



# Seed Newsletter



Vol:01

Issue:04

October to December, 2022

## Editorial Board

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## Seed Village Scheme (SVS)

In order to promote quality seed for improving production and productivity of agriculture, ICAR- Indian Institute of Seed Science, Mau has implemented Seed Village Scheme (SVS) for development and strengthening of seed infrastructure facilities for production and distribution of quality seeds to the farmers with financial support from Department of Agriculture & Farmers Welfare (DA&FW), Ministry of Agriculture & Farmers Welfare, Government of India, New Delhi.

Name of districts covered	:	Mau, Ballia, Azamgarh and Ghazipur
No. of village covered	:	838 Villages
Seeds distributed	:	3089.9 quintals
No. of farmers benefited	:	7996 farmers

## Crops and varieties distributed in Seed Village Scheme

Wheat	:	DBW 187, DBW 222
Mustard	:	Giriraj
Chickpea	:	RVG 202



## Five days training programme

Five days training programme entitled "Quality Seed Production in Pulses and Vegetables" sponsored by ATMA, Nalanda, Bihar was conducted at the ICAR-Indian Institute of Seed Science, Mau from 14<sup>th</sup> to 18<sup>th</sup> November, 2022. The training programme was designed for 20 participating farmers and aimed to teach them about various aspects of quality seed production in pulses and vegetables.





## Breeder Seed Production

Centre	Crop	Production (in quintals)
BSKKV, Dapoli	Paddy	176.45
	Groundnut	2.00
	Pigeon Pea	0.15
ICAR-DGR, Junagadh	Groundnut	393.10
KAU, RARS, Pattambi	Paddy	21.67
NAU, Navsari	Paddy	36.36
SKRAU, Bikaner	Guar	36
	Mungbean	13
	Mothbean	28.60
	Groundnut	3.00
	Fodder Bajra	2.00

## Quality Seed Production

Centre	Crop	Production (in quintals)
BSKKV, Dapoli	Paddy	3014.39
	Finger millet	19.95
	Pigeon pea	0.50
	Groundnut	43.36
ICAR-DGR, Junagadh	Groundnut	91.66
KAU, RARS, Pattambi	Paddy	387.62
NAU, Navsari	Paddy	2845.18
SKRAU, Bikaner	Guar	503.59
	Mungbean	111.37
	Mothbean	153.77
	Cowpea	3.20
	Groundnut	283.00
	Sesame	0.25
	Cotton	0.25
	Hybrid bajra	0.50
TNAU, Coimbatore	Paddy	2707.20
	Millets	14.96
	Pulses	515.34
	Oilseeds	169.75
	Forage crops	0.48
	Greenmanure	45.36
	Vegetable crops	34.31

## Research Highlights

**Physiological studies and development of priming technologies for enhancing planting value of seed in field crops under optimal and sub-optimal conditions ( Pearl Millet)**

- Standardized hydropriming in pearl millet (10 hrs @ 30°C followed by air-drying for 16 hrs).

**Standardization of germination testing protocol in flower crops (Rose)**

- Regarding the collaborative project with ICAR-DFR, Pune on standardization of germination protocol in Rose Seeds; it was found that the thickness of the seed coat is one of the most detrimental factors and seed coat Scanning Electron Microscopy (SEM) studies revealed thickness ranged from 770 to 1052 microns and is acting as an impediment in the germination process.

**Basic and strategic research on seed quality improvement**

- Forty-two QTLs were mapped on genomic regions governing seed vigour in rice (*Oryza sativa* L.)

**Molecular mapping of genomic regions governing seed vigour in rice (*Oryza sativa* L.)**

- Rice seed vigour QTLs identified in Recombinant Inbred Line population were validated on a set of 60 rice germplasm.

## SCSP/TSP

### SCSP

- A training programme on “Quality assessment for seed production in Boro rice” was organised by AAU, Jorhat at Namtemera, Golaghat on 9<sup>th</sup> December, 2022, in which 46 farmers were participated.
- Distribution of farm implements viz., Crow Bar, Hand Hoe, Shovel, Sickle and Iron Bond to 100 scheduled cast farmers of Tamil Nadu Kallakurichi Kalvarayan Hills sub district was organized by PAJANCOA & RI, Karaikal.





- Under SCSP scheme ICAR-IISS, Mau has supplied quality seeds of chickpea (55.10q to 1102 farmers), mustard (5.4q to 1008 farmers), field pea (5.00q to 100 farmers), lentil (3.00q to 150 farmers), wheat (1302q to 6510 farmers) to scheduled caste farmers for demonstration purpose in Mau and Ghazipur districts of Uttar Pradesh.

of Seed Production Technique” was organised on 23.11.2022, 26.11.2022, 03.12.2022 and 12.12.2023 by AU, Kota in which about 300 farmers were participated.

- The 13.20 q of wheat; 3.20 q of chickpea 0.60 q of fieldpea; 0.65 of lentil; 0.41 q of linseed & 0.20 q of mustard, breeder seed were distributed by IGKV, Raipur to 61 tribal farmers during Rabi 2022-23.

- One training programme was conducted on “Poverty Alleviation through Quality Seed production & disease management of Wheat” by SKUAST Kashmir, Srinagar in Gurez district in which 240 farmers benefitted.

- About 40 quintals of wheat seed variety Shalimar Wheat-2 were distributed to tribals farmers of Bandipora district by SKUAST Kashmir, Srinagar.

- One training programme was conducted on ‘Interventions on chickpea seed production’ on dated 28.10.2022 at Chilati circle by PDKV, Akola.

- One day tribal farmers training programme on 'Improved Cultivation practices and Seed production Techniques in pulses and cereals' were conducted on 22.11.2022, 13.12.2022, 20.12.2022 and 29.12.2022 in different villages of Amravati district by PDKV, Akola.

- Demonstration of Wheat variety GW-496 was organized for 50 tribal farmers of Danta, Palanpur and Vadgamtalukas of Banaskantha district by SDAU, Sardarkrushinagar.

- SKUAST Kashmir, Shalimar organized Mega Participatory Seed Production Programme on 08.10.2022 under QSP at Pulwama district in which 11.50 quintals of Oats seed were distributed among 104 farmers.

- Training programme on “Seed Production Technology of Paddy, Pulses and Vegetables” conducted at Vanai and Govane village, Dist-Palghar by BSKKV, Dapoli in which 270 farmers



- Seed distribution cum training programme was organized by ICAR-IISS, Mau at Krishi Vigyan Kendra, Varanasi on 30<sup>th</sup> November, 2022 in which 20 quintals of wheat seeds were distributed among 100 farmers under SCSP scheme.



### TSP

- About 8.00 quintal coriander quality seed variety RKD 18 with *Trichoderma viridi* biopesticides was distributed among 80 tribals farmers of Kishanganj block of Baran district by Agriculture University, Kota on 16.10.2022.

- Four farmers training programme on “Modernization





were participated.

- Inputs distribution cum training programme was organized at Buddinni village of Raichur district under Tribal Sub Plan on 31.10.2022 by UAS, Raichur.



## Publications

### Research Papers

- Asati R., Tripathi M.K., Tiwari S., Yadav R.K., Tripathi N. (2022). Molecular breeding and drought tolerance in chickpea. *Life*. 12, 1846. RVSKVV, Gwalior.
- Devi O.R., Verma O., Halder R., Pandey S.T., P. Chaturvedi (2022). Effect of seed priming with liquid organic on germination, seedling development and enzymatic activity of wheat (*Triticum aestivum* L.). *Environment and Ecology*. 40(3C): 1720-1725. GBPUAT, Pantnagar.
- Dhiman K.C., Thakur A., Kanwar R., Kapila R.K. (2022). Use of different seed priming tools to enhance the planting value and seed quality in barley. *Journal of Cereal Research*. 14 (3): 331-338. CSKHPKV, Palampur.
- Jyothi G.B.N., Mohanty S., Das S., Lenka D., Mohanty T.R., Beura J.K., Moharana A. (2022). Enhancement of rice pollen viability under heat stress by osmoprotectant foliar spray. *Biological Forum An International Journal*, 14(4): 343-347. OUAT, Bhubaneswar.
- L.J. Desai, K.M. Patel, P.K. Patel, V.K. Patel. (2022). Productivity, profitability and soil sustainability of small-holding farming system through suitable cropping systems. *Indian Journal of Agronomy*. 67 (3): 312-315. SDAU, Sardarkrushinagar.
- Mallick S., Mohanty S., Das S., Beura J.K., Jyothi G.B.N. (2022). Effect of polymer coating on seed quality during storage of groundnut seeds. *The Pharma Innovation Journal*. 11(11): 1396-1401. OUAT, Bhubaneswar.
- Manuswamy M.R, Shakuntala N.M., Basavegowda, Doddagoudar S.R., Udaykumar Nidoni, Sharanagouda Hiregoudar, Beladhadi R.V. (2022). Effect of biodegradable packaging materials combination on physiological quality of chickpea seeds during storage. *Scientist*. 1(2):481-490. UAS, Raichur.
- Manuswamy M.R., N.M. Shakuntala, Vijay Kumar K., S.R. Doddagoudar, M. G. Patil (2022). Effect of antioxidants on longevity of chilli (*Capsicum annum* L.) Seeds through seed infusion treatment. *Scientist*. 1(2): 69-77. UAS, Raichur.
- Moharana A., Mohanty S., Lenka D., Nayak R.K., Jena S.N., Satapathy M., Jyothi G.B.N. (2022). Effect of Seed Priming and Coating through Micronutrient Application on Growth and Seed Yield of Groundnut (*Arachis hypogaea* L.). *International Journal of Plant & Soil Science*, 34(24): 462-480. OUAT, Bhubaneswar.
- N.V. Nisarata and K.M. Patel (2022). Integrated nutrient management in coriander (*Coriandrum sativum*). *Indian Journal of Agronomy*, 67(3): 332-335. SDAU, Sardarkrushinagar.
- Senapati B., Sahu G.S., Tripathy P., Das S., Mohanty S., Sahu K. (2022). Effect of nitrogen, phosphorous and boron on growth and seed yield of Dolichos bean (*Lablab purpureus* L.) var. ArkaAmogh. *The Pharma Innovation Journal*. 11(11):2249-2252. OUAT, Bhubaneswar.





Bhubaneswar.

- Sheezan Rasool, Reetika Mahajan, Muslima Nazir, Kaisar Ahmad Bhat, Asif Bashir Shikari, GowharAli, M. Ashraf Bhat, Sajad Majeed Zargar (2022). SSR and GBS based GWAS study for identification of QTLs associated with nutritional elemental in common bean (*Phaseolus vulgaris* L.). *Scientia Horticulturae*. 306, 111470. SKUAST Kashmir, Srinagar.
- Singh P., Tiwari S., Parihar P., Singh R., Tripathi N., Pandya R.K., Tripathi M.K. (2022). A New Method for Genomic DNA Extraction from Sclerotia of *Sclerotium rolfsii* Inciting Collar Rot of Lentil for Genomic Investigations. *Legume Research*. LR 5022: 1-5. RVSKVV, Gwalior.
- Tasmeen J. Parihar, Mohd. Yaseen Sofi, Rovidha S. Rasool, Sehla Khursheed, Zahoor A. Bhat, Khursheed Hussain, Bhagyashree Dhekale, Asma S. Hakak, Mehraj D. Shah, F.A. Nehvi, M. Ashraf Bhat, M.N. Khan, Khalid Z. Masoodi (2022). *Fusarium chlamydosporum*, causing wilt disease of chili (*Capsicum annum* L.) and brinjal (*Solanum melongena* L.) in Northern Himalayas: a first report. *Scientific Reports*. 12: 20392. SKUAST Kashmir, Srinagar.
- Tripathi R., Vishunavat K., Tewari R., Kumar S., Minkina T., De Corato U., Keswani C. (2022). Defense Inducers Mediated Mitigation of Bacterial Canker in Tomato through Alteration in Oxidative Stress Markers. *Microorganisms*, 10(11): 2160. GBPUAT, Pantnagar.
- Verma R., Verma O., Subhash Chandra, Shankhdhar S.C., Gautam P. (2022). Yield performance of normal and late sown wheat in response to seed priming and foliar applied nutrients. *Journal of Plant Nutrition*. 46(6): 852-866. GBPUAT, Pantnagar.
- Yadav P.K., Singh A.K., Tripathi M.K., Tiwari S., Yadav S.K., Tripathi N. (2022). Morpho-Physiological and Molecular Characterization of Maize (*Zea Mays* L.) Genotypes for Drought

Tolerance. *European Journal of Applied Sciences*, 10(6). 65-87. RVSKVV, Gwalior.

### Book Chapter

- Marndi B.C., Anilkumar C., Azharudheen T.P.M., Sah R.P., Moharana D. (2022). Cataloguing of rice varieties of NRRI suitable for different abiotic stress-prone ecologies. *Climate Resilient Technologies for Rice based Production Systems in Eastern India*. ICAR-National Rice Research Institute, Cuttack, Odisha, India, pp 59-71.
- Sharma S., Choudhary D.R., Katoch V., Kumar A., Choudhary A., Harish B.M., Kaur H., Mehta S. (2022). Toxic effects of essential metals on plants: From damage to adaptation responses. *In: Plants and Their Interaction to Environmental Pollution-Damage Detection, Adaptation, Tolerance, Physiological and Molecular Responses* pp. 195-205. CSKHPKV, Palampur.

### Popular Article

- Gehu Beej Utpadan-Fasal Prabandhan Aivam Savdhaniya (2022). Publication No. NSP-SKRAU-BKN/2022/01. SKRAU, Bikaner.
- Jao Beej Utpadan-Fasal Prabandhan Aivam Savdhaniya (2022). Publication No. NSP-SKRAU-BKN/2022/02. SKRAU, Bikaner.

## Awards

Dr. Kunjal M. Patel, Assistant Professor, Seed Tech, SDAU has won the second runner up award for oral presentation in the National Conference on Land Laws and Land planning during 14-15 October, 2022 at GNLU, Gandhinagar.



Dr. M Ashraf Bhat and team of SKUAST, Kashmir received Acheiver of Year (2022) Award for Development of two high yielding Vars in Soybean and Cowpea.



Dr. Aflaq Hamid and Dr. Gowhar Ali of SKUAST, Kashmir received Acheiver of Year (2022) Award for Bean Virus Detection Protocol.



kheti' on 31.10.2022 which was broadcasted on 02.11.2022.

## Others

## Special Lecture Delivered

- Dr. G. K. Lande, ASRO, Seed Entomology, PDKV, Akola delivered lecture on Gram insect pests management, survey and surveillance of the insect pests under ATMA, State Agril. Department extension at village Adoshi Khodshi, Taluka Balapur under the Mahila Sheti Shala and visited the field of Lime at Nimkarda on 09.12.2022.
- Dr. Rajesh Kanwar CSKHPKV, Palampur delivered a radio talk on Kisan Vani All India Radio Dharamshala on the topic 'Matar fasal ki unnat aur vaigyanic vidhi se

- Memorandum of Understanding (MoU) signed on 23.12.2022 between Swami Keshwanand Rajasthan Agricultural University (SKRAU), Bikaner and ICAR-Indian Institute of Wheat and Barley Research (IIWBR), Karnal for fostering breeding rights to SKRAU, Bikaner for newly developed varieties of wheat and barley of ICAR-IIWBR, Karnal.
- Memorandum of Understanding (MoU) signed on 23.12.2022 between Swami Keshwanand Rajasthan Agricultural University (SKRAU), Bikaner and ICAR-Indian Institute of Wheat and Barley Research (IIWBR), Karnal for academic collaboration.

## Extension Activities

S.N.	Topic	Date	Place	No. of Participants (Approx.)
1.	Post-harvest management of soybean seed and management of insect pests in storage and godown cleanliness	04.10.2022	Dr. PDKV, Akola	15
2.	Quality seed production in Oilseeds and Oats for poverty alleviation of resource poor farmers	10.10.2022	Pulwama district by SKUAST Kashmir, Srinagar	104
3.	Training on Seed processing and seed treatment	13.10.2022	Srinagar district by SKUAST Kashmir, Srinagar	55
4.	Varietal Characterization & Seed Production Technology in Pearl Millet	15.10.2022	JAU, Junagadh	29
5.	Training cum exposure visit	17.10.2022	AAU, Jorhat	25
6.	One day kishan Goshti with collobration of RRS, AAU, Anand	18.10.2022.	SDAU, Sardarkrushinagar	25



## Extension Activities

S.N.	Topic	Date	Place	No. of Participants (Approx.)
7.	Entrepreneurship development Programme in quality seed production and seed processing	27.10.2022	Srinagar district by SKUAST Kashmir, Srinagar	70
8.	Field day on Seed Production Techniques of Paddy	29.10.2022	UAS, GKVK, Bengaluru	132
9.	Seed Production Technology in Paddy & Pulses	30.10.2022	BSKKV, Dapoli	52
10.	Entrepreneurship development Programme in quality seed production and seed processing under skill development programme	31.10.2022	Srinagar district by SKUAST Kashmir, Srinagar	70
11.	Distribution of inputs during one day farmers training programme on “Scientific method for cultivation of Rabi vegetables”	01.11.2022	Charhazar, Manipur by CAU, Imphal	50
12.	Think Tank - Brainstorming session on Exploring Researchable areas in Seed Science and Technology	02.11.2022	Seed Centre, TNAU, Coimbatore	75
13.	Krishi Mela of UAS, Bangalore	03.11.2022 to 06.11.2022	UAS, GKVK, Bengaluru	>10 Lakhs
14.	World Soil Day	05.12.2022	ICAR-IISS, Mau	60
15.	Quality seed production and seed processing in cereal crops	06.12.2022	Srinagar district by SKUAST Kashmir, Srinagar	40
16.	Field day on Seed Production Techniques of Redgram	10.12.2022	UAS, GKVK, Bengaluru	102
17.	Seed Production Technology in Agriculture Crops	10.12.2022	Oinamlong, Manipur by CAU, Imphal	38
18.	Farmer Training: Modernization of Seed Production Technique	19.12.2022	Ratadia, Anta by AU, Kota	80
19.	Quality seed production and seed processing in cereal crops	20.12.2022	Srinagar district by SKUAST Kashmir, Srinagar	60
20.	Quality Seed production in Rice	21.12.2022	Alabol, Jagatsinghpur by NRRI, Cuttack	150
21.	Varietal Characterization & Seed Production Technology in Pearl Millet	23.12.2022	JAU, Junagadh	38
22.	Seed Production in Wheat and Barley Under Climate Change Scenario of Arid Zone	23.12.2022.	SKRAU, Bikaner	173



## High yielding seeds of oats, mustard distributed among farmers in Pampore, Tral

**By A. J. MAMUN**

A day long Seed Distribution programme was organised by National Seed Project, SKUAST Kashmir, Shalimar in collaboration with Krishi Vigyan Kendra Malangpora Patalbagh held at Organic village Patalbagh Pampore and Charadrigram area of south Kashmir's Poonam district. SKUAST Kashmir under its National Seed Project organised an awareness cum seed distribution programme at Patalbagh village of Pampore and Charadrigram village of Tral.

During the day long programme National Seed Project under SKUAST Kashmir distributed high yielding seeds for oats and oil seed among variety among farmers in the area. The seeds were from two newly released varieties by SKUAST Kashmir, officials told Kashmir Reader.

Scientist, Head KVK Malangpora Poonam Praveen Ahmad Mangoo Assistant Professor Research SKUAST-K, Prof Nazir Ahmad, Assistant Professor Pro Co-ordinator, Kisan Advisory Board Ahmad, Kishan Ahmad IAS present member Jirshad Ahmad IAS present member on the occasion. Besides progressive farmers of the area also present during

the programme. The Patalbagh village in Pampore area Poonam district has been covered under national seed project. "We prepare new varieties of seed as per and it is the dream of our 'K' to take these seeds to farmers," Assistant Professor NSP Pro Co-ordinator Ahmad told Kashmir Reader, adding that the results of SRI paddy were already encouraging.

The farmers from the village approached us for high varieties of oilseed and oats. "All hectares of land have been put under these new varieties on

demonstration beds to assess its yield so that others farmers also adopt these," he said.

The programme is held under SKUAST-K's National Seed Project and KVK Malangpora was also here. We distributed two high yielding varieties, Shalimar Sarason 2 and Shalimar 1 among farmers, the aim is that the technology of SKUAST should be disseminated at grass roots level and the farmer should get maximum benefit," Assistant Professor Nazir Ahmad told Kashmir Reader.



## 40 qtls of quality wheat seed distributed, farmer-scientist interactions held

**ACRIP, SKUAST Ktr's Gurez visit**

Handspora, New R. All India Co-ordinated Research Project (ICAR) Seed, Storage Centre, in collaboration with Mountain Agriculture Research and Extension included Training and Extension in blocks of Gurez and Tral. The first programme was conducted in Gurez and Tral, where 20 qtls of wheat seed were distributed among the farmers and a training programme was conducted in production of wheat crop.

During the second day, seed distribution cum training programme was organized in village handspora of Block Tral and 40 qtls of wheat seed was also distributed there and a good number of farmers participated in both the programmes.

On both the occasions, Prof M Ahmad IAS, Block Officer Seeds of production technology of wheat and other crops were generated and distributed to the farmers for increasing production and income.

Local production from handspora and various problems arising due to



climate change.

Prof M Ahmad IAS, Block Officer Seeds of production technology of wheat and other crops were generated and distributed to the farmers for increasing production and income.

Local production from handspora and various problems arising due to

about local potato and wheat to register local land races with Farmers Rights Act, New Delhi under the supervision of Prof M Ahmad IAS, Block Officer Seeds of production technology of wheat and other crops were generated and distributed to the farmers for increasing production and income.

Local production from handspora and various problems arising due to

title grounds to get maximum profit from limited land. He spoke by the training programme held in handspora. He also presented a training programme of Seed Project with ACRIP on in Gurez.

On the occasion, Dr. Gurez in Tral area of Kashmir from last four years. The local representatives of both the blocks received a good number of quality seed under TSP scheme.

During the years 2020-21 and 2021-22, the same wheat seed programme was organized in handspora, Malangpora, Gurez and Block Tral and village of Block Tral and village of handspora in Poonam.

Local production from handspora and various problems arising due to