



### Director's Message

**"Everything can stop but not agriculture is the truth experienced during this COVID 19 pandemic days".** During the difficult period of COVID 19 pandemic all the KVKs are playing significant role in addressing the farmers need through technological support and advisories. Let us convert this challenge as an opportunity and evolve new methodologies and innovative approaches to strengthen our activities towards bringing food, nutritional and livelihood security to millions in the country.

Indiscriminate technological interventions will end in negative consequences and inhibition to change process. The technological option for intervention must keep in mind factors like reduction in operational cost and drudgery, resource conservation, value addition, income generation potential, improvement in productivity etc. Therefore, careful assessment of technologies become a mandatory process before recommending for large scale adoption in the system. This helps to save the time and energy as well confidence in our efforts to bring the desirable change process.

The availability and accessibility of relevant technologies is an important step in the technology assessment and demonstration process. Keeping in view of this important requirement of KVKs in the zone ATARI, Bengaluru is planning to organize consultancy workshop for district wise problem identification and technology inventory development through SAUs and ICAR institutes. This process will be initiated by ATARI and we can hope to complete the task before Dec,2021. Together we can make the difference and change. Let us start our mission towards making the Technology inventory and desirable change.

( V.Venkatasubramanian )

## KVK Farmers participated in live telecast of National Horticulture Fair 2021

The ICAR-Indian Institutes of Horticultural Research, Bengaluru, Karnataka has organized the five-day "National Horticulture Fair 2021" on the theme "Start-Up & Stand-Up India" from 8 to 12 February, 2021 in collaboration with ICAR-ATARI, Bengaluru and others. KVKs of ICAR-ATARI, Zone-XI along with KVKs of other Zones across the country actively took part in the live telecast of various demonstrations on horticultural crops to the farmers.

In his inaugural address, the Chief Guest, Shri Shri Ravishankar stressed that everyone has to go back to natural farming, which is not only environmentally safe but also provides nutritional security and health benefits. He urged farmers to get connected in greater numbers with such types of fairs. He said that all horticulture-based ICAR Institutes and state Departments should join together to make the country nutritionally secured. The Chief Guest released "Jacolate", jackfruit-based chocolate product that was licensed to a women entrepreneur during the occasion.

The Guest of Honor, Dr. Trilochan Mohapatra, Secretary (DARE) & Director General (ICAR) urged to make "Krishi Labhdayak and Nature Friendly". Dr. Mohapatra emphasized on creating awareness for nutrition security among consumers through use of fruits and vegetables. The Director General released a Mobile App "Arka Vyapar" developed in collaboration with the Society for Promotion of Horticulture to connect the buyers and sellers of horticulture produce and products.



Dr. A K Singh, DDG (Horticulture), ICAR stressed on the importance of horticulture and its growing contribution to the Indian economy. Dr. M.R. Dinesh, Director, ICAR-IHR, Bengaluru, Karnataka explained how boosting the horticulture as an enterprise and promoting the "Atmanirbhar Krishi". The senior officials of ICAR, Directors of ICAR Institutes and ATARIs, Vice-Chancellors of State Horticultural Universities, Directors of Horticultural Departments, representatives from Private Industries, farmers and students also virtually participated in the event.



KVK, Tumakuru-II



KVK, Khozhikode



KVK, Gadag



# Administrative Building of ICAR-KVK, Vijayapura-II (Indi) Inaugurated

Administrative Building of ICAR-KVK, Vijayapura-II (Indi) was inaugurated on 22.02.2021 by Shri. B. C. Patil, Hon'ble Agriculture Minister, Govt. of Karnataka. During inaugural address, he emphasized the capacity development of rural youth by KVKs and appreciated the role of ICAR and KVKs in supporting farmers and rural youth during COVID19 situation. Hon'ble Yeshwantaraya Gowda Patil, MLA Indi, expressed happiness for additional KVK in Vijayapura district and thanked ICAR, New Delhi. Shri Shankargouda Patil, special representative of state Government lauded the efforts of Government for developmental activities.

Shri Vijugouda S. Patil President KSSOCA, Bengaluru; Shri Ashoka Allapura, President, Karnataka State Lime Development Board, Indi; Shri Annappa Biadarkokte, President, Taluka Panchayat, Indi; Smt. Shailaja Shrishail Pujari, President, Town Municipal, Indi; Shri. Shashimouli Kulkarni, Shri. Y. N. Patil and Dr. S. B. Kalaghatagi, Members, Board of Management, UAS Dharwad graced the occasion. Exhibition highlighting appropriate technologies and live specimen of major crops of the district and fertilizer, seed and farm equipment stall were arranged on the occasion. Hon'ble Vice Chancellor Dr. M. B. Chetti, UAS, Dharwad welcomed the guests and Dr. Venkatasubramanian, Director, ICAR-ATARI, Zone-XI, Bengaluru gave vote of thanks.



## Common Facilitation Centre at KVK, Kottayam Inaugurated

Common facilitation centre for agricultural commodities was inaugurated at KVK, Kottayam on 25 January, 2021 by Adv. V S Sunilkumar, Hon'ble Minister for Agriculture Development & Farmers Welfare. The centre was constructed under the State plan project "Setting up of value addition unit of nutmeg and jack for entrepreneurship development of women SHGs in Kottayam district" with an outlay of 50 lakh. Hon'ble K Suresh Kurup, MLA, Ettumanoor presided over the function. The common facilitation centre has the physical structure worth 15 lakh and machineries & utensils worth 15 lakh which includes fruit mill, fruit pulper, juice expeller, sautiner, pulverizer, packaging and sealing machines, vacuum packing unit and nitrogen flush facilities.

Jack fruit based products like frozen tender jack cutlet, minimally processed jack products, tender jack pickles, dried jack, jack seed powder, jack muffins, jack cookies, jack seed chutney and nutmeg rind based products like squash, syrup, jam, jelly, chunks, bar, pickles and teabag and rind powder were standardized in the unit.

*Farmers can bring their agricultural produce to the common facilitation centre to make value added products using the available facilities and can sell their products in the market.*



# Farmer Guided by ICAR-KVK, Uttara Kannada Gets IARI - Innovative Farmer Award -2021

Shri Hanumantappa Bheemappa Madlur, Kapageri Village, Sirsi Taluq of Uttara Kannada district, Karnataka state is from a poor family background. He started his career as agriculture labour and with his sincere dedicated efforts, he could own 3.5 acres of agriculture land at Kapageri Village. Today, with his continuous efforts and innovativeness he is growing more than 60 types of crops including green leafy vegetable, guard varieties and other vegetables, crops like cereals, pulses, oil seeds and minor millets and flower crops like daisy (dahlia), Sugand raj and rose under pure rainfed conditions. He is locally known as Multi Crop Specialist Hanumantappa. Agriculture is his family venture, on very few occasions he hires external labours for agriculture operations. The farm produce is sold directly in the nearby markets on market days without depending on the middlemen, which fetches him good returns.

He practices crop rotation for soil nutrient management and conserves the rain water at the flag end of rainy season which serves water requirement of crops for more than 20 days. Thus he could harvest good yield even after rains under pure rainfed conditions. He has made optimum use of land and designed scientific drainage system which shows his innovativeness in managing multiple crops. He has two cows which provide nutritional security and bio-gas for fuel needs of the family. He is a small farmer and one among crores of farmers of India, who is completely dependent on rain for agriculture. But, he has proved that self reliance and livelihood security can be achieved through agriculture even with very limited resources. By his hard work and innovativeness in rainfed agriculture, he received IARI - Innovative farmer award -2021 at PUSA KRISHI VIGYAN MELA held during 25-26 February, 2021.



The ICAR-IARI, New Delhi has bestowed him with IARI - Innovative Farmer Award 2021



## KVK, Chikkamagaluru Bagged Best KVK Award from Agriculture Today Group

ICAR-Krishi Vigyan Kendra, Mudigere, Chikkamagaluru has bagged prestigious National Level "Best Krishi Vigyan Kendra" Award 2021 for excellence in Agricultural Extension for farmers and farm women empowerment in India.

Award was presented by Agriculture Today Group during Virtual Award Ceremony was held on 09 April, 2021 with the Chief Guest Dr. T. Mohapatra, Director General, ICAR, New Delhi and the Chair Dr. A.K. Singh, DDG (AE), Krishi Anusandhan Bhawan-I, ICAR, New Delhi and Dr. M.J. Khan, President, Agriculture Today Group.



# Mr. Jojo Jacob's horticultural nursery blooms into an array of innovative enterprises

Mr. Jojo Jacob, aged 50 and ex-trainee of KVK, Kozhikode is a resident of Changaroth Panchayat of Kozhikode District in Kerala has established plant nursery unit in his farm in 1998. Initially he started nursery with few plants in 36 cents of own land around his house soon became a roaring success with the involvement of Ms. Bindu whom he married in 2003. Mr. Jojo - Bindu couple worked over 16-18 hours a day which made their nursery into fame even in far away places of Kozhikode.

The focal point of the nursery is much prized bush pepper plants from six months of age to 15 years. Probably their nursery must be the largest bush pepper nursery in the world selling over 18,000 plants annually. Nursery unit has unique and diverse collection of plants. They produce and sell planting materials of plantation crops and spices, native and exotic fruit plants, ornamental plants etc. Enthused by the success of their nursery venture, they later diversified their activities into ornamental fisheries, vermiculture, apiculture, grow bag ginger and turmeric cultivation etc.

Annual income from a mere 36 cents of land from nursery unit is nearly Rs.25 lakh. Mr. Jojo has received several panchayat and district level awards for his achievements. He was selected for the Young Farmer award of Kerala Government in 2006 and young farmer award of IARI in 2007 which were nominated by KVK, Calicut. Numerous farmers/ students visit their farm every day from different places and both teaches them different techniques of farming with lot of enthusiasm.

To promote farming in a greater perspective, Bindu started a YouTube channel during the year 2019 named as "Techflora" with over 80,000 subscribers. Regular videos on farming for the benefit of farmers as well as young entrepreneurs are uploaded in the channel. She also conducts hands on training to school and college students in both on and off campus modes. Diversified activities of Bindu - Jojo couple are became role model for fellow farmers to emulate.



# Celebration of World Women's Day

## Smt. Rekha T, a Fish Farm Woman from Kozhikode Felicitated by ICAR, New Delhi



KVKs of ICAR-ATARI, Zone XI, Bengaluru celebrated International Women's Day on 8 March, 2021 with the participation of 3627 participants.

Smt. Rekha T was nominated by ICAR- KVK, IISR, Kozhikode for felicitation by ICAR, New Delhi during World Women's day- 2021. She was selected one among six farm women of India for felicitation due to her innovative integration of Fish and Agriculture to increase farm income. Mrs Rekha T, graduate with diploma in computer science, has been one of the pioneer aquaponics farmers in Kozhikode district, Kerala. She is practicing this modern integrated farming system for the past seven years at her backyard, with 0.016 ha protected area having 0.004 ha fish pond and 0.012 ha of grow bed area for vegetable cultivation. The yearly fish production from this unit is 1500 Kg of tilapia and 500 Kg of vegetables, providing a net annual income of Rs. 6.50 lakh.

When she faced slight difficulty in marketing of fresh fish she switched to its value addition by developing ready to cook and eat products such as marinated dressed fish and dry roasted fish. Even the vegetables from aquaponics unit were converted to value added products such as cleaned ready to cook vegetables in pouches giving safe to eat product label ensuring her a premium price. For this she took FSSAI Registration (No.21317243000422). To reduce the high operational cost she powered her unit with solar energy.

She had improvised and standardized many of new concepts and authored a book on aquaponics in Malayalam based on her experiences. The book entitled "Aquaponics endhu eganinaa" with 143 pages published by Theertha foundation is a reliable material in Malayalam for the new practitioners of Aquaponics. She has also formulated an aquaculture product for which patent is awaited. She has many awards and honors to her credit which include district level best fish farmer award by State Fisheries department in 2018.



Apart from this she has a dairy unit with two indigenous dwarf cows (Vechure and Kasargod dwarf) and a calf. The cow dung, milk and urine from this dairy unit are being converted to commercial products such as bio pesticide, plant immune modulator which is packed in 200 ml bottles and marketed by MVR Company Kozhikode. The dairy unit provides her a net profit of Rs.1.80 lakh per annum. She also provide trainings to new entrepreneurs on aquaponics at her farm "Annapurna aquaponics" at nominal rate inviting application through social media which could give her happiness, provide a decent earning and do something for the society.

She was National finalist of Doordarshan's Mahila Kisan award programme 2018-19 and was invited to New Delhi for the reality show. Apart from this she has given interviews in All India Radio, Doordarshan and many leading newspapers have documented her success story.

Thus Mrs. Rekha T who had resigned from the IT job at a Private firm chose a career to satisfy her passion which could give her happiness, provide a decent earning and do something for the society.



## Foot Prints of Fifteen Years by KVK Bengaluru Rural

ICAR-KVK, Bengaluru Rural completed 15 years of yeoman services and is playing a key role in transfer of agricultural technologies to the farmers and also working as a vital link between research and extension systems in the district. On the occasion of Foot prints of 15 years programme, Dr. V. Venkatasubramanian, Director, ATARI, Bengaluru acknowledged the services rendered by KVK since its inception and announced that the KVK will become Centre of Excellence in Natural Resource Management from the coming year..



Dr. K Narayana Gowda, Former Vice- Chancellor, UAS, Bangalore highlighted the importance of integrated farming system in doubling the farmers income and formation of commodity based association for marketing their produce. Dr. S. Rajendra Prasad, Hon'ble Vice Chancellor, UAS, Bangalore narrated the role of KVKs in transferring the new technologies, marketing systems, Rural marts etc. Dr. M. Byre Gowda, Director of Extension and other dignitaries released the souvenir of Foot prints of 15 years of KVK in both Kannada and English.



# KVK-Lakshadweep Leads in Using Barn Owls to Control Rat Menace

In Lakshadweep the incidence of rat and damages caused to coconuts are intense due to close spacing of coconut palms. The island accommodates coconut in an area of 2,674 ha with a production of 87 crore nuts. Information sources indicate that density of coconut palm in Lakshadweep is 408 compared to 78 palms/ha. The estimated loss due to rat menac accounts 40% in the island. As Lakshadweep being organic other chemical methods are prohibited for controlling the rats. Hence, the age old method of using Barn Owls to control rat menace was intervened by KVK. In the meantime, many attempts were made by the UT administration towards using different methods for controlling the rats which was in vain.



Since, 2014 KVK-Lakshadweep took attempts to introduce barn owl as a counter for reducing the rat menace with the technical and financial support of UT administration and Kerala Agricultural University. Based on the devised protocols, KVK translocated barn owls from Kerala. The translocations were performed with intense interactions and permissions from the Government of Kerala.

During the first phase of translocation three pairs of Owls were brought and the breeding was initiated upon quarantine to acclimatize to local conditions. Following scientific methods, the breeding was performed to increase the number of Barn Owls in return to reduce rats. At present the Owl population has increased to 25 and above. Primary data was collected from selected coconut gardens and it was perceived that considerable rat population has been declined due to the introduction of Barn Owls. Observations on collection of pellets revealed that the Barn Owls have consumed rats.

During 2021 by witnessing the success of this project, the UT administration has extended this intervention to other islands. In the second phase of the project the works on construction of quarantine cages and nest boxes has been completed. There has been a wide appreciation and felt need to continue this initiative as it is an effective biological control method for reducing rats in the islands that affect the coconut palms.

KVK submitted preliminary report to the UT administration to appraise the activities as well as to continue the project for the forthcoming years.

## Mahaswamiji of Kanerimath Participated in Wheat Field Day

ICAR-KLE KVK, Mattikopp in association with Indian Farmers Fertilizer Co-operative Limited and Sardar V. G. Foundation, Chachadi organized “Wheat Field Day” on 15 February, 2021. Inaugurating the programme Dr. Vishwanth I. Patil expressed that Belagavi district has unique climatic condition wherein farmers of the region rejoice growing diversified crops such as cereals, pulses, commercial, vegetables and fruits. Shri. B. R. Patil, Chairman, ICAR-KLE KVK, Mattikopp expressed that KVK has made remarkable achievement by producing quality seeds under seed hub for pulses programme.

Dr. V. Venkatasubramanian, Director, ICAR-ATARI, Bengaluru expressed that the main objective of the field day is to make farmers aware about the high yielding varieties of wheat crop and its scientific cultivation for gaining higher returns.

Shri Paramapujya Aadrushy Kadasiddeshwara Mahaswamiji, Kanerimath, Kolhapur expressed his concern towards organic farming for better health of an individual. Inorganic farming is not only increasing the cost of cultivation and also effecting the health of an individual. By practicing the organic farming, farmers can make utilize the available resources with them, which not only brings down the cost of cultivation but also leads to enhanced income due to the value of organic farm produce.



# Onattukara Spices Farmer Producer Company Promoted by KVK-Alappuzha



Alappuzha district in Kerala, once known for its quality turmeric production, went down during the past decades facing a lot of constraints. ICAR- KVK, Alappuzha, through a series of interventions including OFTs and FLDs revived the sector, finally leading to the formation and promotion of a Farmer producer Organization (FPO), 'Onattukara Spices Farmer Producer Company' (OSFPC). The company Registered in 2016 and focussed on quality seed availability, scientific cultivation, procurement, processing and marketing activities of the major spice crops of the region viz., turmeric, ginger, pepper, and garcena in close technical guidance of KVK.



**Preparation of quality seed kits for distribution by development agencies**

The FPO procures 20-25 tones of turmeric annually from 264 share holders of Bharanikkavu and Mavelikkara blocks and selling with better price than the prevailing market price. The products are processed and marketed in the brand name of 'Onattukara Spices'. Further a Farmer Facilitation Centre and Rural Mart were established at Kattanam, beside the KP Road with the technical support of the KVK and financial support of NABARD to facilitate the shareholder farmers with good quality inputs and custom hiring services. The rural mart aims to make available the critical inputs like seeds, planting materials, fertilizers and plant protection chemicals to the share holder farmers and also facilitate the marketing activities of the company.



**Large scale cultivation of turmeric**

Hon'ble U. Prathibha, MLA of Kayamkulam inaugurated the Rural Mart and Farmer Facilitation Centre on 02 February, 2021 and lauded the efforts of the KVK in handholding the farmers and upbringing a sector.



**Inauguration of Rural Mart by Hon'ble MLA**

# KVK Spectrum : ICAR-KVK, Bengaluru Rural



The Krishi Vigyan Kendra of Bengaluru Rural District was established at Hadonahalli, Tubagere Hobli, Doddaballapura Taluk on 30 March, 2006 to serve the farming community of the District.

KVK has infrastructure facilities like Administrative building, farmers hostel, staff quarters, rural mart, soil and water testing lab, farm pond, rain water harvesting unit, farm godown, vehicle sheds, atomic absorption spectrometer lab, vegetable seeds/seedling/planting material production unit and different farm implements including tractor, power tillers, two wheelers and four wheelers.

KVK has well established demo units viz., Vermicompost unit, sheep & goat rearing unit, dairy unit, poultry unit, azolla unit, mist chamber, bore well recharge model, millet processing unit, nursery, medicinal & aromatic plants orchard, plantation crops orchard, ornamental fish unit, bee keeping unit in addition to crop demonstration units.

## Salient Achievements

- ❖ Demonstrated management of diamond back moth (DBM) in cabbage through integrated approach, which was adopted in more than 800 ha by about 640 farmers.
- ❖ Horizontal expansion of blast resistant ML-365 finger millet variety and thereby increased the productivity and production.
- ❖ Management of Yellow Mosaic Virus in Pole bean through Integrated Approach were demonstrated and up-scaled among 1080 farmers in the district.
- ❖ Productivity enhancement of crops through soil health management practices.
- ❖ More than 2400 farmers use eco-friendly practice for fall army worm management in maize and about 1900 farmers use wota-T traps, blue and yellow sticky traps for vegetables in an area of 671 ha in the district.
- ❖ Upliftment of more than 2000 dairy farmers through National disease control campaign and Animal health camps.
- ❖ Three Bee keeping units, 35 vermicompost production units, 12 coconut climbing enterprise were established under ARYA programme with an average monthly income of Rs.8000 to 26000 for rural youth.
- ❖ Enhanced income of farmers, farm women and rural youth through capacity building programmes on Integrated crop management, Integrated pest and disease management, Integrated nutrient management, seed production activities, animal health camps, soil health camps, Human health camps, and diagnostic field visits.

**Bagged  
National Best Krishi  
Vigyan Kendra  
Award 2014**



**QR codes on inputs – cheap and affordable technology:** Act as quick reference guide to farmers, facilitates self learning, resource optimization, replicable model to other agencies, awareness creation on the use through capacity development programmes



**हर कदम, हर उभार  
किसानों का हमसफर  
भारतीय कृषि अनुसंधान परिषद**  
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