



# IAUA NEWS

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### 47<sup>th</sup> Annual Convention of Vice Chancellors of IAUA

The 47<sup>th</sup> Annual Convention of Vice Chancellors of member universities of Indian Agricultural Universities Association (IAUA) was organized by Guru Angad Dev Veterinary and Animal Science University (GADVASU) at main campus, Ludhiana from 17-19 March 2024. The theme of the convention was *Food & Nutritional Security and Farmer's Welfare: Vision India 2047 and Beyond*. The Vice Chancellors, Deans and Directors of about 35 Agricultural Universities from all over India participated in the convention. The Chief Guest of the inaugural session of this three-day programme was Padma Bhushan awardee, former Secretary DARE & DG, ICAR, and Chairperson, TAAS, Dr R. S. Paroda. He delivered inaugural address on *Ensuring Food and National Security and Farmers' Welfare-Vision India 2047*. Dr Paroda said that there is a dire need for agricultural universities in India to provide comprehensive solutions to the problems of farmers. Dr Paroda explained the importance of the R&D and future research needs in the agricultural sector in details. The Guest of Honour of the programme, Food Prize Laureate, Dr Gurudev Singh Khush, in his address emphasized that success of organization depends on the leader of organization. He also spoke on the selection criteria and qualities of a good leader. The Guest of Honour, Dr R. C. Agrawal, DDG (Agril. Education), Indian Council of Agricultural Research, New Delhi, spoke about the achieving excellence in Indian agricultural universities, and how to create such a system that directly contributes to the transformation of the country into a global knowledge superpower. Dr Inderjeet Singh, Vice Chancellor, GADVASU while welcoming all the dignitaries in the convention emphasized on the need of consultation on this subject to strengthen the current agricultural research and education system of the country. He also emphasized on the provision of appropriate financial support to the agricultural universities.

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Dr Inderjeet Singh, VC, GADVASU Welcoming the Chief Guest Dr R. S. Paroda



Dr R. S. Paroda, Chief Guest delivering Inaugural Address

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During the three-day convention, six technical sessions were conducted where intensive discussions were held on various issues concerning Indian Agriculture, Horticulture, Animal Husbandry, Fishery and Dairy Sectors w.r.t. food security, climate change and farmers' welfare to develop a broad road map for Vision 2047 and beyond. The topics of discussions during sessions were –

- Human Resource and Infrastructure
- Climate Smart Food Systems
- Farmers-Entrepreneurs-Scientists Interface
- Biodiversity and Natural Resources Conservation to face Climate Change
- Towards Zero Waste
- Agricultural Extension: Where do ICAR and SAUs fit?

The keynote speakers and their topics in different sessions were: Padma Shri Awardee Dr B. S. Dhillon, former Vice Chancellor, PAU, Ludhiana (Food Grains); Dr Volker Gerdts, Executive Director and CEO, Vaccine and Infectious Disease Organization (VIDO), University of Saskatchewan, Canada (Creating Centres of Excellence in Agriculture and Allied Sciences); Dr Tarun Shridhar, former Secretary, Ministry of Fisheries, Animal Husbandry and Dairying (Livestock, Poultry and Fisheries); Dr Baljit Singh, Vice President-Research, University of Saskatchewan, Canada (One Planet, One Health and One Future); Dr S. K. Malhotra, Vice Chancellor, MPHU, Karnal (Micro Irrigation Advancements for Higher Water Use Efficiency), and Dr A. S. Dhatt, Director Research, PAU, Ludhiana (Horticultural Crops).

The VI technical session of the convention was organized in collaboration with Khalsa College of Veterinary and Animal Sciences, Amritsar. The keynote speaker of the session Dr H. K. Verma, Principal, Khalsa College spoke on *Agricultural Extension: Where do ICAR and SAUs Fit*. During the Convention the delegates also got the opportunity to visit various facilities at GADVASU, Ludhiana; PAU, Ludhiana; and Khalsa College, Amritsar.

One session- Farmers-Entrepreneurs-Scientists Interface- was dedicated to farmers wherein progressive farmers shared their experiences on dairy farming, horticulture, organic farming, etc. Insightful interaction was held between farmers and Vice Chancellors/Scientists on various emerging issues related to the agriculture sector.

The valedictory cum plenary session of the conventions was conducted on 2<sup>nd</sup> day where recommendations of different technical sessions were presented. During valedictory session IAUA-membership certificates were also awarded to the member universities.

The Annual General Body Meeting 2023 (AGBM 2023) of Indian Agricultural Universities Association (IAUA) was also conducted on 17 March 2024 at GADVASU, Ludhiana during the Convention. Dr Rameshwar Singh, Vice Chancellor, BASU, Patna and President, IAUA, chaired the meeting. Dr N. H. Kelawala, Secretary General, IAUA; Dr A. K. Karnatak and Dr M. S. Chauhan, Members, Executive Committee of IAUA were present in the AGBM.

At the outset, Dr Rameshwar Singh, President, IAUA welcomed all in the Annual General Body Meeting of 2023 and thanked Dr Inderjeet Singh, Vice Chancellor, GADVASU, Ludhiana for hosting the 47<sup>th</sup> Vice Chancellors' Convention. He also thanked all the participating Vice Chancellors their representatives for attending the programme. In his initial remarks he appreciated the activities carried out by the IAUA and member universities. Later, the listed agenda items were discussed and decisions were taken on these.



## IAUA Awards for Outstanding Ph. D. Thesis Research for the Year 2023

The IAUA, from the year 2023, started awards for Ph.D. Thesis Research in four categories one in each (1. Agricultural Sciences including Agriculture Engineering, 2. Horticulture Science including Forestry, 3. Veterinary and Animal Sciences, and 4. Dairy and Fisheries Sciences) to recognize outstanding original research done by Ph.D. student, to provide incentive for enhancing the quality of Ph.D. Thesis Research, and to promote high quality Ph.D. thesis research in emerging priority areas. The award carries ₹ 50,000 (Rupees Fifty Thousand) in each, a certificate and a plaque. The maiden awards were given during 47<sup>th</sup> Vice Chancellors Convention of IAUA held at GADVASU, Ludhiana during 17-19 March. A brief description of awardees (2023) and their Ph.D. Thesis research work is given below category wise:

### 1. Agricultural Sciences including Agriculture Engineering (Jointly awarded to Dr Ragul S. and Dr Deepranjan Sarkar)

Dr Ragul S, Tamil Nadu Agricultural University, Coimbatore was awarded IAUA Award for Outstanding Ph.D. Thesis Research in Agricultural Sciences including Agriculture Engineering category, Agricultural Sciences (Genetics and Plant Breeding) for his Ph.D. Thesis 'Genetic Analysis on Bruchine Resistance in Blackgram [*Vigna mungo* (L.) Hepper]'. He did his doctoral research under supervision of Dr N. Manivannan, Professor (PBG), Centre of Excellence in Molecular Breeding, Centre for Plant Breeding and Genetics, TNAU, Coimbatore, Tamil Nadu, India.



Dr Ragul S

Dr Ragul carried out screening for bruchid resistance and identified TU 68 as resistant donor in blackgram. GC-MS analysis identified active biochemical compounds with insecticidal activity in TU 68. Non additive gene action for bruchid resistance traits was identified in the generation mean analysis. Association studies identified that development time, total number of adult emergence, index of susceptibility, and seed damage were reliable selection indices for the seed weight loss in the bruchid resistance programme. Quantitative trait loci were identified for bruchid and mungbean yellow mosaic virus disease resistance and validated in two mapping populations. Complementary and digenic duplicate gene action were identified for bruchid resistance traits. Digenic inhibitory gene action for MYMV disease resistance was identified. Six and nine promising lines with bruchid and MYMV disease resistance were identified in marker-assisted selection and marker-assisted backcross, respectively. Introgressed lines had 64.8-72.4 % recurrent parent genome recovery with high yield.

Dr Deepranjan Sarkar, Institute of Agricultural Sciences, Banaras Hindu University, Varanasi was awarded IAUA Award for Outstanding Ph.D. Thesis Research in Agricultural Sciences including Agriculture Engineering category, Agricultural Sciences (Soil Science and Agricultural Chemistry) for his Ph.D. Thesis 'Integration of Seedling Bio-Priming and Mineral NPK Fertilization on Nutrient Use Efficiency and Nutritional Quality of Red Cabbage [*Brassica Oleracea* L. Var. Capitata L. F. *Rubra* (L.) Thell] in Soils of Middle Gangetic Plains'. He did his Ph.D. Thesis research under supervision of Dr Amitava Rakshit, Associate Professor, Department of Soil Science and Agricultural



Dr Deepranjan Sarkar

Chemistry, Institute of Agricultural Sciences, Banaras Hindu University, Varanasi, Uttar Pradesh, India.

Dr Sarkar carried out comprehensive assessment of bio-priming technology (considering the United Nations Sustainable Development Goals) under integrated nutrient management practice on nutritional quality, resource use efficiency (nutrient, energy), productivity, economics, and soil health of red cabbage systems in the Middle Gangetic Plains of India. He concluded that the priming of red cabbage with compatible rhizospheric strains augmented the crop performance. However, the dual consortium of microbial agents along with 75% recommended dose of fertilizers resulted in a better proliferation of beneficial mutualistic microbes while forming a stable community structure and reducing unnecessary competition like in triple inoculation. The compatible microbes substantially resulted in higher crop yield along with improved nutrient composition by maintaining the soil quality. Although the application of triple species consortium improved carbon mineralization in laboratory conditions, the positive effects lowered down in field conditions. Thus, screening suitable consortium (especially, indigenous strains) and framing suitable policies (mass production) for the farming community in priming-based agroecosystems will help in better management of farm resources.

## 2. Horticulture Science including Forestry

Dr Neha Verma, Punjab Agricultural University, Ludhiana was awarded IAUA Award for Outstanding Ph.D. Thesis Research in Horticulture Science including Forestry category, Horticultural Science (Vegetable Science) for her Ph.D. Thesis research work on 'Inheritance and Molecular Mapping of Yellow Vein Mosaic Virus Disease (YVMVD) Resistance Gene (s) in Pumpkin (*Cucurbita moschata* Duch. Ex. Poir)'. She did her Ph.D. research under supervision of Dr Ajmer Singh Dhatt, Director of Research, Punjab Agricultural University, Ludhiana, Punjab, India.



Dr Neha Verma

Dr Verma's significant achievement is the identification of first novel resistance source with digenic recessive gene inheritance and closely linked KASP marker to resistant loci, which holds immense potential in future marker-assisted breeding of pumpkin. These research findings represent pioneering achievements in the country and have been published in high impactful journals. Her academic and research excellence was also acknowledged with the DST-INSPIRE fellowship and young researcher award.

## 3. Dairy and Fisheries Sciences

Dr Ravi Prakash, ICAR-National Dairy Research Institute, Karnal was awarded IAUA Outstanding Ph.D. Thesis Award in Dairy and Fisheries Sciences category, Dairy Science (Dairy Engineering) for his Ph.D. Thesis work on 'Design and Development of Phase Change Material based Milking cum Cooling Pail'. He did his Ph.D. research under the supervision of Dr Menon Rekha Ravindra, Principal Scientist, Dairy Engineering, NDRI, Karnal, Haryana, India.



Dr Ravi Prakash

A nano-particle enhanced phase change material based rechargeable, handy and portable milking cum cooling pail for maintaining cold-chain from the milk production points in the villages was developed by Dr Ravi Prakash. The lab prototype tested at Livestock Research Centre of SRS, ICAR-National Dairy Research Institute,

Bengaluru, exhibited the chilling of 5-6L of raw milk from 37°C to below 10°C in around 30-40 minutes. The developed pail maintained the chilled milk temperature for at least four hours when exposed to an environmental temperature of 40°C. The unit is intended to extend its utility in the rural and remote locations in unorganized sector of the developing nations to preserve original quality of raw milk as harvested. The anticipated benefits include augmenting of the overall revenue potential out of dairy business by reducing spoilage, minimizing recalls, improving shelf-life of milk products, and thereby, assisting in greater demand in the domestic and international markets.

#### 4. Veterinary and Animal Sciences

Dr Ambreen Hamadani, Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir, Srinagar was selected for IAUA Outstanding Ph.D. Thesis research award in the category Veterinary and Animal Sciences, Animal Science (Animal Genetics & Breeding) for her Ph.D. Thesis 'Exploration of Artificial Intelligence for the Prediction of Genetic Merit in Sheep'. She did her Ph.D. Research under the supervision of Prof. Nazir Ahmad Ganai, Vice Chancellor, SKUAST-K, Srinagar.



Dr Ambreen Hamadani

Increasing population and diminishing resources are widening the demand-supply gap for animal protein and putting tremendous pressure on our existing production systems. This calls for the exploration of state-of-the-art techniques in animal sciences. Keeping this in view, Dr Ambreen evaluated 13 and 14 machine learning (ML) algorithms for breeding value and bodyweight predictions, respectively, and to develop deployable models for the same. Data spanning 52 years from the University farm were used. Various factor effects for heritability and breeding values (BV) estimations were also compared. The top three algorithms for bodyweight prediction were multivariate adaptive regression splines followed by Bayesian ridge regression and ridge regression with correlations between labels and predicted values of 99.3, 99.2 and 99.1, respectively. For BV predictions, random forests, gradient boosting, and XGBoost with correlations of 91.7, 91.5 and 91.5, respectively, performed best. Factor comparison revealed the importance of selecting the most appropriate model for heritability estimations or BV predictions. It is concluded that ML techniques can perform predictions with high accuracies and can be viable alternatives to conventional strategies for BV and performance prediction.



Dr Neha Verma, PAU, Ludhiana Receiving the IAUA Award for Outstanding Ph. D. Thesis Research



## NEW TECHNOLOGIES

### A. CROP and HORTICULTURE SCIENCES

The Agricultural Universities made earnest efforts to develop new technologies in Crop and Horticulture Sciences, which included varieties/hybrids; machines and equipment; products and processing; and package of practices as discussed here.

#### VARIETIES/HYBRIDS

##### Agriculture University (AU), Kota

##### Chick pea

##### Kota Desi Chana 2 (RKGM 20-1)

- Medium tall plants, erect to semi erect growth habit, less lodging, suitable for mechanical harvesting.
- Average yield-2,072 kg/ha; protein-8.77%.
- Resistant to moderately resistant to wilt, dry root rot, collar rot and stunt diseases.
- Average maturity of 94-96 days across different locations of South Zone.
- Single pink flowers and medium bold seed (24.73 g/100 seed weight)
- A desi chickpea variety for SZ-South Zone (Andhra Pradesh, Karnataka) suitable for cultivation in irrigated conditions during *rabi*.



Field view of chickpea variety RKGM 20-1



Pods of chickpea variety RKGM 20-1



Seeds of chickpea variety RKGM 20-1

##### Kota Desi Chana 3 (RKGM 20-2)

- Medium tall plants, erect to semi erect growth habit, less lodging, suitable for mechanical harvesting.
- Average yield- 1,557 kg/ha; protein-20.25%; yield potential-2.5 tons/ha.
- Resistant or moderately resistant to wilt, dry root rot, collar rot and stunt diseases.
- Average maturity of 126-132 days across different locations of NEPZ during *rabi*.
- Single pink flowers, and pods light brown, angular, rough, medium bold seed (26.43g/100 seed weight)
- A desi chickpea variety for NEPZ-North Eastern Plain Zone (Assam, Bihar, Jharkhand, West Bengal) suitable for cultivation in irrigated conditions during *rabi*.



Field view of chickpea variety RKGM 20-2



RKGM 20-2 during maturity



Seeds of chickpea variety RKGM 20-2

**Blackgram (Urd)**

**Kota Urd 6 (KPU 18-1)**

- Released and notified for North Eastern Plain Zone.
- Semi-erect plant habit, stem green with purple splashes, short peduncle, large attractive seed.
- Average seed yield 14 q/ha.
- Resistant to urdbean leaf crinckle virus (ULCV) and Anthracnose, and moderately resistant to MYMV, CLS, LCV and powdery mildew.
- It matures in 75-78 days.



Kota Urd 6 (KPU 18-1)

**Jawaharlal Nehru Krishi Vishwa Vidyalaya (JNKVV), Jabalpur**

**Soybean**

**JS 22-12**

- Suitable for low to high rainfall conditions, early withdrawal of monsoon and medium to heavy soils of central zone (Madhya Pradesh, Vidarbha and Marathwada regions of Maharashtra, Rajasthan, Gujarat and Bundelkhand region of Uttar Pradesh) under normal sowing conditions.
- Suitable for YMD, Anthracnose/pod blight and charcoal rot prone areas. Suitable for sole cropping with 30-45 cm row spacing.



**JS 22-16**

- Suitable for low to high rainfall conditions, early withdrawal of monsoon and medium to heavy soils of central zone (Madhya Pradesh, Vidarbha and Marathwada regions of Maharashtra, Rajasthan, Gujarat, and Bundelkhand region of Uttar Pradesh) under normal sowing conditions.
- Suitable for YMD, Anthracnose/pod blight and charcoal rot prone areas. Suitable for sole cropping with 30-45 cm row spacing.





**Rice****PJRH 56**

- India's first public sector two-line rice hybrid was released in joint collaboration with IARI and JNKVV.
- PJRH 56 is short duration hybrid with long slender grain.
- Early-medium maturity with an average yield of 61.51 q/ha. Suitable for double cropping helps in crop intensification.
- Maintenance of parental line is easy, hence cost of seed production is 50% less than three- line hybrids.

**Wheat****PJG 3410**

PJG 3410 is high yielding (65.91q/ha) under early sown condition. It is highly resistant against all the 23 pathotypes of leaf rust and 22 pathotypes of stem rust at seedling stage. It is a bio-fortified wheat variety with high protein content (12.6 %). It has a high hardness index (80.8) making it suitable for chapatti making.

**MP 1378**

MP 1378 is a high yielding (52.5q/ha) wheat variety under timely sown, irrigated condition of Peninsular zone.

**Niger****JNS 2017-13**

- Average yield 591.40 kg/ha. Oil content is 36.80%.
- Tolerant to cercospora leaf spots, alternaria leaf spots and powdery mildew diseases, and moderately tolerant to white fly and leaf hopper.

**Odisha University of Agriculture and Technology (OUAT), Bhubaneswar****Rice****Kalinga Rice 9 (Chandragiri)**

- The variety Chandragiri (OUAT Kalinga Rice 9) is suitable for irrigated medium and upland situation.
- Matures in 110-115 days with average yield of 5,597 kg/ha.
- Long bold grains.
- Moderately resistant to sheath rot, blasts and BPH.

**Kalinga Rice 10 (Mahendragiri)**

- The variety Mahendragiri (OUAT Kalinga Rice 10) is suitable for irrigated medium and upland situation.
- Matures in 115-120 days with average yield of 5,761 kg/ha.
- The grains are long slender and this variety is moderately resistant to sheath rot and leaf blast.



**Kalinga Finger Millet 2 (Shreeprava)**

The finger millet variety Shreeprava (OUAT Kalinga Finger Millet 2) matures in 113 days, and has average yield of 2,638 kg/ha. It is highly resistant to stem borer and resistant to grasshopper and aphids.



**Punjab Agriculture University (PAU), Ludhiana**

**Sugarcane****CoPb 17215 (CoPb 99)**

- It is a mid-late maturing variety. The cane of this variety is erect, tall, medium thick, bobbin shaped internodes and greenish yellow.
- Its juice contains 16.0 and 18.0 % sucrose in 10 and 12 months, respectively.
- Average cane yield is about 90 t/ha. It is a good ratooner.
- Tolerant to the prevalent pathotypes of red rot disease, and less susceptible towards early shoot borer, stalk borer and top borer.

**Jamun****Konkan Bahadoli and Goma Priyanka**

Two Jamun varieties namely Konkan Bahadoli and Goma Priyanka were released for cultivation in Punjab. These varieties have yield potential of 51 kg/tree.



**Goma Priyanka**



**Konkan Bahadoli**

**Brinjal****PBH 6 (2023)**

- It is an early maturing hybrid of long fruit group of brinjal.
- Its plants are medium in height, compact, thorn-less with green foliage. Flowers are purple and borne in cluster.
- Fruits are medium-long, thin, and black purple with green calyx.
- Its average yield is 695 q/ha. Released as PBH 6 in Punjab.
- It was also identified in Zone IV (Punjab, UP, Bihar, Jharkhand) and Zone VI (Rajasthan, Gujarat, Haryana, Delhi) of the country during 39<sup>th</sup> Group Meeting of AICRP-Veg Crops, 7-9 September 2021 (Central level –Notification proposal submitted).



**Brinjal variety- PBH-6 (2023)**

**Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu (SKUAST-J), Jammu**

**Walnut****Shalimar Walnut 001**

- Nut weight- 27.0 g; days to maturity- 160 to 165; yield- 83.10 q/ha.



- Kernel percentage- 54.0; kernel of light color; shell strength- soft.
- Oil- 70.0%; protein- 20.0%.
- Disease reaction: Tolerant to anthracnose, the only prevalent fungal disease of walnut in Kashmir.



Shalimar Walnut-001

**Shalimar Walnut 002**

- Nut weight- 16.0 g; days to maturity- 160 to 165; yield- 78.10 q/ha.
- Kernel percentage- 67.0; Kernel of light color; shell strength- Soft.
- Oil - 68.0%; Protein- 18.0%.
- Disease reaction: Tolerant to anthracnose, the only prevalent fungal disease of walnut in Kashmir.



**Tamil Nadu Agricultural University (TNAU), Coimbatore**

Tamil Nadu Agricultural University released 20 new varieties of agricultural and horticultural crops with the approval of Tamil Nadu Government's New Varieties Release Committee.

**Rice**

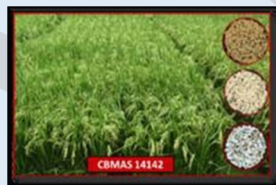
**CORH 5**

- Maturity: 120-125 days.
- Yield: 6,467 kg/ha.



**CO 58**

- Maturity: 120-125 days.
- Yield: 5,858 kg/ha.



**Maize**

**VGI H(M) 2**

- Duration: 95-100 days.
- Yield: 6,300 kg/ha (rainfed).



**Sorghum**

**Sweet Sorghum CO (SS) 33**

- Maturity: 110-115 days.
- Grain yield: 2.5 t/ha; fresh stalk yield: 42 t/ha; Juice yield: 15,133 l/ha.



**Grapes**

**GRS (MH) 1**

- Maturity: 120-130 days from fruit pruning.
- Fruit yield: 41 t/ha/yr



**Jack Fruit**

**PKM 2**

- Maturity: Perennial
- Yield - 175.62 t/ha/yr



**Banana**

**Kaveri Kanchan**

- Maturity: 305-320 days.
- Weight of bunch: 23 High TSS (24.6°Brix)



**Brinjal**

**CO 3**

- Maturity: 140-150 days
- Yield: 48.5 t/ha





**Sorghum CO 34**

- Maturity: 100-105 days
- Grain yield: 2,765 kg/ha, Dry fodder yield: 9,478 kg/ha.



**Cluster Bean MDU 2**

- Maturity: 75 days
- Yield: 14 t/ha



**Foxtail Millet (Tenai)**

**ATL 2**

- Maturity: 80-85 days
- Grain yield: 2,174 kg/ha; straw yield: 2,688 kg/ha



**White Amaranthus PLR 2**

- Maturity: 50 days
- Yield: 43 t/ha (13% over CO 1)



**Greengram**

**VBN 7**

- Maturity: 65-70 days
- Yield: 900 kg/ha



**Red Amaranthus CO 6**

- Maturity: 30-35 days
- Yield: 12.6 t/ha



**Groundnut**

**CO 8**

- Maturity: 110-115 days
- Yield: *Khariif*: 2,527 kg/ha; *Rabi*: 2,343 kg/ha



**Perennial Moringa PKM 3**

- Maturity: 10 to 15 years
- Yield: 68.7 t/ha/yr



**Cotton**

**VPT 2**

- Maturity: 120-130 days
- Seed cotton yield: 1,624 kg/ha



**Red Tamarind PKM 2**

- Maturity: Perennial
- Yield: 217 kg/tree/year (21.78 t/ha)



**Daincha TRY 1**

- Maturity: 45 days (*in situ* ploughing)
- Yield: 17.86 t/ha (Green biomass)



**Coconut VPM 6**

- Maturity: Perennial
- Yield: 120 to 173 nuts per year per palm



**University of Agricultural Sciences (UAS), Bengaluru**

**Sunflower**

**KBSH 88 (Hybrid)**

- Short duration: 84-86 days. Seed yield: 2,486 kg/ha. Oil yield: 932 kg/ha.
- Sturdy stem. Downy mildew resistant.
- Released for Uttarakhand, Jammu and Kashmir, Gujarat, Maharashtra, Northern Karnataka, Andhra Pradesh, Southern Karnataka, Tamil Nadu and Telangana.



**KBSH 85**

- Duration: 95-98 days. Seed yield: 8.9-10.5 q/ac. Oil yield: 3.6-4 q/ac
- Medium height and sturdy stem plant type category.
- Resistant to downy mildew. Released for Zone-5 and 6 of Karnataka

**Paddy****KMP 225**

- Grain yield: 24-26 q/acre. Straw yield: 2.6-2.8 t/acre.
- Short duration variety: 120-125 days.
- Suitable for sowing during July 3<sup>rd</sup> to 4<sup>th</sup> week.
- Long bold grains similar to that of IR 64.
- Moderately resistant to leaf and neck blast.
- Released for Zone-6 of Karnataka.

**RNR 15048**

- Duration: 120-125 days. Grain yield: 22-24 q/acre. Straw yield: 2.6-2.8 t/acre.
- Short duration variety.
- Suitable for sowing during July 3<sup>rd</sup> to 4<sup>th</sup> week.
- Medium slender grains with good cooking quality.
- Low glycemic index. Released for Zone-6 of Karnataka.

**Maize****MAH 14-138**

- Duration: 115-120 days. Grain yield: 34-38 q/acre.
- Long cobs with attractive light orange grains fetches higher price in the market.
- Stays green even at harvest. Resistant to Turcicum leaf blight.
- Moderately resistant to sorghum downy mildew. Released for Zone-5 and 6 of Karnataka.

**Little Millet****GPUL 11**

- Duration: 90-95 days. Grain yield: 6.1-8.1 q/acre. Straw yield: 1.2-1 t/acre.
- Arched shaped inflorescence with intermediate compact panicle.
- Oval shaped grain with dark grey colour.
- Suitable for sowing in *kharif* (June-July).
- Highly resistant to grain smut and leaf blight disease.
- Released for Zone-5 and 6 of Karnataka.

**Prosomillet****GPUP 32**

- Semi-tall variety. Duration: 80-85 days. Grain yield: 7.2-8.1 q/ac. Straw Yield: 1.2-1.5 t/ac.
- Intermediate compact with diffused shaped inflorescence.





- Oval shaped golden yellow colour grain with higher test weight.
- Suitable for sowing in *kharif* (June-July).
- Highly resistant to grain smut and brown spot.
- Released for Zone-5 and 6 of Karnataka.

### Browntop millet

#### GPUBT 2

- Duration: 85-90 days. Grain yield: 6-8 q/acre. Straw yield: 1.0-1.2 t/acre.
- Medium duration. Semi-tall (110-120 cm). Number of tillers (15-20).
- Resistant to leaf blight. Released for Zone-5 and 6 of Karnataka.



### Ragi

#### ML 322

- Duration: 105-110 days. Straw yield: 2.0-2.2 t/ac. Medium height (100-105 cm).
- Grain yield: Rainfed: 10-12 q/acre. Irrigated: 15-20 q/acre.
- Possess stiff stalk that resists lodging. More number of tillers (6-7).
- Resistant to neck and finger blast and is drought tolerant.
- Releases less chaff dust during threshing.
- Released for Zone-5 of Karnataka.



#### KMR 340

- Duration: 95-100 days. Straw yield: 1.6-2.5 t/acre. Rich in iron (4.72 mg) and protein (11.98g).
- Grain yield: Rainfed: 12-14 q/acre. Irrigated: 18-20 q/acre.
- White ragi variety, hence preferred for value added products preparation.
- Suitable for late *Kharif*. Released for Zone-4 of Karnataka.
- Resistant to blast and blight diseases. Tolerant to stem borer and aphids.



### Fieldbean

#### HA 5

- Duration: 90 – 95 days. Green pod yield: 13–14 q/acre. Dry seed yield: 2.5–3 q/acre.
- Photo – period Insensitive. Semi-determinate growth habit.
- Released for Zone-5 of Karnataka.



### Sesame

#### GKVKS 1

- Short duration variety (80-85 days)
- Seed yield: 1.8-2 q/acre. White seeds with 47-48 % oil content.
- More number of branches and filled pods. Leaves stays green even at harvest.
- Released for Zone-5 of Karnataka.





**Niger****KBN 2**

- Short duration variety (80-85 days).
- Seed yield: 1.9-2 q/acre. Bold black seeds with 47-48 % oil content.
- More number of branches and filled pods.
- Suitable for intercropping. Released for Zone-5 and 6 of Karnataka.

**Castor****ICH 66**

- Duration: 95-98 days (primary spike maturity). Seed yield: 6-7 q/acre.
- Red colored stem and semi-spiny capsules. Triple bloom group (waxy coat is present on stem, lower and upper side of the leaves).
- Suitable for *Kharif* (June- July) under both rainfed and irrigated ecosystems. Wilt resistant and green leaf hopper tolerant hybrid.
- Released for Zone-5 and 6 of Karnataka.

**Fodder Sorghum****CNFS 1**

- Suitable for both *kharif* (June - July) and *rabi* (October - November)
- Rich in fibre (35-36%). Rich in protein (9-10%).
- Straw yield: 22 - 23 t/acre. Released for Zone-6 of Karnataka.

**MACHINES and EQUIPMENT****JNKVV, Jabalpur****Self-propelled Battery Operated Leafy-Vegetable Harvester**

- Self-propelled battery operated leafy-vegetable harvester was developed for harvesting of spinach, fenugreek, coriander and other leafy vegetables.
- The developed machine has field capacity of 0.17 ha/h.
- The percent decrease in the cost of harvesting by developed machine in comparison to the conventional method was around 95 %.



Leafy-Vegetable Harvester



Harvesting of Fenugreek

### Engine Operated Remotely Controlled Sprayer Cum Weeder

- Remote controlled sprayer cum weeder was developed using petrol engine as a power source to reduce farmers' exposure to hazardous chemicals, improve safety, sustainability, and environmental impact in agriculture.
- Developed machine consists of remotely controlled propelling unit, steering unit, spraying unit and weeding unit to reduce the health risk and drudgery to operators.
- The developed machine saves 59.2 % of the cost, i.e. almost 13% of energy compared to manual weeding and spraying.



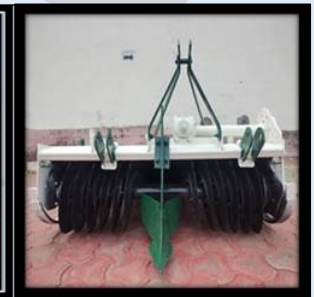
Remotely Controlled Sprayer cum Weeder

### Power Spiral-Tiller for Vertisols

- Secondary tillage machinery such as rotavator may cause subsoil compaction and impermeable layers. To avoid this issue tractor operated power spiral tiller was developed.
- Improved soil condition was observed by using developed machine, which resulted in better crop yield due to improved root growth.
- Developed spiral tiller machine outperforms disc harrow and rotavator. Superior in field efficiency, capacity, time, manpower, energy consumption, and cost-effectiveness.
- Developed machine saves 42 and 64.52 % energy over to energy used in tillage with the existing tractor drawn disc harrow and rotavator during first pass.



Tillage operation by developed machine



Power Spiral-Tiller

## PRODUCTS and PROCESSING

### Dr Y. S. Parmar University of Horticulture and Forestry (Dr YSPUHF), Nauni

- Protocol for the extraction, characterization, and utilization of anthocyanins from jamun fruit was developed. The extracted anthocyanins were fortified in ice-cream to enhance its functional properties along with the natural colour (Ph.D. thesis submitted by Ms Anjali Gautam under the guidance of Dr Manisha Kaushal in January, 2024).
- Process protocol for Hill lemon Ready-to-Serve (RTS) beverages was developed. Different formulations for the preparation of RTS drinks from Hill lemon segment juice, Hill lemon juice with peel and juice and peel extract blend were standardized. Mixed floral honey as sweetener was used without addition of any chemical additive/preservative for the preparation of RTS drinks (M.Sc. thesis submitted by Ms Ankita Thakur under the guidance of Dr Anshu Sharma in January, 2024).
- **UHF Herbal Gulal:** Commercial gulal available in the market for Holi celebration contains toxic chemicals and is not skin and environment friendly. In the Department of Floriculture and Landscape Architecture of Dr YS Parmar University of Horticulture and Forestry, herbal gulal from fresh flowers was prepared and commercialized. This eco-friendly gulal can be prepared from the used flowers also and is safe for the skin after skin sensitivity tests.



## PAU, Ludhiana

- Technology for 'Production and Formulation of Baker's Yeast for Dough Fermentation' was approved for inclusion in the compendium of technologies for commercialization in 299<sup>th</sup> REC meeting held on 22 January 2024.
- Technology for the development of high protein soy powders for beverage and food applications.
- Technology for development of value-added products from figs.

## PACKAGE OF PRACTICE

## JNKVV, Jabalpur

### Coriander

Seed priming with copper has significant influence on the productivity, quality and reduction of powdery mildew incidence in coriander. This technology led to early and rapid emergence, synchronized seed germination and crop establishment in coriander as the germination is late under normal sowing. Soaking of seeds with Cu 500ppm for 18 h, helped increase maximum plant height (127.60 cm), number of seeds per umbel (50-53), test weight (15.40 g) and seed yield (1,815.50 kg/ha). The increase in yield over control (Cu 0 ppm and 18h) was 23.88%. The incidence of the powdery mildew was also less in comparison to the control.

### Cropping System in Vegetables

In view of climate change the cropping system of cowpea-tomato-okra was developed by adjusting sowing time of cowpea from 1-5 July, transplanting tomato from 15-20 October and sowing of okra from 1-5 April for escaping the effect of heavy rainfall, low and high temperature condition.

### Guava

The treatment of raised bed cultivation + drip irrigation (80% ER at all stages) + fertigation (75% RDF) + mulching (with 100 micron UV stabilized black polythene), and micronutrient spray (zinc sulphate + boric acid) @ 0.2% was most effective to increase the yield, shelf life and quality of guava fruits.

### Mitigating Moisture Stress Condition Through Irrigation Scheduling and Application of Salicylic Acid in Coriander

This innovation based on climatological approach of irrigation scheduling under IW/CPE 0.8 (when the crop was grown with 3 irrigations) promoted morpho-phenological growth, physiological efficiency and gave the highest seed yield in coriander. Higher seed yield of 19.61q/ha was registered when the



crop grown under IW/CPE 0.8 (with three irrigations) with foliar spray of salicylic acid @ 150ppm as compared to 14.38q/ha when crop was grown under control i.e. no spray of chemicals.

## PAU, Ludhiana

- **Standardization of propagation time and technique in sapota:** The sapota cultivar Kaipatti can be propagated on Khirni rootstock by side and veneer grafting methods from March to August.
- **IPM module for management of guava fruit borer:** Guava fruit borer can be controlled by spraying two PAU homemade neem formulations @ 18 ml/liter water during July and again in October along with three releases of *Trichogramma chilonis* @ 2000 parasitised eggs/tree/release during July and October.
- **Management of planthoppers** in basmati and non-basmati rice with Ecotine 5% (Azadirachtin 50,000ppm) @ 80 ml/acre under organic and conventional farming conditions (REC 299 on 29 January 2024).
- **Management of planthoppers** in basmati and non-basmati rice with PAU Homemade neem extract @ 4 litre/acre under organic and conventional farming conditions (REC 299 on 29 January 2024).
- **Management of pink bollworm** with PB Knot based Mating Disruption Technology (MDT) was approved for inclusion in POP for kharif crop in REC 299, held on 22 January 2024.
- **Management of whitefly** with Clasto 20% WG (Pyrifluquinazon) in cotton was approved for inclusion in POP for kharif crop in REC 299, held on 22 January 2024.

## B. ANIMAL and FISHERIES SCIENCES

### Indira Gandhi Krishi Vishwavidyalaya (IGKV), Raipur

#### Production of Fishes Through Freshwater Biofloc Technology

In aquaculture, biofloc technology is the new game changer under Blue Revolution. Biofloc is consisting of various beneficial microbial communities, but the mechanism of action of some probiotics, which leads to increase in biofloc is unknown in aquaculture system. In biofloc systems, nitrogen compounds transformation is more efficient, because this process is made by facultative heterotrophic bacteria that correspond principally to *Bacillus* and *Pseudomonas* species, which allow increasing their population abundances quickly and oxide-reduction process. In this method, tilapia, pangasius, desi magur, singhi, pabda fish species are widely cultured. In this technology, 10 lakh



Biofloc Unit at KVK, Raipur



Growth of Magur



Floc Concentration

liter tanks are producing equivalent to one acre pond production. It requires less manpower, less land and produce organic fish which is very tasty and healthy.

## TEACHING

### AU, Kota

#### Blended Learning Platform workshop

Agriculture University, Kota organized a workshop on Blended Learning Platform in association with ICAR-IASRI, New Delhi on 5-6 February 2024 at Agriculture Technology Management and Quality Improvement Center of the university. All the scientists and faculty of different units of the University participated in the workshop.



Glimpse of Workshop

### Dr YSPUHF, Nauni

The university will start B. Tech. in Food Technology from the next academic year in the Department of Food Science and Technology, Dr YSPUHF, Nauni, Solan, Himachal Pradesh.

### Guru Angad Dev Veterinary and Animal Sciences University (GADVASU), Ludhiana

#### College of Dairy and Food Science Technology is going to Introduce a New Course Curriculum B. Tech. in Food Science & Technology from Academic Session 2024-25

The Academic Council of the Guru Angad Dev Veterinary University, Ludhiana approved to introduce a new course, B. Tech. in Food Science and Technology, commencing from the forthcoming academic session of 2024-25. This development represents a significant step forward in catering to the evolving demands of the industry and academic landscape. In tandem with this progressive curriculum enhancement, the nomenclature of the College of Dairy Science and Technology was revised to the College of Dairy and Food Science Technology. This adjustment aligns with the expanded scope and interdisciplinary nature of the educational programs offered, reflecting the institution's commitment to staying at the forefront of advancements in dairy and food science.

### Professor Jayashankar Telangana State Agricultural University (PJTSAU), Hyderabad

#### Training programme on Implementation of Academic Management System (AMS)

The master trainers conducted a training session to all the faculty members on the implementation of the ICAR AMS system at the College level on the test AMS system to understand the AMS application at KMC, Rajendranagar, Hyderabad on 05 and 06 January 2024.



Training on Implementation of Academic Management System

## Rani Lakshmi Bai Central Agricultural University (RLBCAU), Jhansi

### All India Study Tour 2023-24

Final year B.Sc. (Horticulture) students from RHWE embarked on a 16-day educational tour across South India from 26 December 2023 to 10 January 2024, as part of the ICAR Fifth Deans course curriculum. This tour included various ICAR institutes and horticultural sites in Pune, Kasaragod, Coimbatore, Ooty, Mysuru, and Bengaluru. The tour provided valuable insights and practical knowledge, enriching the students' academic and professional growth.



### Study Tour of PG and Ph.D. Students

A study tour was organized for postgraduate and doctoral students from the Department of Floriculture and Landscaping. The tour took place in New Delhi on 10 and 11 March 2024, as part of their coursework in Ornamental Gardening and Landscaping (HFL-505) and Advances in Landscaping (HFL-605). The group, comprising two Ph.D. students and three PG students, visited various gardens in Delhi, including Rashtrapati Bhavan, Amrit Udyan, Lodhi Garden, National War Memorial, Roshanara Garden, and Buddha Jayanti Park. The tour focused on urban landscaping concepts utilizing hardscape and softscape materials.



### Experiential Learning Programme on Quality Planting Material Production

The University concluded an experiential learning programme to enhance the quality of forest tree planting material. Six fifth-semester B.Sc. Forestry students actively participated, resulting in the cultivation of 3,760 seedlings of diverse forest tree species.

### SKUAST-J, Jammu

- 'Digital Ad Making' event was organized on 04 January 2024 for the students of MBA (ABM).
- A case study was conducted on Value Chain of Reliance Trends on 18 January 2024 for students of MBA(ABM).
- A Business Quiz on the topic Management and Current Events was held on 08 February 2024 in the Division for the students of MBA(ABM) degree programme.
- A Poster Making session on Viksit Bharat @2047, was organized on 14 March 2024 for the students of MBA(ABM) degree programme.
- Under RAWE and AIA Programme, 98 students were attached in the Village Kotli Mian Fateh Miran Sahib Block R. S. Pura, District Jammu from 13-03-2024.

### SKUAST-K, Srinagar

- SKUAST-Kashmir, Srinagar started a Bachelor degree programme, B.Tech. (Artificial Intelligence in Agriculture) in collaborations with IIT Mandi, Himachal Pradesh. Brief information about the programmes is as follows:  
Degree: Bachelor of Technology (B. Tech.), Artificial Intelligence in Agriculture  
Duration: 4 years



Dual Campuses: SKUAST-Kashmir, Srinagar, Kashmir & IIT Mandi, Himachal Pradesh  
Program Structure:

- Semester I to IV at SKUAST-K
- Semester V to VI at IIT Mandi (Credit transfer)
- Semester VII Internship and Minor Capstone Project, SKUAST-K/IIT Mandi

## TNAU, Coimbatore

### TNAU Launched First-Ever Professor of Practice Program

The Tamil Nadu Agricultural University Vice Chancellor Dr V. Geethalakshmi inaugurated its first-ever 'Professor of Practice' program on 25 March 2024 in the Department of Entomology, in the presence of Dr N. Senthil, Dean (SPGS) and Dr P. Shanthi, Director, Centre for Plant Protection Studies. Dr M. Murugan, Professor and Head of the Department of Entomology extended a warm welcome to all attendees. The Professor of Practice will deliver lectures regularly by visiting the TNAU constituent colleges located in the various parts of Tamil Nadu. To enhance the accessibility and outreach, these lectures will be recorded for broadcasting through MS Teams which allows students from other campus can benefit from the expertise. During the event, the Vice Chancellor interacted with beekeeping entrepreneurs and advised the students to learn the important key business techniques in beekeeping technology. The experts from the private sector Mr A. Dandayuthapani, APD Apiary, Erode and Mr V. Jino, JEE Honey, Marthadam delivered talks to the students of entomology, and they shared their experience in the beekeeping sector.



Dr V. Geethalakshmi, VC, TNAU giving Certificate of 'Professor of Practice'

## UAS, Bengaluru

### Unlocking Excellence

*Creative and effective teaching strategies for educators:* The College of Agriculture, Hassan, hosted a dynamic Professional Development Training Programme titled 'Unlocking Excellence: Creative and Effective Teaching Strategies for Educators' on 27 March 2024. The programme was inaugurated by Dr S. N. Vasudevan, Dean (Agril.), CoA, Hassan. The resource person for the training was Dr Vivekanandda Jayaraj, Dean Academy for Creative Teaching, Bengaluru. Dr A. Nataraja, Prof. of Horticulture and Dr Aravinda Kumar, M. K., Asst. Prof. Agril. Economics, CoA, Hassan coordinated the programme.



## EVENTS and ACTIVITIES

### Anand Agricultural University (AAU), Anand

#### Winter School on Gender Sensitization

A Winter School on *Gender Sensitization: Step Towards Agricultural Development* was organized by the Department of Agricultural Extension and Communication, B. A. College of Agriculture, AAU, Anand from 18 January to 7 February 2024, sponsored by ICAR, New Delhi. Seventeen faculty/scientists from Assam, Jammu & Kashmir, Karnataka, Maharashtra, Uttar Pradesh, and Gujarat, participated.

Inaugurating the winter school Vice Chancellor Dr K. B. Kathiria said that concepts like gender sensitization are essential for sustainable agricultural development. He also highlighted importance of gender equity and gender equality for gender mainstreaming.

Dr M. K. Jhala, Director of Research and Dean of PG Studies, said that the subject of this training is significant and essential for the country's agricultural development. Emphasis was given to changing the perspective and understanding of women along with recognition, accommodation, and taking appropriate action to increase gender sensitivity in the future.

Dr Y. M. Shukla, the convener of the programme gave insightful remarks on how these capacity-building programs enrich us educationally and personality-wise. The Director of EEI, Dr J. K. Patel, gave information about the importance of training and the subject matter covered. The training course director, Dr J. B. Patel presented the training programme overview.

Forty-two sessions of the winter school included lectures, interactive sessions, discussions, practical exercises, and 12 exposure visits related to gender sensitization. Seventeen experts from institutes such as ICAR-CIWA, Bhubaneswar; NAARM, Hyderabad; IISC, Bengaluru; MS University, Vadodara; SP University, VV Nagar; IARI, New Delhi; MANAGE, Hyderabad, JAU, Junagadh; NAU, Navsari and lawyer of High Court Delhi shared their expertise and experiences. Almost all the aspects of gender like basic concepts, psychological concepts, cultural concepts, educational concepts, issues and roles in agriculture, soft skills and empowerment concepts such as honey, mushrooms, bio-fertilizers, climate change, natural farming, organic farming, legal matters, land legal right, constitutions and justice, Banking Sector, Govt Schemes were covered by the eminent speakers with important exposure visits like AMUL, Entrepreneur of small dal mill, Tribhuvandas foundation, Quality control lab, Experiential Learning units, Bio-fertilizer Unit, DMAPR, Mushroom Unit, tissue culture, nano fertilizer unit, etc.

#### Training Under Skill Vigyan Yojana

A Student Training Programme under *Skill Vigyan Yojana* sponsored by the Department of Biotechnology, Government of India, was inaugurated under the chairmanship of the Vice Chancellor, Dr K. B. Kathiria at Anand Agricultural University on 1 March 2024. This training programme was organized by the Department of Food Safety



Dignitaries During Inauguration Function



VC during Inauguration Function

and Quality Assurance, College of FPT & BE, in collaboration with Gujarat State Biotechnology Mission, Gandhinagar. The beneficiary students from different states are being given three months' training in Microbiology quality control. The trainees were provided with extensive skills in tools and techniques related to various biotechnology to strengthen their job opportunities as microbiologists in different industries.

## AU, Kota

### Training for Entrepreneurship Development

Seven-day self-funded state level training on *Entrepreneurship Development through Smart Horticultural Techniques* for Agriculture Graduates was organized at College of Agriculture, Kota during 11-17 March 2024. A total of 32 students from SKNAU, Jobner; SKRAU, Bikaner; MPUAT, Udaipur; BR Ambedkar Central University, Lucknow; RVSKVV, Gwalior; OUAT, Bhubaneswar; and AU, Kota participated in this training programme.



Glimpses of Training Programme

## Bihar Agricultural University (BAU), Sabour

### Kisan Mela-2024

Bihar Agricultural University, Sabour hosted the widely recognized three-day Kisan Mela (Farmers Fair-2024), from 17-19 February 2024 at its headquarters at Sabour, Bhagalpur. The central theme of the event was -- Self-reliance of farmers through technological advances. As an annual initiative designed explicitly for farmers, the fair serves the dual purpose of keeping them abreast of the latest developments in agriculture, and providing a platform for them to articulate their concerns to scientists and experts. The opening ceremony was graced by the presence of Shri Shravan Kumar, Minister of Rural Development, Government of Bihar, and Dr D. R. Singh, Vice Chancellor of BAU, Sabour, who jointly inaugurated the event. The notable guests were various dignitaries from political and academic spheres, including Mr Ajay Mandal, Member of Parliament from Bhagalpur, and several MLAs. The first day of the fair witnessed an impressive turnout, with over ten thousand farmers attending from not only Bihar but also neighboring states. Notably, six thousand farmers registered by paying fees to actively engage in the event's offerings and opportunities on the first day. During the event, all the distinguished guests explored a more than a hundred stalls, strategically positioned across the premises, showcasing the latest agricultural techniques and diverse crop varieties.



Glimpses of Kisan Mela-2024



### CAFT Training

Bihar Agricultural University, Sabour celebrated the successful conclusion of a 21-day training programme on *Harnessing Disruptive Technology in ICT for Agricultural Extension and Research*. The program, which took place from 01-21 February 2024, aimed to equip participants with insights into leveraging cutting-edge technologies for the advancement of agriculture.



### Dr Rajendra Prasad central Agricultural University (Dr RPCAU), Pusa

#### Krishi Mela

The three-day Kisan Mela-2024, was organized during 24-26 February 2024 on the theme 'खाद्य सुरक्षा से पोषण सुरक्षा की ओर'. The Kisan Mela-2024 was inaugurated by the Deputy Chief Minister and Agriculture Minister GoB, Mr Vijay Kumar Sinha. Distinguished guests included Mr Ram Nath Thakur, Member of Parliament, Rajya Sabha; Dr Tarun Kumar, Member of the Bihar Legislative Council, Samastipur; Mr Virendra Kumar, Member of the Bihar Legislative Assembly, Rosera; Mr Sudhanshu Shekhar Das, Regional Manager, P.N.B. Circle Office, Patna; Padma Shri Rajkumari Devi, also known as Kisan Chachi, and other dignitaries. On the second day of Kisan Mela-2024, the chief guest, Mr Maheshwar Hazari, former Deputy Speaker of the Bihar Legislative Assembly and MLA of Kalyanpur (Samastipur) constituency, inaugurated the farmers' symposium on natural farming. On the final day of the Kisan Mela-2024, the closing ceremony's chief guest was Prof. Dinesh Chandra Rai, Vice Chancellor of Babasaheb Bhimrao Ambedkar Bihar University, Muzaffarpur. The event was presided over by Vice Chancellor Dr P.S. Pandey. On this occasion, members of the university's management board, officials, officers, scientists, employees, and a large number of farmers from various districts participated.

The three-day आत्मनिर्भर कृषि सह बागवनी विस्तार एवं पशुधन कल्याण मेला-2024, was inaugurated at the Krishi Vigyan Kendra, Piprakothi, in the esteemed presence of Member of Parliament, Motihari, and former Agriculture and Farmers' Welfare Minister, Shri Radha Mohan Singh (virtually), Dr Neelam Patel, Senior Advisor (Agriculture), NITI Aayog; Dr P. S. Pandey, Vice Chancellor; Dr Lal Babu Gupta, Deputy Mayor, Motihari; Mr Ganesh Paswan, DPM, Jeevika and Dr M. S. Kundu, Director of Extension Education.



#### Winter School

An ICAR sponsored 21-day (29 January -18 February 2024) winter school on Epigenetic Regulations as Drivers of Insecticide Resistance and Resilience to Climate Change in Agricultural Pests, was organized at department of Entomology, PGCA, RPCAU, Pusa. The winter school was



inaugurated on 29.01.2024 by the Vice Chancellor, Dr P.S. Pandey in the gracious presence of Chief Guest Dr A. K. Singh, former Vice Chancellor, BAU, Sabour. The training focused on advancement of insecticide resistance studies and their management. The course involves lectures and practical activities to enhance knowledge in this field. Several subject experts interacted with the participants both in online and offline mode. A total of 16 participants participated in this winter school.



### Training

ICAR sponsored 10-day short course entitled Crop diversification and utilization of crop waste to achieve climate resilient agriculture and improvement in farmers' income in fragile agri-eco-system, was conducted from 16-25 January 2024. The Vice Chancellor, RPCAU, Pusa inaugurated the course on 16 January 2024, and the Chief Guest was Dr K.G. Mandal, Director, MGIFRI, Piprakothi, Motihari. Participants/scientists (16) from different universities/states participated in this training. It covered all aspects of crop diversification and agro waste utilization. Besides theory classes participants also interacted with the progressive farmers and entrepreneur of nearby district.



### Workshop

The two-day workshop on Natural farming and its importance in the changing climate scenario, was held during 20-21 April 2024. The workshop was inaugurated by the Governor of Bihar, Mr Rajendra Vishwanath Arlekar. During this event, the inauguration of the Constitution Park and the B.Sc. Agril (Hons.) Natural Farming course at the university also took place. Distinguished guests included Mr Dinesh Kulkarni, Akhil Bharatiya Sanghtan Mantri, Bharatiya Kisan Sangh; Dr A.K. Singh, Vice Chancellor, Rani Lakshmi Bai Central Agricultural University, Jhansi; Dr R.S. Chandel, Vice Chancellor, YSP University of Horticulture and Forestry, Solan; Dr C.K. Timbadia, Vice Chancellor, Gujarat Natural Farming and Organic Agriculture University, Anand; Mr Atul Jain, General Secretary, Deen Dayal Research Institute, New Delhi; Dr B.S. Dwivedi, Member, Agricultural Scientists Recruitment Board; Dr Vandana Dwivedi, former Additional Commissioner, Government of India; along with over a hundred agricultural scientists from across India, university officials, and farmers practicing natural farming.



### Dr YSPUHF, Nauni

#### Kisan Mela

Kisan Mela was organized in Collaboration with ATMA, Kaza on the occasion of State Level *Ladarcha Fair* on dated 22.08.2023 at Kaza where about 950 farmers participated. Among them 400 were farmers and 550 were farmwomen. In this event Krishi Vigyan Kendra, Tabo (L & S) staff organized an exhibition for farmers of Lahual Spiti and visiting guest faculty. Exhibition items included



KVK Staff at Exhibition (Kaza) L&S



various Apple varieties (Royal Delicious, Super Chief, Oregon Spur-II, Red Chief, Mollies Delicious), Dried Apple Slices, and Dry Apricots, Processed Products like Sattu Laddo, Strawberry Jam, Sea buckthorn Powder, Apricot Murrumba, Apple Chutney, Local Black Peas, Portable-Polytunnels, Cauliflower Nursery in Pro-treys, Cucumber Nursery in Polybags, KVK's Magazines *Piti-Shingpa*, KVK Profiles, Pamphlets, Hanging Posters, etc.

### Trainings

- Organized 5-day training on *Mushroom Cultivation*, on 2-6 February 2024 at Dr YS Parmar University of Horticulture and Forestry, Nauni.
- Organized 1-day awareness and training camp on *The Role of Biocontrol Agents in Healthy Vegetable Production and Mushroom Production at Farmers household* on 13 March 2024 at Kotla Panjola panchayat. During the programme 700 spawned compost bags were distributed among farmers to grow mushrooms in their houses. These farmers are being guided with respect to day-to-day problems on WhatsApp and are visited by the Scientists on every Thursday.
- Two Skill Development Trainings (Production and Processing of Medicinal and Aromatic Plants) were organized on 20-26 February 2024 and 13-19 March 2024 under Kaushal Vikas Nigam Ltd, Shimla (HPKVN).

## Dr Y.S.R. Horticultural University (Dr YSRHU), Venkataramannagudem

### Farmers' Training

Scientists of AICRP on MAP& B from HRS, VR Gudem conducted one-day training programme on cultivation techniques in aswagandha to SC farmers in Hanumanthunigudem village of Nuzivid Mandal, Eluru district on 7 March 2024, and to Surepalli village of Musunuru Mandal, Eluru district on 13 March 2024 as a part of



Training programs on cultivation techniques in Aswaganda to SC farmers to SC farmers in Surepalli village and Hanumanthunigudem villages

SCSP program. Scientists explained in detail the good agricultural practices to be followed in aswagandha cultivation. Pamphlets on aswagandha cultivation in local language and distributed among farmers. Scientists also explained the importance of biofertilizers and medicinal and aromatic crops cultivation. Nearly 100 farmers participated in the above said programmes.

## Indira Gandhi Agricultural University (IGKV), Raipur

### 38<sup>th</sup> Annual Workshop of AICRP on Farm Implements and Machinery

A three-day 38<sup>th</sup> Annual Workshop of All India Coordinated Research Project on Agricultural Equipment and Machinery was organized from 8-10 January 2024 under the joint aegis of Indian Council of Agricultural Research, New Delhi and IGKV, Raipur at Swami Vivekanand College of Agriculture Engineering, Raipur. Dr Girish Chandel, Vice Chancellor, IGKV was the Chief Guest in inauguration session. Dr S. N. Jha, Deputy Director General (Agricultural Engineering), ICAR presided over the inaugural programme. In this workshop, 27 different centers



Dr Girish Chandel, VC, IGKV, Raipur Addressing the AICRP Scientists



reports related to research, design, development, manufacturing and training of equipment done in across the country were presented and discussions were held for the cooperation of private institutions/agricultural equipment manufacturers from different areas. This project has been running at IGKV for the last 8 years under the direction of Dr A.K. Dave, Head Department of Farm Machinery and Dr R.K. Nayak, Principal investigator and organizing secretary of the workshop.

### Annual Group Meet on Integrated Farming System

Three-day Annual Group meet on Integrated Farming System organized at IGKV during 29-31 January 2024 in collaboration with ICAR-PDCSR, Meerut at IGKV, Raipur. Agricultural scientists from 74 research centers of the country operating under this project participated in this group meeting. Dr S. K. Chaudhary, Deputy Director General (Natural Resource Management), inaugurated the programme as the Chief Guest. Dr Girish Chandel, Vice Chancellor, IGKV presided over programme.



Dr S. K. Chaudhary, DDG (NRM), ICAR  
Delivering Inaugural Address

### Regional Meeting of Eastern States on Price Policy for Kharif Crops

Regional Meeting of Eastern States (Chhattisgarh, West Bengal, Jharkhand, Odisha and Bihar) to determine the cost and support price of *Kharif* Crops was held at IGKV, Raipur on 6 February 2024. Dr Vijay Pal Sharma, Chairman, Agricultural Costs and Prices Commission, Government of India, was the chief guest of the program. The programme was presided over by Dr Girish Chandel, Vice Chancellor, IGKV. On this occasion, Dr Chandan Sanjay Tripathi, Director of Agricultural Development and Farmers Welfare Department, Government of Chhattisgarh, Dr Anupam Mitra, Member Secretary, Agricultural Costs and Prices Commission, Government of India; Dr N.P. Singh, and Dr R.L. Daga, Commission Members; Dr Vivek Kumar Tripathi, Director Research, IGKV; Dr G.K. Das, Dean of Agriculture College, Raipur along with economists and nodal officers related to agricultural costs from the five eastern states and progressive farmers from the state of Chhattisgarh, were present.



### Innovative Fairs and Kisan Mela

Two-day Ankuran Innovation Farmers Fair and Exhibition 2024 was organized on 11 and 12 March 2024 at RMD CARS, Ambikapur in coordination with IGKV CG Biotech Promotion Society and NABARD. Addressing the august gathering, on the occasion, Shri Ramvihar Netam, Agriculture Minister said that the Chhattisgarh government is committed to the development of agriculture and welfare of farmers in the state. Besides, another Innovative Fair was organized at SGCARS, Jagdalpur. Shri Bishwabhusan Harichandan, Governor of Chhattisgarh inaugurated innovation fair jointly organized by IGAU and Chhattisgarh Council of Science and Technology at Shaheed Gundadhur College of Agriculture and Research Station (SGCARS), Kumhrawand, Jagdalpur on 5 March 2024 to give platform to young innovators of Bastar region to showcase their innovations to the scientific minds and public in the region. In his address, Governor said that the state of Chhattisgarh is blessed with abundant natural



wealth and biodiversity that has wide scope for developing innovative industries and business in agriculture and related sectors.

### 38<sup>th</sup> Foundation Day

38th Foundation Day of Indira Gandhi Krishi Vishwavidyalaya was inaugurated by Shri Jagdeep Dhankar, Vice President, India on 20 January 2024. While addressing the 38th Foundation Day of Indira Gandhi Agricultural University, he said that if our farmers are happy then the country will be happy. For farmers, farming is not only a means of livelihood but also the basis of boosting the country's economy, environmental protection and social development. While congratulating the Annadatas, Shri Dhankhar said that by adopting modern technology in agriculture and providing support to the farmers, the goal of ensuring food security to the coming generations can be achieved.

Addressing Shri Vishwabhusan Harichandan, Governor said that our youth have an important role in making India a leading country in the world.



### Release of Krishi Panchang and Calendar

Shri Ramvihar Netam, Agriculture Minister, Chhattisgarh released the Agricultural Almanac – 2024 published by Indira Gandhi Agricultural University at the Seed Corporation office on 10 January 2024. He said that the Agricultural Almanac has included the research and extension work being done by Indira Gandhi Agricultural University as well as information about the latest agricultural technology and various schemes run by the Central and State Government for the farmers, which are helpful to the farmers.



## Junagadh Agricultural University (JAU), Junagadh

### Technology and Machinery Demonstration Mela-cum-Prakrutik Krushi Parisamvad



Lighting the Lamp by Dignitaries



Audience

CAET, JAU, Junagadh organized Technology and Machinery Demonstration Mela cum Prakrutik Krushi Parisamvad, on 14 March 2024 with the participation of the AICRPs on Farm Implements and Machinery, Post-Harvest Engineering and Technology, Plastic Engineering in Agriculture Structure Environment Management, Irrigation Water Management, CRP on Energy from Agriculture, ATMA



Project, Gujarat, ISAE Gujarat Chapter, Junagadh and Tirth Agro Technology Pvt. Ltd, Rajkot, benefitting 1500 participants, including farmers, students, agri-input dealers, university faculty members and students with the latest tools and techniques.

## Kerala Veterinary & Animal Sciences University (KVASU), Wayanad

### ISVM National Seminar and Convocation Concluded

The Indian Society for Veterinary Medicine's 40<sup>th</sup> Convocation and National Seminar on 'Multidisciplinary Concepts of Integrating Veterinary Medicine with a Holistic Approach' concluded at Kerala Veterinary and Animal Sciences University's Mannuthi Veterinary College. More than 150 papers were presented by experts and research students from different states of India on the innovative research and discoveries in each field of veterinary medicine divided into nine fields.

Many speakers recommended the combined use of traditional and non-traditional medicine. The need to

work together with other medical disciplines to control zoonotic diseases such as rabies was also pointed out. Diagnosis and treatment of infectious diseases of pets and ornamental birds were discussed. Modern techniques in the treatment of non-communicable diseases were presented in detail. Advanced technologies such as CT scanning, echocardiography and nuclear medicine are now available across the country. The need to equip the country's veterinarians for their proper use was also highlighted.

ISVM President Dr R. Ram Prabhu presided. Veterinary University Vice Chancellor Prof. (Dr) M. R. Sashindranath was the chief guest. Dean of the Faculty of Veterinary Science and Chairman of the Organizing Committee, Prof. (Dr) K. Vijayakumar delivered the closing message.



### Training on 'Imparting Practical Knowledge in Canine Cardiology to Practicing Veterinarians'

Three days online theory and three days offline hands-on training programme was held for "Imparting Practical Knowledge in Canine Cardiology to Practicing Veterinarians" at UVH & TVCC, Mannuthy.

The second batch of the training programme had 18 practicing veterinarian from different states like Kerala, Karnataka, Tamil Nadu and Telangana. Theory and hands-on classes on ECG, echocardiography, radiography and cardiac diseases were handled by the eminent faculties of the clinical departments.



## Maharana Pratap Horticultural University (MHU), Karnal

### Workshop on Agriculture and Horticulture Career Prospects

Under the esteemed leadership of Vice Chancellor Shri Sudhir Rajpal, Director, student's welfare, Prof Ranjan Gupta, organized a workshop focused on exploring career opportunities in Agriculture and Horticulture on 4 January 2024 at MHU, Karnal. The workshop aimed to enlighten the students with the vast scope and potential opportunities in these fields. Distinguished speaker, Dr Kulveer



Singh Bangarwa emphasized the pivotal role of strategic planning in shaping career paths, shedding light on available domestic and international scholarships, encouraging students to actively seek such opportunities. Dr Yuvraj Kasal and Dr Uma Prajapati coordinated the program, ensuring its smooth execution and fostering an environment conducive to insightful discussions.



Glimpses of Workshop

### Kisan Mela

- Farmer's workshop was organized on -Sustainable Approaches for Maintaining Soil Health and Eco Stability in Middle Gangetic Plains of Haryana- on 26 March 2024 at MHU, Karnal funded by Ministry of Earth Sciences (MoES), Prithvi Bhawan New Delhi under Outreach Support Programme.
- National Farmer's Workshops and Exhibition on natural ways to resolve soil health issues (*Meri Mitti Mera Desh*) was organized during 27-28 March 2024 at MHU, Karnal funded by Ministry of Earth Sciences (MoES), Prithvi Bhawan New Delhi under Outreach Support Programme.

### OUAT, Bhubaneswar

#### Seminar on Medicinal and Aromatic Plants for Health and Prosperity

A state level seminar on *Medicinal and Aromatic Plants for Health and Prosperity*, was organized during 1-2 March 2024 at OUAT, Bhubaneswar. This was jointly organised by Centrally sponsored Scheme on MIDH, Government of India and Directorate of Research, OUAT. Prof. Pravat Kumar Roul, Vice Chancellor, OUAT presided over the inaugural session. Dr Chatturbhuja Bhuyan Retd. Professor, Ayurveda joined as Guest of Honour and Dr M.M. Padhi, Former Deputy Director General, Ministry of Ayush, New Delhi, was the Chief Speaker. About 150 participants consisting of medicinal and aromatic plant growers, traditional healers (*Baidyas*), ayush professionals, herbal traders, Government officials, scientists, teachers, research scholars, students and others participated in the deliberations. An exhibition stall was arranged to display important medicinal and aromatic plants and their value added products.



Prof. P. K. Roul, VC, OUAT (center) and Dignitaries Releasing Publication during Inaugural Session

**PAU, Ludhiana****Following Kisan Melas were organized by the university:**

S. No.	Date	Location
1	05.03.2024	Nag Kalan, Jahangir, Amritsar
2	07.03.2024	BallowalSaukhri
3	12.03.2024	Bathinda
4	14-15.03.2024	Ludhiana
5	18.03.2024	Faridkot
6	20.03.2024	Gurdaspur
7	22.03.2024	Patiala



Dr S. S. Gosal, Vice Chancellor, PAU, Interacting with a Farmer  
Kisan Mela PAU, KVK Bathinda

**Trainings, Winter school and Symposium**

- Training was organized on *Precision agriculture technology including Greenhouses Management*, from 07-13 March 2024 at Committee room, Department of Soil and Water Engineering, PAU, Ludhiana. No. of Participants: 30.
- Winter school was organized on *Artificial Intelligence for Water resources Management in Agriculture* from 18 January to 07 February 2024.
- A National Symposium on *Genomics Revolution to Foster Advances and Innovations in Crop Improvement* was organized by PAU during 27-29 February 2024.

**PJTSAU, Hyderabad****Training on Nutrisensitive: Novel Value Chain Approaches for Agri, Horti and Allied Components**

Professor Jayashankar Telangana State Agricultural University (PJTSAU), College of Community Science, Centre for Advanced Faculty Training organized a 21-day programme on- Nutrisensitive: Novel Value Chain Approaches for Agri, Horti and Allied Components- on 23 January 2024. On the occasion, Dr R. K. Mathur, Director, IIOR, Hyderabad was the Chief Guest of the programme and delivered the key message for the program. Dr M. Venkata Ramana, Registrar, PJTSAU highlighted role of farmers' commodities, cropping systems for value chain development, and improving marketing of nutri products. Dr V. Vijaya Lakshmi, Dean of Community Science, University Officers, 15 participants from different ICAR and SAU's have attended the programme.



Glimpses of Training Programme

### Training on Biotechnological Tools for Crop Improvement

The Institute of Biotechnology (IBT-PJTSAU) in collaboration with TS-COST inaugurated a two weeks training programme on Biotechnological tools for crop improvement from 29 January 2024 to 10 February 2024 at IBT, Rajendranagar, Hyderabad. In the inaugural programme Dr Sean Mayes, (Global Research Programme Director- Accelerated Crop Improvement, ICRISAT, Hyderabad), Dr P. Raghu Rami Reddy (Director of Research, PJTSAU), Dr M. Malla Reddy (Associate Director of Research, RARS, Palem, PJTSAU), Dr Manish Pandey (PS - Groundnut Genomics, ICRISAT), attended. Participants (25) from different agricultural, horticultural universities and ICAR, CSIR research institutes across the state participated in the program.

The training programme was concluded at the Institute of Biotechnology, Rajendranagar, on 10th February, 2024. Dr Ahmed Kamal, Consultant, TSCOST, participated as Chief Guest of the valedictory function. Dr M. Venkata Ramana, Registrar, PJTSAU. Dr P. Raghu Rami Reddy, Director of Research, PJTSAU, Dr C.V. Sameer Kumar, Director, IBT, Dr Shantha Kumari, Representative of TSCOST and trainees attended the valedictory programme.

### Agri Tech South 2024

PJTSAU actively participated in the Agri Tech South 2024 Agri-Tech Vision and Conference organized by Confederation of Indian Industry (CII), Telangana from 16-18 February 2024 at the University Auditorium. Shri T. Nageshwara Rao, Minister for Agriculture, Marketing, Cooperation, Handlooms and Textiles, Government of Telangana, attended the inaugural session of Agri Tech South-Vision and Conference and addressed the scientists, students, agro industrialists, startup, entrepreneurs and farmers. He also visited the exhibition organized by CII in a big way at the sports complex of University and interacted with the scientists.



Glimpses of Agri Tech South

### RLBCAU, Jhansi

#### North Zone Regional Agricultural Fair 2024

The North Zone Regional Agricultural Fair on *Regenerative Agriculture for Sustainable Development*, sponsored by the Ministry of Agriculture and Farmers Welfare, Government of India, was organized by the Directorate of Extension Education, RLBCAU, Jhansi, from 08-10 February 2024.

North Zone includes Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, Uttarakhand, Uttar Pradesh, Delhi, and Chandigarh. Shri Surya Pratap Shahi, Minister of Agriculture, Uttar Pradesh, inaugurated the Regional Farmers Fair-2024 on 08 February 2024 in the august presence of Vice Chancellor, Dr Ashok Kumar Singh; Director Agriculture, Shri Jitendra Kumar Tomar; DG, UPCAR, Dr Sanjay Singh; Pramod Chaudhary, BAERC; Vice Chancellor, RVSKVV, Gwalior, Dr Arvind Shukla; Shri Abhay Mahajan, DRI, Chitrakoot; Jhansi, Sadar MLA, Shri Ravi Sharma and CDO, Jhansi, Junaid Ahmed.

During this event, CAUs, SAUs, ICAR institutes, NGOs, FPOs, and agro-input manufacturers showcased the improved technologies for the benefit of farmers. Kisan Mela Smarika was also





published to promote the message of Regenerative Agriculture. IFS models, millets processing, protected polyhouse facilities, drone technology, Shri Lakshmi honey, and seed collection of more than 250 improved varieties, germplasm of oilseeds and pulses were also showcased during this event. More than 300 honey bee boxes were distributed to the farmers on the inauguration day of RAF-2024.

*Shri Anna* nutrition millets training and dish exhibition were also organized under the joint aegis of RLBCAU, Jhansi, and the Agriculture Department of Jhansi district. More than 100 participants took part in this competition and displayed around 150 dishes made from *Shree Anna*. The chief guest at the closing ceremony was Shri Narendra Singh Tomar, Speaker, Madhya Pradesh Legislative Assembly, and the former Minister of Agriculture and Farmers Welfare, GoI. The closing ceremony was witnessed by Samuel Parveen Kumar, Joint Secretary, Ministry of Agriculture, Government of India; Director of Extension, GoI; Dr S.K. Mishra, Chancellor, RLBCAU, Jhansi, Dr Punjab Singh, Vice Chancellor, RLBCAU, Jhansi, Dr A. K. Singh, and Mayor Jhansi, Shri Bihari Lal Arya.

More than 15,000 farmers from the different states of the northern region actively participated in the regional agricultural fair. Stakeholders including 25 ICAR Institutes displayed in 125 stalls. Flower Show was also organized as a part of the regional agricultural fair. ICAR-CARI, IVRI and KVK-Shivpuri were awarded as best stalls in their respective categories. University Thematic Pavillion on Regenerative Agriculture for Sustainable Development, was also ranked first. The University also inaugurated a YouTube channel where the *Bundeli Krishi Sandesh* issue is released every fortnight for advisory on farm-related issues. The University also signed an MoU with more than 25 FPOs to foster extension networking and linkages for value addition.

The North Zone Regional Agricultural Fair Programme had six technical sessions across three days where fruitful discussions on production, management, processing, and creating a network of linkages were emphasized. Major cereal crops, pulses, millets, oilseeds, flowers, vegetables, fruits, agroforestry medicinal and aromatic plants, etc., showing potential for Bundelkhand Region were thoroughly discussed.

Success stories in the agriculture across India were discussed in a technical session where five *Padam Shri* awardee farmers and two progressive farmers shared their experience and gave an insight of their journey. Entrepreneurial orientation through mushroom production, beekeeping, vermicompost, seed production, etc., was also given a separate session. Role of women in agriculture and society was discussed, and the involvement of women in various sectors of agriculture, along





with group approaches such as SHGs and FPOs, was discussed. A state-supported programme on millet and its recipes, was also organized, and prizes were distributed. Twelve progressive farmers from Bundelkhand and across the country were also awarded for their excellence in agriculture.

### 11<sup>th</sup> Foundation Day of RLBCAU

RLBCAU celebrated its 11th Foundation Day on 5 March 2024 with various events, including the flag-off of the Kishan Bharat Yatra, invited lectures, and cultural programs. Dignitaries, university officials, and guests attended, enhancing the occasion's significance. Traditional lamp lighting marked the beginning, followed by welcoming remarks and speeches by distinguished speakers. Agricultural insights were shared, and lectures on agricultural research enriched the audiences' understanding. The Chief Guest, Shri Hargovind Kushwaha, shared important thoughts on agriculture and academia. Dr A. K. Singh, Vice Chancellor of RLBCAU, highlighted the University's accomplishments and plans. The festivities concluded with a vibrant student cultural program.



### Dragon Fruit and Strawberry Intercropping Model

Intercropping, the simultaneous cultivation of two or more crops in proximity, offers a promising approach to maximize land productivity, optimize resource use, and enhance agricultural sustainability. Research introduced a novel intercropping model focusing on the cultivation of dragon fruit (*Hylocereus* spp.) and strawberries (*Fragaria* spp.), aimed at harnessing synergistic interactions between these two high-value crops. Dragon fruit and strawberry, known for their unique appearance and nutritional benefits, are becoming increasingly popular in semi-arid regions like Bundelkhand. In India, the commercial farming of these two fruits is expanding, with the market price ranging from 200 to 250 Rs/kg. Intercropping dragon fruit and strawberries presents a unique model of horticulture that can optimize land use and increase fruit yield. This method leverages the vertical growth habit of dragon fruit, which can be trained on trellises, alongside the ground-covering nature of strawberries.



It also allows for a diversification of income sources for farmers, as these crops have different harvest times. Implementing this model requires careful planning to ensure that the nutritional needs and root systems of both plants are accommodated without competition. The dragon fruit and strawberry intercropping model (DFSIM) seeks to capitalize on the complementary growth habits, resource requirements, and market demand of dragon fruit and strawberries to create a resilient and economically viable agroecosystem.

Cultivating dragon fruit and strawberries on the same plot of land allows for a year-round production cycle, optimizing land use and potentially increasing profitability for growers. Dragon fruit cropping period is from July to mid-December, followed by the strawberry



fruiting season from January to March. This sequential cultivation can be highly beneficial as it ensures that the land is continuously productive, providing a steady stream of high-value fruits to the market. The cultivation of dragon fruit and strawberries presents a model of staggered economic benefits for farmers. On 1 acre of land, the estimated profit from dragon fruit cultivation after five years is approximately ₹ 5.1 lakh, and strawberries can yield about ₹ 3.38 lakh annually. It is a strategic approach to horticulture that maximizes land use and can lead to sustainable economic growth.

### Winter School

The ICAR-sponsored winter school on- *From genes to proteins: addressing molecular complexity of agriculturally important traits in crops*, was held from 19 February to 10 March, 2024. The focus was on addressing the molecular complexity of agriculturally important crop traits. Participants gained hands-on training in genomics, proteomics, bioinformatics, and system biology analysis.



### Dynamics of Women in Agricultural Livelihood in Bundelkhand Region

The Indian Council of Social Science Research (ICSSR), New Delhi, awarded a two-year research programme on Women's Livelihood in the Bundelkhand. The study aims to explore the historical and contemporary roles of agricultural women, investigating the impacts of socio-economic, cultural, and policy changes. Utilizing methodologies like historical analysis, surveys, and interviews, it seeks to identify factors shaping women's roles and influence policymaking to enhance socio-economic status, gender equality, and rural regional development.

### RLBCAU and Bundelkhand FPOs Meet

An interactive interface meeting was held between RLBCAU, Jhansi, and the FPOs operating in the Bundelkhand region on 17 January 2024. It was held to sensitize the FPOs about the University's extension service offerings and to clarify how FPOs can take advantage of such services. The meeting conducted in the gracious presence of statutory officers and representatives of FPOs from Jhansi and Lalitpur District. It was emphasized that through the interactive platform between RLBCAU and FPOs, the University could increase the outreach of its need-based and resource-oriented extension services to many farmers in Bundelkhand.

### Training on Poultry Farming

A 3-day poultry farming training was held for 35 farmers from Jhansi, Datia, and Gorakhpur from 7 to 9 November 2023. Topics covered were-- challenges, nutrition, and marketing strategies tailored to the region. Lectures were conducted on poultry farming, housing, nutrition, health management, economic aspects, government support, and marketing strategies. Exposure visits to local poultry farms and KVK, Datia, were arranged.

### Training on Induced Breeding Technique of Fish

A 3-day farmers' training programme was organized in collaboration with ICAR-CIFE, Mumbai, under SCSP from 15- 17 January 2024. This training aimed to enable fish farmers in the Bundelkhand region to produce high-quality fish seeds while promoting high-quality fish seed production locally to end the dependency on other states. Farmers (25) from Jhansi and Datia districts participated in this training, including many rural women and young farmers.





### Farmers' Training on Composite Fish Culture Through Scientific Methods

A 3-day training on scientific composite fish culture, jointly organized by ICAR-CIFE, Mumbai, and RLBCAU, Jhansi, under SCSP, took place on 27-29 February 2024. It aimed to empower fish farmers in Bundelkhand to breed faster-growing Indian major carps and exotic major carps while emphasizing water conservation and technological advancement for doubling production. The training provided high-quality seeds and fish feed to 25 beneficiaries from Jhansi and Datia. Essential supplies were distributed to 16 economically disadvantaged fish farmers on the final day.

### Training Programme on Beekeeping

A 3-day residential training on Beekeeping was organized during 12-14 March 2024. Funded by Rastriya Krishi Vikas Yojana Uttar Pradesh, the training benefitted 55 farmers. The training emphasized apiary establishment, honeybee management, pests and diseases, etc.



### Training on Flower Crops

Department of Floriculture and Landscaping organised a training under FLD on *Aaya vardhan hetu unit taking dwara phoolon ki kheti* from 18-20 March 2024. Training focused on advanced techniques for 28 farmers from Datia (MP) and Jhansi (UP) for higher income participated. Training covered nursery production, cultivation, marketing, and pest management.



### Training on Commercial Goat Farming in Bundelkhand

A 4-day training was organized for 50 farmers on Commercial Goat Farming in Bundelkhand from 18-21 March 2024. The trainees from Jhansi, Jalaun, Datia, and Niwari were apprised on multiple aspects of goat farming by experts from ICAR-IGFRI, Jhansi and DUVASU, Mathura. They informed on importance of commercial goat farming, breed selection, feed preparation, cultivation of fodder crops and various governments scheme for goat farming.

## SKUAST-J, Jammu

### Trainings

- Organized 1 month's training programme for incubates of UDGAM and PRAGATI programmes of ABI, SKUAST-Jammu, w.e.f. 19 March 2024.
- Organized 1-week training programme on Virus Indexing in collaboration with Department of Horticulture, Jammu from 1-7 March 2024.



Trainees performing Practical during Training Programme



Identification of Symptoms of Viral Diseases Under Field Conditions

### Symposium

- Organized National symposium on *Plant Pathology in Human Welfare* and Annual Meeting (North Zone) of Indian Phytopathological Society at the SKUAST-Jammu from 9-10 January 2024.



Release of Souvenir

- Organized 6<sup>th</sup> Jammu and Kashmir Agricultural Science Congress on the theme *Diversification of Agriculture for Self-Reliant Mountain Agroecology* held at SKUAST-J, Chatha, Jammu, J&K from 08-10 February 2024.

The university also organized following programmes:

- Convened the input distribution cum awareness programme at Sanasar on 15 March 2024 under TSP (AICRP on Nematodes)
- One-day workshop on *Reducing the yield gaps in rice for Jammu region* was conducted at Conference Hall SKUAST-J on 23 February 2024.



### SKUAST-K, Srinagar

#### Trainings

**Conducted 9 trainings on Skill Training for Rural Youth (STRY), each 7 days entitled as:**

- Organic input production for climate smart agriculture. Dated: 08-14 January 2024.
- Climate change resilient integrated farming system for sustainable socioeconomic development of rural youth. Dated: 17-23 February 2024.
- Canopy management of fruit crops. Dated: 19-25 February 2024.
- Natural farming- A step towards sustainability. Dated: 14-20 March 2024.
- Entrepreneurship opportunities in Livestock farming. Dated: 14-20 March 2024.
- Vermicompost and vermiwash production for entrepreneurship development. Dated: 14-20 March 2024
- Nursery raising for quality planting material production. Dated: 21-27 March 2024
- Advanced feeding strategies for livestock during winter. Dated: 21-27 March 2024
- Organic farming. Dated: 21-27 March 2024.



**Tamil Nadu Veterinary and Animal Sciences University (TANUVAS), Tamil Nadu**

**23<sup>rd</sup> Convocation**

23<sup>rd</sup> Convocation of TANUVAS was held at Madras Veterinary College, Chennai on 13 March 2024. H'E Governor of Tamil Nadu, Shri R.N. Ravi presented degrees and medals to the Graduands. Dr Raghavendra Bhatta, Deputy Director General (Animal Science), ICAR delivered Convocation Address. A total of 1,166 candidates were awarded degrees including 796 Under graduates, 179 Post graduates, 113 Ph.D. scholars and 78 PG Diploma holders. A total of 253 medals / awards were awarded to 32 Under graduates, 49 Post graduates and 15 Ph.D. scholars for their academic excellence and performance, apart from 12 medals for the faculty members.



23<sup>rd</sup> Convocation of TANUVAS – MVC, Chennai

**TANUVAS also Organized Following Events:**

- International Conference on Sustainable animal Nutrition for Global Health and Production: Innovations and Directions, was conducted at Madras Veterinary College, Chennai from 23-25 January 2024.

Dignitaries during inauguration of International Conference held at MVC, Chennai - 23.01.2024 to 25.01.2024



- A National Conference on Moving towards Sustainability: Livestock Production Systems and Adaptive Strategies in the Era of Climate Change, at Madras Veterinary College, Chennai on 01 and 02 February 2024.

National Conference on 'Moving towards sustainability: Livestock production systems and Adaptive strategies in the era of Climate Change' – MVC, Chennai



- 7-day Intensive Startup Skill Training (ISST 2024) organized by VIF @ TANUVAS was inaugurated by the Vice Chancellor, TANUVAS on 05 February 2024.

7-day Intensive Startup Skill Training (ISST 2024) at TANUVAS



- 2<sup>nd</sup> National Veterinary Practitioners conference on 'Recent Advances in Small Animal Practice', was organized on 08 and 09 February 2024 at Madras Veterinary College, Chennai. 'VET GUIDE' Expert Tele Guide App was launched by the Vice Chancellor, TANUVAS.

Vice Chancellor, TANUVAS launching 'VET GUIDE' Expert Tele Guide App





- Tamil Nadu Veterinary and Animal Sciences University and Indian Society of Animal and Production Management (ISAPM) jointly organized National Conference on *Optimization of Livestock Farming for Sustainable Development in the Era of Climate Change*, from 22-24 February 2024.

National Conference on 'Optimization of livestock farming for sustainable development in the era of climate change'



- Tamil Nadu Veterinary and Animal Sciences University conducted a National training on *Basic and advanced ultrasonographic diagnostic techniques in large animals*, from 04-08 March 2024 at Veterinary College and Research Institute, Orathanadu.

National Training on 'Basic and advanced ultrasonographic diagnostic techniques in large animals' – VC&RI, Orathanadu



**TNAU, Coimbatore**

**43<sup>rd</sup> Annual Convocation in TNAU**

The 43<sup>rd</sup> Annual Convocation of TNAU was held at Tamil Nadu Agricultural University, Coimbatore on 09 March 2024. H'E Governor of Tamil Nadu and the Chancellor of TNAU, Shri R.N. Ravi presided over the Convocation. Shri M. R. K. Panneerselvam, Minister for Agriculture and Farmers' Welfare Government of Tamil Nadu and Pro-Chancellor of this University, announced the New Endowments. On this occasion, degree certificates were awarded to 1,589 candidates in person and 299 candidates in absentia mode from the Constituent Colleges candidates and 1,845 candidates from Affiliated Colleges of TNAU.



Shri R. N. Ravi, Hon'ble Governor, Tamil Nadu Presenting Degree to Students

**Trainings**

**Training on Mushroom and Spawn Production at KVK, Kanyakumari**

Krishi Vigyan Kendra, Kanyakumari conducted a skill training on *Mushroom Cultivation and Spawn Production Technology*, under ARYA project from 02- 08 January 2024 for the benefit of farmers. Dr K. Kavitha, Associate Professor (Plant Pathology), handled the skill development training. Technical lectures on importance of mushroom, cultivation of oyster mushroom, cultivation of milky mushroom, spawn production technology, paddy straw mushroom, button mushroom production technology and value addition in mushroom were imparted during the training programme. Hands on demonstration on preparation of medium, isolation of mushroom culture, mother spawn preparation and bed spawn preparation using sorghum and rice chaffy grain, were also conducted. The ICAR – KVK Programme Coordinator, Dr S. Suresh, distributed certificates to the participants.



Trainee Receiving Certificate

**TNAU Trained Scientists on Volatilomics**

ICAR sponsored short course 'Volatilomics: A Key to Understand Plant-Microbe Interactions and

Stress Management in Crop Plants for a Greener Tomorrow” was organized by the Department of Agricultural Microbiology, Coimbatore from 01 February 2024 to 10 February 2024. The training was inaugurated and the training manual was released by Dr R. Thamizh Vendan, Registrar, TNAU, Coimbatore in the presence of Dr P. Balasubramaniam, Director (NRM), TNAU, Coimbatore. Dr U. Sivakumar, Professor and Head, Department of Microbiology, Coimbatore briefed about the concept of the training. Dr R. Anandham, Associate Professor (Agricultural Microbiology) organized the technical sessions. Scientists across the country participated and got benefitted.



Dignitaries Releasing Training Manual

### **Turnkey Workers Training Programme on Biogas Technology**

Turnkey workers training programme on Biogas Technology for Sustainable Fuel and Organic Manure, was organized at the Department of Renewable Energy Engineering, AEC&RI, Coimbatore under the Biogas Programme, sponsored by Ministry of New and Renewable Energy (MNRE) from 02 February 2024 to 16 February 2024. The inaugural session was presided by Dr A. Raviraj, Dean, AEC&RI, Coimbatore, who elaborated on the employment and entrepreneurship opportunities in renewable energy sector especially in biogas domain for building green nation. Dr D. Ramesh, Professor and Head, Department of Renewable Energy Engineering, AEC&RI, Coimbatore highlighted the importance of creating manpower in biogas field. Around 50 trainees participated in the event.

### **Symposium / Conference**

#### **ICPHTV' 24 Organized at Coimbatore**

Horticultural College and Research Institute, Coimbatore in association with the Society for Promotion of Horticultural Science and Technology (SoPHoST) organized an International Conference on Emerging Post Harvest Technologies for Shelf-Life Enhancement and Valorisation of Horticultural Crops (ICPHTV' 24) from 04 January 2024 to 05 January 2024 at Coimbatore. The conference was organized in hybrid mode and more than 500 participants participated across the globe. Twenty experts from 10 countries including USA and European countries delivered lead talks in six thematic areas viz., crop improvement, advances in shelf life and post-harvest quality research, supply chain management, logistics and new age packaging, smart processing techniques and value addition, and trends in phytochemicals, pigments, nutraceuticals and nano delivery systems.

Dr V. Geethalakshmi, Vice Chancellor of TNAU highlighted the importance of food and nutritional security in her presidential address. Dr P. Irene Vethamoni, Dean, HC & RI, Coimbatore asserted on the importance of cold chain, pre-cooling and refrigerated transportation to minimize the postharvest losses. The Chief Guest Dr T. Janakiram, Vice Chancellor of Dr Y.S.R. Horticultural University, Andhra Pradesh, emphasized the efficient usage of solar energy in the field of postharvest technology. The Guest of Honour, Mr D. Sathiyam, IFS, Secretary, Spices Board, Government of India indicated the role of Codex Committee on Spices and Culinary Herbs (CCSCH) headed by the Spice Board, Cochin. Dr C. Subesh Ranjth Kumar, Professor (Horticulture) and Organizing secretary coordinated the programme.





## National Conference on Integration of Multi-Omics Approaches for Crop Improvements

TNAU's Centre for Plant Molecular Biology and Biotechnology organized a National Conference on *Integration of Multi-omics Approaches for Crop Improvements*, on 4-5 March 2024. In the inaugural session, welcome address was delivered by Dr A. John Joel, Professor and Head, Department of Plant Molecular Biology and Bioinformatics, Dr N. Senthil, Director, Centre for Plant Molecular Biology and Biotechnology delivered the introductory remarks of the conference. During the technical sessions, the guest speaker Dr R. Sowdhamani, Senior Scientist and JC Bose fellow, National Centre for Biological Sciences, Bengaluru, spoke on -- Genomics of Medicinal Plants. Dr Shailesh Kumar, Scientist IV, NIPGR, New Delhi, shared his expertise on Surge of genomic datasets for the identification of novel RNAs in plants; and Dr S. Manjula, Scientist F, Rajiv Gandhi Centre for Biotechnology (RGCB), Shrivananthapuram gave insights on Proteome and transcriptome of *Piper nigrum*. Dr M. Raveendran, Director of Research, TNAU, Coimbatore gave presidential address, and Dr D. Uma, Professor, Department of Plant Molecular Biology and Bioinformatics delivered vote of thanks. Around 200 members including research scholars and faculty members participated from various universities and institutes across India.



Dignitaries Releasing Publication

During the technical sessions, the guest speaker Dr R. Sowdhamani, Senior Scientist and JC Bose fellow, National Centre for Biological Sciences, Bengaluru, spoke on -- Genomics of Medicinal Plants. Dr Shailesh Kumar, Scientist IV, NIPGR, New Delhi, shared his expertise on Surge of genomic datasets for the identification of novel RNAs in plants; and Dr S. Manjula, Scientist F, Rajiv Gandhi Centre for Biotechnology (RGCB), Shrivananthapuram gave insights on Proteome and transcriptome of *Piper nigrum*. Dr M. Raveendran, Director of Research, TNAU, Coimbatore gave presidential address, and Dr D. Uma, Professor, Department of Plant Molecular Biology and Bioinformatics delivered vote of thanks. Around 200 members including research scholars and faculty members participated from various universities and institutes across India.

## UAS, Bengaluru

### 58<sup>th</sup> Convocation of UAS, Bengaluru

The University of Agricultural Sciences, Bengaluru conducted its 58<sup>th</sup> convocation on 04 March 2024. Dr S. V. Suresha, Vice Chancellor, UASB, extended a warm welcome to all and provided an overview of the University Progress Report. H'E Shri Thawar Chand Gehlot, Governor of Karnataka and Chancellor of UAS-B, declared the Convocation Open. Shri N. Chaluvarya Swamy, the Minister for Agriculture, Government of Karnataka and Pro-Chancellor of UAS-B, delivered the convocation address. Shri M.C. Rangaswamy, Progressive farmer from Doddamagge village, Arakalagudu Tq. Hassan Dist. received an Honorary Doctorate, in this convocation.

During 58<sup>th</sup> convocation 1,244 students were conferred with various degrees, of which 870 students received Bachelor's, 291 students Master's and 83 students Doctoral degrees. Gold medals (156) and certificates were awarded to Under Graduate, Master's and Doctoral degree students, of which 49 girls received with 45 UAS Gold Medals, 66 Donor's Gold Medals and 19 Donor's Gold Medal Certificates. 14 Boys with 08 UAS Gold Medal, 15 Donor's Gold Medal and 03 Donor's Gold Medal Certificates, respectively.



### Biofuel Seed and Raw Material Collectors Workshop

Biofuel Park, Madenuru, Hassan organized workshop on *Biofuel Seed and Raw Material Collectors*, on 20 January 2024 at College of Agriculture, Hassan in collaboration with Karnataka State Biofuel Development Board, Bengaluru and Mahatma Gandhi Institute of Rural Energy and Development, Bangalore. The programme was inaugurated by Vice Chancellor of UAS, Bengaluru Dr S. V. Suresha. The chief guests of the programme were Dr T. K. Prabhakar Shetty, Dr H. L. Harish, Shri B. S. Ullas,



Shri N. Dinesh, Dr M. Chandregowda, members of the Board, UAS, Bengaluru and Dr Basavegowda, Registrar and I\c Director of Extension, UAS, Bengaluru. The special invitees of the programme were Dr Balakrishna Gowda, Member of KSBDB, Bengaluru. The programme was presided by Dr S. N Vasudevan, Dean (Agri.) and Campus Head, CoA, Hassan. Nearly 550 members of FPO, NRLM (Krishi Sakhi and Pashu Sakhi), SHG and KMF secretaries attended in the programme.



**RAWEP: Agricultural Exhibition**

College of Agriculture, Hassan Organized RAWEP: Agricultural Exhibition on 10 January 2024 at APMC Yard, Gandasi Hand post, Arasikere, Hassan district. The programme was inaugurated by Vice Chancellor of UAS, Bengaluru Dr Suresha S.V., Presided by Dr S. N. Vasudevan, Dean (Agri.), CoA, Hassan. The chief guests of the programme were Dr L. Manjunath, Rtd. Dean (Agri.) COA, Hassan, Dr S. A. Nithin, Principal, RIAMS, Hassan and KVK, ARS Scientists along with Line department officials and Grama Panhcayath office bearers. Around 100 stalls of students, line departments, Private companies and SHG groups exhibited during the Exhibition. In this exhibition 100 stalls and nearly 15 stalls of value-added products of minor millets exhibited. Totally 4,500 participants were witnessed the programme.



Glimpses of Exhibition

**Farming Experience for Urban Youth**

Agricultural Technology Information Centre, Directorate of Extension, GKVK in collaboration with Skill Development Centre, UAS-B organised training programme on Farming Experience for Urban Youth, under HRD programme of ICAR SC-SP on 23 February 2023 for 40 candidates. Dr V. L. Madhuprasad, Director of Extension inaugurated the programme, Dr Siddayya, Director, Skill Development Centre was the chief guest and Dr K. P. Raghuprasad, presided the programme. Dr M. Shalini, Assistant Professor (Horticulture) associated in organising the programme.



'Farming Experience for Urban Youth' - Training Programme

**Natural Farming Trainings for Community Resource Persons (Krishi Sakhi)**

• ICAR-KVK, Hassan has organized the five days training programme on Natural Farming for Community Resource Persons (Krishi Sakhi) of Farm Livelihood Training programme in collaboration with MANAGE, Hyderabad, SANJEEVINI-Karnataka State Rural Livelihood Promotion Society and Department of Skill Development, Entrepreneurship and Livelihood, Government of Karnataka at KVK Hassan from 25-29 March 2024. Natural farming farmer Mr Lakshmeesh was



Group Photo of Natural Farming-Krishi Sakhi Training Programme

felicitated. The programme was inaugurated by Mr Lakshmeesh and Mr Nagavarma, Progressive IFS Farmer, Holenarsipura taluk.

In the inaugural speech, Mr Lakshmeesh addressed that participants of this programme should act a bridge between farmers and agricultural technology developing institutes. Further, the Krishi Sakhi should encourage environment friendly agriculture by adopting natural farming and give more importance to utilization of on farm inputs to reduce cost of cultivation and to achieve sustainability in farming. Dr Rajegowda, Senior Scientist and Head, KVK, Hassan, in his presidential remarks said that trainees should focus on increasing the farmers' income by practicing zero budget natural farming and also should encourage the farmers to practice Jeevmrutha, Ghanajeevmrutha application in their fields to reduce the cost on chemical fertilizers and also informed to motivate group marketing rather than individual marketing of products because it will fetch more profit to the farmers. Krishi Sakhi participants were present in the program.



Jeevmrutha Preparation

- ICAR- KVK, Hadonahalli, Bengaluru Rural District organized 5-day training programme on Natural Farming for Krishi Sakhis from 12-16 March 2024 and 19-23 March 2024 sponsored by MANAGE Hyderabad. The training programme was inaugurated by Mr Vittal Kaavale, Project Director, Sanjeevini-SRLM of Bengaluru Rural District, Dr B.G. Hanumantharaya, Senior Scientist and Head, ICAR – KVK, Bengaluru Rural District presided the inaugural session and briefing about the role of Krishi Sakhi's in farming community said that they should act like frontline workers in farming field and gain knowledge on Natural Farming. During the programme various technical sessions were organized and also demonstrated the preparation of *beejamrutha*, *jeevamrutha* and *panchagavya*. Krishi Sakhis (33) benefitted from each batch.

### Skill Training on Nursery Management-Principles and Practices

ICAR, KVK, Kandali, Hassan, organized 6-day skill training programme on Nursery Management: Principles and Practices. The training was sponsored by MANAGE, Hyderabad and conducted from 11-16 March 2024 at KVK Hassan. The valedictory function of this training was on 16 March 2024. The aim of this training programme was to develop a skill in unemployed youth in nursery management of horticulture crops. About 15 trainees from 6 different districts of Karnataka participated in the training programme.



Exposure Visit



Method Demonstration of Grafting Technique

### Sheep Rearing Training

Skill Training for Rural Youth on Sheep rearing and management was organized at ICAR-KVK, Chintamani under Extension Education Unit (Kolar) from 20-25 November 2023 Dr Papireddy, Extension Leader, Dr Dilip S, Scientist (Agricultural Extension) and Mrs Sindhu K, Scientist (Horticulture) inaugurated the programme. Dr Papireddy M. explained about training programme.





Group Photo



Field Visit- Importance of Fodder Crop in Sheep Rearing

### Training on Millets

ICAR- Krishi Vigyan Kendra, Hadonahalli, Bengaluru Rural District organized 6-day Skill development training programme on Cultivation Practices of Millets, Processing and Value Addition, under Attracting and Retaining Rural Youth in Agriculture (ARYA) project for Rural youth from 8-13 January 2024. During the training programme Dr Venkate Gowda, J., Scientist (Agronomy) delivered lecture on improved cultivation practices and new varieties of millets. Dr Ashwini, Assistant Professor, Institute of Baking Technology and Value addition, GKVK, UAS, Bengaluru, was invited as Resource Person and demonstrated the millet based bakery products such as cookies, doughnuts and cake. Mrs Meghana, S.V., Scientist (Home Science), delivered lecture on processing and value addition of millets. She also highlighted about the importance of FSSAI registration and marketing strategies for millet value added products. Mrs Navanitha, millet entrepreneur participated as resource person and demonstrated the millets value added products like malt, laddu, mixture and nippattu. Rural women (20) participated in the skill training programme and were encouraged to take up millets value addition as an enterprise.

### Bee Keeping Training Under ARYA Project

ICAR- KVK, Hadonahalli, Bengaluru Rural District organized 6-day Skill development training programme on Bee Keeping under Attracting and Retaining Rural Youth in Agriculture (ARYA) project from 29 January to 3 February 2024. The training programme was inaugurated by Dr B.G. Hanumantharaya, Senior Scientist and Head, ICAR – KVK, Bengaluru Rural District. He briefed about the bee keeping in agriculture and said that there is a huge demand for honey and no doubt it can be a profitable venture in the present scenario. Dr Dharshini, G.M., Scientist (Plant protection) gave detailed information about apiculture like Life cycle of honey bees, Different species of bees and their family structure, Equipment used in bee keeping, Establishment of apiary, Maintenance of bee colonies, Shifting of bee boxes/Transformation of colony, Management of honey bees in different seasons. Dr K.T. Vijay Kumar, Assistant professor briefed about the Enemies and diseases of Honey bees, Harvesting, Processing and storage of products of Honey and their marketing. During the programme Training Kits, Bee-box with colony, Bee veil, Wax sheets, Smoker, Honey extractor were provided to the trainees. The training programme benefitted 20 rural youths.

### Coconut Climbing Training Under ARYA Project

ICAR-KVK, Hadonahalli, Bengaluru Rural District organized 6-day Skill development training programme on Improved cultivation practices and mechanization in coconut, under ARYA project from 12-17 February 2024. The training programme was inaugurated by Dr B.G. Hanumantharaya, Senior Scientist and Head, ICAR – KVK, Bengaluru Rural District and briefed about the training programme where the rural farm youths are trained to generate employment opportunities in rural



areas and may remain at their villages instead of migrating to the cities for the employment. During the technical session Dr Sriram, Professor (Retd.), UAS, Bengaluru gave detailed information about the improved varieties of coconut, selection of suitable varieties and by products of coconut. Mr Bharath, S.P., Master trainer demonstrated the skills of coconut tree climbing through the climber machine and gave detail explanation on crown management in coconut. During the programme Training Kits, Coconut tree climber, helmet, sickle and first aid kits were provided to the trainees. Twenty rural youths participated in the training programme.

#### **Besides, UAS, Bengaluru also organized following Training Programmes:**

- Research Institute on organic farming organized a National High end workshop on Novel approaches and techniques in organic farming during 27 February 2024 to 07 March 2024 at GKVK, Bengaluru. It was sponsored by DST-SERB Scheme on Accelerate Vignana.
- All India network project on Soil Arthropod pests organized a National workshop on Capacity Building in Taxonomy of Indian Scarabaeidae: Diversity and Life Strategies of White Grubs, during 12 March 2024 to 21 March 2024 at GKVK, Bengaluru. It was sponsored by DST-SERB Scheme on Accelerate Vignana.
- Institute of Baking Technology and Value Addition organized following training programmes:
  - 14-week Certificate Course in Baking Technology, 19 participants.
  - 4- week Baking Course, three programmes, 60 participants.
- Skill Training for Rural Youth on organic farming was organized at KVK, Chintamani from 11 to 15 March 2024. Dr Papireddy, Senior Scientist and Head; Dr Sandhya, Scientist (Soil Science) and Dr Praveenakumar, Scientist (Horticulture) inaugurated the programme. Dr Papireddy M. explained about training programme. Dr Sandhya highlighted about importance of soil and water conservation in organic farming. Dr Praveenakumar R. emphasized on use of bio formulation in organic farming.



Glimpses of STRY Programme

- Training programmes on natural farming to Krishi Sakhis were organized at ICAR-Krishi Vigyan Kendra, Chikkaballapura for two batches each comprising 30 Krishi Sakhis. First batch training was organized from 12-16 March 2024 and second batch training was carried out from 18-22 March 2024. Dr Papireddy, Senior Scientist and Head inaugurated the programme and highlighted about natural farming and its need in present scenario. Lecture sessions were organized on various topics and also organized method demonstrations in practical sessions. Krishi Sakhis (60) benefitted from the programme.



Method Demonstrations During Training Programme

## MoUs

Universities signed various Memorandums of Understandings/Agreements.

### AU, Kota

#### MoU with MPUAT, Udaipur

A strategic partnership agreement signed between Agriculture University, Kota and Maharana Pratap University of Agriculture and Technology, Udaipur, Rajasthan for cooperation in Agriculture Education and Research for five years.

#### MoU with ICAR-NBPGR, New Delhi

A strategic partnership agreement signed between Agriculture University, Kota and ICAR-National Bureau of Plant Genetic Resources, New Delhi for cooperation in education and research for three years.

#### MoU with MIMT, Kota

A strategic partnership agreement signed between Agriculture University, Kota and Modi Institute of Management and Technology, Kota for cooperation in education, research and Extension for five years.



MoU Signing Ceremony



Exchange of MoU

#### MoU with JDB Government Girls College, Kota, Rajasthan

A strategic partnership agreement signed between Agriculture University, Kota and Janki Devi Bajaj Government Girls College, Kota, Rajasthan for cooperation in Education, Research and Extension for five years.

### BAU, Sabour

SABAGRI has signed an MoU with Chandragupt Institute of Management – Business Incubation and Innovation Foundation (CIMP-BIIF), Patna who was very instrumental in implementing Bihar start-up Policy 2022. The MoU was signed on the occasion of CIMPHONY-2024, the Annual Function of Chandragupt Institute of Management Patna (CIMP), in Patna by Dr Anil Kumar Singh, Director Research, BAU, Sabour and Shri Kumod Kumar, CEO, CIMP-BIIF, Patna This MoU will help in boosting necessary infrastructure and resources for start-ups; capacity building by workshops, diploma and certificate courses, research program, specialized training session, MDP, EDP, and FDP; creating resource pool to cater to the diverse need of start-ups; easing of access to funding for start-ups; providing required technical support; facilitating networking opportunity; and managing IPR effectively for start-ups.



**Dr YSPUHF, Nauni**

The university signed MoUs with (i) University of Warwick, United Kingdom; (ii) Central Institute of Temperate Horticulture (CITH), Srinagar, J&K; and (iii) IARI, New Delhi.

**Dr YSRHU, Venkataramannagudem**

- Memorandum of Understanding between Dr YSR Horticultural University and Tamil Nadu Agricultural University (TNAU), Coimbatore for 3 years (04 January 2024 to 03 January 2027).
- Memorandum of Understanding between the National Institute of Food Technology, Entrepreneurship and Management, Thanjavur and Dr YSR Horticultural University for 5 years (05 January 2024 to 04 January 2029).
- Memorandum of Understanding between Dr YSR Horticultural University and Sir Arthur Cotton Nursery Farmers Association, Kadiyam, East Godavari District for 3 years (25 January 2024 to 24 January 2027).
- Memorandum of Understanding between Dr YSR Horticultural University and Sri Karan Narendra Agriculture University (SKNAU), Jobner, Jaipur for 3 years (02 February 2024 to 01 February 2027).
- Memorandum of Understanding between ICAR - Central Tuber Crops Research Institute (ICAR - CTCRI), Sreekariyam, Thiruvananthapuram and Dr YSR Horticultural University for 3 years (07 March 2024 to 06 March 2027).
- Memorandum of Understanding between ICAR – Indian Institute of Oil Palm Research (ICAR-IIOPR), Pedavegi, Eluru District, A.P. and Dr YSR Horticultural University for 3 years (07 March 2024 to 06 March 2027).

The objectives of these MoUs are:

- human resource development;
- conduct of need based and location specific research; and
- dissemination of proven technologies

**MHU, Karnal**

**MoU signed:** The Maharana Pratap Horticultural University, Karnal signed MoU with Brunel University, London.

**International Linkages**

The University hosted the delegation of Project Monitoring Mission of JICA, members from JICA HQ, JICA India Office, Kochi University Japan, Kochi Prefecture of Japan on 17 February 2024 for future collaboration with Kochi University, Kochi, Japan.

**PAU, Ludhiana**

- MoU signed with National Centre for Organic and Natural Farming (NCONF), Ghaziabad for promotion of organic and natural farming.

- MoA signed with Royal Sugarcane Pvt. Ltd, VPO- Basantpura, Teh- Rajpura, Distt. Patiala, for sugarcane juice bottling technology on 28 February 2024.

### PJTSAU, Hyderabad

- MoU was signed and exchanged between PJTSAU and Koneru Lakshmaiah Education Foundation (KLEF), Deemed to be University, Hyderabad on 19 January 2024.



Officials of PJTSAU and KLEF Exchanging MoU

- Association of Indian Organic Industry (AIOI), New Delhi and PJTSAU was renewed in 01 March 2024 for 3 years. During the last two years 4 batches have rolled out comprising total 147 students registered, out of which 121 students have passed.
- A Memorandum of Agreement was signed between M/s JRM Export Private Limited, Gujarat and PJTSAU, on 19 January 2024 to market *Telangana Sona* low glycemic index rice across Gujarat and India.

### RLBCAU, Jhansi

#### MoU with 27 FPOs of Bundelkhand region

RLBCAU bolstered FPOs in Bundelkhand by signing an MoU with 27 FPOs (14 in Lalitpur and 13 in Jhansi district) on 08 February 2024, during the Northern Regional Farmers Fair. Agriculture Minister of U.P., Shri Surya Pratap Sahi, commended the initiative, suggesting technical assistance for holistic farmer development. The MoU facilitates FPOs accessing need-based technical assistance, technology assessment, demonstration, and capacity development.

### SKUAST-K, Srinagar

- SKUAST-K signed an MoU with ICAR-Indian Agriculture Research Institute (IARI), Delhi for long term collaboration for promotion of students training and quality postgraduate research in 2024 for 3 years.
- SKUAST-K signed an MoU with Indian Institute of Technology, Mandi (IIT Mandi) to foster collaboration and facilities the advancement of knowledge on the basic of reciprocity, best effort, mutual benefit and frequent interaction. To explore possibility of engaging resources between the institution, innovation and entrepreneurship driven opportunities and resources, sharing scientific technical network, R&D infrastructure, partnership of collaboration consultancy and sponsored project in 2024.
- SKUAST-K signed agreement with Estonia University of life science (Mobility Agreement) for Staff/student teaching / training during 2024-25 and 2025-26 in 2024 for two years.
- MoU with ICAR-Central Institute for Research on Buffalo, Hisar (CIRB, Hisar) to promote and accelerate the programmes of academic cooperation in the area of mutual concern in 2024 for 10 years.
- SKUAST-K signed an MoU with Indian Institute of Management, Jammu (IIM Jammu) to promote high performance in academic, entrepreneurship, executive education, skill development and advisory services research and publications, training, capacity building, faculty exchange



programmes, consultancy and organizing various programmes including conferences, seminars symposium and lecture series in 2024 for three years.

- SKUAST-K signed an MoU with ICAR-National Institute of Natural Fibre Engineering and Technology, Kolkata (ICAR-NINFET, Kolkata) for Long term collaboration for promotion of students, training and quality postgraduate research in cutting edge areas in accordance with the provisions as per revised ICAR guidelines in 2024 for 3 years.
- SKUAST-K signed an MoU with ICAR-National Bureau of Plant Genetic Resources, Delhi (ICAR-NBPGR, Delhi) for basic and applied research on collection, conservation and the characterization of germplasm and varietal development in 2024 for 3 years.

## TANUVAS, Tamil Nadu

- A Memorandum of Understanding was signed between TANUVAS and Directorate of Tribal Welfare Department on 06 March 2024 for 2 years. This MoU will foster to undertake the project on Enhancing the Livelihood of Tribal Farmers through Livestock Farming in Four Districts of Tamil Nadu - As a Pilot Study, with a budget outlay of ₹ 2.02 crore.



Exchange of MoU between TANUVAS and Directorate of Tribal Welfare, GoTN

## TNAU, Coimbatore

### TNAU inks MoU with Dr Y.S.R. Horticultural University

A Memorandum of Understanding (MoU) was signed between Tamil Nadu Agricultural University, Coimbatore and Dr Y.S.R. Horticultural University, West Godavari District, Andhra Pradesh on 04 January 2024 at TNAU, Coimbatore to facilitate the exchange of scientific information, germplasm, technologies, information and methodology in the areas of education, research and extension. Dr R. Thamizh Vendhan, Registrar, Tamil Nadu Agricultural University, Coimbatore and Dr B. Srinivasulu, Registrar, Dr Y.S.R. Horticultural University signed the agreement and exchanged in the presence of Dr V. Geethalakshmi, Vice Chancellor of TNAU, Dr T. Janakiram, Vice Chancellor of Dr Y.S.R.HU and Dr P. Irene Vethamoni, Dean, HC&RI, Coimbatore, Deans and Directors of TNAU also attended the MoU signing ceremony.



Dr V. Geethalakshmi and Dr T. Janakiram exchanged the MoU Document

### TNAU signed MoU with ICAR - IISS, MAU

The TNAU, Coimbatore signed an MoU with ICAR-Indian Institute of Seed Science (ICAR-IISS), Mau on 04 January 2024 for facilitating Postgraduate Students' Research and Training. Dr R. Thamizh Vendhan, Registrar, TNAU, Coimbatore and Dr Sanjay Kumar, Director, ICAR-IISS, Mau represented by Dr A. Anandan, Principal Scientist (Genetics and Plant Breeding) and Station Incharge, ICAR-IISS, Regional Station, Bengaluru



signed the agreement and exchanged in the presence of Dr V. Geethalakshmi, Vice Chancellor, TNAU, Coimbatore.

### **TNAU inks MoU with BG Enterprises, Vellore**

The TNAU, Coimbatore signed an MoU with BG Enterprises, Vellore on 10 January 2024 for facilitating Postgraduate Students' Research and Training through scholarship in the area of IoT based Energy Management and Development of Automated Machine with Artificial Intelligence. Dr R. Thamizh Vendan, Registrar, TNAU, Coimbatore and Mr P.G. Ragavandir, Chief Executive Officer, BG Enterprises, Vellore signed the agreement and exchanged in the presence of Dr V. Geethalakshmi, Vice Chancellor, TNAU, Coimbatore.



### **TNAU inks MoU with PAJANCOA & RI**

The TNAU, and the Pandit Jawaharlal Nehru College of Agriculture and Research Institute (PAJANCOA & RI), Karaikal, an autonomous educational institution of the Government of Puducherry with the prime objectives of imparting agricultural education and meeting the agricultural research and extension needs of the Union Territory signed an MoU for facilitating Postgraduate Students' Research. Dr R. Thamizh Vendan, Registrar, TNAU, Coimbatore and Dr A. Pouchepparadjou, Dean and Member Secretary (Governing Body), PAJANCOA & RI, Karaikal signed the agreement in presence of Dr V. Geethalakshmi, Vice Chancellor, TNAU for opening up new avenues in post graduate research and training.



### **TNAU inks MoU with Two Assam Firms**

The Tamil Nadu Agricultural University signed an MoU with two firms of Assam, M/S Pranbandhu Das & Co and M/s. Rafik Ali Associates under the support of Assam Fodder Mission for large scale commercial production and marketing of CO 5 Bajra Napier Hybrid Grass, in the presence of Dr V. Geethalakshmi, Vice Chancellor, TNAU on 09 February 2024. CO 5 Bajra Napier Hybrid Grass was developed by the scientists in the Department of Forage Crops, Centre for Plant Breeding and Genetics, Tamil Nadu Agricultural University, Coimbatore and released at All India Level during 2012. This hybrid is a boon for dairy farmers owing to its high biomass, broader leaves, succulent stem, high crude protein content (14%), winter hardiness, quick generation capacity and it yields throughout the year. Dr R. Thamizh Vendan, Registrar, signed the MoU on behalf of TNAU, Mr Pranbandhu Das signed for M/S Pranbandhu Das & Co, and Mr Md Rafik Ali signed for M/s. Rafik Ali Associates.



### **MoU with M/s. Agri Value Chain Services Private Limited, Chennai**

A Memorandum of Understanding was signed between TNAU, Coimbatore and M/s. Agri Value Chain Services Private Limited, Chennai on 14 March 2024 for undertaking collaborative research in the



aspects of Post Harvest Management of Horticultural Crops. Dr R. Thamizh Vendan, Registrar of TNAU and Mr R. ShivaKumar, Managing Director, M/s. Agri Value Chain Services Pvt. signed the agreement and exchanged the MoU in the presence of Dr V. Geethalakshmi, Vice Chancellor, TNAU.



### UAS, Bengaluru

- MoU for Technology collaboration in the field of science and technology for the benefit of farmers with Manipal Academy of Higher Education on 06 February 2024 for 5 years.
- MoA for Technology Sale Agreement with M/s Fortex Trade Technologies Limited, Bengaluru on 08 February 2024 for 2 years.
- MoA for One-time Controlled Land Application with Sri Chamunderswari Sugars Ltd., Mandya on 26 February 2024 for 1 year.
- MoU for agreement on Licensing of Sunflower Hybrid KBSH-85 for commercialization with National Dairy Development Board and ICAR-IIOR, Hyderabad on 27 March 2024.

## PATENTS and DESIGNS

### AAU, Anand

- A patent is on 'Pneumatic Seed Metering Device for seed planting' (Patent No. 513810). Seed planting machine with pneumatic seed metering mechanism can precisely sow the seeds for higher productivity. It can be used for precise sowing of different crops having different seed sizes and shapes with some adjustments. The contribution of inventors namely, Dr Pankaj Gupta, Dr R. Swarnkar, Dr S.K. Patel, Dr R. C. Salunkhe, Dr B. K. Yaduvanshi, Shri Nilesh M. Patel, is truly commendable and noteworthy.
- The patent 'A Food Pulp Extracting Device' for extracting food pulp from seeded fruits, eliminating the need for manual seed removal (Patent No. 516859). It comprises an outer cylinder enclosing a perforated cylinder, auger, brush, and feeding hopper. The device operates in a closed environment, reducing oxidation and contamination risks. The inventors are Dr Farid G. Sayyad, Dr B. K. Yaduvanshi, Dr Navneet Kumar, Dr M. M. Trivedi, Dr S. K. Patel, Er. Sravan Kumar, Dr Shailendra Gangwar.



Food Pulp Extracting Device

### Dr RPCAU, Pusa

- A patent for an invention entitled 'Mushroom biscuits and preparation thereof' was granted on 01 March 2024 (Patent No. 518386). Vice Chancellor, Dr P.S. Pandey felicitated the Scientists associated with this innovation.

### JAU, Junagadh

#### Pomegranate Juice Extractor

The pomegranate juice extractor machine developed at the Department of Processing and Food

Engineering Department, CAET, JAU, Junagadh was granted a patent by the Controller of Patents, Patent Office, GoI, on 01 February 2024. The specific attribute of the invention is that the whole fruit, without any need for cutting, can be used to extract the juice from the machine. The functions of cutting, aril pressing, juice extraction, juice filtering, and waste disposal can all be done in the machine itself with little effort from the users. As the contact parts of the machine are of PTFE and stainless steel, any physical or chemical reaction with the fruits is totally negated, leading to better juice recovery and quality. When compared to metallic rollers, the machine is also energy efficient and economically viable. (Patent No. 506284 Date of Grant: 01 February 2024).



### Open Core Throat Less Downdraft Biomass Gasifier

The CAET, JAU, Junagadh, received a design patent for its invention on Open Core Throat Less Downdraft Biomass Gasifier, from the Patent Office, GoI, on 22 March 2024. Dr V. P. Chovatia, VC, appreciated the efforts of Shri Sagar Kalaiya, Er. Makavana Jagubhai, Dr P.M. Chauhan, and Dr P.N. Sarsavadiya.

### JNKVV, Jabalpur

- Mitigation of *Fusarium* wilt in chickpeas through self-prepared Bio-regulators; Patentee: Dr Gyanendra Tiwari Dr Anubha Upadyaya; Patent No. 522452, Date of Filing: 15/12/2022, Date of Grant: 08 March 2024.

### OUAT, Bhubaneswar

- A patent was granted for invention on A process for manufacture of acaricidal composition in the form of decoction, vide patent no 492633 dated 01 January 2024.
- Patent was granted on A portable evaporatively cooled storage system, vide patent no. 501950 dated 22 January 2024.
- A patent was granted in favour of OUAT, ICAR and AICRP on UAE for the invention of Bullock drawn engine operated rotavator, vide patent no. 510251 dated 13 February 2024.
- Design registration on Maize dehusker-cum-sheller (design no.390459-001) under the provisions of the Design Act, 2000 was awarded jointly to OUAT and ICAR vide L Sl. No. 161108/dated 22 March 2024. The average output of the maize dehusker-cum-sheller is 166 kg/h with a feed rate of 230 kg/h.



### PAU, Ludhiana

- Indian Patent (No. 508659) was obtained for Bacteriological food testing kit (BFTK) for rapid and efficient detection of presence/absence of recurrent indicator and emerging pathogens in food sample on 08.02.2024.



**PJTSAU, Hyderabad**

- Dr K. Charith Kumar, Assistant Professor, College of Agricultural Engineering, Kandi, Sangareddy received the patent titled A Vertically Aligned Pre-Cooler for Cryogenic Grinding System. Patent Number: 504103, Date of Grant: 29/01/2024.

**SKUAST-J, Jammu**

Title: Surfactant Aided Improved Methodology of Urea-Ammonization of Straw

- Application No. 201711044268; Team of Scientists: Farroq Ahmad Chopan, Dr Ankur Rastogi, Dr R. K. Sharma and Pratiksha Raghuvanshi; Date of Granted/Issued: 16 January 2024; (Patent/Design No. 499770).

Title: A portable Multi Functional Seeder and Fertilizer Machine

- Application No. 202011056484A; Team of Scientists: Dr B.C. Sharma, Dr Vishal Gupta
- Date of Filed: 25.12.2020; Date of Granted/Issued: 16 January 2024; Patent/Design No. 530790.

Title: Portable Ohmic Heater

- Application No. 6347594; Team of Scientists: Dr Anjum Ayoub, Dr Shahid Ahamad, Dr Nazam Khan, Dr Sahar Masood, Dr Vishal Gupta, Dr Brajeswar Singh; Date of Granted/Issued: 26 February 2024; Patent/Design No. 6347594.

**SKUAST-K, Srinagar**

- Solar Powered Insect trap lighting device by Dr Munazah Yaqoob/ Falak Jan. Date of Grant 05/01/2024; Patent No: 396847-001.
- Nutritional Herbal compound / Extract and its method of preparation by Dr Khalid. Z. Masoodi. Date of Grant 15/01/2024; Patent No: 499495.
- Smart fishing rod by Mr. Adil Hussain Mugloo. Date of Grant 19/01/2024; Patent No: 399758-001.
- An improved pre conditioning method of walnut cracking for value addition of kernels by Dr Syed Zameer. Date of Grant 09/02/24; Patent No: 508996.
- An improved multifunctional power operated high efficiency walnut dehuller cum washer by Dr Syed Zameer. Date of Grant 06/02/24; Patent No: 507376.
- Portable Kiwi gummy maker machine by Dr Nowsheen Nazir. Date of Grant 01/02/2024; Patent No: 400082-001.
- Rain Water Harvesting with zero energy by Dr Waseem Raja. Date of Grant 02-02-2024; Patent No: 506657.
- Low cost mushroom structure design for production of mushroom under cold arid conditions by Dr Vikas Gupta, Pathology. Date of Grant 12-03-2024; Patent No: 523702.
- High efficiency electric walnut grading machine by Dr Syed Zameer. Date of Grant 13-03-2024; Patent No: 524816.

## UAS, Bengaluru

- Solar powered roof top aquaponics food production system; Indian patent 497178; Date of grant 10 January 2024.
- Design and development of nanofluid based extended surface module for milkcooling; Indian patent 516796; Date of grant 28 February 2024.
- Root vegetables cleaning machine; Design No. 389643-001; Date of grant 21 February 2024.

## AWARDS and RECOGNITIONS

### AAU, Anand

#### Scientist from Tobacco Research Station, Dharmaj, Awarded at Bengaluru

AAU scientist Dr Nimish A. Bhatt, currently working as Assistant Research Scientist at Tobacco Research Station, Dharmaj, was awarded the Plant Protection Award 2023. The *Insect Environment Journal* invited online applications for the award and a total of 17 scientists and 19 students were selected by the panel of jury for this prestigious award. Awards were presented on 16 December 2023 in the presence of chief guests Dr S. V. Suresha, Vice Chancellor, UAS, Bengaluru and Dr D. K Nagaraju, Joint Director, Regional Plant Quarantine Station, Bengaluru, Ministry of Agriculture and Farmers Welfare. Vice Chancellor Dr K. B. Kathiria congratulated the scientist for receiving the award.



#### Dr Kamlesh R. Jethva Felicitated with Best Ph. D. Thesis Award-2024

Dr Kamlesh R. Jethva, Assistant Professor in the Department of Processing and Food Engineering, College of Agricultural Engineering and Technology, Godhra was felicitated with Best Ph. D. Thesis Award in field of Processing and Food Engineering for the Thesis title *Standardization of Process Parameters for Production of Protein enriched Mango Leather*, during 6th International Conference organized in hybrid mode at SR University, Warangal (Hyderabad) during 4-6 March 2024. The conference was attended online, and the award was bestowed to Dr Kamlesh R. Jethva via online mode. The award includes a Certificate of Appreciation, a Certificate of Life membership.



Certificate of Appreciation

#### Best Young Extension Scientist Award

Dr S. A. Sipai, Assistant Extension Educationist, Directorate of Extension Education, was bestowed with Best Young Extension Scientist Award by the Society of Extension Education, Gujarat at the National Seminar on *Innovative Agricultural Extension Approaches for Holistic Development of Farming Community*, held at SDAU, Sardarkrushinagar on 6-7 January 2024. During the same event, he also ranked 2nd in oral presentation under the theme Human Resource and Entrepreneurship Development by the Society of Extension Education Gujarat.



Assistant Extension Educationist Receiving the Award



**AU, Kota**

- Agriculture University, Kota received an Appreciation Certificate from H'E Governor of Rajasthan, Raj Bhawan, Jaipur for overall development of smart village Kanwas adopted under University Social Responsibility (USR) programme during January to March 2024.
- Dr I. B. Maurya, Dean, College of Horticulture and Forestry, Jhalawar, AU, Kota received ISHRD Fellow award for year 2021 and 2022 from Indian Society of Horticultural Research and Development Uttarakhand, during Progressive Horticulture Conclave 2024 held at NAU, Navsari, Gujarat from 18-20 January 2024.



Dr Maurya Receiving the Award

**BAU, Sabour**

The agricultural extension system of Bihar Agricultural University, Sabour, was recognized as one of the most excellent ICT systems in the country, receiving a National Award from the National Institute of Agricultural Extension Management (MANAGE). The film Parivartan, produced by the Media Center of BAU, received the award on 22 February from Md Faiyaz Kidwai, Additional Agriculture Secretary, Government of India, and Shri Chandrashekhar, Director General, MANAGE, highlighting the changes brought about in agriculture sector of Bihar, by the university's innovative use of ICT.



MANAGE Agri Film Festival Award, 2024

**Dr YSRHU, Venkataramannagudem**

- SHRD - Society for Horticultural Research and Development conferred a National level Award on Dr T. Janakiram, Vice Chancellor, Dr YSRHU during Third Indian Horticulture Summit and International Conference, at Rajasthan on 03 February 2024.



Leadership Excellence Award in Horticultural Research to Dr T. Janakiram, Vice Chancellor, Dr YSRHU

- Dr P. Pranuthi, Assistant Professor (Horticulture), Dr YSRHU- College of Horticulture, Venkataramannagudem, was awarded the Budding Scientist Award, for her best Ph.D. Thesis by Progressive Horticulture Conclave during 18-20 January 2024, ISHRD held at Navsari, Gujarat.



Budding Scientist Award to Dr P. Pranuthi, Asst. Prof., Dr YSRHU

- Ms Sai Nishita received award for poster entitled Value Addition to Worshipped Flowers by Making Incense Sticks through Dry Flower Powders, at National Conference on Recent Trends and Future Prospects of Floriculture in India organized by ICAR - Indian Institute of Horticultural Research, Bengaluru.



## GADVASU, Ludhiana

### Dr R S Sethi Honored with National Fellowship

Dr R. S. Sethi, Dean, College of Dairy and Food Science Technology, GADVASU, Ludhiana, was honoured with the esteemed title of Fellow by the Society for Immunology and Immunopathology (SIIP) in acknowledgment of his exceptional achievements and significant impact on the field of immunology and immunopathology. The honour was conferred during the SIIP's Annual convention and International Conference at Ganeshi Lal Agrawal (GLA) University, Mathura. Dr Sethi is actively involved in international collaborations including member of Steering Committee for World Veterinary Association's (WVA) project on Global Quality Standards for Veterinary Education; and Project coordinator of Collaborative Research and Training Experience (CREATE) program on Genome Editing for Food Security and Environment Sustainability (GEFSES) in collaboration with University of McGill, Canada and University of Saskatchewan, Canada.



Dr R. S. Sethi

### CDFST Faculty was Awarded Best Researcher and Best Teacher

Dr Harsh Panwar, Assistant Professor in the Department of Dairy and Food Microbiology, was honoured with two prestigious awards for the year 2023. He was awarded the Best Researcher Award of the university, highlighting his exceptional research expertise in Dairy Microbiology. Additionally,

Dr Panwar was also bestowed with the Best Teacher Award of the college, recognizing his dedication, passion, and outstanding contributions to teaching.



Dr Harsh Panwar receiving Best Researcher and Best Teacher Award

## IGKV, Raipur

### Best Academician Award

Dr M. P. Tripathi, Dean, BRMS, Mungeli received this award in recognition of the consistent superior performance in Agricultural Engineering for the academic Year 2023-24 during the Agri Meet Foundation on the occasion of International Conference 'One Health-One World 2023' in collaboration with RVSKVV, Gwalior and Agri Meet Foundation.

### Innovative Farmer Award

Mr Vedram Jaiswal, an adopted farmer of KVK, Kawardha, is doing very good work in various bioagents i.e., Trichoderma, Pseudomonas, Jivamrit, Bijamrit, ghanjivamrit on his field. The KVK, Kawardha, started the activities on natural farming during 2022-23. Mr Jaiswal conduct the successfully demonstration on natural farming. The INSEE honoured Ved Ram Jaiswal for young Innovative Farmers Award during National Conference on Next General Agriculture – Organic and Natural Farming Pathways: Extension Strategies and Approaches, held during 28-30 at JNKVV, Jabalpur. It was organized by INSEE, Nagpur, in Collaboration with ICAR-ATARI, Jabalpur; JNKVV, Jabalpur; MANAGE, Hyderabad; TS, RCONF, Nagpur; and MH, PRDIS, Hyderabad.



### Young Scientist Award

Dr Harshaj Singh Tuteja received the Chhattisgarh Young scientist Award 2024 for his outstanding research work on Boosting Mechanization of Lathyrus Crop and Bridging Technological Gap in Chhattisgarh, during the 19<sup>th</sup> Chhattisgarh Young Scientist Congress. It was jointly organised by National Institute of Technology, Raipur and Chhattisgarh Council of Science and Technology from 26-27 February 2024. An Overview in Agricultural Engineering was presented by Prof. N. V. Ramana Rao, Director, National Institute of Technology and Shri S. S. Bajaj, Director General, Chhattisgarh Council of Science and Technology.

## JAU, Junagadh

### Best Language Film - Gujarati Award at the prestigious MANAGE Agri Film Festival

The film *Pasupalan vyavsay Ma Aavak Bamni Karvana Vaignanik Suchano* (Scientific suggestions for doubling farmers' income in dairy business), produced by the Agrisnet Studio under DEE, JAU,



Junagadh was conferred the Best Language Film (Gujarati) award at the prestigious MANAGE Agri Film Festival – 2023, organized on 22 February 2024 at Hyderabad.



## PAU, Ludhiana

- Dr J. M. Singh, Dr Jatinder Sachdeva, Dr Jasdev Singh and Dr Baljinder Kaur received Prof. R.S. Deshpande Award 2023-24 for Research Paper in Agricultural Economics. The awarded research paper entitled 'Irrigation Water Policies for Sustainable Groundwater Management in Irrigated North-Western Plains of India' *Current Science*, Vol. 123, No.10, was in collaboration with the economists from National Institute of Agricultural Economics and Policy Research (NIAP), New Delhi.
- Award for Best Language Film (Punjabi) was conferred on the film *Integrated Farming System* by Communication Centre of Directorate of Extension Education Punjab Agricultural University Ludhiana, Punjab, 22 February 2024 at MANAGE Hyderabad.
- Dr R. K. Dubey received the Outstanding Horticulture Teacher Award, 2021- 22, from Indian Society of Horticulture Research and Development, Uttarakhand, in Progressive Horticulture conclave, NAU, Navsari, 18-20 January 2024.



Dr R. K. Dubey Received the Outstanding Horticulture Teacher Award

- Dr Pushp Sharma was awarded Gold Medal by the Society for Rapeseed-Mustard Research (SRMR), Bharatpur for outstanding contribution to rapeseed mustard plant physiology research and services rendered to the SRMR. This accolade was presented to Dr Pushp Sharma in the 5th National Brassica Conference (NBC) on Oilseed Brassicas for Sustainability, Profitability and Nutritional Security, held at Rajasthan Agricultural Research Institute, Durgapura (Jaipur) during 07-09 February 2024.



Dr Pushp Sharma Received Gold Medal

## PJTSAU, Hyderabad

### Outstanding Achievement Award

Dr B. Jamunna Rani received Outstanding Achievement Award for contribution in the field of Agricultural Extension at VIII International Conference on Global Research Initiatives for Sustainable Agriculture and Allied Sciences - 2023 held at UAS, Raichur.

**Khelo India Women’s Kick Boxing League**

Ten students of Agricultural College, Jagtial and Warangal participated in Khelo India Women’s Kick boxing League 2023-24 on 20-21 January 2024 at LB Stadium, Hyderabad, and won thirteen medals (five gold, two silver and six bronze) in different categories.

**SKUAST-K, Srinagar**

- Dr Manzoor Ahmad Gania PC of KVK, Kulgam received Performance Excellence Award as Best Programme Coordinator on 11 January 2024 (Foundation day) at ATARI Ludhiana
- Sher-e-Kashmir University of Agricultural Sciences & Technology received Best Exhibition Award on 11 January 2024 (Foundation day) at ATARI Ludhiana, jointly for all KVKs of SKUAST Kashmir.



**TANUVAS, Tamil Nadu**

- Dr Ravimurugan, Professor, TANUVAS was awarded Appreciation by Tamil Development Department, Government of Tamil Nadu for his book in Tamil vernacular entitled *Pig Farming for Self-employment* on 15 February 2024. The award also carries a cash prize of ₹ 10,000.

Dr Ravimurugan, Professor, TANUVAS - Award - Book on Pig Farming for Self-Employment



- VIF@TANUVAS was awarded as one of the best incubation centres among 45 centres participated in the Tamil Nadu Incubation Maturity Model (TNIMM). The Director, Centre for Animal Health Studies, received the cash award of Rs.5 lakhs from Shri T.M. Anbarasan, Minister for Micro, Small and Medium Enterprises, Govt. of TN on 06 March 2024.

VIF@TANUVAS Receiving the Cash Award



- Ms Arya Karthikeyan, student of Madras Veterinary College, TANUVAS bagged bronze medal in the women's ergometer event organized by ARAE (Amateur Rowing Association of the East) rowing regatta in Kolkata from 17-23 March 2024.

Ms Arya Karthikeyan, student of MVC -  
Bronze Medal in the Women's Ergometer  
Event



## TNAU, Coimbatore

### Best Centre Award 2023-24 for the AICRP on Post Harvest Engineering and Technology

The Tamil Nadu Agricultural University (TNAU), Coimbatore bagged the 'Best Centre Award 2023-24' for the All India Coordinated Research Project (AICRP) on Postharvest Engineering and Technology (PHET). This accolade was conferred upon the Department of Food Process Engineering, TNAU, Coimbatore for its outstanding performance during 2023-24. The honour was bestowed at the 39<sup>th</sup> Annual workshop of AICRP on PHET held at ICAR-CIPHET, Ludhiana during 13-15 March 2024. Dr S. N. Jha, Deputy Director General (Engg.), ICAR, New Delhi, presented the award to Dr M. Balakrishnan, Professor and Head and PI – AICRP on PHET, Department of Food Process Engineering, AEC&RI, TNAU, Coimbatore in the presence of Dr K. Narasaiah, ADG (Process Engg.), Dr Nachiket Kotwaliwale, Director, ICAR-CIPHET, Ludhiana and Dr R. Vishwakarma, Project Coordinator, AICRP on PHET. Vice Chancellor Dr V. Geethalakshmi, Dr M. Raveendran, Director of Research and Dr A. Raviraj, Dean, AEC&RI, Coimbatore lauded the team's dedication, exceptional performance and significant contributions in the field of post-harvest engineering and technology research.



## UAS, Bengaluru

- Dr K. P. Raghuprasad, Professor and Head, ATIC was honored with Hombale Samhita Harini Kumar Krishi Madyama Mitra, state level award by Alumni Association, UAS, Bengaluru on 02 March 2024.
- Indian Glory Award 2024- ICAR-Krishi Vigyan Kendra, Tiptur, Tumakuru Dist., UAS, Bengaluru awarded with Centre of Excellence in ToT Award, in recognition of outstanding contribution, dedication and remarkable achievement in specialized domain.
- Indian Icon Awards 2024-Dr Govinda Gowda V., Senior Scientist and Head KVK, Tumkur-1, UAS, Bengaluru awarded with Best Senior Scientist and Head of KVK for the year -2023 Award, in recognition of outstanding contribution, dedication and remarkable achievement in specialized domain. He was also awarded with Social Scientist Award in recognition of outstanding contribution, dedication and remarkable achievement in specialized domain.
- State Level Youth Festival Folk Dance (Dollu Kunitha) Championship: The Hoysala Cultural Team of College of Agriculture, Hassan participated in the State Level Youth Festival held at Bellary, where around 32 teams participated in folk dance. Out of these around 10 teams performed Dollu



kunitha dance, and UAS-B team emerged victorious by obtaining first place in Dollu kunitha with excellent performance. The same dance troop represented Karnataka state at the national youth festival held Nashik, Maharashtra from 12-16 January 2024.

- **Participation in NSS State Republic Day Parade Camp 2024:**

Ms Shraddha Rajashekar Hadi, NSS Volunteer of agriculture college was deputed to represent UAS, Bengaluru, for participation in NSS State Republic Day Parade Camp 2024 held at UAS, GKVK, Bengaluru, from 14-26 January 2024. The NSS Republic Day Parade Team bagged II Prize from Governor of Karnataka Shri Thaawar Chand Gehlot in the State Republic Day Parade organized at Manekshaw Parade Ground, Bengaluru on 26 January 2024.



- The students participated in NIRVAH -2024 Competition organized by IIPM, Bengaluru on 23 and 24 February, and won 1<sup>st</sup> Place in Group Dance; 2<sup>nd</sup> Place in Group Song; 2<sup>nd</sup> Place in Dual Dance and 2<sup>nd</sup> Place in Treading event.



## LIMELIGHTS

### AU, Kota

#### DG-ICAR Visited AU, Kota

Dr Himanshu Pathak, DG, ICAR and Secretary, DARE, Government of India, New Delhi visited different units such as Agriculture Education Museum, Food Processing Unit, Gir Cow Dairy Unit and Sirohi Goat Unit situated at headquarter campus of Agriculture University, Kota on 07 January 2024. He interacted with Agri-entrepreneurs and shown his happiness for the excellent work of the university.



Dr H. Pathak, DG, ICAR Interacting with Faculty in Presence of Dr A.K. Vyas, VC, AU, Kota

#### Dr YSPUHF, Nauni

#### Use of HDPE Net for Collection/Harvesting of Apricots

KVK, Tabo is popularizing use of HDPE green nets for collection/harvesting of apricot, which is soft and prone to damage at the time of harvesting. Owing to it farmers have to bear considerable financial loss. Therefore, KVK, Tabo is promoting installation of HDPE net around the tree trunk in the basin of trees.

- This helps in collection of apricot more efficiently and minimizing or reducing the fruit damage to negligible.
- The net is fixed around the trunk with the help of wooden sticks and ropes covering whole canopy of a tree.

- A single tree requires around 6-9 m<sup>2</sup> net to cover whole basin and total cost of installation is ₹ 300/tree (net costing around ₹ 30/m<sup>2</sup>).
- Its spread is recommended during the maturity period only, and before and after that it can be left tied to the tree trunk to enhance its life.
- Since the HDPE net is UV resistant, it can be used for 5-6 years easily even in high UV areas of Spiti, thereby making the net easily affordable for the poor and marginal farmers also.



- Dr Manisha Kaushal conducted the exposure visit of 25 progressive farmers of various forest panchyats of Uttarakhand on 17 Jan 2024 and apprised them about different technologies/ machineries standardized and commercialized by the departments of university.

- Dr Anil Kumar Verma and Dr Anshu Sharma acted as resource persons for the exposure visit to departmental laboratories and food processing units for scientists of various Agricultural Universities namely Anand Agricultural University, Anand; Punjab Agricultural University, Ludhiana; and University of Agricultural Sciences, Bengaluru during their visit to the UHF, Nauni in February 2024.

Glimpse of Displaying Value Added Food Samples by Dr Anshu Sharma under Department of FST during the Exposure Visit of Various Professors and Scientists to Dr YSP UHF Nauni, Solan



- A training on Commercial Floriculture and value-addition was organized by Department of Floriculture and Landscape Architecture, Dr YS Parmar University of Horticulture and Forestry, Nauni, Solan under SCSP of AICRP on Floriculture on 6-03-2024 at Hirapur, Bilaspur. The training was imparted to 70 enthusiastic farmers. Vice Chancellor, Dr Rajeshwar Chandel; Dean, CoH, Dr Manish Kumar; Professor and Head, Department of Floriculture and Landscape Architecture, Dr SR Dhiman; and officials of Department of Horticulture and Agriculture were present during the training programme.



Training on Commercial Floriculture and Value-Addition



## Dr YSRHU, Venkataramannagudem

### Unnath Bharat Abhiyan

Dr YSRHU, adopted five villages under Unnath Bharat Abhiyan (UBA) as a part of Vice Chancellor to Village programme, under the dynamic leadership of Dr T. Janakiram, Vice Chancellor. The Unnath Bharat Abhiyan (UBA) is a Central Government programme aimed at village development for continuous support through various activities related to sanitation, health, rural energy, agriculture development, etc., on 07 February 2024. Dr E. Karuna Sree, Director of Extension and Director PME cell interacted with Dr B. Pavani, Regional Coordinator from Andhra University at Dr YSRHU in the presence of all the University Officers, scientists of KVK, VR Gudem.



Registration of Dr YSRHU under Unnath Bharat Abhiyan (UBA)

### Declaration of Dr YSRHU Year of Chilli 2023-24

With an intention to give crop wise priority in Research, Extension and related activities, Dr YSR Horticultural University, declared the year 2023-24 as Year of Chilli. Shri Kakani Govardhan Reddy minister for Agriculture, Cooperation, Marketing and Food Processing, Andhra Pradesh declared Dr YSRHU Year of Chilli 2023-24 in presence of Dr T. Janakiram, Vice Chancellor Dr YSRHU. Dr S. S. Sreedhar Commissioner of Horticulture, Andhra Pradesh; Dr T.K. Behera, Director, IIVR Varanasi; Dr Rajesh Kumar, PC AICRP Vegetables, IIVR, Varanasi; Dr L Naram Naidu, Director of Research; Dr Karuna Sree, Director of Extension; Dr A. S. Padmavathmma, DH; Dr S. Suryakumari, Dean PGS; Dr B. Srinivasulu, Registrar; Dr Salomi Suneetha, DSA; Shri Mallikarjuna Rao EO; Dr YSRHU, Scientists of HRS, Lam, Guntur and all the scientists and staff of Dr YSRHU on 20 February 2024 virtually. Plan of action for strengthening Research and Extension strategies for crop improvement, production, protection, processing and seed production was announced.



Declaration of Dr YSRHU – Year of Chilli

### Brainstorming Session on Elephant Foot Yam

Brainstorming session on elephant foot yam was organized at Dr YSRHU- VR Gudem jointly by ICAR-CTCRI and Dr YSRHU-HRS, Kovvur. The platform was used to discuss the formulation strategies for empowering the stakeholders of elephant foot yam sector on 13 February 2024. Researchers, academicians, extension professionals, elephant foot yam growers, input dealers, traders and other participated in the discussions. Dr T. Janakiram, Vice Chancellor, Dr YSRHU was





the chief guest for the inaugural session and he emphasized the achievements of tuber crops research in Andhra Pradesh and significant impact of collaboration with ICAR-CTCRI through All India Coordinated Research Project. Dr G. Byju, Director, ICAR-CTCRI acted as the president of the meeting and Dr L. Naram Naidu, Director of Research, and Shri Dharmaja, Deputy Director, Horticulture attended the programme as guests of honour. Dr E. Karuna Sree, Director of Extension; Dr B. Srinivasulu, Registrar; Dr D. V. Swamy, COE, Dr YSRHU; Dr M. Madhavi, Associate Dean, CoH, VR Gudem participated in the programme. Progressive farmers were felicitated by the chief guest, and sprayers were distributed to some identified farmers under SCSP of ICAR-AICRP on Tuber crops. A pamphlet on *Management of plant parasitic nematodes and their management in tuber crops*, was released to create awareness.



Dr YSRHU - Brainstorming Session on Elephant Foot Yam

## IGKV, Raipur

### Director General, ICAR visited IGKV

Dr Himanshu Pathak, Director General, Indian Council of Agricultural Research, and Secretary, Department of Agricultural Research and Education, GoI, addressed Professors, Scientists and students at IGKV during his visit to IGKV, Raipur on 15 March 2024. He highlighted on the remarkable progress witnessed in the Indian Agricultural Sector over the past five decades, emphasizing the pivotal role it plays in the nations development trajectory. He also highlighted the tremendous strides made by India in agricultural production, transforming from a net importer of grains to a leading exporter of agricultural products. He highlighted the rapid expansion of agricultural universities in India, doubling of student enrolment in agricultural universities over the past five years. He also highlighted the integration of modern technologies such as virtual classrooms, massive open online courses (MOOCs) and artificial intelligence in agricultural education, thereby enhancing learning outcomes and skill development.

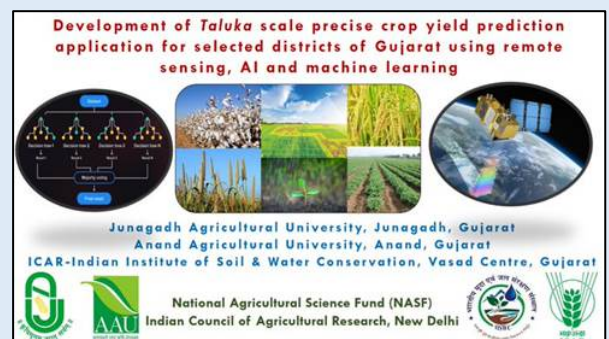


Dr H. Pathak, DG, ICAR Interacting with VC, IGKV, Dr Girish Chandel and Scientists

## JAU, Junagadh

### Project on Precise Crop Yield Prediction Application

Under the adept leadership of Dr V. P. Chovatia, Vice Chancellor, and the guidance of Dr R. B. Madariya, Director Research, the research project proposal titled *Development of Taluka Scale Precise Crop Yield Prediction Application for Selected Districts of Gujarat Using Remote Sensing, AI, and Machine Learning*, won the research grant worth ₹ 75 lakh from the National Agricultural Science Fund (NASF), ICAR, New Delhi. The proposal was submitted by the Research, Testing and Training Centre (RTTC), JAU, Junagadh, with Dr P. A. Pandya, Assistant Professor, serving as the Lead Centre PI, and Dr G. V. Prajapati, Research Scientist (Agril. Engg.), and Dr D. J. Patel, Assistant Professor, as Co-PIs. Only 2 projects from SAUs, including the one from JAU, were among the very few selected projects out of large number of pre-proposals submitted to NASF. Dr M. K. Tiwari from AAU and Dr M. J.



Kaledhonkar from ICAR-IISWC, Vasad, are principal investigators of the cooperating centers in this collaborative endeavour.

JNKVV, Jabalpur

- University got sanction on the project proposal --Development of Climate-Resilient and Nutritious Rice Inbreds and Hybrids for Madhya Pradesh, funded by State Government of Madhya Pradesh in joint collaboration with IRRI, Philippines with a budgetary outlay of ₹ 36 crore.
Plant Variety Protection Cell of University facilitated farmers of 17 districts of Madhya Pradesh in getting Breeder rights certificate from PPV&FR Authority, GoI, New Delhi for their contribution in development and conservation of 153 Farmers Varieties of 13 crops, viz. sorghum (18), chickpea (20), tomato (5), ridge gourd (3), barley (8), brinjal (3), bread wheat (14), turmeric (1), pearl millet (1), soybean (5), rice (59), jowar (15), fenugreek (1). This certification will help farmers in getting the benefits from the commercial utilization of this varieties.

KVASU, Wayanad

Six Students from KVASU Got Chief Minister's Talent Scholarship

Chief Minister's Talent Scholarship for six students from Kerala Veterinary and Animal Sciences University. Naveen Nalinaksh (College of Veterinary and Animal Sciences, Mannuthi), Navya P Shibu (College of Veterinary and Animal Sciences, Pookod), Aishwarya Velekhat Santhosh, Adrija R, Febit K Saji (VKIDFT, Mannuthi), Hridiya Das N (College of Avian Sciences and Management, Thiruvazhamkunnu) degree students are eligible for the Chief Minister's Scholarship for the year 2021-22. To fulfill the objective of promoting excellence and equity in higher education, the government is providing a scholarship of Rs 1 lakh to selected 1000 students from colleges affiliated to various universities in the state. The Pratibha Award is given to students who have obtained the highest marks in completed degree courses within the prescribed annual income limit.

Image showing six students and text in Malayalam: 'നവീൻ നളിനാക്ഷ്, നവ്യ പി. ഷിബു, ഐശ്വര്യ സന്തോഷ്, ആർ. അദ്രിജ, ഫെബിറ്റ് കെ. സജി, എൻ. ഹൃദിയാസു' and 'വെറ്ററിനറി സർവകലാശാലയിലെ ആറ് വിദ്യാർത്ഥികൾക്ക് മുഖ്യമന്ത്രിയുടെ പ്രതിഭാ സ്മാർട്ട് സ്മാർട്ട് അവാർഡ്'.

TANUVAS, Tamil Nadu

- H'E Governor of Tamil Nadu and Chancellor of the Tamil Nadu Veterinary and Animal Sciences University, Chennai, Shri R. N. Ravi extended the tenure of Dr K.N. Selvakumar, Vice Chancellor for a period of one year (from 09 April 2024) at Raj Bhavan, Chennai on 07March 2024.



Thiru. R.N. Ravi, Hon'ble Governor and Chancellor of Tamil Nadu Veterinary and Animal Sciences University has extended the tenure of Dr.K.N. Selvakumar, Vice-Chancellor of Tamil Nadu Veterinary and Animal Sciences University, Chennai for a period of one year, starting from 09.04.2024 at Raj Bhavan, Chennai today (07.03.2024).

- Foundation Stone for TANUVAS Veterinary University Training and Research Centre (VUTRC) at Tiruchendur was laid by Anitha R. Radhakrishnan, Minister for Animal Husbandry Fisheries and Fisherman Welfare on 29 January 2024.

Foundation Stone Laying - TANUVAS Veterinary University Training and Research Centre (VUTRC) at Tiruchendur – Shri Anitha R. Radhakrishnan, Minister for AHFFW



## TNAU, Coimbatore

### Centre of Excellence in Biotechnology Inaugurated by Chief Minister

The Centre of Excellence in Biotechnology was inaugurated by the Chief Minister of Tamil Nadu Shri M. K. Stalin in the presence of Minister for Agriculture and Farmer's Welfare and Pro-chancellor, Shri M.R.K. Panneerselvam; and Minister for Housing and Urban Development, Shri S. Muthusamy; Selvi. Apoorva, IAS Agricultural Production Commissioner and Principal Secretary to Government; and Mr Kranthi Kumar Pati, IAS District Collector, Coimbatore on 13 March 2024. In this event, Dr N. Senthil, Director, CoEB and Centre for Plant Molecular Biology and Biotechnology, TNAU, welcomed the gathering. In her presidential address Dr V. Geethalakshmi, Vice Chancellor, TNAU explained that the establishment of the Centre of Excellence in Biotechnology at TNAU, Coimbatore was in accordance with the Article 110 of Tamil Nadu Legislative Assembly for which ₹ 430 crore was allocated. The focus is on providing substantial support to students, professionals, and research institutions, fostering innovation and knowledge exchange, she added. The Vice Chancellor informed that research activities will be conducted in crucial sectors such as agricultural science, food technology, green biotechnology, biosynthesis, bioresource utilization and bioinformatics, which is expected to contribute significantly to advancements in agriculture, fostering high productivity, addressing climate change and developing crops resistant to diseases. The focus will be on producing high-quality yields, enhancing nutritional content, and promoting sustainable agricultural practices, she added. Ten startup/established companies were requested to occupy the cabin space and eight companies requested to occupy the floorspace in CoE in Biotechnology for strengthening their research activities. In this event, an MoA was signed between CoE in Biotechnology, TNAU and two companies viz., M/s. Aiva Organics Stores, Chennai, M/s. Green Ocean Research Labs Pvt. Ltd, in the presence of Vice Chancellor and Registrar of TNAU, Coimbatore.

## FUTURE PROGRAMMES

### AU, Kota

University has scheduled 03-week Common Induction Training Programme to be held from 15 April to 07 May, 2024 under HRD for new recruited Non-Teaching staff (Technical Assistant, Agriculture Supervisor, Lab Technician, Lab Assistant, Stenographer, LDC, Caretaker, Drivers etc.) of the University for desired knowledge, attitude and skills to serve the system efficiently.

### Dr YSPUHF, Nauri

- Strengthening of medicinal mushrooms production technology such as *Ganoderma* sp.



- Development of quick and easy disease diagnostic kits.
- Development of AI based App for diagnosis of diseases of horticultural crops at farmers' level in the field.
- Studies on the productivity of apples in Seraj Valley.
- To standardize doses of growth retardants to check the vegetative growth of potato.
- Awareness programmes on apple scab and other major pathogens affecting apple and other crops.
- New research will focus on use of eco-friendly disease management methods for sustainable apple production.
- Elemental and metabolite analysis of selected medicinal plants of Seraj valley.
- To conduct surveys in the North Western Himalayan regions for the conservation of *Taxus wallichiana* germplasm.
- Documentation of fodder and medicinal value of local flora.
- Studies on reproductive biology of important forest tree species.

### GADVASU, Ludhiana

#### Vet University to organize Startup Grand Challenge 2024: Unveiling the Next Wave of Innovation in Livestock Sector

The Vety & Livestock Innovation and Incubation Foundation (VL-IIF) of GADVASU, Ludhiana is going to organize 2-day Start-up and Entrepreneurship Grand Challenge on 27-28 June 2024 in collaboration with Startup Punjab, Department of Industries and Commerce, Government of Punjab. Dr Sethi, Director, VL-IIF informed that the entrepreneurs are invited to apply for the challenge with their ideas to identify innovative and sustainable solutions using cutting-edge interventions and technologies to solve pressing problems in livestock, dairy and fisheries sectors. Top 10 visionary startups will receive awards recognizing their exceptional contributions to the startup ecosystem.

### JNKVV, Jabalpur

- University is in the process of preparing application of GI of 'Barman Ka Bhata' for submission to GI Authority.

### PAU, Ludhiana

- **Vulnerability framework for climate change and drudgery reduction for women in agriculture:** Work is being started under the new project on Developing vulnerability framework for women in agriculture and appropriate interventions for drudgery reduction. Under this project assessment, refinement and popularization of gender friendly technologies and skill enhancement of the farm women will be taken up. The technologies developed by different centres of AICRP will be tested and validated to bring at the National perspective.
- **Nutri-sensitive agriculture:** Strengthening Poshan Abhiyan for promoting nutritional awareness, education and behavioral change in rural area involving farm women and school children different awareness programmes will be conducted. Post interventions impact assessment and tabulation of the data under all the five adopted villages will be conducted under NSV programme. Monitoring of nutri-gardens and guidance on maintenance of nutri-gardens along with distribution of winter vegetable kits will be done.

- Emphasis will be laid on the judicious use of fungicides/ biocontrol agents to reduce the chemical load for the control of different crop diseases during *kharif* season.
- Emphasis will be laid on IDM practices to reduce the chemical load for the control of different crop diseases.
- Exploitation of nutrient use efficiency (NUE), water use efficiency (WUE), stay green traits and heterosis for maximizes yield in crops plants.
- Use of biofertilizers to promote growth, nutrient uptake, protection against pathogens and stress conditions.
- Skill enhancement programmes will be organized for the students of the university to improve their varied soft skills, and for preparing them for different types of competitive examinations. The department will invite resource persons from different fields to impart requisite knowledge and training to students. The impetus will be on refining communication skills of the university students. For polishing writing skills of the university students, practical training on content development will be provided.
- Interactive resource bank will be developed for students besides development of language and communication skills courses on SWAYAM.

### **PJTSAU, Hyderabad**

- Soil Health Management for enhancing organic carbon through promotion of diversified cropping systems, crop residue management, green manure crops, use of bio-fertilizers including site specific nutrients, and use of nanomaterial for controlled-release of nutrients in major crops to reduce fertilizer use and GHG emissions in major crops.
- Establishment of Advance Center of Excellence on Organic and Precession Farming Models hydroponics, aquaponics and aeroponics using artificial intelligence (AI), internet of things (IoT), remote sensing - geographical information systems (RS-GIS) and Sensors,
- Development of Standard Operating Protocols (SOPs) for spraying and diagnosis using drones including skill training for rural youth.
- Establishment of plant phenomics / speed breeding facilities to hasten-up breeding of crop varieties / hybrids.
- Establishment of Nano Technology Lab for initiating research on use of nanomaterial's for controlled-release of nutrients, pesticides and fertilizers in crops as well as nano sensors for agricultural practices, food quality and safety.

### **SKUAST-J, Jammu**

- To work on emerging zoonoses and to study the epidemiology of important livestock diseases.
- Establishment of SAIC/ Institute of Aqua-Culture at SKUAST-Jammu.
- Cryopreservation, semen handling and artificial insemination.
- Augmentation of fertility and control of calving interval through synchronized induction of Oestrus and ovulation.
- Development of cost-effective progestogen implant for estrus induction in dairy animals.
- Creation of Agriculture Branding Centre (ABC) and Market Intelligence Cell (MIC) at Main Campus, Chatha, of SKUAST-Jammu under HADP.

- Scientists are engaged in implementation of several Developmental/Research Projects which are approved under Holistic Agriculture Development Programme (HADP) for J&K (UT).
- Awareness of low-cost soil and water conservation technologies for rainfed area of Jammu region.
- Awareness of farm mechanization.

### TANUVAS, Tamil Nadu

Tamil Nadu Veterinary and Animal Sciences University has planned to conduct following National / International conferences /Trainings:

- National Conference on Venturing into Entrepreneurship through Student Pre-incubation and Resourceful Knowledge Support (VETSPARKS 2024) during June 2024.
- National Tamil Conference on Livestock Health is Farmers' Wealth at Veterinary College and Research Institute, Namakkal from 28 to 29 June 2024.
- International Conference on Innovative Education, Research and Extension Approaches for Transmitting Scientific Know-How to Augment Livestock Production in the Contemporary Scenario, at Veterinary College and Research Institute, Orathanadu from 10 to 12 July 2024.
- International Conference on The Impact of Climate Change on Biodiversity – A Global Perspective, at Madras Veterinary College, Chennai from 11 to 13 July 2024.
- XXIX Annual convention of Indian Society for Veterinary Immunology and Biotechnology (ISVIB) and National Conference on Challenges in Animal Health and Production Amidst Climate Change: Innovative, Sustainable Solutions and Their Translation – VIBCON 2024 to be organized by Directorate of Centre for Animal Health Studies from 07 to 09 August 2024 at Madras Veterinary College, Chennai.
- International Conference on Small Holder Goat Production in The Tropical Countries – Opportunities and Constraints, at Post Graduate Research Institute in Animal Sciences, Kattupakkam from 10 to 11 August 2024.

### UAS, Bengaluru

- Pre *Kharif* Campaign in the May 2024.
- World Honey Bee Day, World Environmental Day, and Milk Day will be celebrated.
- Planned OFT/FLD field days will be organized.
- Energy efficient pump set and water conservation awareness programme for farmers and agricultural pump/equipment technicians.
- Capacity building programme on importance of bio-control measures in integrated pest and diseases management in Agricultural and Horticultural crops.
- Two training programmes on use of BEE star labeled energy efficient pump set in agriculture, will be conducted in the second fortnight of May 2024 sponsored by KREDEL.
- Celebration of World Environment Day on 6<sup>th</sup> June 2024.
- Three training programmes for Krishi Sakhi in three batches planned to be conducted in June 2024.
- Institute of Baking Technology and Value Addition planned to organize the following training programmes.
  - 14-week Certificate Course in Baking Technology (one)
  - 4-weeks Baking Course (Three)
  - Short courses (Seventeen)



**NEW VICE CHANCELLORS****Birsa Agricultural University (BAU), Ranchi****Dr S.C. Dubey**

Dr Sunil Chandra Dubey, was born on 02 February, 1963 at Gorakhpur, Uttar Pradesh. He has done his B. Sc. (Ag) at Gorakhpur University Gorakhpur and obtained M. Sc (Ag) in Plant Pathology and Ph. D. in Plant Pathology from C. S. Azad University of Agriculture and Technology, Kanpur.

Before joining at the post of Vice Chancellor, Birsa Agricultural University, Ranchi Dr Dubey worked as Assistant Director General (Plant Protection and Biosafety), Indian Council of Agricultural Research, New Delhi; Head, Plant Quarantine and Director (Acting), ICAR-NBPGR, New Delhi; Senior and Principal Scientist at IARI, New Delhi; and Assistant and Associate Professor at Birsa Agricultural University, Ranchi.

Dr Dubey significantly contributed in race profiling, diversity analysis, DNA barcode, diagnostics and host-pathogen interaction for major fungal pathogens of pulse crops. Developed bio-agent based integrated disease management technologies for major diseases of pulses, cereals, vegetables and oilseeds crops. He made several original and innovative discoveries in the area of Plant Pathology especially by developing highly effective novel bio-formulations Pusa 5SD (got Indian Patent) and Pusa Bio-pellet from *Trichoderma* species for plant disease management. He also monitored quarantine processing of plant genetic resources including transgenic for research purposes and provided technical and policy inputs on phytosanitary issues related to Biosecurity, biosafety and Quarantine to various stakeholders to make the country safe from biosecurity threats. Credited with 6 rice, 5 chickpea, 2 mungbean and 2 garden pea varieties resistant to diseases, registered resistant sources of chickpea (18), urdbean (13), cowpea (3) and lentil (2). Deposited about 600 partial fungal gene sequences to NCBI *GenBank*, and 150 well characterized fungal cultures as reference set to culture collections. As teacher his contributions are well acclaimed, taught several courses at UG and PG level, and guided 21 students for thesis work.

Dr S C Dubey is recipient of several awards and fellowships -- National Academy of Agricultural Sciences (NAAS) New Delhi; National Academy of Biological Sciences (NABS), Tamil Nadu; Indian Society of Mycology and Plant Pathology, Udaipur; Indian Phytopathological Society, New Delhi. Received Young scientist award (BAU); Prof. K.P.V. Menon Best Poster Paper Award; Dastur Memorial Lecture Award 2015; President, National Society of Plant Pathologists, 2021; President, Indian Phytopathology, New Delhi, 2023; Indian National Science Academy Fellowship 2004; Member, Advisory Committee, Journal of Bioscience Discovery, Jalna; Senior Editor, Indian Phytopathology, 2017 to 2019; Editor, Journal of Mycology and Plant Pathology, 2005-2006.

He published 230 research papers with 31 H-index and 86 i-10 index; presented 165 papers in National/ International symposia; authored - 33 book chapters; 45 chapters in practical manuals, 3 books, 41 popular articles and 7 technical bulletins; and edited 10 books.



**Maharana Pratap Horticultural University (MHU), Karnal****Dr S. K. Malhotra**

Born on 3<sup>rd</sup> February 1963 at Rohtak, Haryana, had his graduation in 1984, M.Sc. in Horticulture from GBPUA&T, Pantnagar in 1986 and Ph. D. from CCSHAU, Hisar in 1989. Started his career as Assistant Professor (Vegetable Crops) at HPKV, Palampur (1989) and served as Assistant Scientist (Sr. Scale) at CCSHAU, Hisar (1994). He joined ICAR as Senior Scientist (Hort.) in 2000 at NRC Seed Spices, Ajmer and became Principal Scientist in 2007. Subsequently, he served as ADG (Hort) (2013-14) and Horticulture Commissioner (2013-2017, 2020-2021) and Agriculture Commissioner (2015-2021) in the Ministry of Agriculture & FW, and Director, ICAR-Directorate of Knowledge Management in Agriculture (2022-2024). Presently, he is Vice Chancellor, at Maharana Pratap Horticultural University, Karnal.



As Agriculture Commissioner, he steered India's development agenda in agriculture for food, nutrition, and income security through administration of National Food Security Mission. Credit goes to him for development, implementation and monitoring of new programs such as Bringing Green Revolution in Eastern India, Crop Diversification Program, Targeting Rice Fallow Area, Alternate Crop Plan for WB, Intercropping in sugarcane, Summer/*Zaid* program, NFSM-Pulses, NFSM-Nutricereals, National Mission for Edible Oils based on agro-climatic zone wise planning and cropping system centric interventions. As a Chairman of Insecticide Board Registration Committee, Central Fertilizer Committee, Central Biostimulant Committee and Central Seed Certification Board, his contributions are immense in formation of policy framework and guidelines for their registration and commercialization of novel products and seed regulations.

During his tenure as Horticulture Commissioner, he architected and implemented Per Drop More Crop- of PMKSY, High value agriculture for Island Agriculture, National Saffron Mission and National Bee Honey Mission, Cluster Development in Horticulture programs.

As Assistant Director General, he provided leadership in planning, monitoring, and evaluation of research programs at 23 horticulture institutes. As a Director ICAR-DKMA, he revamped the publication system and introduced new version of ICAR e-pub portal, DOI, plagiarism checking, new policy for collaborations for co-publication and brought reforms for enhancement of impact factor of ICAR research journals.

As a researcher, Dr Malhotra developed 15 high yielding varieties of seed spice crops which are now base for cultivation in arid, semi-arid ecosystem. He provided leadership in four international projects under FAO/WHO, and developed CODEX international standards for okra, brinjal, potato and date palm.

He has been visiting scientist at Cornell University Ithaca, USA and worked in the USAID project of value chain management and also at Taiwan Agriculture Research Institute, Fangshan for management of plant genetic resources. He represented India in 22 International meetings (G20, FAO-COAG, FAO-Council, WHO, UNECE, ADB, BRICS, SAARC, African Union, Russian Federation, EU, CODEX, Shanghai Co-operation Organization) held in USA, Mexico, Australia, Russia, Italy, Germany, Switzerland, Ethiopia, Uganda, Taiwan, Thailand, Indonesia, Philippines, Israel, Saudi Arabia, Tajikistan, Kyrgyzstan, Kazakhstan, Uzbekistan, Spain, Turkey. The most recent is FAO (COUNCIL), where he introduced proposal of International Year of Millets, which was approved for 2023 by United Nation Organization. As Chairperson of 22 task forces, he provided solution to the

emerging issues in agriculture in the country. Currently, he is providing academic leadership as Vice Chancellor of a prestigious horticultural university.

Dr Malhotra is recipient of various awards and honours like BioAg Asia Policy leadership award-2022, Global Agriculture Leadership Award – ICFA, India-2016, Progressive Horticulture Leadership award-2023, HS Mehta Young Scientist Award-2011, Dr RS Paroda Award-2015, Dr G. Kalloo Award-2019, Dr Kirti Singh Award-2017, Hukum Singh Memorial award-2019, PNASF-Young Scientist Gold Medal -2005, JS Pruthi Award-2010, Lakhiram Memorial Award-2012; AIFPA-Award-2013, AF-Professional Excellence Award-2014, Horticulture Leadership Award 2021-22. He is Honorary Fellow of eleven professional societies and guiding 4 professional societies as President and Vice President for furtherance of horticulture in the country. He has 115 research papers, 18 authored books, 15 edited books, 48 book chapters, 68 keynote papers and 72 other publications to his credit.

### University of Horticultural Sciences (UHS), Bagalkot

#### Dr Vishnuvardhana

Dr Vishnuvardhana, presently working as Vice Chancellor at University of Horticultural Sciences, Bagalkot, Karnataka from 6 March 2024. Pursued his bachelors, post graduation and Doctoral degree in Horticulture and has acquired 28 years of services in various capacities of SAU's since 1995.

Started his carrier in AICRP on Cashew at ARS Chintamani and developed new variety Chintamani-02 and recommended two varieties for adoption in Karnataka. Later on, worked on various research stations and actively participated on development activities like establishment of new research station, research fields and extension Units at Mudigere and Hogalagere. He also established new research station at Somanahalli Kaval, Hassan and created facilities for extensive research on potato seed tuber production.

Served as Dean, Campus Head, at College of Horticulture, Bengaluru and Mysuru from 2018 to March 2024. During his tenure created facilities for teaching, research and extension activities and earned appreciation from university for attaining highest JRF cleared UG students.

Visited Root Crop Research and Development centre, National University of Agriculture and Potato Vegetable and Flower Research Center (PVFC) at Dalat, Vietnam in 2019 and introduced ARC technology for successful adoption for seed tuber production in Karnataka to solve the problem of seed tubers.

Visited National University of Singapore for international conference during 2019, Institute of Molecular Plant Science, Edinburgh University, Scotland, UK in 2023, and gained international experiences on various research activities. Dr Vishnuvardhana guided many post graduate students and Ph.D. scholars. Published more than 200 peer reviewed research papers, technical bulletins, technical folders, book chapters, scientific books and popular articles to disseminate the research findings for scientific community and also farmers. Headed many infrastructure development external projects from public and private sectors.

Awarded with National and Intonation recognitions for contribution in the field of Horticulture to mention few; Dr Abdul Kalam Life Time Achievement in 2015, SCIRE-Best Horticulturist.



**The IAUA thanks and congratulates Dr V. R. Reddy, Vice Chancellor, P.V. Narsimha Rao Telangana Veterinary University for support to IAUA and successfully completing his tenures during January 2024.**

