



# KVK TIMES

A WINDOW TO KVK'S OF ICAR-ATARI, ZONE-XI, BENGALURU

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# KVK TIMES

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# Foreword



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**DR. V VENKATASUBRAMANIAN**

THE DIRECTOR

ICAR-AGRICULTURAL TECHNOLOGY APPLICATION RESEARCH INSTITUTE  
ZONE XI, BENGALURU

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Krishi Vigyan Kendras are playing pivotal role in handholding of farmers through technological back-stopping for enhancing the productivity of crops and enterprise keeping in mind profitability and sustainability. 'Believing through seeing' and 'Learning by doing' is most appropriate to the KVKs, as the Scientists and farmers are jointly involved in implementing KVK mandated activities to reach the mission of enhancing the farmer's income. KVKs are expanding the horizon from elite extension to innovation, market linkage, FPOs, processing and value addition. 48 KVK's in Zone XI of ATARI placed in states of Kerala, Karnataka and Lakshadweep Union Territory has immensely contributed in enhancing agriculture productivity and farmer income thus ensuring sustainable social and livelihood security of farm families.

A first of its kind virtual platform, KVK TIMES which documents fortnightly activities of each of the 48 KVKs of Zone-XI is gaining a real momentum. The news items covered in issues made an impact that is long lasting. Most of the news items published in the TIMES has got the potential of cross learning among KVKs and worth reading. This should boost the morale of all of us and many such noteworthy efforts of our fraternity in the zone.

I am happy that ICAR- Krishi Vigyan Kendra, Idukki is bringing up the 19th issue of Second volume of KVK TIMES covering the 1st fortnight of April 2024. I congratulate the KVK fraternity of Zone XI specially Dr. R Marimuthu, Senior Scientist and Head and his team of ICAR- Krishi Vigyan Kendra, Idukki for bringing out this unique edition of KVK Time.

Bengaluru  
15 April 2024

[ V Venkatasubramanian ]

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# Preface



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## REENA CHACKO

CHAIRPERSON, BAPOOJI SEVAK SAMAJ

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Agriculture and allied sectors are not only critical to meet the food and nutritional demands of the growing population but also for the overall development of the country. The decade passed by has been a great teacher. It taught us the tough lessons of survival, cooperation, adaptation, and strengthened us to face the new challenges, the coming will bring. The climate change and disasters have left deep scars in our farming sector, but sincere efforts from scientists, extension personnel and farmers will ultimately sow seeds of change. This is clearly visible from the results of concerted efforts that the whole team of all Krishi Vigyan Kendra's has programmed for the farmers of the respective districts. The team has been successful in making farming profitable in these scenario's. Spearheading the broad objectives of farmer empowerment and profit optimisation, the KVK's has conducted several on farm trials, Front Line Demonstrations, trainings, field visits and diagnostic clinics as per the needs of the farmers. This has been reflected in their income as well as in the standard of living with and wholehearted cooperation from the line departments and allied sectors.

What we have achieved and where we stand today would have been impossible without the genuine assistance and constructive advice of our officials, staff and farmer friends. Our sincere gratefulness goes to The Director, ATARI, Bengaluru and other staff of ATARI who have tirelessly and consistently guided us in achieving the mandates of KVK in Idukki district. We bow our heads before our farmer friends and other well-wishers who have helped us in connecting with the soul of this pristine land, thereby assisting us in disseminating the knowledge required for the farming community. "TEAM KVK IDUKKI" has showcased an exemplary model of service to the farmers and the Bapooji Sevak Samaj appreciate each and every member for the consistent efforts they have put in. I feel very proud and happy about ICAR- Krishi Vigyan Kendra, Idukki for their constant efforts in dissemination of technologies to the farming community across the district and helping the farmers in adoption. KVK has been focusing on thrust areas viz., Organic farming, Integrated Pest & Disease management, Natural Farming, Integrated Farming System, introduction of improved varieties, integrated crop management, crop diversification, drudgery reduction and livestock technologies. At this juncture, I congratulate ICAR- Krishi Vigyan Kendra(BSS), Idukki for bringing out the 19th issue of KVK TIMES Volume II of Zone-XI for this fortnight from 1-15th April, 2024. I complement Dr. V. Venkatasubramanian, Director, ICAR-ATARI Bengaluru, Zone XI and all the staff of each KVK for their collective effort in bringing out the "KVK TIMES" Volume-II, Issue-19, that has emphasized the KVK activities. Through this KVK Times, we proudly unfold, the salient interventions and technology backstopping of all Krishi Vigyan Kendra's of Zone XI, that has helped the farmers in leading a better life. I wish KVK system to reach greater heights in improving Indian Agriculture and continue to contribute further for betterment of farming community. Let us believe that, together we can make this decade a 'DECADE OF HOPE'.

A handwritten signature in blue ink that reads "Reena Chacko".

Reena Chacko  
Chairperson, Bapooji Sevak Samaj

# ACKNOWLEDGEMENT



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**DR. R MARIMUTHU**

SENIOR SCIENTIST AND HEAD,  
ICAR-KRISHI VIGYAN KENDRA, IDUKKI

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KVKs across the nation have made efforts to reach out to farmers through a variety of approaches. This Krishi Vigyan Kendra (KVK) is an Agricultural Extension Center established at the district level by the Indian Council for Agricultural Research (ICAR) and its affiliated institutions that offers various types of farm encouragement to the farming community. As one of the largest and most effective extension programs, KVK serves as the district's knowledge and resource hub for agricultural technology, conducts assessment, demonstration of various technologies, capacity building programs for various stake holders and supply of quality input materials to address the location-specific agricultural problems using various extension methods. In agriculture sector, extension plays a pivotal role in transferring new technologies from lab to land. Krishi Vigyan Kendras are one of such institutes mainly involved in technology transfer through Trainings, Front Line Demonstrations, On farm trails and various other special programmes for the farming communities. I am extremely proud and privileged to be entrusted with responsibility to bring out second volume of fortnightly magazine KVK Times - A Window to KVKs of ICAR-ATARI, Zone-XI, Bengaluru.

I would like to express my gratitude to ATARI, Bengaluru for giving us an opportunity to compile and bring out KVK Times Volume II of Zone XI for 01-15th April 2024. It is my immense pleasure to thank Honorable Director, ICAR-ATARI, Bengaluru, Dr. V. Venkatasubramanian, for his overwhelming support, inspiration and encouragement to serve the farming community and valuable guidance in bringing out this edition of KVK Times. I avail this opportunity to express my heartfelt gratitude to Dr. Mallikarjun B. Hanji, Chief Technical Officer, ATARI, Bengaluru and Nodal Officer of our KVK for constantly encouraging us to carry out the mandated activities. I would like to express my gratitude to our beloved Director of Extension, KAU, Thrissur Dr. Jacob John for his timely guidance and inspiration to carry out the various activities successfully. I sincerely acknowledge the whole KVK families of ATARI Zone-XI who shared their achievements timely to bring out this "KVK Times" 19th e - newsletter. Wholeheartedly I thank our Team KVK Idukki for their complete involvement in bringing out this issue effectively.

A handwritten signature in blue ink, appearing to read 'Dr. R. Marimuthu'.

Senior Scientist and Head,  
ICAR-Krishi Vigyan Kendra, Idukki



## KVK Golden Jubilee torch has started its journey from KVK Idukki

As decided during curtain raiser event of KVK Golden Jubilee Celebration organized at KVK Pondicherry on 21.3.2024, the KVK Golden Jubilee torch received from DDG(AE) travelling across Zone XI covering all KVKs of ATARI Bengaluru started its journey from KVK Idukki on 26.3.2024. Lightening of torch was done by Dr.V.Venkatasubramanian, Director, ATARI, Bengaluru in presence of all KVK staff and farmers on 26.03.2024.



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## ICAR-KRISHI VIGYAN KENDRA ALAPPUZHA

### Rural Agricultural Work Experience Programme for B Sc (Ag) students



Fourteen students of B.Sc. Hon. (Agriculture) from College of Horticulture, Vellanikkara under Kerala Agricultural University have undergone their KVK Module of RAWE at KVK – Alappuzha for three days from 2nd – 4th April, 2024. Besides orienting to KVK mandatory activities and functioning, they were also exposed to the technology interventions taken up in the field by the KVK. The students enthusiastically visited the demonstration units of the KVK farm and learned the handling of land preparation machineries and coconut climbing machine. They acknowledged the experience of learning many agro-practices at KVK – Alappuzha, which could be adopted by the farmers for income and employment generation.

(G. Lekha, SMS)



### 'Vertical Garden' demonstration unit established in the KVK farm



A 'Vertical Garden' demonstration unit is established at KVK farm to educate the visitors on effective and efficient use of the natural resources viz., land, solar energy and water and to replicate at their homesteads. This vertical garden structure can accommodate 50 pots vertically arranged which is enough for growing of selected vegetables required for a family. This structure has three major sub components viz. (1) 3 base frames of 6', 5', and 4' one side squares placed from bottom to top, respectively (2) a central support of 8 feet height and (3) a roof structure of 7 feet diameter. Mist irrigation system is also installed for efficient utilization of water. Earthen pots of 10-12 inch diameter have been used for growing vegetables. Trailing vegetables can also be grown using the central support and roof top of this unit. The unit was officially inaugurated by Dr. K. B. Hebbar, Director, ICAR-CPCRI, Kasaragod in the presence of Dr. D.V.S. Reddy, PS, ICAR-ATARI, Bengaluru on 21st March, 24.

(P. V. Bijila, Farm Manager)



## ICAR-KRISHI VIGYAN KENDRA BAGALKOTE

Conducted off campus training programme on integrated crop management in sugarcane was conducted in collaboration with Shri Kedharnath Sugars Kerakalmatti and S. Nijalingappa Sugar Institute Belagavi on 02.04.2024



Dr. Sudha S, Scientist, (Plant Pathology) explained about Settle borne diseases in sugarcane, Red rot, Settle rot and smut disease. Special emphasis on biological control of disease

using *Trichoderma* was given in sugarcane and importance of green manuring and micro nutrients management in sugarcane.

Dr S. C Angadi, (Sr. Tech. office) Explained about soil sampling, Importance of soil testing, Soil health card and soil and water conservation.

Dr.S.B. Patil, Senior Scientist and Head, Briefed about the activities carried out at Krishi Kigyan Kendra, Bagalkote and also explained about the technologies popularized in sugarcane cultivation, Root grub management, Nutrient management. Availability of new sugarcane varieties, Tissue culture disease free seedlings, Sugarcane and new technologies available in agriculture and also suggested to follow the mixed intercropping with pulses in sugarcane for getting higher yield. Totally large number of farmers, Sugarcane development officers and other officials of around 75 members were participated. ▶



## ICAR BIRDS KRISHI VIGYAN KENDRA TUKKANATTI, BELAGAVI-1

### Newly Developed Multipurpose Improved Sugarcane Varieties for North- ern Karnataka

Karnataka ranks third in area (4.8 lakh ha) and production (432 lakh tones), wherein northern Karnataka has major stake in the state with nearly 2/3rd contribution to state's sugarcane area and production. Maharashtra and Karnataka are the major contributors for sugar and cane production in peninsular India.

To sustain the economy of cane and sugar production, there is an urgent need to enhance the cane productivity and sugar recovery (per unit area and time) in the country particularly to farming communities for aware about varieties and technologies for higher yield and reduce sugarcane monoculture practice and to fit multiple cropping system with other suitable food crops.

Flowering terminates vegetative growth and dry matter accumulation, which limits the yield potential of genotypes. Though flowering is essential for crop improvement, it is very much undesirable for commercial cultivation as it reduces the sugar yield, cane yield, juice quality, fodder quality and crushing duration. Recently current commercial sugarcane varieties (Co 86032, Co SNK 09227, Co SNK 13374, Co SNK 13436, CoS 09293, Co 09004, MS 10001 and COVSI 16121 etc.) are the prominent varieties for threatening sugar /jaggery industry and fodder security particularly in Belagavi, Bagalkot and Vijayapur, the major contributors of

sugar production in the Karnataka State.

Hence, there is an urgent need to popularize high yielding varieties and modern technologies to farming communities for production of early high sugar and biomass accumulating varieties to sustain sugar industry and cane growers for sugar /energy and fodder security in the Northern Karnataka.

Under current complex economically discouraging scenario of both sugarcane agriculture and sugar industry, there is a great need of enhancing sugar and cane productivity per unit area and time. On the other hand there is also a need for improving industrial efficiency through liberalizing and widening economic crushing period by utilizing early high total sugared with relatively non flowering genotypes as raw material for production of sugar, ethanol and power for economic sustenance.

In the context, ICAR BIRDS Krishi Vigyan Kendra Tukkanatti Belagavi-1, is successful developed eight genotypes for KVK visitors and also sources for surrounding sugarcane growing areas farmers. Popularizing the high yielding varieties and modern technologies awareness to farming communities for enhanced productivity of sugar, cane, fiber, ethanol and fodder.



Sugarcane genotypes Demo unit established at ICAR BIRDS KVK Tukkanatti Belagavi-1

## ICAR-KLE KRISHI VIGYAN KENDRA, MATTIKOPP (BELAGAVI-II)

### 1. Scientific Advisory Committee Meeting



The Ninth Scientific Advisory Committee Meeting of ICAR-KLE Krishi Vigyan Kendra was held on 05.04.2024 in the conference hall of KK campus. The meeting began with welcome to the dignitaries, line department officials, farmers and farmwomen by S.M. Warad, Scientist (Soil Science). The meeting was chaired and inaugurated by Shri B.R. Patil, Chairman, KLE KVK, Mattikopp and briefed the various activities undertaken and achievements made by the KVK during 2023-24. He said that, KVK has given excellent service to the farming community of Belagavi district by production and supply of quality seeds under seed hub programme. Dr. B.T. Rayudu, Principal Scientist & Nodal Officer, ICAR-ATARI, Bengaluru suggested that, the Scientists of KVK, Department officials and farmers can discuss the problems in the farming system and derive effective plan to address the problems and enhance farm income in the region. Mrs. Sridevi Angadi, Senior Scientist & Head pre-



sented the progress report of 2023-24 and the action plan of KVK for 2024-25. Dr. B.G. Shivakumar, Principal Scientist, ICAR-IGFRI, Dharwad discussed and explained the possible programmes to be taken during 2024-25 in the field of fodder production and animal husbandry. Dr. Shripad Vishweshwar, Assistant Professor (Economics), UHS, Bagalkot highlighted collaborative programmes of UHS, Bagalkot and KVK in the field of horticulture. During the programme three folders on integrated crop management in soybean, groundnut and natural farming practices were released. Officials of different line departments and farmers shared their ideas for drawing a meaningful plan for 2024-25. Dr.S.S. Hiremath, Scientist (Plan Protection) proposed vote of thanks. The programme ended with national anthem. ▶

### 2. Inauguration of Solar Fencing Unit at KVK Instructional Farm



Demonstration unit on solar fencing is established at KVK instructional farm under the financial support of ICAR-ATARI, Bengaluru to showcase one of the technologies under management of wild animals in agriculture fields which

can be replicated by farmers for safeguarding their produce. It was inaugurated by Dr. B.T. Rayudu, Principal Scientist & Nodal Officer, ICAR-ATARI, Bengaluru in presence of Dr. B.G. Shivakumar, Principal Scientist, ICAR-IGFRI, Dharwad, Dr. Shripad Vishweshwar, Assistant Professor, UHS, Bagalkot and Shri B.R. Patil, Chairman, KLE KVK, Mattikopp Dharwad on the occasion of ninth Scientific Advisory Committee meeting of KVK. ▶



Sakhi's participated in the training programme and gained knowledge on preparation of different natural farming inputs using cow dung and urine. Smt Sridevi Angadi, Sr. Scientist and Head, S M.Warad, Viswanath G.B and Praveen Yadahalli delivered different topics and conducted method demonstrations during practical sessions. ▶



### 3. 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 Kittur, Belagavi, Hukkeri, Ramdurg, Goakk and Khanapur taluks in two batches during 01 - 05 April, 2024. The training curriculum included introduction to natural farming, nutrient management in natural farming, pest and disease identification in field and their control measures. Method demonstration of jeevamruta, ghana jeevamruta, beejamruta, neemastra, agni astra, dashaparni etc., were conducted and participating Krishi sakhis aquired practical knowledge on methods of preparation of inputs under natural farming. The five days training programmes were co-ordinated by Dr.S.S. Hiremath, Scientist (Plant Protection) and Vinoda M. Kochi. A total of 60 Krishi



**ICAR-KLE KRISHI VIGYAN  
KENDRA, MATTIKOPP  
BENGALURU RURAL**

**Celebration of 134th Birth anniversary of  
Dr. B.R. Ambedkar**

ICAR – Krishi Vigyan Kendra, Bengaluru Rural District celebrated 134th birth anniversary of Dr. B.R.Ambedkar on 14.04.2024 at office premises. Dr. Hanumantharaya, B.G., Senior Scientist & Head, Scientists and staff pays the tribute to the principal architect of Indian Constitution. The Senior Scientist and head briefed about this day and memo-



riized their countless contributions in the making of present India. On this day, people pay their respects to the legend who was first Law Minister of Independent India and served as jurist, economist and a social reformer. ▶



## ICAR-KRISHI VIGYAN KENDRA CALICUT

### Capacity development programme on Breeding and culture of ornamental fishes

A one day capacity development programme on breeding and culture of freshwater ornamental fishes was organised

in KVK campus at Peruvannamuzhi on 4th April 2024. Thirty five rural youth mostly women attended the programme. Various breeding techniques of ornamental fishes, their rearing, live feed culture, fish packing, water pH analysis where demonstrated to the participants. Short video documentaries on fish breeding and prospects of freshwater aquaculture were shown to the trainees apart from the regular theory classes. The programme was coordinated by Dr. Pradeep, B., Subject Matter Specialist (Fisheries) of KVK. ▶



Demonstration of live feed culture techniques



Demonstration of water pH analysis

## ICAR KRISHI VIGYAN KENDRA CHAMARAJANAGARA

### Method Demonstration on Seed Rhizome Treatment for the Management of Rhizome Rot disease in Turmeric

ICAR-KVK Chamarajanagara organized a method demonstration as a part of on farm testing "Assessment of different extension methods to know the adoption of rhizome treatment with bio-agent Trichoderma for the management of rhizome rot disease in Turmeric". Dr. Mohan Kumar, A. B., Scientist (Horticulture) detailed the method and advantages of rhizome treatment with Trichoderma with suitable illustrations. Further, the technology was demonstrated through a method demonstration owing to popularization of ecofriendly approaches for better yield and quality of turmeric, being a major commercial spice crop grown in the district. He also emphasized the adoption of improved turmeric varieties for obtaining higher yield with better quality and better returns. A total number of 48 farm-

ers and farm women participated in the programme and the participant farmers visited improved turmeric varieties cultivation block at KVK farm and witnessed the performance of improved turmeric varieties IISR Prathibha, IISR Alleppey Supreme and CIMAP Pithambari. Few growers placed the demand for improved turmeric varieties, especially IISR Prathibha.

Yogesh G.S., Mohankumar.A.B and Mohankumar B.N



Method demonstration on seed rhizome treatment with Trichoderma for the management of rhizome rot disease in turmeric

## Capacity building programme on improved cultivation practices of sunflower and importance of nutrigarden

ICAR-KVK Chamarajanagara conducted capacity development programmes on improved cultivation practices of sunflower under Scheduled Castes Sub Plan (SCSP) and importance of nutrigarden for farm women. Dr. Yogesh.G.S, Senior Scientist & Head and Dr. B.Pompanagouda, Senior Technical Officer provided information on the selection of suitable sunflower hybrid, land preparation, seed treatment, sowing, spacing, importance of thinning, water management, fertilizer management and integrated pest & disease management practices in sunflower. Sunflower hybrid seeds were distributed to selected beneficiaries of Kodosoge village, Gundlupete taluk for cultivation during pre-monsoon. Dr. Deepa. J, Scientist (Home Science) highlighted the importance of nutrition garden, balanced diet and Recommended Dietary Allowance (RDA). Brief information on raising the vegetables and fruit crops in rural home backyards to meet the family needs was provided

with an emphasis on improving nutritional security and cutting expenditure incurred towards purchase of vegetables from market. A total number of 50 farmers/farm women and 30 farm women participated in the respective programmes.

Yogesh G.S., Deepa J and Chandrashekhar S Kallimani



Distribution of hybrid sunflower seeds under SCSP



Distribution of vegetables and fruit saplings under nutrigarden demonstrations

## ICAR KRISHI VIGYAN KENDRA CHIKKABALLAPURA

### Method Demonstration on Seed Rhizome Treatment for the Management of Rhizome Rot disease in Turmeric

Students from University of Horticultural Sciences, Shivamogga visited ICAR-Krishi Vigyana Kendra, Chikkaballapura as a part of state tour on 13.04.2024. Dr. Papireddy, Senior Scientist and Head enlightened students about KVK and its mandates. Dr. Aruna. G.R. Technical officer explained about different demonstration units of KVK and visited demonstration units like vermicomposting, azolla, natural farming, tree mulberry sheep rearing, nutri garden, bio craft etc.,

Scientists from ICAR-Krishi Vigyan Kendra, Chikkaballapura visited mango and pomegranate fields at Ma-

dikere cross, Chintamani taluk. Dr. Swathi, Scientist (Plant protection) diagnosed the problems and suggested the control measures for leaf hopper in mango and wilt in pomegranate.



Students visit to KVK



Scientist visit to farmer field

## ICAR-KRISHI VIGYAN KENDRA CHIKKAMAGALURU

### Capacity Building Programme on Natural Farming

I.C.A.R.-Krishi Vigyan Kendra, Chikkamagaluru organized one-day natural farming capacity building programme at Raitha Bhavana, Mudigere. The program was inaugurated by Dr. Shoba Narayan, President, Agri Challengers Group FPO. In her inaugural speech, she highlighted the impor-

tance of traditional farming system for achieving sustainability in the agriculture production.

Later speaking at the technical session, Dr. Ullasa M.Y., Scientist (Agronomy), KVK, Mudigere spoke about the relevance of natural farming in the present context. Further, he explained about different principles of natural farming to the FPO Members.

60 farmers participated in the technical session and discussed with the experts and got information.

Mr. D.C. Lokappa Gowdru, Director, Co-operative Federation, GOK witnessed the programme.



Demonstration of live feed culture techniques

## ICAR KRISHI VIGYAN KENDRA CHITRADURGA

### Event report of Natural Farming training programme for Krishi Sakhis

A training programme on natural farming was organized for Krishi sakhis of Chitradurga district from 01st to 5th April 2024 at KVK Chitradurga in collaboration with NRLM, Zilla panchayath Chitradurga.

The programme was inaugurated by Dr. Kumara O., Senior Scientist and Head and during his inaugural speech he discussed about the principles of Natural farming and he also briefed about the aims of Natural farming in restoring soil health, maintenance of diversity, Natural farming also aims to ensure the animal welfare, stresses on efficient use of natural/local resources and promote ecological fairness. Natural farming is an ecological farming approach where farming system works with the natural biodiversity, encouraging the soil's biological activity and managing the complexity of living organisms both plant and animal to thrive along with food production system. He also discussed



about the Important practices that need to be adopted during Natural farming practice.

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-KRISHI VIGYAN KENDRA DAKSHINA KANNADA, MANGALURU

### Pre-action plan meeting

Pre action plan meeting for the year 2024-25 of KVK, Mangaluru under the KVAFSU, Bidar jurisdiction was held on 06.04.2024 at training hall of KVK, Mangaluru. At the outset Dr. T. J. Ramesha, Senior Scientist & Head, KVK,



Mangaluru welcomed Director of Extension, Nodal Officer, Technical Experts, and Scientists for the meeting. Dr. N.A. Patil, Director of Extension KVAFSU, Bidar, chaired the session, Dr. M.G. Chandre Gowda, Principal Scientist (Agriculture Extension) and Nodal Officer, ICAR-ATARI, Bengaluru, Dr. Anjanayappa, Dean, College of Fisheries, Mangaluru, Dr. S.R. Somashekar, Associate Director of Extension, College of Fisheries, Mangaluru, Dr. Ravi Bhat, Head of Division (Agronomy) ICAR-CPCRI Kasaragod, Dr. Vinayaka Hegde, Head of Division (Plant Pathology), ICAR-CPCRI Kasaragod, Dr. Jayaprakash S.M, Associate Professor (Soil Science) and Dr. Raviraj Shetty, Associate Professor (Horticulture), KVK, Brahmavar, Dr. Vasanth Shetty, Regional Research Officer, (Veterinary Science) Department of Animal Husbandry and Veterinary, Mangaluru & KVK Scientists and other technical staff were present during the meeting. All the concerned scientists made deliberations during the meeting and accordingly technical experts expressed their remarks and provided valuable suggestions for formulation of the location specific action plan to cater the needs and requirement of farming community of the district. Programme was ended with vote of thanks by Dr. Shivakumar R., Assistant Professor (Animal Science), ICAR-KVK, Mangaluru. ▶

Dr. T.J. Ramesha, Senior Scientist and Head,  
Mr. Sathisha Naik K, Programme Assistant (Computer)



## ICAR KRISHI VIGYAN KENDRA DAVANAGERE

### Management of Horticulture crops

ICAR-Taralabalu Krishi Vigyan Kendra, Davanagere, God-abanal Taralabalu Amrith Farmers Producer Company Ltd. and College of Horticulture, Hiriyur organized one day seminar on "Management of Horticulture crops during summer period". Mr. Basavanagowda M.G., Horticulture Scientist delivered lecture on Management Practices like mulching, irrigation management in Horticulture crops. Dr. Hemla Naik, Director of Education presided the programme and advised the farmers to take up regular advisories from the KVK's. Mr. Raghurja J., SMS (Agri. Extension) gave information about the role of FPOs in increasing the Farmers income. More than 100 farmers with 70 students attended the event.

▶  
Mr. Basavanagowda M.G.  
Horticulture Scientist



### Natural Farming Five Days Training program

ICAR – Taralabalu KVK , Davanagere conducted the five days training program on Natural Farming for Krishi Saki of Davanagere district. Dr Devaraja T.N., SSH inaugurated the five days training program and delivered lecture on Role of Krishi Saki in popularizing the Natural farming.

Mr. Mallikarjuna B.O., SMS (Agronomy) delivered lecture on the Introduction, Water management and use of local seeds under Natural Farming. Mr. H.M Sannagowda. SMS (Soil Science) conducted the hand on training on the preparation of the Jeeva amrutha Ganajeeva amruth, Neemastra and Brahmastra for krishi Saki. Two batches of the Krishi Saki (67) participated in the program. Conducted the pre and Post test for the participants.

▶  
Mr. Mallikarjuna B.O.  
SMS (Agronomy)



### Orientation for Farm Science Courses

An orientation class on Introduction to Farm Science Courses for the Second Year PUC Students at Lalitha International School was conducted by Horticulture Scientist Mr. Basavanagowda M.G. He gave complete guidance

on Farm Science Universities, Carrier guidance in Farm Science Centers, CET option and choice entry process as well. He also gave clues on how to identify specimens for attending the practical test to be conducted in Agriculture Universities.

▶  
Mr. Basavanagowda M.G.  
Horticulture Scientist



## ICAR-KRISHI VIGYAN KENDRA DHARWAD

### Training programme on DAESI

The course on Diploma in Agriculture Extension Service for input dealer is in progress at ICAR-KVK, Dharwad. During 1 fortnight of april 2024, two DAESI classes of were conducted on 04.04.2024 and 12.04.2024 at ICAR-KVK, Dharwad. On 04.04.2024, Dr. D. N. Kambrekar, Senior Scientist and Head, ICAR-KVK, Dharwad delivered lecture on "Precautionary measures in procurement, handling and application of chemicals and other agricultural inputs" and Smt. Kalavathi K. Kambali, Scientist (Plant Protection), ICAR-KVK, Dharwad delivered lecture on "Classification of Pesticides" to 33 input dealers. On 12.04.2024, Dr. Airadevi P. Angadi, Scientist (Horticulture), ICAR-KVK, Dharwad delivered lecture on "Improved cultivation practices of Tomato and Brinjal" and Shri R. B. Hiremath, Retd. Assistant Director of Agriculture,



Dharwad delivered lecture on "Soil profile types, Characteristics, Properties (Physical, Chemical and Biological)" and interacted with 34 input dealers. ▶

Dr. D. N. Kambrekar, Senior Scientist and Head,  
Smt. Kalavathi K. Kambali, Scientist (Plant Protection),  
Dr. Airadevi P. Angadi, Scientist (Horticulture),  
Dr. Praveen T. Goroji, Sr. Technical Officer (Lab.),  
Smt. Shailaja N. Galagali, Technical Officer (Computer), ICAR-KVK, Dharwad



ICAR-KRISHI VIGYAN KENDRA  
ERNAKULAM

KVK-Ernakulam participated in the AQUA-BIZ Summit 2024



The KVK Ernakulam participated in the AQUABIZ Summit 2024, organized by the Zonal Technology Management - Agribusiness Incubation Centre (ZTM-ABI) of the ICAR-Central Institute of Fisheries Technology, Kochi. During the exhibition, KVK showcased innovative products developed by its incubatee entrepreneur, Mr. Ullas, with technical support from the KVK. The exhibited products comprised Sea Fish Extract (Fish Amino), Plankton Booster (Bloom Plus), Organic Fish Manure (Fishlizer), and Pearlspot Seeds. Alongside, KVK publications were also prominently displayed. Dr. P.A. Vikas, Subject Matter Specialist (Fisheries) at KVK, provided detailed explanations of various fisheries-related activities to the participants, offering valuable insights and information.

KVK conducted training to SC farmers on Sugarcane farming



KVK Ernakulam conducted a hands-on training on Sugarcane cultivation for Jaggery production for SC farmers under SCSP project on March 19th, 2024, at Alangad Service Co-operative bank Hall. On the successful conduct of KVK's front line demonstration on Sugarcane cultivation and subsequent Jaggery production as an attempt to revive the traditionally produced Alangadan Jaggery, it was decided to further expand the area under sugarcane cultivation in this region. Fifteen farmers registered. Classes on cultivation aspects, jaggery production, and marketing were dealt with by Shri F Pushparaj Anjelo, SMS (Agril extension). Dr. Vikas P A, SMS (Fisheries) also joined the discussion with farmers regarding local marketing and jaggery production. Upon completion of the training, farmers willing to go ahead with sugarcane cultivation were selected, and field visits were conducted to identify suitable land. Subsequently, it was decided to expand sugarcane cultivation in another 6 acres of land shared by 4 SC farmers and provide assistance for the same using SCSP project.



## Clinical discussion and class on recent Animal husbandry technologies popularized by KVK Ernakulam conducted

A class and further clinical discussion on 'Recent technologies in the field of Animal husbandry popularized through KVK Ernakulam' were conducted for Veterinary surgeons of Kochi taluk on 23rd March 2024 at Veterinary dispensary, Narakkal. The program was arranged by the Kochi taluk unit of the Indian Veterinary Association, Ernakulam. Dr. K Smita Sivadasan, SMS (Animal Science), conveyed various technologies popularized through KVK. Further, the various issues faced by dairy farmers in the district were also discussed, and feeding management strategies popularized through the KVK were conveyed.

meeting, and during the meeting correction of the action plan for the three Farmer Producer Organizations under the Department of Agriculture was also conducted.





**INDIAN VETERINARY ASSOCIATION KERALA**  
KOCHI TALUK UNIT

Clinical Discussion and Class on  
*"Recent Technologies in the field of Animal Husbandry popularized through KVK Ernakulam"*

Faculty : Dr. Smita Sivadasan, Subject Matter Specialist (AH), ICAR- KVK







@ VD Njarakkal on 23.03.2024

## Multidisciplinary diagnostic team visit conducted

A multidisciplinary diagnostic team visit was conducted at Okkal padashekharam on 3rd April 2024. Experts from Kerala Agricultural University and KVK Ernakulam participated. Sheath blight, blast, and false smut were the three diseases observed in the paddy crop during the visit. The diagnostic team recommended spraying Tebuconazole + Trifloxystrobin fungicide at 80g/200L water/ acre. Farmers were advised to do hand-weeding of echinocloa weed.



## KVK Ernakulam participated in ATMA District Level Technical Committee

KVK Ernakulam participated in the ATMA District Level Technical Committee meeting conducted at Block panchayath hall, Kuruppumpadi on 12th April 2024. Shri Shoji Joy Edison, SMS (Horticulture), actively participated in the

ICAR-KRISHI VIGYAN KENDRA  
GADAG

Training on “bio-rational in horticulture crops” for st farmers under tsp project

ICAR-K.H.Patil Krishi Vigyan Kendra, Gadag organized two days on campus training programme on “Bio-rational in Horticulture crops” for Tribal sub plan beneficiaries of Shingatarayanakeri village of Mundaragi block in Gadag district from 22-03-2024 to 23-03-2024. Mr.S.K. Mudlapur, Retired SMS (Plant Protection) inaugurated the programme and said that eco-friendly pest management is very essential to combat ill effects causing to environment due to imprudent use of Chemical fertilizers and pesticides. Dr. Sudha V. Mankani Senior Scientist and Head (I/c), ICAR-KVK, Gadag gave presidential remarks and suggested farmers to follow organic farming and to cultivate less water requiring crops. Mr. N.H.Bhandi, SMS (Soil Science) gave introductory remarks about objectives of TSP programme sponsored by ICAR-NBAIR, Bengaluru. Mrs. Hemavati R. Hiregoudar, SMS



(Horticulture) gave lecture on new improved production technologies on Horticulture crops and Mr. S.K.Mudlapur, Retired SMS (Plant Protection) delivered lecture on Bio-rational in Horticulture crops. Critical inputs like Isaria fumosorosea, Bacillus thuringiensis, Metarhizium anisopliae, Lecanicillium lecanii, Pheromone traps were provided to the 30 beneficiaries.

Mrs. Hemavati R. Hiregoudar, SMS (Horticulture)



## ICAR KRISHI VIGYAN KENDRA HASSAN

### International Women Day

ICAR-KVK, Hassan in collaboration with SKDRDP, Alur taluk celebrated the International Women's Day at KVK Hassan. Mrs. Bhagyamma, President, Kandali Gram panchayth has inaugurated the programme and in her inaugural speech she said that Women's should get equal chance in all sector then only the celebration of women's day will be meaningful and also he said that farm women's should participate in social activities, programme, income generating activities to empower themselves.

Dr. Shivahsnkar, M., Scientist, KVK, Hassan has chaired the programme and during his presidential remarks he said that farm women's should develop leadership qualities among themselves and motivate fellow women farmers

to get benefit of government schemes and programmes related to women. Further, he mentioned that women's should break out the social barriers to get compulsory education so that 33 per cent reservation should be effectively utilized and status of women will be improved.

Dr. Pallavi, N., Scientist (Horticulture), KVK, Hassan during her introductory remarks, she mentioned the motto behind the international women's day celebration, history and the meaning of this year theme for the international women's day. Dr. Arunkumar, B. R. and

Dr. Sanketh, C. V., Scientist of KVK Hassan, Mr. Viganesh, Pogramme officer SKDRDP, Alur taluk, Mrs. Ashwini and Mrs. Pavihra, facilitator, SKDRDP and 43 farm women and were participated in the programme. Finally Mrs. Bhagyamma, President, Kandali Gram panchayth was felicitated by KVK and SKDRDP Alur block.

Dr. Shivashankar, M., Scientist and  
Dr. Rajegowda, Senior scientist and Head



Inagural address by chief guest

## ICAR KRISHI VIGYAN KENDRA IDUKKI

### Experiential Learning Programme for Agricultural Graduates

An Experiential learning Programme course was offered to twelve Agricultural Graduates from ITM University, Gwalior, Madhya Pradesh on Commercial Beekeeping and Production technology of Bio-agents and Bio-fertilizers. Course In-charge for the Experiential learning Programme was Mr. Sudhakar Soundarajan, SMS (Plant Protection) and Staff In-charge for the Experiential learning Programme was Ms. Preethu K Paul, SMS (Agricultural Extension). Course In-charge handled the practical sessions on Production of Bio-agents and Bio-fertilizer of Methlobacteria, Pseudomonas, Trichoderma, VAM, Commercial beekeeping techniques and alike. Along with these courses in additional trainings were also given on preparation of natural farming decoctions, vermicomposting, saffron corm sowing, soil testing and mushroom production technologies. The course was offered for a period of three months' duration. ▶

Ms. Preethu K Paul, SMS (Agricultural Extension)  
Sudhakar S, (SMS Plant Protection)



## ICAR KRISHI VIGYAN KENDRA KALABURAGI - I

### Pre Action Plan 2024-25 of KVKs held at UAS, Raichur

University of Agricultural Sciences, Raichur was organised pre-action plan 2024-25 for 7 KVKs of University of Agricultural Sciences, Raichur jurisdiction and Director of Extension, UAS, Raichur in collaboration with ATARI, Zone XI, Bengaluru on 04.04.2024 to 05.04.2024 at 10.00 am in the Training Hall, ICAR-KVK, Raichur, University of Agricultural Sciences, Raichur

The programme was inaugurated by Dr. S. B. Goudappa, Director of Extension, University of Agricultural Sciences, Raichur. In this occasion Dr. Hanumanthappa Srihari, Senior Scientist & Head, ICAR-KVK, Raichur welcomed, Dr. Hugar, Associate Director of Research, UAS, Raichur and Dr. Hosamani, Seed Officer, Dr. Basavanappa, Head, OFRC, Raichur participated in the programme. Expert panel (University department heads) of UAS, Raichur and provided valuable suggestions were given by them to improve the Action plan 2024-25 and welfare of the farming community to the Senior Scientist & Heads and Scientists of all seven KVKs of UAS, Raichur.

Dr. Raju G. Teggelli, Senior Scientist & Head presented Kalaburagi district Agro-climatic situation, rain fall data of 2023 and previous years of Kalaburagi district, KVK staff position and different demo units, cluster villages, major agriculture problems faced by farmers and identified thrust



areas. Scientists of ICAR-KVK, Kalaburagi- I presented their respective action plans for the year 2024-25 in the above sequence mentioned. The suggestions given by Director of extension, Dr. S. B. Goudappa, Dr. Kurubar, ADE, UAS, Raichur and expert panel at University headquarters were noted. The details with respect to each scientist have been presented discipline wise to the forum.

As a part of this programme, Dr. Prabhuraj, Professor & Head e-SAP, UAS, Raichur, Dr. A. G. Sreenivas, Professor & Head, Dept. of Agriculture Entomology, UAS, Raichur, UAS, Raichur, Dr. Hanumanth Nayak, Assistant Professor and Technical officer to DE office, UAS, Raichur and Dr. Hadimani, Assistant Professor and Technical officer to DE, Dr. Channamallikarjuna, UAS, Raichur were participated as a subject resource persons and gave valuable suggestions to the scientists. In valedictory programme Dr. B. K. Desai, Director of Research suggested the valuable key points to the scientists and Dr. Jaya Prakash, Senior Scientist & Head, KVK, Kawadimatti thanked the participants. In this programme All 7 KVKs Senior Scientists & Heads, Scientists and staffs were participated.



## ICAR KRISHI VIGYAN KENDRA KANNUR

### Training for RAWE students

Final year students of B.Sc. (Hons.) Agriculture of College of Agriculture, Vellanikkara attended KVK module of RAWE Programme in KVK Kannur from 2nd April to 4th April 2024. Ten students attended the programme. Dr. Jayaraj P., Programme Coordinator, KVK has given orientation to the activities and interventions of KVK. Dr. Parvathy A., Assistant Professor (Agricultural Extension), Dr. Manju K. P., Assistant Professor (Entomology), Dr. Elizabeth Joseph, Assistant Professor (Home Science), Smt. Renisha J. M., Assistant Professor (Horticulture) and Smt. Shahanas K. M. P., Farm Superintendent, KVK handled sessions on mandatory activities, bioinput production and schemes and projects implemented by KVK. Students conducted a field visit to nursery of participatory seed production of serpentine cutting of black pepper at Karuvanchal and had a discussion with Mr. Saju, frontline farmer of KVK Kannur. Students also presented proposals of OFTs and FLDs in KVK. ▶



### Field Visit of Expert Committee on Coconut Procurement at Kannur and Kasargode



Expert Committee to study the productivity of coconut to fix the procurement of nuts per palm conducted field visit at Kannur and Kasargode districts on 11th and 12th April 2024. Expert Committee members were Dr. P. Rajasekharan, Chairman, State Prices Board, Sri. Suresh Babu, Assistant Director, State Department of Economics and Statistics Dr. Thamban C., Principal Scientist, ICAR-CPCRI, Smt. Meena, Additional Director (Crop Protection) and Smt. Mannambeth Renisha Jayarajan, Assistant Professor (Horticulture), KVK Kannur (representing DE, KAU, Thrissur). The team visited five coconut plots in Kasargode district and six plots in Kannur district. Agricultural Officers of respective panchayats accompanied the team to coconut field. The expert committee members had interactive discussions with coconut farmers on the productivity and integrated nutrient management followed by the farmers. ▶



Compiled by: Dr. Parvathy A., Assistant Professor (Agricultural Extension) and  
Smt. Renisha J. M., Assistant Professor (Horticulture)

## ICAR KRISHI VIGYAN KENDRA KASARAGOD

### Subsidiary Income through Apiary under SCSP activity

Skill training on Apiary was imparted to eleven SC beneficiaries belonging to Badiadukka and Muliya Panchayaths at KVK Kasaragod by experts. A total of 52 units of beehive with colonies (including 27 units of melliponiculture units) and tool kits were distributed.

Exposure visits and off campus trainings were imparted subsequently to equip the trainees on handling of the colonies and its maintenance. After 2 months around 3- 4 Kgs of honey is extracted from ideally maintained colonies. Also the beneficiaries have further started dividing the colonies for upscaling the same.



## ICAR KRISHI VIGYAN KENDRA KODAGU

### Exposure visit to ICAR-KVK Gonikoppal, Kodagu farm at Athur

A one-day exposure visit was arranged by St. Annia Degree college, Virajpet for the BSc degree students to ICAR-KVK Gonikoppal, Kodagu farm at Athur on 12th April 2024. Smt. Lakshmi R, farm manager welcomed the students and

explained about the activities of KVK. Later, she explained about the propagation method of pepper trellis (mother plant) and production of single node pepper cutting and maintenance of pepper nursery in a scientific method. A visit was arranged to all demo blocks like coffee, Pepper, Arecanut, Sapota, Coconut, All spices, Guava fruit block. In the second half, the students were taken to the Animal Science unit covering Dairy, poultry, vermicompost, Azolla, Fishery & Fodder grass units. A total of 34 students & staff from St. Annis Degree college participated in the programme. ▶



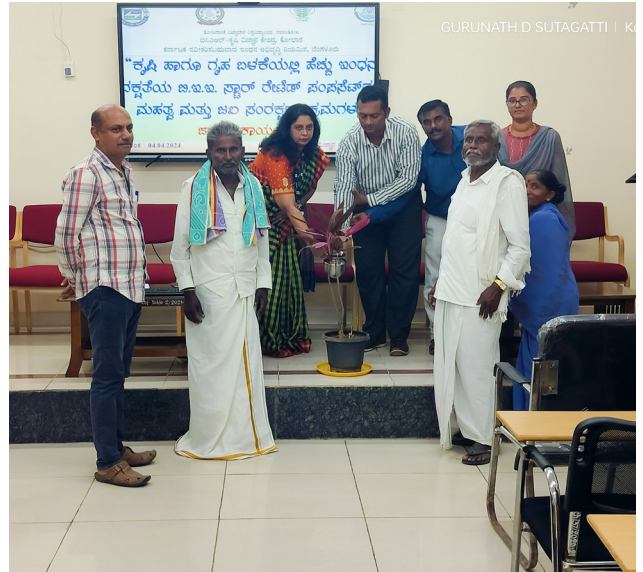
## ICAR KRISHI VIGYAN KENDRA KOLAR

### Diagnostic field visit to Button Rose and Tuberose

KVK Kolar Soil Scientist Dr Anil Kumar S and Dr. T.B. Manjunath Reddy, Scientist (Plant Protection) visited the farmers field of Button Rose and Tuberose at Aynorhasahalli village of Bangarpet Taluk on 02.04.2024. Diagnosed Salt water injury and poor yield and suggested suitable recommendations.



### On campus training programme on Use of Energy efficient pumps sets & Importance of water conservation



KVK, Kolar organized an on campus training programme on Use of Energy efficient pumps sets & Importance of water conservation in collaboration with Karnataka Renewable Energy Development Ltd, dated 04.04.2024. Smt Lalithamba, Technical officer KREDL, Bengaluru was the chief guest & delivered lecture on Energy Efficient pumps & its operation. Dr. Anil kumar S, Scientist (SS&AC) delivered a lecture on water conservation techniques in the training program. Dr. Manjunath Reddy T.B., Dr. Shashidhar K.R. and Dr. Asha K.M. Scientists from KVK along with 50 farmers had participated in the training. After the training program KVK Kolar distributed Energy saving Kits to the farmers.



## Field Day & Group Discussion under the Farm trial of Introduction of a new Musk-melon variety Arka Siri



ICAR-KVK KOLAR organized Field Day & Group Discussion under the Farm trial of Introduction of a new Musk-melon variety Arka Siri at Bussnalli (Uragili) village of Kolar taluk in the farmer field of Mr. Muniyappa on 10.4.2024. Dr. Manjunath Gowda, Scientist (Division of vegetable science), IIHR, Hessaraghatta Bengaluru participated as resource. Scientist (Horticulture), KVK Kolar presided over the program. Around 20 farmers who were really impressed by the performance of Arka Siri have been participated benefited from the program. ▶



## ICAR KRISHI VIGYAN KENDRA KOLLAM

### Promotion of Natural Farming by ICAR KVK Kollam

ICAR KVK Kollam has organized a set of extension programmes for the farmers of the district as part of the ICAR funded project "Out scaling of Natural Farming through KVKs" during 2023-24. In this regard, training programmes, awareness campaigns, exposure visits, method demonstrations on preparation of natural farming formulations, supply of demonstration inputs to selected farmers who

are practising natural farming, preparation of natural farming-based extension literatures and short videos were undertaken by the KVK. The programmes created an in-depth idea to farmers on various aspects of natural farming and created an awareness on the sustainable benefits that can be achieved through natural farming for humans and environment. The natural farming primarily runs on its four wheels-Jeevamritha/Ghana Jeevamritha, Beejamritha, Acchadana (Soil mulching) and Whapaasa (Soil moisture/aeration maintenance)- with Desi Cows being the Core of Natural Farming. The set of training and awareness programmes conducted have created a knowledge on the four-wheel concept of natural farming for the farmers of the district.



Awareness programme natural farming



Release of extension literatures on Natural framing

Release of extension literatures on Natural framing; Method demonstration and Exposure Visit conducted by ICAR KVK Kollam during 2023-24

## ICAR KRISHI VIGYAN KENDRA KOPPAL

### Field day on demonstration of alternate crop jowar in paddy fallow

Once the Kharif paddy is harvested, the fields which are suitable for taking up a second crop with available residual soil moisture / optimum use of irrigation water can be explored further. Potential crops for rice fallows could be a pulse, mung bean, lentil, urd bean, lathyrus, mustard, groundnut, maize and jowar etc. ICAR Krishi Vigyan kendra

koppal along with department of agriculture organised field day on alternate crops jowar in paddy fallow in Sriramnagar on 15.4.2024. Programme was inaugurated by sri sudhkar agricultural officer and explained about the importance of alternate crops in paddy fallow. Sri Narappa Senior technical officer ICAR KVK Koppal explained about different crops suitable crops in paddy fallow and their cultivation practices. Dr. Kavitha Y Ullikashi Scientist (Home Science ) ICAR KVK Koppal explained about nutritional importance of millets and value addition of jowar. Sri Anni Chandrashekar progressive farmer shared his experience on cultivation of jowar in paddy fallow. More than 53 farmers were participated in the programme. ▶



## ICAR KRISHI VIGYAN KENDRA KOTTAYAM

### Skill Development Training on processing and value addition of agricultural crops for SC beneficiaries

KVK Kottayam organised two days skill development training on 'processing and value addition of agricultural crops' on 4th and 5th April 2024 exclusively for the scheduled caste (SC) beneficiaries. Fifteen SC farmers from within and nearby districts participated in the training pro-

gramme. 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 (figs, chunks, tutti fruttii, bar), pickled products, frozen products (sip ups), battered and breaded products (cutlet, rolls, fingers), Fried snacks (tapioca vada, tapioca mixture ) and convenient foods (rasam powder, chutney powder, tea bag) were demonstrated. Session on 'Financial Literacy' was arranged to make them aware about the different government schemes for entrepreneurs and the importance of financial discipline. Sessions were also conducted on Cost-benefit analysis, packaging, labelling and branding of products. ▶



## ICAR KRISHI VIGYAN KENDRA MALAPPURAM

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

The KVK Module as part of RAWE & AIA programme for B.Sc. (Agriculture) students of CoA, Vellanikkara, conducted on 02.04.24 to 4.04.2024. The introductory sessions on the history of KVK, its mandates, organizational setup, specific functions, roles, achievements, and future plans in agricultural extension, were briefed by Dr. Jasna V.K, Assistant Professor (Agricultural Extension). Sessions on interventions in Agricultural Engineering, Animal Science, Community Science, Agricultural Entomology and Horticulture disciplines were handled by Dr. Priya G. Nair, Dr. Ibraheem Kutty C., Dr. Lilia Baby, and Dr. Najitha Ummer, Dr. Akhilraj B.C respectively. The students had the opportunity to visit the OFT field of Mr. Abdulla at Perashannor, Kuttippuram, cultivating ash gourd (Thara), cucumber (Arka Veera), and cowpea (Pusa



RAWE training by PC KVK

Dharani) varieties, under the guidance of Dr. Akhilraj B.C. They were also given the hands on opportunity to participate in the activities of various demonstration and production 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, bio control laboratory, custom hiring unit for machineries, KVK farm and sales counter. Additionally, they could involve in practical sessions on organic manure, and potting media preparation, besides detailed instruction on budding, grafting, and layering.



RAWE training on Farm



The RAWE team

### Meeting best dairy farmer of the district

Visit to the farm of Advocate Biju John who was awarded the best dairy farmer of the district during the year 2023 was made for appraisal of the farming situation and management practices to be presented as success story to other farmers and also for suggesting further improvement measures needed if any. The farm is having 22 high yielding cross bred dairy cows, managed intensively. Sri. Biju is a practicing lawyer and finds time to involve in the farming activities along with his wife, because of his passion for agriculture and allied activities. The farm was started five years back and the animals are procured and managed on scientific basis with the help of a Nepali couple engaged as full time workers. Even during the lean season he is marketing around 180 litres of milk daily through the Milma society. Some of the prominent management issues



mentioned to be faced in the farming is high cost of feeding and infertility. Practical measures for reducing the cost of feeding such as formulation of concentrate feeding based on locally available feed ingredients and the essentiality of providing exercise to the cows by releasing out of the barn at least for some time daily to improve the fertility were suggested. He is convinced on these ideas and has initiated immediate steps to bring about these changes.



With Adv. Biju John and His Nepali caretaker at the dairy farm

## ICAR KRISHI VIGYAN KENDRA MYSURU

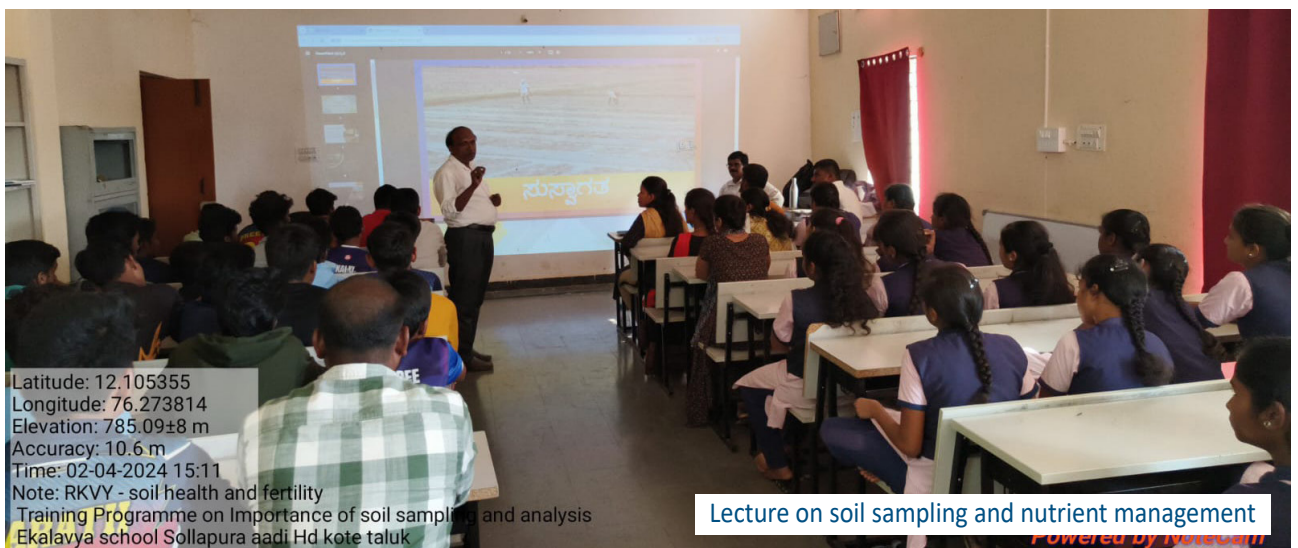
### KVK TIMES 'Fortnightly report (1st to 15th April 2024)' Participation as a resource person in Soil Health Program (SHP)

Soil health management training programme organized by Department of Agriculture (DoA) Mysuru and ATMA Mysuru in collaboration with JSS KVK Suttur on 2nd April 2024 at Ekalavya school Sollepura H D Kote taluk, Mysore district. KVK scientist explained about importance of soil testing, soil sampling methods and soil fertility management. KVK as a nodal officer for the soil health program (SHP) in the district.



Latitude: 12.105716  
Longitude: 76.273679  
Elevation: 785.09±60 m  
Accuracy: 149.6 m  
Time: 02-04-2024 15:47  
Note: RKVY - soil health and fertility  
Training Programme on Importance of soil sampling and analysis  
Ekalavya school Sollapura aadi Hd kote taluk

Method demo on soil sampling



Latitude: 12.105355  
Longitude: 76.273814  
Elevation: 785.09±8 m  
Accuracy: 10.6 m  
Time: 02-04-2024 15:11  
Note: RKVY - soil health and fertility  
Training Programme on Importance of soil sampling and analysis  
Ekalavya school Sollapura aadi Hd kote taluk

Lecture on soil sampling and nutrient management

## ICAR KRISHI VIGYAN KENDRA PALAKKAD

### RAWEP of B.Sc. (Hons.) agriculture students from College of Agriculture, Vellanikkara

KVK Module of the RAWEP (Rural Agricultural Work Experience) programme of B.Sc. (Hons.) agriculture students from College of Agriculture, Vellanikkara was conducted at KVK, Palakkad from 02/04/2024 to 04/04/2024. A class about the mandate and major activities of KVK was given to the students. On 04/04/2024, they participated in the training programme on natural farming at Sreekrishnapuram, which was organized by KVK, Palakkad and ADA, Department of Agriculture and Farmers' Welfare, Kerala, and demonstrated the preparation of inputs related to natural farming to farmers. The students also visited fields of natural and organic farmers and had fruitful interactions with them.

### Natural Farming Training Programme at Sreekrishnapuram

A training programme on natural farming was conducted at Sreekrishnapuram in association with ADA, Department of Agriculture and Farmers' Welfare, Kerala on 04/04/2024. The training was organized at the residence of Sri. Sankaran Namboothiri, who himself is a natural farmer. Dr. Resmi J and Sri. Arun Thazhath took classes on relevant topics and B.Sc. (Hons.) agriculture final semester students of College of Agriculture, Vellanikkara, Thrissur conducted method demonstration on preparation of inputs used in natural farming. The students participated in this training as part of their RAWEP programme.



## ICAR KRISHI VIGYAN KENDRA PATHANAMTHITTA

### Field day on weed management in rice

Weeds are pernicious and if left uncontrolled, can lead to significant yield loss and reduce the quality of farm output. In paddy cultivation, weeds are widespread and a variety of them are found in the fields and are classified into five type's viz. Grasses, Sedges and Broad leaved, ferns

and algae. In Rice due to frequent application of herbicides, certain weeds like Cyprus differmis, Ludwigia perennis are found resistant to single herbicide. A Field Day to show the outcome of Front Line Demonstration on "Performance of Combination Herbicides for control of weeds in Rice" was conducted on 10th April 2024 at Pandalam Thekkekkara Panchayat of Pathanamthitta District. The approach included use of Stale seed bed, Use of Herbicides Vivaya (Cyhalofop butyl + Penoxsulam) 1 litre and Affinity ( Carfextrazone Ethyl 40 % DF) 16g per acre at the right stage of weed growth i.e 16 days ( 2-3 leaf stage) after sowing and Use of weed wiper impregnated with Glufosinate ammonia 100 ml/litre water, 55 days after sowing to control weedy rice. The Technology resulted in almost 90 % weed control. ▶



## ICAR KRISHI VIGYAN KENDRA RAMANAGARA

### Training programme on “Natural Farming for Community Resource Persons” of Farm Livelihood

ICAR-KVK Ramanagara in collaboration with NRLM, Sanjeevini, Zilla Panchayath Ramanagara and MANAGE Hyderabad organised 5 days training programme on “Natural Farming for Community Resource Persons” of Farm Livelihood. The programme was inaugurated by lightening the lamp. During this Dr. Lata R. Kulkarni, Senior Scientist and Head addressed the gathering and explained the need of natural farming in the current scenario to reduce the usage of chemical fertilizer and also explained about health and nutrition-importance of dietary diversity, healthy diet plans etc. Dr. Dinesh, M.S., Scientist (Agronomy) explained the importance of natural farming, its need, definition, principles, significance, benefits, nutrient management in natural farming, water management, integrated farming system & preparation of bio inputs, hands on training on natural farming inputs preparation like Jeevamrita, Ghana-jeevamrit, Beejamruta etc. Mrs. Preethu, D.C., Scientist (Soil Science) explained soil health management, difference between healthy & unhealthy soil;

understanding the structure of soil and its sampling methods through demonstrations, learn to read soil health card for understanding the nutritional requirements of the field. Dr. Rajendra Prasad, B.S., Scientist (Plant Protection) highlighted identification of Pest & disease in field, integrated pest and disease management and demonstrated the preparation of inputs like neemastra, agniastra & dashparni, preparation and application of yellow sticky traps in fields etc. Dr. Sowjanya, S., Scientist (Agril. Extension) explained about extension method demonstration, farmer's field schools, farmer group discussions, qualities of para extension professionals & linkages with organizations working for agriculture development etc. Mr. Surendra, progressive farmer explained about seed conservation for natural farming by establishing farmer seed banks; methods of seed treatment in natural farming, visualization of multi-cropping models in fields, ITKs and Multi - Cropping models. Mr. Keshavamurthy, Progressive Farmer shared his experience about natural farming and marketing. Mr. Nagaraj, ROCO, explained about certification and marketing of natural produce. Totally 60 members were trained in two batches and were benefitted by the training programme. ▶



## ICAR KRISHI VIGYAN KENDRA SHIVAMOGGA

### Natural Farming

Nodal officer Dr. Sudharani, N. Scientist (Home Science), ICAR-KVK, Shivamogga conducted 5day's capacity building training programme on "Natural Farming" for Krishi Sakhi's in two batches from 20.03.24 to 24.03.24 and 25.03.24 to 29.03.24 which was sponsored by MANAGE, Hyderabad. The programme was inaugurated by Dr. R.C. Jagadeesha, Hon'ble Vice Chancellor, KSNUAHS, Shivamogga, Dr. K.T. Gurusurthy, Director of Extension, Dr. G.K. Girijesh, Senior Scientist and Head, KVK Shivamogga, Dr. Ganesh Naik, Dean (College of Agriculture, Navile Shivamogga) and other scientific fraternity. In this regard, Krishi Sakhi's as an extension functionaries themselves to enhance their knowledge and skills in Natural farming conducted several theory as well as hands on method demonstration on Natural Farming Principles & benefits, demonstration and practical exercises on understanding the difference between healthy & unhealthy soil; understanding the structure of soil and its sampling methods through demonstrations, Identification and management of plant pest and diseases in Natural farming and there management practices naturally by using ICT's, hands on training on natural farming inputs preparation like Jeevamrita, Ghanajeevamrita, Beejamrita, Neemastra, Agniastra & Dashparni ark, 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, health and nutrition-im-



portance of dietary diversity, healthy diet plans, qualities of para extension professionals & linkages with organizations working for agriculture development branding, certification and marketing of natural produce. Shri. Erappa Naik, Horbylu village, Soraba taluk, Shivamogga, a well-known progressive farmer who is practicing IFSD components and natural farming has highlighted about the importance of animal components in natural farming as well as processing and value addition activities which must practice all farmers at home scale for the grown crops for sustainable lifestyle. ▶



## ICAR KRISHI VIGYAN KENDRA THRISSUR

### Enhancing Food and Nutritional Security in Kerala

Kerala, known for its lush greenery and diverse agricultural practices, faces challenges in meeting its vegetable demand, with domestic production meeting only 40% of the state's requirement. By 2030, the demand for vegetables is projected to rise to 35.5 lakh tonnes annually. To achieve self-sustainability, Kerala needs 16.5 lakh tonnes more vegetables per year. However, expanding cultivation to meet the 60% deficit is challenging.



In response to these challenges, Krishi Vigyan Kendra (KVK) Thrissur has implemented various initiatives to enhance food and nutritional security in Kerala. KVK Thrissur farm has taken proactive measures by producing various inputs in the revolving fund scheme. 290 kilograms of high-quality vegetable seeds and 14500 vegetable seedlings of cowpea, chilly, cucumber, brinjal, snake gourd, ashgourd, bittergourd and bhindi were produced this year. These efforts are expected to contribute to vegetable production on 150 hectares of land in Thrissur and nearby districts of Kerala, helping in a small way to meet the state's vegetable demand. KVK Thrissur also produced 34 kg of mushroom spawn of oyster and button mushrooms this year, contributing to the state's mushroom cultivation sector.

KVK Thrissur also plays a crucial role in enhancing Kerala's food and nutritional security by addressing micronutrient deficiency of Kerala soils. To address this issue, KVK Thrissur has produced 658 kg of KAU Sampoorana for rice, 215 kg of KAU Sampoorana for banana, and 540 kg of KAU Sampoorana for vegetables. KAU Sampoorana is a micronutrient-rich fertilizer that helps improve soil fertility and enhances the nutritional content of crops. Additionally, KVK Thrissur has produced 4070 kg of Ayar, another micronutrient-rich fertilizer specifically designed for banana cultivation.

Through its various capacity development programme KVK Thrissur promotes market-friendly, high-yielding vegetable cultivation practices. The KVK also advocates soil test-based fertilizer application for commercial farming, with a focus on Integrated Nutrient Management (INM). To complement these efforts the demonstrations in its seed production plots showcase the benefits of advanced agricultural inputs and technologies.

KVK Thrissur supported farmers by selling 7500 vaccinated BV 380 chicks, known for their high egg production, 250 Gramasree chicks, which are popular for their suitability to

local conditions, suitable for backyard poultry rearing and 400 quail chicks, which are known for their fast growth and high egg production. By providing farmers with access to these chicks, KVK Thrissur helps them diversify their income streams and improve their livelihood status.

KVK Thrissur also plays a role in promoting value addition



and income generation by selling processed food products such as juice, squashes, pickles, and other preserved items. These products not only provide an additional source of income for farmers but also contribute to reducing post-harvest losses and increasing the shelf life of agricultural produce. By encouraging the sale of these processed food products, KVK Thrissur promotes entrepreneurship in the agricultural sector.

In addition to selling processed food products, KVK Thrissur also offers publications on various agricultural technologies. These publications serve as valuable resources for farmers, providing them with information on the latest advancements and best practices in agriculture. By making these publications available, KVK Thrissur helps farmers stay informed and adopt new technologies to improve their agricultural practices.

By promoting sustainable agriculture practices, addressing micronutrient deficiency, and empowering farmers with knowledge and resources, KVK Thrissur contributes significantly to building a more resilient and sustainable agricultural sector in the state. ▶



## ICAR KRISHI VIGYAN KENDRA MITRANIKETAN, THIRUVANANTHAPURAM

### Training on banana fibre extraction and handicraft making

ICAR Krishi Vigyan Kendra organised a 5-day vocational training programme on banana fibre extraction and handicraft making from 27.02.2024 to 02.03.2024 under the SCSP programme. The primary goal was to empower underprivileged women economically by equipping them with skills to harness the potential of banana sheath for crafting diverse products. Dr. Binu John Sam Senior Scientist and Head of KVK, inaugurated the programme and emphasized the critical need to tap into banana biomass for enhancing farm income through value addition. The training aims to empower rural communities through skill development initiatives. Fifteen participants participated in this training programme from various villages in Thiruvananthapuram district. Part of this training programme is providing hands-on training and practical knowledge of banana fibre extraction and handicrafts demonstrations to trainees. Dr. Devika I, SMS Home Science, created awareness that after harvesting the banana, one can double the amount sold by converting the leaf sheaths into banana fiber and other value-added products. ▶



## ICAR KRISHI VIGYAN KENDRA TUMKURU I

### Off campus training programme

ICAR-KVK-Tiptur, Tumkur-1 conducted off campus training programme on method demonstration on compost preparation by using areca husk at paruvagondanahalli vil-lage of Tiptur taluk on 06-04-2024.

Farmers are usually burn areca husk at roadside which causes air pollution or it takes normally 2-3 years for de-composting due to high lignin content. By applying com-post culture areca husk will decompose with in a 6 months. Dr. Keerthishankar K, Scientist (Horticulture) explained about procedure of compost making, nutrient status of areca husk compost etc. More than 30 farmers and farm women were participated during the programme. ▶



## ICAR KRISHI VIGYAN KENDRA TUMKURU II

### Exposure visit and awareness programme on natural farming

ICAR-KVK, Hirehalli, Tumakuru had conducting one exposure visit and awareness programme to model natural farming practicing farmer Shri. Chandrashekhara's field at Mugutihalli village, Chikkamgaluru to farmers of Tumakuru. Thirty one farmers were participated in the exposure visit. Shri. Chandrashekhara is practicing natural farming

in his farm for the last 10 years. Shri. Chandrashekhara has shared his experience in natural farming. He has adopted all natural farming components viz., preparation of Jeevamrutha, mulching, rearing desi cows, compost preparation, Coffee intercropping, drip irrigation, supply of Jeevamrutha through drip irrigation in 8 acre Areca nut based intercropping system. Farmers were taken to various natural farming demonstration components in his farm. Shri. Chandrashekhara gave lecture on importance of natural farming and interacted with famers and answered many queries of farmers. Mr.Ramesh.P.R, SMS (Soil Science) motivated the farmers to adopt natural farming in Areca nut and Coconut crops.



## ICAR KRISHI VIGYAN KENDRA UDUPI

### Study and exposure tour to CPCRI Research Station at Kidu

A team of 100 farmers along with scientists from ICAR-KVK, Udupi took a study cum exposure visit for the farmers to Central Plantation Crop Research Institute, research station at Kidu, near Subrahmanya, Dakshina Kannada District on 11.03.2024. The farmers participated in various lectures and demonstration units to acquaint themselves with various horticulture crops. SuShi. Shoba Karandlaje, Union Minister of State for Agriculture & Farmers' Welfare graced the occasion and addressed the farmers. Later, farmers were taken to a nearby honey bee farmers unit as an exposure trip.



Exposure tour to CPCRI Research Station at Kidu

### Valedictory ceremony of Natural Farming training Program for Krishi Sakhis

Valedictory ceremony of a week-long training program on Natural Farming for Community Resource Persons (Krishi Sakhis) was held on 29th March, 2024 at the training hall of KVK, Udupi. The training program was jointly organized by Government of Karnataka, Zilla Panchayath, Udupi District; National Rural Livelihood Mission; Sanjeevini, K.S.R.L.P.S.; Department of Skill Development, Entrepreneurship and Livelihood, Government of India; National Institute of Agriculture Extension Management, Hyderabad; Keladi Shivappa Nayaka University of Agriculture and Horticultural Sciences, Shivamogga and Indian Council of Agricultural Research – Krishi Vigyana Kendra, Udupi. The event was presided over by Dr. Dhananjaya B., Senior Scientist and Head, ICAR-KVK, Udupi. In his talk he emphasized that Krishi Sakhis have a major role in playing as a link between scientists and farmers in delivering technologies to end users. As chief guest, Mrs. Asma Bhanu Abubakkar, Paddy seed conservator from Karkala spoke on importance of traditional and heritage seed conservations in the era of natural farming. Ms. Navya, Project Manager, Ms. Mamatha and Mr. Avinash from NRLM were present as guests. Certificates were distributed to trainees.

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## ICAR KRISHI VIGYAN KENDRA UTTARA KANNADA

### Natural farming training to Krishi Sakhi's

The programme was organized during 27.03.2024 to 31.03.2024 at ICAR-KVK, Uttara Kannada, Sirsi in collaboration with SRLM, Karwar, programme was funded by MANAGE, Hyderabad. The programme was inaugurated by Dr. Roopa S Patil, Senior Scientist and Head and called for adaptation and promotion of natural farming practices in Uttara Kannada to produce chemical residue free food. The hands on training was organized on importance, scope of natural farming, types of soil, soil conservation, soil health management and soil sampling and analysis, community health and natural farming, integration of livestock with natural farming, identification of pest and diseases in different crops and management, medicinal plant cultivation, water conservation techniques, ethno-veterinary medicines in management of livestock diseases, processing, value addition and marketing of natural produce, ITKS in management of pest and diseases in crops, identification,



Demonstration on Jeevamrutha preparation and use

harvesting, processing of traditional varieties of vegetable seeds. Interaction session was organized with champion farming Mr. Vinayaka Umamaheshwara Hegde on natural farming. Practical demonstration on preparation and use of Vermicompost, Vermi wash, Jeevamrutha, BeejAmrutha, Agni Astra, Neemastra, 5% NSKE, Govkrupamrutha was organized. Totally 28 Krish Sakhi were benefitted from the programme. ▶



Practical demonstration on Beejamrutha preparation and use

## ICAR KRISHI VIGYAN KENDRA VIJAYAPURA-II

### FLD field visit Scientist(Horticulture), ICAR-KVK, Vijayapura-II (Indi) visited Watermelon FLD plot

#### Visit Overview:

On April 4, 2024, a horticulture scientist from ICAR-KVK, Vijayapura-II (Indi), conducted a field visit to the Watermelon FLD plot located in Hirerugi village. The purpose of the visit was to evaluate the performance of the Arka Shyama watermelon variety under farmer field conditions. The scientist meticulously recorded various parameters to assess the quality and performance of the watermelon crop. These included:

**Fruit Weight (kg):** The mass of the watermelons, which is an indicator of yield.

**Pulp Colour:** The color of the watermelon's flesh, which

can affect consumer preference.

**Fruit Shape:** The physical form of the watermelons, which is important for market standards.

**TSS (0B):** A measure of the sugar content in the watermelons, which relates to taste and ripeness.

#### Farmer Feedback:

Feedback from the farmers who participated in the demonstration of the Arka Shyama variety was also gathered. They reported several advantages:

**Reduced Disease Incidence:** Farmers observed a lower occurrence of diseases in the Arka Shyama variety compared to other hybrid varieties.

**Lower Cost of Cultivation:** The Arka Shyama variety required fewer sprays and had a lower seed cost, which contributed to a reduction in the overall cost of cultivation.

**Comparison to Check Hybrid:** When compared to the check hybrid (Melody), the Arka Shyama variety was found to be more cost-effective and disease-resistant. But market preference is less compared to check because of absence of waxy coating in Arka Shyama.

Smt Heena M.S. Scientist (Horticulture), KVK, Indi



Arka Shyama



Melody

## ICAR KRISHI VIGYAN KENDRA WAYANAD

### ICAR KVK Wayanad-Training on Beekeeping

KVK Wayanad conducted one day training programme on bee keeping. The programme was inaugurated by Dr. Safia N. E, Senior Scientist and Head, KVK Wayanad. The classes were lead by Sri, Joseph, Progressive honeybee farmer. Training on different topics like commercial bee keeping its requirements & prospects, morphological adaptations,

pollination efficiency, important foraging plants, types and classification of honey bee and honey, identification of different species and races of bees. Banking – Advances & deposits-lending schemes to agricultural sector, supports available for bee keeping from various departments and organizations, management of pest and disease. Field visit to bee keeper field was conducted and interacted with the farmers for problem solving. Explanation through case studies and exercises were taken to the trainees. There was an active participation of 50 farmers. ▶



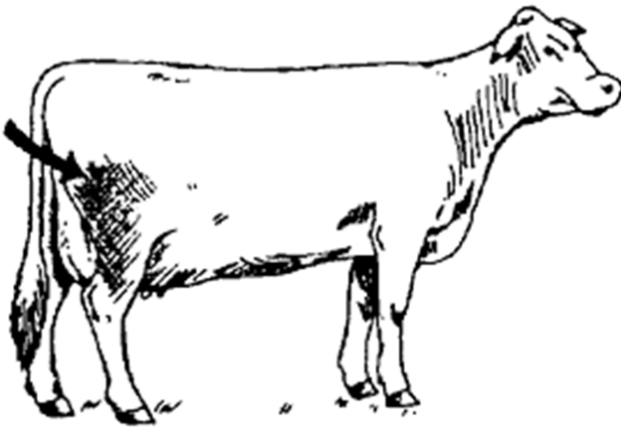
### KVK Wayanad-Distribution of inputs under SCSP

KVK Wayanad distributed agricultural machinery and conducted training on mushroom cultivation at Neervaram, Panamaram as part of SCSP Project. Sri. Ummachan, Krishikootam President, Neervaram, presided over the event and the programme was inaugurated by Smt. Mercy Benny, Chairperson of Panamaram Block Panchayath Standing

Committee on Development Affairs. Sri. Muhammad Jamia, Agricultural Officer, welcomed the gathering. Dr. Safia N.E, Senior Scientist and Head KVK Wayanad explained the aim and details of the project to the farmers. Dr. Deepa Rani C.V, Assistant Professor, KVK Wayanad, provided training on mushroom cultivation and spawn production. Sri. V.T Vinoy, Deputy Director of Agriculture felicitated the gathering. Agriculture Society coordinator Sri Johny. K.V, offered vote of thanks. Around 40 farmers will get benefit by this project. ▶



## Black Quarter: An important bacterial disease of dairy animals



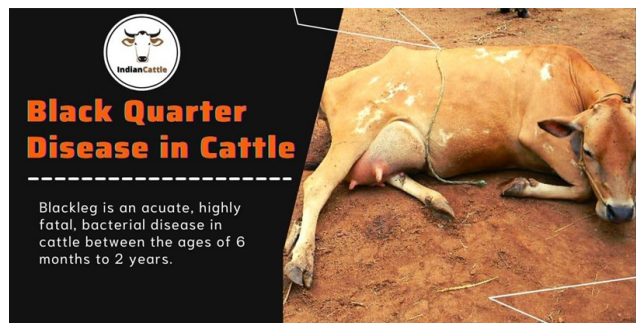
### Introduction

- Synonyms-Black leg, Farrya
- It is an acute infectious and highly fatal, bacterial disease of cattle and Buffaloes.
- Young cattle between 6-24 months of age, in good body condition are mostly affected.
- It is soil-borne infection which generally occurs during rainy season.
- It is caused by *Clostridium chauvoei*
- The disease spreads through a) Ingestion of contaminated feed and b) Contamination of wounds.

### Symptoms:

- Fever (106-108°F)
- Loss of appetite

- Depression, dullness
- Suspended rumination
- Rapid pulse and heart rates
- Difficult breathing (dyspnoea)
- Lameness in affected leg.
- Crepitation swelling over hip, back & shoulder.
- Swelling is hot & painful in early stages whereas cold and painless later.
- Recumbency (prostration) followed by death within 12-48 hrs.



### Prevention and control

- The nearest Vety officer or paravet of the department should be contacted for treatment and prevention.
- Vaccination. Calves 3-6 months of age should be vaccinated twice, 4 wk apart, followed by annual boosters before the anticipated danger period (usually spring or early summer).
- In an outbreak, all susceptible cattle should be vaccinated
- Cattle should be moved from affected pastures.

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

## Theileriosis: An important parasitic disease of dairy animals



### Introduction

- It is a vector-borne, infectious blood disease in cattle
- It occurs primarily in warm tropical and subtropical areas.
- The disease is not contagious but is transmitted most commonly by ticks.

### Symptoms

- It causes anaemia, fever, weight loss, breathlessness, uncoordinated movements, abortion and death.
- High rise of temperature
- Loss of condition
- Coughing, dry rales, moist rales,
- Rumen atony, dehydration, rough body coat, dyspnoea and muscle tremors.
- Enlargement of superficial lymphnodes,
- Grinding of teeth.
- Profound anaemia resulting in tachycardia and dys-



- pneumonia.
- Congestion of mucous membranes which may be jaundiced.
- Anorexia and mucoid diarrhoea, rumenal atony, excess salivation.
- Haemoglobinuria does not occur
- Shivering, fasciculations, ataxia, seizures, syncope.

**Prevention and control**

- Strict control of insect population should be made by acaricidal spray or dips.
- Carrier animals should be isolated and disposed.
- Supportive treatment such as blood transfusions and appetite stimulants in severe cases may be required.
- Detection and culling or treatment of carrier animals is essential.

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

**Ketosis: An important metabolic disease of dairy animals Introduction**



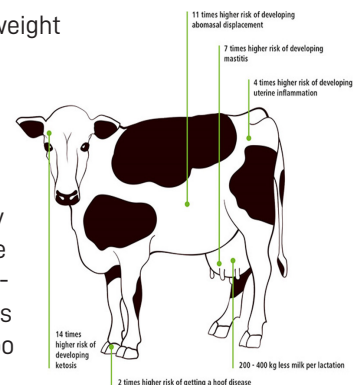
- Ketosis usually occurs within a few days to a few weeks after calving.
- This manifest digestive disturbance in the dairy animals.
- The sudden ingestion of toxic doses of carbohydrate rich feed such as grain or sudden change from forage ration to high energy lactation rations predisposes for it.
- Feeding of excessive amounts of rapidly fermentable carbohydrates leads to ketosis

**Symptoms of Disease**

- Sudden drop in appetite
- Reduced milk yield
- Constipation
- Mucus covered faces
- Anorexia
- Discharge from eyes and nostrils
- Dry muzzle
- Sudden loss of body weight
- Smelling of milk
- Falling of hair

**Prevention and Control**

- Prevention of ketosis is via nutritional management. Body condition should be managed in late lactation, when cows frequently become too fat.
- Modifying diets of late lactation cows to increase the energy supply from digestible fiber and reduce the energy supply from starch may aid in partitioning dietary energy toward milk and away from body fattening.
- A critical area in ketosis prevention is maintaining and promoting feed intake. Cows tend to reduce feed consumption in the last 3 wk of gestation. Nutritional management should be aimed at minimizing this reduction.
- Feed intake should be monitored and rations adjusted to meet but not greatly exceed energy requirements throughout the entire dry period.



- After calving, diets should promote rapid and sustained increases in feed and energy consumption. Early lactation rations should be relatively high in nonfiber carbohydrate concentration but contain enough fiber to maintain rumen health and feed intake.
- Some feed additives, including niacin, calcium propionate, sodium propionate, propylene glycol, and rumen-protected choline, may help prevent and manage ketosis. To be effective, these supplements should be fed in the last 2–3 wk of gestation, as well as during the period of ketosis susceptibility.

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

## Common disease prevention practices for dairy animals

### Balanced Nutrition

- A balanced ration should provide protein, energy, minerals and vitamins from dry fodders, green fodders, concentrates, mineral supplements etc., in appropriate quantities to enable the animal to perform optimally and remain healthy.

### Managing Heat Stress

- Ensure plentiful supply of cool, clean drinking water.
- Washing/Wallowing/Sprinkling/Splashing or showering of water is done to lower temperature and cool buffalo during times of stress. Sprinklers increase evaporative cooling and can reduce ground temperature.
- Good ventilation system may help animal to cope with extreme heat events.
- Feeding green fodder/silage/hay/is generally helpful and should be done at relatively cooler times e.g. morning or late evenings.

### Sanitation

- Cleaning and disinfecting is essential to control the accumulation and spread of disease-causing micro-

organisms. Sometimes it provides the only successful solution for controlling infectious diseases. Thorough cleaning and proper choice and use of a disinfectant are very important.

### Isolation

- Isolating and treating sick animals; dispose of dead animals properly.



### Management Practices

- Regular deworming of the herd.
- Observing animals frequently for signs of disease.
- Keeping animals comfortable.
- Vaccinating for diseases that are a threat to the herd. Needles should be sterilized after each use to prevent spread of disease
- Medicating feed or water, as necessary, to control specific disease problems.
- Utilizing diagnostic services and regular supervision of herd health by a veterinarian. .
- Protecting feed and water from contamination with manure and urine from animal and from droppings of birds and rodents.
- New animals added to the herd are a potential source of new diseases so always buy healthy animals. Test breeding bull for brucellosis and for other diseases before purchase.

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







**KVKs**  
1974-2024



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