

KVK TIMES

A Window to KVKs of ICAR-ATARI, Zone-XI
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ICAR-Krishi Vigyan Kendra Palakkad
Mele Pattambi, Palakkad, Kerala - 679306



Kerala Agricultural University
Vellanikkara, Thrissur, Kerala - 680656



ICAR - Agricultural Technology
Application Research Institute

Zone-XI Bangalore, Karnataka - 560024
atari.bengaluru@icar.gov.in



KVK TIMES

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

Published by

Dr. V. Venkatasubramanian

Director

ICAR-ATARI Zone-XI, Bengaluru

Technical Guidance

Dr. Jacob John

Director of Extension, KAU

Special Thanks

Dr. Thimmappa K.

Principal Scientist & Nodal Officer

ICAR-ATARI Zone-XI, Bengaluru

Compilation and Editing

Dr. Sumiya K. V.

Programme Coordinator, ICAR-KVK, Palakkad

Sri. Arun Kumar K. V.

Assistant Professor (Agricultural Extension)

Dr. Smijisha A. S.

Assistant Professor (Animal Husbandry)

Dr. Reshmi J.

Assistant Professor (Horticulture)

Dr. Gilsha Bai E. B.

Assistant Professor (Agricultural Engineering)

Dr. Sreelakshmi K.

Assistant Professor (Agronomy)

Ms. Haritha A. C.

Programme Assistant (Computer)

Sri. Raveen T.

Agromet observer

Production and Coordination

ICAR-Krishi Vigyan Kendra, Palakkad

Design & Layout

Sri. Anish P.R.





Smt. Ishitha Roy IAS
Principal Secretary & APC
Vice Chancellor
Kerala Agricultural University

MESSAGE

The Krishi Vigyan Kendra (KVK), also known as Farm Science Center is a grass root level plan scheme designed and nurtured by the Indian Council of Agricultural Research (ICAR) for technology refinement and dissemination. Krishi Vigyan Kendras play a crucial role in bridging the gap in the transfer of technology from the research system to farmers. KVKs contribute significantly to disseminating the technologies developed at research institutions to the farmer's field through its diversified activities, thereby increasing production, productivity and income from agriculture and allied sectors on a sustained basis. It acts to cater to the needs of location specific problems in different regions/districts of the state. The KVK system gives emphasis on addressing these cross-cutting issues through a comprehensive multi-disciplinary approach and ultimately aims for food security, farm profitability, sustainability of production systems, poverty alleviation and livelihood improvement. KVKs function as a Knowledge and Resource Centre for agricultural technology for improving the agricultural economy of the district and takes a lead role in linking the National Agricultural Research System (NARS) with the extension system and farmers in its jurisdiction.

I am happy to note that ATARI Bengaluru is publishing KVK-TIMES, a fortnightly e-magazine, highlighting the diverse activities carried out by various KVKs of Karnataka, Kerala and Lakshadweep. It is a unique approach to the transfer of technology that converges the success stories of 48 KVKs into a single platform that will help extension officials and farmers in this region. I am pleased that KVK Palakkad has been given the responsibility of publishing this 34th issue during the second fortnight of November 2022.

I take this opportunity to appreciate the combined efforts put forth by ATARI Bengaluru, Directorate of Extension Education, Kerala Agricultural University and KVK Palakkad in meticulously bringing out this issue of 'KVK-TIMES'. I am sure these KVK Times will bring greater visibility to technologies developed by State Agricultural Universities and ICAR and will go a long way toward serving the farming community at the national level.

Ishitha Roy IAS
Principal Secretary & APC
Vice Chancellor
Kerala Agricultural University





Dr. V. Venkatasubramanian
Director
ICAR-ATARI, Bengaluru

FOREWORD

Krishi Vigyan Kendras structured by ICAR for disseminating the latest technologies in agriculture and allied sectors, are evolving as promising farmer-friendly extension institutes for empowering the farming community. The technologies developed by various central and state organizations are being effectively disseminated to the farming community through the frontline extension systems of KVK. KVKs enable technology dissemination through a multitude of activities, including trials, demonstrations, capacity-building programmes, awareness campaigns etc. Each KVK is distinct in its innovative approaches it has taken to disseminate technology, the farming system models it has developed, and the impact it has had in its district.

Innovative programs and activities of different KVKs are worth sharing with other stakeholders. 'KVK TIMES' is a fortnightly publication by ATARI Bengaluru showcasing the multifaceted activities and achievements of KVKs in Kerala, Karnataka, and Lakshadweep, which essentially aids cross-learning. The success stories documented in KVK times can be replicated in other areas with similar agro ecological situations. I thank all the KVK fraternity of Zone XI for successful documentation and continued efforts in bringing out KVK Times publication on time.

I acknowledge the support extended by Ms. Ishita Roy, IAS, Hon'ble Vice Chancellor and Dr. Jacob John, Director of Extension, Kerala Agricultural University to the KVKs in the State.

I congratulate Smt. Sumiya K.V, Sr.Scientist & Head, KVK, Palakkad and her team for the meticulous effort put into compiling the activities carried out during the second fortnight of November 2022 and bringing out the 34th issue of 'KVK Times'.

Dr. V. Venkatasubramanian
Director
ICAR-ATARI, Bengaluru





Dr. Jacob John
Director of Extension
Kerala Agricultural University

MESSAGE

Krishi Vigyan Kendras are the influential frontline extension systems that bridge the gap between researchers and the farming community. The system disseminates advanced agricultural technologies from the lab to the fields for the benefit of all. KVKs play a pivotal role in improving the agricultural economy of the district. Apart from improving the living status of farmers, KVKs assigns immense significance to attracting the youth into agriculture through entrepreneurial capacity-building programmes. Palakkad District being the "Granary of Kerala", rice-based production systems are primarily focused in the activities of the KVK. Diversity in the agroecological situations of the district, ranging from highlands to lowlands with acidic to alkaline soils, is also reflected in the cropping pattern of the district. Meaningful interventions by the KVK for the betterment of agriculture fulfills the needs of the diversified farming community of the district. KVK Palakkad, under the Kerala Agricultural University, forms the link between the research system and the farmers of the district.

Documentation is as important as the interventions. KVK Times, an initiative of ATARI, Begaluru, provides a proper platform to showcase the major activities of KVKs. It improves the bond among the KVKs under Zone XI. Furthermore, the publication serves as a knowledge hub for agricultural stakeholders.

I wholeheartedly congratulate the Programme Co-ordinator and the team KVK Palakkad for compiling and documenting KVK times for the second fortnight of November 2022 in a comprehensive manner.

A handwritten signature in black ink, appearing to read 'Dr. Jacob John'.

Dr. Jacob John
Director of Extension
Kerala Agricultural University





Dr. Sumiya K.V.
Programme Co-ordinator
KVK Palakkad

ACKNOWLEDGEMENT

I feel extremely happy and privileged to be given an opportunity to compile and edit 34th issue of KVK times vol.I. It is essentially a cross learning experience that helps each KVK to fine tune their activities.

I express my sincere gratitude towards Hon'ble Vice Chancellor of Kerala Agricultural University, Ms. Ishitha Roy IAS for her valuable guidance and invincible support for carrying out the activities of KVK.

I wish to place on record, my deepest sense of gratitude for our Director of Extension, Dr. Jacob John for his constant support and guidance that has helped KVK Palakkad to serve farming community better.

With deep respect and immense happiness, I offer my heartfelt gratitude to Dr. V. Venkatasubramanian, Director, ATARI Bengaluru for his overwhelming support, motivation and encouragement that has inspired us to work more efficiently and focussed.

I would also like to thank Dr. Thimmappa. K., Principal Scientist ATARI and Nodal officer, KVK Palakkad for his valuable guidance and encouragement.

I extend my sincere thanks to ATARI Bengaluru for giving us an opportunity to document the activities of KVKs in zone XI during the last fortnight of November.

I thank all 48 KVKs of zone XI for sharing their activities and achievements during this period for compilation in KVK times.

I take this opportunity to express my heartfelt gratitude and appreciation towards the vibrant team, KVK Palakkad for their sincere and whole hearted co-operation and involvement in each and every activity of KVK. I feel fortunate to be a part of this team.

A handwritten signature in blue ink, appearing to read 'Sumiya K.V.', written in a cursive style.

Dr. Sumiya K.V.
Programme Co-ordinator
KVK Palakkad





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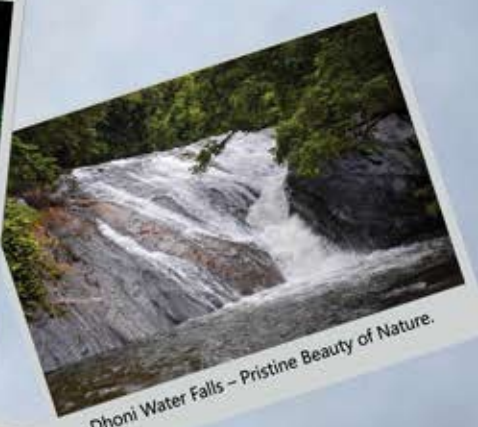
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Nelliampathi Hills - "Heavenly Charm with Misty Mountains."



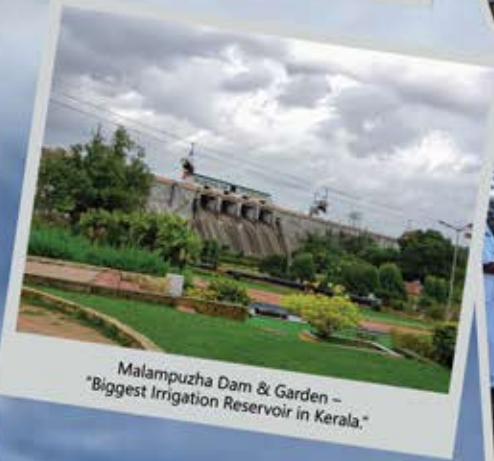
Silent Valley National Park - "Earth's Unspoiled Ecosystem" Where Mother Nature Reigns Supreme, Untamed and Diverse.



Dhoni Water Falls - Pristine Beauty of Nature.



Parambikkulam National Park - Premier Tiger Reserve of India Endowed by Nature in Biodiversity.



Malampuzha Dam & Garden - "Biggest Irrigation Reservoir in Kerala."



Kambalam-Traditional Agricultural Festival of Tribal Attappadi.



Nenmara Vallanghy Vela - Festival of Colours, Art forms, Firework, Elephants

Palakkad

Blessed
by
Nature
&
Rich in
Cultural
Heritage



Kalpathy Ratholsavam - Chariot Festival - One of the most remarkable festivals of Kerala.



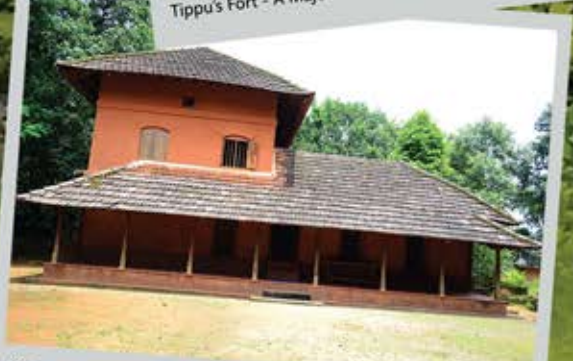
Varikkasseri Mana - one of the oldest traditional aristocratic houses in Kerala.



Tipu's Fort - A Majestic Monument at The Foot of the Sahyadris.



O V Vijayan Memorial - Thasarak Birth Place of legendary novel "Khasakkinde Ithihasam."



Kunjan Nambiar Smarakam - Memorial of prominent Malayalam poet of the 18th century - originator of the art form "OttamThullal."

TECHNOLOGY MANAGEMENT DEVELOPMENT PROGRAMME FOR ENTREPRENEURS



A Technology Management Development Programme (TMDP) on 'Food Processing' sponsored by District Industries Centre for upcoming entrepreneurs from Alappuzha district was conducted at KVK- Alappuzha from 14.11.22 to 25.11.22. Twenty Five young aspirants from Cherthala, Kuttanad, Ambalappuzha, Karthikappilly, Chengannur

and Mavelikkara Taluks of Alappuzha district attended the ten days programme. The programme was inaugurated by Smt. Ambujakshi Teacher, President, Muthukulam Block Panchayath on 14.11.22 in the presence of Sri. Sivakumar. K.S., General Manager, DIC, Dr.P.Muralidharan, Head, KVK-Alappuzha and officials of DIC and KVK. Hands-on-training on preparation of various value added products from major agricultural produces and commodities of the district like coconut, rice, jackfruit, banana and plantain, pine apple, minor fruits, tubers, spices and fish were covered in the capacity building programme. They were trained in the production of new generation food products like Pasta/Macaroni/Noodles and food processing technologies like retorting in addition to making of the traditional cakes, bakery products and rice wafers.

The participants were also oriented on licensing and registration processes required to start food based enterprises, quality standards for food production, packing and labelling, pricing and marketing, and suitable machineries for enterprises.



Visit to a jackfruit processing unit established with the technical support of the KVK at Karunagappally was also arranged for them. Smt. Jissy George SMS (Home Science), KVK coordinated the programme.



KVK-MODULE OF RAWE PROGRAMME CONDUCTED



Final year BSc (Hon) Agriculture students from College of Agriculture, Vellanikkara under Kerala Agricultural University have undergone the KVK-Module of RAWE programme at KVK-Alappuzha from 21st to 25th November, 2022. The batch comprising of ten students gained knowledge on the different KVK activities and were given hands on

experience on how to do training need analysis, training content development and delivery of training. With KVK support, the students organised an off campus training on 'Integrated management of juvenile coconut palms' at Thrikkunnapuzha Panchayath, which served as a new learning experience to them. Visit to KVK farm and interaction with KVK SMSs gave them a new insight on field application of technologies which they missed due to the pandemic situation. They could also interact with FFS partner farmers at Thrikkunnapuzha and witness the outperformance of the partners in the Vegetable Quiz conducted. Dr.P.Muralidharan, PS and Head appreciated the efforts of students for successful completion of the module under the able co-ordination by Dr.Sivakumar. T, SMS (Ent).



FOLLOWUP FIELD VISIT TO OFT- AJWAIN FIELD



Followup Field visit to OFT-Ajwain field to Kesarbhavi by Dr. Airadevi Angadi, scientist (Horticulture) along with Dr. Sudha S., Scientist (Plant Pathology) and Dr. S. C. Angadi, Senior Lab Technician (Soil science), ICAR-KVK, Bagalkot on 21.11.2022.

Dr. Sudha S Scientist (Plant Pathology) and Dr. Venkanna Balaganur Scientist (Animal Science) visited Sheep and Goat rearing unit at Ingalgi, Gorbali village of Hungund and Ilkal taluk on 17-11-2022 as a part of Exposure visit to trainees of NRLM Zilla.

OFF-CAMPUS TRAINING PROGRAMME ON MANAGEMENT OF WILT DISEASE IN BETELVINE



Off - Campus Training Programme on Management of Wilt Disease in Betelvine was conducted by Dr. Sudha S. Scientist (Plant Pathology) and Dr. Dineshkumar S. P. on 19-11-2022 at Cholachaguda village of Badami Taluk

METHOD DEMONSTRATION

Method Demonstration on Use of Arka Microbial Consortium (AMC) for Management of Wilt Disease in Betelvine was conducted by Dr. Sudha S. Scientist (Plant Pathology) and Dr. Dineshkumar S. P. on 19-11-2022 at Cholachaguda village of Badami Taluk.



DIAGNOSTIC FIELD VISIT



Diagnostic field visit to bacterial blight and wilt affected pomegranate orchard at Ingalgi village of Hungund taluk was carried out by KVK, Bagalkote Scientist Dr. Sudha S Scientist (Plant Pathology) and Dr. Venkanna Balaganur (Animal Science) on 17-11-2022.

Diagnostic field visit to chilli field infected with murda complex disease and nutrient deficiency in guava orchard of Hungund taluk was carried out by KVK, Bagalkote Scientist Dr. Sudha S Scientist (Plant Pathology), Dr. Airadevi Scientist (Horticulture) and Dr. Siddappa C. Angadi on 17-11-2022.



CAPACITY DEVELOPMENT PROGRAMME ON MANAGEMENT OF INVASIVE THIRPS (*Thrips parvispinus*) IN CHILLI



Chilli is grown in an area of more than 35,000 ha in Ballari District. The severe infestation of invasive Thrips (*Thrips parvispinus*), which was reported on chilli during the previous year has continued to cause damage in the ongoing season as well. Front Line Demonstrations on management of this pest have been conducted through KVK. Apart from this, ICAR-KVK, Ballari in collaboration with ILL Foundation, organized Capacity Development Programme on management of invasive Thrips (*Thrips parvispinus*) to farmers and traders of Ballari district on 5th November 2022.



The invasive pest on chilli can be managed by adopting integrated pest management strategies viz., border cropping with 2-3 rows of tall growing crops like sorghum or maize or bajra or fodder grasses sown thickly as a barrier for thrips movement, collection and destruction of severely infested plants and uprooting weeds present in the vicinity of field bunds which act as off season / alternate host for thrips, maintaining recommended spacing (90 x 30 cm), soil application of well decomposed farm yard

manure (FYM) or compost @ 1 t/ac, enriched with *Metarhizium anisopliae* @ 2 kg/t along with recommended doses of farm yard manure (10 to 12 t/ac), soil application of 200 Kg of Neem cake and 500 Kg of vermicompost per acre to induce resistance against thrips, balanced fertilization with enhanced potash application along with nitrogen and phosphorous fertilizers to induce plant resistance against the pest, erecting of blue sticky traps @ 25-30 traps/ac at crop canopy height for both monitoring and mass trapping purpose, frequent inter cultivation (earthing up/raking of soil) operations to destroy soil inhabiting pupae of thrips, mechanical destruction of severely infested plants by uprooting and burying or burning, conservation of natural enemies by spray of botanical based pesticides like NSKE 5% or Neem oil (1500 PPM) @ 3 ml/l, spray of microbial based insecticides like *Beauveria bassiana* or *Lecanicillium lecani* @ 5 g/l and need based / judicious application of label claim chemical insecticides.

The programme was inaugurated by Sri. G. Somashekar Reddy, Honourable Member of Legislative Assembly, Ballari. Dr. Anandkumar V., Scientist (Entomology) explained the IPM strategies, Dr. Ramesh, B. K., Senior Scientist & Head, ICAR-KVK, Ballari, Dr. Govindappa M. R., Scientist (Plant Pathology), Dr. Ravi S., Scientist (Soil Science), Sri. Mallikarjunappa K., Joint Director of Agriculture, Ballari and other dignitaries took part in the programme. About 110 farmers and traders from different villages of Ballari district participated in the programme.

ICAR-KVK-BELAGAVI-1

TRAINING ON 'FISH FARMING ENTERPRISE' TO RETIRING ARMY OFFICERS.



ICAR-BIRDS Krishi Vigyan Kendra, Belagavi-1 has participated in invited guest lecture on 'Fish Farming Enterprise' at Marata Regiment, Belagavi. The programme was intended to provide the orientation on opportunities in fisheries sector of retiring officers and soldiers. Mr. Adarsha H. S, Scientist (Fisheries) have given complete

know how of fish farming in pond aquaculture system, biofloc system and recirculatory aquaculture systems. In the same time, aspects of entrepreneurship activities like fresh fish retailing, value chain management, value added products and fish seed production were also covered. Colonel Mr. Bharat Rao has facilitated the training programmes for the batch of 21 participants who are retiring by end of this year.

ICAR-KVK- BELAGAVI-II

DR. PRABHAKAR KORE JI, HON'BLE CHAIRMAN, KLE SOCIETY, BELAGAVI VISITED KLE KVK



Dr. Prabhakar Kore ji, Hon'ble Chairman, KLE Society, Belagavi visited to KLE KVK, Mattikopp on 25.11.2022 and interacted with Senior Scientist and Head and staff regarding the activities carried out for the farmer's. During the visit Hon"ble Chairman also interacted with seed producing farmer's of the

KVK from Bagalkot district. Further, suggested to write a project proposal on Areophonics to provide quality seed material of potato to the farming community and also instructed to do landscaping from Administrative building to Main gate. During the visit, Shri. B.R. Patil, Chairman, KLE KVK, Mattikopp, Dr. Sunil S. Jalalpure, Joint Secretary, KLE Society, Belagavi and Dr. Prasad B. Rampure, Principal, KLE College of Engineering & Technology, Chikodi were present.

DR. VIKRANT SINGH, JOINT DIRECTOR, SEED DIVISION, KRISHI MANTRALAYA, GOI VISITED KVK



Dr. Vikrant Singh, Joint Director, Seed Division, Krishi Mantralaya, Govt. of India visited KLEKVK, Mattikopp for organising demonstrations of wheat for implementing of pilot project entitled 'Enhancement of wheat productivity through bio-fortified Duram wheat production technologies through cluster demonstrations and farmers training. Mrs. Sridevi B. Angadi, Senior Scientist & Head explained about KVK mandated activities and seed production programme carried out through farmers participatory mode. During his visit to KVK, Wheat variety MACS-4028 and MACS-4058 seeds were provided to the farmers of Sangal village of Ramdurg taluk. Shri Shivamurthy Goankar, Land Development Officer, CADA, Belagavi and Shri S.B. Kongawad, Deputy Director of Agriculture, Belagavi were present during the programme.

CADA TRAINING PROGRAMME



A two days training on 'Improved Agricultural technologies' to command area farmers was held at KVK campus during 16-17 November 2022. The programme was inaugurated by Smt. Sucheta Hebballi, Assistant Director of Agriculture, CADA, Dharwad and Mrs. Sridevi B. Angadi, Senior Scientist & Head, presided over the inaugural function on 16.11.2022. During the closing ceremony held on 17.11.2022, Shri. Shivaprasad Goankar, Land Development Officer (Agri), CADA (M & G), Belagavi, Dr. Vikrant Singh, Joint Director, Directorate of Wheat Development, Dept. of Agriculture & Co-operation, Government of India, Shri S.B. Kongawad, Deputy Director of Agriculture, Belagavi, Mrs. Sridevi B. Angadi, Senior Scientist & Head, KLE KVK, Mattikopp and Shri. Shrishail Angadi, Agriculture Officer, Command Area Development Authority (M & G), Belagavi participated and interacted with farmers. S.M. Warad, Scientist (Soil Science) performed opening remarks and KVK Scientists delivered lectures on different topics during the training programme.

FIELD DAY – PADDY



KVK organized Paddy Field Day in collaboration with Department of Agriculture and Agricultural Technology Management Agency on 24.11.2022 at Kasamalagi, Khanapur taluk. Joint Director of agriculture Shri Shivanagouda S. Patil inaugurated the programme. During his inaugural speech, he appreciated the efforts of KVK in

promoting paddy variety RNR-15048 and asked the other fellow farmers to adopt this variety and increase the farm production. He also emphasized to adopt new technologies in crop production and increase their farm income. Dr. Basavaraj Yenagi, scientist (Agronomy), AICRP on Groundnut, UAS, Dharwad addressed the farmers about new technologies in paddy production. G.B. Vishwanath, Scientist (Agronomy) briefed about varietal characters, purpose of taking up frontline demonstration in the village. Dr.B. K. Lokesh, Associate Professor, UAS, Dharwad explained different pest and diseases and their control measures. During the programme, Smt. Lata R. Kammar, President, Gram Panchayat, Shri S.B. Kongawad, Deputy Director of Agriculture, Shri D.B. Chavan, Assistant Director of Agriculture, Shri M.C. Mathad, DPD, ATMA, progressive farmers of neighbouring villages and media persons were present.

JAL SHAKTI ABHIYAN

Jal Shakti Abhiyan awareness programme was organized at KLE College of Engineering & Technology, Chikodi on 29.11.2022. Delivering key note address, Mrs. Sridevi B. Angadi, Senior Scientist & Head highlighted that KVK is intensively working on creating awareness about Jal Shakti Abhiyan with a theme catch the rain among the farming community in the district.



S.M. Warad, Scientist (Soil Science) highlighted that water is becoming scarce natural resource for agricultural production in the country as only 8 per cent of rain water is conserved. Providing supplemental irrigation by conserving rain water is the key factor in enhancing the productivity of agricultural lands to provide food for all. In this connection, he briefed three tier approaches 1. Terrace level practices viz., contour bunds, graded bunds, control fodder strips, graded border strips and zingg conservation benches, 2. Inter bund management practicing like levelling, scooping, across slope cultivation, deep ploughing and 3. Storage of run-off water in farm ponds and its reuse in moisture

stress conditions. In addition, he explained micronutrient in-situ water harvesting structure to conserve rain water in nonarable areas. G.B. Vishwanath, Scientist (Agronomy) briefed on efficient irrigation methods like sprinkler and drip irrigation along with schedule of irrigation in irrigated areas and agronomic practices of crops grown in rainfed areas.



FIELD DAY ON DEMONSTRATION OF FOXTAIL MILLET VAR. GPUF-3 FOR VALUE ADDITION



ICAR-Krishi Vigyan Kendra, Bengaluru Rural District organized Field day on Demonstration of Foxtail millet var. GPUF-3 for value addition at the field of Mr. Maregowda, DFI village Narasapura, Nelamangala Taluk on 22.11.2022. During the programme Dr. Venkate Gowda, J.,

Senior Scientist & Head, ICAR – Krishi Vigyan Kendra, Bengaluru Rural District briefed about the introduction of new foxtail millet variety (GPUF-3) seed rate / ha, use of bio-fertilizers Azospirillum (1 Kg / ac) and its characters. Ms. Meghana, S.V., Scientist (Home Science) gave more emphasis on value addition to this new variety. During the programme Dr. Veeranagapa, P., Scientist (Soil Science) mentioned about the nutrient management. Totally 64 farmers were participated and benefited from the programme.

KISSAN MELA AND MILLETS FESTIVAL



Kissan mela and Millets festival was organised at ICAR-Krishi Vigyan Kendra, Bengaluru Rural District on 29/11/2022 in collaboration with Karnataka State Department of Agriculture, Bengaluru District. The programme was inaugurated by Dr. S.V. Suresh, Hon'ble Vice-Chancellor, UAS, Bangalore

and briefed about the history of celebrating the International year of millets - 2023. Role of FPOs in Processing and marketing of millets. In 2023, University has planned to organize programme related to millets once in a month in view of International year of millets. Dr. K. Narayana Gowda, Director of Extension, UAS, GKVK, Bengaluru highlighted the health benefits of millets, processing and marketing. Dr. D.V. Srinivasa Reddy, Principal Scientist, ICAR-ATARI, Bengaluru briefed about the importance of millets and their improved varieties. Mr. Aravind, Hon'ble Board member of UAS, Bangalore enlightened the importance of millets and its marketing.

In technical session Dr. Sukanya, T.S., Professor, AICRP on small millets, UAS, GKVK, Bengaluru delivered a lecture on Cultivation practices of millets and highlighted the improved varieties of millets. Dr. Suresh, K.B. from Centre of Excellence (Millets) highlighted the Processing and marketing of millets and Dr. Mamatha, H.S., Associate Professor, Bakery Training Unit briefed about the value addition of millets. During the programme, 10 farmers were awarded as District level ATMA best farmer award. Exhibition on small millets was also organized with 15 stalls. KVK staff, Agriculture department staff and 600 farmers/farm women were benefitted from the programme.



CAPACITY BUILDING PROGRAMME FOR RURAL YOUTH



In order to bring the change in the rural economy through the promotion of production of horticulture crops in general and minor fruits in specific. Krishi Vigyan Kendra Bidar is initiated series of capacity building programme for the rural youth. As a part of this programme on campus capacity building programme for one day on "Importance of minor fruits and their cultivation practices" and for 3 day

"Propagation and Nursery Management in Horticulture" are organised on 21.11.2022 and from 28.11.2022 to 30.11.2022 by Dr Ningadalli Mallikarjun, Scientist (Horticulture) respectively. The senior horticulture professor from College of Agriculture, Raichur, Dr. A R Kurubar has interacted with minor fruits producing farmers by explaining the facts and technologies for production and by clarifying the doubts of the farmers. The event was ended up with exposure field visit to clustered apple orchard at Gadagi village of Bidar Taluka. In this event 50 farmers were participated To provide quality planting material of vegetables and fruits to the growers the establishment of nurseries at block level is necessary in the district. Considering this thrust area a 3 day capacity building programme exclusively for rural youth of the district was organised. In this event experts from different institutes and successful farmer were acted as resource person. One of the contacts of farmer of KVK Bidar turned in to famous nursery growers Sri Namdev Metre from village Gogga of Basvakalyan taluk has motivated the participants for start up. During the programme hands on training for vegetables seedling production and turmeric plant propagation through pieces of rhizome in a portray, different layering methods with air layering in Guava, budding in Rose and grafting in Mango was carried out. Total of 30 youth including 8 women were benefitted from this programme.

The Senior Scientist & Head of KVK Bidar Dr Sunilkumar N M in his address to the farmers has urged to startup new nurseries for vegetables and fruits with the technical guidance by the KVK.



ICAR-KVK- CHAMARAJANAGAR

CAPACITY BUILDING PROGRAMME ON SANDALWOOD BASED AGRO FORESTRY MODELS

One day capacity building programme was organized on 22.11.2022 at ICAR KVK Chamarajanagara in collaboration with Institute of Wood Sciences and Technology (IWST), Indian Council of Forestry Research and Education, Bengaluru. The programme was inaugurated by Dr. N. Ravi., Scientist, IWST, Bengaluru, Dr. M. V. Durai, Scientist, IWST, Bengaluru and Dr. Yogesh G. S., Senior Scientist and Head, KVK, Chamarajanagara. A brief introduction to the programme was delivered by Dr. Mohan Kumar A. B., Scientist (Horticulture). Nursery raising, management of Sandalwood and cost of cultivation was explained to the trainees by Dr. N. Ravi. Dr. M. V. Durai, stressed about the Sandalwood cultivation and its management in Agro-forestry systems which included scope of Agro forestry, sandal wood cultivation in India and various aspects pertaining to Agro forest products. Dr. Yogesh G. S., highlighted the importance of growing Sandalwood and its ecological benefits. In total 101 farmers from different parts of the district participated in the programme.



Dr. N. Ravi, Scientist, IWST, Bengaluru gave lecture on Nursery raising, management of Sandalwood and cost of cultivation at ICAR KVK, Chamarajanagara on 22.11.2022



Dr. M. V. Durai, Scientist, IWST, Bengaluru gave lecture on stressed about the Sandalwood cultivation and its management in Agro-forestry at ICAR KVK, Chamarajanagara on 22.11.2022



ICAR-KVK- CHIKKABALLAPURA

TRAINING ON MANAGEMENT OF T-MOSQUITO BUG IN CASHEW



T- Mosquito bug being the major menace in Cashew, training on management of T- Mosquito bug in Cashew was organized at KVK, Chintamani on 17.11.2022. Dr. Papireddy, Senior Scientist and Head explained about problem of T- Mosquito bug. Dr. Praveen, Scientist (Horticulture) explained about symptoms and scientific management practices and also carried out method demonstration in cashew field. 27 farmers participated in the programme.

TRAINING ON VALUE ADDITION



ICAR-KVK, Chikkaballapura organized training programme on Value addition in different crops on 29.11.2022. Dr. Papireddy Senior Scientist and Head inaugurated the programme and highlighted about the importance of value addition for increasing the farmer's income.

Dr. Tanweer Ahmed, Scientist (Agricultural Extension) explained about the marketing strategies and opportunities in value addition of different crops. Dr. Akshata Ramannanavar, Scientist (Home Science) demonstrated the procedure of preparation of tamarind lollipop, Puliogare powder and also explained about importance of packing, branding and labeling.



FIELD DAY ON FINGER MILLET VARIETY (ML-365)

I.C.A.R-Krishi Vigyan Kendra, Chikkamagaluru organized Field day Programme on Integrated crop management in Ragi (ML-365) on 29.11.2022 at Tadaga village of Ajjampura taluk. The programme was inaugurated by Dr. A.T.



Krishnamurthy, Senior Scientist and Head, KVK, Chikkamagaluru, in his inaugural speech briefed that finger millet is also an important food crop and it can cultivate in both irrigated and rainfed area and it can also be grown as an inter crop. Further, explained about ML-365 variety

short duration variety, high yielding variety, blast disease resistant, drought resistant variety and it can be grown in wide range of soils and also encouraged the farmers to grow this variety and disseminate it to other farming community. During this programme Dr. Girish, R, Scientist (Plant Protection), KVK, Mudigere explained about integrated pest and disease management in finger millet. Shri. Girirajappa, Shri. Manjunath, Shri. Suresh and Shri. Thimmegowda, progressive farmers and beneficiary farmer of Tadaga village shared their experience in the programme and this programme was witnessed by around 24 farmers.



SPONSORED TRAINING PROGRAMME FOR PMVDVK MEMBERS



A three day sponsored training programme for the members of PMVDVK groups was conducted by ICAR, KVK, Chitradurga in collaboration with Zilla Panchayath, Chitradurga from 24-11-2022 to 26-11-2022. Similarly three programmes were organized from 21-11-2022 to

30-11-2022. The programme was inaugurated by Dr. B. Hemla Naik, Director of Extension, KSNUAHS, Shivamogga. During his inaugural speech he briefed about PMVDVK programme. And he also discussed that Women play a vital role in Agriculture and she is the backbone for her family. The main purpose of 3 day training programme is to make these women participants well trained in the field of value addition, the technology learnt during the training need to be adopted by them in future days. These women can also motivate their family members and children to take part in this value addition programme to earn better returns from the agriculture produce cultivated by them. Dr. Sharanappa Jangandi, Associate Director of Research, ZAHRS, Babbur Farm, Hiriyur, Mr. Mahanteshappa, Project Director, ZillaPanchayath, Chitradurga was present as chief guest during the programme. Dr. O. Kumar, Sr. Scientist and Head, KVK was presided over the programme and during his presidential address he briefed about the VDVK programme, a special package for the tribal women. These women need to take up the value addition activities for the local crops. He informed the participants that the Women entrepreneurs will be providing hand on training in making ragi malt, Ground nut Chikki, millets laddu, Chakkuli etc. He also suggested the trainees to focus on attractive packaging and labeling to earn better price for their produce.

BLOCK LEVEL WORKSHOP ON SCIENTIFIC COCONUT CULTIVATION PRACTICES



A Block level workshop on Scientific Coconut cultivation practices in collaboration with Coconut Development Board was organized by KVK, Chitradurga on 18-11-2022. The programme was inaugurated by Dr. Ravi Kiran, Technical Officer, CDB, and Bangalore.



During his inaugural speech he opined that the Coconut growers in Karnataka are facing lot of problems mainly due to non-adoption of scientific cultivation practices. In order to overcome all these problems one need to be in regular contact with Scientists of KVK and get the technical

information. He also briefed about the various value added products made by various parts of coconut and the way they are marketed. Later he also briefed about the various facilities available to the farmers through Coconut Development Board. Dr. O.Kumar, Sr. Scientist and Head, KVK was the chief guest for the programme and during his speech he discussed that Coconut cultivation is predominant in Chitradurga and Tumkur districts. Whereas the area and productivity of coconut is declining day by day. Farmers need to adopt the scientific technologies to increase the productivity of the crop to meet the national average of 100-110 nuts per tree. Mr. Ganesh, Chairman and Mr. T.S. Nagaraj, Manager Vanivilasa FPO, Hiriyur and Scientist /staff of KVK were present in the programme . 50 farmers and farm women from Hiriyur participated in the programme .

TRAINING ON SANDALWOOD TREE BASED AGRO FORESTRY MODELS

On 30-11-2022 ICAR - Krishi Vigyan Kendra, Chitradurga in collaboration with Institute of wood science and Technology Bangalore and OISCA International- Karnataka chapter Bangalore, organized "Sandal wood tree based agro-forestry models" training programme in KVK, Chitradurga. The program was inaugurated by Shri. Amara Narayana, retired IAS officer and Chairman of Karnataka state sandalwood grower association and OISCA, Head, International- Karnataka chapter Bangalore. He briefed difficulties faced by sandalwood growers and also stressed on modification of government schemes of forestry department for easily available to farmers. Dr. Hemla Naik B, Director of Extension, KSNUAHS, Shivamogga presided the function and opined that, to be a successful farmer one should adopt scientific method of cultivation and marketing techniques for getting good economic benefit in sandalwood crop.



Mr. Suresh Babu, DFO, Social forestry, Chitradurga and Mr. Sharanappa U, retired Police Superintendent answered the quires of sandalwood growers. Dr. Diwakar, Dr. Durai and Mrs. Mamatha, Institute of wood science and Technology Bangalore were participated as resource person for the training programme.



Dr. Sharanappa Jangandi, Associate Director of Research, ZAHRS, Babbur Farm, Hiriyur, Dr. Kumara O., Senior Scientist and Head, Dr. Prakash Kerure, Scientist (Horticulture) and Mrs. Geetha Kumari, Programme Assistant were present in the programme. .



SCIENTIFIC MANAGEMENT PRACTICES FOR LEAF SPOT DISEASES OF ARECANUT



ICAR-Krishi Vigyan Kendra (Dakshina Kannada) Mangaluru in collaboration with Primary Agricultural Credit Cooperative Society Ubaradka Mitturu Sullia organized a capacity development programme at Shri. Narashima Shastavu Sabhabhavan, Ubaradka Mitturu village of Sullia taluk on Integrated Management of leaf spot disease in arecanut, which is a major threat in the district causing huge economic losses to the farming community. Mr. Jayaprakash, CEO

of PACCS Ubaradka, welcomed the gatherings and briefed about the programme. Shree Rajesh inaugurated the programme and Shree Damodhar Gowda presided over the programme. Dr. Kedarnath, Scientist (Plant Protection) explained in detail about integrated crop management practices in arecanut with prime focus on leaf spot management practices viz., field sanitation followed by demonstration on application of recommended doses of fertilizers (N:P:K, 100:40:140 gram per plant per year), foliar application of propiconazole 25% EC @ 1 ml L⁻¹ of water as first spray and application of carbendazim 12% + mancozeb 63% wp @ 2 g L⁻¹ of water 20 after second spray. A total of 105 farmers and line department officials benefited from the programme.

WORLD FISHERIES DAY CELEBRATION AT KVK, DAKSHINA KANNADA

World Fisheries Day is observed around the world on 21st November every year by the fisherfolk communities. They celebrate this day through workshops, rallies, public meetings, dramas, cultural programs, exhibitions, demonstrations, and music shows to highlight the significance of maintaining the world's fisheries and balance in the ecosystem, healthy oceans, and surroundings.



This marks a significant event for the fishing community, highlighting their hardwork and observing these neglected communities. KVK, Dakshina Kannada celebrated the same at the KVK by inviting various farmers from the district. Progressive farmers like Bhagyaraj, Sudarshan expressed their views on the day. A training programme was also organised during occasion for the farming community. Farm ponds in the coastal districts are exclusively used for storage purposes till date and due to the awareness programs and educating the farming community about the sustainable utilization the available water resources, the farming community is keen to take up aquaculture for an additional income with minimal cost of production. Dr. Chethan N. Scientist (Fisheries) trained the farming community on water usage, basic aquaculture techniques, fish seed selection and stocking, culture methods and management aspects in the farm ponds. Method demonstration on liming and fertilization was also carried out. The participants checked the primary production levels by filtering the water from the culturing pond for concentration of plankton. Fertilizing the pond was also demonstrated with the fresh cow dung to enhance the primary productivity and liming was carried out in a new pond to correct the pH of the water. These demonstrations were helpful for the participants to understand the concept better.



OFF CAMPUS TRAINING PROGRAM ON IPM IN BENGAL GRAM



NFSM- Cluster Frontline demonstration in ICM in Bengalgram conducted at Kattegehalli, Jagalur taluk with 50 farmers. Mr. Mallikarjuna B.O., SMS (Agronomist) delivered lecture on the integrated pest management of pod borer in Bengalgram at early stages and conducted method demonstration

on installation of the pheromone traps @ 5 per acre for monitoring of the pod borer. Conducted the field visit to the FLD plots and crop stand was good.

USE OF PULSE MAGIC IN REDGRAM

Frontline demonstration in Maize (Popcorn) + Redgram conducted at Doddahabbigere, Channagiri taluk for 25 farmers. The Maize crop has been harvested and redgram in flowering stage. Made a field visit to the redgram plots and conducted the training cum method demonstration of the usage of the pulse magic. Mr. Mallikarjuna B.O., SMS (Agronomist) delivered lecture on the importance of spraying of the pulse magic and first spray should be done at time of 50 percent of the flowering @5g /l of water and along with PGR 0.4 ml/l of water and second spray should be done after 15 days of the first spray. Mr. Sannagowda H.M., Soil Scientist and Mr Raghuraja J., SMS (Extension) visited the plots and discussed with farmers.



HONOURABLE DIRECTOR VISITED KVK, DAVANAGERE



Dr. V. Venkatasubramanian Director, ATARI Zone 11 visited KVK and interacted with the staff. He also visited instructional farms of the KVK and FLD- Integrated Crop Management in Paddy plots in Hirekoglur village of Channagiri taluk. During the FLD plot visit, interacted with paddy farmers on issues related to Pests, Disease and Nutrient management. Suggested farmers to use eco-friendly management practices in Crop Protection and advised to take up need based crop protection measures.

Dr. B. T. Rayudu (Principal Scientist, ATARI) was also present during the visit and he discussed with farmers on Paddy varieties and their characters. Dr. Devaraja T. N. Senior Scientist and Head explained to the Director on the challenges faced by paddy farmers with special reference to pests, disease and market. Mr. Mallikarjuna B. O. SMS (Agronomy) and Dr. Avinash T. G. SMS (Plant Protection), FLD Paddy farmers were present during the visit. An interaction with Hirekogaluru Taralabalu Amrith Farmer Producer Company Limited, Board of Director in Hirekogaluru. Director gave several ideas for output business in the FPO.

CELEBRATED COCONUT FIELD DAY



ICAR-Taralabalu Krishi Vigyan Kendra in collaboration with Coconut Development Board, Bengaluru conducted 'Field Day on Coconut' at Basavanahal village of Davanagere tq.

Mr. Basavanagowda M.G. Subject Matter Specialist (Horticulture) gave a detail on scientific production technologies of coconut.

The aspects like mother palm selection, seed nut selection, nursery raising, selection of seedlings, method of planting and post planting care was covered by him. Further, addressed on value addition and processing of coconut. Mr. Sannagoudra H.M., Subject Matter Specialist (Soil Science) gave detail explanation on importance of nutrients, its application based on soil test and use of green manure crops to increase the fertility status in coconut gardens.

Dr. Avinash T.G., Subject Matter Specialist (Plant Protection) explained the Bio-intensive Integrated Pest and Disease Management strategies with special reference to Rugose White fly, Coconut Black Headed Caterpillar, Eriophyid Mites and major diseases Bud rot, Stem bleeding.

Mr. Basavaraj, Progressive Coconut Farmer shared his experiences in coconut nursery raising, seeding production and cultivation practices, 58 farmers attended the field day and had good interaction with scientists.



TRAINING ON "AGRO ECOLOGICAL PRACTICES" FOR COMMUNITY RESOURCE PERSONS OF FARM LIVELIHOOD (KRISHI SAKHI)



Training programme on "Agro Ecological Practices" for Community Resource persons of Farm Livelihood (Krishi Sakhi) was organized by ICAR-Krishi Vigyan Kendra, University of Agricultural Sciences, Dharwad in association with KSRLPS Skill Development, Entrepreneurship and Livelihood Department,

Government of Karnataka from 21-26 November 2022. Dr. V. I. Benagi, Former Vice Chancellor, UAS, Dharwad inaugurated the programme and delivered lecture on Organic farming with special emphasis on pest and disease management. Shri Shrinivas Kotyan, Member, Board of Management, UAS, Dharwad explained about time and stress management.

Dr. Shripad Kulkarni, Nodal Officer (KVKs), UAS, Dharwad delivered lecture on role of women in agriculture. Shri Santosh Talakal, Assistant Project Director, Zilla Panchayat, Dharwad, in his address encouraged the Krishi Sakhis to improve the agriculture status in their villages. Smt. Kalavathi K. Kambali and Dr. Punitha B. C, Scientists, KVK, Dharwad coordinated the training. Total 18 different topics of agriculture and allied science were covered to create awareness and develop skills among 30 selected Krishi Sakhis from Dharwad, Kalaghatagi, Alnavar and Hubballi talukas. Dr. S. A. Biradar, Senior Scientist and Head, ICAR-KVK, Dharwad welcomed the guests and Dr. Geeta S. Tamgale, Scientist (Home Science) compeered.

LAUNCH OF JALA SAKHI TRAINING PROGRAMME

Water and Land Management Institute (WALMI), Dharwad in collaboration with ICAR-KVK, Dharwad organized launching of Jala Sakhi programme on 25.11.2022 at WALMI, Dharwad. As the global population is growing, water resources like ponds, lakes and rivers etc., are under increasing threat from the impacts of climate change and pollution. In this regard WALMI has planned to organize Jala Sakhi training programme to enlighten the rural women about the importance of water for future. Smt. Neelavva Mattihalli of Anchatageri village and Gandhi Puraskar Awardee inaugurated the programme and shared her experience in solid waste management and motivated the rural women to conserve the water bodies of their own villages/ panchayats. Dr. Rajendra Poddar, Director, WALMI, Dharwad indicated the statistics of water usage and emphasized on protection, conservation and control the usage of water and its resources. Dr. S. A. Biradar, Senior Scientist and Head, ICAR-KVK, Dharwad delivered lecture on role of animal husbandry in Integrated Farming System. Smt. Kalavathi K. Kambali, Scientist (Plant Protection), ICAR-KVK, Dharwad gave introductory remarks about the training programme. About 35 Jala Sakhis from Dharwad district participated in the programme.



INSITU GREEN MANURING IN MANGO ORCHARDS TO IMPROVE SOIL FERTILITY



Soil and water management practices that sustain and enhance the productivity of orchard soils are must and is a vital part of the long-term solution to enhance mango productivity. A Front Line Demonstration on Insitu green manuring in mango orchards to improve soil fertility was implemented by ICAR-KVK, Dharwad at Honnapur village of Dharwad taluka. Dr. Punitha B.C., Scientist (Soil Science), ICAR-KVK, Dharwad visited the mango orchards of Shri. Veeresh Dharwad and Shri Somashekhar Kalagatagi on 27.11.2022. In the present demonstration, sunhemp seeds were sown as intercrop in mango orchard and 45 days after sowing sunhemp is incorporated into the soil before attaining flowering stage. Farmers were educated about the importance of insitu green manuring as a low cost input source which is considered to improve soil health. Further, farmers were informed to go for soil sampling to know the nutrient status after incorporation.

NATIONAL CONSTITUTION DAY 2022



Constitution Day also known as 'Samvidhan Divas', is celebrated in our country on 26th November every year to commemorate the adoption of the Constitution of India. The Ministry of Social Justice and Empowerment on 19th November 2015 notified the decision of Government of India to celebrate the 26th day of November every year as 'Constitution Day' to promote Constitution values among citizens. ICAR-Krishi Vigyan Kendra, Dharwad celebrated National Constitution Day on 26.11.2022. About 40 Krishi Sakhis and other staff from ICAR-KVK, Dharwad participated in the programme and the oath was taken to pay respect to the constitution and promote values among citizen.



JAL SHAKTI ABHIYAN TRAINING CONDUCTED

As part of Jal Shakti Abhiyan, the KVK-Ernakulam conducted training on Vegetable farming with efficient water management for students in association with UniY Aluva and Govt Boys Higher Secondary School, Aluva on the 7th November 2022.



As part of the training, the students also set up a demonstration vegetable farm at the school. Cowpea, Okra, Amaranthus, Tomato, Brinjal, Chilli, Cabbage, Cauliflower etc. were planted. Shri. Shoji Joy Edison, Subject Matter Specialist (Horticulture) conducted the training and Shri. Kuruville Mathew, Secretary, YMCA, Aluva participated.

KVK ASSOCIATED WITH ATMA TO CONDUCT BLOCK LEVEL KISSAN GOSTHI

KVK associated in ATMA Kissan Gosthi of Alengad Block conducted at Karumallur on 16th November, 2022. Shri. Shoji Joy Edison, Subject Matter Specialist (Horticulture) has taken a session on Good Agricultural Practices in Banana cultivation followed by a farmer-scientist interface. Scientist of Kerala Agricultural University also participated. Subsequently a multi-disciplinary diagnostic field visit was also conducted to the paddy fields. Iron toxicity symptoms in rice identified and solutions to combat the issue were suggested.



FARMER PARTICIPATORY FISH SEED PRODUCTION ORIENTATION PROGRAMME CONDUCTED

With the objective of replicating the farmer participatory fish seed production model in Kottayam district, the KVK Ernakulam associated with KVK Kottayam and organized one-day orientation programme on Pearlsport seed production for progressive fish farmers. Dr.P.A Vikas, Subject Matter Specialist provided the orientation. The programme was held on 24th November 2022 at Palaikari Aqua Tourism center of Matsyafed, Govt. of Kerala.



KVK CONDUCTED TRAINING UNDER UNNATHI SCHEME FOR MGNREGS MEMBERS



The KVK conducted one day training on Goat rearing for the members of Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) under Unnathi Scheme on November 23rd 2022. The scheme aims at providing Skill trainings to MGNREGS

members so as to make them self sufficient at earning supplementary income even after the 100 days of guaranteed employment under the scheme. The programme was inaugurated by Mulanthuruthy Block Panchayat President, Shri Raju P.Nair. Block development officer and Deputy BDO attended the programme. The class was led by Dr K Smita Sivadasan, Subject Matter Specialist (Animal husbandry).



VEGETABLE CROP CAFETERIA



The field day on Vegetable Crop Cafeteria was organised at Asundi village of Gadag block on 16-11-2022. The high yielding and disease resistant varieties developed by ICAR-Indian Institute of Horticultural Research, Bangalore mainly Palak-Arka Anupama, Ridegurd-Arka Prasanna, Radish-Arka Nishantha and

Dolichos Bean-Arka Amogha seeds were provided to 10 guntas area per crop to 10 farmers. In view of this, the field day was organised in one of the farmer's field namely Shri Hanumanth Nalavadi's field. The farmer is very happy as he is getting good yield as well as good market price from FLD Demonstration plot.

ORGANIC COMPOST PRODUCTION AND NUTRI-GARDEN

ICAR-K.H.Patil Krishi Vigyan Kendra, Hulkoti in collaboration with Shri Swami Vivekananda Samskrithika Samithi, Gadag organised capacity building programme on organic farming and awareness on nutrition garden at Kashi Vishwanath Temple, Gadag on 15-11-2022. The programme was presided over by Shri Shri Ekagavyananda Swamiji, Ramakrishna Ashram, Mangalore.



Swamiji addressed the gathering about health, hygiene, cleanliness and safe environment. Swamiji demonstrated the "Three Pot Composting" techniques for the kitchen waste management at home. The compost produced in pot composting shall be used in production of organic vegetables in Nutri-Garden. Shri D.R.Patil, Chairman, KVK Hulkoti briefed about the importance of protection of environment. In this regard, the citizens must adopt the "Three Pot Composting" technique. Dr.Sudha Mankani, SMS (Home Science) briefed about the Nutri-Garden and Terrace Garden and it's importance in daily diet. On this occasion, Shri Puneet Maharaj, Vivekananda Ashram, Gadag, Shri M.N.Kamenahalli, President, Swami Vivekananda Samkritika Committee, Gadag, Shri J.K.Jamadar, Station Director, CRS, Gadag, Shri Umakanth and residents of Vivekananda Nagar participated in the programme.

WORKSHOP ON "ENERGY CONSERVATION IN AGRICULTURE"

Workshop on "Energy Conservation in Agriculture" was organized on 19-11-2022 at ICAR-Krishi Vigyan Kendra, Hulkoti, Gadag District sponsored by Petroleum Conservation Research Association (PCRA), South Zone, Chennai. Shri N.H.Bhandi, SMS (Soil Science) sensitized about the importance of energy in

Indian agriculture, steps for conservation of petroleum products and operating procedures to be followed to conserve energy sources. Trainees interacted and shared their experiences on the workshop topic. Literatures in vernacular language were distributed to the participants. Dr. Gururaj Kombali concluded the workshop with a vote of thanks.



FIELD DAY



ICAR-KVK, Hassan has conducted the Field day on Scientific Bee Keeping and Snail management in Banana at Kallikoppalu village of Alur taluk on 28/11/2022. Mr. Krishnegowda, Progressive farmer, Kallikoppalu, Alur taluk has inaugurated the programme and in his inaugural speech he

said that perseverance and efforts are essential to get a success in any work similarly, the farmers should know new technologies from the scientist and try to adopt in their farm to earn a sustainable income from the farming. Dr. Nagaraja, T., scientist (Plant Protection) KVK, Hassan has chaired the programme and during his presidential remarks he said that what is the global demand for honey and how farmers should use this opportunity to supply honey to the market. he also briefed the symptoms of Snail attack in Banana, what are technologies demonstrated by KVK to manage Snail attack in Banana and what is the results. Further, he explained the farmers regarding the scientific bee keeping practices and what is the use of scientific bee keeping.



Finally, farmers were taken to the demonstration plots to show the results of demonstrated technologies. Dr. Arunkumar, B. R., Scientist (Soil Science), Dr. Sanketh, C. V., Scientist (Agricultural Extension), Dr. Pallavi, N., Scientist (Crop Physiology), KVK, Hassan and Mr. Mohan, Agriculture officer, Kundur hobali, Alur taluk were participated in the programme.

Mr. Manjunath and Mr. Dharmappa Progressive farmers of Alur taluk and 65 Farmers of Kallikoppalu and surrounding village were also participated in the programme.



'KRISHI SAKHI' TRAINING PROGRAM FOR COMMUNITY RESOURCE PERSONS

Krishi-Sakhi (Community Resource Persons of farm Livelihood) training programme was conducted at KVK Haveri. About 30 farm women were trained on "Agro Ecological Practices" who were selected by Sanjeevini-KSRLPS and Zilla Panchayat Haveri. This six-day program was organized by KVK in collaboration with Department of Skill Development, Entrepreneurship and Livelihood, Government of Karnataka for the women members, one from each gram panchayat.

In the inauguration programme Dr. Ashoka P, Senior Scientist and Head KVK Haveri narrated that Krishi Sakhi are working in rural area at panchayat level and they are link between women self-help groups and different line department. It is a new idea which helps to directly deliver many programs of agriculture department and universities to the farmers at the village level. Climate change impacts, market fluctuations and importance of food production should be conveyed to the farmers by Krishi-Sakhis in the coming days.

Chief guest of the programme Shri. Huliraj H, DDA-2, Agriculture Dept. Haveri in his speech explained the responsibility of the Krishi Sakhi extension workers, they should join hands with the department in future projects related to agriculture and livelihood activities and become a bridge between research, extension and farmers.

Dr. M. V. Manjunath, Dean (Agri) and Campus Head, College of Agriculture, Hanumanamatti presided over the inauguration function. Mr. Parashuram Pujar, Assistant project manager from Zilla Panchayat, Haveri and Mr. Ramesh Dasara, Haveri, participated as guests and explained about the activities of Krishi Sakhi. The programme was conducted during the period between 21-11-2022 to 26-11-2022. Sixteen resource persons thought the different agriculture topics to the participants. An exposure visit was also arranged to the integrated farming system adopted farmer field, Vermicomposting production unit, Sheep rearing, Backyard poultry and Nursery unit.

"DISTRICT LEVEL CASHEW CROP SEMINAR"



District Level "Cashew Crop Seminar" was organized by ICAR-KVK, Haveri (Hanumanamatti) in collaboration with Directorate of Cashewnut and Cocoa Development, Cochin, Kerala on 29.11.2022. In introductory speech, Dr. Ashoka P. Senior Scientist and Head of ICAR-KVK, Haveri (Hanumanamatti) briefed the

importance of cashew crop in foreign exchange earnings and suitability of Haveri district for cashew crop cultivation. Later this program was inaugurated by the Dr. Venkatesh N. Hubli, Honorable Director Cashewnut and Cocoa Development (DCCD), Cochin, Kerala. Dr. Venkatesh N. Hubli addressed the farmers, that the Government of India is bringing many schemes for the farmers to export raw cashewnut to foreign countries and this will help the farmers to be encouraged. If we take care of this crop for three years, the crop will take care of us for 30 years, just like gold is extracted from barren land. He said cashew is a suitable crop to increase income and reduce agricultural related expenses and farmers should grow cashew crop with appropriate inter-cropping. He opined that it is better to use organic fertilizers than to grow crops using only chemical inputs in agriculture. Dr. M. V. Manjunatha, Dean (Agri) and Campus Head, AC, Hanumanamatti opined that crop based seminars will help the needy farmers to achieve higher productivity. Shri. B. Y. Bumannavar, progressive farmer of Hulakoti, shared his experience in cashew crop cultivation and marketing aspects. Mr. Jayadeva Agadi, Progressive farmer and cashew crop cultivator, Haveri and Kannada Rajyotsava Award Winner, Dr. Nagaraja Adivappa, Professor Horticulture, Mr. Revannasiddyya, Deputy Director of Agriculture, Smt. Geeta Ramesh Madiwalar, Gram Panchayat member participated in the seminar. The staff and more than 120 farmers/farm women participated in this program.



KVK IDUKKI TO IMPLEMENT TRIBAL SUB PLAN PROJECT ON ENSURING SUSTAINABLE LIVELIHOOD SECURITY OF TRIBALS IN REMOTE VILLAGES OF ADIMALY BLOCK FUNDED BY ICAR-NBAIR, BENGALURU



ICAR- Krishi Vigyan Kendra, Idukki implement's a Project entitled "Ensuring Sustainable Livelihood Security of Tribal in Remote Tribal Villages of Adimaly Block, Idukki District in Kerala" under Tribal Sub Plan funded by ICAR-National Bureau of

Agricultural Insect Resources (NBAIR), Bengaluru at Plamalakudy Tribal Village at Adimaly. The programme was inaugurated by Dr. S N Sushil, The Director ICAR – NBAIR, Bengaluru. Key note address was delivered by Dr. K. Thimmappa, Principal Scientist (Agricultural Economics), ICAR-Agricultural Technology Application Research Institute, Zone-XI, Bengaluru. Remarks on the programme were delivered by Mr. Milu Mathew, Plant Protection Officer and Central Insecticide Inspector, CIPMC Kakkanad, Kochi, Mr. Joji James, Range Forest Officer, Adimly and Ms. Siji, Agricultural Officer, Adimaly. The inaugural session was followed by technical sessions on Technical sessions on role of macrobials in organic agriculture was delivered by Dr. S. Salini, Senior Scientist, ICAR- NBAIR, Bengaluru, role of microbials in organic agriculture by Dr. R. R. Rachana, Scientist,



ICAR- NBAIR, Bengaluru, General overview on IPM in crops by Mr. Milu Mathew, Plant Protection Officer and central Insecticide Inspector, CIPMC Kakknad, Kochi, IPM in spice crops by Mr. Sudhakar S, SMS (Plant Protection) and INM in spice crops Ms. Manju Jincy Varghese, SMS (Soil Science), KVK Idukki. The Director ICAR – NBAIR, Bengaluru distributed Inputs like Black soldier Fly Larvae production unit and EPN as the NBAIR technological products to tribal farmers of Plamalakudy. BSF larvae technology has been evolved by utilizing BSF to decompose Home/farm waste and the larvae as a protein rich food for poultry along with conventional feed. The BSF larvae can be mixed with conventional feed with the ratio of 2% dry matter basis. EPN plays a vital role Control of Insect Pests – Root Grubs in spices. Along with these technological inputs, Bee boxes for Promotion of alternative livelihood opportunities and to increase better pollination in small cardamom, IISR- PGPR capsule – to promote growth and increases the resistance of crops towards diseases, enhances root production, nutrient mobilization and use efficiency, crop growth and yield and it reduces Nitrogen requirement by 25%. IISR - ginger special - to mitigate the micronutrient deficiency in ginger, VAM biofertilizer inputs for Solubilizing and mobilizing the fixed phosphorus within the soil and makes it available for the plants. The inputs were distributed to 100 tribal farmers.



“AGRO ECOLOGICAL PRACTICES” FOR COMMUNITY RESOURCE PERSONS OF FARM LIVELIHOOD (KRISHI SAKHI III BATCH)

ICAR-Krishi Vigyan Kendra, Kalaburagi-I has organized six days Agricultural livelihood community resource persons (KRISHI-SAKHI) III batch training programme in collaboration with Mission Director, Sanjeevini-KSRLPS and Zilla Panchayat, Kalaburagi on 19.11.2022. Senior Scientist and Head Dr. Raju G. Teggelli



welcomed the guest and briefed about the KVK, importance of 'Krishi Sakhi' and the role of trained Sakhi in strengthening the agriculture sector as well as create awareness on agricultural activities and requested to Krishi Sakhis will make available the latest technologies at the door step of farmers. Sri Lohit Kumar, District Programme Manager, Zilla Panchayat, Kalaburagi inaugurated the event and explained about role, mandates, purpose and also explained criteria, process, roles and responsibility of Krishi Sakhi and procedure for selecting candidates for the Krishi Sakhi training programme.

Sri Lohit Kumar, District Programme Manager, Zilla Panchayat, Kalaburagi inaugurated the event and explained about role, mandates, purpose and also explained criteria, process, roles and responsibility of Krishi Sakhi and procedure for selecting candidates for the Krishi Sakhi training programme. Smt. Ambika, District Management Information System and Nagaraj Young Professional, Zilla Panchayat, Kalaburagi participated as guest. Dr. B. M. Dodamani, Assistant Director of Research, Zonal Agricultural Research Station, Kalaburagi participated as Chief Guest in the programme and in his speech advised the trainees to utilize the improved technologies available at University and help the farmers by implementing in their fields with the help of scientists. Dr. M. M. Dhanoji, Dean, College of Agriculture, Kalaburagi in his presidential address he said that participants of this programme Krishi sakhi's should transfer the technologies in effective manner to the farmers and encourage integrated farming systems in the farmers field and help them to achieve sustainability in their income. During six days training programme gave 24 different classes from various scientists of the university and trainees were taken to exposure visit to progressive farmers' fields and different demo units. On the closing ceremony post evaluation and feedback was collected from participants and participants expressed their experience about the programme and total 30 participants were collected the certificates. Dr. Zaheer Ahamed, Scientist (Plant Pathology) anchored and Dr. Shreenivas B. V, Scientist (Soil Science) thanked the guests.

AWARENESS TRAINING PROGRAMME ON POMEGRANATE CULTIVATION

ICAR-Krishi Vigyan Kendra, Kalaburagi-I has organized one day awareness training programme on pomegranate cultivation for suitability in Kalaburagi



district under SCSP scheme in association with National Research Centre on Pomegranate, Solapur on 29.11.2022 at KVK campus, Kalaburagi. The programme was inaugurated by Senior Scientist and Head Dr. Raju G. Teggelli and scientist team of NRCP, Solapur, and briefed highlighted the importance of pomegranate crop in district and its health benefits, Govt schemes and suitability of crop cultivation.

Horticulture Scientist Dr. Vasudev Naik highlighted shared details about IFS system and fruit crops importance in Kalaburagi district for doubling of farmer's income. The Scientist Dr. Prakash Patil, Dr. Pinky Raigond, Dr. Shilpa Parashuram, Dr. Mallikarjun Harsur, Dr. Roopa Sowjanya explained in detail about pomegranate crop with power point presentation about the land suitability, soil type, different pomegranate varieties, scope of cultivation, Agronomy of crop cultivation, plant protection, post-harvest technique and marketing. Also arranged farmer and scientist interaction session, farmers are pointed out that scope of growing pomegranate crops in the district. In this programme more than 85 farmers from different talukas of Kalaburagi district viz., Vijayapur, Suntanur, Bhognalli and Kadaganchi were participated and taken the awareness knowledge on crop cultivation. Plant pathologist Dr. Zaheer Ahmed welcomed and thanked by Dr. Yusufali, Scientist (Agronomy). Smt. Sujata, President, Gram Panchayat, Suntanur, Ambru Chawan, Namdev Rathod, Progressive farmers and KVK staffs were presented.

ANIMAL HEALTH CAMP



ICAR-Krishi Vigyan Kendra, Kalaburagi-I organized Animal Health camp and vaccination programme in collaboration with Department of Animal Husbandry and Veterinary Science and Alembic Pharmaceutical company at Sunthan Village, Kalagi Taluka Kalaburagi district on 21.11.2022. In this programme, Dr. Manjunath Patil, Scientist (Animal Science) explained about the different diseases of animals and as well as their preventive measures also informed about fodder cafeteria. During the programme 490

livestock viz., 460 cattles, 300 buffaloes were vaccinated against Foot and Mouth disease also method demonstration on application of Ectoparasiticide (Flumethrin solution, Tick out soap) on bullock was shown. Department and company officials and staffs and more than 200 farmers were participated and benefitted from the programme.



ON CAMPUS CAPACITY DEVELOPMENT PROGRAM ON NUTRI-GARDEN AND ITS IMPORTANCE

ICAR- KVK, Kalaburagi-II (Raddewadgi) conducted on campus capacity development programme on Nutri-garden on 21-11-2022 at ICAR-KVK, Kalaburagi-II (Raddewadgi). During the training program Mr. Chethan T., Scientist (Horticulture) explained in details about the vegetable production technologies using little space in and around the home and farms and also briefed about the nutritional deficiencies in common now a days with our daily diet and its effective management by using fresh vegetables and biofortified varieties for the wellness of family. After the training programme in the interaction session discussion about integrated approach for management of pest and diseases in kitchen garden through locally available botanicals insecticide and bio pesticides to obtain pest and disease free and least residue toxicity to get quality vegetable and fruits. About 35 farmwomen benefitted the said training program.

DIAGNOSTIC FIELD VISIT OF CHILLI CROP BY ICAR-KVK, KALABURGI-II (RADDEWADGI) SCIENTISTS AT CHIGRAHALLI TQ. JEWARGI

Dr. Basavaraj, Scientist (Agril. Entomology) visited to chilli crop at Chigrahalli village Tq. Jewargi on 22-11-2022. The crop is damaged by invasive black thrips, *Thrips parvispinus* in the farmer's field. It was recommended that

- Sowing of border crops like maize, bajara, sorghum which acts as a barrier and trap for the thrips.
- Installation of yellow sticky traps 35 No.s / ac
- Application of neem cake 200kg/ac to induce resistance
- Foliar application of fipronil 5% SC @ 0.5 ml/lit or diafenthiuron 1.0g/lit or spinetoram 11.7% SC @ 1.0 ml/lit of water

Dr. Chethan T, Scientist (Horticulture) suggested improved scientific production practices of chilli to enhance the productivity of chilli crop and also recommended spraying and drenching of bio inoculants like *Beauveria bassiana*, *Verticillium lecanii* and *Metarhizium anisopliae* for the management of sucking pests and root grubs. To induce immunity, spraying of macro and micro nutrients suggested.



VCRMC MEETING AND FIELD VISITS OF NICRA

Dr. D. V. Srinivasa Reddy, Principal Scientist and Nodal Officer of NICRA Project, ATARI Bengaluru has attended VCRMC meeting held at Chengalayi Krishi Bhavan to discuss about the progress of NICRA activities and to prepare further action plan. Meeting of VCRMC held on 19th November 2022 was inaugurated by Sri. V. P. Mohanan, President, Chengalayi Grama Panchayath. Smt. Anitha, President, VCRMC Chengalayi presided over the meeting. Dr. D. V. S. Reddy has given key note address and suggested activities to be taken under NICRA programme. Dr. Jayaraj P., Programme Coordinator, KVK has elaborated the activities undertaken under NICRA programme and activities planned to take up further under the programme.



Sri. Janardhanan, Chairman, Standing Committee (Development), Smt. Anu V., Assistant Professor (Agronomy), KVK, Sri. Ragesh, Agricultural Assistant, Krishi Bhavan Chengalayi and Sri. Kunhikrishnan, Secretary, VCRMC, Dr. Parvathy A., Assistant Professor (Agricultural Extension), KVK, Smt. Sujaina M., SRF, NICRA project has attended the meeting and participated in discussion.

Farmers expressed their views and suggestions regarding the implementation of NICRA project. Field visit was also conducted to evaluate the activities undertaken under NICRA project. Team visited Mungam Padasekharam, Kundankai Padasekharam and turmeric plot cultivated by farmer group.



RURAL INNOVATORS MEET 2022

The ICAR-Krishi Vigyan Kendra Kasaragod, ICAR-CPCRI and Kerala State Council for Science Technology & Environment (KSCSTE) jointly organized "Rural Innovators Meet (RIM)-2022" at ICAR-CPCRI, Kasaragod from 25th to 27th November 2022. During the event 34 innovations by rural innovators across Kerala were demonstrated. The event was inaugurated by Dr. B Ashok, Secretary Kerala State Agriculture Department and was presided over by Dr.K. P. Sudheer, Executive Vice



President, KSCSTE and Secretary, Science Technology & Environment Department, Government of Kerala. The exhibition of innovations and agri expo "Krishi Darpan -2022" was inaugurated by Dr. V. Venkatasubramanian, Director, ICAR-ATARI, Bengaluru. Dr.K Muralidharan, Head Social Sciences division and Director i/c ICAR-CPCRI delivered the special address. Sri.Shaji Vargese and Joseph Peechanattu bagged 'The NABARD Rural Innovation Award' comprising of Rupees 25,000/- and certificate for two best innovations. Sri. Shaji Vargese got the award for his invention of organic seed tray and the machinery making it. Sri.Joseph Peechanattu invented an easy paper bag machine which can hold 10 kg of materials for easy transport which is an alternative for polyethylene bags.our special award worth Rupees 5,000/- each and certificates were given to four innovations. An invention of three in one table top unit for making noodles, coconut oil and coconut scrapper for home scale use made by Sri. P. P. Shyju and Ft Ramya Shyju won the special award. Sri Joshi Joseph won the special award for his invention of Renov crushing machine for powdering fodder, dried dungs and goat manure.

K Joy Augustine won the award for 'Kera peelar', a device for easy de-husking of coconuts. Sri. K B Anoop, Manju Suresh, Srijith S Nair and S Gokul Krishnan won the special award for their invention of Asegarur vida for screening eggs for viability which can be used in hatcheries. The awards were given away by Dr. Gopakumaran Nair, Chief General Manager, NABARD, Kerala Region during the valedictory function. Dr. Anitha Karun, Director ICAR-CPCRI chaired the function and Dr. K Muralidharan, Head Social Sciences division delivered the special address. A patent clinic was also organized as part of the event for providing assistance to the Rural Innovators to file patent applications.

**KRISHI DARPAN 2022
(TECHNOLOGY WEEK & KISAN MELA 2022)**



The ICAR-Krishi Vigyan Kendra, ICAR-CPCRI Kasaragod organized a Technology week and Kisan mela from 25th to 30th November 2022 at ICAR-CPCRI Kasaragod. The event was inaugurated by Dr. V Venkatasubramanian, Director, ICAR-ATARI, Bengaluru and was presided over by Dr. K Muralidharan, Head Social Science division and director i/c

ICAR-CPCRI Kasaragod. An exhibition comprising of 20 stalls by agricultural nurseries, agro machineries, agro inputs de alers and various other agencies was organized for providing latest agricultural inputs and services to the farmers. As part of the technology week celebrations, seminars on various topics were organized from 26th to 30th November 2022. The topics covered include integrated crop management in coconut, arecanut and cocoa, climate change in agriculture: problems in opportunities, natural farming, potential in floriculture business in Kasaragod, farm tourism: an opportunities in Kasaragod district, apiculture, scientific goat rearing, integrated crop management in cashew and value addition in jack fruit and its market opportunities. Dr. Anitha Karun, Director, ICAR-CPCRI Kasaragod delivered valedictory speech to the farmers on 30th November 2022 and stressed for improving agricultural infrastructure for secondary agriculture. She also stressed the use of high yielding varieties, latest agricultural agricultural technologies and plant protection measures to be adopted by farmers for improving the production, productivity and profitability.



CAPACITY DEVELOPMENT PROGRAMME ON NATURAL FARMING

ICAR-Krishi Vigyan Kendra, Gonikoppal conducted two days Capacity development programme on Natural Farming on 14th and 15th November, 2022.



The programme was inaugurated by KVK head Mr. Devaiah K A. He spoke about components of natural farming, A progressive farmer Shri. Thammaiah from Chawdikatte village, Hunsur Taluk was invited as a chief guest, who is also practising natural farming since 2015 delivered a lecture on adoption of natural farming in their farm land. He explained in detailed about sustainable way of farming is also known as 'Do-nothing

farming' or 'No-tillage farming help in Physical work and labour can be reduced as compared to other agricultural systems. Yields similar to chemical agriculture and there is a steady increase in soil fertility year after year and he also explained key principals of natural farming. On day two, the farmers were taken for field visit to natural farming block of Krishi Vigyan Kendra-Gonikoppal located at Athur village. The farmers were given wide practical knowledge on practising and adoption of natural farming. The farmers gained huge knowledge and thanked KVK for sharing their valuable information. The entire programme was coordinated by Mr. Veerendra Kumar.K. V, SMS (Plant Protection). A total of 41 farmers attended the Capacity development programme.



FIVE DAYS EDP PROGRAMME ON PROCESSING AND VALUE ADDITION OF TOMATO



KVK Kolar conducted five days EDP programme on Processing and Value addition of Tomato from 15.11.2022 to 19.11.2022 at KVK, Kolar. Dr Chikkanna G. S., Scientist (Home Science) delivered lecture on preparation of Ragi and Tomato value addition and conducted hands on training program on Preparation of Tomato Ketchup, Tomato Pickle, Tomato Sauce and Ragi malt, Ragi pappad.

Dr Akshatha M, Scientist (Home Science), KVK, Chintamani delivered lecture on preparation of Mango and Groundnut value addition. Conducted hands on training on Preparation of Mango pickle and Groundnut chikki. Around 25 SHG members participated and benefited from the programme.

FFS- SESSION-III ON MANAGEMENT OF MULBERRY AND SILKWORM DURING WINTER SEASON



ICAR- KVK Kolar organized FFS session III on Management of Mulberry and Silkworm during winter season at Gaddekannuru village, Kolar taluk on 19.11.2022. During III session Shri K. Thulasiram, Senior Scientist & Head briefed on Role of Trichogramma chilonis as IPM practices under mulberry ecosystem and conducted method demonstration on fixing of tricho cards in mulberry. Dr. Shashidhar K.R, Scientist

(Sericulture) gave information on Management of mulberry and silkworm during winter season. Around 25 sericulture farmers participated during the session.

CAPACITY DEVELOPMENT PROGRAMME ON INTEGRATED CROP MANAGEMENT OF TOMATO AND POTATO



KVK Kolar organized off campus capacity development programme on integrated crop management of tomato and potato at five different places in association with Seghal foundation. Rajenahalli, Malur taluk on 16.11.2022, Gudipalli, Mulbagilu taluk on 21.11.2022, Budikote on 25.11.2022, Kamasamudra on 28.11.2022 and Tayluru on 30.12.2022. KVK, Kolar Scientists Dr Sadananda Mushrif,

Scientist (Plant Protection) delivered lecture on integrated pest and disease management of tomato and potato and Dr Anilkumar S, Scientist (SS&AC) gave information on Soil Health Management in Horticulture crops and soil test based nutrient application. Dr Jyothi Kattegoudar, Scientist (Horticulture) delivered lecture on crop production technology of potato and tomato. A total of 290 farmers were benefited from the program.

ON CAMPUS CAPACITY BUILDING PROGRAM ON SCIENTIFIC DAIRYING AND MANAGEMENT OF DISEASES OF CATTLE.

KVK Kolar and DHAN Foundation organized a capacity building program on scientific dairying and management of diseases of cattle on 21.11.2022 at KVK, Kolar. Dr. Viswanath, Chief veterinary officer gave information on scientific dairying and management of diseases of cattle while Swati G R, SMS (Agrometeorology) gave information on weather forecasting and its applications. 48 farm women and farmers have participated in the program.

CAPACITY DEVELOPMENT PROGRAMME ON INTRODUCTION OF DISTRICT AGROMET UNIT & IMPORTANCE OF WEATHER FORECASTING IN AGRICULTURE AND POPULARIZATION OF WEATHER BASED MOBILE APPLICATIONS.



KVK, Kolar organized a capacity development programme to final year RAWEP students of college of Agriculture, Chintamani at KVK, Kolar on 22.11.2022. Mrs. Swathi GR SMS(Agromet) chaired the program. During the programme, addressed the gathering regarding mandates of KVK, Importance of weather-based farming, use of various weather based mobile applications(Meghdoot, Damini, Mausam), How to utilize the AAS Bulletins in planning various agricultural operations. A demo was given on MEGHDOOT, steps to download, registration and usage of this app in farming activity. Provided information about types of weather forecasting and how weather conditions prevail for next five days and next one month is discussed. Also pest & disease incidence during the prevailing weather conditions in major crops of the district and also possible pest and disease outbreak were disseminated and interacted with the trainees on various agri-related issues. 70 RAWEP students were benefitted from the programme.

ON CAMPUS CAPACITY DEVELOPMENT PROGRAMME ON ALTERNATE HORTICULTURE CROPS FOR INCREASED WATER TABLE & THEIR CONSEQUENCES AND PROSPECTS



KVK Kolar organized on campus capacity development programme on alternate horticulture crops for increased water table & their consequences and prospects in association with ATMA, Kolar on 29.11.2022.

Dr Nagaraj K. S., Assistant professor (Fruit science), COH, Kolar delivered lecture on butter fruit and dragon fruit cultivation practises. Dr. Channayya Hiremath, Scientist CIMAP and Dr K Bhaskaran on suitable aromatic crops and its economic feasibility. Mrs. Swati, SMS (Agromet) gave information on climate change and its impact on agriculture crops. Dr Jyothi Kattagoudar, Scientist (Horticulture) gave information on important points to be considered while choosing perennial Horticulture crops. A total of 80 farmers participated in the program.

NATURAL FARMING- A SUSTAINABLE MODEL FOR AGRICULTURE

Natural farming is an ecological farming approach established by Masanobu Fukuoka. It generally adopts chemical free system of farming which encourages farmers to use local breeds of seeds, native varieties of vegetables, grains, pulses and other crops. In natural farming there is no ploughing, no tilting of soil, no fertilizers, and no weeding is done just the way



it would be as in natural ecosystems. Decomposition of organic matter by microbes and earthworms is encouraged right on the soil surface itself, which gradually adds nutrition in the soil, over the period. There are many working models for natural farming. Zero budget Natural Farming (ZBNF) developed by Padma Shri Subhash Palekhar is the most popular model. In ZBNF, soil is always covered by a layer of organic mulch, which encourages efficient microorganisms. It requires a Desi cow for dung and urine. As inputs two types of formulations- which fulfil the nutritional requirements and which repel pests and control diseases in the crop are preferred. Jeevamrit and Ghan jeevamrit helps in fulfilment of nutritional requirements and enhances active beneficial microbes in soil. The formulations utilized for insect control includes Neemastra, Brahmastra, Beejamrit and Agnistra. Spray of Jeevamrit and Desi cow urine remain effective for the control of diseases as prophylactic spray in Natural Farming approach. Green manuring, residue incorporation, mulching, crop rotation and minimum tillage practices are also recommended in natural farming. Research shows a positive impact on soil and crop yields as a result of adopting this sustainable model. In view of mitigating the climate change and safe guarding the agro-biodiversity, the natural farming is considered as a viable solution. Suitable blending of natural farming approaches with modern scientific approach is needed to promote natural farming.

In the wake of this scenario, Department of Agriculture, GoI and ICAR, have taken sincere efforts to promote these sustainable models through a broad scheme "Out-scaling of Natural Farming" and the duty is entrusted with the KVKs across the country. ICAR-Krishi Vigyan Kendra, Kollam has taken sincere efforts in this regard by arranging a two days training programme for a farmer group of 40 on 18-10-2022 and 20-10-2022 and an awareness campaign for the farmers (80 numbers) of the district on 09-11-2022 respectively to disseminate the concepts of natural farming with its do's and don'ts.



FIELD DAY ON WEED MANAGEMENT IN PADDY



ICAR-KVK Gangavathi in collaboration with Bayer company organised Field Day on weed management in paddy at Hosalli village on 16.11.2022. Dr. Raghavendra Yaligar, Senior Scientist and Head, KVK, Gangavathi addressed

the farmers that, now day's farmers are facing many problems like weedy plots and labourer shortage, to overcome these problems, farmers can use weedicides to control the weeds effectively at lower cost, also suggested to go for teak plantation on bunds of the fields to get additional income. G. Narappa, Senior Technical Officer (Farm Management) insisted the farmers, not to burn the paddy straw after harvesting by explaining the disadvantages of straw burning, also suggested to incorporate paddy straw in to the soil by using profel or waste decomposer instead of paddy straw burning. He had given lecture on the integrated weed management in paddy and suggested the farmers to go for Alternate wetting and drying method in paddy to save irrigation water around 30%. More than 40 farmers were participated in this field Day programme.

FIELD DAY ON "INCREASING THE PADDY PRODUCTIVITY BY USING NANO UREA AND NANO ZINC.



ICAR-KVK Gangavathi in collaboration with IFFCO company organised Field Day on weed management in paddy at Danapur village on 18.11.2022. Dr. Raghavendra Yaligar, Senior Scientist and Head, KVK, Gangavathi had given

information on pest and disease management in paddy. Raghavendra, Field Officer, IFFCO company had given information about procedure to use nano urea and nano Zinc and their advantages. Smt. Farzana Korabu, Senior Technical Officer (Soil Science) informed the farmers about uses and benefits of applying nano urea and nano zinc. G. Narappa, Senior Technical Officer (Farm Management) had given lecture on the nutrient and water management in paddy. Pampanagouda, Channaveeraswamy and Sharanappa, FLD farmers shared their experience about using nano urea and nano zinc in paddy crop with the farmers Dr. Kavitha Ullikashi, Scientist (Home Science), KVK, Gangavathi and IFFCO officers were participated in the programme. More than 40 farmers were participated in this field Day programme.

FIELD DAY ON SALINE TOLERANT VARIETY GNV-11-09



ICAR-KVK Gangavathi organised Field Day on Saline tolerant variety GNV-1109 at Challur village on 22.11.2022. Dr. Raghavendra Yaligar, Senior Scientist and Head, KVK, Gangavathi in his inaugural speech addressed the farmers to get the benefit of field days on new varieties and technologies, also informed the farmers, GNV-1109 paddy variety can be grown in saline soils to get higher yield and income.

Dr. Mahantha Shivayogayya K, Scientist (GP&B), AICRP on Rice, Gangavathi explained the characteristics of the paddy variety GNV-1109 which is also known as Gangavathi Churumuri variety, used for puffed rice making, suitable for saline soil, high yielding, non shattering, short duration (130 days) and requires less fertilizer & sprays compared to other paddy varieties viz., BPT-5204, RNR-15048 etc. J. Radha, Scientist (SS&T), ICAR-KVK, Gangavathi briefly explained about seed production practices in paddy. Smt. Farzana Korabu, Senior Technical Officer (Soil Science) insisted the farmers to avail the benefits of Front line Demonstrations on New varieties and technologies by implementing in farmers field. Birappa, Agriculture Officer, RSK, Navali suggested the farmers to use compost and other organic fertilizers to improve the soil fertility. Mahadevappa and Sharanappa, FLD farmers Challur, both shared their experience of growing paddy variety GNV-1109, as they are expecting higher yield in saline soil where as other varieties had given poor yield due to low plant establishment at transplanting stage. More than 50 farmers of Challur and surrounding villages were participated in the Field Day programme.



CAPACITY DEVELOPMENT PROGRAMME ON "SCIENTIFIC SEED PRODUCTION AND FARMING PRACTICES OF PEARL SPOT"



Krishi Vigyan Kendra, Kottayam organized an off campus training programme on scientific seed production techniques and the emerging farming practices of the State fish of Kerala – *Eetroplus suratensis* (commonly known as Pearl spot) on 24th November, 2022 at Matsyafed Palaikkari Fish Farm in Vaikom. Pearl spot is a highly sought after fish of Kerala with high market value and native to the backwaters of Vembanad Lake.



Eventhough it breeds naturally in ponds the seed collection and slow growth patterns are major setbacks in farming.

The Matsyafed fish farm spread in an area of 120 acres has demonstration units of cage and pond farming of Pearl spot in a vast area of 90 acre ponds.

The farm is also designed as an aquatourism centre with sport fishing, boating and Seafood restaurant. The technical sessions on scientific seed production practices and collection of seeds and scientific farming practices were handled by Dr. Vikas P. A., SMS (Fisheries), ICAR- KVK, Ernakulam, Dr. Navya R. SMS (Fisheries), KVK, Kottayam and Dr. TSivaprasad P. S., Farm Manager, Matsyafed fish Farm, Palaikkari. About 40 farmers from different parts of Kottayam district participated in the training programme.

“WORLD FISHERIES DAY” CELEBRATED AT KVK, KOTTAYAM

World fisheries Day is celebrated every year on November 21st to ensure the sustainable stock of fishes and healthy ocean ecosystems due to the declining trend in marine fisheries. The increasing demand for fish can be met by increase in aquaculture production and maintenance of healthy fish stock and aquatic ecosystems. KVK, Kottayam organized the event by stocking fish seeds in the integrated fish ponds of five master trainer IFS farmers of Kottayam District. The fish fingerlings of major varieties of carps, tilapia and pearl spot were stocked in the integrated fish ponds with duck, horticulture and rice. The programme coordinator, Dr. Jayalekshmi G. inaugurated the function by releasing fish seeds in the integrated fish pond of KVK, Kottayam and Dr.Navya R., SMS (Fisheries) gave an awareness on the enhancement of fish production in integrated farming systems.



STUDENT CADETS FOR NATURAL FARMING AND SOIL HEALTH



A soil health camp with classes on introduction about Kerala soil, status, crop deficiency symptoms and soil sampling for nutrient analysis were organised by KVK experts Dr P.Ratha krishnan and Dr K.M. Prakash. Students of Naduvannur Hre Secondary

School NSS wing and farmers of Naduvannur town residence association were trained on Jeevamirtham making and they performed the duty of Natural Farming Ambassadors to improve the soil health in Naduvannur Panchayat. The programme was inaugurated by Mr T. Dhamodharan, President, Naduvannur Grama Panchayat and attended by staff of Kavumthara Service Cooperative Bank, Kavil. The students collected about 81 soil samples and the samples are being analysed at IISR, Kozhikode Soil testing lab and soil health cards were prepared for distribution to the farmers.

DIVISIONING OF BEE COLONY DEMONSTRATED AT FARMER FIELDS



Farm Field School on "Maintenance of honey bees in Coconut garden" was conducted by KVK, Peruvannanuzhi with introductory class and demo on division of bee colonies. The practical session was conducted by Mr Keerthi Chandran, a progressive

Apiculture Farmer from Kariathumpara. Two group of farmers from Gramina Farmers Club, Kavil and Diksha Farmers Club, Elankamal were trained during the programme organised by Dr K.K. Aiswarya and Dr P. Ratha krishnan, KVK, IISR staff. This FFS activity is scheduled with another 8 sessions on Bee maintenance and honey harvesting.

BASELINE SURVEY ON COCONUT HALWA

KVK-Lakshadweep has been invited by Lakshadweep Development Corporation Limited (LDCL), UT administration of Lakshadweep to work on





lodging a geographical indication (GI) for the unique coconut value added product of Lakshadweep the "Coconut Halwa". A working committee has been formed by LDCL involving KVK for this assignment. The first round of discussion lead for undertaking a baseline survey for understanding the potential of coconut halwa produced in Lakshadweep. The first round of baseline survey was organized at

Agatti islands involving scientists of KVK and officials from LDCL from November 18-20, 2022. The outcome of the first round of baseline survey was on identification of the difference of coconut halwa produced in mainland and in the islands. The base ingredient across the coconut halwa producers in Lakshadweep is with coconut sap "neera". However, coconut halwa produced in mainland using coconut has a base ingredient with jaggery. The coconut halwa produced in Lakshadweep has a long history and its presence is for more than 80-90 years. The production of coconut halwa has been documented by the team which also differs from the mainland. Apart from that the potential of coconut halwa and its movement from island to mainland also has been documented. The survey was led by Dr. P.N. Ananth, Head, KVK along with officials from LDCL. During the three-day baseline survey, four SHGs and 12 individual entrepreneurs producing coconut halwa were involved. Both survey and focus group discussion were the techniques employed. The forthcoming round of baseline survey has been planned in two more islands. ICAR-CPCRI has been invited for providing expertise in the process of lodging application for GI tagging by the UT administration for this unique product.



SCIENTIFIC ADVISORY COMMITTEE MEETING



The 19th Scientific Advisory committee (SAC) meeting was held on 29th November at KVK Malappuram. The meeting was chaired by Dr. Jacob John, Director of Extension, Kerala Agricultural University.

Release of leaflets during SAC - 2022



A special address was given by Dr. M. J. Chandre Gowda, Principal Scientist, ATARI Bengaluru. Officials of line departments, IISR, research station of KAU and progressive farmers also actively attended the event. Programme Coordinator, KVK Malappuram presented the

overall progress report of KVK and extension activities carried out by KVK team during last year. Newsletter, KVK times, leaflets, a training manual on food processing under ARYA and the bioinput, Trichoderma liquid formulation were released during the event.

FIELD VISITS BY NODAL OFFICER, ATARI

Dr. M.J. Chandre Gowda, Principal Scientist, ATARI visited the farmers' fields and entrepreneurs developed through technology backstopping of KVK Malappuram. Scientist was accompanied by Programme coordinator and SMSs. The team visited the enterprise 'Eco Froot'- developed through ARYA project of KVK Malappuram, coconut processing unit of Ms. Sushama, the winner of Kisan samrudhi award



of ATARI zone XI. The GI tagged crops Edayur chilli and Tirur betel also were visited to assess the KVK interventions made in uplifting the significance of the crops. The OFT and FLD plots and farm of Mr. Haridasan, A progressive farmer and SAC member of KVK

Malappuram also was visited by the team. The nodal officer gave suggestions on more interventions to be made to improve the production and to enhance the income of farmers and entrepreneurs.

AGRI-START UPS AND ENTREPRENEURIAL ECOSYSTEMS IN INDIA



Programme coordinator, KVK Dr. Ibraheem Kutty C., attended the 6 days vcapacity development programme on Agri- start ups and entrepreneurial ecosystems – An Indian perspective organized by NAARM – Hyderabad. , which formed an occasion for understanding the entrepreneurial ecosystems, start-ups and enormous government support for promoting them.

The seventeen participants belonging to various backgrounds such as farmers, entrepreneurs, academicians and scientists from seven states interacted and exchanged their ideas for promotion of more business activities related to agriculture sector, since there are very few start ups in India dealing with agriculture related activities.

KVK MODULE TRAINING TO RAWE STUDENTS

RAWE, Rural Awareness Work Experience Programme of final year students of agriculture graduation course is an opportunity to students to understand the rural situations, status of adoption of technologies by farmers, prioritizing farmer problems etc. one module of the programme is KVK module in which they acquire the knowledge of KVK system,

the mandate and other extension activities carried out through KVKs and other aspects related to KVK functioning. A group of seven students from College of Agriculture, Vellanikkara visited KVK and undergone training for one week under the expertise of KVK scientists.



FIELD DAY ON DEMONSTRATION OF PADDY VARIETY RNR-15048



A field day was organised by ICAR- Krishi vigyan Kendra, V.C Farm, Mandya on 19.11.2022 with respect to demonstration of paddy variety RNR-15048, at B. Hullukere village of Mandya Taluk. The demonstration was conducted to deliberate the need for proper management practices for cultivation, nutrient, pest

and disease management. A improved variety RNR-15048 with medium slender grain and medium duration along with integrated nutrient, Pest and disease management practices were introduced. During field day programme Dr.Kamalbai koodagi, Scientist (Home science), emphasized on the need to adopt the integrated farming to achieve sustainability, Dr. Rekha Badalingappanavar, Scientist (Agronomy), Dr. Atheefa Munawery, Scientist (Soil Science) deliberated on the practices to be followed with respect to cultivation, integrated nutrient management and pest & disease management to reduce

he cost of cultivation and increase productivity. Dr. Divya, B. Scientist (Horticulture), urged the farmers to take up Horticulture crops along with Agricultural crops to increase the income. Dr. Mahesh, H.M, Senior technical Officer was present during the programme.



EXTENSION PERSONNEL TRAINING FOR SCHOOL TEACHERS

There are many opportunities to keep the youth in the villages and develop in agriculture. It is imperative that children who are deprived of the opportunity to learn agriculture be provided an opportunity` to learn agriculture through the school curriculum. A two-day training program on 'Importance of Agriculture in School Education' was conducted on 24-25 November 2022 for selected teachers of 26 different schools of Mysore district on the opportunity and priority of school teachers in agriculture with the objective of making the subject of agriculture an interesting and skill-based



one at JSS Krishi Vigyan Kendra. Mr. Shivamallu, Headmaster, JSS School, Suttur who inaugurated the training, told the teachers to teach about agriculture to attract the children towards agriculture and said that since farmers' children are interested in agriculture, they can make progress in agriculture by using modern agricultural technology. Ms. Divya, Senior Scientist and Head (I/c) and in-charge of training, opined that, 73% of children in our country are from rural areas. Despite giving free clothes, shoes, and ree books, 53 percent of girls drop out of school before the age of 9. Education system to be made attractive by including agriculture subject

in syllabus and make them practical in agriculture during the leisure hours. She said that children can be attracted to school by teaching on horticulture, dairy farming, Silk rearing etc.



Dr. Pallavi H.M. Assistant Professor, Horticulture College, Mysuru said that some of the agriculture universities have provided agriculture education in the form of Diploma after PUC. Rural youth may join these type of courses and do their agriculture in their own lands scientifically.

Apart from this many opportunities for agricultural students in agriculture department, voluntary organizations, private companies, banks and higher positions in universities. Due to lack of information, farmers' children are deprived of agricultural education which is reserved for farmers.

Mrs. Netravati Yettinamani, Home Scientist of KVK, explained in detail about the construction and maintenance of kitchen drains, organic terrace garden in the school premises. KVK's horticulturist Dr. Vinay spoke about the control of diseases and pests in natural methods in kitchen gardens and also explained the method of grafts through a demonstration.

Animal husbandry scientist of KVK Dr. Rakshit Raj gave information about earthworm manure, cow shed, fodder crop, azola demonstration units. Kumari Shilpa, gave information about Agriclinic and seed production units. 26 teachers from different schools of Mysore district participated with interest in the training. In order to encourage the teachers, various plants were distributed by KVK to plant in their schools, and they were told to make kitchen garden and make the children aware about agriculture lessons.

SKILL TRAINING PROGRAMME FOR SHG MEMBERS



Skill oriented programme has been organized for the Sri. Srikeshtara Darmastala Rural Development Project SHG members on 27.11.2022. During the programme grafting, honey production skill has been taught through demonstration. Later trainees visited to demo units of the KVK. More than 50 farmers and farmwomen were participated in the programme.



AGROCLINIC FOR BANANA FARMERS AT TRIBAL EXTENSION CENTRE, ATTAPPADY



An agroclinic was organized at tribal extension centre Attappady on November 20th. Scientists from Central Tuber Crop Research Institute and RARS Pattambi and Assistant Director of Agriculture Attappadi also participated in the programme apart from experts from KVK Palakkad.

Scientists from CTCRI gave an introduction on biofortified crop varieties. A demonstration is being conducted by them on these varieties in Attappady. Training on production technologies and pest and disease management in banana was imparted to the farmers. The class was followed by an interactive session for addressing the field problems faced by farmers. An exhibition on various technologies were also arranged as a part of the agroclinic.

AWARENESS PROGRAM ON ORGANIC FARMING

A three days awareness program was conducted at KVK Palakkad from November 24th to 26th. The sessions were aimed to impart technical knowhow and skill based training on different aspects of organic farming including basic principles, various crop production and crop protection technologies etc. One whole day was dedicated for Vrikshayurveda. Hands on training was given on



various preparations such as Jeevamrutham, Beejamrutham, Panchagavya etc. The participants were acquainted with application of biofertilizers and a hands on training was given on production of VAM. Various organic measures for plant protection were discussed in detail and hands on training

was imparted on onfarm production of Trichoderma. About 30 farmers participated in the training program. BSc Agriculture students from College of Agriculture, Vellanikkara also participated actively in the training program as a part of their KVK module under RAWE program.

ADDRESSING YELLOWING IN ARECANUT THROUGH FLD

KVK Palakkad has conducted 5 FLDs on Integrated Nutrient Management for addressing the farmer's problem of yellowing in arecanut palms. Arecanut yellowing is an economically important disease affecting betel palm. Wide spread incidence of this problem has been worrying the farmers of Palakkad district especially Attappady in Mannarkkad



Arecanut yellowing before adopting INM

block as well as Nagalassery and Pattithara panchayats in Thrithala block. The symptoms start with chlorosis spreading along vascular tissue of leaves with a sharp green-yellow border. The yield has been reduced drastically following the infestation finally resulting in fall off of the crown leaves leaving a bare trunk. Integrated Nutrient management especially organic manures (10 kg/palm) and fertilizers (2 splits –May and October 2022) after liming (250g/ palm) based on

the soil test results. Zinc sulphate 25g a span of 7 months in farmer's fields of Att



Arecanut yellowing after adopting INM

the soil test results were done. Soil application of Magnesium sulphate-100g, Zinc sulphate-25g and Borax-20g were also given for each palm. Within a time span of 7 months,

new unaffected emerging leaves were observed in the selected farmer's fields of Attapady Hills.

ON JOB TRAINING ON PROTECTED CULTIVATION – FLORICULTURIST FOR PHYSICALLY CHALLENGED VHSE STUDENTS



The K V K Palakkad is conducting 6 days On Job Training on Protected cultivation Floriculturist for 6 deaf students undergoing second year VHSE. Various sessions in OJT include introduction to protected structures and their components,

sterilization of growing media, irrigation and fertigation, equipments for environmental parameter monitoring as well as special horticulture practices in rose, gerbera, carnation and lilly. The students were given hands on experience on cultivation aspects of these export oriented crops as well as its after care measures. Practical sessions on protray seedling production, mulching sheet and drip installation, fertigation and botanical preparation were also conducted.

A special session on terrarium and bonsai making was also performed for the students. An expert interaction session on enhancement of vase life in flower crops was also conducted for these students. The sessions were carried out by Dr. Resmi J, Assistant Professor (Horticulture) and Dr. Gilsha Bhai, Assistant Professor (Agriculture Engineering) with the help of translator Smt. Jyothi, Vocational Teacher (Physics) and Smt. Vidya Vocational Teacher (ED).

IOT BASED SMART DAIRY FARMING: AN INNOVATIVE DIGITALIZED APPROACH FOR CATTLE MONITORING AND MANAGEMENT



Technology driven products, facilities and Solutions are bringing in critical changes in all sectors of life and dairy sector is not left behind. Maintaining all the relevant records of each cow using app based system that can operate on

mobile phones can go a long way in helping the farmer to maintain records on each cow. Important priorities in a dairy farm are to find the right time for inseminating a cow and to detect diseases, failing which leads to a higher management and feeding cost. ICAR-Krishi Vigyan Kendra, Pathanamthitta for the first time in the district introduced a livestock health monitoring and tracking system that use an Internet of Things (IoT) ear tag and a unique machine learning algorithm to identify sick and cycling animals and alert farmers accordingly through their smart phones. The technology named WeSTOCK is an initiative of Cochin based Brainwired agritech Start Up, an incubate of RAFTAAR Agri Business Incubator Centre of Kerala Agricultural University. KVK, Pathanamthitta initiated the demonstration of IoT based smart dairy farming at Amrutadhara Gaushala, Koipuram Block on 15th November 2022. The program was inaugurated by Dr. Jacob John, Director of Extension, Kerala Agricultural University. Dr. C.P Robert, Senior Scientist and Head, ICAR Krishi Vigyan Kendra delivered the special address on the occasion. Dr. Sency Mathew, SMS (Animal Science), KVK, Pathanamthitta, Dr. Kannan A, Veterinary Surgeon, Thelliyoor and Mr. Obey R Nair, Dairy farm Instructor, Department of Dairy Development spoke during the occasion.

CAPACITY BUILDING PROGRAMME ON JACKFRUIT BASED VALUE ADDED PRODUCTS.

Capacity building programme on Jackfruit based value added products were conducted on 21st and 25th November 2022 by The State Resource Centre for Jackfruit of KVK, Pathanamthitta. Technology of Jackfruit based pulp products and frozen products from Tender Jackfruit were imparted during the programme. A total of 40 trainees from different parts of the state attended the programme.



Pulp based products like squash, RTS, Jelly, Sip-up and Frozen products like burger Patties, Momoos, Cutlet were demonstrated in the practical sessions. In addition to the preparation of products, orientation on various licenses, selection of suitable machineries for the enterprise were also covered.



**TRAINING PROGRAMME FOR EXTENSION FUNCTIONARIES ON
"NUTRITION GARDEN : A WAY TO ELUDE MALNUTRITION"**



An unbalanced diet, lack of nutritional food and pesticide residues in the vegetables and fruits are directly linked to high rates of malnutrition, especially in kids under the age of

5 years. Community based nutrition garden and kitchen gardens can play an important role in enhancing nutritional food security and dietary diversity to combat malnutrition. ICAR-Krishi Vigyan Kendra, Raichur conducted on campus training programme on "Nutrition Garden : A way to elude malnutrition" for anganawadi workers on 21.11.2022 (Monday) in collaboration with Women and child development department, Raichur.



Sri. M. N. Chetan Kumar, Deputy Director, Women and child development department, Raichur inaugurated the programme and created awareness on importance of cleanliness and nutritional food in evacuating malnutrition among children. Honour of guest Smt. Sharanamma, District programme organiser

elaborated the ongoing activities and schemes of the department. Dr. Prahlad, Senior scientist and Head, ICAR-KVK, Raichur, intricated about the role of vaccination in enhancing the immune system throughout the human life. Dr. Hemalatha K. J., Scientist (Horticulture), ICAR-KVK, Raichur delivered lecture on importance of nutrition garden, establishment and its management and also demonstration was organised on the media preparation, pot filling and terrace gardening. Dr. Basavannappa, Professor and Head, Organic farming unit expressed the importance of millets in every day routine in his presidential address. Dr. S. N. Bhat, Dr. Shreevani G. N., and 126 anganawadi workers were participated in the programme.

WORKSHOP ON OPPORTUNITIES AND SCOPE FOR AGRITOURISM FOR FARMERS OF RAMANAGARA DISTRICT



ICAR-KVK Ramanagara in collaboration with Department of Tourism and other line departments organized one day workshop on "Opportunities and scope for agritourism for farmers of Ramanagara District" was organized at Janapada loka of Ramanagara. Deputy Commissioner of Ramanagara

Dr. Avinash Menon Rajendran inaugurated the programme and highlighted that Ramanagara district is close vicinity to Bangalore and has various tourist places and diversified agriculture making it the place for agritourism and as an income generating activity for the farmers. Chief Executive Officer of Zilla Panchayath, Ramanagara, Sri Digvijay Bodke expressed that it is a unique opportunities for farmers to showcase their agriculture activities which ensure a more stable income by involving in agritourism. The Director of Extension, University of Agricultural Sciences, Bangalore, Dr. K. Narayanagowda, in his address said the link between agriculture and tourism and need for agritourism, since Ramanagara is blessed with good nature and diversified cropping pattern. Farmers should design the plan to attract the visitor and educate them on agricultural activities through recreation and entertainment.

The technical session highlighted on opportunities for agritourism, Tourism department government schemes for agritourism, role of hospitality in agritourism, link between tourism and agriculture and also farmers who are involved in agritourism shared their experiences. During farmers, scientist, official interaction, plans to start agritourism, agritourism polices and steps to be take-up for agritourism in Ramanagara district were discussed. During the programme, Senior Scientist and Head Dr. Lata R Kulkarni welcomed the gathering and Assistant Director of Tourism Smt. Roopa gives the vote of thanks. More than 80 farmers and farm women participated in this occasion and benefited.





CAPACITY DEVELOPMENT PROGRAMME ON "BEE KEEPING"



ICAR- Krishi Vigyan Kendra, Shivamogga conducted capacity development programme on Bee keeping under the project Attracting and Retaining Youth in Agriculture (ARYA) on 24-11-2022 at Thalalakoppa, Soraba taluk, Shivamogga district. In the programme, Dr. B. C. Hanumanthaswamy, Senior

Scientist and Head, KVK, Shivamogga explained in detail about the ARYA project and gave information related to the site selection and setting up of bee keeping unit, various measures for bee management, pests and diseases of bees and their management practices. Mr. Vignesh, Bee keeping entrepreneur, Soraba gave information and explained in detail about bee keeping equipments and their uses, methods of obtaining bee colonies, different types of bee boxes and bee stand, bee behaviour activities and method of dividing bee colony through proper practical demonstration and visits. During the programme, the participants also interacted with the scientists and resource person, at the end of the programme trainees were provided with bee box, bee colony and bee stand. Sri. L. T. Thimmappa Hegde, Former President, Arecanut growers association, Shivamogga, Dr. Jyoti M. Rathod, Scientist (Home Science) and Nodal officer, ARYA Project and Dr. Pooja, G. K., SRF, ARYA Project were also present in the programme. Totally 34 participants benefitted from this programme.



UAVS TO SUPPORT PADDY FARMERS OF THRISSUR



Unmanned Aerial Vehicles (UAVs), popularly known as drones, have come to the rescue of farmers to aid them in spraying biocontrol agents and nutrients. The Krishi Vigyan Kendra (KVK) Thrissur recently demonstrated modern rice production technologies in 50 acres of Kole land in Variyampadavu

paadasekharam of Arimbur panchayath. Spraying of Sampoorna micronutrient mixture and biocontrol agent *Pseudomonas fluorescens* liquid formulation, one month after transplanting was done in different plots of the paadasekharam. Sampoorna for rice was given at the rate of 10 g per litre, and *Pseudomonas fluorescens* at the rate of 5 ml per litre. The programme aimed at sensitizing the farmers on overcoming problems such as shortage of farm labour and high input costs. The pilot project has helped reduce the time and effort. UAVs provide better and faster nutrient application than the commonly used knapsack sprayer. In the previous trials of KVK with Sampoorna, the average rice yield increased from 1.8 tonnes/ acre to approximately 3.0 tonnes/acre. It also reduces the spray volume from around 100-200 litres for conventional spraying, to 16-25 litres per acre. The UAV spraying charges are at the rate of Rs 700/acre, compared to the conventional spraying of Rs 1200/ acre. The conventional sprayer takes a 2 hours/acre, whereas UAV spraying takes only 5-10 minutes/ acre. It also reduces the risks involved in manual spraying. Considering the State's fragile ecosystem and the network of water bodies, the application of farm inputs with drones needs to be monitored. KVK Thrissur provides scientific advice to operators and specific protocols to be followed in the case of each nutrient and biocontrol agent.



ICAR – CIAE, NRCB BANANA PSEUDOSTEM INJECTOR DEMONSTRATION AT THIRUVANANTHAPURAM DISTRICT



The banana pseudostem injector was demonstrated at Balaramapuram panchayat covering 2 acres of banana plantations. This equipment is used for applying pesticide against banana pseudostem attack. The conventional method where solution is sprayed on banana leaf axles to control pseudostem disease is time consuming. Also large amount of solution is applied to prevent the

attack. Chances of evaporation losses are also high. To reduce the drudgery associated with this process, an injector developed by ICAR –CIAE and NRCB was demonstrated. Using the device liquid is directly injected into the pseudostem of a banana plant after inserting a spear or needle directly into the soft tissue of a banana pseudostem. Dr.T.Senthilkumar, Principal Scientist (FMP) & ICAR-Central Institute of Agricultural Engineering Regional Centre, Coimbatore visited Balaramapuram panchayat and described the merits of the equipment.



Dr. Binu John Sam, Senior Scientist & Head inaugurated the programme. Er.Chithra.G, SMS Agricultural Engineering demonstrated the equipment to farmers. Field capacity of the machine was 0.13 hr/ha. Battery operated Back pack model was observed to be highly convenient to the farmers making it easily portable from one tree to another. The major advantage was that correct amount of liquid could be injected into the banana stem using the equipment without any wastage. The control unit attached with electronic embedded system helps in the injecting of predetermined quantity of liquid into the stem. Spillage of solution applied is less than 2%. Malayalam daily newspaper Malayala Manorama and Kerala Kaumudhi covered the news about the utility of the machine.



FINAL YEAR B.SC (HONS.) AGRICULTURE STUDENT PLACEMENT IN KVK UNDER STUDENT READY PROGRAMME



Under student READY programme the final year B.Sc (Hons.) Agriculture students of college of Agriculture, Hassan was placed in ICAR- KVK Tumkur-1 for the duration of 06 days. Totally, 21 students were placed in KVK from 14 th November 2022 to 19th November 2022. Intensive practical exposure was

provided to the students. Dr. Govinda Gowda V., Senior Scientist & Head of KVK oriented the students on KVK genesis, mandates and objectives. The Scientists of KVK trained the students on diagnosing the pest & diseases of nutrition garden establishment, soil sampling and its analysis of different farm lands, campaign on Swachata Abhiyana and also participated in essay writing competition on the occasion of Swachata Abhiyana and received the prizes.

FIELD DAY ON DEMONSTRATION OF ACTINO PLUS IN BRINJAL



A Field Day was organized by KVK, Konehalli, Tumkur-I on 18 th November 2022 at Patrehalli hobli of Tiptur Taluk on Demonstration of Arka Actinoplus on growth and yield of Brinjal. Dr. Tasmiya Kowser along with 20 farmers were involved in the programme and demonstrated the importance of

Arka Actinoplus in Brinjal. Arka Actinoplus is a bio fertilizer used in Brinjal for seed treatment at 10g per 100g of seeds and also used for drenching near the root zone of Brinjal at the rate of 20g per litre of water on 10 th day after transplantation. Arka Actinoplus reduces the incidence of wilt disease and also helps in better nutrient uptake also increases the plant height, Number of branches, fruit size thereby increases the yield of brinjal.



INTERACTION MEET WITH STATE MINISTER, SCIENTISTS AND DEPARTMENT OFFICIALS

District Horticulture Department organized an interaction meet with District in-charge Minister Shri. B. C. Nagesh, Primary and secondary education Minister, Government of Karnataka. This Farmers cum Scientists interaction meeting was held at Tiptur on 17.11.2022 regarding the outbreaks of Stem bleeding in Coconut and Stem rot diseases in Arecanut. The KVK expert SMS (Horticulture) and other scientists explained about the severe epidemic of stem bleeding and Stem rot caused by the fungus due to heavy rainfall and prevalence of favourable weather



conditions over a relatively long period of time. On the remedial steps, advice was given for community based integrated disease management. Minister suggested to go for mass media publicity and technical demonstrations in severely affected areas. The KVK Scientists

along with Department officials visited the problematic Coconut and Arecanut orchards in and around Tiptur. Awareness was brought to ADHs and AHOs on the management of diseases through method demonstration.

MEETING WITH HORTICULTURE DEPARTMENT OFFICIALS ON OIL PALM CROP SUITABILITY IN THE DISTRICT



Aing was arranged by Deputy Director (Horticulture), Tumakuru on 24th November, 2022, to discuss on the suitability of Oil palm plantation in the district. KVK Scientist - SMS (Horticulture) was invited to share his expertise. During the meeting, all the ten Senior Assistant Directors of

Horticulture were allowed to present the climatic situation in their respective blocks. Further, the weather, soil conditions and climatic pattern of the district and the pros and cons of cultivating the oil palm in the district was also discussed. Finally, SMS Horticulture shared his expertise and opinion on the above subject. He also visited the farmers fields for inspection.



TRAINING PROGRAMME ON NUTRIGARDEN AND NATURAL FARMING

Keladi Shivappa Nayaka University of Agricultural and Horticultural Sciences, Shivamogga, Indian Council of Agricultural Research, New Delhi, ICAR-Krisi Vigyan Kendra, Brahmavar in association with Nehru Yuva Kendra, Udupi, Pragathi Sanjeevini Union, Cherkadi and Samruddhi Mahila Madali (Reg.) Petri has organized Training programme on Nutrigarden and Natural Farming at Petri on 18.11.2022. Dr. Dhananjaya. B, Senior Scientist and Head, KVK, Brahmavara, inaugurated the programme. In his inaugural speech, he highlighted the importance of Nutrigarden and also benefits of nutrigarden in uplifting the health of the family members. He also encouraged the gathering to follow natural farming to get healthier life style. Smt. Prasanna Prasad Bhat, President, Samruddhi Mahila Madali (Reg), Petri, Presided over the function and expressed gratitude towards KVK for organizing the programme at their place. She also encouraged the gathering to go for Nutrigardening to have good health. Smt. Prathima, MBK, Pragathi Sanjeevini Union, Cherkadi were chief guests of the programme.

Dr. Chaitanya. H. S, Scientist (Horticulture), KVK, Brahmavar, was the resource person of the programme and he has trained the gatherings regarding establishment of Nutrigardening and also explained about the application of Natural Farming.



TRAINING PROGRAMME AND DEMONSTRATION ON PADDY MECHANIZATION AND PADDY NURSERY PREPARATION

ICAR-Krishi Vigyan Kendra, Brahmavar, Udupi in association with Shri Kshethra Dharmastala Gramabhivridhi yojane. Udupi, KSDA, Udupi organized training programme and demonstration on Paddy Mechanization (Yanthrashri) and Paddy nursery preparation at Barkur Koodli on 22.11.2022. Shri Manoj Minejes, Director, Regional Director of Agriculture, SKDRDP, Udupi dist has inaugurated programme. In his inaugural speech, he opined that, small and very small farmers are benefited by the information on availability agricultural mechaneries at village level. A programme named Yanthrashree has been implemented for complete mechanization of paddy cultivation. Shri Venkataramana Udupi, Chief Administrator, Koodli Janardhana temple presided over the function. Shri Shivaraya Prabhu, Senior project Director, SKDRDP, Shri H. Kempegowda, Joint Director of Agriculture, Udupi, Dr. Lakshmana, ADR, ZAHRS, Brahmavar, Dr. B Dhananjaya,



Senior Scientist & Head, KVK, Brahmavar, Dr. K.V. Sudhir Kamath Principal, Agriculture Diploma College, Brahmavara, Shri Mohan Raj, ADA, Udupi Dist were chief guests of the programme. After the programme method demonstration on Paddy Seed treatment was conducted by Dr. Dhananjay.B, Senior Scientist & Head, KVK, Brahmavara.



GOAT FARMING ENTREPRENEURSHIP TRAINING



Goat farming training was organized at ICAR-KVK, Uttara Kannada on 24.11.2022. Twenty-eight rural youth from varies parts of Uttara Kannada districts participated in the training programme. They though about the ARYA project, importance, role, avenues in attracting and retaining the rural youth towards Agriculture, scope of goat farming, pros and cons of goat farming in Uttara Kannada, measure

to sustainable goat farming, suitable breeds to Uttara Kannada, Schemes available in various government sector to start goat entrepreneurship, major diseases and measures to combat the deaths. The programme was inaugurated by Dr. Govinda S Bhat, retired Deputy director, Department of AH and VS, Karwar. In his inaugural remarks he stressed the importance of sheep and goat sector in food security of the country. Dr. Manju M. J, Senior Scientist and Head, in his presidential remarks stressed the role of youth in sustaining the agriculture in the district.



DEMONSTRATION OF BACKYARD POULTRY FARMING WITH IMPROVED BREED KAVERI

The potentiality of indigenous birds in terms of egg production is only 50 to 60 eggs/ bird/ year and meat production is also very low. However, the backyard poultry production can be enhanced by adopting improved strains of chicken





that can promise better production of meat and egg. Backyard poultry is a handy and promising enterprise to improve the socio-economic status of farmers in rural areas with low-cost initial investment and high economic return along with guarantee

for improving protein deficiency among the poor. Since KVK has been working on its mandatory activities like On-Farm Trials (OFT), Front Line Demonstrations (FLD) and vocational trainings for the rural youths who are interested on the latest technologies and improved practices in livestock farming. The KVK has successfully assessed and demonstrated backyard poultry strains viz., Giriraja, Swarnadhara and coloured broiler. In addition to that ICAR-Krishi Vigyan Kendra, Vijayapura has initiated new poultry strain Kaveri from Central Poultry Development Organisation (CPDO), Hesarghatta. The organisation also recommended it as a suitable bird for rural backyard poultry farming. In this regard one on farm testing is being carried out with the objectives

1. To assess the strain in terms of production and feasibility to backyard farming system,
2. To assess the farmers perception towards adoption of the introduced strain,
3. To assess the production performance by feeding dried and wet azolla.



SCIENTIFIC POULTRY REARING.



ICAR - Krishi Vigyan Kendra, Vijayapura-II (Indi) organized on campus paid training programme on "Scientific Poultry rearing" from 22.11.2022 to 24.11.2022 at ICAR Krishi Vigyan Kendra, Indi. Dr. Bhimashankar Kannur, Assistant Director of Animal Husbandry, Indi inaugurated the programme and delivered lecture

on importance of poultry rearing in enhancing the income of farmers and further suggested the trainees to rear the birds like swarnadhara, kaveri, DP cross etc., Dr. Santosh Shinde, Scientist (Animal Science), KVK, Indi delivered different topics like breeds, breed selection, feeding management, disease management etc., to the farmers during these days of training. Also, the farmers were taken to the KVK, Indi field and demonstrated use of hatchery unit, poultry shed etc., nearly, 30 participants were benefitted by the programme.

KVK WAYANAD JOINED HANDS WITH KUDUMBASREE FOR HELPING THIRUNELLI TRIBAL FAMILIES



ICAR KVK Wayanad in association with Kudumbashree mission Wayanad had conducted one day awareness and training programme on Nutrigarden in households as a part of Tirunelly Tribal Sub plan at Kattikulam, Mananthavady. The programme was named Urineeru meaning 'Sweat' which was held at Thirunelli where tribal colonies are more in Wayanad district. Dr. Safia N.E welcomed the gathering. The programme was inaugurated by Smt. A.K Jayabharathi, Thirunelli Panchayath President. The lead talk was given by Smt. Sreelekshmi IAS, Sub Collector, Wayanad. There was also a campaign on reducing the drug usage in the colonies. Vegetable seedlings of cabbage, cauliflower, chilli, tomato, brinjal were distributed to the tribal families in order to overcome the malnutrition and for sustainable vegetable production.

CAPACITY BUILDING PROGRAMME ON VEGETABLE PRODUCTION



KVK Wayanad in association with IIHR Bangalore had conducted Capacity Building Programme & Input distribution under Tribal Sub Plan at Chekadi, Pulpally. As part of the programme vegetable seeds, seedlings and micronutrient mix were distributed to the farmers. Ward member Sri. Raju Thonikadav welcomed the dignitaries and participants to the programme. Dr. D Kalaivanan, Senior Scientist from IISR Bangalore explained about the project and Smt. Susheela A N, District Panchayath member delivered presidential address. Inauguration of the programme was done by Sri. Dileep Kumar T S, Panchayath President, Pulpally. Dr. T Sakthivel, Dr. D Kalaivanan and Dr. Anushma P L (Scientists from IIHR Bangalore) dealt classes on various subjects. Dr. Safia N E, Programme Coordinator, KVK Wayanad delivered vote of thanks.



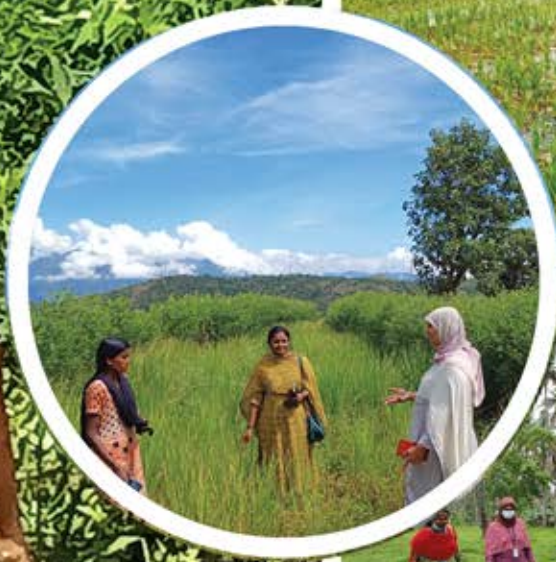
DIRECTOR EXTENSION, UAS, RAICHUR VISIT TO ICAR-KVK, YADGIR



Dr. M.K. Nayak, Director Extension, UAS, Raichur visited KVK, Yadgir and discussed about various activities of the KVK. He addressed the staff of KVK and encouraged them to work for the rural community. He emphasized on increasing the economically viable cropping systems for demonstrating farmers.

He suggested having demo units of all specus of livestock and field crops by which the farmers can be motivated and hands on training can be given. He visited progressive farmer's field with scientists of KVK, Yadgir.





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