA-9*	2
Aonla	Narendra Aonla-4, Narendra Aonla-5, Narendra Aonla-6, Narendra Aonla-7, Narendra Aonla-10	5
Bael	Narendra Bael-4, Narendra Bael-5, Narendra Bael-7, Narendra Bael-9, Narendra Bael-17*, Narendra Bael-16	6
Ber	Narendra Ber Selection-1*, Narendra Ber Selection-2*	2
Opium Poppy	Narendra Posta-1 (Kirtiman)	1
Jute	Reshma, NDC-9102, NDC-2008	3
Crotolaria	Narendra Sanai-1	1
Bajra (Forage)	NDFB-2,	1
Oat	NDO-1*	1
	Total	**130**

* Varieties identified in National Workshops/Group Meetings of AICRP's.

Based on the locational specific problems affecting productivity and farmers needs, the research programmes are formulated by the scientists concerned. At present 138 research projects/schemes, financed by various national and international agencies, are in operation in the university. These projects are reviewed at Zonal level by the Zonal Research and Extension Advisory Committees (ZREAC) and at main campus by the DAES at least twice in a year. The progress of research work is monitored by the DAES from time to time. The new technologies developed by the university scientists are passed on to the Directorate of Extension and line departments for dissemination to farming communities.

A- Varietal Improvement :

The major research thrust in crop production has been to develop high yielding varieties of all important crops resistant to biotic and abiotic stresses. As a result, the university has so far developed 130 improved varieties of various crops. Out of which 110 varieties have been released at central/state level by central/ state Varietal Release Committee (CVRC/ SVRC) and the rest have been identified for release. During last 4 years (2007-10) 29 varieties have been developed out of which 14 varieties of rice, 09 of vegetables, 01 of barley, 02 of fodder crops and 02 of jute & fibre crops and 01 of yellow sarson. Crop varieties developed by the university are given in table-1.

B- Technological Achievements

Location specific technologies regarding agronomic practices, fertilizer management, dry land agriculture, diara land management, cropping system, crop protection, vegetable production, horticultural crops, agro-forestry, aromatic & medicinal plants, mushroom production, apiculture, pisciculture, agro-meteorology, agricultural engineering and animal husbandry have been developed and popularized among the farmers. The details of technologies generated by NDUAT are as follows-

I- Agronomical Practices :

- Among all the direct seeding methods, sowing of rice with DRR drum seeder gave highest yield.
- Ridge planting of pigeon pea (Arhar) gave 10-22% more yield over flat sowing.

II- Fertilizer Management :

- Results of long term manurial experiment (over 30 years) on rice- wheat system indicates that the responses to P & K increased with time in both the crops with a higher response rate in wheat. In the absence of phosphatic fertilizer, nitrogen failed to produce any effect on grain yield of both the crops.
- Substitution of 25-50% N through FYM and sesbania green manuring to rice and 100% NPK to wheat resulted equal or more yield as compared to 100% NPK fertilizer alone in rice-wheat system.

- Application of 25kg zinc sulphate ha^{-1} to both crops in rice-wheat system was more beneficial than its application to any single crop though its application to rice was preferred as it showed higher residual response on wheat.
- Application of 20-25 kg sulphur per hectare was found to increase the yield of several pulse crops by 15-20%.
- Application of 60 kg sulphur per ha through gypsum in mustard crop increased both yield and quality of oil.
- Omitting of nitrogen, phosphorus and potassium reduced the grain yield of rice by 56.2, 25.4 and 6.0% in rice and 59.4, 41.3 and 8.0% in wheat, respectively.

III- Water Management

- The integrated farming system with diversified cropping system, pisiculture and duckery were more profitable as compared to the conventional cropping system. The highest benefit cost ratio of 3.60 was observed in integrated farming system with cropping system of Rice-Lentil + Rai as compared to 1.94 in Rice – Wheat + Rai system.

- Improved water management practices (7cm water 1-3 days after disappearance of ponded water applied with check basin of 10x10m) increased grain yield of rice on farmers fields a tune of 28.66%, 29.46% and 40.9% at head, middle and tail ends of Ram nagar distributory, respectively. The WEE was also higher under improved water management practices.

- Improved water management practices (6cm water at CRI, late jointing and milking stages by check basin of 10x5m) increased 23.08%, 25.56% and 28.13% grain yield of wheat at head, middle and tail ends of distributory, respectively. The WEE was also enhanced under improved water management practices.

- Pigeon pea grown on raised bed in paired rows at 50cm spacing intercropped with 3 rows of urd (blackgram) on raised beds was found more productive and remunerative system under poor availability of canal water at tail end of minor in kharif season, while intercropping of gram + mustard (4:1) was found more economical in rabi season.

IV- Dryland Management :

- Application of 30 kg sulphur ha^{-1} either in form of gypsum or as elemental sulphur is recommended to increase the productivity of chickpea under rainfed condition.
- Sowing of lentil with the help of Pant Nagar Zero Till Drill Machine is more remunerative under rainfed condition.
- For higher income under rainfed condition of eastern U.P. either okra or kalmegh or turmeric may be intercropped with pigeonpea in additive series of sowing.
- Fodder (maize + cowpea)- lentil and blackgram- lentil cropping sequences are recommended for higher returns under rainfed conditions of eastern Uttar Pradesh.

V- Cropping system :

- Rice (hybrid)-potato-green gram cropping system proved to be most remunerative with the net profit of Rs. 110724/ha/year followed by rice (basmati)-lentil-maize+cowpea (green fodder) providing net profit of Rs. 79940/ha/year. Adoption of hybrid rice (PHB 71) or basmati rice (Pusa basmati) was found more profitable than imbred rice (Sarjoo-52).
- The substitution of 25 – 50% recommended nitrogen through farm yard manure or through green manure of *Sesbania aculeata* (dhaincha) with 75-50% recommended NPK doses through fertilizers to rice crop and 100% NPK through fertilizer to wheat responded more or similar as compared with 100% NPK fertilizers alone in rice – wheat cropping system.
- In NARP Zone 8, under irrigated conditions, rice-gram system was found more remunerative providing an additional income of Rs. 10642/ha followed by rice-mustard (Rs. 1681/ha) than traditional rice-wheat system (25287/ha/year).
- In upland situations, Pigeon pea + black gram–wheat cropping system was more profitable recording Rs. 5613/ha/year additional income than Pigeon pea-wheat system. The negative net income was noted with urd-mustard as compared to pigeon pea-wheat system.

VI- Crop Protection :

- Monocrotophos 36 WSC @ 500 g/ha + Acephate 45%+ Cypermethrin 5% @ 500 g/ha or Thiocloprid 24% @ 120 g/ha were found most effective for controlling stem borer, leaf folder and whorl maggot.
- Soil application of Neem Cake @ 3-5 q/ha controlled nematodes and their related diseases in most of the crops.
- Planting of marigold 3-5 plants per pit prevented root knot nematode in pointed gourd (Parwal).
- A mixture of 1 g Vitavax and 1 g Thirum per kg of seed was found most effective to control smut and seed borne diseases in wheat and barley.
- Application of bio-control agent (*Psudomonas fluorisense*-Biocon B-4% + Vitavax 0.125%) effectively controlled the smut disease in wheat.
- Population of gram pod borer was higher in non IPM fields while higher yield ranging from 20.32 to 24.20 q/ha was recorded in IPM fields of Basti district.
- Two hand weedings gave higher yield of rice (48.83 q/ha) in comparison to application of butachlor +propanil @ 1.12 + 1.12 kg/ha (42.68 q/ha).
- Cinosulfuron @ 15-20 g/ha or Oxadiangyl 70-100 g/ha or almix @ 4-6 g/ha can be used safely in transplanted rice for effective weed control.
- Anilophos @ 0.3 kg/ha at 4 DAT can be applied as spray or broad cast with sand for the control of weed effectively in transplanted rice.
- In wheat, Isoproturon @ 1.0 kg/ha as spray or broadcast mixed with sand or Sulfosulfuron @ 3.3 gm./ha as spray can be applied at 30-35 DAS to control *Phalaris minor* and wild oats effectively.
- In late sown wheat, isoproturon @ 1.0 kg/ha + 2,4-D Na salt @ 0.5 kg/ha as tank mixed may be use safely as post emergence.

VII- Vegetable Production :

- Maximum net return was obtained with vegetable based intercropping of Arvi+Chilli.
- In rice-potato-wheat crop rotation Kufri Ashoka variety of potato was found most suitable in comparison to other varieties due to its early maturity. It could be harvested after 70-80 days of planting.
- For weed management in Parwal, highest net income and cost-benefit ratio were obtained with paddy straw mulch which produced 127 q/ha fruit yield.
- Maximum fruit yield (332 q/ha) of Narendra Tomato-2 alongwith maximum cost-benefit ratio (1:3.45) was obtained with Dhaincha green-manuring + half dose of recommended NPK (60:30:30 kg/ha) transplanting at 60 x 45 cm spacing.
- Application of 240:180:80 kg NPK/ha in hybrid capsicum var. Bharat gave maximum yield (195.60 q/ha), net-income and cost-benefit ratio (1:4.22).

VIII- Horticulture :

- Narendra Ber Selection-1 and 2 continuously gave excellent performance with respect to yield, size and quality of fruits.
- Foliar application of 2% urea along with 250 ppm Ethrel one month after fruit setting was found most effective to induce early ripening, higher yield and better quality of guava fruits.
- A suitable technique for integrated management of mango malformation, caused by *Fusarium monoliformis*, has been developed by the university.
- 50% pruning of I year old in determinants shoot give maximum fruit yield and better quality fruit.
- Application of 0.5% Zinc sulphate + 0.1% Thio urea followed by 0.5% Borax + 0.1% Thio urea were given to improve plant growth, fruit set, yield and quality attributes.

IX- Medicinal and Aromatic plants :

- NDAS-4 found to be maximum root yielding genotype of Asparagus.
- Nutrient level of 50:30:20 kg nitrogen, phosphorus and potash/ha along with bio-fertilizer (VAM) proved best treatment combination with respect to seed, latex and husk yields of opium poppy.
- Maximum seed yield of Isabgol (16.60q/ha) was recorded in line sown crop with fertilizer application @ 50 kg N + 2kg PSB/ha.
- NDH-1 was found best for latex yield in opium poppy.

X- Mushroom Production :

- In order to get more yield and net profit, *Pleurotus, Volvariella* and *Agaricus bisporus* were found most suitable.
- Cheap and easily available organic materials like paddy straw, wheat straw and groundnut shell are being successfully used for mushroom production.

XI- Apiculture :

- Apiculture with *Apis mellifera* in arhar, mustard and sunflower crops could produce 50-70 kg honey/ha. It also helped to increase the yield of these crops by about 40-50%.

XII- Agro-meteorology :

- Agro-advisory bulletins are prepared and distributed among the farmers. Short term weather forecasting is also being done which helps the farmers in planning the farm operations for obtaining higher production in adverse weather conditions.
- Oct.30th sowing of chickpea was characterized by optimum temp. during vegetative and reproductive phase hence it was more congenial for crop growth. Crop sown in Nov. exposed relatively lower temperature during vegetative phase and higher temp. during grain filling stage which adversely affected the crop growth and yield.

XIII- Agricultural Engineering :

- Semi automatic potato planter-ridger was successfully tested. The effective field capacity of this machine was found to be 0.2 ha/hr with labour saving of 75 man days/ha.
- It was found that sowing can be advanced by 7-10 days by using Pantnagar Zero till seed-cum-fertidrill and strip till-drill machines. It was also observed that these machines are labour saving and gave higher returns in comparison to conventional method.
- Tractor mounted semi-automatic two-row sugarcane sett cutter planter was tested and its field efficiency was found to be 0.2 ha/hr. Four persons including tractor driver are required to operate this machine which does the job of furrow opening, sett cutting and cropping, fertilizer placement and sett covering simultaneously.

- Tractor mounted rotavator has been tested and operated in more than 500 ha area. The field capacity of this machine was found to be 0.25 ha/hr in first operation. It prepares the field in one operation as good as 4-6 operations with cultivator or harrow.

XIV- Agro forestry :

- Under 7-year old agroforestry plantation of *Populus deltoids*, the grain yield of wheat variety NW-1067 (1.75 t ha^{-1}) was higher than those of other varieties. Grain yield reduction of wheat under same system in comparison to open area ranged from 35.2% to 38%. During Kharif, of the three varieties of paddy sown under same system, Narendra Usar-3 variety gave higher grain yield (2.50 t/ha^{-1}) than other varieties.
- There was a concentrated leaf litterfall in *Populus deltoids* based system during October-January. During this period, leaf litter accounted for about 88.9% of the total annual leaf fall (516 g m^{-2}yr^{-1}). After decomposition litter had 64.8% dry weight loss over annual cycle. Carbon dioxide evolution (root+soil+litter) from this system amounted to about 284 g. m-^{2}yr^{-1}.
- In case of medicinal herbs cultivated in *C. equisetifolia* based agri-silvi system FYM application showed greater crop yield (3.07 t ha^{-1}) of *Andrographis paniculata* than other treatments. In *Matricaria chamomilla*, FYM application also showed greater flower yield (0.34 t ha^{-1})
- Under *D. sissoo* based silvipastoral system, the green herbage yield was maximum (27.07 t ha^{-1}) for *Pennisetum purpureum* and minimum (16.75 t ha^{-1}) of *Panicum maximum* grass.
- The average paddy grain yield across agri-silviculture systems under six *P. deltoides* clones was better as well as almost equal (2.0-2.06 t ha^{-1}) of Narendra Usar-3 and Sarjoo-52. On the whole, G-48 followed by Pant-5 and L-52 indicated better paddy grain yield than rest of the three clones.

XV- Usar and Wasteland Management :

- In usar and wastelands, the pits were filled with soil, sand and compost in the ratio of 2:1:1 without gypsum/pyrite and Aonla, Bael, Ber and Forestry plants were planted. By using this technique the plants grow well and the soils also improve. The technique is very popular among the farmers.

XVI- Animal Husbandry :

- Improved breed of buffalo, housing design and complete health package suited specially for the agro-climatic conditions of eastern U.P. is being developed.
- Low cast feed using locally available agricultural products and natural resources have been developed.
- Semen bank of improved breed/strains of various livestock species is being established.
- Work on development of technology to produce calf of desired sex through artificial insemination with sex sorted spermatozoa at farmers' field is in progress.
- Training of veterinarians, paravets, local youth, house wives of livestock farmers are being conducted.

Impact of Research

1. Adoption of varieties developed by the University :

- The improved varieties developed by the university is being adopted not only by the farmers of the State but also the farmers of other State.
- The paddy varieties such as Sarjoo-52, NDR-97, NDR-359, Jal Lahari, Swarana-Sub-1, Barh Awarodhi, Narendra Usar Dhan-2 and Narendra Usar Dhan-3 are very popular among the farmers under various rice ecosystems.
- Narendra Barley-2 and Narendra Barley-4 has great demand on the farmers field in Jhansi & Agra-regions and NDB-1173 & NDB-943 in sodic soils ecosystem.
- In rice-potato-wheat-moong/urd crop rotation, Narendra-97 variety of rice has been widely accepted by the farmers due to its short duration and higher yield.
- In rainfed and saline-sodic soils, Narendra Rai-1 is more popular among the farmers due to its high yield potential and more oil content.
- The common and hybrid varieties of different vegetable crops developed by the university have greater acceptance among the farmers of U.P. and other states.
- Narendra Aonla-6,7 and 10 due to their high yield potential, have greater demand among the farmers of Maharastra, Gujarat, Madhya Pradesh, Rajasthan, Andhra Pradesh and Tamil Nadu in addition to Uttar Pradesh.
- Narendra Bael-5 and 9 are popular among the farmers of Uttar Pradesh.
- The opium poppy variety-Kirtiman is very popular among the farmers in U.P.
- Tractor operated semi-automatic belt type potato planter ridge is being widely used in eastern U.P.
- Pantnagar Zero-till seed cum ferti-drill is getting popularity in more moist areas where sowing of wheat was either delayed or not possible due to late harvesting of rice.
- Timely harvesting of rice and wheat could be made possible due to use of combine harvester. It reduces labour dependency and losses due to climatic factors & fire etc.

II- Seed Production :

Improved seeds play a very vital role in agriculture production . Use of high quality seed alone may increase crop production by 20-30%. Keeping this in view, the university is giving due emphasis on quality seed production. The prime responsibility of the university is to produce breeder and foundation seeds. The breeder and foundation seeds of different crops produced by the university are made available to different seed agencies such as National Seed Corporation, State Seed Farms and U.P. Seed Development Corporation, etc. as per their demands for further multiplication as foundation/certified seed. These seeds are made available to the farmers by seed agencies. In this way, the university plays a major role in seed production and its replacement in the state. The details of cropwise breeder & foundation seed production during 2006-07 to 2009-10 are given in table-2.

Table 2- Cropwise Breeder and Foundation Seed production (Qtls.) by NDUAT, Faizabad. (2006-07 to 2009-10)

Crop	2006-07		2007-08		2008-09		2009-10	
	Breeder	Foundation	Breeder	Foundation	Breeder	Foundation	Breeder	Foundation
Paddy	479.48	6471.68	649.60	6021.68	850.50	6102.10	2449.27	3689.81
Arhar	10.82	-	32.05	82.60	18.80	10.30	25.55	27.92
Urd	3.25	3.25	7.00	-	4.50	--	21.29	-
Mung	4.65	-	1.32	-	3.75	--	6.70	-
Til	-	-	-	-	-	-	-	-
Wheat	1389.25	1878.71	1776.55	1182.05	1875.10	669.60	2199.89	637.00
Gram	8.35	54.60	81.40	67.65	104.90	9.10	159.00	25.00
Pea	38.00	-	30.20	21.20	31.10	--	60.00	-
Lentil	70.60	2.00	40.35	41.35	63.40	16.82	65.00	15.00
Mustard	16.46	66.30	18.90	44.80	11.82	25.53	-	5.00
Toria	-	-	-	-	-	-	-	-
Barley	44.15	22.00	30.85	6.75	31.47	6.75	56.30	-
Berseem	1.50	-	1.75	-	3.40	--	-	-
Chari	3.09	-	0.50	-			-	-
Total	**2069.60**	**8498.54**	**2670.47**	**7468.08**	**2998.74**	**6840.20**	**5043.00**	**4399.73**
Grand Total	**10568.14**		**10138.55**		**9838.94**		**9442.73**	

III- Usar and Wasteland Management :

- University has done excellent work in Usar and wasteland management which is applauded at National and International levels. The agro-techniques developed by the university for usar and wasteland management have greater acceptance among the farmers for plantation of fruits and forest crops on their lands.

IV- Mushroom Production :

The spawn of different species of mushroom are being produced by the university and sold to the needy farmers for cultivation. The details of Mushroom and Span production are given in following table.

Mushroom/Spawn	**Mushroom/Spawn Production (kg.)**			
	2006-07	2007-08	2008-09	2009-10
(A) Mushroom (Fruiting Body)				
a) Pleurotus	174.00	86.500	52.250	62.50
b) Volveriella	3.15	18.900	77.600	21.00
c)Agaricus	31.60	53.800	45.000	40.00
d)Calocybe	45.20	45.900	NIL	25.00
Total :	**253.95**	**205.100**	**174.850**	**148.50**
a) For sale	521.0	357.0	489.500	300.00
b) For trial/ Demon./ Multi.	394.0	225.0	153.50	100.00
Total *:*	**915.0**	**582.0**	**643.00**	**400.00**

Crop varieties developed by University

Varieties released/identified	Year of release	Potential yield (q/ha)	Salient characteristics
A. Cereals			
Rice			
Sarjoo-52	1980	55-60	Maturity 130-135 days. Resistant to BLB & Bacterial leaf streak. Suitable for irrigated areas of U.P.
Narendra-1	1981	40-45	Maturity 105 days. Resistant to BLB. Suitable for rainfed upland multiple cropping system.
Narendra-2	1982	45-50	Maturity 112-115 days. Resistant to BLB. Suitable for irrigated early paddy growing situations.
Narendra-80	1986	45-50	Maturity 110 days. Suitable for multiple cropping system.
Narendra-118	1987	40-45	Maturity 85-90 days. Resistant to blast. Suitable for direct seeding under rainfed upland conditions.
Narendra-97	1992	45-50	Maturity 90 days. Resistant to BLB, blast, sheath rot, brown spot. Suitable for direct seeding in rainfed upland conditions.
Narendra-359	1992	60-65	Maturity 130-135 days. Moderately resistant to BLB.
Jal Lahari	1993	40-45	Maturity 140 days. Moderately resistant to BLB. Suitable for rainfed shallow low land situations.
Jal Priya	1993	35-40	Maturity 150-160 days. Suitable for semi deep water situations (50-100 cm water depth)
Jal Nidhi	1993	45-50	Maturity 215-225 days. Suitable for deepwater situations (100-250 cm water depth)
Barh Avrodhi	1995	35-40	Maturity 145-155 days. Suitable for flash/intermittent flood situations.
Narendra Usar Dhan-2	1996	45-50	Maturity 120-125 days. Suitable for saline-alkali soils.
Narendra Sankar Dhan-2	1998	65-70	Maturity 125-130 days. Resistant to blast and BLB. Suitable for irrigated conditions.
Narendra Usar Dhan-3	1999	45-50	Maturity 125-130 days. Resistant to BLB, sheath blight, sheath rot, brown leaf spot, false smut. Suitable for saline-alkali conditions.
Barani Deep	2000	30-35	Maturity 95-100 days. Resistant to brown spot and BLB. Suitable for rainfed upland multiple cropping system of eastern Uttar Pradesh.
NDURH-3	2002	60-65	Maturity 125-130 days. Resistant to brown spot and BLB, suitable for sodic (Usar) and normal soils.

NDR- 8002	2004	40-45	Maturity 135-140 days, Resistant to White Brown Plant Hopper (WBPH) and Leaf Blast. Better export quality, suitable for late sown condition of rain fed low land areas. Recommended for eastern U.P., West Bengal, Orissa and Chhattishgarh states.
NDR –2026 (Richa)	2004	45-50	Maturity 110-115 days, Plant height 80-90 cm., medium early duration, resistant to brown spot and sheath rot diseases.
Shusk Samart	2005	35-40	Maturity 100-105 days, for direct seeded rainfed upland condition of U.P, Orissa & Bihar
Lalmati	2007	30-35	Maturity 115-120 days, irrigated, mid early.
NDR-2064	2007	45-50	Maturity 120-125 days, irrigated, mid early, moderately resistant to BLB, ShB, ShR and Brown spot.
Narendra Narayani	2008	43-45	Maturity 115 days, suitable for irrigated low land conditions of U.P.
Narendra Mayank	2008	43-45	Maturity 110 days, tolerant to submergence, suitable for flood prone areas of U.P.
Narendra Jalpusp	2008	42-47	Maturity 113 days, long bold grain, suitable for irrigated late sown & rainfed low land areas of U.P.
Improved Swarna (Swarna-Sub-1)	2009	55-60	Maturity 150-155 days, medium fine, small highly submergence tolerant.
Narendra Usar Dhan- 2008	2009	45-50	Maturity 120-125 days, long bold, Suitable for salt affected soils of West Bengal, Andhra Pradesh and Orissa
NDR- 3112-1	2009	45-50	Maturity 125-130 days, long bold, suitable for irrigated conditions.
NDR- 9930111	2009	50-60	Maturity 145-150 days, medium bold, highly submergence tolerant
NDR- 9930077	2009	45-50	Maturity 145-150 days, semi deep ecology, medium bold, highly submergence tolerant
NDR – 9930017	2009	40-45	Maturity 145-150 days, long slender, good for delayed planting, submergence tolerant.
NDR-2065	2010	50-55	Maturity 120-125 days, long bold grain, suitable for early sown condition, resistant to sheath rot.
NDR-6093	2010	35-40	Maturity 125-130 days, aromatic long slender grain with Basmati feel.
NDRK-50002	2010	45-50	Maturity 120-125 days, medium bold grain with good cooking quality. Tolerant to Usar soil, resistant to lodging and shattering.
Wheat			
Narendra Wheat-1012	1997	50-60	Maturity 120-130 days. Resistant to rust. Suitable for timely sown irrigated conditions of North Eastern Plain Zone.

Narendra Wheat-1014	1997	40-45	Maturity 100-112 days. Resistant to rust, foliar blight, Karnal bunt and loose smut. Suitable for late sown conditions of North Eastern Plain Zone.
Narendra Wheat - 1076	2002	50-60	Maturity 108-110 days. Resistant to saline and sodic conditions; brown, black and yellow rusts and foliar blight. Suitable for late and very late sown conditions of whole U.P.
Narendra Wheat-2036	2002	45-50	Maturity 108-110 days. Resistant to rusts and tolerant to foliar blight. Suitable for late and very late sown conditions of North Eastern Plain Zone.
NW -1067	2004	50-60	Maturity 121-125 days, tolerant to saline alkali soils, protein 12.37%; resistant to lodging, shattering and brown rust; recommended for timely sown, irrigated, high fertile salt affected soils.
Barley			
Narendra Barley-1	1999	25-30	Maturity 110-115 days. A hulled, six rowed barley. Tolerant to smut, rust and salinity-alkalinity. Suitable for normal and late sown conditions.
Narendra Barley-2	1999	45-50	Maturity 100-110 days. Six rowed variety. Tolerant to smut and rust. Suitable for irrigated and timely sown conditions.
Narendra Barley-3	2000	25-30	Maturity 110-115 days. A hulled, six rowed variety. Resistant to foliar diseases. Suitable for saline-sodic conditions and malt based industries.
Narendra Barley-4	2002	35-40	Maturity 105-110 days. A hulled, six rowed barley. Resistant to major diseases and insects. Suitable for rainfed, saline-sodic conditions and late sowing in irrigated conditions.
NDB-1173	2003	35-40	Maturity 115-120 days. A hulled, six rowed barley having dwarf plant stature. Suitable for saline-sodic conditions; resistant to foliar blights, rusts, aphids, shattering and lodging. It yields reasonably well at low fertility levels.
NDB-943	2007	35-45	Maturity 115-120 days, hull less, bold seeded, mid early maturity. Suitable for saline and alkaline conditions of U.P.

B. Pulses			
Narendra Mung-1	1992	12-15	Maturity 60-70 days. Resistant to Mung Yellow Mosaic Virus (MYMV), Rhizoctonia blight and Cercospora leaf spot. Suitable for both kharif and zaid seasons.
Narendra Mung-2	2005	15-18	Maturity 70-75 days, resistant to yellow mosaic virus, tolerant to major insect pests, suitable for kharif season. More than 25% yield superiority over check variety PDM-54 & Pant M-4.
Narendra Urd-1	1992	12-15	Maturity 80 days. Resistant to MYMV. Suitable for kharif season.
Narendra Urd-2	2003	13-15	Maturity 80-85 days, bold seeded, resistant to MYMV and Cercospora Leaf Spot. Suitable for kharif in EPZ and summer in NEPZ.
Narendra Arhar-1	1996	25-30	Maturity 255-260 days. Resistant to sterility mosaic and tolerant to wilt and Phytophthora blight.
Narendra Arhar-2	2004	25-33	Maturity 240-250 days, resistant to Sterility Mosaic Virus and Wilt; tolerant to pod borer. Bold seeded with higher Dal recovery. Suitable for timely and late sown conditions.
Narendra Arhar-3	2006	18-20	Maturity 210-215 days, suitable for pre-rabi sowing, resistant to sterility mosaic virus & phytophthora blight and tolerant to wilt.
Narendra Masoor-1	1996	18-22	Maturity 130-135 days. Resistant to rust and tolerant to wilt and root-rot diseases.
Narendra Masoor-2	2002	22-25	Maturity 125-130 days. Resistant to rust, wilt and root rot diseases. Suitable for both irrigated and rainfed conditions.
C. Oilseed Crops			
Narendra Rai-1	1990	25-30	Maturity 120-125 days. 21% more yield than Varuna; 40% oil content. Resistant to downy mildew. Tolerant to salinity and alkalinity
Narendra Sarson-2	1996	12-18	Maturity 125-130 days. 46% oil content. Resistant to white rust, downy mildew and Alternaria blight.
Narendra Ageti Rai-4	1999	15-20	Maturity 100-105 days; 40% oil content., 8-10 q/ha yield in September sown crop. Resistant to white rust and downy mildew; tolerant to salinity and alkalinity. Suitable for multi cropping system.
NDYR-8	2004	15-20	Maturity 130-135 days, plant height 190-195 cm., yellow colour grain, tolerant to white rust and Alternaria blight, oil content 45.7%, recommended for U.P.
NDYS-2018 (Jagrati)	2007	15-20	Medium bold seeds, tetralocular, upright siliquae, oil content 43.17%.

D. Vegetable Crops			
Narendra Gobhi-1 (Cauliflower)	1992	300	Early in mid season group. White and solid flower with average weight of 700 g per head.
Narendra Brinjal-1	1992	325-350	Oblong fruits. Dark violet colour, medium size plant. Suitable for winter and rainy seasons.
Narendra Hybrid Brinjal-1	1995	500-550	Round and big fruits, violet colour, fleshy with less seed. Tolerant to phomopsis leaf blight.
Narendra Hybrid Brinjal-2	1996	550-600	Long fruits, colour bright violet. Resistant to stem and fruit borers.
Narendra Hybrid Brinjal-3	1999	500-550	Fruiting in 70-80 days. Round large fruit; colour bright violet; soft, less seeded. Moderetely resistant to Alternaria leaf blight, phomopsis leaf blight and Sclerotinia wilt, shoot and fruit borer in field condition. Suitable for cultivation in summer, rainy and winter seasons.
Narendra Brinjal-2 (NDB 28-2)	2005	375-450	Fruits long, dark purple shining colour, soft texture and less seeded. Medium maturing variety, takes 70-75 days for first fruit harvest.
Narendra Brinjal-3	2007	350	Early in maturity, fruits long, medium thick, shining purple colour, highly tolerant to fruit & shoot borer.
Narendra Tomato-1	1996	450-500	Fruit medium to large, suitable for table and processing purposes. Averge fruit weight 75-100 g. Tolerant to diseases and fruit cracking.
Narendra Tomato-2	1995	400-450	Medium fruit size, average weight 50-75 g/fruit, dark red colour. Resistant to early and late blight and leaf curl virus.
Narendra Tomato-3	2005	350-400	Plants green, determinate type. Fruits small to medium size, flat, round, grooved. First fruit harvest 60-65 days after transplanting. Tolerant to root-knot nematode.
Narendra Tomato-4 (NDT-9)	2005	350-375	Early maturing variety; plant green, indeterminate type fruits medium to large size, flat, round, slightly grooved, acidic in taste.
Narendra Tomato-5	2001	380-410	Medium early, solid fruit size, fleshy fruit. More tolerant to diseases and insects in comparison to other varieties.
Narendra Tomato-6	2001	400	Medium late; medium to large size, solid and fleshy fruits. Resistant to nematodes.
Narendra Tomato-7 (NDTS-2001-3)	2007	400-425	Plant dwarf, round solid fruits of acidic nature. Highly tolerant to curl virus, good keeping quality and suitable variety for processing. Recommended for cultivation in Punjab, U.P. & Bihar.
Narendra Tomato-8	2007	350-400	Plant indeterminate, fruits round medium thick pericarp, resistant blight & moderately resistant to leaf curl virus.
Narendra Sabji Matar-1	1996	80-100	Early, medium to long pod size. Resistant to powdery mildew.

Narendra Sabji Matar-2	1997	85-95	Medium early, sweet grains. Resistant to diseases.
Narendra Sabji Matar-3	1999	85-100	Long pods with 8-10 grains; very sweet grains. Fruiting within 70-75 days.
Narendra Sabji Matar-4	2001	140-150	Plant height 70-75 cm, long green pods with 8-9 grains, medium early. Resistnat to powdery mildew and rust.
Narendra Sabji Matar-5	2001	110-120	Medium plant height (70-75 cm). Maturity 80-85 days. Medium long pods with bold seed. Resistant to powdery mildew.
Narendra Kharbuja-1 (Muskmelon)	1998	175-200	Medium fruit (Av. wt. 700 g/fruit), very sweet taste (10-12% TSS)
Narendra Kharbuja-2 (NDM-15)	2005	150-200	Fruits oval round, light orange colour with green strips at maturity, medium size fruits with smooth skin, excellent musky flavour. First fruit harvest in 70-75 days.
Narendra Arvi-1 (Colocasia)	1998	120-125	Maturity 170-180 days (early); can be harvested after 140 days. Less acridity. Soft and easy to cook. All parts are edible. Tolerant to Phytophthora blight. Suitable for summer and rainy seasons.
Narendra Arvi-2 (Colocasia)	1999	120-125	Maturity 182-196 days (medium). Can be harvested in 150 days after sowing as per requirement. Tolerant to Phytophthora blight, less acridity, soft and easy to cook.
Arvi PKS-1 (Colocasia)	2002	270-280	Maturity 150-170 days, early. Suitable for all types of soils.
Narendra Parwal-260 (Pointed gourd)	2001	200	Fruits 13-15 cm long, stripped, green, thick flesh, suited both for vegetable and sweet making. Planted in single stake system at 1.25 x 1.25m spacing. Tolerant to vine borer and wilt disease.
Narendra Parwal-307	2001	230	Small, round, stripped, green fruits and have good self life. Planted in single, stake on bamboo at 1.25 x 1.25 m. spacing.
Narendra Parwal-604	2001	200	Medium size, plain light green colour fruits without strips. Planted in single stake system at 1.25 x 1.25 m. spacing.
Narendra Banda-1	2001	350	Digging in 180-195 days, Suitable for chips making. Resistant to Phytophthora blight. Suitable for Zaid season.
Narendra Banda-3	2002	280-300	Digging in 180-210 days. Medium size, soft and tasty.
Pumpkin Narendra Agrim	2001	255	Short vined, very early and small fruited variety. First picking within 55 days in summer. Fruits round and dark green. Suitable for summer season. Tolerant to Yellow Vein Mosaic Virus (YVMV)

Pumpkin Narendra Amrit	2001	330	Medium maturing, first picking within 65 days in summer. Flat rounded fruits with light green mottled colour. Papery skin, thick flesh and small seed cavity. Green as well as mature fruits are good for highly palatable vegetable preparations. Green fruits also suitable for salad and mature fruits for juice and sweet preparation. Tolerant to YVMV.
Narendra Pumpkin Hybrid-1 (Narendra Abhooshan)	2005	600	It is early hybrid, first picking in about 55 days during summer, fruits attractive round, dark green and mottled. It has shown field tolerant against curcumas virus-1
Narendra UPCAR (Pumpkin)	2007	400-500	Smal fruit, dark green strived, fruit skin, field resistant against pumpkin mosaic virus, suitable for rainy season cultivation.
Narendra Sankar Lauki-4 (Bottle gourd)	2001	365	Early hybrid, first picking within 55 days in summer. Fruits are medium long, near cylindrical in shape and light green in colour. Suitable both for summer and rainy seasons.
Narendra Rasmi (Bottle gourd)	2001	410	Bottle shaped fruits. First picking within 65 days. Suitable for cultivation in all the seasons. Resistant to anthracnose during rainy season.
Narendra Shishir (Bottle gourd)	2001	675	Round fruits, first picking within 85-90 days. Suitable for winter season cultivation. Resistant to anthracnose, downy mildew and fruit fly.
Narendra Dharidar (Bottle gourd)	2001	200	Bottle shaped fruits having green strips. First picking within 60 days. Green fruits can be eaten as salad.
NDBG-104 (Bottle gourd)	2002	360	Fruit long cylindrical.
NDBG-132 (Bottle gourd)	2004	450	An early homogenous variety with attractive bottle shaped, slender long fruits; suitable for early sowing.
Narendra Shivani (Bottlegourd)	2007	700-1000	Winter season type variety, sowing time mid July, prolific bearer, fruits very long and slender, suitable for kitchen garden.
Narendra Madhuri (Bottlegourd)	2007	800-1100	Winter season type variety, sowing time mid July, fruits round and palatable cooked vegetable.
Narendra 619 (Bottlegourd)	2009	1100	Suitable for eastern plain zone.
Narendra Barahmasi -1 (Bittergourd)	2007	250	Rainy/winter type variety, fruits available for picking after 60 days of sowing, fruits are long, suitable kitchen garden
NDO-10 (Okra)	2005	75-80 (Rainy season) 40-50 (Summer season)	Suitable for both summer and rainy season, first fruit harvest in 35-40 days in summer & 45-50 days in rainy season. Fruits are 10-15 cm. long, dark green colour with five ridges, resistant to yellow vein mosaic virus.

Narendra Lobia-1 (Cowpea)	1995	100	First picking in 60 days. Long pods, very early in flowering and fruiting. Recommended for UP and Bihar.
Narendra Lobia-2 (NDCP-13)	2005	75-100	Plant bushy type with dark green, long, fleshy pods. Early maturing variety, green pods ready for first harvest in 50 days after sowing. Mature seeds red in colour
Narendra Sakarkand-9 (Sweet Potato)	2001	140-150	Digging in 120-130 days under un-irrigated condition and 260-270 days in irrigated condition. Tuber sweet, soft and easy to cook. Suitable for both kharif and rabi seasons.
Sweet Potato NDSP-10	2002	280-300	Digging in 120-130 days. Medium, red colour tuber with sweet taste. Suitable for all conditions.
Zimikand NDA-5 (Elephant Foot)	2002	600-700	Maturity in 190-200 days. Medium size, tasty and less acid content.
NDA-9 (Elephant Foot)	2006	650-800	Maturity 180-210 days, early variety, testy and less acid content.
Narendra Turmeric-1	2007	300-350	Digging in 200-210 days, has 2-3% essential oil, 5-6% curcumin, 19.08% dry matter & 9.8% oleoresin and moderately resistant to leaf blotch and leaf spot diseases.
E. Horticultural Crops			
Narendra Aonla-4	1987	1 q/plant	Fruits large and smooth, an early maturing variety.
Narendra Aonla-5 (Krishna)	1987	1 q/plant	Plant semi tall; large and triangular fruits, less fibrous, highly astringent. Early maturing and shy bearing.
Narendra Aonla-6	1993	1-1.5 q/plant	Large and bright fruits. Most ideal for preserve making and excellent for processing.
Narendra Aonla-7	1990	1-1.5 q/plant	Fruits medium to large, medium maturity. Resistant to necrosis diseases.
Narendra Aonla -10	1995	1-1.5 q/ha	Very early, fruit flattened, round, medium in size.
Narendra Bael -4	1990	0.70-0.80 q/tree	Fruits oval round, small, fruit quality good.
Narendra Bael -5	1990	70-80 fruits/tree	Fruit size medium, round, fleshy and less seeded.
Narendra Bael -7	1990	0.80-0.90 q/tree	Fruits large in size, fruit quality excellent, moderately seeded.
Narendra Bael -9	1990	60-70 fruits/ tree	Fruits medium to large and oval in shape. More sweet fruits with less seed.
Narendra Bael -17	2004	40-50 fruits/tree	Fruits oblong, big sized, fruit quality excellent, seed content less.
Narendra Bael-16	2006	70-75 fruit/tree	Elliptical round, pulp yellow, Av. weight 1.3 kg, TSS 31%, medium seed and low fibre content.
Narendra Ber selection-1	2004	0.80 q/tree	Fruits oblong to round, quality excellent, big sized.
Narendra Ber selection-2	2004	0.65 q/tree	Fruits oblong, moderate, quality excellent.

F. Medicinal and Aromatic Plants			
Opium poppy Narnedra posta-1 (Kirtiman)	1991	8-10 q/ha seed and 45-50 kg latex/ha	Morphin content 11-12%. Resistant to downy mildew.
G. Fibre and Green Manuring Crops			
Jute Reshma	1995	25-30 q fibre/ha	Shining, long and strong fibre.
Jute-NDC-9102	2008	33-35 q fibre/ha	A capsularis variety, 27.51% superior over control (JRC-212), suitable for water-logged condition.
Jute – NDC-2008	2009	27 q. fibre/ha.	Maturity 160-170 days, suitable for waterlogged areas.
Crotolaria Narendra Sanai-1	2003	Seed 16-20 q & Biomass 300-350 q/ha	Maturity 130-135 days, lusturous black seeded variety, produces more number and weight of root nodules per plant, succulent stem. It adds 60-80 kg N/ha. Suitable for fibre, fuel and seed production. Well suited for normal and partially reclaimed saline-sodic soils.
H. Forage Crop			
Bajra-NDFB-2	2008	Seed 18-20 q, Green biomass 380-425 q/ha & dry matter 110-120 q/ha	Medium maturity, tall and erect plant type, broad dark green leaves, crude protein 8.2% and better quality characters, suitable for salt effected soils.
Oat- NDO –1	2009	500-534 q./ha Green Forage	Resistant to major diseases and pests, suitable for normal and salt affected soils, Crude protein yield 9-10 q/ha

A- All India Co-Ordinated Research Projects (75% ICAR share and 25% State share)

Sl. No	Name of the Project/ Scheme	Name of PI	Year of Start
1.	AICRP on Rice Improvement	Dr. J.L. Dwivedi	1976
2.	AICRP on Deep Water Rice	Dr.S.S. Prasad	1976
3.	AICRP on Jute & Allied Fibers	Dr. R.K. Srivastava	1976
4.	AICRP on Maize Improvement	Dr. B.N. Mishra	1976
5.	AICRP on Cropping System Research	Dr. H.P. Tripathi	1976
6.	National Seed Project (Crops)-Seed Technology Research	Dr.R.D.S.Yadav	1978
7.	National Seed Project- Breeder Seed production	Dr. R.K. Srivastava	1978
8.	AICRP on Water management	Dr. G.R.Singh	1980
9.	AICRP on Medicinal & Aromatic Plants	Dr. O.P. Singh	1980
10.	AICRP on Vegetable Improvement	Dr.S.S. Singh	1980
11.	AICRP on forage Crops Improvement	Dr.D.N.Vishwakarma	1982
12.	AICRP on Oilseeds (Linseed)	Dr. K. Kumar	1982
13.	AICRP on Arid Fruits	Dr. H.K. Singh	1987
14.	AICRP on Potato Improvement	Dr. S.P. Pathak	1987
15.	AICRP on Agro-forestry	Dr. A.K. Saxena	1987
16.	AICRP on Wheat & Barley Improvement	Dr. B.N. Singh	1987
17.	AICRP on Tuber Crops	Dr. P.K. Singh	1987
18.	AICRP on Weed Control	Dr.Jai Dev	1987
19.	AICRP for Dry land Agriculture	Dr.Bhagwan Singh	1987
20.	AICRP on Harvest & Post Harvest	Er. R.P. Tiwari	1988
21.	AICRP on Chickpea	Dr. Ranjeet Singh	2001
22.	AICRP on Pigeonpea	Dr. Ranjeet Singh	2001
23.	AICRP on MULLaRP	Dr. Ranjeet Singh	2001
24.	AICRP on Agro-meteorology	Dr. Padmaker Tripathi	1990
25.	AICRP on Mushroom	Dr. Subodh Pandey	1994
26.	AICRP on Rapeseed & Mustard	Dr. K. Kumar	1994
27.	AICRP on Spices	Dr. Vikrama Pandey	1995
28.	AICRP on Underutilized Crops	Dr. C.B. Yadav	1995
29.	AICRP on Farm Implement and Machinery	Dr. R.C. Tiwari	1996
30.	AICRP on Network Project on Buffalo	Dr. V.K. Singh	2001
31.	AICRP on Honey Bee & Pollinators	Dr. R.P. Singh	2009

B- Scheme 100% Financed by ICAR

1.	Front line demonstration on Wheat	Dr. B.N. Singh	1993
2.	Front line demonstration on Pulses – MULLaRP Crops (Rabi, Kharif & Zaid)	Dr. Ranjeet Singh	1993
3.	Front line demonstration on Oilseed (linseed) Crop- Hyderabad	Dr. K. Kumar	1993
4.	Front line demonstration on Rapeseed mustard	Dr. K. Kumar	1993
5.	Centre for Advance Studies in Plant Physiology	Dr. A.H.Khan	1995
6.	Frontline demonstration on Agril. Machinery and implements	Er. R.P. Tiwari	1998
7.	Front line demonstration Pigeon Pea	Dr. Ranjeet Singh	1999
8.	Front line demonstration on maize	Dr. Prem Kumar	2000
9.	Development of hybrid Pigeon Pea	Dr. Ranjeet Singh	2003
10.	Front line demonstration on Barley	Dr. S.R. Vishwakarma	2003
11.	Multilocational evaluation of germplasm of major crop wheat.	Dr. B.N. Singh	2005
12.	Seed Production in Agriculture Crops & Fisheries (Mega Seed)	Dr. R.D.S. Yadav & Dr. A.P. Rao	2006
13.	Improvement of fibre quality through microbiological, enzymatic and chemical treatment in Jute.	Dr. R.K. Srivastava	2007
14.	Scaling up of water productivity in agriculture for livelihoods through teaching cum demonstration, training of trainers and farmers.	Dr. G.R. Singh	2008
15.	Development and maintenance of rice knowledge management – portal (RKMP)	Dr. J.L. Dwivedi	2009
16.	Multilocation evaluation of Okra Germ plasm	Dr. S.S.Singh	2009
17.	Abiotic stress (water logging)	Dr. B.N. Singh	2010
18.	Conservation Agril. for improvement of productivity of rice-wheat cropping system	Dr. H.P. Tripathi	2010
19.	Frontline demonstration on rice Hyderabad	Dr. J.L. Diwedi	2010
20.	Frontline demonstration on oil seed – Dryland Agriculture	Dr. Bhagwan Singh	2010
21.	Improvement of salt wheat tolerant using molecular approach	Dr. Shambhoo Prasad & Dr. B.N. Singh	2010

C- Scheme 100% financed by UPCAR

1.	Establishment of Leaf tissue culture analysis lab	Dr. S.P. Singh	2008
2.	Front line demonstration for management of mango malformation.	Dr. D.K. Chakarvorti	2008
3.	Development of hybrid rice for major rice growing agro-ecological situations of U.P.	Dr. J.L. Dwivedi	2009
4.	Strengthening of existing tissue culture facilities for production of elite plantlets of banana at large scale.	Dr. K.N. Singh	2008
5.	Establishment of bio-control lab for mass production of bio-agents	Dr. S. Ali	2009
6.	Networking project on identification & development of thermotolerant wheat varieties suitable for different agro-climatic zones of U.P.	Dr. B.N. Singh	2009
7.	Conservation propagation and track development of Sahiwal breed of cattle	Dr. Sushant Srivastava	2010
8.	Development of crop weather yield models for different agro-climatic region of U.P.	Dr. P. Tripathi	2010
9.	Evaluation of Homeopathic medicines in animal health management with special reference to mastitis, alongwith preliminary investigations on other common diseases in the animals of Eastern U.P. and their scientific validation (Sodh Nidhi)	Dr. Satyavrat Singh	2010

D- Plan Projects 100% Financed by State Govt.

1.	Development of Hybrids in Pigeonpea	Dr. Ranjeet Singh	2009
2.	Development of pure lines and hybrid varieties of vegetables crops i.e. tomato and brinjal resistant to biotic and abiotic stresses	Dr. T. Singh	2009
3.	Post Harvest Technology of a few important fruits and vegetables	Dr. Sanjay Pathak	2009
4.	Adoption, development, testing and evaluation and prototype manufacture of farm equipment and machinery for mechanization of Rice Crop in eastern Uttar Pradesh	Er. R.C. Tiwari	2009
5.	Nutritional evaluation of uncommon plant foods consumed in eastern U.P.	Dr. Sadhna Singh	2009

E- Research Projects Financed by Other National and International Agencies

1.	National Centre for medium range weather forecasting agriculture advisory services, (Kumarganj), Govt. of India, Ministry of Earth Science.	Dr. Padmaker Tripathi	1993
2.	National centre for medium range weather forecasting agriculture advisory services, (Bahraich) **Govt. of India**	Dr. P. Tripathi	1998
3.	Improving of drought tolerance in rice through marker assisted selection **(Rockefeller Foundation, Bangkok).**	Dr. J.L. Dwivedi	2001
4.	Consortium for un-favourable rice environment **(CURE) IRRI** project	Dr. A.H. Khan	2003
5.	National Horticulture Mission (Hort./Vegetable Sci.)	Dr. T. Singh	2005
6.	Organizing state level training programme on Jute	Dr. B.N. Mishra	2005
7.	Facilitation centre on medicinal plants. **(Govt. of India MH&FW)**	Dr. O.P. Singh	2007
8.	Bamboo production technology **(Govt. of India, Bamboo Mission)**	Dr. A.K. Maurya	2007
9.	To popularize Mushroom cultivation among rural masses through training and demonstration of mushroom production technology to increase its popularity in rural areas **(DBT Govt. of India)**	Dr. L.P. Awasthi	2007
10.	Development of oil bearing trees (Mahua) **(NOVOD Board)**	Dr. D. Ram	2008
11.	Plantation and development of Jetropha in waste land through efficient management practices **(NOVOD Board)**	Dr. D. Ram	2008
12.	Stress tolerant rice for poor farmers of Africa and South Asia **(BMGF – IRRI)**	Dr. J.L. Dwivedi	2008
13.	Enhancing and stabilizing the productivity of salf-affected areas by incorporating genes for tolerance to abiotic stresses in rice **(BMZ- IRRI)**	Dr. S.P. Singh	2008
14.	Feasibility testing & Prototype manufacturing of improved farm equipments **(NABARD)**	Dr. R.C. Tiwari	2008
15.	Controlling yellow stem borer in rice using cysteine protease inhibitor from seed of jack fruit an alternative to Bt. approach **(DBT)**	Dr. Nawaz Ahmed Khan	2008
16.	Validation of refined IPM modules for the management of *Helicoverpa armigera* in larger areas of Basti district **(CST UP)**	Dr. Samshad Ali	2009
17.	Wheat improvement for water logging, salinity and element toxicities in Australia & India **(ACIAR)**	Dr. B.N. Singh	2009
18.	Management of Banded leaf & sheath blight disease of maize by Integration of cultural & biological means **(CST-UP)**	Dr. R.K. Srivastava	2009
19.	From QTL to variety : Marker assisted breeding of abiotic stress tolerant rice varieties with major QTLs for Drought Submergence & Salt Tolerance. **(Govt. of India DBT)**	Dr. J.L. Dwivedi	2010

F- List of Schemes Financed through State Govt. under RKVY & NFSM Project

1.	Strengthening of quality seed production of field crops in eastern U.P. **(Directorate of Agriculture, U.P.- RKVY)**	Dr. R.K. Pandey	2008
2.	Conservation of superior germplasm through establishment of modernization frozen semen bank for genetic improvement of cattle and buffaloe in eastern U.P. **(RKVY)**	Dr. Sushant Srivastava	2009
3.	Strengthening of University poultry farm for vocational training of rural youth, women and weaker section of the society **(RKVY)**	Dr. P.S. Pramanik	2009
4.	Management of vector borne legume viruses by Boerhavia diffusa glycoprotein **(RKVY)**	Dr. L.P. Awasthi	2009
5.	Genetic improvement and performance recording of buffaloe in eastern U.P. **(RKVY)**	Dr. Sushant Srivastava	2009
6.	Production of supply of mushroom span to farmers **(RKVY)**	Dr. Subodh Pandey	2009
7.	Promoting Swarna sub-1 a submergence tolerant rice variety to Alleviate poverty of flood prone rice farmers of eastern U.P. **(RKVY)**	Dr. R.D.S. Yadav	2009
8.	Integrated management of plaster models of milky mushroom **(RKVY)**	Dr. Subodh Pandey	2009
9.	Foundation/Certified seed production stream-I **(RKVY)**	Dr. R.K. Pandey	2009
10.	Acceleration and dissemination of quality seed production of rice Swarna sub-1 in eastern U.P**.(NFSM)**	Dr. R.D.S. Yadav	2009
11.	To pushup business and cultivation of scented rice (Kala Namak) in eastern U.P. **(NFSM and Naford)**	Dr. R.D.S. Yadav	2009
12.	Development of nutrient management options to enhance survival recovery and yield of submerged Sub-1 varieties.	Dr. A.K. Singh	2009

F - Non - Plan Projects 100% Financed by State Govt.			Remark
1.	Foundation and Breeder Seed Production Unit and Strengthening of Seed Testing Lab	Non- Plan	Govt. is only providing grant for salary. No grant for research work is being provided
2.	Sodh Scheme (Rice , Masodha)	-do-	-do-
3.	Oil Seed Project	-do-	-do-
4.	Pulses Project	-do-	-do-
5.	Research on Vegetable Crops	-do-	-do-
6.	Research on Crop Physiology	-do-	-do-
7.	Directorate of Research (Administration)	-do-	-do-
8.	Directorate of Research (Under NATP, Head Quarter)	-do-	-do-
9.	NARP (Adjusted), Kumarganj, Faizabad	-do-	-do-
10.	NARP (Adjusted), Masodha, Faizabad	-do-	-do-
11.	NARP (Adjusted), Basuli, Mahrajganj	-do-	-do-
12.	NARP Basuli/Sub-Station, Bahraich	-do-	-do-
13.	NARP (Adjusted), Basuli Sub-Station, Ghaghraghat, (Bahraich)	-do-	-do-
14.	NARP (Adjusted), (Tissuhi), Mirzapur	-do-	-do-
15.	Sodh Scheme, Tissuhi (Mirzapur)	-do-	-do-
16.	Flood Rice Research Scheme : Ghaghragaht (Bahraich)	-do-	-do-
17.	NARP (H.Q.), Ghaghraghat (Bahraich)	-do-	-do-
18.	Jute Establishment Scheme : Bahraich	-do-	-do-
19.	Sodh Scheme – Bahraich	-do-	-do-
20.	NARP (Adjusted), Ghazipur	-do-	-do-
21.	NSP – Plant	-do-	-do-
22.	Main Experiment Station (DAES)	-do-	-do-
23.	Strengthening of Research Staff at Ghaghragaht	-do-	-do-
24.	Strengthening of Research Station – (Ghaghraghat)	-do-	-do-
25.	Strengthening of Research Station- (Bahraich)	-do-	-do-
26.	Strengthening of Research Station- (Tissuhi)	-do-	-do-
27.	Farm Scheme (Prakshetra Yojna) – CRS, Bahraich	-do-	-do-
28.	Farm Scheme (Prakshetra Yojna) – ZARS, Barabagh , Ghazipur	-do-	-do-
29.	NSP, Farm	-do-	-do-
30.	Research Farm – (Sodh Prakhsetra), Masodha Unit – I	-do-	-do-
31.	Research Farm – (Sodh Prakhsetra), (Tissuhi)	-do-	-do-
32.	CRS, Masodha – University Strengthening	-do-	-do-
33.	Prakhsetra Yojna , Masodha Unit – II	-do-	-do-
34.	Prakhsetra Yojna , Masodha Unit – III	-do-	-do-
35.	Research Project on Mushroom	-do-	-do-
36.	Research Project Agricultural Economics	-do-	-do-
37.	Strengthening of Central Computer Lab.	-do-	-do-
38.	Regular Scheme – Agricultural University Lab. – Basuli	-do-	-do-
39.	Naya Prakhsetra – (Tissuhi Unit – II)	-do-	-do-
40.	Production and Processing of Fruits in Usar and Wasteland	-do-	-do-