



# KVK TIMES



A Window to KVKs of ICAR-ATARI, Zone-XI

Vol 01 Issue 05, 1-15 September 2021

**75**  
Azadi Ka  
Amrit Mahotsav



**ICAR-Agricultural Technology Application Research Institute  
Zone XI, Bengaluru  
ICAR-KLE Krishi Vigyan Kendra, Mattikopp, Belagavi**

**ACKNOWLEDEMENT**

It is a matter of great privilege for me to express my profound gratitude to Dr. V. Venkatasubramanian, Director and all the Principal Scientists and staff of ICAR-ATARI, Zone-XI, Bengaluru for providing us an opportunity to bring out KVK Times of Zone-XI for this fortnight from 1-15 September 2021. I sincerely thank Dr. Prabhakar B. Kore, Chairman, Board of Management, KLE Society, Belagavi and Shri. B.R. Patil, Chairman, ICAR-KLE KVK, Mattikopp for their constant support and encouragement in over all development of KVK, implementation of KVK activities and supply of quality inputs to serve the farmers of the region.

I Sincerely thank Dr. Ramesh Babu, Director of Extension, Dr. P. S. Hugar, Associate Director of Extension and Dr. Shripad Kulkarni, Nodal Officer (KVKs), UAS, Dharwad for their technical support and constant encouragement for our KVK activities.

I wish to place on record our sincere thanks to all my fellow colleagues of KVK family Zone-XI for their sustained efforts in sharing the requisite information in time which largely helped to precisely compile and bring out the final edited issue of KVK TIMES for the first fortnight of September 2021.

I profusely thank my KVK Scientists for their unstinted support in compiling the News letter and offering valued suggestions to bring out this issue. Finally I thank Shri. Manjunath P.I., Technical Officer (Computer), Smt. Veena Bannur (Stenographer) and Shri Bhavani Offset Printers, Hubballi for systematically designing the cover page.

Date: 15.09.2021

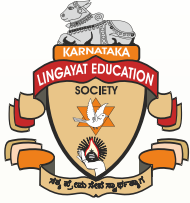
Place: Mattikopp



**Sridevi B. Angadi**  
Senior Scientist & Head  
ICAR-KLE KVK, Belagavi-II



## FOREWORD



### **Prabhakar B. Kore**

Ex-Member of Parliament  
(Rajya Sabha)  
CHAIRMAN  
KLE Society, Belagavi  
CHANCELLOR  
KLE Academy of Higher Education and Research, Belagavi  
KLE Technological University, Hubballi  
Karnataka State, India.

Krishi Vigyan Kendras (KVKs) are the vibrant knowledge resource Farm Science Centres for agriculture and allied sectors aiming at dissemination of location specific farm technologies to meet the needs and aspirations of farmers. Besides the assessment and demonstration of technologies, KVK provide vital feedback to National Agriculture Research System (NARS) to reorient farmers' centric research programmes. KVKs produce quality farm inputs and supply to farmers besides extending need based technology oriented services.

In this direction, the efforts of the Indian Council of Agricultural Research (ICAR), Ministry of Agriculture and Farmers Welfare, Government of India has established 722 KVKs across India is commendable. Accelerated Entrepreneurship development in agriculture and allied sectors through agribusiness incubation with emphasis on processing and value addition will go a long way in attracting farm youths towards agriculture. KVKs are playing pivotal role in not only enhancing farm production through technological interventions but also in promoting formation of Farmers Producers Organization (FPOs) to get remunerative and sustainable returns. Thus, the large network of KVKs in India is providing need based and location specific appropriate technologies to bring overall socio-economic transformation.

I am delighted to learn that the ICAR- ATARI, Bengaluru (Zone-XI) is encouraging KVKs to bring out fortnightly "KVK Times" for cross learning among 48 KVKs located in Karnataka, Kerala and Lakshadweep which will serve as important reference to all KVKs to strengthen their action in serving the cause of farmers.

I congratulate the team KVK of Zone-XI for documenting farmers oriented activities in "KVK Times" and wish them a great success.

Date: 15.09.2021

  
(Prabhakar B. Kore)



## MESSAGE



**B. R. Patil**

Chairman  
ICAR-KLE Krishi Vigyan Kendra  
Mattikopp



Krishi Vigyan Kendras (KVK) are functioning at district level for improving the agriculture economy through enhancement of productivity by introducing new varieties, reducing the cost of cultivation and value chain development and market linkage to ensure livelihood security of the farmers.

In recent years, KVKs are using mobile technology for faster dissemination of technology capsules in more convincing way by uploading suitable audio/ visual aids for easy grasping of the farmers and to implement them for gaining higher returns.

KVKs maintain an effective functional interaction and convergence as well as working in harmony and partnership with different stakeholders for achieving their mandate as well as agricultural development in the district. KVKs jointly organize pest and disease surveillance, diagnostic visits, participation in meetings and workshops, arranging awareness programmes, training programmes, seminars, health camps, etc. for efficient transfer of technology to the farmers of the district.

Innovative idea of ICAR-ATARI, Bengaluru to document significant achievements of all 48 KVKs of Zone-XI in 'KVK Times' is highly appreciable.

My best wishes to all the KVKs in Zone-XI for rendering valuable services to the benefit of the farmers timely in their district during pandemic situation also.

My compliments to KLE KVK team, for editing and compiling this issue of 'KVK Times' for 1-15 September 2021.

I wish the publication a great success.

Date: 15.09.2021

  
(B. R. Patil)



Dr. V. Venkatasubramanian  
डॉ. वी. वेंकटसुब्रमण्यन  
Director  
निदेशक



## From the Director's Desk

Agriculture is successful only when farmers gain potential yields from the crops they grow. This depends on adoption of suitable technologies relevant to farming situations which play prime role in reaching the targeted returns through sustainable agriculture.

KVKs are playing pivotal role in handholding of farmers during difficult pandemic situation by linking them to the market to sell their produce on spot and to gain profitable income. 'Believing through seeing' and 'learning by doing' is most appropriate to the KVKs, as the scientists are involved in implementing KVK mandated activities to reach the goal of doubling farmers income through livelihood security.

Information communication technology (ICT) has become the powerful tool for disseminating the technology capsules through KVK website and social media like, facebook, whatsapp, twitter, youtube, instagram and telegram as it ensures easy and fast delivery of the technologies, in the light of fact that farmer has access to smart phones. ICT tools has given an unique opportunity to the farmers to participate in virtual training programmes in a large number and interactions with the Scientists to seek the solution for their field problems.

KVKs are organizing Agriculture Skill Trainings (ASCI) for 25 days duration to rural youths/ farmers/ farmwomen to establish an entrepreneur activity. The ASCI training is end to end approach on skilling and linking all the stakeholders of the agriculture value chain for creating a sustainable growth.

I hope and confident that the activities reflected in this issue of KVK TIMES will become a guide for all extension functionaries for further transfer of appropriate and successful technologies to farming community for adoption.

(V Venkatasubramanian)



## Impact of Eco-friendly Interventions on Enhancement of Sugarcane Productivity in Belagavi district (Belagavi-II)



### Introduction

Sugarcane is major commercial crop of the district covering an area of 2,06,864 ha with a production of 1,90,62,518 t and productivity of 97 t/ha in Belagavi district. Due to its large area under sugarcane and establishment of 27 sugar factories in the district, Belagavi district is known as sugar bowl of Karnataka. The productivity is low due to various reasons like cultivation practices, inadequate nutrient management, occurrence of pest and diseases etc. In view of this, KVK identified two prominent problems in the cultivation of sugarcane i.e., burning of trash and incidence of white grub. Burning of trash leads to loss of nutrients and carbon emission causing environmental pollution. By burning of trash from one hectare of land accounts for loss of 28 kg of nitrogen, 10.4 kg of phosphorus and 52 kg of potash. By doing this opportunity of better soil fertility management in sugarcane ecosystem is lost. The other major problem in the district is incidence of white grub which spoil the rhizospheres of sugarcane plant and destroys the crop to the extent that the farmer have to cease the cultivation. To address these problems KVK has taken up interventions like Frontline demonstrations, trainings and campaigns to sugarcane growers in the KVK jurisdiction and the impact created is briefed below.

### Crop residue management in Sugarcane

- Sugarcane trash contains about 0.35 per cent nitrogen , 0.13 per cent phosphorus and 0.65 per cent potash .Burning of sugarcane trash, a common practice causes environmental pollution. On an average 8 tons/ha of trash is burnt in Khanapur taluk
- KVK demonstrated trash management in 8 ha through composting culture (*Trichoderma viridae*) which resulted in reduction of burning trash in 650 ha and increased soil fertility. The productivity enhanced from 62.60 t to 70.70 t/ha besides increase in the soil nutrient status.
- The net returns increased from Rs. 1.03 lakh/ha to Rs.1.20 lakh/ha due to trash incorporation in ratoon sugarcane with a reduction in carbon emission
- The overall economic gain realized is Rs.110.5 lakh in Khanpur taluk due to KVK intervention



## Increase in Soil Fertility

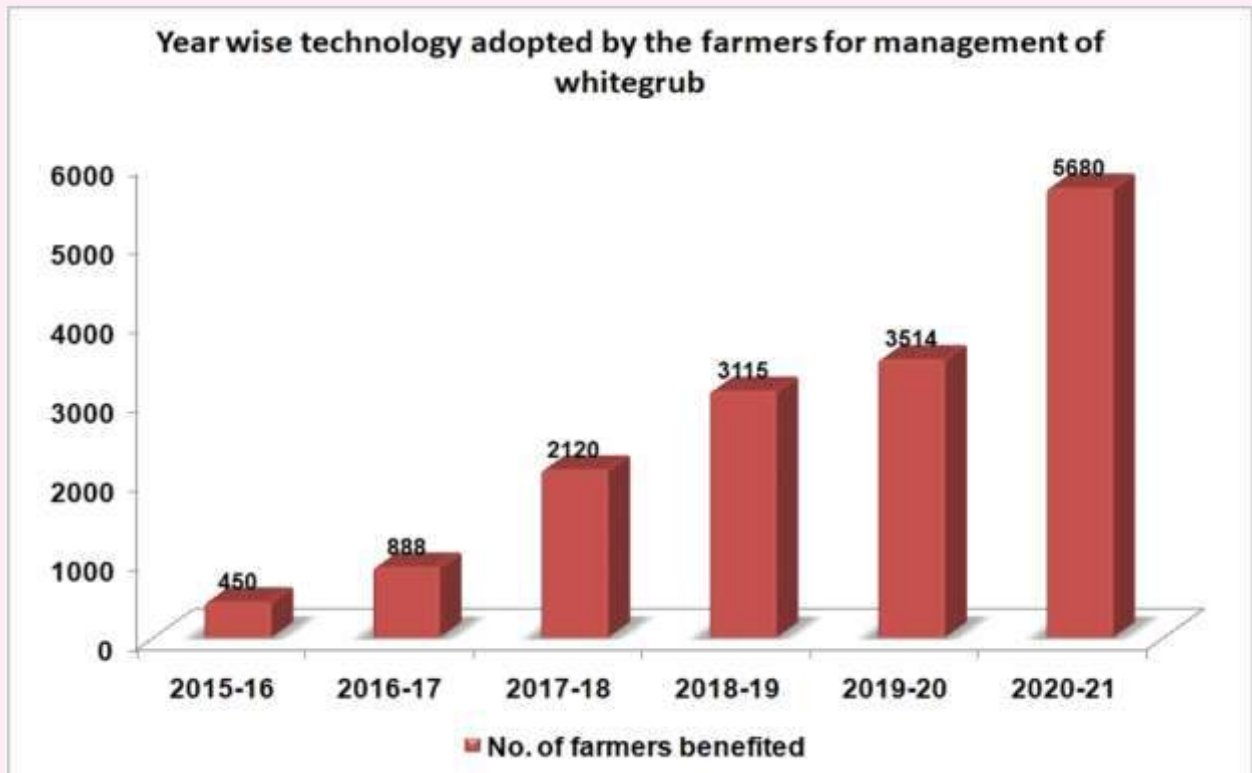
OC (%)		Av. P (kg/ha)		Av. K (kg/ha)	
Before	After	Before	After	Before	After
0.47	0.66	18.76	21.59	62.82	71.67



## Integrated Management of White grub in Sugarcane

Sugarcane is leading commercial crop in the district and average yield is low due to various reasons. Among them white grub menace is the major cause for low yield from last two decades. White grub infestation has been reported throughout the district and magnitude of the problem is consistently increasing over the years causing 30-40% economic damage to sugarcane. In majority of the farming situations, control of white grub is largely abandoning cultivation of sugarcane because of lack of control over its damage. In general, the management strategy depends primarily on the use of highly poisonous spurious chemical pesticides. Realizing the ill effects of indiscriminate application of highly toxic chemical pesticides on the environment, KVK conducted frontline demonstration on Eco-friendly management of white grub in sugarcane in its adopted villages like Ingalagi, Vakkund and Yenagi of KVK jurisdiction. The use of bio-control agents in general and fungal based myco-insecticides in particular are lacking in the farming community. With a view to address these issues, an alternative control measures based on fungal antagonist with the fungus *Metarhizium anisopliae* and IPM techniques etc. were demonstrated in 12.8 ha involving 32 farmers which resulted in productivity enhancement from 92.5 t/ha to 99.80t/ha. KVK also organised various training programmes and campaigns on management of white grub in sugarcane. Apart from these, large scale demonstrations (45) and trainings were undertaken during 2019-20 to develop eco-friendly, economical and integrated approaches for management of white grub under sugarcane cropping ecosystem of Bailhongal, Chikkodi, Hukkeri, Raibagh and Savadatti taluk of Belagavi district with the financial support from Department of Agriculture under ATMA project. This has resulted in spread of technologies to an area of 1936 ha in various clusters. All these interventions caused for economic gain of Rs.3.87 crores to the farming community of Belagavi district.





FLD on Management of white grub in sugarcane



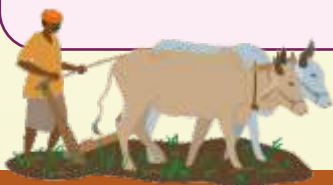
Demonstration of solar trap



IISR Combo insect trap for white grub



Catch and kill method of whitegrub adults



## TECHNOLOGY ASSESSMENT

### KVK, Chikkamagaluru

#### Assessment of flower crops as a intercropping in young Arecanut garden to enhance the farmers income

Arecanut is an important commercial crop cultivated in Chikkamagaluru district (16,468.27ha). Majority of farmers are small farmers (< 1ha) and practicing monocropping which, earns low income and difficult to sustain livelihood security. In this contest, Krishi Vigyan Kendra, Mudigere, Chikkamagaluru had initiated assessment of flower crops i.e., Marigold and China aster as a intercropping in young arecanut garden for higher income at Tadaga village of Ajjampura cluster. The study will be continued up to the crop age of 4 to 5 years.



### KVK, Chikkaballapura

Redgram being the important rainfed crop in Chikkaballapura, method demonstration on mechanical nipping was organised by KVK, Chikkaballapura at Gidnahalli village of Chikkaballapura taluk on 09.09.2021. Dr. Papireddy M. Senior Scientist and Head, KVK, Chikkaballapura, Mr. Vishwanath Scientist (Agronomy) and Mrs. Sindhu Scientist (Horticulture) explained about the importance of nipping in redgram in getting enhanced yield and demonstrated the mechanical nipping process.



## TECHNOLOGY DEMONSTRATIONS

“Believing through seeing” and “learning by doing”

### KVK, Bagalkote

Visited farmer field of Frontline demonstration on Integrated Crop Management in Banana at Honnakatti village on 11.09.2021 by Dr. Airadevi Angadi, Scientist (Horticulture), KVK Bagalkote and Arjun Sulagitti, Scientist (Entomology), KVK Bagalkote. Method demonstration on pit filling with trichoderma, Pseudomonas and rhizosphere microbial consortium application to root zone was conducted.

### KVK, Kannur

#### Frontline Demonstration of Salt tolerant paddy variety Lavanya

Demonstration of salt tolerant paddy variety Lavanya is being demonstrated at Kaipad areas of Kannur districts under the technological guidance of KVK Kannur. Scientific interventions were taken up by KVK Kannur, highlighting importance of soil



amelioration. The highly acidic saline tracts of kaipad, with low productivity due to traditional varieties, but well known for organic rice farming needs new approaches that could enhance the productivity for sustaining income and thereby sustaining the interest of farmers in rice cultivation, in the long run. Regular monitoring of the demonstration fields are done by KVK, Kannur. Enhancing income of farmers through sustainable and increased production by the introduction of high yielding variety along with soil amelioration is the expected outcome of demonstration. And KVK is expecting a gradual shift in the approach of kaipad farmers towards soil amelioration practices.



## KVK, Mallappuram

### Demonstration of Botanical cake and paste for management of Rhinoceros beetle infestation in coconut

Infestation of Rhinoceros beetle is a constant headache to coconut farmers and Central Plantation Crops Research Institute, (CPCRI) Kayamkulam has come up with a new technology of application of botanical cake and paste in juvenile palms to reduce the infestation. ICAR - KVK Malappuram introduced this new product to the farmers in Alipparambu and Edayur Panchayats and demonstrated its application.



## KVK, Palakkad

### Paired row planting of paddy: A model exercise

Paired row planting of paddy seedlings was demonstrated to farmers of Vavannur Padashekaram of Thrithala Block by scientists of Krishi Vigyan Kendra Palakkad with the cooperation of Farmnet Farmer producer Company (FPC). In this method, there will be a distance of 35 cm between two paired row of seedlings which is different from the traditional method of planting at a spacing of 15 x 20 cm. This scientific planting method ensures better air circulation and exposure to sunlight providing an ideal conditions for the crop to grow and yield more. This technology is gaining popularity among farmers of Palakkad district.



## CAPACITY DEVELOPMENT PROGRAMMES

The capacity to learn is a gift, the ability to learn is a skill and the willingness to learn is a Choice

### KVK, Bagalkote

ICAR- Krishi Vigyan Kendra, Bagalkote in collaboration Department of Agriculture, Bagalkote organized training to extension functionaries on 14.09.2021 at ADA Office, Hunagund. Dr. Arjun Sulagitti Scientist (Entomology) covered Rootgrub management in sugarcane, fall armyworm management in maize and other pests of various crops; Dr. Sudha S, Scientist (Plant pathology) explained about the Management of Onion twisting, sugarcane rust, pigeon pea sterility mosaic and other diseases of various crops. Dr. Dinesh Kumar discussed about new ground nut varieties like Dh 256 and Kadari lepakshi etc. Discussions were held regarding Atmanirbar programme and ODOP. At the end of the programme, a demonstration on UPL Boom sprayer in pigeon pea was carried out in farmers' field in collaboration with DMAC, Ramatal. During the training, Associate Director of Extension Dr. R.B. Belli, JDA Dr. Chetana Patil, Senior Scientist & Head Dr. M.R. Kammar and DDA 1& 2 and more than 40 extension functionaries participated.



### KVK, Chikkaballapura

Krishi Vigyan Kendra, Chikkaballapura organised training programme on cocoon bio craft at KVK, Chikkaballapura on 13.09.2021. Dr. Papireddy M., Senior Scientist and Head, KVK, Chikkaballapura along with other dignitaries inaugurated the programme and emphasized on role of cocoon bio-craft in entrepreneurship development. Trainees were imparted the skills like cocoon cutting, dyeing, flower preparation and garland preparation.



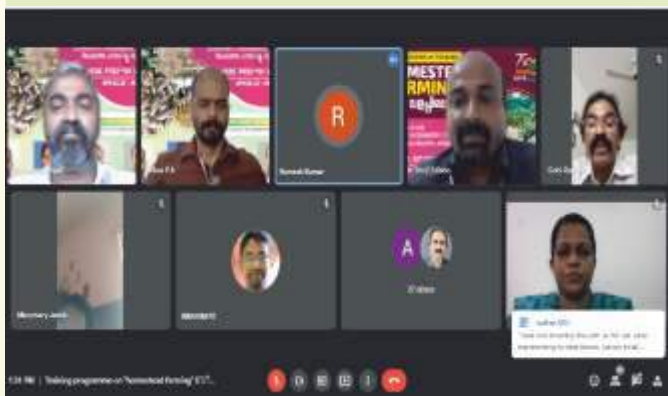
### KVK, Ernakulam

#### KVK to promote homestead farming towards safe food in all homes

Ernakulam being the most urbanized district in Kerala is short of space for commercial scale farming. In this context, KVK is promoting homestead farming to ensure safe food in all homes while the excess production can be income source. The KVK through its Farm store is supplying quality farm inputs which includes vegetable seeds, seedlings, fruit grafts, poultry chicks, fish fingerlings, poultry and fish feed, organic manures, growth enhancers, probiotics, microbial inoculums etc. In order to extend technology backstopping, a comprehensive training on Homestead farming was conducted online on 10 September 2021. Protocol for



production of safe to eat fruits, vegetables, egg, meat and fish in homesteads was shared to the participants. Species and breeds suitable for homesteads, farming/rearing method, potting mixture preparation, pond preparation, animal housing, pests, diseases deficiency symptoms, prophylactic measures etc., were covered. Along with that, uses of various biopesticides and organic manures and their proper application in homesteads was discussed. The various species suitable for milk, meat and egg production in Ernakulam was covered along with the basic requirements for their farming, advantages and disadvantages with different breeds, diseases and preventive measures were discussed. Further, the prospects of fish farming in homesteads and the advantages and disadvantages of new technologies in fish farming were discussed. This was followed by interaction with the participants to address the queries.



Dr. Savita B. Scientist (Soil Science), Krishi Vigyan Kendra, Indi in her presidential address said that sheep farming is an important income generating activity that everyone should take up along with agriculture. Dr.L. Kattimani, Veterinary Officer, Animal Husbandry and Veterinary Science, Government of Karnataka working at Salotagi, Indi taluk spoke about introduction of Goat breeds and explained how to select quality breeds. Many farmers are taking up the broiler farming system adopted in Tamil Nadu and Kerala to get a higher income, so the farmers in our district are also ready to adopt it. Dr. Santosh Shinde, Scientist (Animal Science), organizer of this training programme spoke in detail in training session on the management of goats, forage crops, homemade feed preparation, Azolla as food, hydroponics and vaccinations and interacted with farmers. Thirty interested farmers, farmwomen and youths participated in this training programme.



**KVK, Indi**



## Scientific Goat Rearing Training

“Scientific Goat Farming” training was conducted by ICAR-Krishi Vigyan Kendra, Indi from 08.09.2021 to 09.09.2021 as a subsidiary occupation in agriculture to get their daily income sustainably. The training was aimed at encouraging the farmers to earn a high income by scientific rearing with small amounts of investment.



“To most people, it's Dirt. To farmer, its Potential” -Doe Zantamata

## KVK, Kodagu

### Training on organic farming and Agro-advisory services

A training programme on organic farming and agro-advisory service was held at Bageri village of Kodlipete Hobli on 9 September 2021. The program was jointly organized by Department of Agriculture and Krishi Vigyan Kendra. In this programme, training was given to farmers on Organic farming for different crops. The stepwise procedure for conversion of land to organic was also explained to the farmers. The package of practices, Do's and Don'ts to be followed in the field to convert conventional farming land to organic farming were also discussed. The process of conversation, procedure to get organic certification logo and marketing links and supply chain management for organic produce was also discussed. The selection of suitable crops, pest and disease resistant varieties suitable for organic cultivation were highlighted. Finally, a talk was given to farmers about weather based advisory services from KVK, Gonikoppal and asked the farmers to take advantage of this new service from KVK under the Gramin Krishi Mausam Sewa programme launched by Govt. of India. The District Agro meteorological unit located at KVK, Gonikoppal is providing this service to the farmers of Kodagu district.



## KVK, Koppal

### “Bakahu” alternate income source for banana growers

Bananas are one of the best nutritious fruit sources and suitable for all age group. But lockdown forced the farmers to feed cattle or sell it at low price. Considering the problems and also a social media revolution regarding Bakahu, ICAR-KVK, Koppal organised webinar on Bakahu preparation and value addition in association with ICAR-KVK Ballari on 13.08.2021. Programme was virtually inaugurated by Sri. Padre, Journalist and Editor of Adike Patrike and explained in detail about revolution of Bakahu and its spread in Karnataka and encouraged the farmers to take it as subsidiary income. Dr.Kavitha. Y. Ullikashi, Scientist (Home Science) briefed about nutritional importance of the banana. Smt. Vanishree, progressive farmwomen from Sagar, Shivaogga narrated details about Bakahu preparation and its different food products. Dr.Shilpa. H, Scientist (Home Science) explained about different value addition of banana and banana fibre. More than 40 farmers and farmwomen were participated in this programme.



## KVK, Kolar

### Capacity development program on integrated crop management of potato

Kolar district is known for intensive vegetable cultivation and potato crop occupies maximum area during Rabi season in the district. In this regard, an online capacity development programme for officials of Department of Horticulture, Kolar was conducted on 3.9.2021. Similarly, off campus programme in collaboration with Masti Venkatesh Iyengar FPO, Malur was also organized on 7.9.2021. In the said programmes advances in crop, nutrient, diseases & pest management practices were discussed in detail by KVK, Kolar Scientists. A total of 75 farmers & extension officials have benefited by the programme.



## KVK, Kottayam

### IFS for Agricultural Officers

Integrated Farming System Research Station (IFSRS), Karamana in collaboration with KVK, Kottayam has conducted one day offline training programme on “Integrated Farming System for sustainable livelihood” for 25 Agricultural Officers representing all blocks of Kottayam District who are implementing integrated farming scheme (Jaiva Griham) of the State Department of Agriculture. Cost effective IFS models developed at IFSRS, Karamana for both rural and urban area were explained. Since the

declining land holding size of the farmers, IFS can be profitably promoted even in 5 cents of land in integration with animal husbandry, fisheries and allied sectors. Also pointed out IFS can be done in participatory approach by collective farm planning, involvement of farm family with technological support of KVK and other line departments with major thrust on doubling farmer income. IFS models which can be replicated in different Agro ecological units were also explained. Considering the below sea level farming situation in Kuttanadu, rice based farming system incorporating other components for ensuring year round income and employment opportunities were also discussed. Also the basic objectives of IFS like promoting organic farming, waste management, resource conservation, food and nutritional security and finally ensuring livelihood security of the farmer were well explained. To reach the national goal of doubling farmer income in Kerala the integrated farming system models will increase the productivity of the farmer and this will ensure the nutritional and livelihood security of the farmers. KVK in collaboration with State Department of Agriculture is promoting IFS models in different blocks of the district. Another session on different models of integrated fish farming and relevance of the fish farming system was also done.



**KVK, Mangaluru****Capacity development programme on Bio Control Agents for PKVY farmers**

ICAR- Krishi Vigyan Kendra, Dakshina Kannada organized a capacity development programme on 'Bio control agents application in crops' at Ajjavara, an adopted village of Sullia Taluk. The programme was inaugurated by Shri. Belliyappa Mudoor, a progressive organic farmer of the village and he addressed PKVY farmers to use biocontrol agents like Trichoderma and Arka Microbial consortia (AMC) for managing fungal diseases and to enhance availability of nutrients by plant uptake. Dr. Mallikarjun L., Scientist (Soil Science) organized method demonstration on usage of bio control agents through soil applications by mixing with FYM and water to spray at base of the plants at field in the presence of forty identified PKVY farmers. Also advised for incorporation of Trichoderma and AMC with farm waste generated in the field for application to the soil to improve the soil fertility and productivity. Senior Scientist and Head, ICAR- Krishi Vigyan Kendra, Dakshina Kannada presided over the function and briefed about the importance of bio control agents, their production technologies and use in crop production. During the training, provided 100 kg of Trichoderma and 144 kg of AMC to all the beneficiaries of PKVY Farmers. A technical folder developed on bioagents in local language was also provided to farmers. Shri Bhavani Shankar, Lead Resource Person (LRP), PKVY project, demonstrated the use of bio-agents and explained how best can be utilized them in their traditional method of crop production without any chemical residues. A total of 40 farmers participated in the programme.

**Capacity Development programme for tribal women on value addition of fish for livelihood improvement under ODOP**

On eve of 75th Azadi Ka Amrit Mahotsav a capacity development programme on preparation of value added product (Fish Chutney Powder) from low priced fish in collaboration with Nidpalli Gram Panchayat was organized on 26.08.2021 at Nidpalli village under One District One Product (ODOP). The demonstration was organized on preparation of fish chutney powder. Two entrepreneurs already involved in the business of selling value added products also shared their traditional method of preparation of fish chutney and motivated other women participated in the programme. Smt. Anitha M., Keerthi Streeshakti group head inspired by this programme determined to start this business on small scale involving 25 tribal women initially and later will be expanded to similar 15 groups in the district under the technical guidance of ICAR-Krishi Vigyan Kendra, Dakshina Kannada.



## KVK, Malappuram

### Bee keeping for additional income generation

To promote bee keeping as a key component in integrated farming system for additional income generation and enhancement of crop production, ICAR-KVK, Malappuram in collaboration with HortiCorp, Kerala organised two batches of three day skill training programme for 40 participants. The programme coordinated by Dr. Najitha Ummer and was inaugurated by Dr. Ibrahim Kutty C. Senior Scientist and Head, KVK Malappuram and Mr. Abdul Jabbar, Scientist (Agricultural Extension) delivered felicitation address. Trainees were exposed to different honeybee species, their characteristics, bee behaviour, hive management and breeding techniques. Certificates were presented to the trainees on successful completion of training. To scale up its adoption, KVK will provide hives with bee colonies and other accessories with a two day follow up training.



## KVK, Raichur

### “Scientific Bee Keeping - An income booster for the farming community

ICAR-Krishi Vigyan Kendra, Raichur in association with Department of Horticulture organized training programme on “Scientific bee keeping” on 11.08.2021. The training programme included technical

sessions comprising of topics like Bee Keeping history, bee species, species of bee that can be domesticated, management of bee boxes in different seasons, bee rearing techniques and tools, importance of horticulture crops in bee keeping, schemes and subsidies for bee keeping by horticulture department, Bee keeping for doubling farmers income and bee keeping as a subsidiary occupation in Integrated farming systems. The involvement of the farmers in training programme was encouraging as the selection of the trainees was done based upon the interest. Its a good sign that about 35 interested farmers from various parts of the district participated in the training and the trainees were enthusiastic to start the Bee-keeping with the acquired knowledge and guidance of the scientists of Krishi Vigyan Kendra.



## KVK, Shivamogga

### Coconut palm climbing through machine

ICAR-Krishi Vigyan Kendra, Shivamogga conducted 3 days skill oriented capacity development programme on “Coconut palm climbing through machine” under ARYA project from 06-09-2021 to 08-09-2021. The objective of this programme was to learn the skill on climbing of Coconut palm through machine and management practices in coconut garden through practical experiences and hands-on training related to Coconut palm climbing through



machine. The theoretical sessions like Management of coconut nursery, Use of organic manures in coconut cultivation, Integrated Nutrient Management in coconut, Integrated Pest and Disease Management in coconut, Management of coconut garden, Value Addition in Coconut were delivered by training coordinator Dr. Arun Kumar P., Scientist (Agri.Ext.), Dr. Hanumanthswamy, B.C., Senior Scientist and Head, Dr. M. Basavaraj, Scientist (Agronomy), Dr. Jyoti M. Rathod, Scientist (Home Science), Dr. Arun Kumar, B.R., Scientist (Soil Science) and Dr. Nagarajappa Adivappar, Principal investigator, Areca research project and Dr. Imran Khan, Assistant Professor (Plant Pathology), UAHS, Shivamogga, respectively. The practical sessions were handled by Mr. Venkatesh Naik, skill trainer, Shettihalli. The participants were trained practically for climbing coconut trees with the help of machine. Totally 23 participants got benefit from the training programme.



## KVK, Tumakuru-II

On-campus training on Vermicompost preparation and biogas production from kitchen waste was organized. Mr. Ramesh.P.R, Subject Matter Specialist (Soil Science) explained preparation of vermicompost and its uses and biogas production from kitchen waste.



## KVK, Waynad

### Skill Development Programme to pest scouts

Pest Scouts Skill training was organized by ICAR-KVK, Wayanad for two days in association with Department of Agriculture, Development and Farmers Welfare. During the training, skill on inspecting for pests, weeds and pathogens were trained for major crops of Wayand. After gathering the information, it was taught to determine whether pest population is at economical threshold level (ETL). If the pest load crosses above ETL suitable plant protection measures were highlighted to the trainees. The programme was inaugurated by Sri Muraleedhara Menon, Deputy Director (E&T).

The classes were dealt by Dr. Susha S. Thara, Assistant Professor and Head, Dept. of Plant Pathology, College of Agriculture, Vellayani, Dr. Ambili Paul, Assistant Professor, AINP on pesticide residues and Dr. Deepa Rani C.V, Assistant Professor, KVK, Ambalavayal. Dr. Deepa Rani C.V. welcomed the participants and Dr. Allan Thomas made the presidential address. Dr. Indulekha V. P. delivered the vote of thanks.



## SKILL TRAINING

It's not the length of the pool...it's the skill in the stroke

### KVK, Chamarajanagar

Twenty five days Sericulturist training programme under ASCI was organized at ICAR-KVK, Chamarajanagara from 5 to 30 August, 2021. Twenty (20) farmers actively participated and learnt the skills of new technologies in Sericulture. Skills acquired by the trainees during the training programme were selection of seed material for raising mulberry nursery, nursery bed preparation, and planting of cuttings in nursery beds by adopting different spacing. Besides this, the trainees were taught planting of mulberry methods of planting with different spacing, importance of raising green manure crops as intercrops in mulberry and method of incorporation, pruning of tree mulberry, harvesting leaves for rearing according to different stages of silkworms, rearing of late age silkworms, care to be taken during pre and post moulting with dusting of bed disinfectants, identification of matured silkworms, method of disinfection of plastic mountages, proper placing of mountages on rearing bed, harvesting of cocoons, cleaning and disinfection of plastic mountages. Harvesting of cocoons, sorting of cocoons (good ones and defective cocoons), marketing of cocoons at government cocoon market, Mysore, marketing of defective cocoons, procurement of proper inputs for sericulture activities, value addition in Sericulture with special reference on utilization of rearing bed waste/ by product, separation of fecal matter and use of cut/pierced cocoons for making cocoon crafts.

Apart from this, a two days study tour was organized to trainees to elite sericulture farmer units at Kulagana (Chamarajanagara district), Sangapura (Mandya district) and Central Sericultural Research and Training Institute, Mysuru, Keerangere Chawki Rearing centre at Keernagaere, Kanakapura taluk, Ramanagara district. Big sericulture farm at Hanur.

**Outcome :** Five of the 20 trainees were active youth decided to work in group to harness group benefit and to serve the sericulture farmers of the district.



### KVK, Davanagere

#### Dairy Farmer/Entrepreneur Training under Agriculture Skill Council of India

Twenty six days skilled training programme was organised for the benefit of rural youth in the District from 05-04-2021 to 20-04-2021 and 2-8-2021 to 24-08-2021. Twenty five rural youth/Dairy Farmers who are interested in becoming Dairy Entrepreneur undergone the skilled training programme. During the programme various skills viz., Accommodation of Animals in the shed, selection of good quality breeds and breeding, preparation of compounded feeds, making silage and hay, production of azolla and hydroponic fodders, better utilization of low quality feeding stuffs through value addition (Enrichment), clean



milk production, Disease control etc. were taught to the trainees to make produces based on National operational standards for better marketability and acceptance across the borders.



## KVK, Raichur

### Skill training for rural youths of 'MAITRI' workers

ICAR-KVK, Raichur organized one month training to the MAITRIs (Multi-Purpose AI Technicians in Rural India) workers on 'Artificial Insemination' in collaboration with Department of Animal Husbandry & Veterinary Sciences, Raichur under Rashtriya Gokul Mission to establish Gokul Gram to conserve and develop local indigenous breeds from 9 August 2021 to 4 September 2021. Forty trainees were chosen from the area where veterinary services were not extended, but are unemployed educated rural youths. Prolong class room training for one month was carried out followed by two months of practical training in rural areas. The Programme was inaugurated by Shri Rajesh B. Bhavagi, District Skill Development Officer and presided over by Dr. Shivanna, Deputy Director, Animal Husbandry and Veterinary Science, Raichur.



## EXTENSION ACTIVITIES

### FIELD DAY

#### KVK, Bidar

The field day in greengram was observed by ICAR-KVK Bidar at Suntan village of Basavakalyan Taluk, Bidar district. The event was organized in the field of Shri. Murlidhar Shripatrao Patil on 23 of August 2021 with an active participation of 52 farmers including 18 women farmers. It provided an opportunity to discuss the ups and downs observed during the course of conducting the demonstration trials. The Integrated Crop Management technologies were demonstrated with the approach of Cluster Front Line Demonstration (CFLD) the central government sponsored under NFSM programme. Shri. Murlidhar (Partner Farmer) has explained the important technologies and practices carried out during demonstrated viz., replacement of Variety with potential variety BGS- 9, (tolerant to powdery mildew disease), application of bentonate sulphur @ 5 kg per ac., seed treatment with Goucho, @5 ml per kg of seeds followed by *Trichoderma*, PSB and *Rhizobium* @ 5 g per kg of seeds, during the grand growth stage spray of hexaconazole to manage the powdery mildew disease and to manage the sucking pest spray with imidachloprid were demonstrated. The foliar spray with pulse



magic @ 5 g per lit was also taken up during pod initiation stage which has helped the crop to increase the percent of pod setting and to get higher grain weight. At the outset the gathered farmers were convinced about the technologies demonstrated in the Green gram crop and opined that the yield in the demonstration field will be at least 15 Per Cent more than that of regular Farmers Practice plot.



Latitude: 17.755513  
Longitude: 76.992245  
Elevation: 831.27900 m  
Accuracy: 251.4 m  
Altitude: 101.67  
Pitch: -63.25° E 377  
Time: 23/09/2021 02:42  
Note: Field on CFLD Geosys



## AWARENESS PROGRAMME ON BRUCELLOSIS



### KVK, Belagavi-I



National Animal Disease Control Program (NADCP) is a flagship program of Department of Animal Husbandry & Dairying (GoI) to control Brucellosis by vaccinating 100% bovine female calves. ICAR-BIRDS KVK, Belagavi-1 organized Brucella vaccination drive for female cow and buffalo calves of 4-8 months age in co-ordination with Department of Animal Husbandry & Veterinary Services, Belagavi on 11 of September-2021. Brucellosis is an infectious disease caused by Brucella species causing abortion during third trimester of pregnancy with retention of placenta in females and infertility in male along with hygroma. Humans are affected when they come in direct contact with placenta and aborted fetus of infected animals. Once exposed, humans get fever, orchitis, arthritis and become infertile. Vaccination is an

effective way for control and prevention of Brucellosis in animals avoiding productive and reproductive losses to the farmer. During the program, importance of vaccination, information on Brucellosis was conveyed to the farmers and information leaflet on Brucellosis was distributed among farmers for lateral spread of knowledge.



### KVK, Belagavi-II



ICAR KLE Krishi Vigyan Kendra, Mattikopp, Belagavi- II in association with Department of AHVS, Belagavi organized three brucellosis vaccination programmes and animal health camps at identified DFI villages namely Bevinakoppa (Bailhongal Tq), Ingalagi (Savadatti Tq) and Karavinakoppa (Khanapur Tq) from 07-09 September 2021. The Brucellosis vaccination programme was inaugurated by Shri. Mahantesh Koujalagi, Hon'ble MLA (Bailhongal) who addressed the livestock farmers of the region about importance of vaccination of dairy animals and how it helps in providing economic security to farmers. Dr. I.S. Kolhar, Assistant Director, AHVS, Bailhongal Taluk explained about the common myths about vaccination and cleared the doubts of the farmers. Dr. Nagesh Huilgol, Scientist (Animal Science) explained to farmers on adoption of integrated management of diseases in dairy animals. During the three days, a total of 69 female calves (27 cattle calves and 42



buffalo calves) were vaccinated against Brucellosis. Apart from this, 185 animals (95 cattle, 60 buffalos, 20 male calves, 10 bullocks) were treated for various ailments like enteritis, deworming, low milk yield, infertility, skin infections, lameness and yokegall. Free medicines and mineral mixture were provided during animal health camp. A total of 120 farmers benefitted from brucellosis vaccination programme and animal health camps in the three DFI villages.



## KVK, Chitradurga

Brucellosis vaccination programme was organized in collaboration with department of Veterinary and Animal Husbandry and Department of Agriculture, Hiriyyur taluk at Imangala, Hiriyyur taluk, Chitradurga district on 11 September 2021. Dr. Kallappa, Deputy Director of Veterinary and Animal husbandry has advised the farmers on early identification and management of Brucellosis and foot and mouth diseases in animals. He stressed on maintenance of balanced nutrition in animals to increase the milk yield also improves the development of resistance to diseases like Brucellosis. Growing of pulses along with cereal fodder crops helps in minimizing the expenditure on animal feeds which increases the net income of the farmer. Dr. S. Onkarappa, Senior Scientist and Head, KVK, Chitradurga explained

farmers on improved varieties of fodder crops and trees which are tolerant to drought condition in the district. Dr. Rangaswamy, Deputy Secretary, Zilla Panchayath, Chitradurga, Dr. Rudragouda F. Channagouda, Scientist (Agronomy), KVK, Chitradurga, Dr. Thippeswamy, Assistant Director of Veterinary and Animal husbandry, Chitradurga, Dr. Horakereppa and Dr. Vinay, Veterinary officers, Hiriyyur were present in the programme and interacted with farmers with useful suggestions. Sixty animals including buffaloes and cows were vaccinated in this occasion.



## KVK, Dharwad

ICAR-Krishi Vigyan Kendra, Dharwad in association with Department of Animal Husbandry and Veterinary Services, Dharwad conducted Brucellosis vaccination under National Animal Disease Control Programme (NADCP) at KVK, Dharwad adopted DFI village Shirur on 09.09.2021. During the programme, Dr.

Rudreshappa Kotur, Assistant Director, Admin, Veterinary Hospital Navalagund addressed the farmers that Brucellosis is mainly seen in Cows, Buffaloes, Sheep, Goat, Pig, Dog and affected animals show abortion, reduced milk production, infertility as major clinical symptoms thereby contributing to severe



economical loss to farmers, hence to control the disease, vaccination to female calf is very important.

Dr. Jayashree Pattar, Scientist (Animal Science) explained the farmers about the detrimental effect of Brucellosis on human health and protective measures that it is important zoonotic disease mainly spread through animal secretions like raw milk and semen. Affected persons suffer from intermittent fever, abortion in pregnant women, night sweating and infertility. Therefore the persons who are in close contact with animal like owners, veterinary inspectors, AI worker, veterinary doctors and person working in slaughter house should be aware about detrimental effects of the disease. Hence one should be careful in handling Brucellosis affected animals, aborted placenta, blood and other secretary material and should wear protective clothing. Dr Kiran, Veterinary Doctor from Veterinary Dispensary Shirur told the farmers about importance of Brucellosis vaccination in female calf above 4 months of age old in its lifetime and rise of antibody level in the body to fight against Brucellosis. More than 25 farmers participated in the vaccination camp and total 35 female calves were vaccinated.



## KVK, Kalaburagi-I

ICAR-KVK, Kalaburagi-I in collaboration with Department of AH & VS, Kalaburagi organized Brucellosis Vaccination and Mass Awareness Campaign at Suntanur, Aland taluk, Kalaburagi district on 07.09.2021. Dr. B. S. Patil, Deputy Director, Department of AH & VS, Kalaburagi inaugurated the programme and highlighted on economic losses to livestock, human beings and country due to brucellosis disease. Dr. Manjuanth Patil, Scientist (Animal Science) presented on brucellosis cause, mode of spread, symptoms, prevention & control measures through Audio-Visual mode. Dr. Sanjay Reddy, Assistant Director, Veterinary Hospital, Aland taluka delivered information on importance of brucellosis vaccination to cow and buffalo calves. Dr. Yallappa Ingle, Technical Officer, Deputy Director Office, Kalaburagi briefed on the Zoonotic importance of brucellosis disease. During this event, totally 30 female cow calves of 4 to 8 months old were vaccinated with B.abortus strain 19 vaccines and 80 farmers & rural youth were benefitted from the campaign programme.



## KVK, Kodagu

ICAR-KVK Gonikoppal, Kodagu organised One day awareness cum vaccination programme on brucellosis in Bovines at T-Shettigeri village, Ponnampet taluk on 8 September 2021 along with Department of AHVS, Veterinary Hospital, Srimangala. During the programme, Dr. Suresh SMS (Livestock) gave information on Brucellosis in animals & its zoonotic importance for the benefit of livestock farmers. Dr. Girish G.G, CVO, Veterinary hospital, Srimangala gave information on vaccination to control Brucellosis in animals. During the programme 28 female calves of Shettigeri village, Ponnampet village were vaccinated against Brucellosis. A total of 78 farmers participated in the awareness & vaccination programme.



## KVK, Kolar

Kolar district is known for milk production and every household of the district will be having one or two crossbred cows and calves. Recently a campaign under NADCP was launched by the Government of Karnataka from 1-15 September 2021 for Brucellosis vaccination, a deadly disease of cattle. In this regard KVK, Kolar has organized a series of awareness programmes in collaboration with local veterinary doctors. To begin with an online capacity development awareness programme was organized on 2.9.2021 in

which 25 farmers have participated. A total of 260 farmers & farmwomen participated in brucellosis awareness programmes organized at Muthunuru on 06.09.2021, at Rajenahalli & Kuppanahalli on 07.09.2021, at Honnenahalli on 08.09.2021 and at Kadudevandahalli on 14.9.2021. In the said programmes, the impact of brucellosis on animal & human health, its management and vaccination drive information was discussed.



## KVK, Haveri

On the occasion of “Launching Brucella vaccination Programme under National Animal Disease Control Programme (NADCP)- Karnataka” KVK Haveri conducted a training programme on “Brucellosis: Epidemiology and Control” for veterinary officers and sub-staffs of Haveri district in collaboration with department of Animal Husbandry and Veterinary Services. Dr. Paramesh Hubballi, Deputy Director (i/c) in his inaugural speech explained about government efforts and vaccination programme to control the brucellosis in animals. Dr. Mahesh Kadagi, Scientist (Animal Science) in his speech explained about different species of brucella organisms affecting animals and humans, disease transmission, clinical signs and symptoms, new diagnostic tools and control measures. He further explained that country is incurring loss of Rs. 21,580 corers



every year due to brucellosis. He also explained about importance of calthood brucella vaccination to female calves of 4-8 months age. Dr.H.Sannakki, Chief Veterinary officer, Poly Clinic Haveri explained about zoonotic importance of brucellosis programme. In the programme, 35 Veterinary officers and 30 Sub-Staffs attended the training.



research farm and demonstration units in the Krishi Vigyan Kendra under the guidance of relevant scientists and officers. Mrs. Jissy George, SMS, KVK explained the technologies related to production of Virgin Coconut Oil and other products from coconut to the farmers in the Agro-Processing Training cum Incubation Centre of the KVK.



## SPECIAL DAY CELEBRATIONS

### WORLD COCONUT DAY

#### KVK, Alappuzha

KVK joined the 'World coconut day' celebrations organized by ICAR-CPCRI, RS, Kayamkulam as part of the 'Azadi ka Amrit Mahotasav'. Selected progressive coconut farmers physically attended the programme and many others online. The programme was inaugurated by Smt. Sasikala, Chairperson, Kayamkulam Municipality and attended by Smt. Binu Ashok, Municipal Councillor, Dr. Anitha Karun, Acting Director, CPCRI, Dr. S. Kalavathi, Acting Head, CPCRI, RS, Kayamkulam and Dr. P. Muralidharan, Head, KVK-Alappuzha. There was a special lecture on the topic 'Nutritional values of coconut for health' delivered by Dr. B. Chembakam, Former Head, Division of Crop Production, ICAR-IISR, Kozhikode in the forenoon. In the afternoon session, farmers visited various experimental plots in the

#### KVK, Haveri

On 2<sup>nd</sup> September, 2021 KVK-Haveri celebrated World Coconut Day at Hanumanamatti, Ranebennur taluk. Coconut is one of the most popular crops in the world. The nut fruit multipurpose nature makes it to stand out from the rest. Right from extracting coconut water to coconut milk from the flesh and extracting oil from the copra, the fruit is extremely versatile and has plenty of uses. Coconut Day was first celebrated in 2009 by the Asia Pacific Coconut Community. Keeping COVID-19 in mind, this year's theme for World Coconut Day was "Building a Safe Inclusive Resilient and Sustainable Coconut Community Amid COVID-19 Pandemic and Beyond." On the eve of Coconut Day, a training programme on coconut cultivation was organised and soil suitability and climate, seedlings selection, varieties/hybrids available, nutrients management and processing aspects were thought to the farmers. After the training



programme, coconut seedlings were planted at KVK premises by scientist and farmers to remember the day. Coconut seedlings were distributed to all the participants.



## KVK, Mysuru

The ICAR JSS-KVK celebrated World Coconut Day on the Theme 'Building a safe, inclusive, resilient and sustainable coconut community amid Covid-19 pandemic and beyond' on Thursday 2 September. This year's World Coconut Day celebration is included in the program 'Azadi ka Amrit Mahotsav' as part of the Commemoration of 75 years of India's Independence.

On the celebration of World Coconut Day Dr. Vinay G M Scientist (Horticulture) organized the online training program on 'Recent Advances in Coconut Production and Value Addition', the objective of the training program is to give scientific knowledge and recent technologies in Coconut production and Value addition. The training started with welcoming participants by Dr. Vinay G. M. and explained the importance of Coconut in increasing the income of the growers and given the details on history of the World Coconut Day. The Resource person of the program was Dr Bhavishya Scientist (Horticulture) CFTRI, Vittala who delivered the detailed lecture on new technologies in Coconut production technologies viz., method of seedlings production, planting

methods, new varieties, irrigation methods, fertigation importance, nutrient management, nutrition deficiencies, organic farming in coconut and new technologies in value addition of coconut. A total of 52 interested farmers participated and benefitted from the training.



## FOOD AND NUTRITION FOR FARMERS

### KVK, Koppal

In the series of 'Azadi Ka Amrit Mahatsav' for the month of August 2021, ICAR-Krishi Vigyan Kendra, Gangavathi, Koppal district organized the training programme on "Food and Nutrition for Farmers" on 26.08.2021. Programme was inaugurated by Dr. M.V. Ravi, Senior Scientist and Head, ICAR-Krishi Vigyan Kendra, Gangavathi and explained in detail about the concept of doubling the farmer income. Dr. Kavitha Y. Ullikashi, Scientist (Home Science), narrated details about the balance nutrition and immunity boosting nutraceutical foods. She also introduced the new concept of banana powder and encouraged the farmers and farmwomen to adopt Bakahu to reduce the malnutrition in children and community. Dr. Jyothi R., Scientist (Horticulture) explained the availability and nutrition of different fruits and vegetables. Dr. Mahantesh M.T., Scientist (Animal Science) explained about the nutritional importance of dairy



products. Dr. Raghavendra Yaligar, Scientist (Agril. Entomology) briefed about the importance of organic foods. More than 76 farmers and farmwomen were participated in this programme.



## KVK, Thrissur



In commemoration of India's 75 years of Independence, KVK, Thrissur organized a Webinar on "Healthy food habits" on 26 August 2021 as directed by ICAR. This webinar was organized through online platform (google meet) in line with the theme of this month i.e. "Food and Nutrition for Farmers". KVK contact farmers, members of women self-help groups and Anganwadi workers participated in the webinar. Dr. Aneena E.R., Assistant Professor (Community Science) handled the session. The session emphasized the importance and urgency of maintaining good health and also the precautions and concerns for controlling unhealthy food habits with sedentary life styles. On this occasion, seeds and inputs were distributed to farmers of Madakkatharapanchayath for homestead cultivation and microgreen production as part of "Nutri Smart Village Programme which is being implemented by KVK Thrissur for ensuring nutritional self-sufficiency.

As part of "PoshanMah", an online training on "Vegetable cultivation" was organized on 10.09.2021 wherein Dr.

Flemine Xavier, Assistant Professor, KAU handled the session. In the afternoon on the same day, a health clinic to assess the nutritional status of nutriclub members was conducted. Their anthropometric parameters were assessed. Dietary guidelines for correcting their Body Mass Index was given. A class on safe food practices was also given.



## INTERNATIONAL BIOFUEL DAY



## KVK, Davanagere



International Biofuel Day was celebrated in collaboration with Zilla Panchayath, Davanagere at Naraganahalli village, Davanagere taluk on 10.08.2021. The programme was inaugurated by Dr. Vijaya Mahanthes B. Danammanavar, CEO, Zilla Panchayath, Davanagere. The theme for World Biofuel Day 2020-21 is 'The promotion of biofuel for a better environment'. The day is to raise awareness to replace the traditional fossil fuels with non-fossil fuels. Biofuel will have a positive impact on the environment which will help in improving the economic condition of the country by providing a practical and feasible solution.

The Krishi Vigyan Kendra is operating the project on 'Biofuel Research, Information and Demonstration Centre (BRIDC)' sponsored by Karnataka State Biofuel Development Board, Bengaluru



since 2010-11. The centre is collecting biofuel seeds from farmers and extracting biodiesel which is used at 10 % as a blend blended with diesel vehicles, besides creating awareness on importance of biofuel and planting biofuel plants.



## NATIONAL NUTRITION WEEK

Exercise is king, nutrition is queen. Put them together and you have kingdom

### KVK, Bengaluru Rural

ICAR-Krishi Vigyan Kendra, Bengaluru Rural District in association with All India Coordinated Research Project (Home Science), GVKK, Bengaluru and Women and Child Welfare Department, Doddaballapura Taluk organized one day training programme to celebrate National Nutrition Week on “Role of Micronutrients in Daily Diet” on 6 September 2021 to farm women. This year's theme for National Nutrition Week is 'Feeding Smart Right from Start'. The objective of the training programme was to create awareness about good nutrition and health to make people understand the importance of nutritional and adaptive eating habits so that they can maintain a healthy lifestyle. The occasion was presided by Dr. Manjunath B., Scientist (Plant Protection), KVK, Bengaluru Rural District. Dr. Shilpa Yathnatti, Research

Associate, AICRP (Home Science), GVKK, Bengaluru, addressed the importance of food and nutrition, types of malnutrition, role of macro and micronutrients in daily diet, water and fat soluble vitamins, deficiency disorders of vitamins, RDA for vitamins, foods rich in vitamins, macro and micro minerals and their deficiency disorders, RDA for minerals, foods rich in minerals. Also dealt in detail about anaemia covering role of red blood cells, formation of red blood cells, WHO classification of anaemia and methods to prevent anaemia. At the end of the programme quiz related to micronutrients was organized for the women.

Meghana S.V., Scientist (Home Science), KVK, Hadonahalli, Chaitra, Scientist (Agril. Extension), KVK, Hadonahalli, Dr. Sneha, SRF, AICRP (Home Science), GVKK, Bengaluru, Smt. Chandana, Anganawadi Head, Hadonahalli were present in the programme.



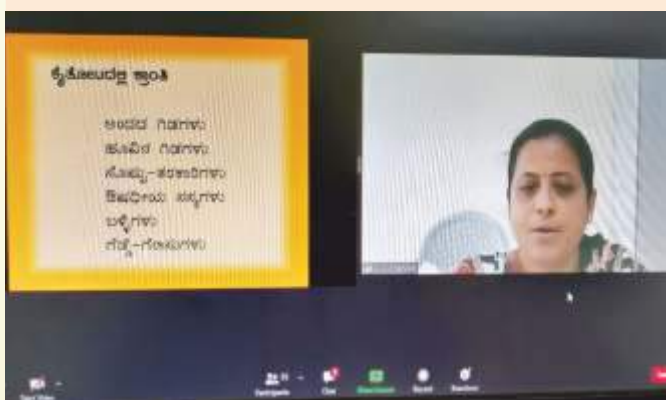
### KVK, Dharwad

On the eve of 75th year of Independence and Poshan Maah 2021 ICAR-KVK, Dharwad organized an online training programme on 08.09.2021 at ICAR-KVK, in collaboration with Department of Food and Nutrition, College of Community Science, Dharwad and Nutritional Society of India, Dharwad Chapter. Dr. Pushpa Bharati, Retd.



Professor, College of Community Science, Dharwad and Convener, Nutritional Society of India, Dharwad Chapter dealt in detail about nutrition of pregnant and lactating women. The nutrients required by the women along with their role in maintenance good health were highlighted. Dr. Sarojani Karakannavar, Professor and Head, Department of Food and Nutrition, College of Community Science, Dharwad explained about the importance of supplementary feeding, preparation of low cost feeds and nutritional disorders in case of infants. The main theme of 2021 Poshan Maah is “Eat Right, Bite by Bite” was highlighted here. The supply of fruits and vegetables grown safely is a present need of the hour and making this happen, the concept of nutri and terrace garden, nutri thali and bio-fortified crops was covered by Dr. Geeta S. Tamgale, Scientist (Home Science), ICAR-KVK, Dharwad. Dr. S. A. Biradar, Senior Scientist and Head, KVK, Dharwad and other staff participated in the programme and exchanged information with the participants. About 100 Anganawadi workers and farm women participated.

theme “FEEDING SMART FROM START”. KVK organized awareness programmes for farmers, farm women and youths on good and smart foods and establishment of nutrition garden for nutritional security. The programmes were conducted in KVK Campus as well as in adopted villages of Singataryanakeri, Beladhadi and Shirol. WhatsApp messages and mobile advisories were also sent during the weeklong celebration. About 127 farmers, farm women and youths participated in the programme.



## KVK, Hasan

ICAR-KVK, Hassan celebrated the National Nutrition week programme in collaboration with the Women and Child Welfare Department, Hassan on 04.09.2021 at KVK, Kandali, Hassan. Mrs. Roopa, Supervisor, Women and Child Welfare Department, Hassan inaugurated the programme and in her inaugural speech she said that, this nutrition programme should not be just a weekly programme, it should be a day-to-day meal programme for all the people in the country then only this celebration will become meaningful. She also gave the statistics on child malnutrition in Hassan district and to eradicate these anganwadi activists should change the people mindset to give nutritious food for the children and pregnant women. Dr. Rajegowda, Senior Scientist and Head, KVK,

## KVK, Gadag

ICAR-KVK, Gadag observed National Nutrition Week during 1-7 September, 2021 to commemorate the importance of nutrition and its role in building healthy society celebrated with the 2021 year's



Hassan chaired the programme and during his presidential remarks he said that, to overcome the malnutrition problem in the country anganwadi activists should involve in creating the awareness among the people about importance of balanced food. Dr. M. Shivashankar, Scientist (Home Science) KVK, Hassan during his introductory remarks, mentioned the statistics that country had 46 per cent of malnutrition which is very high in Bihar and Uttar Pradesh state and Karnataka has 44 per cent of malnutrition among the people so to address this issue, creating awareness among people about the importance of nutrition food is very important and to achieve this objective this national nutrition week is celebrating in every parts of the country from September 1st to September 9th of every year. Dr. Nagaraja, T., Scientist (Plant Protection), KVK, Hassan and Mrs. Nigamma, Supervisor, Women and Child Welfare Department, Hassan and 36 anganwadi women workers of Hassan district participated in the programme and the programme was anchored by Dr. Sanketh, C. V. Scientist (Agricultural Extension), KVK, Hassan.

celebrating is to spread awareness about nutrition and health. In this regard ICAR JSS Krishi Vigyan Kendra, Suttur celebrated National Nutrition Week at Pillahalli, Mysuru taluk on 6 September 2021. The theme for National Nutrition Week 2021 is "Feeding smart right from start". The theme focuses on the main source of nutrition which should be chosen wisely and requires exploring the nutritious food options which are provided by Mother Nature. The Nutrition Week propagates a holistic approach towards a healthier society.



## SEMINARS/WORKSHOP

### KVK, Belagavi-II

KVK organised ex-trainees meet of farmers and farmwomen at the KVK campus on 13 September 2021 to access the usefulness of the trainings among the farmers trained by the KVK on various technologies. Mrs. Sridevi B. Angadi, Senior Scientist and Head inaugurated the programme and suggested farmers to share their feedback on usefulness and adoption of technologies disseminated through KVK trainings. Farmers shared good agricultural practices implemented and their effect on reducing the cost of cultivation and enhancement of farm income through eco-friendly practices. Pre and post evaluation of knowledge and adoption level was conducted through written test.

### KVK, Mysuru

National Nutrition Week is celebrated from 1 to 7 September. It spreads awareness about nutrition, its importance in our lives, and how to curb the problem of malnutrition. The purpose behind



Participating farmers opined that adoption of technologies have created good impact towards sustained farm income. Scientist (Agronomy) welcome the gathering and Scientist (Soil science), Scientist (Horticulture), Scientist (Plant Protection) and Scientist (Animal Science) interacted with the farmers and facilitated in successful completion of the programme.



## KVK, Kalaburagi-I

Hon'ble Union Minister of State for Agriculture & Farmers Welfare Ms. Shobha Karandlaje Madamji inaugurated the workshop on 'youths march towards agriculture' organized at Dr. B.R. Ambedkar Bhavan in Gulbarga University in Kalaburagi by Kalyana Karnataka Human Resource, Agriculture & Cultural Society association with Vikas Academy on 04.09.2021. The minister said 'the welfare programmes initiated by Union government is making efforts to get good price to agriculture produces by providing international market for tur and red banana which got Geographical Information (GI) tag'. Cluster based market will be provided to export agriculture produces under this system, tur and red banana will be exported to the country where there is a demand for such produces. The government will start 10,000 FPOs in the country. Kalyana Karnataka Human resource, Agriculture & Cultural Society President Basavaraj Patil Sedam said

'progress in agriculture can be achieved in Kalyana Karnataka but region lacked due to technical skills. The society has stepped to resolve this problem organizing lectures by the agricultural scientists/experts along with demonstrations. Youths should get technical knowledge of agriculture and take it as a profession. Later minister felicitated to Dr. Raju G. Teggelli, Senior Scientist & Head, KVK, Kalaburagi-I for getting the ICAR National second best KVK award 2020 and also to KVK contact farmer Sri Sharanbasappa Patil from Halsultanpur Kalaburagi district for bagging ICAR Best Innovative Farmer Award-2020.

In this ceremony, Dr. K.N. Kattimani, Vice-Chancellor, University of Agricultural Sciences, Raichur, Dr. V. Venkatasubramanian, Director, ICAR-ATARI, Zone-XI, Bengaluru, Dr. D.M. Chandargi, Director of Extension, UAS, Raichur and Senior Scientist & Head and all the staff of KVK-Kalaburagi-I participated.



## KVK, Mysuru

ICAR JSS Krishi Vigyan Kendra, Suttur, conducted one day "Awareness programme on afforestation and workshop on seed ball preparation" on 3<sup>rd</sup> September 2021 to 35 school children (9<sup>th</sup> std) and 10 teachers of Sri Gurumalleshwara Higher primary school of Hosket village, Nanjangud taluk, Mysuru district.



In this programme Smt. H.V. Divya, Senior Scientist and Head (I/C), ICAR JSS KVK, Suttur, explained about establishing a plant population by seed ball and throwing them in a free and safer space and demonstrated seed ball preparation and explained about use of seed ball. pongamia, tamarind, clustered apple, soap nut, jamun, neem, simarouba, rain tree and some available forest tree seeds etc., can be used for mud ball preparation. Since seed ball is having a basic nutrients, by using the basic nutrients, plant establishment and germination percentage will improve. Sri. Mallikarjun, Headmaster, Sri. Gurumalleshwara Higher Primary School, in his presidential remarks motivated the school children to involve in environment friendly activities and each student should prepare and throw seed ball in free space in and around the river side and should grow plants on their bunds. Sri. Manjunath, Teacher, invited the guests Sri. Mallaradya, Horticulture teacher gave vote of thanks and School children did prayer and mastered the ceremony.



## KVK, Ramanagara

ICAR-KVK, Ramanagara in collaboration with ICAR-NIANP, Adugodu, Bengaluru had organized seminar on “Balanced Feed, Nutrition and Maintenance in Livestock rearing” for the benefit of Dairy, Sheep and Goat rearing farmers. The programme was inaugurated by Dr.

Raghavendra Bhatta, Director, NIANP, Adugodu, Bengaluru and in his inaugural address, he emphasized the importance of Scientific approaches on total mixed ration, balanced nutrition, urea enrichment, dry fodder to green fodder ratio and importance of mineral mixture for cattle, based on its body weight and milk yield per day. He also urged the importance of resting period before every lactation to get sustained increase in milk yield.

Dr. Savita S. Manganavar, Senior Scientist and Head, KVK, Ramanagara in her presidential remarks briefed about the importance of record maintenance in livestock rearing to keep a proper track on expenditure and income. She also highlighted that dairy farming could be profitable as additional income generating subsidiary activity to agriculture provided; it is maintained by family members only. During technical sessions, Dr. Shivakumar Gowda, Principal Scientist, NIANP, Adugodu briefed about various feed formulations and explained the use of dairy feed chart.

Dr. Krishnappa, Scientist NIANP explained about infertility management in cattle and importance of timely vaccination in all types of livestock animals. Dr. Giridhar, Principal Scientist briefed about use of Azolla, Silage preparation and use of ready feeds in dairy animals. Dr. Anand highlighted researchable issues in livestock and briefed about milk replacer for kids of sheep and goat during early 6 months of age. Dr. Dinesha M.S, Scientist (Agronomy) explained about improved cultivation practices of Napier, Guinea grass, Rhodes and emphasized the use of leguminous fodder crops such as Sesbania, Subabul, Hedge Lucerne, Lucerne, Stylo etc. Dr.Laxmikanth, Senior Veterinary Officer, Magadi briefed about the diseases of livestock and its management, importance of vaccination. He also highlighted on

Central Government program on “Brucellosis Vaccination” for 4 to 8 months female Bovine calves under campaigns being carried out during first fortnight of September 2021. After the scientific sessions, various queries from the farmers were addressed by the experts of NIANP, Veterinary department and KVK. More than 70 farmers registered for this program and were benefitted.



## BAMBOO CULTIVATION

EGO is like a bamboo, Bigger the bamboo, hollower it is, First year it sleeps, the second year it creeps, the third year it leaps



### KVK, Gadag



To sensitize the farmers on importance of Bamboo Farming and its growing industry users, ICAR-KVK, Gadag organized a seminar on 31 August, 2021. Shri Nagendra Sagar, Director, Bamboo Shoots and Woods India Private Limited, Sagar participated as a Resource Person. He said that, there are very good opportunities for Bamboo Farming especially in the Kappatagudda Hill Terrain of Mundaragi and Shirahatti blocks. Growing demand for Bamboo in industrial sector is a boon for farmers, he said. The poor man's timber can be grown in any type of soil and farmers can earn Rs.3-4 lakhs per year per acre after 5 year of planting. He also spoke on Bamboo

Mission, an initiative of Government of India for Bamboo promotion. He answered all the queries raised by the farmers on type of Bamboo species, irrigation requirement, economics of cultivation, procurement, marketing and value addition. A total of 45 farmers participated in the seminar.



### KVK, Vijayapura-I



Bamboo Workshop entitled “Challenges and opportunities of Bamboo cultivation in Vijayapur district” is an event organized by Krishi Vigyan Kendra Vijayapur in collaboration with Department of social forestry and extension education unit, Vijayapur during August, 2021 with an objective to spread the traditional use and application of bamboo of a particular place or region of the district and at the same time bringing all the scientific, technical and traditional knowledge available around the district. Workshop was inaugurated by Zilla Panchyat Chief Executive Officer Shri Govindreddy, IAS. In his inaugural address, he focused on challenges and opportunity of Bamboo cultivation by the farming community of Vijayapur district. He worried about decreasing trends of forest area in the district and suggested implementation of more programmes on plantation of bamboo on the bund of field of every farmer and wasteland. So lot of emphasis has to given



for nursery and seedling plantation of bamboo in the Vijayapur district through department of forestry and farming community.

Joint Director of Agriculture Dr. Rajashekar William in his remarks, said that due to uncertain rainfall and frequent drought in the district farming community is not happy even though we have 10.5 lakh hectares cultivable area. So every farmer has to adopt Bamboo as Agro forestry component in their farming system. Smt. Sarina Shikkalagar District Forest Officer, explained in detail about different programmes on bamboo available for the farming community and also addressed on Bamboo, its wide distribution throughout the world. Dr. S.B. Kalaghatagi as chief guest addressed about, Current demand of bamboo for more housing, alternative fiber and biofuels can be met with the expansion of bamboo plantations specific to regional production and export opportunities. A Session on bamboo production technology and marketing opportunities arranged for farmers with the expert scientists. Dr. S.B. Devaranavadagi, Dr. S.I. Hanumashetti and successful bamboo farmer Shri Pradhip Chavahan. Special guest Dr. Chandrashekar Biradar, International Environment Scientist, Egypt addressed the gathering. Sustainably managed bamboo plantations can stimulate social and economic development, and serve important ecological and biological functions to improve Planet Earth. The relevance of this workshop meeting would allow to visualize how bamboo has the capacity to be a global too for a better future. Workshop programme was organized with the leadership of Dr. R.B. Belli, Associate

Director of Extension, Dr. Shubha S, Senior Scientist & Head KVK, Vijayapur, Shri B.C. Kolhar, Senior Technical Officer and scientists of KVK, Vijayapur. There are 350 farmers from different villages of Vijayapur district participated in the workshop and get benefitted.



## DIAGNOSTIC FIELD VISIT

### KVK, Bagalkote

Visit to progressive farmer field of Shri. Mahagunda Kamatar on 02.09.2021 from Kotekal village who is doing farming in the hilly and rocky soil. KVK Bagalkote team visited his field where red rice local variety, vegetables and fruit like mango, guava and custard apple is being grown.



## KVK, Ballari

Srinivasa Poojari, an engineering graduate and an dairy entrepreneur from Sanganakallu village in Ballari taluk visited KVK and requested Senior Scientist (Animal Science) and Head, KVK, Ballari, Dr. Ramesh, B.K. to make a visit to his dairy unit as he was facing problem of poor milk production from his elite 25 cross bred cows and calf mortality. A team of scientists from KVK visited his dairy farm on 01.09.2021. Other dairymen in the neighborhood also joined at his farm for discussion. After a thorough inspection, it was found that the nutrition management was inadequate and the farms were facing fodder scarcity. He was suggested to go for 'balanced feed formulation' taking into consideration the locally available feed ingredients. Scientific calf rearing practices were suggested which included deworming schedule and adequate nutritional management. Dr. Ravi, S., Soil Scientist advised proper fertilizer application to get potential yield in fodder crops like CoFS-31 and Super Napier grown on fields of these dairy units. An interaction was held with eight dairy farmers and their other problems of poor fat and SNF in milk was addressed by sharing scientific know-how on dairy animal management.



## SUCCESS STORIES

Experience of a successful farmer

### KVK, Kollam

#### A Successful Agri entrepreneur-His special forethought reaps success

##### Background

Mr. Shanu M, 32 years, from Karingannur in Kollam district, Kerala is a young fire and safety officer who gave up his white color job in Culcutta due to dissatisfaction in job and returned to his village. He looked for some job in Kollam but went vane as he did not like the bossing in private sector or hierarchy. So he wanted to be his own boss and did not have the mind set to work under anybody. More over native greenery of his village always called him back as his parents have an agriculture back ground and they own 0.2 ha and 2 ha of leased land. He realized that in agriculture both mind and body equally get satisfaction. According to him agriculture is a business with low investment and endless scope. He started banana and vegetable cultivation in commercial scale in 2 ha of leased land. Though he got a bumper yield, the huge quantity of organic waste such as banana pseudo stem became a problem. Then he started vermicomposting. He approached Krishi Vigyan Kendra for the commercial production of vermicompost. Then he undergone 4 vocational trainings viz., organic input production, terrace farming, wick irrigation, farm machinery operation and vermin compost production. After the successful completion of the training he started organic input production commercially as he thought that there is a possibility of making money from booming organic farming.

## Interventions

### Process: A series of vocational training and technical support

He was undergone vocational training on organic input production and marketing (15 days) in the Kendra under the project 'Establishment of organic input production and marketing outlet funded by DoA, GoK during May 2015. He was exposed to the production and marketing of different organic inputs like coir pith and vermicomposts, growth stimulants, biofertilizers, bio pesticides, readymade vermin/ compost units and wick irrigation. Then 5 day training on terrace farming which includes the establishment of scientific terrace gardens with vegetables, tubers, azolla, vermicompost units and poultry. He was also under gone ASCI training on Vermicompost producer. When he approached the authorities to get license for marketing his produce and faced some difficulty. These complexities sparked an idea to him that 'without license how I can market my produce?'. Hence after trained from KVK, he started a new enterprise with two other persons a doctor (Dr Alwin Raj) and an IT professional (Subin C Sudhakar) and now harvesting success through which he is popularizing a package for terrace farming aspirants that includes pots with wick irrigation with different crops including vegetables, tubers, ginger, curry leaf (may change according to customer's interest), drip or wick irrigation system, floor carpets, sprayer, manure kits and yellow sticky traps etc, he is marketing quality seedlings, organic inputs as quality potting mixture, organic inputs along with service. He is also keen in monitoring of the garden set by him and offering the maintenance of garden after one season at a cheaper rate ie., customer support on call.

He formed a club 'organic farmers club-earth' He is promoting the organic farming (by trying to inculcate safe crop production practices in his village). Now he is planning to take license for marketing bio inputs like composts, organic growth stimulants, enriched manures

### Technology

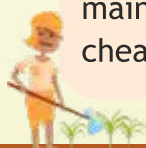
The technology support is from KVK Kollam-safe production of vegetables, tubers and fruits in households. Scientific production techniques of enriched organic manures, vermi and coir pith compost, organic growth stimulants, on farm and commercial production of azolla, AMF, bioagents and botanicals, scientific terrace farming, wick irrigation.

### Impact

- Has set up 208 terrace vegetable garden all over Kerala
- Formed a group entitled organic farmers club which has a face book account with more than 4000 followers (link:[www.facebook.com/OrgaAyur](http://www.facebook.com/OrgaAyur))
- Floated a company ORGAAYUR PRIVATE LTD along with a doctor and an IT engineer which promotes organic farming and value addition. It provides services, guidance and materials for safe food production
- He is also maintaining a whatsapp group with his clients which includes 99 persons
- Sharing good agriculture practices through youtube, face book and instagram([www.instagram.com/p/ByUpMZAGcO](http://www.instagram.com/p/ByUpMZAGcO))

**Economic gains:** Earning Rs 35000 to Rs 40000 per month

**Employment Generation:** Providing employment to 16 persons comprising of 6 office staff, 1 driver and 10 labourers





## KVK, Palakkad

### Smart delivery of Bio-fertilizer as bio capsule in Pepper: An Innovative approach

Mannarkkad is a major pepper growing hub of Palakkad District. Farmers usually practice chemical fertilizers for their crops. However, continuous use of chemical fertilization can reduce the microbial population in soil which in turn affects soil fertility. Bio capsule, a bio-fertilizer, an ecologically safe technology developed by Indian Institute of Spices research was demonstrated by Krishi Vigyan Kendra Palakkad at the field of Sri. George Manual a pepper farmer of Karimba Panchayath. Capacity development programme was also given to 26 farmers from the pepper farmers cluster. Bio capsules are an easy and reliable technology of storing and delivering PGPR bio-agents in hard gelatin capsule termed as bio capsule. It is a preparation of viable microbial agents in a capsule form. 20 capsules can be used as against 20 kg of talc formulation and hence has the advantage of reducing the bulk quantity in application as well as avoiding adding the filler material talc to soil unnecessarily. It enhances nutrient mobilization and use efficiency, growth and yield and provides protection against diseases at a negligible cost. It also helps to reduce the manpower requirement due to longevity of product, and does not require any refrigerated condition for storage, hence save energy.



## KVK, Pathanamthitta

### Promoting Exotic Fruit Cultivation as A Remunerative Crop in Pathanamthitta District

Promotion of exotic fruits and conservation of indigenous cultivars of fruits in Pathanamthitta district have been a project implemented by KVK in collaboration with the District Panchayath. Absence of nursery to cater the demand of farmers for quality planting materials of the potential exotic fruits like rambutan, pulasan and mangosteen has been the major bottle neck in its large-scale cultivation. Hence KVK established progeny orchard exclusively for commercial fruits in 5acre area at KVK farm. On an average KVK produces 1000 no. of quality planting materials of exotic fruits every year. 5.5 tons of rambutan fruits worth Rs. 6.5 lakhs have been harvested at KVK farm this year.



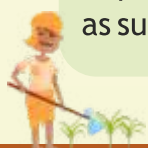
**KVK, Raichur****Fruit-fly traps: an eco-friendly management tool in Cucurbits - A success story**

A farmer named Mr. Bhagawan Nekkanti from Sri Ram Nagar camp of Raichur district cultivated Ridge gourd in an area of 1 acre in a Pandal system with a plant spacing of 2.0 m. x 2.0 m. He used insecticides for managing sucking pests at the early stage of the crop. However, in later stage, the infestation of fruit fly (*Bactrocera cucurbitae*) was severe in Ridge gourd. He did nothing but applied only insecticides to manage pests specially to manage fruit fly due to lack of knowledge. At that period, ICAR-Krishi Vigyan Kendra, Raichur Scientists during a field visit to his farm observed the malformed fruits due to severe incidence of fruit fly in his crop and discussed the pest incidence with the farmer. Further, the farmer was suggested to install fruit fly traps (25-30 traps per ha prior to flower initiation) for its management, the use of the trap was also method demonstrated and the KVK also provided some sample traps to him. Along with the traps, the farmer was advised to adopt eco-friendly management practices such as good agricultural practices, deep summer ploughing to expose pupae of the fruit fly, crop rotation with non-cucurbits, use of neem oil as ovicidal spray, collecting the damaged fruits and destroying it to practice clean cultivation.

Since then, the farmer has been adopting almost all the eco-friendly management practices which were recommended by the Scientists of ICAR-KVK Raichur. Ridge gourd crop is now at fruiting stage and he is getting good yields and he is planning to install bee boxes further to improve the quantity and quality of his yield as suggested by the Scientists.

**KVK, Sirsi****A Farmer Participatory Approach to Manage RPW in Arecanut**

Uttara Kannada region with two agro-climatic zones namely, coastal plain and Malenadu with an annual average rainfall of 2700 mm is situated at an elevation of 1860 feet above MSL is considered as Gateway of Western Ghats. Arecanut, coconut, black pepper, banana, cardamom and vanilla are widely cultivated in this region. With farmers participation, entomologist of KVK-Uttara Kannada, Sirsi demonstrated the sustained release of RPW pheromone technology jointly developed by ICAR - National Bureau of Agricultural Insect Resources (NBAIR), ICAR - Central Plantation Crops Research Institute (CPCRI) and Jawaharlal Nehru Centre for Advanced Scientific Research, Bengaluru. It is a cutting edge technology involving controlled release of red palm weevil aggregation pheromone developed jointly by was used in the farmers garden @ rate of 1 trap per ha on 21.04.2020. As the damaged palms in farmers' garden accounted for seven % of total palms, it was decided to go in mass trapping of the weevils with aggregation pheromone to trap both male and females so as to bring down the population. It was a pandemic situation addressed collectively by KVK- Uttara Kannada, Sirsi and ICAR- NBAIR. The implementation of the technology was



coordinated by KVK, Sirsi under ATARI, Bengaluru. The farmers' participation was ensured in servicing the traps and he devised the bucket trap based on the guidelines provided by ICAR-NBAIR. The weevils that were trapped was collected by farmer on daily basis. A total of 177 weevils were trapped from five traps placed in his garden. The trap was periodically serviced. Due to continuous trapping, the farmer reported that there was no new incidence palm damage by weevils in his arecanut garden during May 2020. He was convinced with application of controlled release of RPW aggregation pheromone. The lure was 50 % cheaper than the commercial lure loaded in polymer membrane or polypropylene tubes lure and was effective in the field for trapping the red palm weevil adults for over six months compared three months in lures made of polymer membrane or polypropylene tube. As the red palm weevil has been reported to infest arecanut in North Eastern region, potential of the technology could be replicated in other regions too.



**KVK, Trivandrum**

## Farm Purpose Solar Dryer - The Mitraniketan Model

Drying is the oldest preservation technique of agricultural products and sun drying is still widely used for preservation of agricultural products in the tropics and

subtropics. Drying of agricultural products is an energy-demanding process. High costs, scarcity and environmental threat in fossil fuels, attract the use of solar energy as an alternate source, especially in developing countries. Increasing environmental concerns led to the use of clean and green energy resources in the field of drying agricultural products. Mitraniketan, over months of practical studies, has developed a direct solar dryer integrated with a thermal energy storage system. Comparative study was done in garcinia, cassava and banana, to study parameters like colour change, texture, smell and drying efficiency. Readings were taken in two hourly duration regarding temperature and relative humidity. The data in the following table shows the average of nine such values recorded during the process. The analysis was taken up by Dr. Devika. I., Subject Matter Specialist (Home Science) under the guidance of Dr. Reghu Rama Das, Joint Director and Dr. Binu John Sam, Senior Scientist and Head, Mitraniketan KVK (ICAR), Thiruvananthapuram.

### Comparison on average temperature and total hours needed for uniform dehydration in the three types of drying methodology under study

Different type of drying	Maximum temperature	Minimum temperature	Average temperature	Total hours for dehydration
Open sun drying		29 °C	34.7 °C	14 hours
Mitraniket an solar dryer	59 °C	40 °C	52.2 °C	10 hours
Electric tray dryer	60 °C	60 °C	60.0 °C	6 hours

Comparison between the three drying methodology on different parameters, showed that Mitraniketan solar dryer generated higher temperature, lower relative humidity, lower product moisture content, reduced spoilage and saved time

during the drying process than open sun drying. It helps to decrease the drying cost of the agricultural product compared to electric dryer and it is useful for farmers during light rainy seasons also. Equivalent time duration for dehydration also depended on the moisture content of the product and relative humidity. The colour, texture and appearance of the end product also gave higher visual score in Mitraniketan model solar drying than open sun drying. The average cost of Mitraniketan model sun dryer is around Rs. 23,000 and upwards, depending on the overall dimensions of the dryer. The multi-locational and multi-product trials conducted have shown that the innovation is a definite boon to small scale farmers, cultivating garcinia, cassava and banana among many other farm dried products, so that their produce does not go waste during periods of glut. Farmers also have freedom, within the scientific framework, to customize the dimensions of the dryer to suit their product's spatial and temporal needs.



## KVK, Vijayapura - I

### Dairy farming : A Source of livelihood for young farmer

In today's society where parents want their children to become engineers and doctors, here is a parent who wants his children to do agriculture. Though both of his sons have completed their diplomas, the

parent wants his children to look after their ancestral property. Manju Pujari from Muttagi village, B.Bagewadi taluk, Vijayapur district was just 19 years old when he entered into agriculture. Children of this age are still dependent on their parents for everything and are busy with their mobiles. But Manju is a dedicated agripreneur who is always engrossed in the field work. He has 6 acres of land where in he is maintaining dairy, poultry, goatery, fodder, coconut, drumstick, guava, maize, & cowpea . In the year 2017, he started dairy with two animals. He attended training on dairy conducted by KVK, Vijayapur for technical knowledge. Later two of his family members who are also of the similar age attended 21 days vocational training programme on dairy entrepreneur conducted by KVK, Vijayapur. He also took technical inputs under front line demonstrations on poultry, fodder and technical guidance for goat rearing and started these units. Under dairy unit, he has local and HF breeds. They are 22 in number and give a yield of 100 liters per day which he is supplying to dairy @ 25 rupees per liter. He is earning a net profit of 50,000 rupees per month. The cowdung and urine are used for the field as manure. He has one male cattle which he is using for insemination purpose @ 500 rupees at one time which is earning him good income. Added to this, he is earning an amount of Rs. 60,000 per year from sale of fodder eye buds of COFS-29. Under goatery component he has 18 goats and 10 kids. He is earning Rs.85000/- per year from this component. From poultry, he is earning Rs.4000 per month wherein he is selling birds as well as eggs. An income of Rs.6000 per month is earned from sale of coconut. Whatever income is being earned is reinvested for the development activities of his farm. He has spent 8-9 lakhs from the year 2017 for establishment of different units and at



present reaping the profits. He has earned a net profit of 3 lakhs during 2020-21. His passion for agriculture has made him a role model for the younger generation.

Contact No. : 8459207158



## DIPLOMA IN AGRICULTURE EXTENSION SERVICE FOR INPUT DEALERS (DAESI) PROGRAMME

### KVK, Belagavi-1

ICAR-BIRDS Krishi Vigyan Kendra, Tukkanatti, Belagavi-1 in association with Govt. of India, MANAGE, Hyderabad, University of Agriculture Sciences, Dharwad SAMETI (North), Dept. of Agriculture & ATMA Belagavi, has organised DAESI Certificate awarding ceremony of 3 Batch (2019-20) on 14.09.2021. Program was presided over by Shri. R.M. Patil, Chairman, ICAR-BIRDS KVK, Belagavi-1 and guest of honour was Shri. Iranna Kadadi, Hon'ble Member of Parliament (Rajya Sabha), Chief guest Dr. M. Gopal, Professor and State Nodal Officer (DAESI & SAMETI), UAS-Dharwad. Special invitee of the programme Shri. Shivangouda Patil, Joint Director of Agriculture, Belagavi and Shri. H.D. Kolekar, Deputy Director of Agriculture and Project Director of ATMA, Belagavi are the dignitaries of the programme. Programme went very well with agenda consisting ICAR song followed by welcome speech by Shri. D.C. Chougala, Senior Scientist & Head, KVK, Tukkanatti.

Dr. M. Gopal, Professor and State Nodal Officer (DAESI) made a detail note on DAESI course and explained responsibilities of the certificate awardees. DAESI participants shared their opinion and experience about course journey. Chief guest of the programme expressed their views and Guest of honour Shri. Iranna Kadadi, Hon'ble MP, wished all the certificate awardees, and suggested them to always be in touch with scientist of KVK and work for the farmers in order to double their income. Certificate distribution and DAESI oath taking ceremony was also arranged. Shri. Parashuram M. Patil, Scientist (Horticulture) anchored this event and Shri. Adarsh H.S. Scientist (Fisheries) expressed the vote of thanks. Totally 143 participants attended and made this program successful.



### KVK, Bengaluru Rural

The inauguration of 5 Batch Diploma in Agricultural Extension Services for Input Dealers and inauguration of newly built conference hall at first floor of KVK' was held on 02.09.2021 at ICAR Krishi Vigyan Kendra, Hadonahalli, Bengaluru Rural District. Dr. A.P. Mallikarjuna Gowda, Senior Scientist and Head, KVK, Bengaluru Rural District preamble the programme and introduced the students. He highlighted the mandates of DAESI programme and role of Input dealers in Agriculture as a para Agriculture Extension workers. He mentioned the



importance of diploma for input dealers to maintain integrity in their business services. The programme was inaugurated by Dr. S. Rajendra Prasad, Vice- Chancellor, UAS, Bengaluru by pouring water to the plant along with other dignitaries. In his inaugural address, he explained the growth of agriculture from post Independence to till time. He highlighted the role of extension services of input dealers for the farming community to double the farmers' income. Dr. N. Devakumar, Director of Extension, UAS, Bangalore has participated as chief guest and briefed the students about importance of contact classes and urged to provide technical information to the farmers in a benefitting manner not only in a business point of view but in service motto. Dr. Pennobali Swamy, State nodal officer, Mr. Obaleshappa, Facilitator, DAESI programme and staff of Krishi Vigyan Kendra, Bengaluru Rural District and 40 DAESI students participated in the programme and visited the KVK demonstration plots.



## KVK, Idukki

Two batches of Diploma in Agriculture Extension Service for Input Dealers (DAESI), MANAGE was conducted at ICAR, KVK, Idukki. The course was conducted in association with ATMA, Idukki and SAMETI, Trivandrum for two batches viz., Nedumkandam and Kattapana. Each

batch was comprised of 40 students. The course included 80 theory classes and 8 field visits for two batches. The sessions were designed in such a way in order to make them a well-equipped para extension professional. The field visits helped them to identify nutrient deficiencies, pest and disease symptoms at field conditions. The 11 month course concluded with the theory examination and practical.

Theory examination was conducted for two batches from 01.09.21 to 03.09.21 at ICAR, Krishi Vigyan Kendra (BSS), Idukki. The examination was conducted by the representative from MANAGE, Hyderabad, Dr. Manisha Ohlam. Verification of original certificates, license along with original applications were done on 01.09.2021 by Dr. Manisha Ohlam, MANAGE, Hyderabad, Ms. Saija Jose, Deputy Project Director, ATMA and Ms. Manju Jincy Varghese, SMS (Soil Science), ICAR, Krishi Vigyan Kendra (BSS), Idukki. The theory examination was conducted on 02/09/21 for Kattapana Batch and 03/09/21 for Nedumkandam Batch respectively. The Viva was conducted in the presence of experts from Department of Agriculture, Kerala Ms. Betsy Mariam John, Agriculture Officer Senapathy and Ms. Beena, Agriculture Officer, Vattavada and other KVK officials.



## VISIT OF DIRECTOR, ATARI TO KVKs

### KVK, Kalaburagi-I

Dr. V. Venkatasubramanian Director, ICAR-ATARI, Zone XI, Bengaluru visited ICAR-KVK, Kalaburagi-I wherein different activities and demo units like agri museum, soil and water testing lab, terrace garden, azolla, hydroponics, dairy, compost, organic fertilizer, vermi compost, bee keeping, watershed model, rain water harvesting technology, farm pond were briefed to the Director by Senior Scientist & Head. Director ATARI interacted with the staff and suggested that conduct special programme on tur dal, red banana, millet seed hub, fodder & feed security to livestock, organize fodder workshop, activities for waste land management, seed production & processing activities in disease resistant pulse crops etc. He later inaugurated '75th Azadi Ka Amrit Mahotsava Garden' and swing garden, planted Coconut plant on the eve of "World Coconut Day" on 02.09.2021 at the KVK premises in the presence of Dr. Suresh S. Patil, Dean, College of Agriculture, Kalaburagi and Dr. M.M. Dhanoji, Associate Director of Research, Zonal Agricultural Research Station, Kalaburagi and KVK staff.



### KVK, Kalaburagi-II

Dr. V. Venkatasubramanian, Director, ICAR-ATARI, Zone-XI, Bengaluru visited ICAR-KVK, Kalaburagi-II (Raddewadgi). Dr. Sanjeevkumar Bellad, Senior Scientist & Head, ICAR-KVK, welcomed the Director and explained various KVK and seed production activities. The Director visited Millet demonstration block, Pigeonpea demonstration block, dibbled Pigeonpea long duration variety BSMR-736 intercropping with sunflower, Seed Unit ICAR (Seed hub project) and Soil and water conservation demo. Dr. Vikram Simha H.V., Scientist (Processing and Food Engineering) explained the importance of soil and water conservation with the innovative implement (Bund former) which results in conservation of moisture and also soil, helpful for crop production under rainfed condition and the implement saves labour, time and drudgery to the farming community. The Director also visited Sheep and Goat rearing unit, Green manuring crops and IFS block, Soil and Water Testing Laboratory (SWTL), Digital display of technologies. Sri. Sanjeevkumar Patil, Computer programmer explained about the digital display of technologies of the KVK to the farming community through large format display (LFD monitor). Finally, the Director encouraged the work by giving valuable suggestions to improve the activities of KVK to farming community by capacity development programme in different disciplines.



"Farming is a profession of hope"-Brian Brett, Canadian poet





## SEED PRODUCTION ACTIVITIES

### KVK, Belagavi-II

Seed is a basic input in agriculture. Seed is an embryo, a living organism embedded in supporting or the food storage, tissue. In seed, the importance is given to the biological existence. Hence, the quality seed should have high genetic purity, high germination percentage, high vigour, higher field establishment free from pest and diseases, good shape, size, colour according to the specification of the variety released by a breeder. In this context, seed production programme was started by KVK to make timely availability of good seed at reasonable price to ensure good yield and profit per unit area to the farmers of the region. The seed production programme of soybean, bengal gram, green gram, *rabi* jowar, wheat and onion was taken at KVK instructional farm as well as on farmers participatory mode. The details of the seed production taken by KVK from the inception is given below.

Sl. No.	Crops	Varieties	Quantity Produced (q)	No. of farmers benefitted
1	Soybean	JS-335, JS-9305, Dsb-21, Dsb-23, KDS-726, KDS-753, NRC-130, NRC-128, NRC-136, NRC-147, NRC SL-1, NRC-132	668.35	2501
2	Green gram	DGGV-2	237.50	4743
3	Groundnut	GPBD-4, GPBD-5, TAG-24, Dh-256, K-1812	86.40	86
4	Bengal gram	JG-11, Jaki-9218, BGD-111-1	1530.00	7648
5	<i>Rabi</i> Jowar	M-35-1, SPV-2217	75.00	3500
6	Wheat	DWR-162, UAS-304, UAS-375, MACS-6478, DBW-168, DBW-93	40.60	136
7	Onion	Bhima Super and Pune Fursangi	6.95	232
		<b>Total</b>	<b>2644.80</b>	<b>18,846</b>



## VIP / DIGNITARIES VISIT TO KVK



## OUR PARTNERS



**Smt. Iravva Shivanand Mathpati,**  
At Post: Mudkavi, Ramdurg Taluk,  
Belagavi District  
**Contribution made:**  
Entrepreneurship in pickle making



**Smt. Kavita Katkar,**  
Ranakunde, Belagavi taluk  
**Contribution made:**  
Integrated Farming System (IFS)



**Shri. Shankar Langte,**  
At Post: Gundyenatti,  
Khanapur Taluk, Belagavi District  
**Contribution made:**  
Conservation of paddy land races



**Shri. Kallapa Neginhal,**  
At Post: Chikkabagewadi,  
Bailhongal Taluk, Belagavi District  
Contribution made:  
**Conservation of**  
local *Rabi* Jowar land races



**Shri Mahantayya Pujari**  
Honnihal, Belagavi taluk & District  
**Contribution made:**  
Integrated Farming System



**Shri. Dayanand Jagadish Appayannavarmath**  
At Post: Kurgund, Bailhongal Taluk,  
Belagavi District  
**Contribution made:**  
IFS component and Village sanitation



**Shri. Abhay Tukaram Mutalik Desai**  
H.No 203A, Shukrawar Peth,  
Tilakwadi, Belagavi  
**Contribution made:**  
Organic farming



**Shri. Ravindra Sidnal**  
Sampagoan, Bailhongal Taluk  
Belagavi District  
**Contribution made:**  
ATMA Shreshtha Krishika



# KVK TIMES

A Window to KVKs of ICAR-ATARI, Zone-XI

Vol 01 Issue 05, 1-15 September 2021

## Patron

**Dr. V. Venkatasubramanian**

Director, ICAR-ATARI, Zone-XI, Bengaluru

## Compilation and Editing

**Mrs. Sridevi B. Angadi**

Senior Scientist and Head  
ICAR-KLE Krishi Vigyan Kendra, Mattikopp, Belagavi

**Shri. S. M. Warad**

Scientist (Soil Science)  
ICAR-KLE Krishi Vigyan Kendra, Mattikopp, Belagavi

**Shri. Praveen Yadahalli**

Scientist (Horticulture)  
ICAR-KLE Krishi Vigyan Kendra, Mattikopp, Belagavi

**Shri. Manjunath P. I.**

Technical Officer (Computer)  
ICAR-KLE Krishi Vigyan Kendra, Mattikopp, Belagavi

**Smt. Veena Bannur**

Stenographer  
ICAR-KLE Krishi Vigyan Kendra, Mattikopp, Belagavi

## Published by

**ICAR-KLE Krishi Vigyan Kendra, Mattikopp,  
Belagavi**

## Under the guidance of

**ICAR-ATARI, Zone-XI, Bengaluru**

  
**Azadi Ka  
Amrit Mahotsav**



हर कदम, हर डगर  
किसानों का हमसफर  
भारतीय कृषि अनुसंधान परिषद

*Agrisearch with a human touch*