

ICAR-Agricultural Technology Application Research Institute Zone-XI, Bengaluru University of Agricultural Sciences, Dharwad ICAR-Krishi Vigyan Kendra, Haveri (Hanumanamatti)







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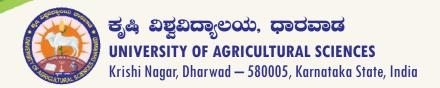
### **Published by**

ICAR-Krishi Vigyan Kendra, Haveri (Hanumanamatti) – 581 115 Tq: Ranebennur, Dist. Haveri

With the guidance of

ATARI Zone XI, Bengaluru





I am delighted to announce the launch of KVK Times by ATARI Bengaluru, a fortnightly online magazine spotlighting the endeavors of various KVKs across Karnataka, Kerala, and Lakshadweep. This innovative initiative by ICAR-ATARI-Zone XI, Bengaluru, aims to empower farmers within its jurisdiction and amalgamate the insights of numerous KVKs onto a unified platform. It brings me great pleasure to highlight that KVK Haveri (Hanumanamatti) has been entrusted with the task of curating Volume 02, Issue 18 of KVK Times during the latter half of March 2024.

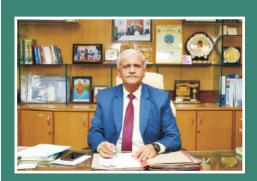
Established in 1976 as the premier KVK in Karnataka and second in South India, KVK Haveri (Hanumanamatti) has been pivotal in enhancing the agricultural landscape of Haveri district, renowned as the seed bowl of Karnataka. Its significant contributions include the dissemination of cutting-edge technologies developed by UAS, Dharwad, other SAUs, and ICAR institutes, spanning a spectrum of crops such as Maize, Paddy, Millets, Cotton, Sugarcane, and more. Furthermore, it has actively engaged in promoting activities related to livestock farming, dairy farming, horticulture, and poultry, along with showcasing advancements in processing, value addition, and marketing of agricultural produce.

Despite encountering various challenges, KVK Haveri (Hanumanamatti) has demonstrated resilience by developing the "Su-Krishi" mobile app and ICT tools to educate farmers, thereby uplifting their livelihoods and augmenting their incomes. I am confident that the diligent efforts invested in crafting this issue of 'KVK Times' reflect the unwavering commitment of KVK Haveri, and I extend my best wishes for their continued success. May KVK Haveri soar to greater heights in the days ahead, enriching the agricultural landscape and empowering farmers across the region.

Dharwad 31-03-2024

Dr. P. L. Patil Vice Chancellor UAS, Dharwad

#### **FOREWORD**







ICAR-Agricultural Technology Application Research Institute, Zone XI भा कृ.अनु. प. - कृषितकनीकी अनुप्रयोग अनुसंधान संस्थान, जोन XI MRS, HA Farm Post, Hebbal, Bengaluru 560 024 एम. आर. एस. एच. एस.पीस्ट.हेब्बाल, बेंगलुङ ५६० ०२४

Krishi Vigyan Kendra is a Knowledge and Resource Centre that provides agricultural technologies to empower farmers. KVKs are proven to be effective institutions at the grassroots level for the farming community. They are well-established as a frontline extension system for disseminating farming technologies to farmers across the country.

There are 48 KVKs established under Zone XI, which includes the states of Karnataka, Kerala, and Lakshadweep. The "KVK Times" has now become a platform for sharing valuable knowledge among the KVKs in the zone. It facilitates cross-learning among them and helps them understand and appreciate each other's strengths.

KVK Haveri (Hanumanamatti) is the oldest KVK in Karnataka, established in 1976. It was second KVK established in South India. KVK Haveri (Hanumanamatti) provides various extension activities to support and serve the farming community. I appreciate their efforts and dedication towards the betterment of the farming community.

I express my gratitude for the support provided to KVKs by Dr. P. L. Patil, Vice Chancellor, Dr. S. S. Angadi, Director of Extension, Dr. S. A. Gaddanakeri, Associate Director of Extension, and Dr. Nagaraj, Nodal Officer KVKs, UAS Dharwad. Their valuable services have been effective in assisting the farming community.

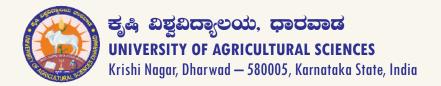
I would like to extend my heartfelt congratulations to Dr. Guruprasad G. S., Senior Scientist and Head of ICAR-KVK Haveri and his team for their commendable efforts in publishing this edition of the "KVK TIMES". I also want to acknowledge the invaluable services provided by other KVKs that have contributed to the welfare of farmers

Bengaluru 31-03-2024

**Dr. V Venkatasubramanian**Director, ATARI Zone XI
Bengaluru

#### **FOREWORD**





The agricultural sector relies heavily on extension programs to transfer new technologies from the lab to the land. Krishi Vigyan Kendras are one such institute that primarily focuses on technology transfer through Trainings, FLD and OFT programs. Haveri district has two agro-climatic zones, namely the Northern transition zone (VIII) and the hilly zone (IX). KVK, Haveri has demonstrated and disseminated several technologies related to major crops of the area like Maize, Cotton, Jowar, Groundnut, Sunflower, Mango, Arecanut, Chilli, and Banana and major livestock activities viz., cattle, sheep, goats, and poultry farming. The Volume 02,  $18^{\text{th}}$  issue of KVK times, published by KVK Haveri (Hanumanamatti) between March 16 and 31, 2024, is a document that records and publishes various extension activities of KVKs under ATARI Bengaluru, Zone XI. It presents an opportunity for documenting the extension programs carried out by different KVKs, which facilitates cross-learning for KVKs situated in different zones across the country.

The online edition of KVK Times through ATARI Zone - XI is a model for documenting KVK activities, providing a unique approach for other systems working on extension activities of ICAR.

I congratulate KVK-Haveri for compiling KVK Times and all KVKs of Zone-XI for constantly working towards the welfare of farmers.

Dharwad 31-03-2024

Dr. S. S. Angadi
Director of Extension
UAS, Dharwad

#### **FOREWORD**







### ಕೃಷ್ಠಿ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಧಾರವಾಡ UNIVERSITY OF AGRICULTURAL SCIENCES



ಐ.ಸಿ.ವಿ.ಆರ್. – ಕೃಷ್ಠಿ ವಿಜ್ಞಾನ ಕೇಂದ್ರ, ಹಾವೇಲಿ (ಹನುಮನಮಟ್ಟ) ICAR-KRISHI VIGYAN KENDRA, HAVERI (Hanumanamatti) Hanumanamatti 581 115 Tq. Ranebennur, Dist. Haveri

I would like to express my heartfelt gratitude to ATARI Bengaluru for providing us with an opportunity to compile and publish KVK Times of Zone-XI for the second fortnight of March 2024. I am truly grateful to Dr. V. Venkatasubramanian, Director, ICAR-ATARI Zone XI, Bengaluru, for his constant inspiration, encouragement to serve the farming community, and invaluable guidance in bringing out this edition of KVK Times.

The constant support and encouragement provided by Dr. P. L. Patil, Honorable Vice-Chancellor, UAS, Dharwad has always been supportive in executing our services to the farming community.

I would like to express my sincere gratitude to our esteemed Director of Extension, Dr. S. S. Angadi, Associate Director of Extension, Dr. S. A, Gaddanakeri, and Nodal Officer, Dr. Nagaraj, for their prompt guidance and constant inspiration that enabled us to carry out various activities successfully.

I would like to express my sincere gratitude to Dr. D. V. Srinivasa Reddy, Principal Scientist and Nodal Officer of ICAR-ATARI Zone XI, Bengaluru, for their unwavering support and guidance. I also extend my appreciation to the entire KVK family of Zone-XI for sharing their accomplishments in a timely manner, which made it possible to publish the Volume 02, 18th issue of the "KVK Times" newsletter.

Our KVK team deserves wholehearted thanks for their complete involvement in effectively bringing out this issue.

Hanumanamatti 31-03-2024

Dr. Guruprasad G. S. Senior Scientist and Head ICAR-KVK, Haveri (Hanumanamatti)

#### **ACKNOWLEDGMENT**





# CONTENTS

SI No.	Name of the KVK	Page No.	SI No.	Name of the KVK	Page No.
1	KVK, Alappuzha	1	25	KVK, Kollam	25
2	KVK, Belagavi-I	2	26	KVK, Koppal	26
3	KVK, Belagavi-II	3	27	KVK, Kottayam	27
4	KVK, Bengaluru Rural	4	28	KVK, Lakshadweep	28
5	KVK, Bidar	5	29	KVK, Malappuram	29
6	KVK, Calicut	6	30	KVK, Mandya	30
7	KVK, Chamarajanagar	7	31	KVK, Mysuru	30
8	KVK, Chikkaballapura	8	32	KVK, Palakkad	31
9	KVK, Chikkamaglauru	9	33	KVK, Pathanamthitta	31
10	KVK, Chitradurga	10	34	KVK, Raichur	32
11	KVK, Dakshina Kannada	11	35	KVK, Ramanagara	32
12	KVK, Davanagere	12	36	KVK, Shivamogga	33
13	KVK, Dharwad	13	37	KVK, Thrissur	33
14	KVK, Ernakulam	14	38	KVK, Trivandrum	34
15	KVK, Gadag	15	39	KVK, Tumakuru-I	35
16	KVK, Kodagu	16	40	KVK, Tumakuru-II	35
17	KVK, Hassan	17	41	KVK, Udupi	36
18	KVK, Haveri	18	42	KVK, Uttara Kannada	37
19	KVK, Idukki	19	43	KVK, Vijayapura-I	37
20	KVK, Kalabuaragi-I	20	44	KVK, Vijayapura-II	38
21	KVK, Kalabuaragi-II	21	45	KVK, Wayanad	39
22	KVK, Kannur	22	46	KVK, Yadgir	39
23	KVK, Kasaragod	23	47	ATARI Zone XI, Bengaluru	40-43
24	KVK, Kolar	24			



### ICAR-KVK-Alappuzha

#### Twenty Second Scientific Advisory Committee meeting conducted



Twenty second SAC meeting of the KVK was conducted on 21st March, 2024 under the chairmanship of Dr. K. B Hebbar, Director, ICAR-CPCRI, Kasaragod. The chairman in his introductory remarks highlighted the achievements of KVK during the past years and appreciated the KVK team for the sustained performance. Dr. DVS Reddy, Principal Scientist, ICAR-ATARI, Bengaluru, Dr. Sreevalsan J Menon, Associate Director of Extension, KAU, Dr. Regi Jacob Thomas, Head, ICAR-CPCRI, Regional Station, Kayamkulam, SAC members representing various agencies, and selected farmers representing different agro ecological situations of the district were present in the meeting. Dr. P. Muralidharan, Head, KVK presented the action taken report of the 21<sup>st</sup> SAC meeting and activities taken up by the KVK during the past year. Three Award winning farmers during the last year viz., Sri P A Thomas (Millionaire farmer), Smt. Krishnakumari (Akshayasree) and Sri. Mujeeb A Pulliyil (Agri. Entrepreneur) were honored and KVK newsletter (Oct-Dec, 2023) and revised edition of the extension booklet on 'Oyster mushroom cultivation' were released by the dignitaries on the occasion. All members and invitees actively participated in the discussion and made suggestions for the future activities of the KVK.



#### **SCSP** programme under NICRA project



As part of the Scheduled Caste Sub Plan (SCSP) Programme of National Innovations in Climate Resilient Agriculture (NICRA) project being implemented at Edathua panchayath by the KVK, fruit plants (mango, jack, sapota grafts and curry leaves) were provided to selected 50 families and brush cutter and garden tillers were provided to farmer groups belonging to SC. Smt. Binu Issac Raju, Member, Alappuzha District Panchayath, Smt. Liji Varghese, President, Edathua panchayath, more than 10 Grama panchayath members and about 75 farmers attended the programme organized at Edathua panchayath community hall on 13.03.2024.

#### RAWE programme organized for B Sc (Hon) Ag students

Twenty four final year students of B Sc (Agriculture) from Amrita School of Agricultural Sciences, Coimbatore under Amrita Viswa Vidyapeetam underwent their RAWE-KVK Module at KVK-Alappuzha from 6<sup>th</sup> to 28<sup>th</sup> March, 2024. The students were exposed to different activities of the KVK like OFT, FLD, and Agro Clinic, and given hands on experience on training need analysis, training content development and delivery of training. With KVK support, the students organized a training programme on 'Scientific tips for vegetable and coconut cultivation in homesteads' at Cherthala, in collaboration with Rotary Club, Cherthala. Students could interact with the FFS partners at Thanneermukkom and visit various OFT/FLD plots located at Thanneermukkom and Muhamma panchayaths. They also visited NICRA demonstration plots in Kuttanad region to understand the various climate resilient technologies. The students were excited to experience the KVK activities and functioning from a closer angle and by the new insights on field application of technologies.





#### 5 Day training on Natural Farming to Krishi Sakhis at KVK Belagavi-1

ICAR- BIRDS KVK is conducted 5 day residential training on Natural Farming for Krishi sakhis of Belagavi district. KVK trains sakhis according to the scheduled time table as per training guidelines of MANAGE, Hyderabad. KVK was allotted 8 batches of 34 sakhis each totalling 272. Training for 5<sup>rd</sup> and 6<sup>th</sup> batch was organised from 25<sup>th</sup> to 29<sup>th</sup> March of 2024. Daily 3 theory and 1 practical class were engaged, class were taken by KVK scientists and champion farmers practising natural farming. Taluka program manager was deputed to KVK to monitor sakhis and also TPM discussed with sakhis regarding the training, importance of sakjhis in field for the farmers, facilities provided during training. Concluding program was attended by KVK chairman Shri R.M.Patil, SS&H Dr. Dattu Mhetre, KVK Scientists and staff, training coordinator Dr. Suraj Koujalagi.





## ICAR-KVK-Belagavi-II

#### Krishi Sakhi Training Programme

ICAR – KLE Krishi Vigyan Kendra, Mattikopp in association with MANAGE, Hyderabad and SRLM, Karnataka organized five days Capacity Building programme on 'Natural Farming' for Krishi Sakhi's of Bailhongal, Belagavi, Savadatti, Ramdurg and Khanapur taluks from 18 - 22 March, 2024 and 26–30 March 2024 in four batches of 30 participants each. The training curriculum included introduction to natural farming, nutrient management in natural



farming, pest and disease identification in field and its control measures were also highlighted. Method demonstrations of jeevamruta, ghana jeevamruta, beejamruta, neemastra, agni astra, dashaparni etc., were conducted. The five days training programmes were co-ordinated by Dr. S. S. Hiremath, Scientist (Plant Protection), G.B. Vishwanath, Scientist (Agronomy), Shankargouda Patil, Farm Manager and Vinoda M Kochi, Lab Technician.

#### **Awareness Programme on Natural Farming**



A total of five awareness programme on natural farming were organized in Belagavi district during the reporting period. Among which three were conducted at KVK, Campus and one each at Ankali village and Chikodi. S.M. Warad, Scientist (Soil Science) highlighted the concept of natural farming and its advantages in sustainable soil health management and reduction in the cost of cultivation and suggested the audience to adopt the natural farming practices in a part of their total land holdings to maintain the production and eco-system in the village. He said that, due to continuous use of chemicals in the agriculture/ horticulture system the residual effect which is being noticed in the food will bring major health risks of human beings. During the event, method demonstration on preparation of various cow dung and urine based products like beejamruta and jeevamruta for supply of nutrients in natural farming method were comducted.

#### Farmers- Scientist interface meet

An interface meting of farmers and scientists was organized at KVK, Campus on 19.03.2024. During the event, KVK Scientists integrated with progressive farmers from ATMA project and other entrepreneurs from different taluks of Belagavi district. Dr.S.S.



Hiremath, Scientist (Plant Protection) discussed on likely pest and diseases that can occur during *kharif* season and eco-friendly management practices and prophylactic measures to be adopted. S.M. Warad, Scientist (Soil Science) explained the need on application of fertilizers based on soil test results and integrated nutrient management practices for *kharif* crops. G. B. Vishwanath, Scientist (Agronomy) highlighted the improved high yielding varieties and availability of seeds of soybean, green gram, black gram at the KVK and seed treatment methodology. Praveen Yadahalli, Scientist (Horticulture) briefed on the importance and advantages of drone application in agriculture. A method

#### Training on Nutritional Aspects to Anganwadi Teachers

A training on nutritional aspects was conducted to Anganwadi teachers at Deshnur village, Bailhongal taluk on 26.03.2024. Mrs. Sridevi Angadi, Senior Scientist & Head imparted training and explained the importance of balanced nutrition to the child for healthy nourishment during the early stages of the growth. She explained that, good nutrition for children is essential to achieve their full developmental potential. Under nutrition has critical consequence for physical and cognitive growth and development. Malnutrition leads to failure in early physical growth and behavioural development and diminishes immunity. In light of this, she suggested suitable food items to be prepared and supplied to the kids of anganawadi.





### ICAR-KVK-Bengaluru Rural

# Two day workshop on Improved cultivation practices of aromatic crops, processing and value addition for Income enhancement

ICAR – KLE Krishi Vigyan Kendra, Mattikopp in association with MANAGE, Hyderabad and SRLM, Karnataka organized five days Capacity Building programme on 'Natural Farming' for Krishi Sakhi's of Bailhongal, Belagavi, Savadatti, Ramdurg and Khanapur taluks from 18 - 22 March, 2024 and 26–30 March 2024 in four batches of 30 participants each. The training curriculum included introduction to natural farming, nutrient management in natural farming, pest and disease identification in field and its control measures were also highlighted. Method demonstrations of jeevamruta, ghana jeevamruta, beejamruta, neemastra, agni astra, dashaparni etc., were conducted. The five days training programmes were co-ordinated by Dr. S. S. Hiremath, Scientist (Plant Protection), G.B. Vishwanath, Scientist (Agronomy), Shankargouda Patil, Farm Manager and Vinoda M Kochi, Lab Technician. An interface meting of farmers and scientists was organized at KVK, Campus on 19.03.2024. During the event, KVK Scientists integrated with progressive farmers from ATMA project and other entrepreneurs from different taluks of Belagavi district. Dr.S.S. Hiremath, Scientist (Plant Protection) discussed on likely pest and diseases that can occur during kharif season and eco-friendly management practices and prophylactic measures to be adopted. S.M. Warad, Scientist (Soil Science) explained the need on application of fertilizers based on soil test results and integrated nutrient management practices for *kharif* crops. G. B. Vishwanath, Scientist (Agronomy) highlighted the improved high yielding varieties and availability of seeds of soybean, green gram, black gram at the KVK and seed treatment methodology. Praveen Yadahalli, Scientist (Horticulture) briefed on the importance and advantages of drone application in agriculture. A method demonstration on preparation of spray solution and protocol on handling of the drone during its operation.



#### Training programme on Natural Farming for Krishi Sakhis

ICAR- Krishi Vigyan Kendra, Hadonahalli, Bengaluru Rural District organized five days training programme on "Natural Farming for Krishi Sakhis" from 19<sup>th</sup> to 23<sup>rd</sup> March 2024, sponsored by MANAGE Hydearabad.

The training programme was inaugurated by Dr. B.G. Hanumantharaya, Senior Scientist & Head, ICAR – KVK, Bengaluru Rural District and briefed about the role of Krishi Sakhi's in farming community and they should act like Para extension workers in farming field and they should educate and gain knowledge on Natural Farming. During the programme various technical sessions were organized to the participants. Dr. Venkate Gowda, J., Scientist (Agronomy) delivered lecture on introduction to Natural Farming, agronomic systems, role of seed, Integrated farming system, Dr. Veeranagappa, P., Scientist (Soil Science) delivered lecture on soil health and nutrient management, Dr. Dharshini, G.M., Scientist (Plant protection) briefed about the pest and disease management in natural farming. In the technical session Dr. B.G. Hanumantharaya given detailed information about water management in natural farming, Dr. Ramegowda, H.V., Scientist (Crop Physiology) explained about the environmental system, services and natural farming, indigenous and traditional knowledge and models of natural farming. Mrs. Meghana, Scientist (Home Science) elicited about Health and nutrition. Dr. Sagar, S. Pujar, Scientist (Agril. Extension) explained the roles and responsibilities of Krishi Sakhis in Natural farming, extension methods, services and qualities of extension workers and also demonstrated the preparation of beejamrutha, jeevamrutha and panchagavya. Totally 33 Krishi Sakhis were benefitted from the training programme



# ICAR-KVK-Bidar

# Empowering Krishi Sakhis : KVK Bidar's Natural Farming Training Program

ICAR - Krishi Vigyan Kendra (KVK) Bidar recently organized a five-day training program on Natural Farming, sponsored by MANAGE Hyderabad, aimed at empowering 30 enthusiastic Krishi Sakhis. Held from March 18th to 22nd, 2024, the program witnessed a fervent participation as Krishi Sakhis delved into various natural farming techniques.

At the heart of this initiative was a Champion Farmer from the district Sri. Bhagwanth Patil, whose practical classes instilled proficiency in all 30 Krishi Sakhis, making them adept in natural farming methodologies. Under his guidance, participants gained hands-on experience and invaluable insights.

Dr. Sunilkumar N M, Senior Scientist & Head of KVK Bidar, played a pivotal role in training participants on Integrated Pest Management (IPM) technologies. His expertise equipped the attendees with sustainable pest control methods, ensuring ecofriendly agricultural practices.

Moreover, KVK Bidar scientists Dr. Mallikarjun Ningdalli and Dr. Gnyandev Bulla enriched the training with their profound knowledge. Dr. Ningdalli shared insights into horticulture practices, while Dr. Bulla focused on seed treatment and the selection of high-quality seeds. Serving as master trainers, their sessions were instrumental in enhancing participants' understanding and skills.

Throughout the training, participants were brimming with enthusiasm, actively engaging in discussions and practical exercises. By the program's conclusion, all 30 Krishi Sakhis emerged as proficient practitioners of natural farming, poised to implement their newfound knowledge for sustainable agricultural development in their communities. The collaborative efforts of KVK Bidar, MANAGE Hyderabad, and dedicated experts have undoubtedly empowered these Krishi Sakhis to become catalysts of positive change in the agricultural landscape.



#### Scientific Advisory Committee Meeting Marks Milestones in Agricultural Innovation

The Scientific Advisory Committee Meeting convened at ICAR - KVK, Bidar on March 12, 2024, chaired by Dr. S.B. Goudappa, the esteemed Director of Extension at UAS Raichur. Distinguished members including Dr. D.V.Kolekar, Scientist and Nodal Officer, ICAR-ATARI, Bengaluru, Dr. N.A. Patil, Director of Extension, KVAFSU Bidar, Dr. S.V.Patil, Dean, College of Horticulture, Bidar, Dr. A.R.Kurubar, ADE (Hq), UAS, Raichur and Dr. Sangappa, Scientist (Agricultural Extension), IIMR, Rajendranagar, Hyderabad, Telangana graced the occasion, representing various prestigious institutions and bringing a wealth of expertise to the table.

Dr. Sunilkumar N M, Senior Scientist & Head of KVK Bidar, presented a comprehensive action taken report on the previous SAC recommendations, outlining notable achievements and the overall progress of KVK Bidar. During the meeting, Dr. N.A.Patil, Director of Extension, KVAFSU, Bidar, Dr.A.R. Kurubar, ADE UAS, Raichur, and Dr. S.V. Patil, Dean, College of Horticulture, Bidar, delivered special remarks. Dr. Sangappa, Scientist from IIMR, Hyderabad, along with representatives from various line departments such as Agriculture, Horticulture, ATMA, NABARD, Lead Bank, Fishery, Sericulture, Reliance Foundation, Prawarda, FPO, and Progressive farmers engaged in constructive discussions. They deliberated on challenges and proposed focal points for the forthcoming 2024-25 action plan, emphasizing collaboration and strategic planning for agricultural development

The occasion also marked the commencement of several impactful initiatives:

Seed Cafeteria: A unique dining area designed for farmers and students.

Krishi Link: A mobile application facilitating seamless communication between farmers and scientists, aimed at addressing farming issues with user-friendly technology.





## **ICAR-KVK-Calicut**

#### **Technology Week celebrated at KVK**

Technology week was celebrated at KVK from 18 to 21 March 2024 with the main themes of natural farming, value addition, quality planting material production, climate smart agriculture and Ornamental fish culture. Training classes, seminars, exhibitions, sale of agri-inputs etc were held with participation of nearly 100 persons per day. Progressive farmers Mr. Abraham T K, Panthirikara was felicitated on World Forestry day (21st March, 2024) due to his efforts of perennial trees cultivation and practicing natural farming for about 20 years, while Mr. Padmanabhan, K.T, Avala was felicitated on World water day (22<sup>nd</sup> March, 2024) for his effective water usage in agriculture, integrated farming and paddy cultivation with conservation of resources. Smt. R.Indumathy, President, OISCA - Women's chapter, Perambra and Dr. Ambily, J. Head (Training Division), CWRDM, Kozhikode were guest of honours and distribution of seedlings to farmers were carried on those special days. Dr. P. Ratha Krishnan, Head, KVK, coordinated the events while Subject Matter Specialists, Dr.P.S.Manoj, Dr.S.Shanmughavel, Dr. K.M. Prakash, Dr. K. K. Aiswariya, Ms.A. Deepthi and Dr. B. Pradeep conducted trainings and demonstrations.

About fifteen Exhibition stalls by District Agriculture Farm, Farm machinery agencies, value added products developing societies. SHGs and individual farmers with display and sale of items attracted many visitors too. Exhibition of natural farming tent, drone demo and practical on propagation are some other attractions during the event.



#### NICRA Project farmers exposure visit to KVK Palakkad



An exposure visit to KVK Palakkad was carried as an exploration of the NICRA technology demonstration plots in Pattithara village of Palakkad, by 20 farmers and 3 staff of KVK, Kozhikode. The visit encompassed various NICRA activities, including bunding and rerouting of river water for irrigation, summer sowing of green gram and cowpea in rice fallows, short-duration paddy sown fields, in-situ water conservation practices through coconut husk burial mulching, NICRA interventions in fertility management in arecanut fields with leaf yellowing symptoms and collaborative farming efforts in paddy and vegetable cultivation.

#### Inputs distribution to SC Beneficiaries



A "fish kit" containing essential inputs for ornamental fish farming was provided to nine small-scale SC farmers. The beneficiaries were members of FRANK (Fish Rearers Association North Kozhikode), a society established by KVK Kozhikode with small scale farmers specialized in ornamental fish farming. The programme was inaugurated by Dr. P. Ratha Krishnan, Principal Scientist and Head KVK, Kozhikode and the programme was coordinated by Dr. Pradeep B, SMS Fisheries of KVK.

Plants like bush pepper, Moringa seedlings and bio control agents Trichoderma were distributed to SC beneficiaries of Perambra Block. Distribution and installation of stingless bee boxes to eight SC beneficiary homes at Kallode, Perambra and Chembanoda were also carried. These programmes were carried by Dr P. Ratha Krishnan, head and Rr K.K. Aiswarya, SMS of KVK.



### ICAR-KVK-Chamrajanagar

#### Capacity Building programme on Natural Farming for Krishi Sakhis

Five days capacity building programme on natural farming sponsored by Karnataka State Rural Livelihood Mission (KSRLM) through MANAGE was organised and conducted at KVK Chamarajanagara from 18.03.2024 to 22.04.2024. The programme was inaugurated by Shri. Vekatesh, G State Programme Manager, KSRLM, Shri.Deepak, District Programme Manager and Smt.Rajamma, Cluster supervisor. Shri.Venkatesh, in the inaugural address emphasized the role of Krishi Sakhis as community resource persons for the betterment of agriculture, rural health and in bringing out favorable socio-economic changes at rural level by narrowing down the gap between farming community and development departments. Further, he insisted Krishi Sakhis to maintain good communication and cooperation which facilitates a close working relationship between farming community or organizations. Shri.Deepak suggested Krishi Sakhis to promote chemical free farming and encourage farmers to follow and adopt natural farming practices. He also provided the details about development schemes that are routed through KSRLM. Dr.Mohankumar, A.B Scientist (Horticulture) presented the programme schedule, sessions detail and urged the trainee participants to document the details of natural farming practicing farmers in their operational area and share it with KVK. Senior Scientist & Head, Dr. Yogesh, G.S apprised participants to acquire the knowledge regarding natural farming practices that will be detailed during various sessions and by doing the same in the practical sessions. Also, he insisted the participants to learn about the practices adopted in natural farming crop demo plot and bioinputs demo unit maintained at KVK farm. During the training programme, different resource persons deliberated sessions on natural farming, its need, definition, principles, significance, benefits, practical exercises on understanding the difference between healthy & unhealthy soil, soil sampling methods through demonstrations, learn to read soil health card, nutrient management in natural farming & preparation of bioinputs, pest & disease management, seed conservation for natural farming by establishing farmer seed banks, methods of seed treatment in natural farming, crop & livestock integration, health & nutrition - importance of dietary diversity, healthy diet plans, extension method, method demonstrations, farmer's field schools, farmer group discussions, certification & marketing of natural produce. Pre and post evaluations were conducted on respective days and the programme was concluded after taking the feedback from participants and providing them the training completion certificates.



Practical on soil physical properties analysis



Deliberation on seed conservation for natural farming



Presenting natural farming illustrations



**Practical on preparation of bioinputs** 



### ICAR-KVK-Chikkaballapur

Training programmes on natural farming to Krishi Sakhis' were organized at ICAR-Krishi Vigyan Kendra, Chikkaballapura for two batches each comprising of thirty Krishi Sakhis. First batch training was organized from 12<sup>th</sup> to 16<sup>th</sup> March, 2024 and second batch training was carried out from 18<sup>th</sup> to 22<sup>nd</sup> March 2024. Dr. Papireddy, Senior Scientist and Head inaugurated the programme and highlighted about natural farming and its need in present scenario. Dr. Sandhya, Scientist (Soil Science) coordinated the training and delivered lecture on natural farming and its importance, nutrient management in natural farming. Lecture sessions were organized on various topics and also organized method demonstrations in practical sessions. 60 Krishi Sakhis' benefitted from the programme.





Method demonstrations during training programme



Mango being one of the important dry land fruit crop in Chikkaballapura district, ICAR-Krishi Vigyan Kendra, Chikkaballapura in collaboration with National Research Centre for Integrated Pest Management, New Delhi (NCIPM) organized on campus training on integrated pest management in mango on 22.03.2024. Dr. P. Venkataravana, Dean (Seri.), Dr. Papireddy, Senior Scientist and Head and Dr. Raghavendra, Senior Scientist NCIPM, New Delhi inaugurated the programme. Dr. P. Venkataravana, Dean (Seri.), College of Sericulture, Chintamani emphasized to promote ecofriendly pest management practices to improve the export potential of mango. Dr. Papireddy highlighted about timely operations to be carried out in mango and its relevance in pest management. Dr. Raghavendra explained about insect management in mango. Dr. Praveenakumar Scientist (Horticulture) delivered a lecture on improved cultivation practices in mango. Dr. Swathi Scientist (Plant pathology) explained integrated disease management in mango. Folder on IPM in Mango was released during the event.



Inauguration of training programme



Release of folder



# ICAR-KVK-Chikkamagaluru

#### Training on Bamboo Production, Primary Processing and Value Addition





A training on bamboo production, primary processing and value addition was organized by I.C.A.R.-KVK, Mudigere, Chikkamagaluru district in collaboration with Institute of Wood Science and Technology, Bangalore.

Dr. A. T. Krishnamurthy, Senior Scientist and Head, IC.A.R.-Krishi Vigyan Kendra, Chikkamagaluru in his introductory speech, welcomed everyone and spoke about the importance of bamboo, that by growing living fence at the edge of the fields, the menace of wild animals can be prevented and the value addition of bamboo products will provide employment and support the local economy.

In technical session, Dr. Rashmi Shanubhog, Scientist, Institute of Wood Science and Technology, Bangalore gave information on bamboo production and adoption of plant protection technologies. Further, she gave information about the pests of bamboo like leaf-biting and sucking insects and diseases like Fusarium moniliforme and their management.

Miss. Mohini Kumari, Junior Project Associate, Institute of Wood Science and Technology, Bangalore briefed the participants on bamboo production technology and bamboo cultivation in hot to warm temperate climatic conditions and sandy loam soils.

Dr. Suresh Kumar B., Scientist (Horticulture) informed the participants about value addition of bamboo products.

Dr. Prashantha G.M, Scientist (Soil Science), Dr. Suchithra Kumari M.H. Scientist (Plant Protection) witnessed the programme. A total of 75 farmers actively participated in this program and got information.





## ICAR-KVK-Chitradurga

#### Natural Farming training programme for Krishi Sakhi- Batch -I

A training programme on natural farming was organized for Krishi sakhi of Chitradurga district from 18<sup>th</sup> to 22<sup>nd</sup> March 2024 at KVK Chitradurga in collaboration with NRLM, Zilla panchayath Chitrdadurga.

The programme was inaugurated by Dr. Kumara O., Senior Scientist and Head and during his speech he discussed about the importance of Natural farming, principles of Subhash palekar and Fukuoka. He also discussed about the advantages of using Jeevamrutha, Ghanajeevamrutha, Beejamrutha etc. Natural farming can improve the soil health as well as human health. Advised the farmers to minimize the use of chemicals and inorganic fertilizers in agriculture.

Dr. S. Onkarappa, Scientist (Plant Protection), Dr. Ravi Kumar D., Scientist (Soil Science), Dr. Saraswathi J.M., Scientist (Home Science)., Dr. Mahantesh P.S., Scientist (Horticulture) along with 80 krishi Sakhis of Chitradurga district were present during the programme. Mrs. Geetha Kumari B N., Senior technical Officer, KVK, Chitradurga hosted the programme.





#### Natural Farming training programme for Krishi Sakhi- Batch -II

A training programme on natural farming was organized for Krishi sakhis of Chitradurga district from 25<sup>th</sup> to 29<sup>th</sup> March 2024 at KVK Chitradurga in collaboration with NRLM, Zilla panchayath Chitrdadurga.

Dr. Kumara O., Senior Scientist and Head, KVK inaugurated the programme and during his speech he opined that the only way to rejuvenate soil health is adoption of Natural farming which includes the adoption of principles of fukuoka and Subhash palekar. Using cow dung and urine farmers have to prepare jeevamrutha, Ghanajeevamrutha, Beejamrutha etc and apply the same to soil at regular intervals which helps in enhancing soil health as well as prevent the damage of pest and diseases. Farmers can also earn about the uses of Neemasthra, Bhramhasthra etc for pest and disease control. At last he suggested the farmers to minimize the use of chemicals and inorganic fertilizers in agriculture. Dr. S. Onkarappa, Scientist (Plant Protection), Dr. Ravi Kumar D., Scientist (Soil Science), Dr. Saraswathi J.M., Scientist (Home Science)., Dr. Mahantesh P.S., Scientist (Horticulture) along with 40 krishi Sakhis of Chitradurga district were present during the programme. Mrs. Geetha Kumari B N., Senior technical Officer, KVK, Chitradurga hosted the programme.







### ICAR-KVK-Dakshin Kannada

#### Field Day on High Yielding Yard Long Bean (Variety: Arka Mangala)

The ICAR- Krishi Vigyan Kendra (Dakshina Kannada) Mangaluru organized the FLD-Field Day on Demonstration of High yielding Yard Long Bean (Variety- Arka Mangala) at Badakodi, Belthangady taluk. Dr. Rashmi R., Scientist (Horticulture) coordinated the programme and provided detailed information to farmers about Yard Long Bean variety Arka Mangala cultivation practices to achieve higher yields. Dr. Kedarnath, Scientist (Plant Protection), Mangaluru explained about plant protection activities for sustainable and effective management of pest and diseases. Dr. Mallikarjuna L, Scientist (Soil Science) briefed about Integrated nutrient management. Mr. Yuvaraj, farmer shared feedback on Arka Mangala variety that it has excellent shelf life, Pods are very long compared to local variety, Stringless and pods are straight which is easy for making bunch. Mr. Jeromias Moras, Progressive farmer and Mr. Hariprasad, Director PACCS, Peradi, 18 farmers and farm women graced the Occasion





# Participation in Farmers Meet and Agricultural Technology Exhibition

ICAR-Krishi Vigyan Kendra, Dakshina Kananada in Farmers Meet and Agricultural participated Technology Exhibition organised on 11.03.2024 at ICAR-CPCRI, Kidu under the leadership of Dr. K.B. Hebbar, Director, ICAR-CPCRI, Kasaragod, Sushri. Shobha Karandlaje, Hon'ble Minister of State for Agriculture & Farmers Welfare was the Chief Guest on the occasion. About 300 farmers were mobilised from KVK, Dakshina Kannada to attend the mela. Dr. S. K. Singh, Deputy Director General (Hort. Sci.), ICAR, New Delhi presided over the function Dr. Prabhat Kumar, Horticulture Commissioner Govt. of India Sushri Bhagirathi Murulya, MLA (Sullia), Dr. Homy Cheryian Director DASD, Dr Hanumanthe Gowda CCDO CDB, Shri Kishore Kodgi President CAMPCO and Shri Satish Kalige, Bilinele Ward Member. Technical session on latest technologies on plant and soil health management, value addition, farmers support initiatives, marketing etc. Demonstrations on drone enabled spraying technology; hybridization technique in coconut; coconut tree climbing device were also conducted for the benefit of the farmers.Dr.T.J.Ramesha,Senior Scientist and Head participated in Farmer-Scientist interaction.







### ICAR-KVK-Davanagere

#### Awareness program on Swachhta to College Students

ICAR-Taralabalu KVK Davanagere, in collaboration with Maganuru Malleshappa College of Education Davanagere conducted Swachhta awareness program to B.Ed students of the college. Dr. Devaraja T. N. Senior Scientist and Head addressing to students said that waste management in now a days become major problem, we need to think newer ways to mitigate and convert waste to manure. Further, said that pesticide residue free food consumption become a challenge. Dr. Avinash T. G. SMS (Plant Protection) said that many organisms and insects plays a vital role indirectly in conversion of Agricultural and Urban waste. Dr. Nagaraj Naik K. T. Principal of the college expressing happiness about KVK's collaboration in conducting Swachhta program. He suggested students to voluntarily involve in cleanliness drive. Essay competition conducted to students on the topic 'Plans for solid waste management in Davanagere city" winner students awarded with prize, faculties of the college and 104 students participated in the program.



#### Training on Natural Farming to Krishi Sakhi Trainees

Five days training on natural farming to 66 Krishi Sakhi trainees under the NRLM mission sponsored by MANAGE Hyderabad was organized in ICAR-Taralabalu KVK Davanagere. The trainees were exposed to natural farming practices along with practical demonstration of production of Jeevamrutha, Ghana jeevamrutha, Neemastra and Bramhastra. Mr. Raghav who is practicing natural farming in his coconut farm from past 20 years, shared his experience with the trainees. The pre and post knowledge test for the train was conducted during the training program.

#### **Training for Input dealers**

Mr. Mallikarjuna B.O., SMS (Agronomy) delivered lecture on the improved production technology for the Paddy for DAESI- students. The program was organized by department of agriculture in collaboration with MYRADA, Holalkere. Explained in detail about the different methods of paddy cultivation. And main preference for the water saving technologies. Interacted with trainees the present scenario of the crops and water management aspects in arecanut.



#### **Collaboration training program with Coromandel Fertilizers**

The program was inaugurated by Mr. S. B Patil DGM, Coromandel Fertilisers organised at kashipura, Davanagere taluk and expressed that the paddy area is decreasing g due shortage of water and methods. Mr. Mallikarjuan B.O. SMS(Agronomy) delivered a talk on the integrated nutrient management in paddy with special reference to NANO urea and DAP. Suggested to the farmers to go for the green manuring crops and seed treatment with bio fertilisers for good growth and yield of the crop.



### **ICAR-KVK-Dharwad**

#### Trainings on Natural Farming for Krishi Sakhis

Two Training programmes on Natural Farming for Krishi Sakhis were organized by ICAR-Krishi Vigyan Kendra, Dharwad in association with KSRLPS Skill Development, Entrepreneurship and Livelihood Department, Government of Karnataka sponsored by MANAGE, Hyderabad from 18-22 March, 2024 and 22-26 March, 2024. During the training programme krishi sakhis were pre-evaluated for knowledge on agriculture and allied sectors. Various lectures on Introduction to Natural Farming-its need, definition, principles, significance & benefits, soil health management, Integrated Farming Systems, seed and planting material in Natural Farming, understanding the concept of crop and livestock integration, extension method demonstration, Farmer's Field Schools, farmer group discussions, nutrient management in natural farming & preparation of bio-inputs, water management, ITKs and multi - cropping models, hands on training on natural farming inputs preparation like Beejamruta Ghanajeevamruta, health and Jeevamruta, nutrition-importance of dietary diversity, healthy diet plans, pest and disease identification in field and its control measures through input preparations like Neemastra, Agniastra and Dashparni ark, understanding the preparation and application of yellow sticky traps in fields, demonstrations on seed conservation for natural farming by establishing farmer seed banks; methods of seed treatment in natural farming, visualization of multi-cropping models in fields, qualities of para extension professionals and linkages with organizations working for agriculture development, certification and marketing of natural produce were delivered by experts and champion farmers as resource persons. On last day, post evaluation study was conducted mainly to evaluate the knowledge gained on Natural Farming by the Krishi Sakhis was done by setting up a questioner, participants shared their usefulness of training and online certificates were issued to the participants. Dr. Jayashree Pattar, Scientist (Animal Science) and Smt. Vidya V. Sangannavar, Subject Matter Specialist (Home Science), KVK, Dharwad coordinated the first training programme and Dr. U. K. Shanwad, Scientist (Agronomy) and Dr. Airadevi P. Angadi, Scientist (Horticulture), KVK, Dharwad coordinated the second training programme. Total 20 different topics of agriculture and allied science were covered to create awareness and develop skills among 60 selected Krishi Sakhis from different talukas of Dharwad district.











## ICAR-KVK-Ernakulam

# KVK participates in Pokkali Farmer-Scientist Face-to-Face Interaction program

On February 22, 2024, ICAR KVK Ernakulam actively participated in the Pokkali Farmer-Scientist Face-to-Face Interaction program organized by the Rice Research Station, Vytila. Dr. P.A. Vikas, Subject Matter Specialist at KVK, elucidated on the potential integration of fish farming alongside Pokkali paddy cultivation. During the interface, Dr. Vikas provided technical insights and addressed farmers' inquiries regarding the practices of farming Milk fish, Mullet, Asian Seabass, and Pearlspot within the Pokkali farming system. His expertise shed light on the practicalities and challenges associated with incorporating diverse fish species into Pokkali paddy farming. The program facilitated meaningful exchanges between farmers and scientists, fostering knowledgesharing and enhancing the understanding of sustainable agricultural practices within the Pokkali farming community.



#### Live screening of release of 16th Installment of PM Kisan

On February 28, 2024, ICAR KVK Ernakulam organized the live screening of the release of the 16th installment of PM-KISAN at the Narakkal Campus. The event saw active participation from KVK staff, contract staff, and local farmers. The initiative aimed to provide direct access to important government schemes and updates to the farming community. By broadcasting the release of the PM-KISAN installment, KVK facilitated greater awareness and engagement among stakeholders, ensuring that farmers are informed about the support available to them. The event served as a platform for dialogue and collaboration, further strengthening the bond between KVK and the farming community it serves.



# Farmers Group visits KVK's Cage Fish Culture and Pearl spot Seed Production units

On March 1, 2023, members of the newly formed Farmer Producer Company (FPO) from the Thripunithura region embarked on a visit to the KVK's Cage Fish Culture unit at Mattuppuram and the Pearlspot seed production unit at Karumaloor. Dr. P.A. Vikas, SMS (Fisheries), provided detailed insights into the technical and practical aspects of seed production. During the visit, partner farmers Shri. Jabbar from Mattupuram and Shri. Deepu from Karumaloor actively engaged with the visiting farmers, sharing their valuable experiences in farming ventures. Their first hand knowledge and expertise greatly enriched the discussions and provided the visiting farmers with practical insights. The newly formed FPO group expressed their intention to commence brackish water fish farming in a 1.5-acre area and cage farming in open water bodies. This initiative aligns with KVK's mission to facilitate practical farming opportunities and address the challenges faced by farmers venturing into new agricultural domains. Such support is pivotal for ensuring the success of farming ventures, particularly in the primary production sector. The visit proved to be an invaluable learning experience for all involved, fostering knowledge exchange and promoting sustainable agricultural practices within the community.





# ICAR-KVK-Gadag

#### Krishi Sakhi - Natural Farming

ICAR-K.H.Patil Krishi Vigyan Kendra, Gadag in association with Ministry of Agriculture and Farmers Welfare, New Delhi, MANAGE, Hyderabad and SRLM, Karnataka organised five-days training programme on "Natural Farming" for Krishi Sakhis's (Community Resource Persons) of Ron and Shirahatti blocks of Gadag district from 18-03-2024 to 22-03-2024.

The programme was inaugurated by Shri Jagadev B., Project Director, Zilla Panchayat, Gadag and emphasized the crucial role Krishi Sakhis in disseminating agricultural technologies to farmers. Chief Guest of the programme Shri Chandrashekhar M. Yaligar, DPM, Sanjeevini Scheme, Zilla Panchayat, Gadag, highlighted the need for Krishi Sakhis to act as a bridge between KVK, development departments and farmers in facilitating the timely dissemination of agricultural information to farmers. Dr. Sudha V. Mankani, Senior Scientist & Head (I/c), ICAR-KVK, Gadag, presided over the function said that Krishi Sakhis should encourage farmers to adopt natural farming and environmental friendly technologies. Method demonstration on preparation of organic inputs, bio-fertilizers, bio-pesticides and their importance, soil nutrients, health and nutri-garden, dairy cattle nutrition, horticulture in natural farming and experience sharing by progressive farmers were the highlights of this training.





### ICAR-KVK-Kodagu (Gonikoppal)

#### Training programme on mushroom cultivation and women empowerment at KVK Kodagu

ICAR- Krishi Vigyan Kendra, Gonikoppal in collaboration with Coffee board, south Kodagu region conducted training programme on mushroom cultivation and women empowerment on 18<sup>th</sup> March 2024. A total of 37 farmwoman participated in the programme. The programme was inaugurated by the chief guest Dr. Shridevi, Department Director (extension), Coffee board south Coorg. She opined that empowering women to participate in economic and social life across sectors was essential to build stronger Indian economy. Mr. Prabhakara B, Head Incharge, welcomed the participants and spoke about the importance of women empowerment in agriculture sector and ways to earn livelihood. Mrs. Rashmi Bhanuprakash, Mushroom entrepreneur took a session on mushroom cultivation. She encouraged the participants to take up entrepreneurship activities. The participants got hands experience in mushroom cultivation and they appreciated the facilities and training provided by KVK Gonikoppal, Kodagu.







#### Natural Farming Training for Community Resource Persons (Krishi Sakhi)

ICAR-KVK, Hassan organized the five days training programme on "Natural Farming" for Community Resource Persons (Krishi Sakhi) of Farm Livelihood Training programme in collaboration with MANAGE, Hyderabad, SANJEEVINI-Karnataka State Rural Livelihood Promotion Society and Department of Skill Development, Entrepreneurship and Livelihood, Government of Karnataka at KVK Hassan from 25-03-2024 to 29-03-2024.

As a part of training, inauguration and felicitation program was organized to progressive natural farming farmer Mr. Lakshmeesh. The programme was inaugurated by Mr. Lakshmeesh and Mr. Nagavarma, Progressive IFS Farmer, Holenarsipura taluk.

In the inaugural speech, Mr. Lakshmeesh addressed that participants of this programme should acts a bridge between farmers and agriculture technology developing institutes. Further, kirshi sakhi's should encourage environment friendly agriculture by adopting natural farming and give more importance to utilization of on farm inputs to reduce cost of cultivation and to achieve sustainability in farming.

Dr. Rajegowda, Senior Scientist and Head, KVK, Hassan has chaired the programme and during his presidential remarks he said that trainees should focus on doubling the farmers income by practicing zero budget natural farming and also should encourage the farmers to practice Jeevmrutha, Ghanajeevamrutha application in their fields to reduce the cost on chemical fertilizers and also informed to motivate group marketing rather than individual marketing of products because it will fetch more profit to the farmers.

Dr. Arunkumar, B. R., Scientist (Soil Science) organized the training and briefed the objectives, motto, roles and aims of SANJEEVINI and Kirishi sakhi's. Dr. Shrinivas Deshpande, Scientist (Agri. Engineering), KVK, Hassan has made introductory remarks. The faculty of KVK Dr. M. Shivashankar, Scientist (Home Science), Dr. Nagaraja, T. Scientist (Plant Protection), Dr. Pallavi N. Scientist (Crop Physiology), Ms. Fiyzia, Alur taluk Panchayath organic farming anchor and 30 Krushi Sakhi participants were present in the program.



### **ICAR-KVK-Haveri**

#### Training and capacity building to the Krishi Sakhi

KVK, Haveri in collaboration with Department of Skill Development, Entrepreneurship and Livelihood, Zilla Panchayath, Haveri organized 6 days structural capacity building programme to 30 rural womens called as "Krishi Sakhi" from 25.03.2024 to 30.03.2024. Dr. Guruprasad G. S, Senior Scientist and Head in his inaugural speech emphasized the role of Krishi Sakhi's in transferring technologies to farming communities for sustainable development and upliftment. He also insisted Krishi Sakhi's to assist small and marginal farmers to enhance their productivity sustainably through natural farming.

Several aspects like soil health management, major agriculture and horticulture crops production aspects, importance of nutrition garden, apiculture, safe use of insecticides, improved varieties of perennial fodder crops, Integrated Health Management in sheep and goat, horticulture nursery management, seed treatment and germination test preparation and application of bio pesticides and bio fertilizers, mushroom cultivation, agriculture extension methods, use of ICT tools in agriculture were discussed. A practical exposure visit was also executed covering different aspects viz., vermicompost production unit, Integrated Farming System fields, cole crops production field, betelvine garden and sheep unit. Before and after conducting the training pre and post evaluation was conducted to know the level of knowledge gained regarding agriculture and allied sectors and noticed the 60-70 per cent improvement in knowledge level after 6 days of training. Totally 15 theory and 09 practical classes were engaged by different technical experts.



#### Natural Farming capacity building training programme

Krushi Sakhi's are driving force behind a rural transformation and playing pivotal role in encouraging and disseminating different techniques of natural farming to farming communities. In this context KVK Haveri entrusted five days residential natural farming

training programme in collaboration with MANAGE Hyderbad and Skill development, Entrepreneurship and Livelihood Department, Zilla Panchayath, Haveri to 60 Krushi sakhis in two batches from 19/03/2024 to 23/03/2024. Dr. Guruprasad G S, Senior scientist and Head, in his inaugural speech advised the Krushi Sakhis to work as catalyst of agriculture transformation and play an important role in nurturing future for sustainable agriculture like natural farming. He also highlighted the importance of natural farming in sustainable livelihood. Master trainers Dr. Mahesh Kadagi, Scientist (Animal Science) and Dr. Santhosh H M, Scientist (Horticulture) were coordinated the training programme and urged Krushi Sakhis to understand local ecosystem and its importance in developing strategies for natural farming and convey same to farming community in reliable manner.

These certified Krushi sakhis trained on nutrient management in natural farming & preparation of bioinputs like Jeevamrit, Ghanajeevamrit, Beejamrit etc., soil health management, concept of crop and livestock integration, hands on training on natural farming, pest & disease identification in field and its control measures through input preparations like Neemastra, Agniastra & Dashparni ark, ITKs and multi - cropping models, seed and planting material in natural farming, qualities of para extension professionals & linkages with organisations working for agriculture development and certification and marketing of natural produce aspects. On this occassion natural farming practicing farmer Mr Chandrashekar Patil, narrated his experiences and benefits of natural farming. Further he narrated role of organic carbon in making soil healthy and opined that when health of soil and animals improves, health of humans also improves automatically. At the end of training programme, all the participants were evaluated and issued the certificates as per the guidelines and procedures of MANAGE Hyderbad. Totally 14 theory and 07 practical classes were engaged by different technical experts.





### ICAR-KVK-Idukki

#### Scientific Field Visit to Natural Farming plot and different technology adopted fields of KVK

A Scientific Field Visit was conducted by Dr. B. T. Rayudu, Principal Scientist, and Nodal Officer, ICAR-Agricultural Technology Application Research Institute(ICAR-ATARI), Zone XI, Bengaluru to Natural Farming Farmers Plot in Thekkinkannam Village of Idukki district where an interaction was arranged with farmers. He discussed with the farmers on different components and importance of Natural farming. He observed the Natural Farming Plot of Farmers where they were religiously using all the natural decoctions demonstrated by ICAR- Krishi Vigyan Kendra, Idukki viz., Jeevamrutham, Beejamrutham, Ghanajeevarutham, Botanical Fungicides and Viricides, Saptadhanyakurukashyam, Dashabharnikasyam, Neemastra, Bhramastra and Agniastra. The farmers personally explained the difference in using natural farming decoction as compared to the heavy chemical application. After that a visit was also conducted to Pink Pigmented Facultative Methlotrophs (PPFM) applied field of small cardamom. The farmer is continuously using all the technologies demonstrated by ICAR- Krishi Vigyan Kendra, Idukki in his field viz., PPFM, Entamo Pathogenic nematode (EPN), Pseudomonas fluorescens, Trichoderma viride, Bacillus subtilis, VAM, Micronutrients viz., IIHR Banana Special and IIHR Vegetable Special. The Results after application of PPFM was personally explained by farmers to our Nodal Officer. He also visited a nearby Bitter Gourd field where all the technologies of ICAR- Krisghi Vigyan Kendra, Idukki viz., culure Trap for Fruit Fly, IIHR Vegetable special etc. Dr. R. Marimuthu, Senior Scientist & Head, Ms. Manju Jincy Varghese, SMS Soil Science, Mr. Sudhkar Soundarajan, SMS Plant Protection, ICAR-Krishi Vigyan Kendra, Idukki accompanied the field visit.





# ICAR-KVK-Kalaburagi-1

#### Five days training programme for Krishi Sakhi on Natural Farmina



ICAR-Krishi Vigyan Kendra, Kalaburagi-I has organized five days Agricultural livelihood community resource persons (KRISHI-SAKHI) II batch training programme in collaboration with MANAGE, Hyderabad, Mission Director, Sanjeevini-KSRLPS and Zilla Panchayat, Kalaburagi from 18.03.2024 to 22.03.2024. 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 Sakhi will make available the latest technologies at the door step of farmers. Dr. M. V. Chalageri, Project Director, inaugurated the event and explained about role, mandates, purpose and also explained criteria, process, roles and responsibility of Krishi Sakhi. Dr. Shreenivas B V, Master Trainer for Natural Farming presented overview of the training program and Introduction to Natural Farming-its need, Definition, Principles, Significance & benefits and Soil health management. 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. Lohit, Kalaburagi wished to the participants for their new job role in bridge between scientists and the farming community for transfer of new technologies. Dr. Zaheer Ahamed, Scientist (Plant Pathology) anchored, Dr. Yusufali, Scientist (Agronomy) welcomed and Dr. Shreenivas B. V, Scientist (Soil Science) thanked the guests. Dr. Rajashekahar Basnayak, Basayya Swamy, Nagaraj, Vijayanand, Ashwini Young Professional, NRLM, Zilla Panchayat, Kalaburagi, Mahesh Hugar, KVK Staff and 30 Krishi Sakhi were participated as guest.

#### Organic/ Natural farming Exposure visit

Sri Sharanbasavshwara College of M.Sc. Botany students along with KVK scientist exposure visited to Natural farming progressive farmer Mr. Laxmikant Hibare from Hagaraga, Kalaburagi dist on 27.03.2024. During visit students visited different fields of Hibare farm turmeric, agroforestry, vermicompost and poultry units and learned cultivation and plant protection through Natural farming also exposed to processing, branding and marketing. Dr. Zaheer Ahamed, Scientist (Plant Pathology) interacted with participants on pest and disease management in field and horticulture crops, integrated farming system, about natural farming and also explained about the KVK mandated activities, facilities like QR code based technologies, do scan call scientist service and facilities available at the KVK and visited to different demo units of KVK. Smt. Dwarka, Asst professor, S.B College. A total of 20 students were actively participated and benefitted from the visit





# ICAR-KVK-Kalaburagi-2

#### CDP on Natural farming to Krishi Sakhi from 23-03-2024 to 27-03-2024

ICAR-Krishi Vigyan Kendra, Kalaburgi-II organized five days (23-03-2024 to 27-03-2024) Capacity Development Programme on "Natural Faming" in collaboration with MANAGE, Hyderabad and State Rural Livelihood Mission, (Karnataka) Zilla Panchayat. Krishi Sakhis are the driving force behind the rural transformation. In this back drop, these Krishi Sakhis were educated with brainstorming session on effective utilization of natural resources in farming and all the aspects of natural farming and also practiced the preparation of Bio-formulation like Dashaprani, Neemastra, Agniastra and compost making methods from fruits and vegetables waste and local available materials to reduce the input cost through method demonstrations by the experts.

They also gained the knowledge from the expert organic farmer in the locality. He shared the essence of natural farming to the Krishi Sakhis made them to realize the worthiness of Natural Farming.

All the Krishi Sakhis were evaluated and observed the confidence over the topic and real consequences from modern agriculture in the future. The valedictory program addressed and graced by the Sri. M. Chalgeri, Project Director DRDA, Zilla Panchyat, Kalaburgi, Dr. M.M. Dhanoji, Dean (Agri) CoA, Kalaburgi, Dr. B.M. Doddmani, ADR, ZARS, Kalaburgi, Sri. Lohith Kumar Project Manager, NLRM, Zilla Panchyat, Kalaburgi and Dr. Raju Teggali, Sr. Scientist & Head, ICAR-KVK, Kalaburgi-I and this program was coordinated by Dr. Chethan T., Scientist (Horticulture) and Sri. Sanjeevkuamr Patil, Technical officer (Computer) ICAR-KVK, Kalaburgi-II. with the support of Dr. P.Vasudev Naik, Sr. Scientist & Head, ICAR-KVK, Kalaburgi-II and made grand success.











### ICAR-KVK-Kannur

#### ZMC visit to Chengalayi, NICRA Village of KVK Kannur

The Zonal Monitoring Committee visited NICRA village Chengalayi at Kannur District on March 12, 2024 to evaluated the progress of implementation of NICRA project of KVK Kannur. Dr. D. M. Hegde, Chairman ZMC, NICRA, ATARI Zone XI, Bengaluru, Dr. B. Narayanasamy, Member, ZMC, Dr. D. V. S Reddy, Principal Scientist, ICAR-ATARI Bengaluru and Dr. Sanju Balan, Assistant Professor, PRS Panniyur and Nominee of DE. KAU, Thrissur were accompanied by Dr. Jayaraj P., Head, KVK Kannur, Dr. Parvathy A, Nodal Officer NICRA and Assistant Professor, KVK, 7. Kum. Anjali, SRF, NICRA Project, Sri. Rakesh A., Assistant Agricultural Officer, Krishi Bhavan, Chengalayi and Smt. Bijina K., VCRMC Member, Chengalayi.

Dr. Jayaraj P., Head, KVK Kannur welcomed the ZMC members at KVK Kannur. Dr. D. V. S. Reddy explained about activities of NICRA approved by the nodal agency CRIDA and the purpose of the ZMC visit and how the activities undertaken in NICRA village are benefitted in addressing the climate related issues in agriculture and allied sectors. The major activities undertaken during the last two years were presented. The ZMC members critically reviewed the activities and suggested to give more importance to the activities to popularize climate resilient technologies and also to make an impact of such activities through convergence with other agricultural stakeholders. The team had a



discussion with Dr. Elizabeth Joseph, Assistant Professor (Home Science), Smt. Renisha J. M., Assistant Professor (Horticulture), Dr. Manju K. P., Assistant Professor (Entomology) and Smt. Shahanas K. M. P., Farm Superintendent, KVK Kannur about NICRA interventions and constraints faced in implementing the project.

The ZMC members visited the selected fields in NICRA village and interacted with beneficiary farmers of NICRA project to evaluate the implementation of NICRA project. The team has visited the plot of vegetable cultivation at

Edakkulam by a group of 13 farmers namely Karshakashree group lead by Sri. Mahoharan, a progressive farmer, which is promoted as a vegetable cluster under NICRA project with the support of Krishi Bhavan. The team also visited arecanut field and dairy unit of Sri. Roy, a progressive farmer and beneficiary of NICRA project, demonstration plot of Integrated Nutrient Management (INM) in Banana of Sri. Anto under NICRA project, a homestead with Integrated Farming System of Smt. Sindhu, a progressive women farmer also maintaining a floriculture unit and Choorikkattu paddy field where a wooden plank was installed under NICRA project. The team also monitored Custom Hiring Centre of NICRA at Krishi Bhavan, Chengalayi where the implements and machinery provided under the project including garden tiller, seedling trays, sprayers etc. were kept.

The team had a critical review of interventions in Chengalayi under NICRA project and conducted a fruitful discussion with Sri. Janardhanana (Chairman, Standing Committee of Development) and Sri. M. M. Prajosh (Chairman, Standing Committee of Health and Education) at Chengalayi Grama Panchayat, Sri. Nived, Assistant Engineer, MGNREGS, Smt. Bindu, CDS Chairperson, Kudumbashree and Sri. Biju K., VCRMC



member. The farmers shared their experiences about NICRA interventions and their expectations from the project in future with ZMC. Satisfaction of farmers in technical support provided by KVK through NICRA project is a signboard for the



effectiveness of implementation of the project by exploring all possible avenues of convergence of all agricultural stakeholders like Department of Agriculture Development and Farmer's Welfare, other line departments like Animal Husbandry, Fisheries etc., Local Self Government Institutions, MGNREGS, District Industries Centre, Kudumbashree Mission etc. Dr. Hegde, Dr. Narayanswamy and Dr. D. V. S. Reddy appreciated the efforts under NICRA to revive wetland ecosystem and to support farmers with advanced technologies and convergence and advised to demonstrate more climate smart technologies in NICRA village in convergence with other institutions for a wider coverage of benefits under NICRA to farmers in Chengalayi Panchayat.



# ICAR-KVK-Kasaragod

#### SAC meeting and Nodal Officers Visit to KVK Kasaragod

The XXVIth Scientific advisory committee meeting of KVK Kasaragod was organised on 20th March 2024 at DJ Hall in CPCRI, Kasaragod. The meeting was chaired by Dr. K.Balachandra Hebbar, Director, ICAR-CPCRI, Kasaragod. Dr. D.V.S.Reddy, Principal Scientist, ATARI and Nodal Officer, KVK Kasaragod attended the meeting. A total of 37 officers from the developmental departments and invited guests participated in the meeting. The department heads from the line departments offered suggestions for strengthening the activities of KVK. The major suggestions include taking up climate smart technology demonstrations, demonstrations for the prevention of mastitis in milch cows, interventions for the management of leaf spot and inflorescence dieback in arecanut, addressing crown rot in coconut, pest management in coconut, drone technology demonstrations in paddy, introduction of suitable high yielding and salt tolerant rice varieties, demonstrations on high yielding vegetable crops and integrated pest and disease management, organising training on value addition of fruits and vegetables for FPOs, SHGs and entrepreneurs, associating with SC and tribal development departments for undertaking developmental activities for underprivileged sections of the society and collaboration with ATMA and Department of Agriculture and farmers welfare for implementation of various activities. The newly developed website of ICAR-KVK Kasaragod was also launched by Dr.K.B.Hebbar and Dr.D.V.S.Reddy during the meeting.

During the function Shri Satyanarayana Beleri, Bellur, Kasaragod district was honoured for receiving Padma Shri award during the year 2024. He also addressed the gathering and offered his remarks for furthering the cause of the farmers especially in rice cultivation.

Dr.D.V.S. Reddy, ATARI nodal officer for KVK Kasaragod further visited KVK and the demonstration units Viz; Open precision farming, fruit orchard, fodder demo unit, vegetable seed production unit, millet demo unit, aquaculture unit, seed production unit, micro irrigation demo, composting unit, solar electric fencing unit and labs. He offered suggestions for improvement of the bio input production and soil testing lab for the benefit of farmers. The KVK had taken up various activities under SCSP for the development of underprivileged communities and as part of 'Socially Responsible Affirmative Action by KVK Kasaragod', six goat kids were distributed to three 'Widowed ladies in the middle age group' for economic empowerment and nutritional security.





# ICAR-KVK-Kolar

# Animal health camp & a training program on management of cows to achieve "Calf a year

ICAR-KVK Kolar organized two significant events aimed at enhancing livestock health and productivity in the region. The first event, held on 16.03.2024 at Kalahasthipura village in Kolar taluk, saw the participation of approximately 60 farmer families who brought around 400 animals, including 65 cows, 15 buffaloes, 100 goats, 200 sheep, and 20 hens. Activities such as vaccination, deworming, infertility management, and treatment for other diseases were conducted, with tablets, mineral mixtures, vitamins, and liver tonics distributed among the participating families. Dr. Naganna, Chief Veterinary Officer, delivered a lecture on cow management to achieve "Calf a Year," while the staff from Veterinary Dispensary, Vadaguru, actively participated in treating the animals.

The second event, held on 21.03.2024 at Muduvatti village in Kolar taluk, gathered around 50 farmers with over 400 animals, including various livestock species. Led by Dr. Vijay Patil, Senior Veterinary Officer from Vakkaleri hobli, and his office team, the event focused on treating animals and providing training on the "Calf a Year" program. The camp was presided over by the Senior Scientist and Head of KVK Kolar, Scientists (Horticulture) & (Sericulture) chaperoned the camp.





#### **World Water Day 2024**

On March 22, 2024, ICAR KVK Kolar marked World Water Day, focusing on the theme "Water for Peace." This event serves to raise awareness about the critical importance of water and to inspire action to combat the global water crisis, in collaboration with the DHAN Foundation, the occasion aimed to underscore the significance of adopting effective water conservation and management practices.

Dr. Shivanand V. Hongal, Senior Scientist & Head, KVK, Kolar chaired the event, leading. Distinguished guests included Dr. V. Nache Gowda, Former DR of UHS Bagalkot, Dr. Manjunath Reddy, T.B. Scientist (Plant Protection) of KVK Kolar, and Ramesh from the DHAN Foundation, who participated as esteemed chief guests. Dr. Anil Kumar S, Scientist (Soil Science) from KVK Kolar, delivered a compelling lecture on the importance of implementing water conservation techniques in agriculture. The aim was to equip farmers with knowledge and strategies to optimize water usage in their farming practices, thereby promoting sustainability. A total of 80 farmers actively engaged in the event, demonstrating their commitment to addressing water-related challenges.



Capacity building program on Management of Chicks for healthy growth & productivity

On 22.03.2024 ICAR KVK Kolar organized training program on Management of Chicks for healthy growth & productivity at Muduvatti village of kolar taluk under SCSP programme & distributed chicks to the beneficiary SC farmers. Mrs. Santhosh gowda, from primary animal health centre vakkaleri served as resource person. Scientists Horticulture & Home science kvk kolar presided over the program.





#### Promotion of integrated farming through skill upgradation of master farmers

The initiative 'Promotion of integrated farming through skill upgradation of master farmers' aims to enhance agricultural sustainability and productivity by empowering farmers and rural youth to establish Integrated Farming System (IFS) units within their homesteads. It focuses on providing essential knowledge on critical technologies for IFS-based production systems, establishing exemplary IFS models in gram panchayats, and offering technical assistance to farmer and women collectives for successful establishment within the IFS framework.

The project 'Promotion of integrated farming through skill upgradation of master farmers' was implemented in strategically selected Block Panchayats, focusing on Vettikkavala and Kottarakkara in Kollam district, and identified four Grama Panchayaths for targeted interventions: Vettikkavala and Mylom within the Vettikkavala block, alongside Kareepra and Ezhukone in the Kottarakkara block. 20 master farmers, 5 per panchayat, underwent a twenty eights day capacity building programme, and an Agri-Task Force comprising 10 youngsters per panchayat received 10 days of training.

The skill of master farmers was upgraded in agriculture and allied areas, making it beneficial to the participants. This enhancement in skills is crucial for improving agricultural practices and overall productivity in farming. Training rural youth to form an Agri Task Force is beneficial to the community, especially in addressing labor scarcity issues in agriculture. It helps in building a skilled workforce that can efficiently manage agricultural tasks, thereby mitigating the impact of labor shortages on farming activities. Study tours to agricultural facilities like To facilitates the transfer of knowledge from research institutions to farmers, three Exposure visit were conducted for master farmers and agri task force members to Asia's biggest fruit crop nursery (1)Home Grown Nursery & Farms, Kanjirappaly (2) JNTBGRI, Palode (3) IFSRS, Karamana. The visits helped them to learn more about the recent cutting-edge techniques and technologies in fruit cultivation and IFS model for urban, and peri urban agriculture. Inputs includ papaya hybrid and jack graft, ready-to-fruit mushroom beds, chicks, boiler feed, stingless bees with hives, and micronutrients like Ayar, were distributed to the master farmer's thereby enhancing productivity and diversifying farming practices.









# ICAR-KVK-Koppal

#### Training programme on pickle making

The pickle making holds a significant place in the state's cultural heritage, showcasing a remarkable culinary art passed down through generations. This age-old practice not only preserves the diversity of local produce but also empowers women to embrace entrepreneurship and gain economic independence. The pickle making empowers women, fostering entrepreneurship for economic independence and social recognition. Preserving and supporting women pickle makers promotes inclusive economic growth and gender equality. ICAR KVK Koppal along with zilla panchayat Koppal organised a training programme on pickle making in kvk premises for selected SHG members of koppal district on 21.3.202. The programme was inaugurated by the senior scientist and head Dr.Raghvendra Yaligar by lighting the lamp. During his inaugural speech he stressed on use of local fruits and vegetables for processing and value addition. Shri shyam sundar Panchyat officer Koppal explained different financial facilities available for women. Dr. Kavitha Y Ullikashi Scientist (Home Science) explained that pickles are a traditional food item in India, and heavily consumed in every household. Pickles become more helpful for a single person staying distant from family as pickles come in the range of varieties and tastes which can suit anyone. Pickle manufacturing is very simple and any individual with small start-up capital can start this business. With consideration of the availability of fruits and vegetables and the popularity of tastes and acceptance of certain varieties, the business can be very successful. She also gave hands on training on preparation of local fruit and vegetable pickles such as amla, lemon, grapes and bitter gourd. About 26 women from different villages of koppal were participated in the training programme.







# ICAR-KVK-Kottayam

# Capacity building and inputs distribution programme to strengthen the livelihood security of tribal population in Kottayam district under ICAR-NBAIR TSP

Capacity building: A training session was organized on 16.03.2024 at Melukavu village aimed at improving the livelihoods of tribal farmers by providing adequate technological support for enhancing farm productivity. Technologies promoting eco-friendly farming techniques were demonstrated to the farmers. One hundred and five farmers from the village attended the training. Four scientists from the disciplines of Agrl. Extension, Soil science, Horticulture and Plant pathology interacted with farmers and suggested solutions for various production, plant protection and marketing related problems of the farmers. The training commenced at 10.30 am in the panchayath hall at Melukayumattom.

**Inputs distribution:** Bio inputs were distributed among 105 tribal farmers of Melukavu village. The technologies of NBAIR like oil-based formulations of Isaria fumosorosea, Lecanicillium lecanii, Beauveria bassiana, and Bacillus thuringiensis along with KAU technologies of Pseudomonas fluorescens, Trichoderma enriched cow dung, Fish Amino Acid, Cue lure fruit fly trap as well as other inputs of micronutrient mixtures like IISR pepper special, Ayar, Sampoorna multi mix (vegetables) were demonstrated and distributed to the farmers. The importance of scientific crop production techniques and usage of the above bio inputs were emphasized during the training. Also leaflets on the proper usage of bio inputs were provided to ensure maximum benefit.





#### Skill Development Training on processing and value addition of agricultural crops for ED Club Members

KVK Kottayam organised skill development training on 'value addition of agricultural crops' on 18.03.2024 for the 'Entrepreneurship Club' members of Sree Narayana College, Kumarakaom. Twenty six degree students participated in the training programme. Technology for preparation of minimal and intermediate processing of fruits and vegetables, preparation of non-alcoholic fruit beverages (squash. Syrup, crush, RTS), concentrated products (jam, jelly, varattu), dehydrated products (chunks, tuttifruttii, bar), pickled products, frozen products (cutlet, momos, sip ups) and convenient foods (rasam powder, chutney powder, tea bag) were demonstrated. Sessions were also conducted on packaging, labeling and branding of products





# ICAR-KVK-Lakshadweep

#### Animal Health Camp organized by KVK-Lakshadweep at Kavaratti island

KVK-Lakshadweep-ICAR-CMFRI organized ten days long animal health camp at Kavaratti in various locations. The health camp was funded by TSP of ICAR-CMFRI. The camp was organized with the objective of providing basic information on animals related to health, nutrition, breeding, feeding, management, control and prevention of diseases, administer preventive inoculation and other measures. In addition to that the objective was to provide free veterinary health check-up facility and free distribution of veterinary medicines. \

The animal health camp was organized with the support of FPO formed by KVK in Kavaratti. The camp was inaugurated by Shri. Musnad PK, President, Kavaratti Island Coconut Producers Cooperative Society Ltd from Kavaratti. The camp comprised activities towards identification of diseases, practicing de-worming, providing dietary supplements and others related to dairy and poultry. About 5021 animals (dairy cows, goats, cat, duck, poultry birds and other pet birds) were treated and other supplements were provided benefitting 782 farmers and other stakeholders. There was a huge response for this activity and many farmers and animal growers extended their gratitude for such camps. Animal health camp attracted wide publicity in islands and the farmers from other islands have requested KVK to organize such camps in their respective islands. The camp was coordinated by Dr. V.M. Abdul Gafoor, SMS of KVK. The approach for the camp and other coordinating activity of this camp was performed by Dr. P. N. Ananth, Head, KVK. The camp was attended by all the staff of KVK.











## ICAR-KVK-Malappuram

#### RAWE Programme of B.Sc. (Agriculture) students

The KVK attachment module of RAWE programme of B.Sc. (Agriculture) students, CoA, Vellayani, Trivandrum started on 18.03.24. The introductory class, covering the history of KVK, its mandates, organizational setup, specific functions, roles, achievements, and future plans in agricultural extension, was handled by Dr. Jasna V.K, Assistant Professor (Agricultural Extension). Interventions in Agricultural Engineering, Animal Science, Community Science, Agricultural Entomology and Horticulture disciplines were led by Dr. Priya G. Nair, Dr. Ibraheem Kutty C., Dr. Lilia Baby, and Dr. Najitha Ummer, Dr. Akhilraj B.C respectively. In the afternoon session, the students visited the OFT field of Mr. Abdulla at Perashannor, Kuttippuram, under the guidance of Dr. Akhilraj B.C., where ash gourd (Thara), cucumber (Arka Veera), and cowpea (Pusa Bharani) varieties were grown. They also toured various units of KVK, including the vermicomposting unit, Azolla cultivation unit, coir pith composting yard, production units of Jeevamritham and Sampoorna, as well as the food processing unit, biocontrol laboratory, custom hiring unit for machineries and sales counter. Additionally, they participated in practical sessions on organic manure preparation, potting media preparation, and received detailed instruction on budding, grafting, and layering. The students also undertook a field visit to the KVK Farm, where they harvested Soubhagya cucumber variety and participated in seed extraction.



# Demonstration of economic feeding regime for dairy cattle using local ingredients

Increasing cost of compounded cattle feed and lack of reliable quality of the market procured feeds in spite of high price and the resultant poor productivity, ill health and infertility forms the most serious issue affecting economics of dairy farming in Kerala. Inadequate cultivation / availability of feed ingredients for making compounded feed such as grains and agricultural / industrial by products compels dairy farmers to purchase cattle feed as such or ingredients for feed making from the market at very high cost, which in turn makes dairying least attractive. At the same time lot of nutrient rich substrates such as household food wastes goes unutilized due to lack of awareness on proper usage and faulty advices from experts and feed marketing firms against the use of such materials for high producing cattle.

In this context, front line demonstration were initiated under BLAKC (Block Level Agricultural Knowledge center) Malappuram utilizing the special funds sanctioned by DE, on balanced feeding of dairy cattle utilizing household food waste and other locally available materials such as coconut cake. Ten demonstrations were started involving small dairy farms/ household units on proper utilization of household food waste for making balanced daily ration, supplementing deficient nutrients with adequate feed ingredients. The farmers were demonstrated (1) the gross proportion of energy substrates (household food wastes) and protein substrates (oil cakes) to be mixed with for making balanced feed, (2) the total quantity to be fed based on daily requirement for maintenance, milk production, growth and pregnancy together with (3) the gradual way in which the locally available ingredients to be incorporated for replacing market purchased compounded feed completely so that cost of concentrate feeding can be reduced to the extent of 60 % with various additional health and productivity benefits.



## ICAR-KVK-Mandya

### Natural farming Krishi Sakhi Programme



National Institute of Agricultural Extension Management, SANJEEVINI- Karnataka State Rural Livelihood Promotion Society Department of Skill Development, Entrepreneurship and Livelihood, GoK in collaboration with University of Agricultural Sciences, Bangalore. ICAR-KVK Mandya has organized training programme on Natural Farming Krishi Sakhi programme from 18.03.2024 to 22.03.2024. The training programme was conducted with an objective to enrich the knowledge of Krishi Sakhis in Natural Farming and practical Skill enhancement in preparation of Jeevamrutha, Beejamrutha, Neemamrutha, Bramashtra. It's an opportunity for the trainees to serve as a resource persons in conduction of extension activities in diffusion and adoption of natural farming in their block level farmers field.

Dr. Naresh N.T, Senior Scientist and Head, suggested them to learn and implement the natural farming effectively for the healthy farm production in his presidential remarks. Dr. Kamalabai Koodagi, Scientist (Home Science) highlighted the Krishi Sakhis regarding the importance of natural farming in maintain healthy life. Dr. Atheefa Munawery, Scientist (SS&AC), Dr. Rekha Badalingappanavar, Scientist (Agronomy), Mr. Mahesh.H.M, Sr. Technical Officer were participated in the porgramme. Dr. Divya, B and Dr. Suresh,D.K, Master Trainers were co-ordinated the training programme.

## ICAR-KVK-Mysuru

### **Training programme on Soil Health Management**

ICAR JSS Krishi Vigyan Kendra Suttur with the collaboration of NFL Mysore organized a training programme on Soil Health Management at Taraganahalli Village of Nanjungud Taluk. In the programme Rajanna J G delivered lecture on Soil sampling methods in the different agricultural crops and importance of soil analysis. Horticulture scientist Dr Vinay G M explained about management of soil under Horticultural crops with inter and multiple cropping systems. NFL Assistant management Kashyapa delivered lecture on new environment friendly fertilizers for agriculture and its importance. A total of 60 farmers participated and benefitted from the programme.









## ICAR-KVK-Palakkad

### Hands-on Food Processing Training at KVK Palakkad

The Krishi Vigyan Kendra Palakkad held a comprehensive food processing training program. This program offered participants a unique blend of classroom learning and practical experience. Trainees gained valuable knowledge on the principles behind various food processing methods. They weren't just taught theory; the program included hands-on sessions where participants processed different food items, giving them a well-rounded understanding of food preservation techniques. Additionally, the training program introduced participants to various machines used in food processing and gave them the skills to create valueadded products from fruits and vegetables. Notably, a special session focused specifically on the processing of moringa, a highly nutritious and versatile plant. This program empowered participants to preserve food and create new products, potentially boosting their income and entrepreneurial opportunities.





### ICAR-KVK-Pattanamthitta

# KVK, Pathanamthitta launches the agricultural spray drone demonstration in the district

The district level launching ceremony of the agricultural spray drone demonstrations as part of the Agri-drone project of Ministry of Agriculture and Farmer's welfare in Pathanamthitta district was held on 18<sup>th</sup> March 2024 at Koipram block. The programme was inaugurated by Ms. Susmitha L, Project Director, ATMA and was presided over by Ms. Ambily V.L, Assistant Director of Agriculture, Koipram block. Dr. C.P Robert, Senior Scientist and Head, KVK, Pathanamthitta delivered the Key note address. The project aims to create awareness among the farming community regarding how the drones revolutionize farming practices. The drones allow for precise and targeted application of pesticides, fertilizers, and other agricultural inputs, reducing wastage and ensuring efficient use of resources. With the ability to cover large areas quickly, agricultural spray drones save significant time and labour compared to traditional manual spraying methods. By minimizing chemical drift and runoff, agricultural spray drones help in reducing environmental contamination and promoting sustainable farming practices. Drones also eliminate the need for farmers to handle hazardous chemicals directly, reducing the risk of exposure to harmful substances and improving overall safety. As part of the project in the district a total of 250 demonstrations will be carried out across 8 blocks, showcasing the effectiveness and potential of agricultural spray drones in modernizing farming practices and enhancing agricultural productivity.





### ICAR-KVK-Riachur

# Training program on "Natural Farming" to community Resource persons (Krishi Sakhis)

Training program on Natural Farming was conducted to community Resource persons (Krishi Sakhis) for five days on "Natural Farming" to sponsored by MANAGE, Hyderabad in collaboration with Zilla Panchayat, Raichur at ICAR-Krishi Vigyann Kendra inaugurated on 19.03.2024. The programme was inaugurated by watering the pot and explaining about the importance of Krishi Sakhis in disseminating technologies to the farming community by the dignitaries. The Sr.Scientist and head Dr. Hanumantappa Srihari conveyed the information about the importance of natural farming and its impact on agriculture as well as environmental safety. Inaguaration was concluded by vote of thanks.

Later classes on Natural Farming for Krishi Sakhis were conducted especially through hands on training on prepration of jeevamrit, Ghanajeevamrit and beejamrit. There were 30 participants participated from 7 talukas of Raichur districts benefitted the programme.



### ICAR-KVK-Ramanagara

### Skill Training on "Organic Farming" for Rural Youth (STRY)

ICAR-Krishi Vigyan Kendra Ramanagara in collaboration with MANAGE, Hyderabad and SAMETI, UAS, Bengaluru organised six days skill development training programme on "Organic farming" from 11.03.2024 to 16.03.2024 at K.V.K. Magadi, Ramanagara (D). In six days training Scientist (Soil Science) Mrs Preethu, D.C. explained about nutrient management, composting and manuring, vermicomposting techniques, use of biofertilizers, liquid fertilizers etc. and demonstrated preparation of composting, vermicomposting, vermiwash, fortification of compost with microbial consortium etc. Dr. Dinesh, M.S., Scientist (Agronomy) briefed about Crop rotation practices in organic farming, water management, livestock management. Dr. Ranjendra Prasad, B.S., Scientist (Plant protection) explained about cultural and mechanical practices, biopesticides and other practices to control diseases in plant protection. Dr. Sowjanya, S., Scientist (Agricultural Extension) highlighted the concepts of Organic farming, principles and approaches, characteristics of an organic farm etc. Mrs. Uma Rani, K., Farm manager explained seed and planting techniques in organic farming. Mr. Nagaraju Reliable organic certification organization Bangalore explained about organic certification procedure etc. During the training programme progressive farmers of Ramanagara district Mr. Srivatsa and Mr. Surendra shared their experiences about organic farming. Field visit was organized to Samrakshan organics regarding the production of enriched compost and vermicompost In the Valedictory session Senior Scientist & Head distributed participation certificate to all the 15 trainees.





## ICAR-KVK-Shivamogga

### **Bee Keeping for rural youths under ARYA**

ICAR-KVK, SHivamogga organized 3 days on campus training programme on Bee Keeping for rural youths under ARYA from 14.03.2024 to 16.03.2024. The programme was inaugurated Dr. G. K. Girijesh Senior Scientist and Head and was organized by Plant Protection Scientist Dr. R. Girish.

A total of 25 rural youths participated for the programme. The training was scheduled by various resource persons. Honey bee species, bio-products like bee pollen, honey, wax and bee poison were explained. The practical classes on honey bee colony identification, division, uniting and shifting cultivation were taught. The programme was also strengthened with departmental schemes, processing and valve addition. The programme was validate by Dr. B. C. Hanumanthaswamy, ADE and Senior Scientist and Head. All the participant were strengthened by one honey bee colony for continuing as an rural entrepreneurs.





## ICAR-KVK-Thrissur

### Empowering Indigenous Communities for a Sustainable Future

The Tribal Subplan (TSP) programme is a beacon of hope for indigenous communities nationwide. Unlike conventional welfare programs, the TSP focuses on holistic development in tribal regions, addressing their unique challenges and bridging the socio-economic gap. It empowers tribal communities to achieve sustainable development and a brighter future by prioritizing their specific needs and providing targeted support and resources.

KVK Thrissur plays a pivotal role in supporting tribal groups engaged in agri and allied activities through the TSP. KVK offers training, marketing assistance, and infrastructure development to enhance the quality of products. This year, the TSP is focusing on Chimmony, Peechi, Vazhachal, and Chalakkudy forest ranges due to their proximity to tribal settlements and potential resources for ecoshops.

The TSP is actively strengthening Vanasree ecoshops through various initiatives. Training programs help tribal farmers process food products, while marketing support expands their customer base. Infrastructure development ensures product quality, enhancing marketability. By improving the value chain of forest-based products, the TSP increases income for tribal communities.

The positive impact of the Tribal Subplan is evident in the improved living standards in numerous tribal regions. It not only provides economic opportunities but also empowers communities, fostering self-reliance and enabling them to control their development trajectory. Thanks to Director and team ATARI Bangalore for supporting the tribal groups through KVK Thrissur.





# ICAR-KVK-Trivendrum

### Journey of Golden Jubilee Torch through ICAR KVK, Thiruvananthapuram

ICAR Krishi Vigyan Kendra, Mitraniketan, Thiruvananthapuram, organized a special function to commemorate the Golden Jubilee Celebration of the establishment of the KVKs on 30<sup>th</sup> March 2024.

The Golden Jubilee Torch which started its journey from Puducherry during the curtain raiser event which took place on February 21, 2024, after travelling through ICAR KVK, Idukki, was brought to ICAR KVK, Mitraniketan, Trivandrum. It was handed over to Smt. Sethu Viswanathan, Director, Mitraniketan in presence of Dr. Binu John Sam, Senior Scientist & Head, ICAR KVK, Mitraniketan, Dr. Reghu Rama Das, Joint Director, Mitraniketan and other staff of KVK by Mr. Ayans, representative from KVK, Idukki. Smt. Sethu Viswanathan, Director, Mitraniketan graced the occasion as Chief Guest. She lauded the efforts of all KVK staff for their outstanding service to the farming community. With pride, she remembered the golden days spent in KVK, Pondicherry with our founder Chairman, Late Padmashree Shri. K. Viswanathan during 1979 for technical guidance which led to the establishment of our KVK which is the second one in NGO sector.

During the special address, Dr. Reghu Ramadas, Joint Director, Mitraniketan highlighted the role of KVK in the development of farming community, particularly emphasized the significance of KVKs networking for implementing and transferring technological support to farmers.

Golden jubilee celebration was commemorated with the inauguration of the renovated Bio-Inputs Production unit financially supported by the Hon. Director, ATARI, Zone XI, Bengaluru in his special interest. This Bio-hub focuses on the deliverance of eco friendly technologies and supply of bio control agents like talc based Trichoderma, enriched Trichoderma, Pseudomonas sp., Trichoderma coir pith cake, bio pesticides, different types of mechanical traps, pheromone traps etc in cost effective manner.

The Golden Jubilee Torch would be handed over to ICAR KVK, Kollam for its onward journey in a week's time after witnessing further farmer friendly interventions of ICAR, KVK, Mitraniketan, Thiruvananthapuram.









### ICAR-KVK-Tumkur-I

### Training programme for Krishi Sakhis on Natural farming

ICAR-KVK-Tiptur, Tumkur-1 organized 05 days training programme on Natural farming for Krishi Sakhis in association with MANAGE Hyderabad and Sanjeevini, Government of Karnataka from 25-03-2024 to 29-03-2024. The programme was inaugurated by Mr. Siddarameshwara, Circle inspector, Tiptur rural and addressed the participants regarding eco friendly natural farming. Dr. V. Govinda Gowda, Senior Scientist and Head explained the steps for conversion of unfertilized and chemical applied land to fertilized land using bionatural inputs. During this training programme resource persons from KVK Tiptur and champion farmers delivered a lecture on concept of natural farming, and its eco system, soil health management, bio inputs preparation, farming system and seed system, water conservation practices, IFS system, crop and livestock model, extension method, natural product certification, linkages etc during this 05 days programme. Total 36 krishi sakhis from 10 taluks of Tumkur district participated and benefited from this programme.





## ICAR-KVK-Tumkur-II

# On-campus training programme on oyster mushroom cultivation

An On-campus training programme on Oyster mushroom cultivation was conducted on 14<sup>th</sup> March 2024 at Krishi Vigyan Kendra, Hirehalli, Tumakuru. Dr. Loganandhan.N, Principal Scientist and Head, KVK, briefed about the training programme and suggested various ways to become a successful entrepreneur. Mr Ramesh P.R, SMS (Soil Science) delivered a lecture on spawn production techniques. Mrs. Radha R.Banakar SMS (Home Science) gave a lecture on nutritional importance of different kinds of mushrooms along with oyster mushroom cultivation techniques. Later in the session, trainees were shown a demonstration on mushroom bag filling and bag incubation methods. At the end, certificates and training manuals were distributed to all the participants. This training programme was attended by 32 participants from in and around Tumakuru district.







# ICAR-KVK-Udupi

#### **Convocation ceremony of DAESI students**

Final Convocation ceremony of Diploma in Agricultural Extension Services for Input Dealers (DAESI) students of ICAR-KVK Brahmavara was help on 20.03.2024 at the Training Halls of Brahmavara. Keladi Shivappa Nayaka University of Agriculture and Horticultural Sciences, Shivamogga; University of Agricultural Sciences, Bangalore; State Agriculture Management and Extension Training Institute (SAMETI), National Institute of Agricultural Extension Management (MANAGE), Karnataka State Department of Agriculture (KSDA, Udupi District, ICAR-KVK, Brahmavara, Zonal Agriculture and Horticultural Research Station, Brahmavara (ZAHRS) jointly organised the event. Dr. Dhananjaya B., Senior Scientist and Head, ICAR- Krishi Vigyana Kendra Brahmavara welcomed the gathering. Dr. Narayana Reddy, Nodal Officer, SAMETI, Bangalore spoke on the importance of DAESI program and how to use the knowledge gained here. Dr. K. T. Gurumurthy, Director of Extension, KSNUAHS, Shivamogga inaugurated the event and spoke on integrated pest and disease management of crops. He emphasised on input services not just limited to chemicals but also on knowledge. Shri Sivaprasad Gaonkar, Joint Director of Agriculture, Udupi District, said, farmers first contact is input services and hence DAESI graduates should be aware of all agriculture services. Dr. Sudhir Kamath, Principal, Diploma College of Agriculture, Brahmavara opined that input services outlets should have data base of farmers so that they can be guided properly in case of emergencies.



# Training on Natural Farming for Community Resource Persons (Krishi Sakhi)

Government of Karnataka (GoK), Zilla Panchayat, Udupi, Sanjeevini - K.S.R.L.P.S., Department of Skill Development, Entrepreneurship and Livelihood; National Institute of Agricultural Extension Management, Hyderabad; Keladi Shivappa Nayaka University of Agriculture and Horticultural Sciences, Shivamogga; Indian Council of Agricultural Research, New Delhi; ICAR-Krishi Vigyana Kendra, Brahmavara jointly organised a 5 day module II training program on Natural Farming for Community Resource Persons - Krishi Sakhis. The program was inaugurated on 25.03.2024 by Dr. Lakshmana, Associate Director of Research, Zonal Agriculture and Horticultural Research Station, Brahmavara. He emphasised on women empowerment through agriculture and krishi sakis who should become krishi pandits in their field. In his introductory and welcome address, Mr. Avinash, District co-ordinator, opined that Krishi Sakhis should work as link between farming community and agricultural sciences.

The program was presided over by Dr. Dhananjaya, Senior Scientist and Head, ICAR-Krishi Vigyana Kendra, Brahmavara. He called upon the Krishi Sakshis to be in touch with farming community in order to transfer knowledge and technologies that they leant. He also advised that Natural Farming be implemented phase by phase in a structured manner rather than at once. Dr. Revanna Revannavar, Professor of Agricultural Entomology, Zonal Agriculture and Horticultural Research Station, Brahmavara spoke how to control pests in natural farming. Mrs. Navya, District Coordinator, NRLM, Udupi was present during the event. Mrs. Sangeetha, Krishi Sakhi of Thekkatte compeered the program, while Mrs. Archana Prabu delivered vote of thanks





## ICAR-KVK-Uttara Kannada

# Skill Training of Rural Youth (STRY) on "Nursery Management"

University of Agricultural Sciences, Dharwad, ICAR-KVK, Uttara Kannada, Sirsi along with MANAGE, Hyderabad, Skill India, Govt. of India jointly organized 6 days Skill Training of Rural Youth (STRY) programme on "Nursery Management" from 01.03.24 to 06.03.24. Mr. Umamaheshwar Hegde, Grafting and Budding Expert, Sirsi demonstrated various grafting techniques to the participants and they practiced soft wood grafting and patch budding in mango, jack, citrus and hibiscus plants. Participants received hands on training on nursery preparation, seed sowing, nursery mixture preparation, potting, repotting in vegetables, flowers, fruits, plantation crops and spices. They also visited Horticulture Department Nursery, Sirsi and Plantation Crop Nursery at College of Horticulture, Sirsi. Dr. P. Dhanraj demonstrated nursery preparation and transplanting of plantation crops and spices such as Arecanut, coconut, pepper, cardamom etc. About 15 rural youths from Sirsi and Siddapur Taluk participated in the training program. Dr. Roopa S. Patil, Senior Scientist and Head, KVK, Sirsi distributed certificates to the participants and recorded their feed backs. Dr. Yashaswini Sharma, Scientist (Horticulture), KVK, Sirsi has organized the training programme and conducted various nursery management practicals to the participants.





## ICAR-KVK-Vijayapur-1

### Vacuum packing training

KVK,Vijayapur organized vacuum packing training to 12 FPO representative of Vijayapur district on 21.03.2024. Forty representatives of FPO and Chairman, Federation of FPO's participated Dr.D.S.Uppar Professor and Head, Department of seed

Science & Technology inaugurated the training and explained in detail about the advantages of vacuum packing and how it will help in reducing the post harvest losses. Dr.



R.B.Jolli Professor of Seed Science & Technology, College of Agriculture practically showed how vacuum packing of seeds (20 kg packing) can be done. The farmers appreciated the technology and asked to share the machine on hire basis and Associate Director of Research Dr. A.S. Sajjan agreed. Dr. S.M.Vastrad, senior Scientist & Head, Dr. Prakash.H.T, Scientist (Entomology), Mr. S.C. Rathod Senior Technical Officer (Computer) collaborated the training

# BEE Star Labeled Energy Efficient Pump set and Conservation training

KVK, Vijayapur organized BEE Star Labeled Energy Efficient Pump set and Conservation training at KVK,

Vijayapur during 26 - 27.03.2024 100 farmers from different taluks of Vijayapur participated Dr. Ramesh Beerge, Assistant Professor (Agri. Engineering) and Head, Farm Machinery Testing Centre, AC,



Vijayapur he explained about the Solar pump sets efficiency and how to apply for solar pump sets and advantages of pumps. Dr. Vivek.S. Devernavadagi, Scientist (DLA), RARS, Vijayapur explained about soil and water conservation practices. Mr. Shrishail.Rathod, Senior Technical Officer explained about energy saving methods during irrigation. The programme was inaugurated online by KRIDIL, Chief Manager Mr. Anand and Dr. S.M. Vastrad, Senior Scientist and Head, Dr. H.T. Prakash participated in the training programme



### ICAR-KVK-Vijayapur-2 (Indi)

### **FLD & OFT field visit**

Scientist (Horticulture), ICAR-KVK, Vijayapura-II (Indi) visited Pomegranate FLD plot and recorded observations and visited lime OFT field and noticed recovery of wilted plants after technological adoption at Batagunaki village on 21.03.2024.

Fallow up visit to Bhendi FLD field, recorded observations at Ahirsang on 25.03.2024 Scientist (Horticulture and Agronomy), ICAR-KVK, Vijayapura-II (Indi) visited problematic pomegranate field of Mr. Mallikarjun Bidri at Bhairungai on 25.03.2024, observed fruit rot, blight and sunburn suggested appropriate control measures.





# Training programme for Krishi Sakhis on natural farming for Batch-I sponsored by MANAGE Hyderabad

ICAR-KVK, Indi (Vijayapura-II): Organized Krishi Sakhi training programme (Batch-I) on natural farming from 26.03.2024 to 30.03.2024 at KVK Indi. Krishi Sakhis from Indi, Chadchan and Almel taluk of Vijayapura district participated in this event. On first day, the programme was inaugurated by Smt. Nilaganga Babalad, Executive Officer ZP, Indi and presided by Dr. Shivashenkaramurthy M., Senior Scientist and Head. Later Dr. Veena Chandavari, Scientist (Home Science) briefed the overview of training programme to the participants and arranged the

accommodation facility for participants at farmers hostel of KVK. Indi. The technical sessions on introduction to Natural Farming, - Definition, its Importance, Principles, Objectives and Nutrient management, preparation of Bioinputs, pest and disease management in natural farming were conducted by Dr. Shivashenkaramurthy M. Champion farmer Sri Muddugouda B. Patil of Bhatagunaki village delivered lecture on Natural farming for quality produce and improvement of soil health. Lecture on importance of soil sampling and Testing, Preparation of bioinputs like Jeevamrit, Ghanajeevamrit, Beejamrit etc. pest and disease control through Neemastra, Agniastra & Dashparni and Indigenous Seeds and Planting Material in Natural Farming were delivered by Dr. Prakasha G., Scientist (Agronomy). Dr. Heena M.S, delivered the lecture on cropping systems, Pest and disease management in Horticulture Crops in Natural Farming and understanding the installation of yellow sticky traps in field crops. Health and Nutrition-Importance of dietary diversity, healthy diet plans topic dealt by Dr. Veena Chandavari, Scientist (Home Science). Shri. Majeed, G., Technical officer (Computer) explained the Application of ICT in Agriculture and browsing information through Websites, Apps like krishi Suvidha for the benefit of farmers etc. As a part of exposure visit, on fourth day (29.03.2024) Dr. Prakasha G., Scientist (Agronomy), Shri. Majeed, G., Technical officer along with 30 participants visited Shri Rajshekhar Nimbaragi a progressive natural farmer at Benakanhalli and Shri Beerappa Vaggi progressive IFS farmer at Thamba of Inditq.





# ICAR-KVK-Wayanadu

#### One day training on Natural Farming

KVK Wayanad had conducted one day training programme on "Natural Farming" for farmers at Venniyod. In this event classes were lead by Dr. Arularasan G.S, Assistant Professor, KVK Wayanad. Topics like importance of natural farming and different methods to be adopted in natural farming were explained in detail. Around 40 farmers actively participated in the training programme.



### **Distribution of inputs under Tribal Subplan**

As part of Tribal Sub Plan Project of Krishi Vigyan Kendra Wayanad, a programme on goats distribution was organized for the farmers at Chettiyalathur as part of the intervention to strengthen nutrition and livelihood. Dr. Arularasan G.S, Assistant Professor, KVK Wayanad welcomed the gathering. Dr. Deepa Surendran, Assistant Professor, KVK Wayanad presided over the function. The program was inaugurated by ward member. Training on goat rearing were also organized on the same day. Around 15 farmers actively participated in the event.



### ICAR-KVK-Yadgir (Kawadimatti)

### 5 days Capacity Building Programme on Natural Farming to Krishi Sakhis

ICAR-Krishi Vigyan Kendra, Yadgir organized a Fiveday natural farming capacity-building programme (From 18-03-2024 to 22-03-20204). Dr. Jayapraksh Narayana. R. P., Senior Scientist and Head, KVK,

Yadgir welcomed the gathering and opined that sustainability is only possible if there is diversity. Natural Farming improves soil fertility, and environmental health as well as helps in the



reduction of greenhouse gas emissions, and also promises the enhancement of farmer's income. Natural Farming can be considered as a prominent strategy to save the planet Earth for future generations. Natural Farming aims to drastically cut down production costs by encouraging farmers to prepare essential nutrients and plant protection materials with locally available residues. Later overview of the training program spoken by Dr. Raja Scientist (Plant Pathology)

Demonstration/visit to IFS model, Demonstrations on seed conservation for natural farming by establishing farmer seed banks; methods of seed treatment in natural farming, visualization of multi-cropping models in fields explained by Shri.Vishwa Shankar (Champion Farmer). In the technical session, Dr. Eramma., Dr. Shruti Koraddiand, and Dr. Raja., explained the principles and procedures for following natural farming and Hands-on training on natural farming inputs preparation like Jeevamrit, Ghanajeevamrit, Beejamrit, Vapasa mulching and Pest & disease identification in field and its control measures through input preparations like Neemastra, Agniastra & Dashparni etc & 29 Krishi Sakhis participated in the technical session and discussed with the experts and got information. Dr. Sowmya. T. M., ARS, Farm Superintendent, witnessed the programme.





# ATARI ZONE XI, Bengaluru

### Actionomycosis: An important bacterial disease of dairy animals

### Introduction

- This disease is also known as Lumpy Jaw
- This is a chronic infectious bacterial disease occurs in dairy animals.
- Infection usually invades bones of the head in bovines
- Actinomycosis is caused by Actinomyces bovis.
- The organisms remain as resident population and may establish the infection through abrasion, injury or wounds.
- The abrasion of buccal mucosa induced by coarse feed or surface material while chewing may set up infection.
- Transmission of infection through dental alveoli at the time of eruption is noted.
- The alimentary canal of normal cattle may harbor A.bovis and from where the organisms may invade the subepithelial tissues through injury by surface object

### **Symptoms**

- This causes swelling of lower jaw or around the mandibular region.
- This condition affects the feed intake of the animals.
- The disease is preceded by a sharp rise of temperature ranging between 103-107°F or more.
- There is shivering and muscle trembling.
- The affected cattle decline to move and if forced to move, they move with great difficulty with arched back condition.
- There is marked anorexia and appreciable reduction in milk yield.
- Salivation, nasal secretion and lacrymation are noticed.
- Muscle of the affected limb becomes stiff, hard and painful.
- The animal shows lameness to acute laminitis.
- Severely affected cattle may lie down with extended rigid hind limbs.
- Lameness may shift from one leg to other within few hours.
- The recumbent animals will also show suspended rumination, grinding of the teeth and signs of groaning.

#### **Preventive measures**

- Potassium iodide 6 to 10 gm daily orally as drench for 7 to 10 days may be given
- There is no vaccine against this disease.
- Isolation of infected animals and their treatment are to be rendered.
- Removal of contaminated materials and disposal of animals with discharging foci may be made.
- This condition should be consulted with qualified veterinarian for antibiotic treatment.

(D. V. Kolekar, Scientist, ICAR-ATARI Bengaluru)



### **Ephemeral Fever: An important viral disease of dairy animals**

#### Introduction

- It is an arthropod transmitted viral disease of cattle and buffaloes.
- Among the cattle age group ranging from 6 months to 2 years are more susceptible.
- The virus belongs to rhabdo virus group.
- The disease is transmitted by sand fly.
- Transmission does not occur by direct contact from animal to animal or via their discharges.
- Outbreak generally used to occur in summer season.
- The virus spread rapidly by wind and spread of the virus over three thousand miles within 5 months period has been reported.
- After infection the virus is found in the blood of cattle in about 5 days. The insects pick up the virus from the blood.
- The viruses never exist in the recovered animals and it is suggested that some fauna may be responsible for carryover of the virus from season to season.
- The disease can be transmitted by injection of whole blood.

### **Symptoms**

- The disease is preceded by a sharp rise of temperature ranging between 103-107°F or more.
- There is shivering and muscle trembling.
- The affected cattle decline to move and if forced to move, they move with great difficulty with arched back condition.
- There is marked anorexia and appreciable reduction in milk yield.
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- The recumbent animals will also show suspended rumination, grinding of the teeth and signs of groaning.

### Prevention and control

- Vector control is the important key to curb down this disease propagation.
- At present no commercial vaccine is available for this disease.

(D. V. Kolekar, Scientist, ICAR-ATARI Bengaluru)



### Mastitis: A common disease of dairy animals

#### Introduction

- Mastitis is defined as the inflammation of mammary gland caused by physical, chemical and biological agents such as bacteria, fungi, virus, yeast etc.
- The most important bacterias responsible are *Streptococcus agalactiae*, *Staphylococcus aureus*, *Corynebacterium pyogenes*, *Corynebacterium bovis*, *Mycobacterium species* and *E.coli*.
- Milk yield reduces abruptly and results in heavy economic loss.
- High yielding dairy cows are more commonly affected than low yielders.
- Exotic and cross bred cows are more prone to mastitis than the Indian zebu cows.

### **Symptoms**

- Onset of symptoms will be quick; the gland will be reddened, swollen, high temperature.
- The animal does not allow touching the udder, due to pain.
- Systemic reactions like fever, depression, anorexia etc, in addition to udder infection.
- Reddening of teats, consistency changes of milk are the other signs
- Changes in size and presence of scar tissue may be detected more easily after milking when the udder is empty.
- Appearance of milk
- Observation of first stream of milk (foremilk) permits the detection of abnormal milk that should be withheld and discarded promptly.
- Abnormal milk may show discolouration, flakes or clots.
- Abnormal milk may be watery also.

#### Prevention and control

- It can be achieved by proper udder hygiene and floor hygiene
- Teat should be cleaned and dried before and after milking. Keep the animals clean and healthy.
- Dipping of teats with KMnO<sub>4</sub> after each milking is most effective to reduce the incidence of mastitis.
- If milking machine is used, it should be checked periodically. Vacuum level in the milking unit should be between 275-380 mm of Hg and the fluctuation should be as little as possible. The vacuum regulator should be kept clean and checked regularly for accuracy.
- Treatment of all quarters of cows at the time of drying off
- Effective uses of long acting antibiotics infused in each quarter at the last milking of the lactation reduce
  the incidence of new infection during the dry period. In addition, dry cow therapy is the best way to cure
  chronic and sub clinical mastitis that can rarely be treated successfully during lactation.
- Culling of chronically infected cows is generally effective for clinical mastitis cases.
- Nutritional deficiency of selenium and vitamin E in the diet has been associated with increased rate of new infection.
- Feed the cows immediately after milking, so that it can remain standing for an hour before lying down which will allow complete closure of teat canal there by prevent the of entry of microbes into the teat canal.
- Milk the infected cows at last.
- High yielders are more prone for mastitis, so extra care is needed for them.

(D. V. Kolekar, Scientist, ICAR-ATARI Bengaluru)



### Milk Fever: An important metabolic disease of dairy animals

#### Introduction

- Milk fever, postparturient hypocalcemia, or parturient paresis is a disease, usually of dairy cows, characterized by reduced blood calcium levels.
- Amongst cattle, mature and old cows are most commonly affected usually in the 5-10 year age group
- It is metabolic disease of dairy animals characterised by general muscular weakness, depression of consciousness, circulatory collapse.
- This disease commonly seen in high yielding dairy cattle, in which the disease occurs within 48 hours of calving.
- It due to fall in the level of ionised calcium in tissue fluids at the onset of lactation as there will be heavy demands of calcium in colostrums and milk in heavy producers.
- Excessive loss of calcium in the colostrum beyond the capacity of absorption from the intestine and mobilization from the bones to replace.
- Rate of mobilization of calcium from bone may not be sufficiently rapid to maintain normal serum levels
- · Sometimes milk fever is associated with hypocalcaemia, hypophosphataemia and hypomagnesaemia

#### **Symptoms**

- · Loss of appetite
- Constipation due to atony of the rumen
- · Restlessness and inclined laterally with depressed consciousness
- Muscular weakness and unsteadiness in movement animal becomes recumbent with its head. Due to recumbency bloat is evident.
- The skin and the extremities remain cold. Temperature is generally subnormal.
- Muzzle becomes dry. Eyes are unable to blink and Mucous membrane of the eye also turns dry with dilated pupil.
- There is continous relaxation of anus.
- Venous pressure is low as such it may difficult to raise the jugular vein.
- There is complete flaccidity for which animal cannot sit up.
- There may be Anuria and oliguria due to paresis of muscles.

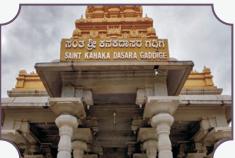
#### Preventive and control

- Vitamin D administration before parturition
- · Increased feeding of grains
- Increasing the intake of phosphorous by lactating cows
- · Administration of parathyroid at calving
- Manipulation in the diet
- Maintaining calcium, phosphorous ratio 2.5: 2 in the diet.
- Delayed or incomplete milking for several days after calving.
- Administration of calcium borogluconate 100-200 gm as 25 per cent solution, supplemented with dextros, magnesium and vitamins.
- The metabololites of vitamin D can be toxic if given at frequent intervals.
- Intramuscular injection of 4-8 mg of 2.5-hydroxy cholecalciferol from 10-3 days before parturition has been found effective.
- Vitamin D2 is added to feed and vitamin D3 is injected

## ಏಲಕ್ಷಿ ಕಂಪಿನ ನಾಡು ಹಾವೇಲಿ ಜಲ್ಲೆ







Birth Place of Sarvagna, Abaluru

Santa Shishuvinahal Sharif Gadduge, Shishuvinahal

Kanaka Gurupeetha, Kaginele







Tarakeshwara Temple, Hanagal

Siddheswara Temple, Haveri

Kanakadasa Birth Place, Baada







Mukteshwara Temple, Choudayyadanapura

Janapada Vishwa Vidyalaya, Gotagodi

Kadaramandalagi Hanumantha Temple







Red Chilli Market, Byadagi

Blackbuck Sanctuary, Ranebennur

Peacock Sanctuary, Bankapura





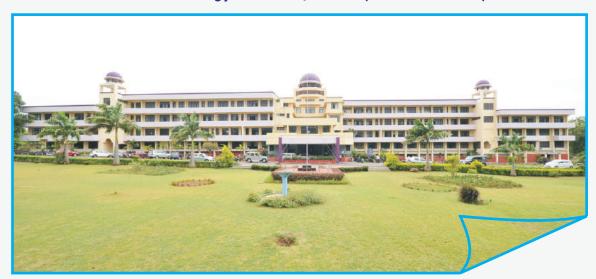
Utsava Rock Garden, Gotagodi

Agadi Thota, Shiggao

**Haveri Cardamom Garland** 



ICAR-Krishi Vigyan Kendra, Haveri (Hanumanamatti)



University of Agricultural Science, Dharwad



ICAR-ATARI Zone XI, Bengaluru