

समृद्धि

इकलवुरीवेवुी

75
Azadi Ka
Amrit Mahotsav

ICAR-ATARI Bengaluru NEWSLETTER



July to September, 2021

Volume - 2 : Issue - 3



*Let us bring
Sustainability*

The National Mission for Sustainable Agriculture (NMSA) refers sustainable agriculture by adopting appropriate adoption and mitigation strategies for ensuring food security, enhancing livelihood opportunities. Under this mission, absorption of improved technology and best practices, creation of infrastructural and institutional framework be adopted. Sustainable offers an alternate to both high cost productivity oriented Green revolution and low cost, low productivity prone traditional cultivation. Sustainable agriculture depends on crop rotation, animal manure, off farm organic wastes, mechanical cultivation, mineral bearing rocks biological pest controls to maintain soil fertility, to supply plant nutrients and to control insects, weeds and other pests. The holistic sustainable agriculture involves exploiting fully the integration of tree - crop- animal breeding, aqua culture and their complementarity in terms of productivity and maintaining soil fertility

World commission on Environment and Development defines sustainable development as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable development emphasizes on satisfying the needs of poor and the constraints of the environment in meeting the present and future needs. Over 150 million hectares (45% of geographical area) are affected with soil erosion, 69 million hectares is in critical situation and 93.69 million hectares have become seriously degraded. Over irrigation has water logged more than 6 million hectares and damagingly salinized more than 7.16 million hectares of farmlands and 6.6 million hectares of wasteland has emerged due to mismanagement of land resource. I appeal all my KVK partners to take into account the sustainability as the mantra of and guiding factor for planning our technology interventions programmes. It is the need of the hour to design our technology inventories with the sustainable technology inventories I take this opportunity to congratulate our award winning KVK-Kalaburagi and farmer Sh. Sharanabasapa Patil.

(V.Venkatasubramanian)

KVK Farmers participated in live telecast of Hon'ble Prime Minister

KVKs of ICAR-ATARI, Zone-XI actively took part in the programme of Virtual Interaction with Hon'ble PM Shri Narendra Modi on 28 September, 2021. A total of 2959 farmers viewed the telecast programme at their respective KVKs. On the occasion, the Prime Minister, Shri Narendra Modi dedicated 35 crop varieties having special traits and the newly established campus of the National Institute of Biotic Stress Management, Raipur to the Nation. The Prime Minister also presented the Green Campus Award to Agricultural Universities. He interacted with innovative farmers, appreciated their innovative methods and addressed the gathering



Contd.....2



भाकनुप - कृषि प्रौद्योगिकी अनुप्रयोग अनुसंधान संस्थान
ICAR-Agricultural Technology Application Research Institute
Zone-XI, Hebbal, Bengaluru, Phone: 08023510616; Email: atari.bengaluru@icar.gov.in

KVK Farmers participated in live telecast of Hon'ble Prime Minister (Continued from Page: 1)

Addressing the farmers, the Prime Minister said in the last 6-7 years, science and technology has been used on a priority basis to solve the challenges related to agriculture. Our focus is very high on more nutritious seeds, adaptation to new conditions, especially in changing climates, said the Prime Minister.

The Prime Minister recalled the massive locust attack in various states last year, in the midst of the Corona pandemic. India had tackled this attack by making a lot of efforts, saving farmers from incurring too much damage, he said.

The Prime Minister stressed that whenever farmers and agriculture get a safety net, their growth becomes rapid. He informed that 11 crore Soil Health Cards were issued for the protection of the land. The Prime Minister listed the farmer-friendly initiatives of the Government such as campaigns to complete about 100 pending irrigation projects for providing water security to the farmers, providing new varieties of seeds to farmers to protect crops from diseases thus getting a higher yield. He added that along with increasing the MSP, the procurement process was also improved so that more and more farmers can get the benefit. More than 430 lakh metric tonnes of wheat has been procured in the Rabi season and farmers have been paid more than Rs.85,000 crore. Wheat procurement centres were increased more than three times during the pandemic.

The Prime Minister said by connecting farmers with technology, we have made it easier for them to get help from banks. Today farmers are getting weather information in a better way. Recently, more than 2 crore farmers have been given Kisan Credit Cards.

The Prime Minister remarked that due to climate change, new types of pests, new diseases, epidemics are emerging, because of this, there is a big threat to the health of humans and livestock and crops are also being affected. Intensive continued research on these aspects is necessary. He remarked that when science, government and society work together, results will be better. Such an alliance of farmers and scientists will strengthen the country in dealing with new challenges.

The Prime Minister said efforts are being made to take the farmer out of the crop-based income system and encourage them for value-addition and other farming options. He stressed the need to further develop millets and other grains with support from science and research. He said that the purpose is that they can be grown in different parts of the country according to the local needs. He asked people to be prepared to use the opportunities provided by the UN declaring the coming year as the International Year of Millets.

The Prime Minister said along with our ancient farming traditions, marching towards the future is equally important. He said modern technology and new farming tools are at the core of future farming.



KVK Kozhikode



KVK Chitradurga



KVK Udupi

District Agricultural Meteorological units under KVKs

Weather is one of the most important factors affecting agricultural production. The increase in climatic variability and associated extreme weather conditions such as erratic rainfall distribution, abrupt change in day and night temperatures during crop season and sudden outbreaks in pest disease population are throwing challenges to farmers. In this connection, 16 select Krishi Vigyan Kendras of ATARI, Bengaluru under the Gramin Krishi Mausam Sewa (GKMS) scheme of IMD are providing block level agro advisories to the farmers.

During July to September 2021, a total of 1109 agro advisories were generated and disseminated to 1,53,009 farmers through registered WhatsApp groups in 16 districts. In addition, DAMU KVKs have conducted 60 on-campus and off-campus farmer awareness programmes on the importance of weather-based farming, use of various weather-based mobile applications like Meghdoot, Damini, Mausam, how to utilize the AAS Bulletins in the planning of various agricultural operations and also developed 13 shortvideos on weather based agro advisories to farmers and disseminated through different social media. Besides, 32 newspaper articles and 2 folders were published by these DAMU KVKs.



Hon'ble MOS for Agriculture and FW Ms. Shobha Karandlaje inaugurated the campaign on Nutri garden and Tree plantation

The Nutri-cereals Multi-stake holder's Mega convention and Poshan Vatika and Tree Plantation Campaign event for International Year of Millets 2023 was organized at ICAR-Indian Institute of Millets Research, Hyderabad on 17th September, 2021. Shri Narendra Singh Tomar Hon'ble Minister of Agriculture and Farmers' Welfare, Govt. of India inaugurated the programme which was webcasted live at 48 Krishi Vigyan Kendras of ATARI Bengaluru for the benefit of the local farmers, researchers and policy makers. Total five MPs, four MLAs, 2724 girls and 4158 farmers participated during which 15758 plants and 6287 packets of vegetable seeds were distributed to farmers.



Hon'ble Union Minister of State for Agriculture and Farmers' Welfare Ms. Shobha Karandlaje inaugurated the programme by planting Jack fruit plants and distributing sapling of fruit plants to the students and farmers to mark the launch of campaign to promote nutrigarden and tree plantation at KVK Udupi.



The Union Minister stated that based on the proposal from India, United Nations has agreed to observe 2023 as "International year of Millets" and in future millets will be recognized on a global scale. India was well known for its millet-growing heritage. The millets seeds recovered from Harappan sites suggest that the crop played an important role in our food habits, but the growth had slowed down due to various reasons. During green revolution, millet farmers were encouraged to grow paddy and wheat crops. Thus, in Karnataka, land under millet cultivation reduced from 8 lakh hectares to 3.50 lakh hectares. She cited an example of Rajasthan, which despite having desert land boasted of highest millets cultivation

The Union Minister for State in her inaugural address said that, a plan is in the offing to bring a paradigm shift in the farming approach, from water guzzling crops like rice and wheat to millet production and expressed that India aspired to become a global millet exporter by 2023 and also the nation will be witnessed as the hub for the production of organic and quality millets in the world.

The Union Minister for state also emphasized the production and marketing of good quality, pesticide-free millets. To avoid any health issues, there is a need to go back to our old food practices and also added that millet production will be predominantly promoted in the states like Karnataka, Maharashtra, Andhra Pradesh and Tamil Nadu. Hon'ble Minister said that fallow land should be brought under cultivation in order to increase the area under cultivation in India. Despite the fact that the monsoon season is unpredictable, the introduction of weather based crop insurance is assisting farmers to a great extent. She also said that there is a need to establish Agriculture cooperative societies and Farmers Producer organizations (FPOs) in all the village clusters.



KVK Kozhikode



Zonal Workshop 2021 for KVKs of ICAR-ATARI Bengaluru

Dr. Ashok Kumar Singh, Deputy Director General (Agricultural Extension), ICAR inaugurated the Zonal Workshop 2021 for KVKs of Zone - XI comprising of Karnataka, Kerala and Lakshadweep organized by ICAR-ATARI, Bengaluru on 30th July, 2020 with the theme of 'Doubling the Farmers' Income through Strengthening KVKs with Inclusive Technologies and Innovative Approaches'.

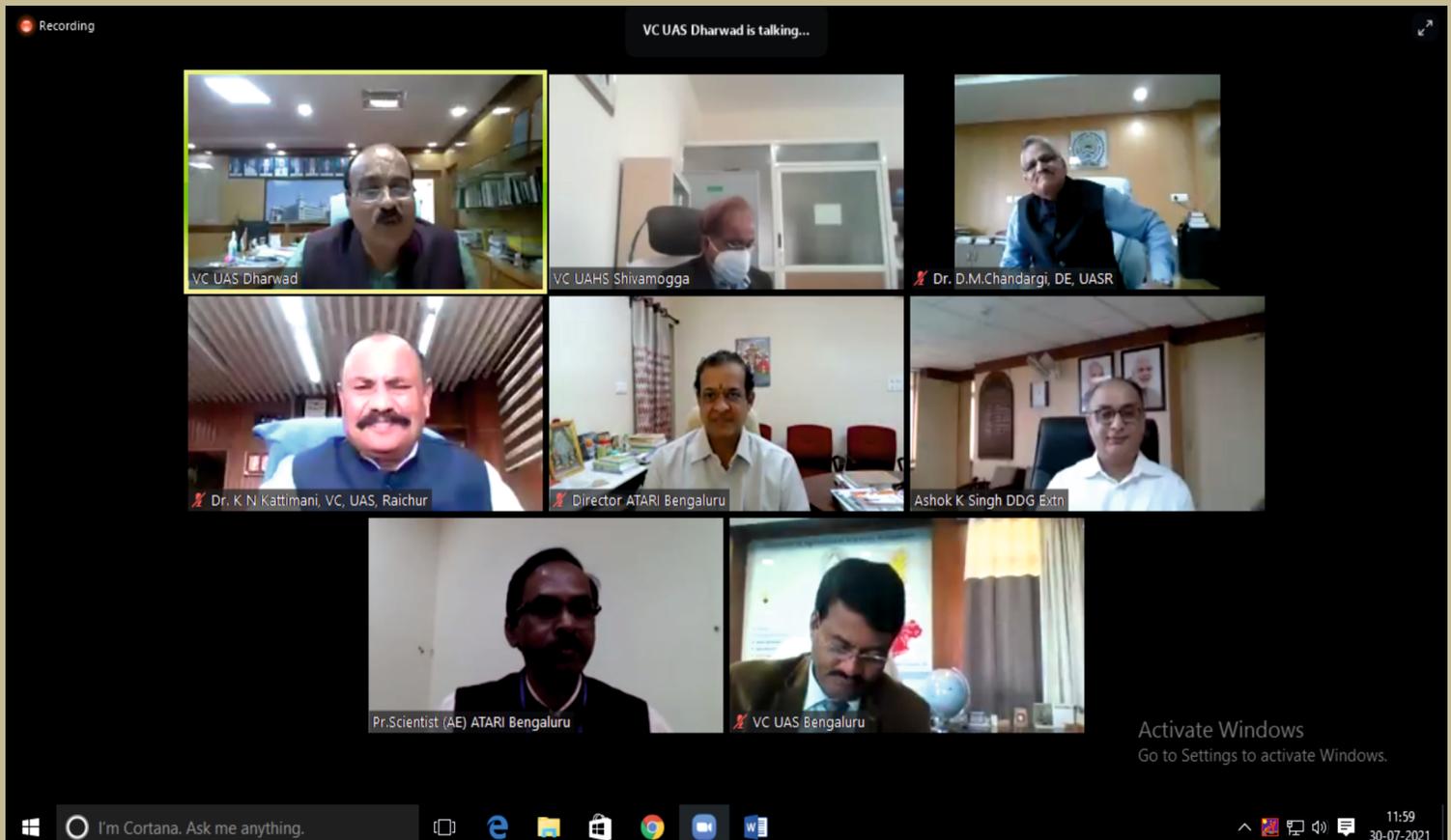


Dr. V. Venkatasubramanian, Director, ICAR-ATARI, Bengaluru gave welcome and briefed about the important activities being done by the KVKs of Zone XI. He emphasized the importance of convergence with the Agricultural Universities, ICAR Institutes and State Development Departments for the benefits of KVKs and farmers.

Dr. A. K. Singh, DDG (AE) requested the research system to make use of the KVK system so that technology development is hastened and the time lag in technology dissemination can be reduced. New varieties and technologies which are to be tested or put to trial can be taken up through KVKs. Research and Extension should go hand in hand and the KVK system should be treated as an important partner in the technology development continuum. Crop and Technology Cafeteria consisting of both newly developed crops/technologies and traditional crops and practices can be established in the KVKs so that farmers are provided comprehensive and holistic information. Similarly, KVKs can demonstrate the technologies related to indigenous breeds as well as improved breeds. Science Focus should be the centrality in all spheres of KVK activities. KVKs must strive to have modern diagnostic facilities and processing and value addition technologies with additional financial support from sponsoring, wherever possible. KVKs can promote use of Kisan Sarathi App among farming community so that farmers' needs and feedback are documented and mainstreamed. KVKs were urged to continue the good work being done in the use of ICT tools and approaches to enhance the reach.

Vice-Chancellors of SAUs in Karnataka and Kerala viz. Dr. M.K.Naik, VC, UAHS, Shivamogga; Dr. S. Rajendra Prasad, VC, UAS, Bengaluru; Dr. M.B.Chetti, VC, UAS, Dharwad; Dr. K.N. Kattimani, VC, UAS, Raichur; Dr. R. Chandra Babu, VC, KAU, Thrissur, Dr. K.M.Indires, VC, UHS, Bagalkot participated and interacted in panel discussion on the above theme under chairmanship of Dr. A. K. Singh, DDG (AE).

Dr. M.J. Chandre Gowda, Principal Scientist (AE), ICAR-ATARI, Bengaluru briefed about the programme. Directors of ICAR Institutes, Heads and scientists from KVKs, and officials from SAUs participated in the Workshop. Dr. D. M. Chandaragi, Director of Extension, UAS, Raichur proposed vote of thanks. During the two days zonal workshop, Directors and Experts from ICAR Institutes presented the recently developed important technologies for the benefit of KVKs.



Lakshadweep Islands Declared Organic: A Game Changing Effort by KVK Lakshadweep

After Sikkim State, Lakshadweep is the second territory in the country to declare whole territory as organic and getting the Large Area organic certification. Ladakh also now in the process of going organic after Lakshadweep. KVK Lakshadweep with the guidance of ICAR-ATARI, Bengaluru, actively involved with administration of Lakshadweep Union Territory in the process of getting Scope Certificate (large area organic farming) from PGS – India, Ministry of Agriculture and Farmer Welfare, Govt. of India for different crops in Kadmat, Andrott, Agatti, Kalpeni, Minicoy, Kavaratti, Kiltan, Amini, Chetlat islands of Lakshadweep Union Territory for the crops grown in the farmers’ fields. The standards given to the farmers by PGS India are in tune with National Standards for Organic Production (NSOP) prescribed under National Programme for Organic Production (NPOP) maintaining uniformity in organic production process and quality of organic products. This will enable the Lakshadweep farmers to obtain global recognition for their produce and get more remuneration/premium prices.



After detailed deliberation with the Lakshadweep Administration and other stakeholders, ICAR-ATARI Bengaluru initiated the process of channelizing technologies of ICAR Institutes located in Karnataka, Kerala and Tamil Nadu. ICAR Institutes under their TSP programmes are extending technological support to KVK Lakshadweep in different commodities

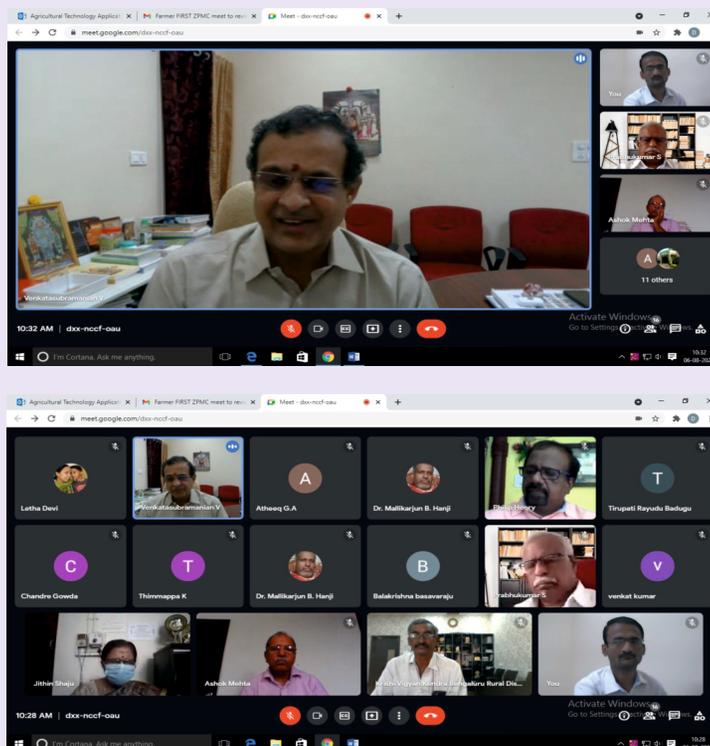
Review cum ZPMC meeting of Farmer FIRST Programme

The ICAR-Agricultural Technology Application Research Institute, Bengaluru organized the Review cum Action Plan Workshop and Zonal Programme Management Committee (ZPMC) meeting of Farmer FIRST Programme on 6th August, 2021.

Dr. V. Venkatasubramanian, Chairman, ZPMC & Director, ICAR-ATARI Bengaluru in his opening remarks, emphasized the need for strengthening of all basic farm components which move beyond production and productivity, and address the issues which are related to post harvest technology, value addition, marketing and strengthening the farmers farming system. Technology Assemblage based on changing needs of farmers should be taken care. Action plan must give attention to integration of technologies with respect to specific FFP objectives. Farmer-scientist interface to be ensured and include climate resilient technologies in strengthening the resource integration of zameen, jal, jungle, janvar and jan in doubling farmer income.

Dr. S. Prabhu Kumar, Former Zonal Project Director (Zone-VIII and Zone-I) and Member PMC applauded the achievements of FFP centres from Zone XI and asked for proper documentation to publicize at national level. Dr. A. K. Mehta, Member ZPMC & Former ADG (AE), ICAR HQ, New Delhi appreciated the work done by FFP centers and suggested that all technological modules should be implemented effectively.

Dr. H. Phillip, Member ZPMC & Former Director of Extension, TNAU, Coimbatore highlighted the importance of documentation with exact data and standardized methodology. He suggested assessing the effectiveness of interventions in terms of gain in knowledge and extent of adoption. Non-adoption must be carefully looked into for reasons and for initiating appropriate activities. Documentation of success stories, both print and video form was insisted. Shri H. Sadananda & Shri Vijayendra Gurunath Nadajoshi, Farmer representatives & Members ZPMC participated and contributed with valuable feedback. Three implementing centers viz. ICAR-CPCRI, Kasaragod (Regional Station, Kayamkulam), ICAR-IIHR, Bengaluru and ICAR-NIANP, Bengaluru presented the progress for the year 2020-21 and action plan 2021-22. The scientists from ATARI Bengaluru were present and interacted during the session.



Banana flour finding a place in Indian Food Recipe

Indian stakeholders are now taking food items prepared with banana flour. Realizing the immense potential and opportunities available with banana flour, workshop on “Banana flour (BaKaHu) value addition and Competition” was organized by ICAR-Krishi Vigyan Kendra, Uttara Kannada in collaboration with Uttara Kannada Organic Federation, Sirsi, Dept. of Horticulture, Sirsi and State Dept. of Agriculture (ATMA) on 11.08.2021 at KVK Uttara Kannada, Karnataka as a part of the “Azadi Ka Amrut Mahotsav” to commemorate 75 Years of India’s Independence. Over 350 participants including farmers, farm women, entrepreneurs, SHGs and other stakeholders participated in the banana workshop from various districts of Karnataka and fifteen persons from different parts of the country, connected through online platform. The integration of banana flour in the day to day food items is silently spreading across the country, including far away places like Mizoram.



Dept. of Horticulture, Sirsi, Dept. of Agriculture, Sirsi (ATMA)



The main attraction of the Workshop was Exhibition cum competition of BaKaHu value added products. Nearly 56 farm women and SHG members Participated, prepared and exhibited more than 175 BaKaHu products in sweet, spicy and daily usable category. The exhibition highlighted the importance of banana powder products diversity and nutritional importance. Products were evaluated as excellent, very good and good categories; accordingly certificates were issued to all the participants. The products such as Bakahu Chocolate, Bakahu Jalebi, Bakahu Cake, Bakahu Sanjivini, Bakahu Kurkure, Bakahu Bhakarwada, Bakahu Khakhra, Bakahu Uppittu, Bakahu Burfi, Bakahu Kare, Bakahu Chakli, Bakahu Idli, Bakahu Mudde etc. were rated as excellent products.



The food, nutrition and energy value of banana flour is widely popularised by the women groups with highly commercial importance and prosperity among the farmers. This event fueled interest among women across Karnataka and country to use the banana flour with the traditional food items.

ICAR – KVK Kalaburagi-1 and It's Farmer BAGGED ICAR National Awards



KVK Kalaburagi bagged the National Best KVK Pandit Deendayal Upadhyay Rashtriya Krishi Vigyan Protshahan Puraskar 2020 (2nd Prize of Rs. 8.00 lakh). Hon'ble Union Minister for Agriculture and Farmers Welfare Shri Narendra Singh Tomar ji presented the awards virtually in the presence of Hon'ble Ministers of State for Agriculture and Farmers Welfare Shri Kailash Choudhary ji and Sushri Shoba Karandlaje, Hon'ble Union Minister for Railways, Communications and IT Shri Ashwini Vaishnav ji, Hon'ble Union Minister for Fisheries, Animal Husbandry and Dairying Shri Parshottam Rupali ji, Dr. Trilochan Mohapatra, Secretary DARE and DG ICAR, and Dr. A.K. Singh, Deputy Director General, ICAR.

The ICAR – KVK Kalaburagi was established during 1999 under UAS, Raichur KVK has demonstration-cum-production units on vermicompost compost, medicinal plants, solar fencing, bee keeping, watershed model, rain water harvesting structure, roof top harvesting model and borewell recharge, training hall, museum, SWTL and plant clinic etc., KVK sends weekly mobile advisories for 35,000 farmers and about 22 whatsapp groups formed for different crops. Besides research papers and publications, the scientists have reached farming community through 66 booklets and 99 popular articles apart from 338 radio talks and 127 TV talks. The Scientists have answered about 1.7 lakh calls in the last five years. Top ten technologies promoted by KVK are given below:

- **Introduction of TS-3R Pigeonpea variety** : The productivity of the district has increased from 600 kg/ha to 710 kg/ha, resulting in an economic gain of about Rs.178 crore per year in the last five years.
- **Pulse Magic, a micro-nutrient mixture** : Technology from UAS Raichur has reached about 10,000 farmers on an area of 25,000 ha, increasing the yield by 2.5 q/ha, helping farmer to get Rs. 15,000/ha as additional income.
- **Nipping in Pigeonpea** : Through various extension activities popularized this technology which reached 20,000 farmers over an area of 50,000 ha. The yield increase was about 15%-18% i.e 2 q/ha with economic benefit of Rs. 12,000/ha.
- **Dairy Units** : KVK Kalaburagi has helped in establishing 80 organized dairy farms, each unit consisting of a minimum of 10 cows and 10 buffaloes. Each farmer is getting a net profit of upto Rs.2.5 lakh a year.



Continued to Page: 8

ICAR – KVK Kalaburagi-1 and It's Farmer BAGGED ICAR National Awards (Continued from Page: 7)

- **Integrated Pest Management Technology in Pigeonpea :** IPM technology was demonstrated in the district over an area of 2000 ha. This resulted in reduction in number of sprays from 8 to 4, enabling farmers to save 50% cost on chemicals. Besides, application of insecticidal dusts were completely stopped resulting in huge environmental benefits .
- **Vermicompost Production :** Capacity development of farmers, rural youth and women, critical inputs support with worms and technical hand-holding resulted in establishment of 650 small scale vermicomposting units, 113 medium scale units and 34 large scale units with capacity to produce an average of 3000 tons/year of vermicompost.
- **Minor Millet Popularization and Marketing :** KVK, Kalaburagi empowered the farmers in production, processing and marketing of millets. Consumer awareness was built through an innovative concept of *dinakkondu siridhanya* (millet a day) through a basket containing five types of millets (each 200 gms). Two farmer entrepreneurs are engaged in processing and marketing the millets.
- **Upgradation of Non-descriptive goats with Sirohi bucks :** Improved breed and healthy goat population has increased from 10,000 to 50,000 in over 150 villages of Kalaburagi.
- **High Density Guava Orchard :** KVK, Kalaburagi provided the technology of High Density Plantation in Guava (L-49 variety), facilitated in getting the quality seedlings from Lucknow and spread the area from 10 ha to 50 ha.
- **Watermelon with Natural Resource Conservation Technology :** The technology of watermelon cultivation during summer with technologies of conserving natural resources is popularized and is spread to an area of 200ha, by which the farmers are getting 100 t/ha as compared to 45-50 t/ha in the conventional approach.



Shri. Sharanabasappa Patil s/o Shri. Peerappa Patil, R/o: Hal Sultanpur, Kalaburagi (Tq. & Dist.) has been awarded with **ICAR-Jagjivan Ram Innovative Farmer Award (Rs.1.00 lakh)**. He is a medium land holder with three hectares of irrigated and one hectare of rainfed land. He is ICAR-KVK, Kalaburagi-1 contact farmer since 15 years.



Shri. Sharanabasappa Patil has invented low cost technologies that are highly affordable and beneficial to farming community which are listed given below:

- Pigeonpea Nipping Equipment
- Low cost Solar Fencing
- Tap irrigation for Horticulture crops
- Low cost timer for irrigation water control
- Low cost Lime grader equipment
- Solar screened system for bird dispersal
- Solar powered Hydroponics
- Animal Scaring Equipment
- Foxtail Millet Dehusking blades
- Low cost bio-gas without weight for creating pressure



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

Agrisearch with a human touch

Published by Dr. V. Venkatasubramanian , Director, ICAR -ATARI, Bengaluru
Editors : Dr.D.V.Kolekar and Dr B.T. Rayudu
Editorial Board: Dr.M.J.Chandre Gowda

Dr.D.V.S.Reddy
Dr.Thimmappa K.
Dr.M.B.Hanji

