



# IAUA NEWS

QUARTERLY NEWSLETTER OF INDIAN AGRICULTURAL UNIVERSITIES ASSOCIATION

Volume 23 No.2

April-June 2023

## ADVISORY BOARD

**Dr Rameshwar Singh**

Vice Chancellor  
BASU, Patna  
*President, IAUA*

**Dr Parvinder Kaushal**

Vice Chancellor  
VCSGUUHF, Bharsar  
*Vice President, IAUA*

**Dr N. P. Dakshinkar**

Vice Chancellor  
DSVCKVV, Durg  
*Secretary General, IAUA*

**Dr N. H. Kelawala**

Vice Chancellor  
KU, Gandhinagar  
*Treasurer, IAUA*

**Dr S. D. Sawant**

Vice Chancellor  
Dr BSKKV, Dapoli  
*Member, EC, IAUA*  
(up to 27/05/2023)

**Dr M. R. Saseendranath**

Vice Chancellor  
KVASU, Wayanad  
*Member, EC, IAUA*

**Dr A. K. Karnatak**

Vice Chancellor  
MPUAT, Udaipur  
*Member, EC, IAUA*

## CONTENTS

1. 11 <sup>th</sup> Brainstorming Session	1
2. New Technologies	
A. Crop & Horticultural Sciences	2-12
• Varieties/Hybrids/Germplasm	
• Machines and Equipments	
• Products and Processing	
• Package of Practices	
B. Animal and Fisheries Sciences	12-13
3. Teaching	13-15
4. Events and Activities	15-29
5. MoUs	29-34
6. IPRs	35-36
7. Awards & Recognition	36-42
8. Limelights	42-50
10. Research Publications	50-51
11. Future Programmes	51-53
12. New Vice Chancellors	53-54

## EDITORIAL BOARD

**Dr O. N. Singh**

*Vice Chancellor, BAU, Ranchi*

**Dr Kusumakar Sharma**

*Ex-ADG, Education Division, ICAR*

**Dr Sanjeev Saxena**

*Ex-ADG (IPTM), ICAR*

**Dr S. R. Maloo**

*Ex-Dean, MPUAT, Udaipur*

**Dr Aruna T. Kumar**

*Ex-Editor (English), DKMA, ICAR*

**Dr Dinesh Kumar**

*Executive Secretary, IAUA*

Office: G-5, Office Block A, NASC Complex, Dev Prakash Shastri Marg, Pusa Campus, New Delhi 110012

Website: [www.iauaindia.org](http://www.iauaindia.org), Tele: (O) 011-21520075

E-mail: [esiaua.newdelhi@gmail.com](mailto:esiaua.newdelhi@gmail.com), [iauaofficenewdelhi@gmail.com](mailto:iauaofficenewdelhi@gmail.com)

## 11<sup>th</sup> Brainstorming Session

In view of the natural resource degradation issues and further emerging challenges as well as the opportunities, the 11<sup>th</sup> Brainstorming Session of Indian Association of Agricultural Universities (IAUA), New Delhi was organized at the Rani Lakshmi Bai Central Agricultural University (RLBCAU), Jhansi during 7-8 April 2023 on Innovation in Sustainable National Resource Management.



Dignitaries lighting the lamp

Besides, inaugural and plenary sessions following technical sessions were held during the event:

- I. Sustainable management of soil and water resources,
- II. Sustainable management of animal and fish resources,
- III. Sustainable management of plant resources including biodiversity,
- IV. Sustainable climate resilient practices, and
- V. Introducing innovations including AI, IoTs, block chain, agri-drone, blended learning, etc.

The Vice Chancellors from various State Agricultural, Horticultural and Veterinary Universities attended the Brainstorming Session. Besides, representative of Vice Chancellors, senior officials from ICAR such as DDG (NRM), DDG (Fisheries), Director, CRIDA, Hyderabad, and Vice President NAAS, Former DDG (Ag. Extension) also attended, and actively participated in this Brainstorming Session.

Padma Bhushan Dr R. S. Paroda, former Secretary, DARE & DG, ICAR and Chairperson, TAAS, New Delhi was the Chief Guest in the Inaugural session. Dr Panjab Singh, former Secretary, DARE & DG, ICAR and Chancellor, RLBCAU, Jhansi chaired the Plenary session. Besides, Dr P. L. Gautam, former Chairperson, PPV&FRA, New Delhi and NBA, Chennai and former DDG (Crop Sciences), ICAR; Dr S. K. Chaudhary, DDG (NRM), ICAR, New Delhi; Dr J. K. Jena, DDG (Fisheries), ICAR, New Delhi; Dr P. Das, former DDG



Dr P. L. Gautam, Dr Panjab Singh, Dr R. S. Paroda, Dr Rameshwar Singh and Dr A. K. Singh (Left to Right) doing inaugural session



Dr R. S. Paroda addressing the delegates

(Ag. Extension) and Dr A. K. Singh, Vice President, NAAS, New Delhi, also addressed the delegates during different sessions. The experts shared their experiences and also put forward their views for the way forward with regard to sustainable management of the natural resources. The proceedings and recommendations of the Brainstorming Session will be shared with the stakeholders.

## NEW TECHNOLOGIES

### A. CROP and HORTICULTURAL SCIENCES

The Agricultural Universities made earnest efforts to develop new technologies in Crop and Horticultural Sciences, which included varieties/hybrids; machines and equipment; products and processing; and package of practices as given below:

#### VARIETIES/HYBRIDS/GERMPLASM

##### Anand Agricultural University (AAU), Anand

##### Registration of Desi Cotton variety GADC 3 with PPV&FRA

The Desi Cotton variety Gujarat Anand Desi Cotton 3 (GADC 3: Wagad Gaurav) developed by Regional Cotton Research Station, AAU, Viramgam during the year 2019 was registered by PPV&FRA, New Delhi. The variety registration no. is REG/2021/0185 dated:02 June 2023. This variety is semi open boll type, smooth boll surface and bushy plant type. This variety gives 2,150 kg/ha seed cotton yield and 964 kg/ha lint yield, and is released for desi cotton area of North West Agroclimatic Zone - V as well as Bhal and Coastal Agroclimatic Zone-VIII of Gujarat state.



[GADC 3]

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

##### New Apple Germplasm

- Early and solid fruit peel colouring and early maturing bud sports of Apple cv. Royal Delicious namely DDK, TKL, DSK and PSK

were identified by the university scientists. The identified accession was certified by the NBPGR, New Delhi with the national identity number IC-0647748; IC- 0647749; IC- 06477450 and IC- 06477451, respectively.

- Day Neutral Cultivar of Chrysanthemum: In general chrysanthemum (*Dendranthema grandiflora* Tzvelev.) is a short-day plant and produces only one flush of flowers (from September to November) in a year. A study conducted on a day neutral chrysanthemum cultivar recently introduced Early White, revealed that planting in January produced two crops in a year i.e., summer flush (May-June) and winter flush (October-November). Among the planting densities, good quality cut stems with highest flower yield per square metre with highest benefit cost ratio (B:C ratio) of 4.56 were obtained under highest planting density i.e., 100 plants/m<sup>2</sup>. Lowest planting density (9 plants/m<sup>2</sup>), on the other hand was found best for quality cut flower production in terms of flower size, stem girth and vase life and gives a B:C ratio of 2.79.



Chrysanthemum cultivar Early White in flowering stage

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

Varieties (10) in different horticultural crops, viz., chilli: Dr YSRHU-Kranti (LCA 657), Dr YSRHU-Chaitra (LCA 680), Dr YSRHU-Tanvee (LCA 684) and Dr YSRHU-Siri (LCA 616); acid lime: Dr YSRHU-Vakula;

Amaranth: Dr YSRHU-Varna; red dolichos bean: Dr YSRHU-Shrestha; Greater Yam: Dr YSRHU-Sabari; Cassava: Dr YSRHU-





Aditya; and sweet potato: Dr YSRHU-Arunima, were approved for notification by the Central Varieties Release Committee (CVRC) on 4 May 2023.

## Odisha University of Agriculture and Technology (OUAT), Bhubaneswar

Twenty- one varieties of various crops, developed by the University, recommended for release by the State Variety Release Committee are given below.

### Rice

#### **OUAT Kalinga Rice-1**

**(Kolab):** A medium duration (130 days) variety with average yield of 5307 kg/ha is moderately resistant to leaf blast, neck blast, sheath rot, brown leaf spot, grain discolouration, BPH and gall midge.



**OUAT Kalinga Rice-2 (Salandi):** A medium duration (130-135 days) variety with average yield of 5540 kg/ha, long bold grain type is moderately resistant to leaf blast, neck blast, sheath rot, bacterial blight, stem borer and leaf folder.

#### **OUAT Kalinga Rice-5**

**(Nabanna):** This variety is suitable for rainfed upland situation. Its duration is 86 days and average yield 2,775 kg/ha. It is bio-fortified with 13.6% protein, 34 ppm zinc and 8.78 ppm iron. It has good aroma and is resistant to lodging.



**OUAT Kalinga Rice-6 (Bhargavi):** This variety is suitable for rainfed shallow lowland situation. Its duration is 155 days and average yield of 5,009 kg/ha. It is moderately resistant to sheath rot, brown leaf spot and blast diseases.

**OUAT Kalinga Rice-7 (Barunei):** A medium duration (135-140 days) variety with average yield of 5,145 kg/ha, is moderately resistant to sheath rot, blasts and BPH.



**OUAT Kalinga Rice-8 (Suryashree):** It is suitable for irrigated medium land situation having 125-130 days duration with average yield of 4,257 kg/ha. It is tolerant to high temperature and moderately resistant to sheath blight and blast.

### Finger millet

#### **OUAT Kalinga Ragi-1**

**(Shreeratna):** A medium duration (117 days) variety with average yield of 2,416 kg/ha, is non-lodging and non-shattering type having resistance to brown spot and foot rot diseases.



### Little millet

**Kalinga Suan-18:** The duration of this variety is 92 days and average yield is 1,688 kg/ha. It has resistance to leaf blight and smut diseases.

### Green gram

**OUAT Kalinga Green gram (Shreejan):** It is suitable for *kharif* season with duration of 70 days and average yield of 830 kg/ha. It is resistant to MYMV, leaf crinkle virus, white fly and pod borer, and moderately resistant to web blight, anthracnose, root rot and powdery mildew.

### Groundnut

#### **OUAT Kalinga Groundnut-1**

**(Dhara):** Duration of this variety is 103-111 days and pod yield is 2,408 kg/ha. It has shelling out turn of 67%.



**Mustard****OUAT Kalinga Mustard-1 (Sampoorna):**

Suitable for irrigated medium land and matures in 110-115 days with average yield of 1,337 kg/ha. It is moderately resistant to aphids, alternaria blight, powdery mildew, white rust and sclerotinia rot.

**Sesame****OUAT Kalinga Sesame-1 (Ashrit):**

It is suitable for irrigated condition in summer with duration of 87-93 days and average yield of 895 kg/ha. It has synchronous maturity and oil content is 45 to 48%.

**Brinjal****OUAT Kalinga Brinjal-1 (Banita):**

It takes 85-90 days for first picking with average yield of 34.2 t/ha. It has resistance to bacterial wilt and moderately tolerance to fruit borer.

**Chili****OUAT Kalinga Chili-1 (Ragini):**

It takes 114 days to first picking for green chili and 135 days for ripe chili. It gives average yield of 10.1 t/ha (green chili) and has resistance to bacterial wilt and leaf curl virus.

**Tomato****OUAT Kalinga Tomato-1 (Gouri):**

It takes 95-98 days for first picking and average yield is 38.3 t/ha. It is resistant to bacterial wilt and moderately resistant to early blight.

**Dolichos bean****OUAT Kalinga Dolichos Bean-1 (Jayakrushna):**

It takes 100-117 days for first picking with average yield of 10.2 t/ha. It is tolerant to pod borer and moderately resistant to leaf spot.

**Ginger****OUAT Kalinga Ginger-1(Subhada):**

It matures in 220 days and the average yield is 20 t/ha. It is resistant to bacterial wilt and moderately resistant to shoot borer and scale insect.

**OUAT Kalinga Ginger-2 (Sourabh):**

The duration of the variety is 218 days and average yield is 18.0 t/ha. It has low fibre content (3.5%) and moderately tolerant to soft rot, bacterial wilt, leaf spot, shoot borer and scale insects.

**OUAT Kalinga Ginger-3 (Prayag):**

It matures in 225 days with average yield of 13.7 t/ha. It is tolerant to soft rot and resistant to bacterial wilt.

**Turmeric****OUAT Kalinga Turmeric-1(Surangi):**

The duration is 200 days and average yield is 23.4 t/ha (fresh rhizome). It has resistance to rhizome rot, leaf blotch and scale insects.

**OUAT Kalinga Turmeric-2(Gourab):**

The duration is 218 days and average yield is 23.1 t/ha (fresh rhizome). It is resistant to rhizome rot, leaf blotch and scale insects and moderately resistant to shoot borer.

## Tamil Nadu Agricultural University (TNAU), Coimbatore

Following 23 new varieties of agricultural, horticultural and forest crops of TNAU have been released by Tamil Nadu Government's New Varieties Release Committee:

**Rice****Rice CO 56**

Grain yield: 6,372 kg/ha

Duration: 130 – 135, days

**Rice Improved Kavuni CO 57**

Grain yield: 4,638 kg/ha

Duration: 130-135, days

**Rice ADT 58**

Grain yield: 6,376 kg/ha  
Duration: 125, days

**Rice ASD 21**

Grain yield: 6,330 kg/ha  
Duration: 120, days

**Maize Hybrid COH (M) 11**

Grain yield: 6,590 kg/ha  
Duration: 105-110, days

**Pearl Millet****Hybrid COH 10**

Yield: Irrigated 3,020 kg/ha  
Rainfed 2050 kg/ha  
Duration: 85-90, days

**Sorghum****Sorghum K 13**

Yield: 2,575 kg /ha  
Stover Yield: 11.4 t/ ha  
Duration: 95-100, days

**Kudiraivali ATL 1**

Yield: 2,123  
Dry fodder yield: 3057 kg/ha  
Duration: 90, days

**Panivaragu ATL 2**

Seed Yield: 2,140 kg /ha  
Dry fodder yield: 2793 kg/ha  
Duration: 65 -70, days

**Green gram CO 9**

Yield: 825 kg/ha  
Duration: 65 -70, days

**Green gram VBN 6**

Yield: 760 kg/ha  
Duration: 70 -75, days

**Cowpea VBN 4**

Yield: Irrigated: 1,377 kg/ha  
Rainfed: 1,035 kg/ha  
Duration: 70 -75, days

**Sunflower hybrid COH 4**

Yield: Irrigated 2,182 kg/ha  
Rainfed: 1,898 kg/ha  
Duration: 90 – 95, days.

**Sesame VRI 5**

Yield: 795 kg/ha  
Duration: 75 – 80, days

**Sugarcane Co 18009 (Punnakai)**

Yield: 160.39 t/ha  
Sugar Yield: 20.71 t/ ha  
Duration: 356, days

**Sunn hemp****Sunn hemp ADT 1**

Yield: 20.8 t/ha  
Duration: 120, days

**Ridge Gourd MDU 1**

Yield: 18.75 t/ha  
Duration: 120 -130, days

**Winter Jasmine CO 1**

Yield: 8.52 t/ ha  
Duration: Perennia

**Bush Lab lab CO 16:**

Yield: 16.5 t/ ha  
Duration: 100 -120, days

**Silk Cotton MTP 1:**

Yield: 900 – 1,500 pods/tree  
Duration: 4 - 40 years

**Red sanders MTP 1:**

Yield: 100 kg heartwood / tree  
Duration: 15 -18 years

**Casuarina MTP 3:**

Yield: 162 t / ha  
Duration: 3 years

**Khaya MTP 1:**

Yield: 150 t / ha  
Duration: 5-6 years

## Vasantrao Naik Marathwada Krishi Vidyapeeth (VNMKV), Parbhani

### American Cotton NH-677

- American cotton straight variety NH-677 is high yielding, tolerant resistant to sucking pests, bacterial blight and alternaria leaf spot.
- It is recommended for release under rainfed condition for Maharashtra State.

### Chick pea: Parbhani Chana-16 (BDNDG-2018-16)

- Chick pea variety Parbhani Chana-16 (BDNDG 2018-16) suitable for mechanical harvesting.
- Bold seeded, recorded higher yield over the existing best checks.
- It is recommended to release for cultivation in Marathwada region in protective irrigation.

### Sesame: TLT-10

- Sesame variety TLT-10 with white, bold export quality seed (3.69 g).
- It recorded 20.46 to 43.70% and 46.51 to 50.40 % higher seed yield and oil yield, respectively, over state and national checks.
- It is tolerant to macrophomina, root and stem rot and phyllody disease and leaf webber and capsule borer as compare to checks.
- It is recommended for release for cultivation in *kharif* and *rabi*/Summer season in Maharashtra state.

### Kharif Sorghum: Parbhani Shakti (PVK-1009)

- Kharif* sorghum variety Parbhani Shakti (PVK-1009) is recommended for cultivation in *rabi* season for Maharashtra state.

### Chili: PBNC-17

- PBNC-17 variety of chili recorded the highest average yield.

- It is recommended for release for cultivation during *kharif* in Marathwada region.

### Tomato: PBNT-20

- PBNT-20 variety of tomato recorded the highest average yield.
- It is recommended for release for cultivation during *rabi* in Marathwada region.

## MACHINES and EQUIPMENTS

### Indian Veterinary Research Institute (IVRI), Izatnagar

#### Portable Goat Feeder

- Ergonomic design– Facilitates individual feeding as well as provided with a foot rest for comfort of the animals.
- The trough of the feeder was also modified from the conventional feeder to reduce feed wastage.
- The feeder is simple in design and portable, which enables its application in all field conditions.

#### Portable Mini Biogas Plant

- Has provision for mixing of slurry, which is a major problem with traditional biogas plants.
- A water trap is provided, which helps in purifying the gas before being collected.
- The collection tank follows a floating dome mechanism, which provides safety of use as the excess gas collected may seep out thereby avoiding overfilling of the tank.
- The tank has a capacity to accommodate 160 L slurry (1:1 dung to water) with potential to generate 2-3 m<sup>3</sup> biogas.

### Sri Venkateswara Veterinary University (SVVU), Tirupati

#### Virtual Dissection Software

SVVU developed Non cadaver based Virtual Dissection Software of cow under NAHEP



Project. It is one of the latest innovations for teaching of Veterinary Anatomy Developed jointly by the Department of Veterinary Anatomy, College of Veterinary Science, Tirupati and IDA solutions Pvt. Ltd, Mumbai. This



**Demonstration of Virtual Dissection Software of Cow**

software is being used for teaching in practical classes of both UG and PG students of Veterinary Anatomy and Surgery. The usage of formalinized specimens is replaced by this virtual dissection software and usage of animals for the dissection is also greatly reduced with this software.

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

#### **Mechanized Drum Composter**

- Simple method of composting waste.
- Liquid waste produced during the decomposition of wastes can be collected and used for crops through trays below the drums.
- Motorized plastic drums of 50 liter capacity can produce about 30 kg of compost in 30-35 days.

## **PRODUCTS and PROCESSING**

### **IVRI, Izatnagar**

#### **Rapid Method for the differentiation of Fresh (Chilled) and Frozen-Thawed Meats**

- Kit based visual and spectrometric method uses- extraction buffer medium, substrate and developer.
- The method is rapid (visual differentiation in 5 min), cost-effective and do not require trained manpower.
- Spectrophotometric method is simple, robust and compatible with wider format as

it can be used in micro plate, microcuvette and standard cuvette for measurement.

- Applicable to differentiate chilled and frozen-thawed meat of multispecies (buffalo meat, goat, sheep, pork and chicken meat).

### **Keladi Shivappa Nayaka University of Agricultural & Horticultural Sciences (KSNUAHS), Shivamogga**

At the College of Horticulture, Mudigere Jack Fruit seed powder based biscuits instead of maida powder were developed. These biscuits are nutritious and have a good taste and better keeping quality.

### **Swami Keshwanand Rajasthan Agricultural University (SKRAU), Bikaner**

#### **Marushakti - Agri Innovative Foods unit**

Marushakti -Agri Innovative Foods unit started on 25 January 2020, is extensively working on millets. Keeping in mind the current scenario and market needs, unit has mainly focused on value added products made out of arid crops.



Recognizing its importance and opportunities, not only the farmers but also the college students are planning to set up their own production unit. Technology regarding increasing the shelf life of millets was developed, by which, enzymes present in it become deactivated and can be stored up to six months. Value-added millets products namely: puffs, cake, biscuits, laddu and khakhra were also standardized and developed for sustainable livelihood and income generation.

Marushakti has got FSSAI registration, trade mark registration, Udhyaam registration, which ensures the adherence to hygiene, food



standards, strict adherence to all safety standards. Not only this, all the products made here are free from harmful chemicals and are completely vegetarian. These qualities make it different from other products available in the market.

### Maru Shakti Honey

The Department of Entomology has taken a significant step towards promoting and supporting the commercial beekeeping industry by establishing a honey processing unit. This endeavor was made possible through the active involvement of students who had chosen

commercial beekeeping as an elective course in their final year of B.Sc. Agriculture. The primary objective of setting up the honey processing unit is to acquire raw honey from local beekeepers in the district, and process it according to standard parameters. This ensures that the honey meets high-quality standards and retains its nutritional and medicinal properties. The processed honey is proudly named Maru Shakti Honey, signifying the strength and potential of the region.

Students, under the guidance of experienced faculty members, actively participate in the honey processing operations. They gain hands-on experience in handling, filtering, and packaging the honey using modern equipment and techniques. This practical exposure allows them to develop essential skills in honey processing and enhances their understanding of the industry's intricacies.



Exhibition of Maru Shakti Madhu in Kishan Mela, SKRAU, Bikaner



Hon'ble Chief Minister of Rajasthan, Shri Ashok Gahlot discussing about Maru Shakti Madhu in Divisional Kisan Mela held at Jaipur during 16 to 18 June 2023.

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

### Utilization of Brown Rice and Broken Basmati Rice for Development of Convenience Foods

- Nutritious instant khichdi mix, can be prepared from microwave dried instant brown rice and dehulled mungbean in the ratio of 60:40:: instant brown rice: instant dehulled mungbean. The formulated instant khichdi mix i.e. T5 (60: 40:: instant brown rice: instant dehulled mungbean) is rich in 15.02 % crude protein, 2.98 % crude fibre, 5.12 mg per 100g iron, 59.56 mg per 100g calcium and 611.87 mg per 100g potassium.
- Nutri-bar, is formulated from blends of brown rice, oats and flaxseeds in the ratio of 70:20:10 :: Brown rice: Oats: Flaxseeds. The blended nutri-bar T5 (70:20:10 :: Brown rice: Oats: Flaxseeds) possesses 11.61 % crude protein, 5.37 % crude fibre, 5.90 mg iron per 100g, 79.00 mg calcium per 100g and 436.69 mg potassium per 100g. The total microbial count of the formulated products was within the acceptable limits during storage period of 90 days.
- The crackers from broken basmati rice flour can be formulated using combination 86:10:4 :: Broken Rice Flour: Sesame Seeds: Green Leaf Powder having high crude protein (11.09%), ash (1.88%), crude fibre (2.31%), total phenolic content (55.44 mg GAE/100g) and antioxidant activity (10.36 %) with shelf life of 3 months at ambient temperature.

### VNMKV, Parbhani

- For preparation of most acceptable and value added *Ambil* from *dahi*, 7% *bajra* flour (48 hr germinated *bajra* Satva) along with 50% water and spices (2% salt, 1% cumin, 4.5% ginger-garlic paste, 1% chili powder,

0.5% black pepper) addition on the basis of *dahi* followed by boiling and cooling before storage at 5°C in refrigerator for 8 days is recommended.

- For the production of 90 to 95% quality sorghum pops from average bold size (3.55-3.65 mm average mean diameter) sorghum grains, VNMKV developed process technology – soaking grains 30 min in water, conditioning 12 hr and popping in salt media at 170°C temperature, is recommended for small scale industries.
- Use of sorghum flakes, rice flakes, peanut, sesame seeds, green gram malt, jaggery, liquid glucose and water in the proportion of 20:10:10:10:5:25:10:10 for preparation of nutri bar is recommended.
- It is recommended that 60, 10, 15 and 15 % refined wheat flour and germinated flour of pearl millet, finger millet and foxtail millet, respectively, with incorporation of 25 %sugar or jaggery improved the sensory and nutritional qualities of millet-based cookies.
- It is recommended that, good quality soup mix powder is prepared by using corn starch, yam flour, drumstick leaves powder, roselle calyces powder, dehydrated vegetables, spice mix powder and salt in 45:25:5:2:15:5:3 proportion, respectively.
- For the preparation of good quality millet based nutritious crackers by using pearl millet, sorghum and soybean, respectively, in the ratio 60:30:10 is recommended.
- It is recommended that good quality acceptable probiotic *basundi* can be prepared by using 0.65 % hydrochloric acid modified psyllium husk with encapsulated culture containing equal proportions of (1:1 ratio) 10 % of *Lactobacillus acidophilus* and *Lactobacillus bulgaricus*.
- It is recommended that the good quality and better overall sensory acceptable *idli* can be prepared by blending 75g rice, 10g black gram dhal, 10g soybean 5g bajra and 0.5g gum and 12 hr fermentation period.

## PACKAGE OF PRACTICES

### Agriculture University (AU), Kota

Major recommendations for inclusion in package of practices for the agro-climatic zone-V are as follows:

- **Urdbean / Mungbean:** Application of Fomesafen 11.1% + Fluzifop-p-butyl 11.1% SL (ready mix) @ 220 g a.i./ha (commercial dose 1.0 litre/ha) or Propaquizafop 2.5% + Imazethapyr 3.75% ME (ready mix) @ 83.3 g a.i./ha (commercial dose 1,350 ml/ha) at 15-20 DAS is recommended for broad spectrum weed control (narrow and broad leaf weeds) in urdbean/mungbean crop.
- **Pegionpea:** A L 882 variety recommended for the zone and foliar spray of water-soluble N:P: K (19:19:19) @ 0.5% at flowering stage along with recommended doses of fertilizers gave higher yield of pigeon pea.
- **Maize:** Spray of Emamectin benzoate 5 SG @ 200 g/ha or Chlorantraniliprole 18.5 SC @ 200 ml/ha in 500 litre water at 20-25 days after sowing was effective for the management of fall army worm in maize and second spray may be applied need based at 40-45 DAS.
- **Soybean:** Application of compost @ 5.0 t/ha as soil amendment (25-30 days before sowing) and irrigation at IW/CPE ratio 1.0 (one irrigation at pod development stage) enhanced the grain yield and water use efficiency of soybean and reduce the soil cracks in black soils.
- **Custard apple** (*Annona squamosa*): Cultivar Balanagar gives maximum yield (kg/plant) and fruit weight under agroclimatic conditions of Jhalawar.
- **Lasoda:** Two sprays of Tebuconazole 50% + Trifloxystrobin 25% (75%WG) @ 1g/L or copper oxychloride 50% WP @ 2.5g/L at an interval of 20 days from disease initiation was most effective in managing *Alternaria* leaf spot disease of lasoda (*Cordia myxa*).

### Chaudhary Charan Singh Haryana Agricultural University (CCSHAU), Hisar

- For control of brown plant hopper in paddy spray dinotefuran 20% SG (Token 20%SG) @ 80 g/acre in 200 litre water at appearance of 5-10 hoppers/hill.
- For control of sheath blight of paddy, spray, thifluzamide 24% SC (Iglare) @ 150 ml/acre in 200 litre water first at the time of disease initiation and second 15 days after first spray.
- To obtain higher yield of Bt. Cotton, spray NAA @ 25 ml and cobalt chloride @ 1g / 100 litre of water at the stage of square formation, peak flowering and boll initiation/formation before and after irrigation/rainfall (within 12 hr) in cotton crop.
- Spray 400 ml (200 g a.i./acre) afidopyropen (Sefina) 50 g/l DC in 200-250 litre of water per acre at the economic thresholds for the management of leafhopper and whitefly in cotton.

### SKRAU, Bikaner

#### Groundnut

- Seed treatment with Tebuconazole 2DS @ 1.5 g/kg of seed of groundnut for reduce collar rot disease and higher pod yield (24.39%) and straw.
- Groundnut pod storage up to 8 months without losses of aflatoxin contamination and insect infestation with the use of PIC (Purdue Improved Crop Storage) bags. (Moisture level less than 10 % of storage groundnut)
- Weed control in groundnut. Application of Diclosulam (84%) 25 g/ha as P.E. effective for weed management in groundnut.

#### Date Palm

- For increasing more number of roots and higher survival of offshoots in the field, the offshoots should be treated with mixture of sand and FYM (1:1) in fertilizer bags for six month with regular moisture and after that detached from mother plants and shifted in polybags for two month.
- The Halawy variety is suitable for early crop with good quality fruits and Barhee variety is suitable for late crop with good quality fruits at Doka stage in western Rajasthan. The Khuneize variety is suitable for early and mid-season crop with good quality and red colour fruit.

### UAS, Bengaluru

- **Fertigation in Aerobic Rice:** Recommended nitrogen (100kg/ha) and potash (50 kg/ha) fertilizers are divided into 12 equal proportions and applied once a week starting from sowing to grain filling stage through fertigation enhances the fertilizer utilization efficiency (from 40% to 75%), yield (58q/ha to 68 q/ha) and B:C ratio (2.58:1 to 3.11:1).
- **Management of bacterial blight in paddy:** Seed treatment with 0.5 g streptocycline + copper oxychloride 1 g/litre of water (soak whole seeds overnight) along with present recommendation of spraying 0.2 g streptocycline + 1g of copper oxychloride per litre of water as soon as the disease is observed, will reduce disease by 79% with yield up to 38 q/ha and B:C ratio of 3.11:1.
- **Management of rice yellow stem borer in paddy:** Broadcasting of granular insecticide, chlorantraniliprole 0.4% GR @ 4 kg/acre at 20 days after planting reduces the incidence by 93% while enhances the yield (53.2 q/ha) by 75% over control with B:C ratio of 2.02:1.
- **Management of paddy brown plant hopper:** Foliar spray of triflumezopyrim 10 SC @ 0.40 ml/litre when we observe 5-10



grasshoppers per stem @ 94 ml in 225 litre of water/acre reduces the pest incidence to the extent of 99% with B:C ratio of 2.87:1.

- **Management of rust disease in foxtail millet:** Seed treatment with 10g *Pseudomonas fluorescens* talc based powder per kg of seed and spraying with azoxystrobin 23% SC @ 1ml/litre of water at 40-45 days after sowing followed by spraying with *Pseudomonas fluorescens* talc based powder 10g/litre of water at 50-55 days after sowing will reduce the disease by 89% with yield up to 15.2 q/ha and B:C ratio of 2.86:1.
- **Management of pod fly in pigeonpea:** Spraying of lufenuron 5.4 EC @ 1ml/litre of water, twice at an interval of 15 days at pod setting and pod development stages reduces the pod damage by 56% and seed damage by 77% with B:C ratio of 3.63:1.
- **Weed management with post-emergence herbicides in sunflower:** Whenever pre-emergence herbicides cannot be used, apply post-emergence herbicide, quizalofop-p-ethyl 5% EC @ 1.5 ml/litre at 15-20 days after sowing (when weeds are at two to three leaf stage) and one intercultural operation @ 30 DAS reduced the weed density by 75% and increased the yield by 13 % with reduction in cost of weed management by 60% as compared to manual hand weeding (B:C ratio of 2.43:1).
- **Integrated management of leaf curl virus disease in chili:** Two rows of multi-harvest fodder maize should be grown before 45 days along the borders of the field. Chili seedlings grown for 35 days under 50 × nylon mesh net should be transplanted in the mid of the silver reflective mulch row cover. Spray 0.5 ml of Imidacloprid (17.8 % SL) or 2 ml of Afidophyropen (50 g/l ) per litre of water at 15<sup>th</sup> and 70<sup>th</sup> day after planting. Sea plant biomolecule (*Kappaphycus alvirai*) LBD-12/ AGFORT/TOMOTUFF) 1.5ml/litre of water should be sprayed on 21<sup>st</sup>, 35<sup>th</sup>, 49<sup>th</sup> and 63<sup>rd</sup> day of

transplanting. Neem oil (5,000 ppm) @ 5 ml/ liter of water should be sprayed on 28<sup>th</sup> and 56<sup>th</sup> day of transplanting. Thiamethoxam (25 WG) at 0.5 g/l water should be sprayed at 42 days after transplanting. With adoption of this technology, the severity of the disease is between 3.00 to 7.3 % compared to control (44.29%) with record of highest yield (5.7 t/ha) with B:C ratio of 6.3:1 than untreated plots (1.2 t/ha and 2.4:1).

- **Management of diamond backmoth in cabbage:** Spraying broflanilide 30% SC @ 0.08 ml/liter of water when we observe the diamond backmoth in cabbage reduces incidence by 97% and enhances yield (23 t/ha) by 13% with B:C ratio of 3.3:1 or spraying fluxametamide 10% EC @ 0.8 ml/liter of water when we observe the diamond backmoth in cabbage reduces incidence by 96% and enhances yield (21 t/ha) by 12% with B:C ratio of 3.1:1.
- **Apical Rooted Cuttings (ARC) of potato for seed tuber production:** Disease-free saplings grown in tissue culture bottles (TC bottles) are selected and carefully separated roots from culture media. Dip the saplings in 2% fungicide and transplant to mother bed (a bed prepared with coco-peat). 21 days after transplantation, the first apicals are available to cut. The cut apicals are again transplanted to the mother bed for further multiplication up to 2 months. Where, each tissue culture sapling produces 100 saplings by the end of 2 months. After 2 months and based on the farmers need, apicals are cut and transplanted to portrays. After 14 days of nourishment, rooted saplings are ready for transplantation in open field conditions. Later, saplings are transplanted by following 60 × 20 cm spacing. Harvesting can be done at 90-110 days and harvested potato tubers are used as G-0 seed material for sowing. This can be used as seed material for three generations.

- **Management of early blight in tomato:** Spraying azoxystrobin 18.2% + difenconazole 11.4% SC @ 1 ml/liter of water as soon as the disease is observed, reduces early blight incidence in tomato by 70% and yield of about 31.2 q/ha with B:C ratio of 2.26:1.
- **Management of mirid bug in cotton:** Spraying dinotefuran 20 SG @ 0.3 g/liter of water when we observe mirid bugs at bud setting and fruit development stage @ 200 litre of solution per acre reduces the mirid count to the extent of 87 % and enhances the yield by 60% (24.4 q/ha) with B:C ratio of 3.41:1.

### VNMKV, Parbhani

- Crop coefficient (Kc) values 0.51, 1.24 and 0.95 for initial (1-30 days), mid stage (31-111 days) and the end stage (112-164 days), respectively, are recommended for estimation of crop water requirement of Bt. cotton crop for Maharashtra state.
- Crop coefficient (Kc) value 0.64, 1.31 and 0.66 for initial stage (1-28 days), mid stage (29-84 days) and end stage (85-110 days), respectively, is recommended for estimation of crop water requirement of soybean crops for Marathwada.
- For obtaining higher yield, net monetary returns and improving soil health in organically grown pigeon pea, it is recommended to apply 100 % RDN (25 kg/ha) through 33% each of FYM (1.6 t/ha) + vermi-compost (1.0 t/ha) + neem cake (230 kg/ha) at the time of sowing
- Planting of turmeric + sweet corn (2:1) intercropping system (turmeric on bed with 60 cm × 20 cm spacing and one row of sweet corn in between two rows of turmeric at the centre of bed) along with application of 125 % RDF (250:125:125 NPK kg/ ha) is recommended for higher turmeric equivalent yield and net monetary returns.

- For obtaining higher yield, net monetary returns and improving soil health in organically grown tomato, it is recommended to apply 100 % RDN through vermi-compost (10 t/ha) or to apply 100 % RDN through 50 % FYM (10 t/ha) + 50 % vermi compost (5 t/ha) before transplanting.
- Adoption of VNMKV developed BBF (4 in 1) planter technology in soybean cultivation adds 27.67 % in the productivity, 33.47 % saving in the seed with increase in net profit by 131.65 %.

## B. ANIMAL and FISHERIES SCIENCES

Various technologies developed in Animal and Fisheries Sciences by the universities are given here.

### IVRI, Izatnagar

#### Live Attenuated PPR-Goat Pox Combined Vaccine

- Single shot of vaccine can protect both PPR and goat pox diseases.
- PPRV (Sungri/96) and goat pox (Uttarkashi/1976) vaccine viruses were used for preparing the vaccine.
- Both the viruses were passaged in Vero cells at passage 60 level.
- 100 TCID<sub>50</sub> of each virus protects goats for at least one year.
- Recommended dose: 10<sup>2.5</sup> -10<sup>3.0</sup> TCID<sub>50</sub> of each virus.
- Route of inoculation: subcutaneous at neck region.
- Age of vaccination: above four months.

**Nutrient supplement:** IVRI Regional Station, Palampur, formulated a starch-based multi-nutrient supplement containing tea seed meal as source of phytochemicals for Gaddi goats.

**Methlow:** A herbal product fed on normal diet decreased methane production and improved body weight gain and relieves stress in ruminants.

## TEACHING

### AU, Kota

- 2<sup>nd</sup> Annual Prize Distribution Ceremony *Mridang* was celebrated by College of Agriculture, Kota on 27 April 2023. Dr A. K. Vyas, Vice Chancellor, Agriculture University, Kota Presided over the programme. In this programme more than 115 students were felicitated.
- College of Horticulture and Forestry, Jhalawar, organized Annual Function *Tarang-2023* on 27 May 2023. Dr Uma Shanker Sharma, Former Vice Chancellor, MPUAT, Udaipur was the Chief guest and Vice Chancellor, Agriculture University, Kota. Dr Abhay Kumar Vyas was president of the function. Total 25 students were awarded for excellence in academics, 45 in cultural activities and 88 in sports. On this occasion College Annual Report 2021-22 and College magazine *Baag-van* was also released by the honorable guests. Students also presented cultural performance on this occasion.



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

- Sensitization workshop on Research Visibility, Open Access Repository and Plagiarism, was held on 20 June 2023 with expert lecture delivered by Dr Sridhar Gautam, Senior Scientist, ICAR-IIHR, Bangalore, Dr Amarendra Kumar, Principal Scientist, Agri. Statistics, ICAR-IARI, New

Delhi and Dr Harish Kumar Tripathi, Assistant Chief Technical Officer (Library), ICAR, New Delhi.

- All India Educational Tour for the 5<sup>th</sup> semester students of TCA, Dholi was successfully organised from 19-27 April 2023. The students visited GBPUA&T, Pantnagar; Indian Institute of Soil and Water Conservation, Dehradun and Forest Research Institute, Dehradun and NASC (National Agriculture Science Centre) at IARI, New Delhi. Similarly, All India Educational Tour for the 8<sup>th</sup> semester students of TCA, Dholi was successfully organised from 22-26 May 2023. During educational tour, students visited and interacted with renowned scientists at IAS, BHU; IIVR, Varanasi; IISS and NBAIM, Mau.

### Dr YSPUHF, Nauni

- Dr Rajesh Kumar Dogra participated and successfully completed under UGC-Approved short term professional development programme under Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching w.e.f. 12-20 June 2023.
- All UG and PG Courses of Post harvest and Food Technology were offered in Current Semester.
- Developed practical manual on *Elementary Plant Biotechnology* for UG students.
- Mr Gaurav Singh Dhakad cleared DRDO Ceptam 10 exam, and now recruited as Senior Technical Assistant-B in DRDO.

### G.B. Pant University of Agriculture and Technology (GBPUAT), Pantnagar

- Upscaling 20% of the Undergraduate Courses to online (MOOC) mode, for facilitating credit-sharing, in line with NEP-2020 (December 2023).



- Starting a new undergraduate/post-graduate certificate, diploma and skill development courses.
- Transformation of entire PG academic procedures in on-line mode on AUAMS portal.
- Implementation of NEP principles and recommendations: Allowing on line courses (MOOC, SWAYAM etc.) up to 20% and counting towards the degree completion.
- All UG, PG and Ph.D. programmes offered in different faculties of the university are as per scheduled calendar. The courses are being taught as per the recommendation of 6<sup>th</sup> Deans Committee/ BSMA Committee.

### **Professor Jayashankar Telangana State Agricultural University (PJ TSAU), Rajendranagar**

#### **Participation of Ph.D. Students in National Seminar**

Three Ph.D. students, viz., Ms K. Soujanya, Ms N. Anusha Reddy and Ms B. Jagadeeswari, Department of Agricultural Extension presented their research papers as oral presentation at National seminar on Evolving Extension Science towards Secondary Agriculture for Sustainable Development, held from 22-24 June 2023 at University of Agricultural Sciences, Bengaluru.

#### **Student Radio Programme**

Under *Chenukaburlu*, 11 programmes were produced by the students of constituent colleges of the University. These were broadcast through All India Radio (Hyderabad-A) on every Wednesday (1.30 to 2.00 pm) in the name of *Gruha Vignana Tarangini / Vyavasaya Vignana Tarangini*.

### **SKUAST, Jammu**

- Conducted UG Classes of B. Tech. Dairy Technology students for semester II.

- Routine teaching instructions were made along with mid-term and practical exams and other teaching activities.
- An expert lecture was delivered on Communication Skills for Success by Prof. B. Kumar, Former Dean, College of Agriculture Business Management, GBPUAT, Pantnagar for UG and PG students at Smart Class Room, University Library, SKUAST-Jammu, Chatha on 20-06-2023.



Prof. B. Kumar delivering lecture on Communication Skills

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

- In collaboration with M/s. Virbac Animal Health India Private Limited, TANUVAS organized Budding Veterinarians Programme 2023 for the final year B.V.Sc. & A.H. students on 26.04.2023 at VC&RI, Namakkal. An offline quiz competition was also conducted and a total of 78 students participated in this competition.

### **UAS, Bengaluru**

- Kumari Syeda Ifthaquar Banu participated in Khelo India Games 2022 Fencing (Epee-Event). Kumari Syeda Ifthaquar Banu and Srividya R participated in the World University Trials for World University Games held at GNDU, Amritsar from 28 May to 08 June 2023.
- NSS unit, College of Agriculture, GKVK organized orientation programme on Fundamental Right Under Indian Constitution, for NSS students on 5-6 June 2023.

- Guest lecture was organized on 15.06.2023 for first year NSS students, College of Agriculture, GKVK on the topic Life Skills and Confidence Building. The session was conducted by Dr C. Narayaswamy, Associate Professor and Scientific officer to Dean (Agriculture). The main points discussed in the lecture included the guidelines for building self-confidence, self-image, self-identity and self-esteem among students.



## EVENTS and ACTIVITIES

### AAU, Anand

#### 42<sup>nd</sup> Annual Conference and National Symposium 2023 on Plant Health Management- Way Forward for Food Safety, Security and Sustainability

Anand Agricultural University in collaboration with Indian Society of Mycology and Plant Pathology organized 42<sup>nd</sup> Annual Conference and National Symposium-2023 on Plant Health Management- Way Forward for Food Safety, Security and Sustainability, during 10-12 May 2023 at AAU, Anand under the presidentship of Dr K. B. Kathiria, Vice Chancellor, AAU. Dr S. S. Chahal, Former Vice Chancellor, MPAUT and Prof. A. J. Patel, Former Professor and Head were Chief Guest and Guest of honour, respectively. More than 300 participants attended the three days conference.



Dr K. B. Kathiria, Vice Chancellor, AAU addressing the delegates

### Ch. Sarwan Kumar Himachal Pradesh Krishi Vishvavidyalaya (CSKHPKV), Palampur

#### Regional Agricultural Fair (Parvatiya Krishak Mahasangam)

Regional Agriculture Fair-2023 (Parvatiya Krishak Mahasangam)- a three-day fair was organised by CSKHPKV, Alliance Bioversity International and International Centre for Tropical

Agriculture at the university from 12-14 June 2023.

It aims to promote agricultural advancements



Cultural Programme during the fair and improve farmers' livelihoods in mountainous regions. The fair was inaugurated by Prof. Chandra Kumar Chaudhary, Minister of Agriculture and Animal Husbandry, Government of Himachal Pradesh. The Vice Chancellor, CSKHPKV, Palampur, Dr H. K. Chaudhary highlighted the achievements of the university at the agricultural fair. Various departments and private companies installed their exhibitions during the fair. Use of drone technology in agriculture was one of the main attractions. There were Farmers-Scientists Interaction sessions during the fair for addressing problems of farmers. Prizes were also distributed to the progressive farmers for their best vegetable and fruit exhibits. Farmers of Himachal Pradesh, Uttarakhand, Punjab and UT of Jammu, Kashmir and Ladakh participated in the fair and also shared their success stories/experiences.

#### National Conference on Natural and Organic Farming for Ecological, Economical & Nutritional Security (NCNOF-2023)

The Organic Agricultural Society of India, Department of Organic Agriculture and Natural Farming organized a National Conference on

Natural and Organic Farming for Ecological, Economical and Nutritional Security, from 07-09 June 2023 at CSKHPKV,

Palampur with various themes including agriculture,

livestock, farm mechanization, extension strategies, etc. More than 270 delegates from 12 states participated and presented their research work on natural and organic farming during the conference.



### XXXV Annual Convention and National Conference of IAVMICON 23

The XXXV Annual Convention and National Conference (IAVMICON 23) of Indian Association of Veterinary Microbiologists, Immunologists and Specialists in Infectious Diseases (IAVMI) on the theme *Novel Approaches in Animal Health for Realizing One Health Mission* was organized by the Department of Veterinary Microbiology, Dr G. C. Negi College of Veterinary and Animal Sciences, CSKHPKV, Palampur on 07-08 April 2023. During the Conference 153 delegates including industry representatives participated from 16 different States and UTs of India. Total 08 technical sessions, 02 poster sessions and one award session were organised. The Plenary-cum-Valedictory and award distribution function was organized on 08 April 2023. Professor H. K. Chaudhary, Vice Chancellor, CSKHPKV, Palampur was the Chief Guest and Dr Ashok Kumar, ADG (AH), ICAR was Guest of Honour.

### Dr YSRHU, Venkataramannagudem

#### 5<sup>th</sup> Convocation of Dr YSRHU

At the Dr YSRHU the 5<sup>th</sup> Convocation ceremony was held on 12 May 2023 at the university campus located at Venkataramannagudem, Andhra Pradesh. The ceremony was graced by the presence of Shri S. Abdul Nazeer, Hon'ble

Chancellor, Dr YSRHU and Governor of Andhra Pradesh. In his message he said that contributions of Dr YSR Horticultural University in the field of horticulture in Andhra Pradesh made everyone proud of the University. Joining the Chancellor was Prof. Ramesh Chand, member of NITI Ayog and renowned Agricultural Economist.

Dr T. Janakiram, Vice Chancellor of the Dr YSRHU, extended cordial welcome to the Chancellor Shri S. Abdul Nazeer, Dr Ramesh Chand, University Officers, Members of Board of Directors, Members of Academic Council, Teaching and Non-Teaching Staff, Students and Parents, and proudly presented about the achievements of the University in education, research and extension.

On this solemn occasion with permission of the Chairman, the university awarded Degrees to 1192 students (1069 B.Sc (Hons.) Horti and 97 M.Sc (Hort.) and 26 Ph.D students), symbolizing their academic achievements and preparing them for a promising future in the field of horticulture.

#### Training

On 01-04-2023, Dr YSRHU-KVK, Venkataramannagudem initiated 90 days Vocational Skill Training

programme on Bamboo value addition and Handicrafts



preparation for Participants of training programme Tribal youth, at Youth Training Center (YTC), ITDA, KR Puram, Eluru District under Tribal Sub Plan EDP. Dr T. Janakiram, Vice Chancellor, Dr YSRHU participating as Chief Guest and inaugurated the programme in the presence of Director of Extension, Dr YSRHU, Dr E. Karunasree and APO, ITDA, Shri PVS Naidu. He explained about the potential of Bamboo value addition to take up as self employment generation activity by the women and youth in tribal areas.



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

### **3<sup>rd</sup> Convocation of Varsity**

Varsity organized the third Convocation on 06 May 2023. S. Kultar Singh Sandhwan, Speaker, Punjab Legislative Assembly graced the convocation as Chief Guest while S. Laljit Singh Bhullar, Cabinet Minister of Animal Husbandry,



Fisheries and Sh. R.S. Sodhi Receiving Degree Dairy Development, Punjab was the Guest of Honour. S. Rupinder Singh Sodhi, President of the Indian Dairy Association and former MD, Amul, received Doctor of Philosophy (*Honoris Causa*) for his praiseworthy contribution in developing the cooperative sector within the Indian dairy industry. A total of 315 degrees, 102 merit certificates and 17 gold medals were conferred on students who have successfully completed their academic programmes in Doctor of Philosophy, Master of Veterinary Science, Master of Dairy Science and Technology, Master of Fisheries Science, Master of Veterinary Science, Master of Science (Biotechnology), Bachelor of Veterinary Science and Animal Husbandry, Bachelor of Dairy Science and Technology, Bachelor of Fisheries Science and Bachelor of Biotechnology.

### **Brainstorming Sessions to Improve Productivity of Dairy Animals**



**Dr Inderjeet Singh, Vice Chancellor chairing Brainstorming Session**

Two brainstorming sessions on animal reproduction and management were organized

at the Varsity with the aim of increasing per animal productivity of dairy animals and to set the future roadmap. Dr Inderjeet Singh, Vice Chancellor chaired these sessions. The eminent guests for reproduction session were Dr A. K. Misra, Ex-Chairman, Agricultural Scientists Recruitment Board, New Delhi; Dr Shyam Zawar, National mentor, IVF-Labs, GoI; along with Dairy Entrepreneurs Mr Narinder Singh and Mr Karan, Frontier Dairy Junction, Ludhiana. In the management session, the invited experts were Dr R. S. Yadav, Retd. Professor, Department of Livestock Production Management, CCSHAU, Hisar; Dr A. K. Balhara, Senior Scientist, Central Institute for Research on Buffaloes, Hisar with Mr. Sandeep S. Randhawa, Dairy Entrepreneur. The Dean and directors of varsity also attended the sessions. The major issues discussed in the reproduction session were poor Artificial Insemination coverage with less conception rate, problems of availability of quality germplasm, limitation of use of ultrasonography at farmer's doorstep, infertility, etc.

### **Orientation Workshop on Intensive Aquaculture**

An orientation workshop on intensive aquaculture technologies i.e., recirculatory aquaculture system (RAS) and Biofloc based Aquaculture (BFA), was organized by College of Fisheries (CoF), for capacity building of officials of Department of Fisheries (DoF), Punjab and aspiring farmers/youth of the State. Nineteen Fisheries Officers/Senior Fisheries Officers and 29 farmers/entrepreneurs attended the workshop. A Capacity Building Resource Centre for Intensive Aquaculture Technologies, has been established at Varsity under Pradhan Mantri Matsya Sampada Yojana (PMMSY) of



**RAS Demonstration Unit**

DoF, Government of India to cater the training needs of stakeholders of the region.

### Undergraduate Students Sent to Malaysia for Training



Students contingent with Dr Inderjeet Singh, VC, Dr R.S. Sethi and Faculty Members

15 B.Tech Dairy Technology (Batch 2019) students from College of Dairy Science and Technology (CoDST) attended an international training programme on International Collaborative Training Program on Advances in Quality and Safety Assessment of Animal Based Foods at University Putra Malaysia (UPM), Malaysia from 10 June 2023 to 7 July, and was sponsored by World Bank and NAHEP, ICAR funded Institutional Development Plan (IDP) operational at Vet Varsity. The training aimed at providing exposure to students to the facilities and techniques at reputed institutes in developed countries.

### GBPUAT, Pantnagar

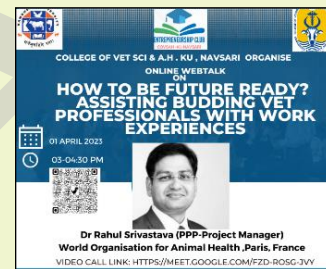
#### Trainings

- 10 entrepreneurial trainings under Capacity Building for Women through Dairy Sector in Uttarakhand, were organized by Department of Veterinary and Animal Husbandry Extension Education in collaboration with Department of Livestock Product Technology, C.V.A.Sc. Under this training programme, 310 women livestock producers from 2 districts of Uttarakhand, were trained.
- Three 10-day trainings entitled Fish culture, seed production and processing, were organized for the progressive fish farmers of Bihar state.

### Kamdhenu University (KU), Gandhinagar

#### Web Talk for Students on How to be Future Ready? Assisting Budding Vet Professionals with Work Experiences

A web talk on How to be future ready? Assisting budding vet professionals with work experiences, was organized on 01-04-2023 at College of Veterinary Science and A.H, Kamdhenu University, Navsari. The speaker Dr Rahul Srivastva (PPP-Project Manager, WOAHP-Paris, France)



shared his journey from a small-town vet to working with an international organisation. He emphasized on the current situation of veterinary profession and job openings for budding vets. He also shared his views on animal husbandry sector in India and explained the challenges being faced by livestock farmers. The speaker interacted with the students and motivated them to grab job opportunities in National/International companies of animal health industry, startups and development sectors. The web talk was very pertinent to the current scenario of public and private veterinary sector in India. A total of 67 students attended the web talk and interacted with the speaker. Dr V. B. Kharadi, Principal, CoVs & A.H, Navsari, expressed his gratitude to Dr Rahul Srivastva for his motivational talk to inspire budding vets in our college.

#### Web Talk for Students on Role and Scope of Laboratory Animal Veterinarian-International and National Educational Requirements and Openings

A web talk on Role and Scope of Laboratory Animal Veterinarian-International and National Educational Requirements and Openings, was organized on 15-04-2023 at College of Veterinary Science and A.H,

Kamdhenu University, Navsari. Dr Hari Krishnan. V. S. has a wealth of professional experience and knowledge in the field of laboratory animal veterinary science. It is impressive that he has achieved the MLAS (FELASA-D, Denmark) qualification, which is a certification for professionals who work with laboratory animals in Europe. He is a Scientist F and Scientist-in-Charge at SCTIMST, Thiruvananthapuram. Dr Hari Krishnan V. S. shared valuable insights about the international and national educational requirements for laboratory animal veterinarians. A total of 52 participants attended the web talk and interacted with the speaker. Dr V. B. Kharadi, Principal, CoVs & A.H, Navsari, expressed his gratitude to Dr Hari Krishnan. V. S. for his motivational talk to inspire budding vets in the college. This talk has encouraged students to pursue their interests in laboratory animals and to continue learning and growing in their field. The event was organized under the guidance of Dr V. B. Kharadi, with support from Dr Durgga Rani V., Dr R. S. Ghasura, Entrepreneurship Club In-charge and Dr Sudhir Mehta, Internship In-charge. This suggests that there is a strong commitment to provide students with access to high-quality educational experiences and opportunities for professional development. Overall, it appears that the web talk was a valuable and inspiring experience for all the participants.



Pookode, Wayanad, was organized on 20 May 2023. In a ceremony held at the Kabani Auditorium of the University headquarters at Pookode, Wayanad, the Honourable Chancellor of the University Shri. Arif Muhammad Khan, distributed gold medals, various endowment awards and certificates to the students who earned the highest achievements.

Hon. Smt. J. Chinchurani, the University Pro-Chancellor and Minister of State Animal Husbandry and Dairy Development and Dr Bhupendranath Tripathi, Deputy Director General (Animal Sciences), Indian Council of Agricultural Research (ICAR) were the chief guests of the function. Members of Board of Management of the University Mr O.R. Kelu, MLA; Mr Vazhursoman, MLA; District Police Chief Shri R. Anand, IPS and other elected people representatives and officials were present.

Gold medals to 19 meritorious students, 20 endowment awards, various graduation certificates to 265 students, post-graduation certificates to 80 students, doctorate certificates to 19 students and diploma certificates, were distributed on the occasion.

University Vice Chancellor Prof. (Dr) M.R. Saseendranath, Registrar Prof. (Dr) P. Sudhir Babu, Director of Academic and Research Prof. (Dr) C. Latha, Director of Entrepreneurship Prof. (Dr) T.S. Rajeev, Faculty Deans Prof. (Dr) K. Vijayakumar, Prof. (Dr) SN Rajakumar, other Directors, University Management Council and Academic Council members participated in the Convocation.

### Training

The Directorate of Entrepreneurship, KVASU organised 3-month Training Program for Assistant Directors of Kerala State Animal Husbandry Department from 15.05.2023 to 12.08.2023. The Inauguration Function was held on 15.05.2023 at Academic Staff College, Mannuthy. The training programme was inaugurated by the Vice Chancellor Prof. (Dr) M.R. Saseendranath.

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

### 4<sup>th</sup> Convocation of Kerala Veterinary & Animal Sciences University

The Fourth Convocation of the Kerala Veterinary & Animal Sciences University,



## Maharashtra Animal and Fishery Sciences University (MAFSU), Nagpur

### Trainings

#### Training programmes under ICAR- NAHEP- CAAST, project

Department of Veterinary Public Health, Mumbai Veterinary College, Mumbai organized following training programmes under ICAR-NAHEP- CAAST project entitled Centre of Excellence for Advanced Research on Animal Food Safety.

- Three-day hands-on training on Detection and Quantification of antimicrobial residue in meat by Liquid Chromatography Tandem Mass Spectrometry (LC-MS/MS), was organized during 10-12 May 2023.
- Two-day hands on training program on Detection and Quantification of Heavy Metal Residues in Chicken Meat by Induction Coupled Plasma- Mass Spectrometry was organized on 12 June 2023.
- Five-day hands on training program on Bioinformatics and Genomics, was organized during 13-17 June 2023.
- Three-day hands on Training Program on Detection and Quantification of Pesticide Residues in Animal Origin Foods by Gas Chromatography, was organized during 21-23 June 2023.

Dr S. U. Gulavane, Associate Dean & Project Implementing Officer, MVC, Mumbai and Dr R. J. Zende, Principal Investigator NAHEP-CAAST, MVC, Mumbai were the course directors.

#### Commercial Goat Farming Training Programme at COVAS, Parbhani

Three-day training on Commercial Goat Farming, was organized during 18-20 April 2023 by Department of Livestock Production Management,



Distribution of certificates to trainee

College of Veterinary and Animal Sciences, Parbhani. Faculty members from different disciplines guided 47 farmers/unemployed youth on various facets of Commercial goat farming. Dr M. B. A. Siddiqui, I/c Professor of LPM and Dr V. S. Ingle, Assistant Professor LPM and Dr M. D. Kharwadkar were the Co-ordinators.

#### Poultry Training Programme for tribal women of Melghat

Backyard Poultry Training was organised by Department of Poultry Science, PGIVAS, Akola at Chilati Melghat for tribal women during 28<sup>th</sup> to 29<sup>th</sup> May 2023. During training total 20 improved desi birds, 100 kg feed, one feeder and drinker, Medicine, and feed supplements were distributed to 30 tribal women. Training was chaired by Dr D. G. Dighe, Associate Dean and coordinated by Dr M. R. Wade



Distribution of poultry farming equipments to tribal women

### MPUAT, Udaipur

#### The Global Dairy Industry

On 5 June 2023, the College of Dairy and Food Technology (CDFT) organized a National Seminar on The Global Dairy Industry: An Analysis of Market Trends, Challenges and Opportunities, in which Shri Vijay Sardana, a well known techno-legal advisor, TV panellist, agri-economist, youtuber and blogger was the keynote speaker. Sh. Kaushlesh Varshney, Technical Director, Sosyo Hazoori Pvt Ltd explained the students about product development, challenges, and opportunities. Dr Lokesh Gupta, Dean CDFT, Dr Kamlesh Kumar Meena, Organizing Secretary and faculty of



CDFT organized a series of programs to celebrate World Milk Day on 01 June which culminated with this National Seminar.

## **Navsari Agricultural University (NAU), Navsari**

### **Trainings on Basic Molecular Biology**

College of Forestry, NAU, Navsari in collaboration with Gujarat Biotechnology Research Centre, Gandhinagar

organized the hands-on training programme on Basic Molecular Biology, during 10-14 April 2023. The programme sponsored under the KAUSHALYA programme of



Gujarat State Biotechnology Mission (GSBTM), Department of Science and Technology, Government of Gujarat, Gandhinagar. The training program was inaugurated by Vice Chancellor Dr Z. P. Patel in the gracious presence of Dr Akhilesh Pandey, Training officer, District Health Department; Dr C. G. Joshi, Director, GBRC; Dr P. K. Srivastava, Dean, College of Forestry, Navsari; Dr Alka Singh, Dean, ASPEE college of Horticulture, Navsari; Dr Sanjay Jha, Dean ASABI, NAU, Surat and other distinguished dignitaries. Ph.D. students, research fellows and faculties from various Institutes and Universities of Gujarat, were the participants of the event.

## **OUAT, Bhubaneswar**

### **Workshop of AICRP on Micro-Secondary Nutrients and Pollutant Elements in Soil, Plant and Water**

The XXIX Biennial Workshop of AICRP on Micro-Secondary Nutrients and Pollutant Elements in Soil, Plant and Water, was

organized from 23-25 June 2023 at OUAT, Bhubaneswar in collaboration with ICAR-Indian Institute of Soil Science, Bhopal. The inaugural session was graced by Dr S. K. Chaudhari, Deputy Director General (NRM), ICAR; Prof. A. K. Shukla, Vice



Chancellor, Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya, Gwalior; Dr S. P. Datta, Director, ICAR-Indian Institute of Soil Science, Bhopal; Dr S. K. Sanyal, former Vice Chancellor, Bidhan Chandra Krishi Viswavidyalaya, and Dr A. K. Nayak, Director, ICAR-National Rice Research Institute, Cuttack. The inaugural session was chaired by Prof. Pravat Kumar Roul, Vice Chancellor, OUAT. About 100 scientists of AICRP on MSPE from all over the country participated in the workshop. AICRP on MSPE, OUAT centre was adjudged as the best center in the country.

### **State Level Research and Extension Council Meeting**

A State Level Research and Extension Council meeting was organized at the University from 23-25 May 2023 to review the research and extension activities of the University. Shri Suresh Kumar Vashishth, IAS, Principal Secretary

Fisheries & Animal Resources Development, Government of Odisha graced the



inaugural function as the Chief Guest. Presiding over the inaugural session, Prof. Pravat Kumar Roul, Vice Chancellor, OUAT articulated that the University is developing new technologies keeping in view the emerging challenges of climate change. Prof. Prasanjit Mishra, Dean, Extension Education, presented an overview of activities undertaken by the Directorate of Extension Education. Prof. S. K. Swain, Dean of Research presented the key



accomplishments of research programmes of the University. A special session on Innovations in Millet Research and Extension, was held on 25 May 2023 in view of International Year of Millets.

### Workshop on Usages of Nano Urea

A State Level Workshop on Usages of Nano Urea, was jointly organized by Odisha University of Agriculture and Technology, Indian Farmers Fertilizer Cooperative Ltd and Department of Agriculture and Farmers' Empowerment, Government of Odisha, Bhubaneswar on 22 June 2023. The Chief Guest Prof. Pravat Kumar Roul, Vice Chancellor, OUAT in his address mentioned that nano urea is useful for minimizing pollution, reducing cost and easiness in handling. The Guest of Honour, Dr A. K. Nayak, Director, ICAR-NRRI, Cuttack highlighted various aspects of nano urea application. Mr S.K. Chatterjee, State Marketing Manager, IFFCO, Odisha welcomed the guests and participants. Prof. Prasannajit Mishra, Dean, Extension Education elaborated about opportunity and challenge of use of nano urea.



Empowerment, Government of Odisha, Bhubaneswar on 22 June 2023. The Chief Guest Prof. Pravat Kumar Roul, Vice Chancellor, OUAT in his address mentioned that nano urea is useful for minimizing pollution, reducing cost and easiness in handling. The Guest of Honour, Dr A. K. Nayak, Director, ICAR-NRRI, Cuttack highlighted various aspects of nano urea application. Mr S.K. Chatterjee, State Marketing Manager, IFFCO, Odisha welcomed the guests and participants. Prof. Prasannajit Mishra, Dean, Extension Education elaborated about opportunity and challenge of use of nano urea.

## PJTSAU, Hyderabad

### Annual Action Plan Workshop of KVKs

Annual Action Plan Workshop of KVKs of Telangana in collaboration with ICAR- ATARI-X was conducted on 19-20 April 2023 at University Auditorium, Rajendranagar. Dr R. K. Samantha, Former Vice Chancellor, BCKV, West Bengal graced the inaugural Session as Guest of Honor. All



Annual Action Plan Workshop of KVKs

Scientists and PCs of 16 KVKs, Director ATARI and Principal Scientists of ATARI, Director of Research, University Officers, University Heads and Principal Scientists of PJTSAU, Directors of Extension of SKLTSHU and PVNRTVU participated in the workshop. During the workshop, the extension activities taken up by the KVKs units during the year 2022-23 were reviewed and the Technical Programme for the year 2023-24 was discussed and finalized.

### Annual Seed Mela

The Seed Mela 2023 was organized by PJTSAU on 24 May 2023 at University Auditorium Premises, Rajendranagar and at 3 RARSs of the University. Shri Singireddy Niranjana Reddy, Minister for Agriculture, Co-operation and Marketing, Government of Telangana inaugurated the event in the presence of Smt Surabhi Vani Devi, MLC, Shri Hanmanth K. Zendage, IAS, Spl. Commissioner, DoA, Shri K. Koteswara Rao, Chairman, TSSDC Ltd, Scientists and farmers. Quality seed of paddy, maize, sorghum, redgram, greengram, blackgram, groundnut and castor were put on sale. In addition, seed of vegetable crops, mango and guava saplings, fodder slips, medicinal and aromatic plants were also sold through an exhibition organized on the occasion. A total of 2,536 farmers participated in the mela, and 1,101.99 q of seed of different crops was supplied and an amount Rs 5,427,877 was realized through the sale of seed, value added products and others.



Dignitaries Releasing Publication

A total of 24 stalls were arranged for sale of seed and value added products along with demonstrations on various modern agro technologies. Scientists from Shri Konda Laxman Telangana State Horticultural University, P. V. Narsimha Rao Telangana Veterinary University, ICAR institutes, Department of Agriculture, National Seeds



Corporation, TSSOCA, TSSDC and Regional Fodder Station participated in the event.

### Review meeting by the Hon'ble Governor & Chancellor with Vice Chancellors

Vice Chancellors meeting with the Hon'ble Governor of Telangana Dr. Tamilisai Soundararajan was held on 26 June 2023 at Raj Bhavan, Hyderabad. The Registrar, PJTSAU presented the progress of academic and

research activities of PJTSAU along with progress in the

areas of village adoption, NCC, NSS activities in University colleges. In addition, progress of Chancellor Connects Alumni and implementation of National Education Policy 2020 was also presented. During the meeting, G20 Souvenir comprising the activities conducted at PJTSAU was released by the Hon'ble Governor.



Release of G-20 Souvenir of PJTSAU by the Hon'ble Governor of Telangana

### Farmers' Conference (Rythu Dinotsavam – Sadassu)

As part of the decennial celebrations of Telangana State Formation Day at PJTSAU, Shri Singi Reddy Niranjan Reddy, Minister for Agriculture, Cooperation and Marketing, Government of Telangana, participated as Chief Guest of the program and inaugurated the State Level Farmers' Conference (Rythu Dinotsavam – Sadassu) entitled Agricultural Transformation in Telangana - Genesis, Status and Way Forward on 03.06.2023 at University Auditorium, Rajendranagar. Prof. Ghanta Chakrapani, Dean of Social Sciences, BRAOU; Vice Chancellor, PJTSAU, Shri M. Raghunandan



Hon'ble Minister facilitating the farmer

Rao, IAS, APC & Principal Secretary, Government of Telangana; Shri K. Hanumanthu, IAS, Special Commissioner, Department of Agriculture, Telangana, Shri Srinivas Rao, Advisor, Oil Palm; Dr M. Venkata Ramana, Registrar, PJTSAU; University Officers, Scientists, Farmers, Students, Teaching and Non-teaching staff participated in the program. Prof. Ghanta Chakrapani, Dean of Social Sciences, BRAOU delivered the key note address. On this occasion, progressive farmers were felicitated, and students of the University expressed their impressions about the progress made by the State during the last decade.

### P. V. Narasimha Rao Telangana Veterinary University (PVNRTVU), Hyderabad

#### Conference

The National Animal Resource Facility for Biomedical Research (NARFBR) (<https://www.narfbr.org>) under the Indian Council of Medical Research, Department of Health Research, Ministry of Health and Family Welfare,

Government of India is the apex institute in India having state-of-the-art infrastructural facility for pre-clinical testing of new drugs, vaccines, diagnostics and biomedical devices within the country. The Institute will provide infrastructure under one roof for basic, applied, and regulatory animal research in the country. A conference on Innovative Approaches in Laboratory Animal Research, was held to commemorate the World Laboratory Animal Day at ICMR-NARFBR, Hyderabad on 23-24 April 2023 at Conference Hall, ICMR-NARFBR, Genome Valley, Shamirpet, Hyderabad 500101, Telangana. Dr V Ravinder Reddy, Vice Chancellor seen lighting of the lamp at the above conference.



**SKRAU, Bikaner****Research Advisory Committee (RAC) Meeting**

The Research Advisory Committee (RAC) meeting was organized by Directorate of Research, SKRAU, Bikaner, on 13-14 April, under the chairmanship of Vice Chancellor, SKRAU, Bikaner, Prof. Arun Kumar. Prof. N.P. Singh, Vice Chancellor, BUAT, Banda, was the chief guest and Prof. Sanjay Singh, DG, Uttar Pradesh Council of Agricultural Research, Lucknow and Shri Mohan Singh, a progressive farmer of village Nalbadi, district Bikaner were special guest on this occasion. Research achievements and future planning of research station of Bikaner, Sriganganagar and Hanumangarh as well as National Seed Project were presented and finalized during the RAC meeting.



Lightening of Lamp before Goddess Saraswathi by the Dignitaries

**SKUAST, Jammu****Trainings**

- Dr Sudhakar Dwivedi (Professor) as a Convener organized 07 days training programme on Revitalizing Wool and Pelt Industry in Jammu and Kashmir, under HADP programme, w.e.f.: 21 – 27 June 2023 at Main Campus, SKUAST-J, Chatha, Jammu. Dr Anil Bhat (Assistant Professor) was the organizing Secretary of the training programme.
- School of Biotechnology organized 07-day training for B.Tech (Biotechnology) final year students under Student READY Programme for promoting Biotechnology based Entrepreneurships w.e.f. 15-05-2023 to 22-05-2023.
- Dr Jyoti Kachroo, Prof. & Head organized a two-month training programme for incubates of UDGAM and PRAGATI

Programme of Agri-Business Incubator of SKUAST-Jammu, w.e.f. 03.05.2023 to 02.07.2023.

- KVK Poonch conducted 15-day certificate course on fertilizers for Input dealers from 03-06-2023 to 17-06-2023.



15 days certificate course on fertilizers for input dealers at KVK Poonch

**TANUVAS, Chennai****Trainings**

- In coordination with Vazhnthu Kattuvom project, Tirunelveli, Training of Trainers programme on Profitable dairy farming was conducted at VC&RI, Tirunelveli from 24.05.2023 to 26.05.2023 benefitting 36 trainers of Tirunelveli and Tenkasi districts.
- Buffalo Mela, Workshop on Dairypreneurship and Scientific Rearing of Buffaloes for Rural Women, was inaugurated at College of Food and Dairy Technology, Koduveli. Vice VC, TANUVAS inaugurated the mela Chancellor, TANUVAS; Additional Collector, Tiruvallur and Registrar, TANUVAS were the Guests.
- Ten students from Oklahoma State University, Stillwater, USA underwent clinical externship training at TANUVAS from 14.06.2023 to 14.07.2023.





**TNAU, Tamil Nadu****Trainings****Summer Training on Next-Generation Sequencing Data Analysis**

Department of Plant Molecular Biology and Bioinformatics (DPMB&B), Centre for Plant Molecular Biology and Biotechnology organized a four-day Hands training in Next Generation Sequencing (NGS) Data



Analysis, from 23-26 May 2023 at CPMB&B, TNAU, Coimbatore under Venture Capital (V 60 KE) scheme. The faculties of DPMB&B delivered lectures and handled practical sessions on NGS data analysis. This programme enlightened faculty/scientists, students of UG/PG/PhD from TNAU and other institutions in the Life Science stream on the whole genome sequencing data analysis and interpretations. Totally twenty-five participants from different disciplines such as Genetic Engineering, Biotechnology, Plant Breeding and Genetics, Plant Physiology, Agriculture and Microbiology participated in this training programme. The training program was inaugurated with a welcome address by Dr E. Kokiladevi, Professor and Head (Biotech), TNAU and presided by Dr N. Senthil, Director (CPMB&B). Hands-on training was arranged to learn genomics databases, Linux command, pre-processing of genomics data, WGS assembly and annotations, SNP calling and annotation, comparative genomics, etc. The valedictory session was scheduled on 26.05.2023. The valedictory session started with a welcome address by Dr E. Kokiladevi, Professor and Head (Biotech) and a training report presented by Dr M. Jayakanthan, Assistant Professor (DPMB&B). The valedictory address was delivered by Dr N. Senthil, Director CPMB&B followed by felicitation by

Dr M. Shanthi, Director, Centre for Plant Protection Studies, TNAU. The participants provided feedback about the training and it was well received.

**Training on FPO Management**

The Agribusiness Incubation Society (ABIS) – Technology Business Incubator (TBI) in coordination with the Directorate of Agribusiness Development, TNAU, Coimbatore



conducted a three-day training on FPO Management, under Tamil Nadu Small Farmers' Agribusiness Consortium (TNSFAC) by Department of Agricultural Marketing and Agri Business (DAMAB) on 31 May to 02 June 2023. About 80 farmers from FPOS of Coimbatore, Tirupur and Erode districts participated in the training programme. Dr E. Somasundaram, Director, ABD inaugurated the training and delivered lecture on identifying the opportunities in Agribusiness. The training was focused on the Formation of FPOs for Organic Farmers, Concept and FPCs under Companies Act, Statutory and Compliances of FPC, Export potential for FPC products, Opportunities and Challenges in the promotion of FPOs, Governance of FPCs, Projecting Cash Flows, Price fixation strategies for FPC Products, Financial Statement for FPCs, Leadership skill Development and Team Building, and Value addition of Horticultural Crops. With the technical support of TNAU, the TNSFAC is conducting similar training to members of 318 Farmer Producer Organisations to transform them into agri entrepreneurs.

**National Conference on Law and Agriculture: Prospects and Issues**

The Centre for Law and Agriculture at Tamil Nadu National Law University (TNNLU), Tiruchirappalli, recently collaborated with Anbil Dharmalingam Agricultural College and Research Institute (ADAC&RI), Tamil Nadu



Agricultural University (TNAU), to host a one-day National Conference on Law and Agriculture: Prospects and Issues on 05 May 2023. The

conference focused on addressing the current legal challenges

faced by the Indian agricultural sector, providing a platform for experts to exchange knowledge and ideas. Out of the 185 abstracts received, 40 papers were selected for presentation in four-panel sessions, each chaired by experts from both the legal and agricultural fields. Dr Raja Natarajan, an Assistant Professor in Computer Science from the Department of Agricultural Economics at ADAC&RI in Trichy, received the best paper award under the sub-theme of Agricultural Stakeholders and Legal Rights. The conference's success has opened up possibilities for future collaborations between TNNLU and TNAU. These institutions have the potential to collaborate on the development of joint curricula, offering of joint degree programs, conducting shared research initiatives, organizing workshops, and implementing exchange programs focused on agriculture and law.



## UAS, Bengaluru

### Pre-kharif Technical Campaign

A district level Pre- *Kharif* Technical Campaign-2023 was organized on 12.06.2023 in seven KVKs and EEU, Naganahalli in association with Agriculture Research Stations, Constituent Colleges of Agriculture/Sericulture in the locality. A total of 1,837 farmers participated in the campaign and a total of 81 stalls were exhibited (28 developmental departments- and 53 others). During the programme 13 Group discussions, seven (07) method demonstrations, 15 Farmer scientist-interaction sessions were conducted to provide

technical guidance to farmers to take up *kharif* agricultural activities. In the campaign, 876 consultancy services were provided and 11.87 q of quality seeds sold. Further, a total 13 videos were developed about the campaign and 312 WhatsApp messages were shared to 53,219 members followed by 18 twitter messages to 326 members and 14 face book messages were sent to 7,088 members. With respect to Mass media coverage 22 newspaper covered about campaign including Radio.

### Skill Development Training

ICAR-Krishi Vigyan Kendra, V.C. Farm, Mandya organized Capacity Building and Entrepreneurship

Development

Programme (EDP) on Processing and value addition to finger millet, from



05-10 June 2023 in collaboration with Skill Development Centre, UAS, Bengaluru under ICAR SC-SP. The programme was inaugurated by Dr D. Raghupathi, Associate Director of Extension, ZARS, V.C. Farm, Mandya. Dr N. Shivakumar, Associate Director of Research, ZARS, V.C. Farm, Mandya participated as chief guest and stressed on importance of processing and value addition to agricultural produce. Dr Kamalabai Koodagi, Scientist (Home Science), KVK, Mandya briefed the importance of the skill training in processing and value addition particularly for millets to the SC farm women. During 6-day of skill training series of guest lectures on various aspects- Processing, value addition, health benefits of millet, food safety and standards, personal hygiene, cost analysis, packing and labelling, branding and market linkage, communication skills and leadership qualities, time management, etc., were held. The value-added products of millets like malt, papad, snacks items, laddu, energy food, etc., were demonstrated. Exposure visit and sharing of experience of women entrepreneurs were also arranged for better learning.

### KVKs Zonal Workshop 2023

KVKs Zonal Workshop 2023 on Technologies for Strengthening Secondary Agriculture for Entrepreneurship Development,

organized by Directorate of Extension, UAS, Bengaluru and ICAR-ATARI,



Zone-XI, Bengaluru from 20-21 June 2023 at Babu Rajendra Prasad International Convention Centre. At the outset, Dr V. L. Madhu Prasad, Director of Extension, UAS (B) welcomed the dignitaries and briefed about the workshop as well achievements of the KVKs. Dr V. Venkatasubramanian, Director, ICAR-ATARI, Zone-XI gave an introductory remark and said that agriculture generates raw materials that meet basic human requirements and is considered as a primary economic activity. Secondary agriculture helps in using all parts of an agricultural produce, processing to enhance shelf-life, increasing total factor productivity and generating additional jobs and income for farmers.

The Chief Guest of the workshop, Dr S. N. Sushil, Director, NBAIR, Bengaluru, mentioned in his inaugural address that NBAIR has 47 commercialized technologies in insect management; KVKs should make use of these technologies for the benefit of the farming community.

Dr S. V. Suresha, Vice Chancellor, UAS, Bengaluru told that secondary agriculture has a huge potential due to the change in demand for value-added goods and the region's diverse supply base. The goal of strengthening secondary agriculture through entrepreneur development in the form of a cluster strategy is to add value to primary agricultural products to meet market demands.

The Principal Scientists from ICAR-ATARI, Bengaluru, Heads of 48 KVKs, viz., Karnataka, Kerala and Lakshadweep, DE's from KSNUAHS, Shivamogga and KAU, Thrissur participated in the Zonal workshop.

### Interface Meeting

Interface Meeting (SAUs, ICAR Institutes, KVKs) in the presence of Shri Adrishya Kadsiddheshwar Swamiji under the chairmanship of Dr U. S. Gautam, DDG (AE) organized by Directorate of Extension, UAS, Bengaluru and ICAR -ATARI, Zone-XI, Bengaluru on 21

June 2023 at IABM, GKVK, UAS, Bengaluru. At the outset, Dr M. J. Chandre Gowda,



Principal Scientist, ICAR-ATARI, Bengaluru welcomed all the dignitaries to the meeting. Dr V. Venkatasubramanian, Director, ATARI-Zone XI gave introductory remarks and expressed that the purpose of interface meeting is to bring the researchers from the ICAR institutes and develop insight into the relationship between administrators and extension scientists. Dr U. S. Gautam, in his opening remarks stressed for publications with innovative ideas and creativity in the work, and KVKs should use ICT tools and motivational media to create enthusiasm in the farmers.

Dr S. V. Suresha, Vice Chancellor, UAS, Bengaluru raised the points, viz., quantification of the work should be made by income generation; reduce the burden on the KVKs from unnecessary and irrelevant activities rather give more emphasis to mandated activities; increase the SMS posts from six to eight, if possible, to ten in each KVK; Recruit one extension person to each block in the district to work with the KVKs. Shri Adrishya Kadsiddheshwar Swamiji in his address told that develop embryo center at KVK farm, and KVK should be the model to the farmers. Scientists should think how to save soil health and human health and possible reasons for so much variation in rainfall pattern and its impact on socio economic status of the farming community.

Vice Chancellors from SAUs, viz., KSNUAHS - Shivamogga, UAS-Dharwad, UAS-Raichur and KVAFSU-Bidar, Director Extension of all SAUs

of Karnataka, Directors of different ICAR institutes, Scientists from different ICAR institutes, Principal Scientists from ATARI, University professors and KVK Heads participated in the programme.

## University of Agricultural Science (UAS), Dharwad

### 36<sup>th</sup> Convocation of UAS, Dharwad

Development in the field of agriculture is pivotal for India to become a developed country, said Secretary, Department of Agricultural Research and Education, Government of India and Director General,



ICAR, New Delhi, Dr Himanshu Pathak. He delivered the Chief Guest Address at the 36<sup>th</sup> Convocation of UAS, Dharwad held on 12 June 2023. He, further, said that agriculture has to be converted into an industry, for the economic development of farmers and for more employment opportunities.

Hon'ble Governor of Karnataka State and Chancellor of the University, Shri Thawarchand Gehlot, in his presidential address, said that Agriculture Graduates should make agriculture self-reliant to make India a developed country where agriculture is the predominant occupation. Agriculture Minister of Government of Karnataka and Pro-Chancellor of the University Mr N. Chaluvarayaswamy called upon scientists, teachers and students to develop more and more high yielding varieties to enhance the income of farmers.

Vice Chancellor, Dr P. L. Patil introduced the chief guests and welcomed everyone and presented a report on the activities of various wings of the university like teaching, research, extension, seed production, students' activities, etc.

On this occasion, honorary doctorate degrees were awarded to Padma Shri Smt Tulsigowda of Uluvare Village (Ankola taluk) and Padmashri Shri Abdul Khadar Imamsab Nadakattin, Founder of Vishwashanthi Agricultural Research Centre, Annigeri in recognition of their services rendered in various fields.



During this convocation, a total of 966 candidates were awarded degrees, including 71 Ph.D, 269 postgraduate and 626 undergraduate degrees. Along with this, 38 Agricultural University Gold Medals, six other Gold Medals and nine Cash Prizes were awarded to talented and deserving candidates. Registrar of the University, Dr S. S. Angadi, Members of Board of Management and Academic Council, Deans of constituent Colleges and Officers of the University were present on the stage. Apart from this, various retired officers and dignitaries were present during the programme.

## VNMKV, Parbhani

### Kharif Farmers Rally

VNMKV, Parbhani and Department of Agriculture (MS) jointly organized Kharif Farmers' Rally on 18 May 2023 on the occasion of 51<sup>st</sup> University Foundation Day and International Millets Year.



The rally was inaugurated by Prof. Indrajeet Chaube, Dean, Connecticut University (USA) and the function was presided over by Dr Indra Mani, Vice Chancellor. In technical session, Chief Speaker Shri Gopalbhai Sutaria, President, Bansi Geer Goshala, Ahmedabad, guided the farmers about organic farming. University scientists

Kharif Farmers Rally



guided the participants regarding *kharif* crop production technologies, INM, IPM, etc. Books, magazine and leaflets written by university scientists regarding *kharif* crop cultivation were released by the dignitaries. More than 2000 farmers and extension workers participated in *Shetkari Melava*. About 3000 farmers watched the farmers rally through the YouTube channel of the university.

## MoUs

### AAU, Anand

- Anand Agricultural University, Anand has signed an MoA with Sathguru Management Consultants (P) Limited, Hyderabad, to conduct farmers and veterinarians trainings in Gujarat state. The project is funded by Asian Development Bank (ADB) with a focus on promoting One Health – Farmer Education Project.
- Anand Agricultural University, Anand has signed MoUs with (i) Sher-e-Kashmir University of Agricultural Sciences & Technology, Kashmir for Collaboration in research and extension education, students and faculty exchange, (ii) National Dairy Development Board, Anand for collaboration in research and extension education in Agriculture and Agriculture allied activities, and (iii) Banas Dairy, Palampur for transfer of Bio NPK-Liquid Biofertilizer Technology.

### Dr YSPUHF, Nauni

- MoU signed between Dr Y S Parmar UHF, Nauni and Rajat IG Biotech Pvt. Ltd, Ghumarwin, Bilaspur (Himachal Pradesh). Duration: 20 years initially, and based on the results of the sale and progress of the first 5 years, it can further be extended as may be mutually decided by both the parties. Purpose: Joint collaborative efforts for the production of quality planting

material for commercially important fruit crops through tissue culture technique/conventional propagation method.

- An MoU was signed on 16.6.2023 between Dr YSPUHF, Nauni and Institute of Himalayan Bio Resource Technology, Palampur for close co-operation of research, academic and extension activities.

### Dr YSRHU, Venkataramannagudem

An MoU signed between HDFC Bank Limited and Dr YSR Horticultural University, Venkataramannagudem, West Godavari for a period of 2 years.

Objectives of the MoU

- to boost horticultural production through adoption of technology and thus better farming practices by farmers to improve the productivity and agricultural income.
- to showcase implementable pilot projects which may enhance private investment in rural areas through engaging all partner agencies (like HDFC Bank, Nab Foundation, NABCONS and NABKISAN, etc.)
- To provide most effective services and support to Farmer Producer Organizations (FPOs).
- To provide financial literacy programs to farmers and rural customers for effective utilization of financial services for betterment of their standard of living.

### MAFSU, Nagpur

#### MoU between MAFSU and PAANI Foundation

The Directorate of Extension Education, MAFSU, Nagpur signed an MoU with the PAANI Foundation on 29 April 2023. Through this MoU, activities for water literacy and water conservation programs will be undertaken. The university will also assist in collaborative activities like organization of animal health camps, awareness about scientific animal

husbandry, dairying and fish farming, conservation of indigenous germplasm and imparting training on various aspects for improving production and productivity of animals in the rain-fed rural areas across the state.



Signing of MOU between MAFSU and PAANI Foundation

### **MoU between MAFSU, Nagpur and Karkheda Agri Producer Company Ltd, Akola**

The Directorate of Extension Education, MAFSU, Nagpur, signed an MoU with the Karkheda Agri Producer Company Ltd, Akola on 29/04/23 at the University HQ. The MoU is signed to share the technical knowledge regarding goat husbandry and to assist the Karkheda Agri Producer Company Ltd, Akola in transfer of technologies in the domain of goat farming. The MoU was signed in the presence of Dr Sharad Gadakh, Vice Chancellor, MAFSU, Nagpur.



Signing of MOU between MAFSU, Nagpur and Karkheda Agri Producer Company Ltd, Akola

### **MOU between MAFSU, Nagpur and Reliance Foundation, Mumbai**

The Directorate of Extension Education, MAFSU, Nagpur signed an MoU with the Reliance Foundation on 29 April 2023 at the University HQ. This MoU is signed with a vision to share the technical knowledge in the field of animal husbandry, dairying and fisheries for the benefit of farmers across the



Signing of MOU between MAFSU, Nagpur and Reliance Foundation, Mumbai

state through the use of digital technologies available with the Reliance Foundation. The MoU was signed in the presence of Dr Sharad Gadakh, Vice Chancellor, MAFSU, Nagpur, Dr Anil Bhikane, Director Extension Education, Dr S. V. Upadhye, DI and Dean (Veterinary), Dr N. V. Kurkure, Director of Research.

### **MoU between MAFSU, Nagpur and CellMed Biotech Pvt. Tech. Ltd., New Delhi**

An MoU was signed between MAFSU, Nagpur and CellMed Biotech Pvt. Tech. Ltd, New Delhi, for facilitating collaborative research with special reference to the stem cell application on 25/05/2023.

### **MoU between MAFSU, Nagpur and MAVIM, Mumbai**

The Directorate of Extension Education, MAFSU, Nagpur signed an MOU with MAVIM, Mumbai on 1 June 2023. This MoU seeks to impart the capacity-building training of 1050 pashusakhis and 470 lead women identified by MAVIM, Mumbai through specifically designed training modules



Signing of MOU between MAFSU, Nagpur and MAVIM, Mumbai

for the project during the year 2023-24 and 2024-25. Mrs Mangalprabhat Lodha, Minister for Women and Child Development, Shri. I. A. Kundan, Principle Secretary, Women and Child Development Board, Dr Anil Bhikane, Director Extension Education, MAFSU, Nagpur, Dr Indu Jakhad, Managing Director, MAVIM and Mrs Kusum Balsaraf, MD (Project), MAVIM, were present while signing the MOU.

### **PJTSAU, Hyderabad**

The PJTSAU entered into MoU's with the following institutes/organizations:

- Sustainable India Trust (SIT), Hyderabad
- Metropolitan Water Supply and Sewerage

Board (HWSSB) and Indian Institute of Rice Research (IIRR) on 5 June 2023 for sharing available data, reports, information and best practices on manure management, research/development /training /extension for solid waste composting.

- Director of Agriculture and Farmers welfare (DA&FW), New Delhi, National Committee on Precision Agriculture and Horticulture (NCPAH), New Delhi on 21 June 2023 to undertake applied Research and development activities on futuristic technologies such as hydroponics, aeroponics, drones, cloud and IoT based automations using digital agriculture and demonstrate the proven precision and Plasticulture technologies among end users.
- A Memorandum of Agreement (MoA) was renewed between M/s. Deccan Mudra Agri Pvt. Ltd, and PJTSAU on 23 June 2023 to trade the Telangana Sona Rice (RNR 15048) rice developed by the University using PJTSAU brand.



PJTSAU and M/s. Deccan Mudra Agri Pvt. Ltd. officials during MoU signing ceremony

### SVVU, Tirupati

- Entered MoU with Sri Venkateswara Medical College, Tirupati to Exchange Students and Collaborative Research. Duration of MoU is 5 years.
- Entered MoU with S.V Gosamrakhna Trust, Tirumala Tirupati Devasthanams with an objective to Manufacture Quality Compound feed to distribute to the farmers in the state. The duration of MoU is 5 years.

### TANUVAS, Chennai

The university signed following MoUs with various partners:

- Indian Institute of Packaging, Mumbai (14.05.2023): To facilitate student placement and placement exchange services, faculty exchange programme, collaborative training programmes / seminars / conferences, providing technical support and utilization of laboratories for testing and research purpose.
- Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana and EpiPointe, USA (Tripartite) (18.05.2023): To strengthen scientific and technological capabilities to broaden and expand relations between the extensive scientific and technological communities of both the countries in the areas of mutual benefit.
- National Institute of Food Technology, Entrepreneurship and Management, Thanjavur (01.06.2023): To foster academic and research collaboration.
- Developing Library Network (DELNET), New Delhi (16.06.2023): Will provide license to use DELNET's Archives and Services, Union Catalogues and other databases online for furthering academic, research, reference and training.



VC, TANUVAS during MoU signing ceremony

### TNAU, Coimbatore

- A Memorandum of Understanding (MoU) was signed between Coimbatore Coconut Producer Company Ltd, Ramapattinam, Pollachi, Coimbatore with 2100 farmer





members represented by the Director Mr A. Sakthivel and Tamil Nadu Agricultural University, Coimbatore on 12.04.2023 at Directorate of CARDS, TNAU, Coimbatore.

- A Memorandum of Understanding (MoU) was signed between TNAU, Coimbatore and Zytex Biotech Private Limited, Mumbai on 15.04.2023 for facilitating Postgraduate



Students' Research through sponsorships. Zytex is a Mumbai based Agricultural Sciences Company engaged in the business of research, manufacturing and selling probiotics, enzymes, biopolymers, and bio-agricultural products. ZYTEX will sponsor scholarships to the students of TNAU under the *ZYTEX Science Leaders Scholarship Program* aimed at creating greater opportunities for aspiring students to develop their aptitude in agricultural research. Moreover, the selected students from TNAU will be provided with internship and industry mentorship by ZYTEX for their overall development in addition to the opportunity for pursuing a career in ZYTEX.

- A Memorandum of Understanding was signed between the Department of Fruit Science, Horticultural College and Research Institute, TNAU, Coimbatore and Agricultural and Processed Food Products Export Development



Authority (APEDA), Ministry of Commerce and Industry, Government of India, New Delhi on 17.04.2023 for enhancing the production potential of commercial grape varieties suitable for export. APEDA agreed to provide a grant-in-aid of Rs 97 lakh to establish research and development activities. The MoU was signed by Dr R. Tamizh Vendan, Registrar, TNAU,

Coimbatore and Mrs Shobana Kumar, Assistant General Manager, APEDA, Chennai.

- A Memorandum of Understanding (MoU) was signed between TNAU, Coimbatore and ACSEN Agriscience Private Limited, Coimbatore on 24.04.2023 for facilitating Postgraduate



Students' Research. ACSEN is a Coimbatore-based industry, leading in research, breeding and crop production programs in important Vegetable and Field crops like corn, millet, rice and mustard. Both parties desired academic collaborations to establish collaborative programmes to advance scientific knowledge, capacity building, research projects and multi-year product development subject to developing specific research projects to enable the introduction of high-performing crops in Indian markets. Dr R. Tamizh Vendan, Registrar, TNAU, Coimbatore and Mr. S. Senthilnathan, Chairman & Managing Director, ACSEN Agriscience Private Limited, Coimbatore signed the agreement and exchanged it in the presence of Dr V. Geethalakshmi, Vice Chancellor, TNAU, Coimbatore, where she remarked about the essentiality of this academic collaboration and the way forward.

- A Memorandum of Understanding (MoU) was signed between TNAU, Coimbatore, SKUAST-Kashmir, Srinagar on 15.05.2023 for facilitating Postgraduate Students' Research through Sandwich / Twinning Programmes



primarily foster Academic and Research Co-operation between the two different Institutions. The Universities

jointly agree to initiate the exchange of students under Sandwich/Twinning Post-graduate degree programmes where candidates shall complete part of their degree programmes in one University and part in another.

- A Memorandum of Understanding (MoU) was signed between TNAU, Coimbatore and International Maize and Wheat Improvement Center (CIMMYT), Mexico on 24.05.2023 for



facilitating Postgraduate Students' Research. Both parties desired to establish collaborative programmes in Molecular breeding programme, Phenotyping services, leveraging germplasm and providing DH services to Asian Maize Breeding Programme to advance scientific knowledge, capacity building, research projects and multi-year product development subject to developing specific research projects to enable the introduction of high-performing crops in Indian markets. Dr V. Geethalakshmi, Vice Chancellor, TNAU, Coimbatore and Dr B. M. Prasanna, Director of CIMMYT's Global Maize Program and One CGIAR Global Maize Breeding Lead signed the agreement.

- Madurai Mavatta Tennai Mattrum Ethara Payirgal Producer Company Limited, Karumathur, Madurai is a Farmers' Producer Organization adopted by the Community Science College and Research Institute, Madurai as part of the TNAU-FPO linkage initiative. To strengthen the relationship between the adopted FPO and TNAU, a Memorandum of Understanding was signed on 26.05.2023 in the presence



of the Honourable Governor of Tamil Nadu, the Vice Chancellor of TNAU, and higher officials between the TNAU and the adopted FPO Madurai Mavatta Tennai Mattrum Ethara Payirgal Producer Company Limited, Karumathur, Madurai.

## UAS, Bengaluru

The University signed following MoUs:

- With Criyagen Agri and Biotech Pvt. Ltd, Doddaballapura, for Incubatee under Agri Innovation Center- for development of innovative technologies for commercialization of agri based products on 10-04-2023 for 3 years.
- With 41 Foods Pvt. Ltd, Bengaluru Urban District for Incubatee under Agri Innovation Center- for research and development in agriculture and allied sciences to create opportunities for public- private partnership on 10-04-2023 for 3 years.
- With Suryanirbhar Agritech LLP, Bengaluru for Incubatee under Agri Innovation Center- for research and development in agriculture and allied sciences to create opportunities for public- private partnership on 10-04-2023 for 3 years.
- With En Cure Farms LLP, Bengaluru for Incubatee under Agri Innovation Center- for research and development in agriculture and allied sciences to create opportunities for public- private partnership on 12-04-2023 for 3 years.
- With Phytobio works Plant Biotechnology company for Incubatee under Agri Innovation Center- for research and development in agriculture and allied sciences to create opportunities for public- private partnership on 17-04-2023 for 3 years.
- With Agreeva Agrigenetics Private Ltd, Bengaluru for Incubatee under Agri Innovation Center for providing technical services towards innovation, development

and commercialization of agri based products on 20-04-2023 for 3 years.

- With Padmini Sudarshana, Big Granatee, Bengaluru for Incubatee under Agri Innovation Center for developing affordable and protected culture system for rural small holder farming and urban rooftop arming on 14-04-2023 for 3 years.
- With CIPET-SARP (School for Advanced Research in Polymers, Bengaluru for setting up of laboratory for testing of micro – irrigation components and training to faculty/ research graduates on 27-04-2023 for 5 years.
- IBAB- Institute of Bioinformatics and Applied Biotechnology, Bengaluru for collaborative academic and research activities on 27-04-2023 for 1 year.
- With University of Greenwich, UK for Project partnership Agreement- for seed transmission operation cost on student research on 03-05-2023 for 6 months.
- With Sher e-Kashmir University of Agricultural Sciences and Technology of Kashmir, Shalimar, Srinagar, For exchange of students for sandwich and twinning Post graduate degree programmes on 15-05-2023 for 10 years.
- With Hexagon Manufacturing for Intelligence India Pvt. Ltd, Pune for establishment of Center for Innovation and Development in Smart Agriculture (CIDSa) at GKV Campus, UAS Bengaluru for carrying out of drone and remote based modern techniques, leveraging engineering technologies and trainings in agriculture on 19-05-2023 for 3 years.
- University of Saskatchewan, Canada for collaborative academic, research activities and exchange of publication/training materials on 20-05-2023 for 5 years.
- Tata Institute of Genetics and Society, NCBS-TIFR campus, Bengaluru for Material Transfer Agreement for research setup assays on 25-06-2023 for 5 years.

- Gandhi Institute of Technology and Management (GITAM), Bengaluru for Collaborative Research and academic activities, faculty exchange and use of IT in Sericulture sector to assist the farmers on 23-06-2023 for 5 years.

### VNMKV, Parbhani

- The MoU between VNMKV, Parbhani and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH (Germany) signed at Indian National Science Academy Seminar Hall, New Delhi on 24 June 2023 for collaborative R & D of Agricultural Photovoltaic (AgriPV) technology. The MoU was signed by Prof. Indra Mani, Vice Chancellor, VNMKV; Topias Winter, Director at Indo-German Energy Forum SO GIZ. and Mr Vivek Saraf, CEO, Sunseed APV Pvt Ltd, Gurgaon. Dr P. L. Gautam, Former Vice Chancellor, GB PUAT, Pantnagar and Former DDG (Crop Science), ICAR, and YVK Rahul were present on this occasion. The goal of the research under MoU is to devise executable crop cultivation strategies for the selected crops under the different Agrivoltaic structures, that would benefit from the environment created by the solar panels to generate higher yields or higher revenues via shifting the timing of production to off season cycles.



VNMKV signed a MoU with GIZ (Germany) for collaborative work on AgriPV



## IPRs

**CCSHAU, Hisar**

Instrument Name: - Garlic Stalk cutter cum Grader Machine; Design No. 339194-00; Granted on 02/05/2023; Inventor Name: Charan Singh, Vijay K. Singh, M.K. Garg, Department of P&FE, COAE&T.

**Dr YSPUHF, Nauni**

Preservative free kiwi juice acidified sugarcane juice powder and process for preparing the same invented by Devina Vaidya, Manisha Kaushal, Anil Gupta and Sristi Vats (Patent No.456154) on 16/06/2023 and *The Patent Office, Journal No 24/2023* on Dated 16/06/2023 Pg 43353 Filing number: 202111057664 A.

**IVRI, Izatnagar**

## Copyright

- आई वी आर आई - जैव सुरक्षा एप: (ROC No.: L-122567/2023; Rupasi Tiwari, Triveni Dutt, Anuj Chauhan, Amit Kumar, Pratikshya Panda, Arun S Somagond, Ajit Singh Yadav, AK Tiwari, Sudeep Marwaha, Mukesh Kumar, Soumen Pal; Date of grant: 30.05.2023)

**MPUAT, Udaipur**

- A Design Patent No 381754-001 on Activated Biochar Air Purification Cartridge was granted to Directorate of Research, MPUAT on 23 May 2023. The inventors are Ms Priti Jagnade (Ph.D. scholar), Dr Narayan Lal Panwar (Associate Professor and Head), Ms Neelam Rathore (Senior Research Fellow), Department of Renewable Energy Engineering, and Mr Sandip Gangil, CIAE, Bhopal.

- Dr Narayan Lal Panwar, Head and his Ph.D. student Mr Maga Ram Patel of the Department of Renewable Energy Engineering, College of Technology and Engineering, MPUAT obtained a South African Patent (No. 2023/01203, dated 29 March 2023) for creating and developing a grassroots technology called Energy Efficient Biochar Kiln for Production of Biochar from Agricultural Crop Residues.
- A design Patent (Design No 383116-001, dated 5 April 2023) for the Manual driven solar power ice cream cart was granted to Dr Narayan Lal Panwar, HoD and his Associates scholars Maga Ram Patel, Barkha Shakeel, Kuldeep Kumar and Lokendra Singh Rathore of Department of Renewable Energy Engineering, College of Technology and Engineering (CTAE).

**NAU, Navsari**

User friendly and ergonomically designed Nauroji Stonehouse Fruit Fly Trap (Patent no. 366004-001, dated 13 June 2023) developed by Dr Z. P. Patel, Vice Chancellor, Navsari Agricultural University, Navsari, Gujarat was registered by Controller General of Patents, Designs and Trade Marks, The Patent Office, Government of India. The trap was registered in pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001. The trap is used to capture male fruit fly of vegetables and fruits depending upon the type of lure being used. This is a foldable trap, which acquires lesser space and can be easily dispatched through post. It is simple to unfold and install the trap in a field.

**PJTSAU, Hyderabad**

Professor Jayashankar Telangana State Agricultural University was granted patent

entitled Compositions for Printing and Paint Formulations Thereof, Application No.202241001084. Patent No. 428588.



### TANUVAS, Chennai

Patent was been granted to the following two inventions developed by the faculty members of TANUVAS:

- Patent No. 415409 - Composition to enhance rumen fermentation and mitigating methane emission in dairy cattle. Inventors: Dr V. Balakrishnan and Dr R. Murugeswari
- Patent No. 429922 - A tick-controlling formulation of dimethicone and the process thereof. Inventors: Dr P. Azhahianambi, Dr K. Chithra, Dr Sarath Sagar, Dr R. P. Aravindh Babu, Dr T. M. A. Senthilkumar and Dr G. Dhinakar Raj.

### TNAU, Coimbatore

- UAV Downwash Airflow Test RIG (Inventors: Er. D. Yallappa, Dr R. Kavitha, Dr A. Sureshkumar, Dr Balaji Kannan, Dr M.K. Kalarani and Dr B. Suthakar) Patent no. 133788.
- Dual Purpose Agricultural Implement (Inventors: E. Ramya, P. Pavithra, M. Arunkumar, Dr A. Kamaraj, Dr M. Pandian, Dr R. Baskaran and Dr V. Sivakumar) Patent no. 133988.

## AWARDS and RECOGNITIONS

### AAU, Anand

#### ISEE Fellow Award

In this seminar, Dr J B Patel, Professor and Head, Department of Agricultural Extension and Communication, B A College of

Agriculture, AAU Anand had presented two research papers. ISEE Conferred ISEE Fellow Award to Dr J. B. Patel in recognition of outstanding contribution in the field of extension and education and services in the gracious presence of Minister of Professor receiving the award Agriculture, Karnataka Government, Deputy Director General (Agricultural Extension), ICAR, New Delhi, CEO, NRAA, Government of India and Vice Chancellor, UAS, Bengaluru. The award was given during National seminar on Evolving Extension Science Towards Secondary Agriculture for Sustainable Development, held on 22-24, June 2023 at UAS, Bengaluru.



#### Best Thesis Award 2023

Rachana Kumari Bansal, Assistant Professor, Department of Agricultural Economics, B. A. College of Agriculture, AAU, Anand, Gujarat was awarded the prestigious Best Thesis Award-2023 during the 15th International Conference on Agriculture, Horticulture and Plant Science (ICAHPS 2023) on 24-25 June 2023 organized by the Society of Tropical Agriculture, New Delhi, India, for Ph.D. Research Work – An economic study of agricultural labourers, labour scarcity and its impact on agriculture in middle Gujarat, accomplished under the guidance of Dr Y. C. Zala.



### AU, Kota

- Dr Mahendra Singh, Senior Scientist and Head, KVK, Kota received Swami



Keshwanand Distinguished Scientist Award in National Conference on Millet: Magical Crops for Nutritional Sustainability 2023 organized by Jagannath University, Junagarh on 29 April 2023.

- Krishi Vigyan Kendra, Bundi received appreciation award for KVK exhibition on the occasion of Zila Yuva Utsav 2023 by Lok Sabha Speaker Shri Om Birla.



### Dr RPCAU, Pusa

- Dr Bishnu Deo Prasad, Associate Professor, Department of Agricultural Biotechnology and Molecular Biology, CBS&H, Pusa was selected for the prestigious SERB International Research Experience (SIRE) award for high-end research in the field of Gene Editing for the year 2023-24 at John Innes Centre (JIC), Norwich, UK, a leading international centre of excellence in plant science.
- AICRP on Mushroom, Dr Rajendra Prasad Central Agricultural University was awarded with Certificate of Excellence for outstanding contribution in Mushroom.



Certificate of Excellence for outstanding contribution under extension in AICRP-Mushroom

- A student of the University - Ms Kashvi Kajal, Bachelor of Fisheries Science (2019-23) was awarded with a prestigious fellowship Erasmus Mundus Joint Master in Aquaculture, Environment and Society (EMJM ACES-STAR), from UHI-SAMS,

Oban (Scotland, UK), University of Crete (Greece) and University of Nantes (France) for the year 2023-25.

### Dr YSRHU, Venkataramannagudem

- From 22-24 June 2023, Dr N. B. V. Chalapathi Rao, Principal Scientist (Entomology) participated in National Seminar on Evolving Extension Science



Dr Rao receiving the award

Towards Secondary Agriculture for Sustainable Development, at, UAS, Bengaluru. His presentation on Large scale impact of bio-control based IPM technology against Rugose spiraling whitefly *Aleurodicus rugioperculatus* in Andhra Pradesh, received Best Oral Presentation Award.

- Best Center under ICAR –AICRP on Tuber Crops for the year 2022-23 was awarded to Dr YSRHU during the 23<sup>rd</sup> Annual group meeting held at BCKV Kalyani from 10-12 May 2023. Dr K. Mamatha, Principal Scientist (Hort), HRS, Kovvur and Dr M. Janaki, Scientist (Hort) and Head, HRS, Peddapuram received the awards from the Dr AK Singh, DDG (Horticultural Sciences) ICAR, New Delhi.



- Annual post graduate students National Conference-APGSNC 2023: Post graduate students of Dr YSRHU- College of Horticulture,





Anantharajupeta, Ms G. Tirumala Geethika, AHM/22-19 pursuing PG first year in the Department of Entomology and V. Jagaseeswari, AHD/21-06 pursuing Ph.D. second year in the Department of Floriculture and Landscaping bagged first prize in oral presentation and poster presentation respectively, in the Annual post graduate students National conference-APGSNC 2023 on Frontiers in Agricultural Research -Challenges and Opportunities for Food and Nutritional Security, organized by Acharya N.G. Ranga Agricultural University at S.V. Agricultural College, Tirupati on 5-6 June 2023.



- Dr A. Devivaraprasad Reddy, Scientist, KVK, Dr YSRHU, V. R. Gudem presented a paper entitled Integrated Farming Approach for Renaissance of Farming Community, in the 5<sup>th</sup> International Conference on Climate Change and its Impact from 09 to 11 June 2023 at SKUAST-K, Srinagar and received the Best Oral Presentation Award in the conference from the Prof. P.V. Vara Prasad, Director, Kansas State University, USA.



## GADVASU, Ludhiana

### Distinguished Veterinarian of India Award Bestowed on Dr Inderjeet Singh

Dr Inderjeet Singh, Vice Chancellor, GADVASU, Ludhiana was bestowed with the Distinguished Veterinarian of India award by the Veterinary Council of India.



Dr Inderjeet Singh receiving the Award

The award was conferred at an impressive national level event organized by the Department of Animal Husbandry and Dairying, Government of India at Vigyan Bhawan, New Delhi. Shri Parshottam Rupala, Union Minister for Animal Husbandry, Dairying and Fisheries of India conferred the honor in the presence of Dr Umesh Chandra, President, Veterinary Council of India, Dr Sanjeev Kumar Balyan, Union Minister of State, Dr B. N. Tripathi, Deputy Director General (AS), Indian Council of Agricultural Research and Dr Abhijit Mitra, Commissioner of Animal Husbandry, Government of India.

## GBPUAT, Pantnagar

- Dr M. S. Chauhan, Vice Chancellor, GBPUAT, Pantnagar was conferred the degree Doctor of Science (*Honoris Causa*) at the XIX Convocation of ICAR-National Dairy Research Institute (Deemed University) Karnal on 24 April, 2023.
- Dr Joyti Phalod, Professor, College of Veterinary and Animal Science was conferred with fellow of National Academy of Veterinary Science.

## IVRI, Izatnagar

- Dr Kishor Kumar DG, Ph.D. scholar received Best Oral Presentation Award for Leptin-mediated Increase in iNOS Expression May Contribute to Uterine Relaxation in Early Pregnant Mouse, in the National Conference on Innovative Approaches in Laboratory Animal Research, and Pre-conference workshop on Accreditations for Pre-clinical Testing Facilities, scheduled to commemorate the World Laboratory Animal Day at ICMR-NARFBR, Hyderabad, 23-24 April 2023, organized by ICMR-NARFBR, Hyderabad.
- Dr Ajayta Rialch received 2<sup>nd</sup> best oral presentation Award for the presentation entitled Novel Approaches in Animal Health

for Realizing One Health Mission, during XXXV Annual Convention and National Conference of Indian Association of Veterinary Microbiologists, Immunologists and specialists in Infectious Diseases (IAVMI) organized by Department of Veterinary Microbiology, DGCN COVAS CSKHPKV, Palampur during 7-8 April 2023.

Excellence Award from Agriculture Research Communication Centre, Haryana as a reviewer of the Journal articles of ARCC journals on 12-06-2023.



## KSNUAHS, Shivamogga

- Dr H. M. Vinay Kumar, Assistant Professor of Agricultural Extension, KSNUAHS, Iruvakki was awarded ISEE Young Scientist Award of Indian Society of Extension Education, New



Dr Vinay Kumar receiving the award

Delhi on 24 June 2023. Shri Chaluvarya Swamy, Agriculture Minister, Government of Karnataka presented the award for his outstanding contributions in the field of Extension Education.

- Mr Praveen B. Baligere, Alumni of College of Horticulture, Hiriur awarded 2022-23 Krishi Panditha award by Department of Agriculture, Government of Karnataka for his achievements of excellence in farming field.



- Dr C. M. Kalleshwaraswamy, Associate Professor of Entomology, College of Agriculture, Shivamogga, was selected for Post-Doctoral Fellowship, at Okinawa Institute of Science and Technology, Japan. He will work on Termite Taxonomy to Uncover Their Evolutionary Process, for a period of one year.



- Dr B. N. Harsh Babu, Associate Professor, ZHARS, Hiriyur received Reviewer

## KU, Gandhinagar

- Priyal Dakhore, a postgraduate scholar of the Department of Veterinary Microbiology, registered under of Dr R. A. Mathakiya, received second rank for an oral presentation of a research paper entitled Whole Genome Sequencing based Virulence Associated and Antimicrobial Resistance Genes Profiling of *Salmonella enteritidis* Isolated from Poultry, at the 35th annual convention and national conference on Novel Approaches in Animal Health for Realizing One Health Mission, organized by the Indian Association for Veterinary Microbiologists, Immunologists and Specialists in Infectious Diseases.
- Dr Ajay P. Raval, Assistant Professor, Department of Animal Nutrition, College of Veterinary Science & AH, KU, Navsari received J R AGRO innovation award, on Ph.D. Research Designer Goat Milk - fatty acid manipulation using oils (Rice bran and soybean oil), during 7<sup>th</sup> International Conference on Rice Bran Oil 2023 (ICRBO) held at Marriott Hotel And Convention Centre, Hyderabad, India on 21-23 April 2023.

## MAFSU, Nagpur

**Dr Vijaysingh Lonkar, KNPCVS Shirwal received Dr A. P. J. Abdul Kalam Lifetime Achievement National Award**

Dr Vijaysingh Lonkar, Assistant Professor of Poultry Science, KNPCVS Shirwal received prestigious Dr A. P. J. Abdul Kalam Lifetime Achievement National Award in the field of

Teaching, Research and Publication from National Institute of Socio-economic Development, Bengaluru on 6 May 2023

### MPUAT, Udaipur

- Mr Divya Pratap Singh Rathore and Mr Faizan Khan, students of the Department of Electrical Engineering, College of Technology and Engineering secured Vikram Award, sponsored by Secure Meters, Udaipur. Both the students made smart gloves for the deaf and dumb so that such people and paralytic patients can easily express their words to others. Both the students were given cash prize of Rs 50,000 by the sponsors.
- Dr Ajeet Kumar Karnatak, Vice Chancellor was conferred upon the CHAI Honorary Fellow Award 2023 by The Confederation of Horticulture Associations of India (CHAI) for his outstanding contributions in research and development.
- Dr Ajeet Kumar Karnatak, Vice Chancellor was bestowed upon Amit Prabudh Manishi Award 2023 and ASM Udhyan Ratna Award 2022 by Lt. Amit Singh Memorial Foundation, New Delhi, for his outstanding contributions in research and human resource development in agriculture including horticulture.
- Dr Gayatri Tiwari, Professor, College of Community and Applied Sciences was honoured with the Best Paper Presentation Award for her research paper entitled An Exploratory Study on Climate Change and its Impact on Menopausal Problems, at 5<sup>th</sup> International Conference on Climate Change and its Effects held at Srinagar during 9-11 June 2023.



### NAU, Navsari

Dr Lalit Mahatma, Associate Director of Research, NAU, Navsari has been unanimously elected as National President of Indian Society of Mycology and Plant Pathology (ISMPP) Udaipur. He has an international credential in the field of Plant Viruses and Biofertilizers.



### SKUAST, Jammu

University scientists received following awards:

- Dr Anish Yadav: Dr Kalyana Sundaram Memorial Award (2022)- Indian Association for Advancement of Veterinary Parasitology.
- Dr Rajesh Godara: Dr Sarvepalli Radhakrishnan Best Faculty and Researcher Award-2022 in Veterinary Parasitology- International Multi-disciplinary Research Foundation (IMRF).
- Dr Rajesh Godara: Pashudhan Samridhi Award 2022- Pashudhan Praharee.
- Dr R. K Bhardwaj: 1<sup>st</sup> prize in paper presentation in Diagnostic and therapeutic studies of fungal...Zoonotic Potential session- International Conference on Advances in Veterinary Dermatology and Emerging Skin Health Challenges of Animals, held at Holiday Inn, Kochi, Kerala w.e.f. 19-21 May 2023.

### TANUVAS, Chennai

- Dr M. Selvaraju, Dean, VC&RI, Namakkal, received the National level Best Veterinarian (Gynaecology) award and Dr S. Saravanan, Associate Professor, Department of Veterinary Public Health and Epidemiology, VC&RI, Namakkal received the National level Best Veterinarian (Medicine) award from Dr C. K. Rao Endowment Trust,



Andhra Pradesh and APVAS Service Association during the World Veterinary Day-2023 Celebrations organized by the Department of Animal Husbandry, Andhra Pradesh at Vijayawada on 29.04.2023.

- TANUVAS granted with manufacturing license for test purposes by CDSCO for two of the Class B *In-vitro* diagnostics-TANUCHEK SCC kit and Keto Quant Kit developed by TRPVB through DBT funding under the Medical Devices Rules 2017.



- Selvi S. Santhiya, Selvi K.R. Ashika Zahangina and Selvi R.S. Vijayaboarani, Final year B.V.Sc. & A.H. (2018-19 batch) students of VC&RI, Orathanadu won the oral presentation awards in the 6<sup>th</sup> National Online Conference entitled Technological Advancements in Veterinary Diagnostics and Therapeutics: New Frontiers in Animal Care, organized by Post Graduate Institute of Veterinary and Animal Sciences, Akola, Maharashtra Animal and Fishery Sciences University, Maharashtra on 25-26 April 2023.
- Students of VC&RI, Theni, TANUVAS namely Selvan V. Bharath Kumar won Gold medal in CM Trophy Badminton Tournament held at district level and Selvi S. Menaka won 2 Golds in Mixed Doubles and Team Tennikoit South Zone National Championship.

## TNAU, Coimbatore

- NIRF Ranking 2023-TNAU Triumphs:** Under Agriculture and allied sectors category, the TNAU is ranked 5<sup>th</sup> out of 152 institutions across the country, 2<sup>nd</sup> among the State Agricultural Universities of India,

93<sup>rd</sup> among 2478 institutions representing all Public and Private funded Universities, Central and State Institutes, Autonomous bodies, etc. and 72<sup>nd</sup> out of 1073 universities that participated in the ranking. Dr V. Geethalakshmi, Vice Chancellor of TNAU, noted that the university's outstanding achievement is due to its dedication to teaching, research, outreach, agribusiness, and ODL activities at the regional, national and international levels.



## UAS, Bengaluru

- AICRP on Weed Management, UAS, Bengaluru was conferred with Best Centre Award for the year 2022-23 by the ICAR - Directorate of Weed Research, Jabalpur in 30<sup>th</sup> Annual Review Meeting of AICRP on Weed Management, held at Sher-e-Kashmir University of Agricultural Sciences and Technology, Jammu during 26-27 May 2023.
- AICRP on Sunflower, UAS, Bengaluru was adjudged as the Best AICRP (Oilseeds) Centre, by the Quinquennial Team constituted by the ICAR to review the research work of ICAR-IIOR and AICRP on oilseeds for the five years (2017-2021) in the Annual *Kharif* Oilseeds group meet (Castor, Sunflower, Sesame and Niger) held at Agricultural University, Mandor, Jodhpur, Rajasthan from 31 May to 3 June 2023.
- Dr S.V. Suresha, Vice Chancellor, UAS, Bengaluru was honoured with Lifetime Achievement Award during ISEE National Seminar 2023 on 22 June 2023 held at Dr Babu Rajendra Prasad International Convention Hall, UAS, GKVK, Bengaluru.
- Mr Rajath H P SMS (Agromet), DAMU was awarded Dr T. S. Venkataramana award on

4<sup>th</sup> International Conference (21-23 June 2023) instituted by ISHRD and JUST Agriculture education group, Chandigarh held at Mall Reddy University, Hyderabad.

- Miss Ranjeetha R. and Rudresh Raviteja, Scientists of KVK, Bengaluru Rural received best popular article composer award, Krishi Science E-magazine for *Agricultural Science*, Vol.-4, P.No. 90-93 for Brimato - New grafted hybrid vegetable.
- Best Reviewer Award to Dr S. N. Vasudevan, Dean (Agri.), CoA, Hassan.



- Dr Shankara M.H, Assistant professor and Head (Division of Social Science), College of Agriculture, Hassan was honoured with Best

Agricultural Extension Book award with prize amount of Rs 30,000 by



Hyderabad on 13 June 2023 for his book titled Entrepreneurship Development and Business Communication.

- Dr Y. N. Shivalingaiah, Professor and Head, Department of Agricultural Extension, GKVK honoured with Dr G.S. Vidyarthi Memorial Award during ISEE National Seminar 2023 on 24 June 2023 held at UAS, Bengaluru.
- Dr C.M. Savitha, Associate Professor, Department of Agricultural Extension, GKVK honoured with Young Scientist Award during ISEE National Seminar 2023 on 24 June 2023 held at UAS, Bengaluru.
- Dr Vinay Kumar R, Assistant Professor, Department of Agricultural Extension, GKVK honoured with Young Scientist

Award during ISEE National Seminar 2023 on 24 June 2023 held at UAS, Bengaluru.

### VNMKV, Parbhani

- Pulse Breeder Dr D. K. Patil of VNMKV was Awarded the Best Agriculture Scientist, at the auspicious hands of Shri Abdulji Sattar, Minister (Agriculture), Government of Maharashtra in 51<sup>st</sup> Joint Agricultural Research and Development Committee (Joint Agresco-2022) meeting of four SAUs of Maharashtra State jointly organized by Mahatma Phule Krishi Vidyapeeth, Rahuri and Maharashtra Council of Agriculture Education and Research, Pune, between 25-27 May, 2023 at MPKV, Rahuri.
- Oilseed Research Station, Latur of VNMKV awarded as the Best Research Center: 2022-23 for remarkable contribution in research work on sunflower under Project AICRP on Sunflower during 2017-2021. The award conferred in the



**Oilseed Research Station, Latur of VNMKV awarded as Best Research Centre**

Group Meeting held at Agriculture University, Mandore, Jodhpur. Scientists were felicitated with Certificate and memento at the hands of Dr T. R. Sharma, DDG, ICAR, New Delhi, Dr Sanjeev Gupta, ADG, ICAR and Dr B. R. Chaudhari, Vice Chancellor, Agriculture University, Mandore, Jodhpur.

## LIMELIGHTS

### AAU, Anand

- **First Book on 'Immature Insects' in India:** Dr M. B. Zala, Assistant Research Scientist, Agricultural Research Station,

AAU, Anand along with other authors from SAUs of Gujarat, D.A. Dodia main author, C. S. Barad, G. M. Patel and P. H. Rabari prepared first book on Immature Insects, in India which is published by



Cover page of the book

Scientific Publishers, Jodhpur. This book includes separate chapters for various immature stages of insects viz., egg, larva/nymph and pupa. It includes egg morphology with chorionic attachment and sculpturing, types of eggs. The details about insect larva, larval morphology, chaetotaxy and larval mobility. Considering information about pupa, it includes types of pupa, classification, pupal morphology, sex determination of pupa and significance of pupal stage. Other than that, detail information about methods of collecting insects, preservation of insects, defense mechanisms in immature insects, rearing of immature insects, use of taxonomic keys for immature insects and other important aspects are also discussed, chapter wise. This book will be useful to graduate/ post graduate students of Agricultural Entomology as well as Zoology, researchers and extension workers as well.

- **19<sup>th</sup> Combined AGRESKO meeting of SAUs of Gujarat and Kamdhenu University** held during 25 April to 17 May 2023 through online mode was organized by AAU, Anand. In this meeting total 226 Recommendations for farming community including 26 Crop varieties, 159 Scientific Recommendations and 521 New Technical Programmes were approved from all the SAUs and KU. Out of these, 8 crop varieties, 69, 47 and 143 recommendations for

Farming community, Scientific community and New Technical Programmes of AAU were approved, respectively.



Glimpses of the meeting

### Dr RPCAU, Pusa

- Zonal Research and Extension Advisory Committee (*Kharif*) meeting for Zone- 1 was organised by TCA, Dholi on 03 April 2023. A total of 112 progressive farmers, government representatives, Scientists of the university, Heads and SMS of different KVK participated in the deliberation of meeting.
- A Multi-Stakeholders workshop on Millets for Next Generation Climate Smart Agriculture, was organized on 28 May 2023 at RPCAU, Pusa with 200 participants including



Multi-Stakeholders workshop on 'Millets for Next Generation'

Farmers, Extension functionaries, FPOs, students and scientists. A series of lectures on importance of millets, their nutritional and health benefits, role as climate resilient crop, high yielding varieties in different small millets, their scientific cultivation, protection measures, value addition and processing were delivered. Practical session was organized to demonstrate the processing and value addition in millets.

### Dr YSPUHF, Nauni

- Keeping in view the International Year of Millets, a total number of 16 products were formulated and standardized during May



2023 using different millets, viz., pearl millet (*bajra*), foxtail millet (*kangni*), finger millet (*ragi*), buckwheat (*kuttu*), amaranth (*chulai*) and sorghum (*jowar*) in the department to be displayed in Red Cross Mela on 1 June 2023 at Ridge, Shimla (Himachal Pradesh).



Display of Exhibits in Red Cross Mela, Shimla

### Dr YSRHU, Venkataramannagudem

#### National Conference on Ethnic Vegetables

Dr YSRHU-College of Horticulture, Anantharajupeta organised two days National Conference on Ethnic Vegetables, during 27-28 May 2023. Dr T. Janakiram, Vice Chancellor, Dr YSRHU participated as Chief Guest and addressed the



participants about the nutritional importance of ethnic vegetables and future scope for strengthening the research and extension activities related to these traditional, underutilized, nutrition dense horticultural crops. Dr A. S. Padmavathamma, Dean of Horticulture, Dr YSRHU presided over and Dr L. Naram Naidu, Director of Research, Dr S. Surya Kumari, Dean of PG Studies, and Dr B. Srinivasulu, Registrar, Dr YSRHU were the Guests of Honour for the Programme. Recommendations generated out of scholarly deliberations and discussion during the conference paved way to formulate future strategies for conservation and utilization of ethnic vegetables in improving livelihoods of the Indian farmers.

#### Inauguration of Academic Blocks, New Blocks of UG and PG Hostels and KVK, Vonipenta Administrative Building at College of Horticulture, Anantharajupeta

Sri Kakani Govardhan Reddy, Minister of Agriculture, Co-operation, Marketing and Food Processing, Andhra Pradesh inaugurated new Academic blocks, new blocks of UG, PG hostels, new administrative building of KVK, Vonipenta (virtual mode) at Dr YSRHU-College of Horticulture, Anantharajupeta on 28-04-2023.



While speaking on the occasion, Minister said that the Horticulture and Agriculture universities in Andhra Pradesh will be developed on par with NITs and IITs. The Vice Chancellor, Dr T. Janakiram, Dr YSR Horticultural University, Shri K. Srinivasulu, MLA, Railway Koduru, Dr B. Srinivasulu, Registrar, Dr A. S. Padmavathamma, Dean of Horticulture, Dr E. Karuna Sree, Director of Extension and Zonal Research Head, Coastal Zone-I, Dr K. T. Venkata Ramana, Associate Dean, Dr YSRHU-College of Horticulture, Anantharajupeta along with teachers, staff and students participated in the inaugural ceremony. An exhibition with mango diversity and improved production and protection technologies on Horticultural crops was arranged by the scientists and students of CoH, Anantharajupeta. Publications on *Mushroom culture as sustainable means of nutritional security and employment of SC farmers of YSR KADAPA District of Andhra Pradesh* (booklet) and *Mushroom cultivation* pamphlet in Telugu compiled by Dr Ch. Ruth, Professor (Plant Pathology), PI and Co-PI of SC Sub-Plan were released by the Minister and other dignitaries.

## GADVASU, Ludhiana

### Dr Amandeep Sharma appointed as Adjunct Faculty American University

Dr Amandeep Sharma, Associate Professor (Dairy Engineering) of College of Dairy Science and Technology was appointed as adjunct professor in Southern Illinois University (SIU), Carbondale, USA. Dr Sharma will be jointly co-supervising post graduate students of Southern Illinois University for developing the predictive model for the prediction of shelf-life of yogurt. Dr Sharma developed a software for the prediction of quality parameters of paneer using artificial intelligence. He has worked on 8 research projects funded by the various agencies including MOFPI, NABARD and RKVY. He has worked in the field of application of solar energy for processing of milk into value added products and has developed technology of milk chiller, which was transferred to the industry.



### Research for Revival of Livelihood Opportunities in Sheep Husbandry

Varsity earned a research project of Rs 232.15 lakh from Ministry of Dairying, Animal Husbandry and Fishery, Government of India under National Livestock Mission. In this project scientists will conduct research for next 3 years to develop a sustainable intensive sheep farming model for mutton production to diversify current paddy-wheat cropping system in Punjab. Dr Amit Sharma will be the Principal Investigator of the project. This project aims to revive lost livelihood opportunity in sheep husbandry of rural population as per current socio-economic requirement and situation.

## KU, Gandhinagar

### Animal Vaccination Camp

Department of Veterinary Medicine, CVSc & AH, KU, Anand, organised a vaccination

programme for Haemorrhagic Septicaemia at Sarsa, Khambolaj and adjoining areas, in collaboration with Animal Husbandry Department, Anand on 16 June 2023, under the guidance of Dr P.H. Tank, Principal and Dean, and Dr Suketu Upadhyay, Deputy Director, Animal Husbandry Department, Anand. Dr S. K. Raval, Prof. and Head, Department of Veterinary Medicine, Dr Neha Rao, Dr D.



B. Sadhu, Dr Bhavika Patel and Dr Varun Patel, Veterinary officer, Anand along with 82 undergraduate and postgraduate students took part in the programme. The vaccination was carried out in 2,123 cattle and buffaloes. Livestock owners were given guidance for the care and management of animals during monsoon season. The students were given practical training of vaccination in field condition.

### Dr B. R. Ambedkar Jayanti Celebration

NSS unit, CVSc&AH, KU, Anand celebrated Dr B. R. Ambedkar Jayanti on 14 April 2023. This day was marks the 132<sup>nd</sup> Birth Anniversary of Bharat Ratna and architect of Indian constitution Dr B.R. Ambedkar.



NSS Programme officer delivered a talk and highlighted Dr Ambedkar's philosophy and his contribution in the framing of our Indian Constitution, and also explained about the role of Dr Ambedkar for the upliftment of oppressed sections of society and shared the contributions of Ambedkar towards women's empowerment. The programme was organised under the guidance of Dr P. H. Tank, Dean and Principal, Veterinary College, Anand.



**Celebration of World Veterinary Day 2023**

College of Veterinary Science & AH, Kamdhenu University, Navsari organized free of cost Animal Disease Diagnosis and Treatment camp at Surkhai village of Chikhli taluka for pre celebration of



World Veterinary Day 2023, on 26.04.2023. The camp was organized in collaboration with Animal Husbandry department, District Panchayat, Navsari and Shri Bhagvan Mahavir Vishvakalyan Trust. In the camp 473 animals (cow 61; buffalo 12; goat 400) of Surkhai and surrounding villages were treated and dewormed. Dr C. T. Khasatiya, Dr M. D. Patel, Dr D. N. Suthar, Dr J. A. Vala, Dr H. C. Sharma and post graduate students of the college; Dr Mitesh Gamit, Veterinary Officer and Dr M. C. Patel, Deputy Director, Animal Husbandry Department, District Panchayat, Navsari provided the service to treat the sick animals.

**KVASU, Wayanad**

- The Directorate of Entrepreneurship, KVASU conducted two-day Summer Camp – Aaral for students from Tribal Hamlets of Wayanad. The tribal students from different hamlets of Wayanad were trained in digital awareness, email creation, GPS mapping and use of internet search engines on the first day of the camp. On the second day, they were taken to a nearby river and given practical training on conservation of indigenous fishes in Wayanad.
- Minister for Agriculture, Animal Husbandry and Co-Operative Department, Government of Jharkhand, Mr Badal Patralekha visited Mannuthy campus of KVASU on 20 April 2023. He was accompanied by Shri Aboobekkar Siddique IAS, Secretary, AH Department, Director of Animal Husbandry and other senior officers of the department. Minister and team visited the Teaching

Veterinary Clinical Complex, University Livestock Farm and Fodder Research and Development Scheme, Vechur Conservation Unit and University Goat and Sheep Farm. The visiting team held discussions with Officers of the College, Farms and TVCC. The team appreciated the diagnostic and treatment facilities, modern milking parlour and the animal welfare measures adopted in the hospitals and farms of KVASU.

**MPUAT, Udaipur**

- The Maharana Pratap Memorial Lecture 2023, was virtually delivered by Dr Pramod Kumar Joshi, Former Director South Asia - International Food Policy Research Institute and an internationally acclaimed Agricultural Economist and Policy Expert. More than 1300 participants, mostly students and young professionals from all over the country attended this online lecture hosted by Directorate of Students' Welfare. The Patron and Chief Guest Dr Ajeet Kumar Karnatak, Vice Chancellor paid tributes to Maharana Pratap and recalled his instinct of patriotism.
- On 14 June 2023, Dr Ajeet Kumar Karnatak, Vice Chancellor inaugurated a 40 KV Grid connected Solar Photovoltaic Plant at College of Agriculture, Bhilwara in the presence of the Senior Officers, faculty, staff and students. The plant is estimated to produce 180 to 200 units of electricity per day.
- Dr Vikramaditya Dave, Head, Department of Electrical Engineering developed a knowledge app drive (QR code) *Nav Vaigyanik avam Takniki Krishi Gyan*, which contains ten basic articles on advance technology related to agriculture including





articles on Robotics, Artificial Intelligence, Mobile Apps, etc. and five books including *Krishi Parashar*.

## PJ TSAU, Hyderabad

### Inauguration of EEI Golden Jubilee Auditorium

EEI Golden Jubilee Auditorium at Extension Education Institute (EEI), Rajendranagar was inaugurated on 15 May 2023 by Shri Narendra Singh Tomar, Union Minister for Agriculture and Farmers Welfare, Government of India, New Delhi in the presence of Shri Singireddy Niranjan Reddy Garu, Minister for Agriculture, Co-operation and Marketing, Government of Telangana; Shri Manoj Ahuja, IAS, Secretary, Agriculture and Farmers welfare, GoI; Shri M. Raghunandan Rao, IAS, APC and Secretary, Commissioner of Agriculture, Government of Telangana and Vice Chancellor, PJ TSAU; University Officers and other invited dignitaries. Besides, New College Building of Agricultural College, Palem was also inaugurated on 16 May 2023 by Shri Singireddy Niranjan Reddy, Minister for Agriculture, Co-operation and Marketing, Government of Telangana in the presence of Vice Chancellor, PJ TSAU, Distinguished Guests, Public Representatives, University Officers, Staff and Students of the college.



Inauguration of EEI, Auditorium by Shri Narendra Singh Tomar, Union Minister of Ag.&FW

### Inauguration of New Campus of Agricultural College, Sircilla at Jillela

Shri K. Taraka Rama Rao, Minister for Municipal Administration and Urban Development, Industries and Commerce and Information Technology, Electronics and Communications, Government of Telangana, Shri Pocharam Srinivas Reddy, Speaker of the Telangana Legislative Assembly, Shri Singireddy Niranjan Reddy, Minister for

Agriculture, Co-operation and Marketing, Government of Telangana, and other distinguished guests inaugurated the college and hostel buildings of the Agricultural College, Sircilla (New campus) at Jillela village on 12 April 2023. The chief guest and other distinguished guests unveiled the plaque at New College Building in the presence Shri M. Raghunandan Rao, IAS, Vice Chancellor and Registrar, Dean, DSA, and other University Officers.

## SKUAST, Jammu

- KVK Jammu awarded best KVK among 72 KVKs of North states and Union Territories viz., Himachal Pradesh, Panjab, Uttarakhand, Jammu and Kashmir and UT of Ladakh for their functioning and service to the farming community.



The award **Zonal Workshop of KVKs 2023** was confirmed by ICAR, Agriculture Technology Application Research Institute (ATARI Zone 1 PAU Ludhiana) for its initiative, viz., farmers outreach, administrative capabilities, linkages with line departments, handholding of FPO's, Farmer's lounge, processing and branding of farmers produce along with large scale recommendations through OFT's, Frontline demonstrations and capacity building of rural youths and progressive farmers.

## SVVU, Tirupati

The university Established IVF Laboratory with latest and modern equipment in collaboration

with TTD for research on Augmentation of Productivity Through Assisted Reproductive Technologies in Cattle. The main objective of this project is to conserve the native breeds of cattle i.e Ongole, Sahiwal and Gir. In this regard, the university has entered MoU with Tirumala Tirupati Devasthanams. As a result, the first IVF Sahiwal calf was born on 24-6-2023, and it is our pride to inform that it is a first calf in India to have born through this technique and it was named as Padmavathi, and 2<sup>nd</sup> calf was born on 27 June 2023 and it was named as Vyshnavi.



Sahiwal calf born on 24-6-2023 through IVF Technology

### TANUVAS, Chennai

- With the assistance from NABARD, a district level farmers workshop on Augmenting Milk Production through Scientific Balanced Feeding Technique Among Rural Dairy Farmers, was conducted at Veterinary University Training and Research Centre, Vellore on 12.05.2023, benefitting 120 dairy farmers. During this workshop, a mobile app on *TANUVAS Samacheer Theevanam*, was also released.
- Vice Chancellor, TANUVAS, Dr K. N. Selvakumar distributed Madras Red ewes (2 ewes each for 14 beneficiaries) under ICAR-NWPSI Schedule Caste Sub-Plan. Similarly, inputs for Back yard poultry and coconut tree saplings were distributed to 30 beneficiaries



under AICRP on Agroforestry Schedule Caste Sub-Plan at Post-Graduate Research Institute in Animal Sciences, Kattupakkam.

### TNAU, Coimbatore

The Tamil Nadu Agricultural University and the Tamil Nadu Government's Department of Agriculture and Farmers Welfare jointly organized Millet Mela 2023 on 28-29 May 2023 at KVK,

Pappalapatti, Dharmapuri District. Nodal officer and Professor and Head, staff of



HC&RI Jeenur & RRS Paiyur and I. B.Sc (Hons) Horticulture students participated in the Millet Mela. Competitions on millet value addition, the Millet International Year 2023 logo design, millet-based songs, and so on were held among students on the eve of Millet's mela to instill the nutritive properties and benefits of millet. Mr M.R.K. Panneerselvam, Minister of Agriculture and Farmers Welfare, presented the prizes to the winners. Millet varieties, management and crop protection methods were displayed in the form of live specimens, samples, and charts on behalf of HC&RI, Jeenur, and RRS, Paiyur.

### UAS, Bengaluru

#### Special Days Organized

- World Honey Bee Day 2023** with the theme Bee engaged in pollinator – friendly agricultural production, was organized on 20 May 2023 to create awareness on the role of honey bees at GKVK, Bengaluru by AICRP on Honeybees. On the occasion talks by entrepreneurs and farmers engaged in bee keeping, and exhibition and sale of honey, value added products and equipment's needed for beekeeping was organized.

- UAS, Bengaluru in collaboration with Department of Agriculture, Government of Karnataka organized the **International Seed Day** with the theme Seeds for Sustainable Development - Global Perspective and Local Actions, at GKVK, Bengaluru on 8 June 2023. On the occasion exhibition and sale of seeds and planting materials was organized and more than 2000 farmers participated in the programme.

- **World Food Safety Day** was celebrated annually on 07 June 2023, with the purpose to promote awareness and action on food safety. The BTU took an initiative to draw the attention to food safety and standards among the participants and celebrated Fifth World Food Safety Day on 07 June 2023 by organising a guest lecture on Microbiological safety of Food products. Around 40 participants were benefitted.



World Food Safety Day Programme

- Agricultural Technology Information Centre, GKVK organised **World No Tobacco Day** in collaboration with Consortium of Tobacco free Karnataka on 31 May 2023 at UAS, GKVK, Bengaluru.



Vice Chancellor, UAS, Bengaluru Dr S. V. Suresha along with Dr Prathima Murthy, Director - NIMHANS, Mr. Suresh Heblikar, Well-known film director and environmentalist and other dignitaries inaugurated the event. A short film on alternative cropping pattern for tobacco was developed by the students and screened during the event. Farmers from Tobacco growing belt [Hunsur, H. D.Kote, Nippani] participated. Scientists briefed them about

the alternative crops and other ill effects of tobacco.

### Awareness Programmes

In the week-long campaign from 22-28 May 2023 on the occasion of World environment day on 05 June and in observance of the International Year of Millets 2023 with the theme of Climate resilient and smart agriculture, 16 awareness programmes were organized during 22-27 May 2023 by Agricultural Research Stations creating awareness among 694 farmers (426 men and 268 women).

### Launching of e-Newsletter of Bakery and Value Addition Center

An e-Newsletter of Bakery and Value addition Centre was launched by Shri N. Chaluvarya

Swamy, Agriculture Minister, GoK, Dr S. V. Suresha, Vice Chancellor, UAS, Bengaluru and other



Launching of e-Newsletter by dignitaries

dignitaries, during Valedictory function of ISEE National Seminar on Evolving Extension Science towards Secondary Agriculture for Sustainable Development, on 24 June 2023 at UAS, GKVK, Bengaluru. This e-Newsletter provides information about the activities of BTU, carried out in the form of events, awareness programs, research activities, training programs etc. which could be useful to the Scientists, Research scholars, Food Technologists, Students and other entrepreneurs engaged in industries with respect to food processing and value addition.

### VNMKV, Parbhani

### Transforming 1550 acres of Fallow Land Cultivable

VNMKV, Parbhani has transformed 1550 acres of land, which was lying fallow and denuded for



more than two decades, into cultivable land. These 1550 acres of land used for breeder seed production of demanded varieties of soybean,

pigeon pea, sorghum, etc.

Out of which 250 acres of land used for digital farming. The

university

administration under the guidance of Vice Chancellor Dr Indra Mani employed manpower and tractors, JCP, other machinery to remove unwanted trees and shrubs and make land ready for sowing during this *kharif* season. The university has also constructed four new big farm ponds and renovated old big farm pond to ensure adequate water supply for the land and water conservation. These farm ponds have total 9 crore litre water storage capacity to address protective irrigation during dry spell.



VNMKV makes 1550 acres of fallow land cultivable

## RESEARCH PUBLICATIONS (≥14 NAAS RATING)

### CCSHAU, Hisar

- Mondal S., Jatrana A., Maan S. and Sharma P. (2023). Lignin modification and valorization in medicine, cosmetics, environmental remediation and agriculture: review. *Environmental Chemistry Letters*, 21, 2171-2197. **(NAAS Rating :19.6)**.
- Rani N., Duhan A., Pal A., Kumari P., Beniwal R. K., Verma D. and Singh R. (2023). Are nano-pesticides really meant for cleaner production? An overview on recent developments, benefits, environmental hazards and future prospectives. *Journal of Cleaner Production*, 137232. **(NAAS Rating: 17.1)**.
- Sachin D. G., Singh S. and Rajeevan M. (2023). WiFEX: Walk into the warm fog over Indo Gangetic Plain region. *Bull American Met Soc*. 104 (5): E980-E1005. DOI:

<https://doi.org/10.1175/BAMS-D-21-0197.1> **(NAAS Rating: 15.12)**

### GBPUAT, Pantnagar

- Shivvendra Singh, Sumit Chaturvedi, Prayasi Nayak, Vipin Chandra Dhyani, Tony Manoj K. Nandipamu, Dhananjay Kumar Singh, Pratibha Gudapaty, Prabhakar Mathyam, Kanchu Srinivasrao, Kasivelu Govindaraju. (2023) Carbon offset potential of biochar based straw management under rice- wheat system along Indo-Gangetic Plains of India. *Science of the Total Environment* 897 (2023) 165176 **(NAAS Rating: 16.75)**

### IVRI, Izatnagar

- Jaismon P. A., Sushmitha A. P., Med Ram Verma, Yash Pal Singh, Udipta Borthakur, Sanjay Kumar, Khan Sharun and Kuldeep Dhama. (2023). Prevalence of bovine brucellosis in India: a meta-analysis. *Veterinary Quarterly*, 43:1, 1-9. **(NAAS Rating: 14.07)**

### SKUAST, Jammu

- Manzoor M., Sharma P., Murtaza M., Jaiswal A. K. and Jaglan S. (2023). Fabrication, characterization, and interventions of protein, polysaccharide and lipid-based nanoemulsions in food and nutraceutical delivery applications: A review. *International Journal of Biological Macromolecules*, 124485. **(NAAS Rating 14.2)**
- Wani et al., 2023. Climate plays a dominant role over land management in governing soil carbon dynamics in North Western Himalayas. *Journal of Environmental Management*, 338, 117740. **(NAAS Rating: 14.91)**

**TANUVAS, Chennai**

- Desingu P.A., K. Nagarajan and N.R. Sundaresan 2023. Unique Tandem Repeats in the Inverted Terminal Repeat Regions of Monkeypox Viruses. *Microbiology Spectrum*, ppe03199-22 (**NAAS Rating: 15.04**).
- Desingu P.A. and K. Nagarajan. 2023. Unveiling HERV-K113-ENV as SARS-CoV-2 severity admissible biomarker by mining transcriptome data. *Journal of Medical Virology*, 95(1):149 (**NAAS Rating: 20.00**).

**FUTURE PROGRAMMES****Dr YSPUHF, Nauni**

- Certificate courses on wine technology will to be initiated in next semester in the Department of Food Science and Technology, Dr YSPUHF Nauni, Solan, HP.
- Crop improvement through survey, identification and collection of new bud sports of fruit crops from different part of the state.
- Development of HDP modules for pear and stone fruits.
- Mass multiplication of elite planting material of temperate fruit crops on clonal rootstocks and production of feathered nursery plants.
- Standardization of technologies for intercropping/ mixing of 2-3 compatible crops for seed production.
- Provide quality education to undergraduate and postgraduate students for human resource generation.
- Undertake basic and applied research activities for developing strategies to enhance productivity of vegetable crops.
- Dissemination of technical knowledge to the farmers through various training and skill development programmes.

**GBPUAT, Pantnagar**

- **International exchange and network on large scale:** It is targeted to organize 50 overseas expert lectures and interactions across the year, through which students and faculty members could directly connect with international experts for research exposure.
- **Entrepreneurship development among undergraduate students of the college through mass scale skilling:** Hydroponics, propagation techniques and protected cultivation units have been established in the college premises for mass scale skilling of undergraduate students under Earn While You Learn pattern, in which it is targeted to provide 80-100 hours of training to each undergraduate student across the year.
- **Up skilling of students with rural background in soft skills, language skills and analytical skills:** An intensive plan was developed to put 100 hours of skilling of undergraduate students in the college, as special remedial classes for struggling students, so that overall students' performance could be led above the threshold level.
- **ICT led Revolution in Farming:** The farming community of Uttarakhand is not getting technical and technological information of farming on time due to remoteness of area, difficult terrains and lack of transportation facilities. The advance tools of ICT like Artificial Intelligence, Machine Learning, Simulation Modelling, IOT, Remote Sensing, Drone etc., would be applied to provide solutions at farm gate. An AI/ML system will be created for farm advise, which will be first implemented on sugarcane crop and later on other crops.
- **Revolution of Start-up in Agriculture:** There are plenty of opportunities available to develop new start-ups and

entrepreneurs by applying advanced technologies. Pantnagar University has started supporting start-ups ever since corona disrupted the lives of people of Uttarakhand. The efforts are going on and Directorate of Research is planning to create a total number of 30 start-ups by 2025.

- **Organic Farming in Uttarakhand:** The hills of Uttarakhand state with low chemical inputs offers great opportunity/potential for organic farming. Directorate of Research will provide technical backstopping and congenial ecosystem for science led organic farming. The organic products of state would be exported to western countries with the help of APEDA to fetch premium prices. A Research School on Organic Farming (RSOF) will be established in the University to provide all kinds of support. The organic seed in the desired quantity (needed by Government of Uttarakhand) will be produced by the RSOF.

### MPUAT, Udaipur

- A Millet Hut will be launched to acquaint students with new millet recipes.
- Millet Vatika will be developed at each College, research station and Krishi Vigyan Kendra to familiarize students and visiting farmers with nutricereals.

### PJTSAU, Hyderabad

- 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 nanomaterials for controlled-release of nutrients, pesticides and fertilizers in crops as well as nano sensors for agricultural practices, food quality and safety.
- It is proposed to intake 1233 UG, 270 PG and Ph.D. and 924 diploma students during the year 2023-24.
- It is proposed to undertake 400 Training Programmes, 315 Technology Assessment and Refinement activities, 1200 Diagnostic Field Visits, 170 Method Demonstrations, 50 *Kisan Melas* in all district headquarters and 100 Farmer Interaction programmes during the year 2023-24.

### SKUAST, Jammu

- Production and distribution of elite planting materials of rainfed subtropical fruit crops during the year i.e. aonla, kinnow mandarin, eureka lemon, orange, malta, mossambi, kagzi lime, bael, phalsa, jack fruit and custard apple, etc.
- Development of low-cost soil and water conservation technologies for rainfed area of Jammu region.
- Development of power operated potato planter.
- Development of engine operated paddy harvester.
- Development of engine operated maize planter.
- Cryopreservation, semen handling and artificial insemination.
- Development of cost effective progestogen implant for estrus induction in dairy animals.
- Implementation of several Developmental/Research Projects which



are approved under Holistic Agriculture Development Programme (HADP) for J&K (UT).

### UAS, Bengaluru

- Establishment of Common Incubation Centre on Coconut under ODOP / PMFME scheme.
- Institute of Agri-Business Management, College of Agriculture, GKVK planning to conduct Brainstorming session for strengthening of MBA (ABM) Programme on 21 July 2023.
- Department of Forestry and Environmental Science, College of Agriculture, GKVK is planning for planting around 2,000 saplings at GKVK Campus.
- Department of Seed Science and Technology, College of Agriculture, GKVK planned to Develop Modern Seed Production Farm in 2 acres of land.

## NEW VICE CHANCELLORS

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

#### Dr B. N. Tripathi

Dr B. N. Tripathi born in Uttar Pradesh on 20 July 1962; graduated from Veterinary College, Mathura, CSA University of Agriculture & Technology, Kanpur (UP), (now DUVASU) in 1984, and did M.V.Sc. and Ph.D. from Indian Veterinary Research Institute, Izatnagar (UP) in 1987 and 1990, respectively.

Before joining on the post of Vice Chancellor of SKUAST-J, Jammu, Dr Tripathi served as Deputy Director General (Animal Science),



ICAR, New Delhi from 30 January 2020 to 19 June 2023 and Director, ICAR-National Research Centre on Equines (NRCE), from August 2014-January 2020. Earlier he served as Director, CCS-National Institute of Animal Health, Baghpat Ministry of Agriculture and Farmers' Welfare, Department of Animal Husbandry, Dairying and Fisheries, Government of India, from 2012-2014 and Head of Animal Health Division, Central Sheep & Wool Research Institute, Avikanagar from 2009-2012. Dr Tripathi joined ICAR-NRCE, Hisar as scientist in 1990 and served the institute as scientist/Principle scientist till 2008.

Dr Tripathi has over 32 years research experience including 13 years of administrative experience. He has 200 research papers in high impact journals, 5 books, 4 manuals, 5 technical bulletins, 3 policy papers, two National Action Plan (Disease control), 20 diagnostic and 4 vaccine technologies including Ancovax and Lumpi-ProVac vaccines, 9 patents, 200 NCBI Accessions to his credit. Besides, he supervised 16 PG Students.

Dr B. N. Tripathi has been recipient of several awards including Sardar Patel Outstanding ICAR Institute Award (2015) for ICAR-NRCE, Hisar; University Best Teacher Award, Drs Jain and Vegad Outstanding Pathologist Award, (2006); International Wellcome Trust Fellowship (London) (2003); Best Research Paper Awards of IJVP 2003, 2005; Prof. Rama Rao Best Ph.D. Thesis Award for three students, 2006, 2013; Dr Talpatra Oration Award 2023, Dr C. M. Singh Samman, Dr C. M. Singh Oration Lecture-2020, Dr N. N. Dastur Oration Award, etc.

Dr Tripathi has a vast international exposure as he visited large number of countries for academic, research and as Government of India representative. He has been Member of Indian delegation for OIE, WHO, SAARC, ASEAN, BIMSTEC meetings in India and abroad. He has also been Post-Doctoral Scientist, Institute of Animal Health, Compton, UK, (1998-99); Visiting Scientist, Moredun Research Institute,

Edinburgh, (2003-04). He also availed International Travel Grants from Indian National Science Academy (INSA), Department of Science and Technology, Government of India in 2005 and 2012 and Asian African Society of Mycobacteriology, 2018. He has also been Member of International delegation from ICAR for various meetings of BRICS, BIMSTEC, SAARC, ASEAN, FAO, WHO and OIE.

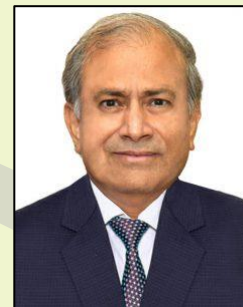
Dr Tripathi also served as National coordinator of Animal Genetic Resources in India and Vice-Chair (Asian Region) for 12<sup>th</sup> Inter-Governmental Technical Working Group (12<sup>th</sup> ITWC), FAO, Rome. He is Elected Fellow of Science Academics/Societies viz. Fellow of the Royal College of Pathologists, London, UK; National Academy of Agricultural Sciences; National Academy of Veterinary Sciences; National Academy of Dairy Sciences; Indian Association of Veterinary Pathologists; Society for Immunology and Immunopathology; Indian Society for Veterinary Immunology & Biotechnology; FIAAVR, Diplomat and Charter member, Indian College of Veterinary Pathologists 2008.

Dr Tripathi is President, Indian Association of Veterinary Pathologists (2019-2025) and also served many scientific societies in various capacities such as Chief Editor of Veterinary Pathology and IAVP Newsletter (2006-2011); Secretary General, IAVP (2013-2016); Secretary, (ICVP 2012-14); Member Task Force DBT (2017-18). He also served as Member of Board of Management, LUVAS, Hisar (2014-17), GADVASU (2015-18, 2019-22) and SKUAST-Kashmir (March, 2021-continues).

## **Chandra Shekhar Azad University of Agriculture & Technology (CSAUA&T), Kanpur**

### **Dr Anand Kumar Singh**

Dr Anand Kumar Singh, former Deputy Director General, Horticultural Science, ICAR has joined as Vice Chancellor of Chandra Shekhar Azad University of Agriculture & Technology (CSAUA&T), Kanpur on 16 June 2023. The Executive Committee of IAUA extends heartiest congratulations and best wishes to Dr Anand Kumar Singh for his new responsibility.



## **Dr Balasaheb Sawant Konkan Krishi Vidyapeeth (Dr BSKKV), Dapoli**

### **Dr Sanjay G. Bhawe**

Dr Sanjay G. Bhawe, has joined as Vice Chancellor of Dr Balasaheb Sawant Konkan Krishi Vidyapeeth (Dr BSKKV), Dapoli on 07 June 2023. The Executive Committee of IAUA extends heartiest congratulations and best wishes to Dr Sanjay G. Bhawe for his new responsibility.



**The IAUA thanks and congratulates Dr S. D. Sawant, Vice Chancellor, Dr Balasaheb Sawant Konkan Krishi Vidyapeeth for support to IAUA and successfully completing his tenures during May 2023.**