



कृषिवानिकी समाचार पत्र



Agroforestry Newsletter

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ANNUAL GROUP MEETING

The Annual Group Meeting of All India Coordinated Research Project on Agroforestry was organized at Birsa Agricultural University, Ranchi from 28-30 July, 2018 with inauguration by Dr. Parvinder Kaushal, Hon'ble Vice Chancellor of the University. In his inaugural speech Dr Kaushal stressed upon transfer of proven technology to the farmer field and impact assessment of these technologies He emphasized the need for integrating livelihood options in the agroforestry models. Dr. S. Bhaskar, ADG (Agron./AF and CC), NRM Division, ICAR, New Delhi highlighted the future thrust areas and asked all the centres to ensure economic security of the farmer and to identify most important technologies for further dissemination. He urged the centres to compile the information on work done on bamboo under the project to showcase our strength on bamboo research and submit projects under National Bamboo Mission. Dr. Anil Kumar, Project Coordinator and Director, ICAR-Central Agroforestry Research Institute, Jhansi presented the Co ordinator Report and the brief summary of the research achievements of the project for the year. Dr. Javed Rizvi, Regional Director of World Agroforestry Centre, South Asia programme highlighted the achievements and future programmes under ICAR -ICRAF workplan for the year. In the beginning, Dr. D. N. Singh, Director of



Research of the host University welcomed the dignitaries and delegates and highlighted the significant achievements of the university. During the occasion four publications on agroforestry published by coordinating centre were released by the dignitaries. During the meeting there were nine technical sessions including inaugural and valedictory sessions and field visit to the experimental area of the Project at BAU, Ranchi. There was an invited talk on Role of Information and Communication technology (ICT) in Agroforestry by Dr. Manoj Khare, from Centre for Development of Advanced Computing, Pune. The best presentation award was presented to coordinating centre CCSHAU, Hisar and BSKVV, Dapoli.

A K Handa
ICAR, CAFRI, Jhansi

Tree plantation and vermicomposting activities at military station Talbehat

As per request of army commander of Talbehat Military station, team of CAFRI scientists (Dr. Anil Kumar, Dr. Rajendra Prasad, Dr. Sudhir Kumar, Dr. Inder Dev, Dr. K.B. Sridhar, Dr. Asha Ram and Sh. Lal Chand) visited Talbehat Military station during July, 2018. Presentations were made on nursery raising, vermicomposting, pit filling techniques,

packages of practices for trees and benefits of agroforestry to the army officers and soldiers. The scientists also visited whole military area for identification of suitable sites for plantation. The two members of the team (Dr. Asha Ram and Sh. Lal Chand) suggested management practices in mango and aonla orchards during their subsequent visits.

Transforming Chhatpur as a model village in Bundelkhand Region through ensuring water availability

Chhatpur

Chhatpur is a village in Babina block of District Jhansi and is located at a distance of 35 km from Jhansi city. Agriculture and dairy are two major sources of their livelihood. Land terrain of this village is mild sloppy (3.5%) and field soils are red, coarse textured and poor in organic carbon with lower water holding capacity. The farmers remained dependent on rains for agriculture as assured irrigation facilities were not available. Under such adverse conditions, despite of their hard work farmers were not getting the optimum yield from their agricultural lands. Even, round year availability of the drinking water was not ensured. During summer season of deficit year, the traditional water reservoirs dried and they had to remain dependent even for daily use water on the water supplied through tankers by state government department. Under such situation, it was difficult to grow the agricultural crops, rear the livestock and thus sustain the livelihood. As a result most of the males were compelled to migrate to big cities in search of livelihood.

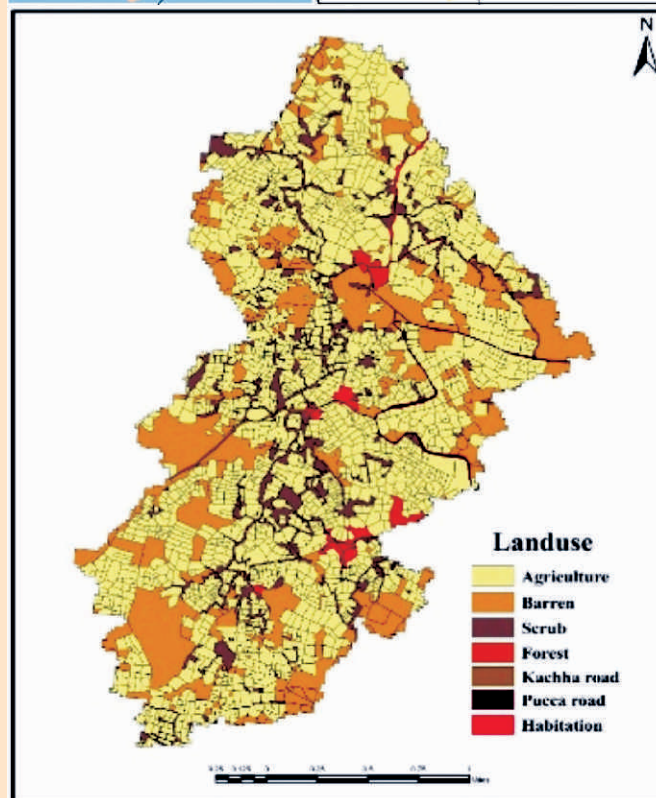
Interventions

ICAR-CAFRI in consortia mode with ICRISAT, Hyderabad, decided to change the fate of the village through the project interventions on enhancing ground water recharge in drought prone Bundelkhand region. Considering acute problem of water in the village, different interventions for rainwater harvesting and conservation were initiated. Three gully plugs and four check dams were constructed in nallah besides field and marginal bunding.



Transformation of the village

Due to soil and water conservation interventions, the ground water recharge and base flow has increased resulting into higher yield from open shallow dug wells, which is only means of irrigation. Before interventions the farmers were able to cultivate one or two crops and due to shortage of irrigation the frequent crop failure was a common feature. The farmers are growing groundnut, sesame, blackgram and



greengram in *kharif*; wheat, chickpea, mustard and barley in *rabi* season. Now, the area and productivity under *kharif* as well as *rabi* crops has increased substantially due to improved yield of open wells for longer duration. Due to natural resource management and agroforestry interventions the farmers are growing crops with no risk even in case of 20-30 % deficit in annual rainfall. The growth of number of livestock per family has also observed due to the availability of drinking water and green fodder and the family members are busy in different farm related activities throughout the year. Thus, the stressful migration have been checked completely. Although, the annual rainfall of the region is ranges between 850-900 mm, but most of the times deficit rainfall is received in the area. The farmers have adopted fruit based agroforestry systems (lime based, guava based) and agri-silvi system (block and bund plantation) in their farm lands. Out of 67 households in Chhatpur village, 43 have planted fruit trees in their homestead as a nutritional security gardens.



Thus, with all amenities, diversified land use, plentiful water resources the village has become a model village where people practice variety of occupations. Village is now self-reliant in terms of services and goods and inhabitants lead happy life. Now the village has become a site of learning also as many famers, Government Officials, visitors from



SAARC, Africa and Europe are commonly visiting this village to understand the learnings.

Ramesh Singh, Kaushal K. Garg, Inder Dev, R K Tewari, R H Rizvi, R P Dwivedi, K B Sridhar, Dhiraj Kumar and Mahender Singh
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वन महोत्सव

6 जुलाई, 2018 को केन्द्रीय कृषिवानिकी अनुसंधान संस्थान, झाँसी द्वारा संस्थान में एवं बड़ागाँव ब्लॉक के ग्राम ईसागाढ़ में वन महोत्सव आयोजित किया गया।

वन महोत्सव का कार्यक्रम निदेशक डा. अनिल कुमार के मार्ग-दर्शन में आयोजित किया गया। वन महोत्सव कार्यक्रम की अध्यक्षता करते हुए संस्थान के प्रधान वैज्ञानिक डा. आर.पी. द्विवेदी ने वृक्षारोपण के महत्व को बताते हुए कृषिवानिकी द्वारा सूखे की स्थिति में किसानों को प्राप्त होने वाले लाभों से अवगत कराया। किसानों के खेत में बाँस, यूकेलिप्टस एवं सागौन का वृक्षारोपण कर वन महोत्सव की शुरुआत की।

कार्यक्रम में विषय विशेषज्ञ (वानिकी) डा. के.बी. श्रीधर ने विभिन्न पेड़ प्रजातियों की विस्तृत जानकारी देते हुए

वैज्ञानिक ढंग से वृक्ष लगाने को रेखांकित किया। तकनीकी अधिकारी श्री राजेश श्रीवास्तव, श्री राम बहादुर एवं श्री प्रिंस उपस्थित रहे। कार्यक्रम के दौरान प्रश्नोत्तरी कार्यक्रम भी रखा गया जिसमें किसान भाईयों ने बढ़-चढ़कर भागीदारी की।

प्रगतिशील किसान श्री अलफ्रेड लॉरेन, श्री सुरेन्द्र सिंह, श्री जीवन, श्री सुरजीत एवं श्री रणधीर सिंह ने अपने विचार व्यक्त किये। वन महोत्सव के दौरान सागौन, यूकेलिप्टस तथा बाँस के पौधे रोपित किये गये। ज्ञात हो कि संस्थान द्वारा प्रत्येक वर्ष इस क्षेत्र के विभिन्न गाँवों में कृषिवानिकी के प्रोत्साहन हेतु कार्यक्रम चलाये जा रहे हैं जिसमें बहुउद्देशीय वृक्षारोपण पर बल दिया जाता है।



आर.पी. द्विवेदी, के.बी. श्रीधर एवं राम बहादुर
भा.कृ.अनु.प.-केन्द्रीय कृषिवानिकी अनुसंधान संस्थान, झाँसी

देशी बेर में कलम बाँधने का प्रशिक्षण

संस्थान द्वारा बबीना ब्लॉक के गाँवों – गणेशगढ़ तथा हस्तिनापुर एवं निवाड़ी ब्लॉक के गढ़कुण्डार में तीन दिवसीय 25–27 जुलाई, 2018 बेर में कलम बाँधने की विधियों की जानकारी देकर ग्रामीण युवकों का कौशल विकास का प्रशिक्षण दिया गया।

यह प्रशिक्षण संस्थान के निदेशक डॉ. अनिल कुमार के मार्ग-दर्शन एवं निर्देशन में आयोजित किया गया। प्रशिक्षण कार्यक्रम के समन्वयक तथा संस्थान के प्रधान वैज्ञानिक (कृषि प्रसार) डॉ. आर.पी. द्विवेदी ने किसानों, कृषक महिलाओं एवं ग्रामीण युवाओं का आह्वान करते हुए कहा कि बुन्देलखण्ड में देशी बेर एवं झरबेरी बहुतायत में उपलब्ध है, जिसको कि आसानी से कलम बाँधकर उन्नतशील प्रजाति में तब्दील किया जा सकता है तथा इससे किसान भाइयों को अधिक आमदनी भी प्राप्त होती है। उन्होंने ग्रामीण युवाओं में कौशल विकास हेतु बढ़-चढ़कर भागीदारी हेतु जागरूक कर इसमें शामिल होने का आह्वान किया। उन्होंने कहा कि जुलाई-अगस्त का मौसम कलम बाँधने के लिए उपयुक्त है, तथा उन्नतशील बेर की किस्में जैसे बनारसी कड़ाका, गोला, सेव इत्यादि की कलम संस्थान में उपलब्ध है।

प्रशिक्षण के दौरान किसानों को कलमी बेर के फायदे इत्यादि के बारे में जानकारी दी गई। बेर में कलम बाँधने के प्रशिक्षण कार्यक्रम का मुख्य उद्देश्य कृषकों को बेर में कलम बाँधने की कौशल का विकास करना तथा कृषकों में देशी बेर को कलमी बनाने हेतु जागरूक करना एवं कृषकों में नई तकनीकी व जानकारियों के बारे में उनके स्वभाव व व्यवहार में सकारात्मक बदलाव लाना है। प्रशिक्षण व्याख्यान के समय बुन्देलखण्ड तथा देश के अन्य क्षेत्रों के सफल किसानों की कलमी बेर द्वारा प्राप्त आमदनी की सफलता की कहानी बतायी गयी। प्रश्नोत्तरी कार्यक्रम के दौरान किसान भाइयों, महिलाओं तथा ग्रामीण युवकों द्वारा बढ़-चढ़कर हिस्सा लिया गया।



तदोपरान्त “करके-सीखो” कार्यक्रम किया गया जिसमें किसान भाई एवं ग्रामीण युवाओं ने स्वयं कलम बाँधना सीखा तथा उन्होंने अपने खेत में देशी बेर व झरबेरी में कलम बाँधी।

प्रशिक्षण कार्यक्रम के सह-संयोजक डा. लाल चन्द ने विषय सम्बन्धी जानकारी प्रदान कर कलम बाँधने की विधियों से प्रशिक्षणार्थियों को अवगत कराया। श्री मुन्ना लाल ने कलम बाँधकर अन्य युवाओं को कलम बाँधना सिखाया। कार्यक्रम में सहयोग हेतु संस्थान के अधिकारी एवं कर्मचारी श्री राजेश श्रीवास्तव, श्री राम बहादुर एवं श्री हेतराम उपस्थित रहे।

प्रशिक्षण कार्यक्रम में 85 कृषकों, ग्रामीण महिलाओं तथा ग्रामीण युवाओं ने हिस्सा लिया। प्रगतिशील कृषक श्री रामकिशन राजपूत, श्री ज्ञान सिंह, श्री रामकुमार, श्री कपिल, श्री यशपाल, श्री धनीराम एवं मो. सलीम ने अपने विचार व्यक्त किये।

ज्ञात हो कि केन्द्रीय कृषिवानिकी अनुसंधान संस्थान, झाँसी द्वारा प्रत्येक वर्ष देशी बेर एवं ऑवले में कलम बाँधने का प्रशिक्षण प्रदान किया जाता है जो कि संस्थान के प्रक्षेत्र एवं गाँवों में आयोजित किया जाता है। इस कार्यक्रम में बुन्देलखण्ड क्षेत्र तथा देश के विभिन्न प्रदेशों के किसान भाई लाभान्वित होकर अधिक आमदनी प्राप्त कर रहे हैं।

डॉ. आर.पी. द्विवेदी, लाल चन्द एवं राम बहादुर
भा.कृ.अनु.प.-केन्द्रीय कृषिवानिकी अनुसंधान संस्थान, झाँसी

First Monthly Death Anniversary of Bharat Ratna Late Sh. Atal Bihari Vajpayee Ji

The ICAR-Central Agroforestry Research Institute, Jhansi (U.P) organized the first monthly death anniversary (16th September, 2018) of Bharat Ratna late Sh. Atal Bihari Vajpayee Ji. On this occasion, Director (I/c) Dr. R.K. Tewari briefed the staffs of the Institute about Bharat Ratna late Sh. Atal Bihari Vajpayee Ji and it was followed by giving tribute to him by reciting the poems composed by him. On this occasion, Dr. Ramesh Singh, Dr. Inder Dev, Dr. Asha Ram, Dr. Rajendra Prasad and Dr. Dhiraj Kumar recited the poems composed by late Sh. Atal Bihari Vajpayee Ji. The programme ended with vote of thanks.

हिन्दी सप्ताह

दिनांक 14 सितम्बर, 2018 को डॉ. अनिल कुमार, निदेशक (कार्यवाहक) की अध्यक्षता में हिन्दी सप्ताह (14-20 सितम्बर, 2018) का शुभारम्भ आई.सी.ए.आर. कुलगीत से किया गया। कार्यक्रम का संचालन करते हुए डॉ. सी.के. बाजपेयी, प्रभारी अधिकारी, राजभाषा ने हिन्दी सप्ताह आयोजन की रूप-रेखा प्रस्तुत की।

कार्यक्रम के आरंभ में डॉ. आर.पी. द्विवेदी, प्रधान वैज्ञानिक द्वारा माननीय कृषि एवं किसान कल्याण मंत्री, भारत सरकार का संदेश एवं भारतीय कृषि अनुसंधान परिषद, के महानिदेशक की अपील पढ़कर सभी को उनके बहुमूल्य विचारों से अवगत कराया

डॉ. अनिल कुमार, निदेशक (कार्यवाहक) ने सभी वैज्ञानिकों एवं अधिकारियों से अपील की कि हिन्दी में अधिक से अधिक पुस्तकें, तकनीकी बुलेटिनों तथा प्रसार बुलेटिनों का प्रकाशन किया जाए जिससे किसान भाई आपके अनुसंधान को पढ़कर उसका भरपूर लाभ उठा सकें। कार्यक्रम की अध्यक्षता करते हुए निदेशक, डॉ. अनिल कुमार ने अपने उद्बोधन में कहा कि भारत सरकार के गजट में इस संस्थान का नाम "क" क्षेत्र में है, इसलिए हम लोगों को अपना प्रशासनिक कार्य शत-प्रतिशत हिन्दी में करना है। उन्होंने समस्त वैज्ञानिकों एवं अधिकारियों से अपील की कि हिन्दी में पत्राचार को बढ़ाने में अपना सहयोग प्रदान करें जिससे राजभाषा विभाग द्वारा दिये गये लक्ष्यों को पूरा किया जा सके।

दिनांक 13.09.2018 को संस्थान की राजभाषा कार्यान्वयन समिति की बैठक संस्थान कार्यवाहक निदेशक डा. अनिल कुमार की अध्यक्षता में सम्पन्न हुई, जिसमें राजभाषा कार्यान्वयन समिति के सदस्य उपस्थित थे। बैठक में सर्वसम्मति से निर्णय लिया गया कि संस्थान में 14-20 सितम्बर, 2018 के मध्य हिन्दी सप्ताह का आयोजन किया जाय तथा हिन्दी को बढ़ावा देने के लिए विभिन्न प्रतियोगिताओं का आयोजन किया जाये। प्रतियोगिताओं को सफल बनाने हेतु निदेशक महोदय द्वारा प्रत्येक प्रतियोगिता के लिए अलग-अलग निर्णायक मण्डल का गठन किया गया। प्रतिभागियों को प्रोत्साहित करने हेतु प्रत्येक प्रतियोगिता के लिए प्रथम, द्वितीय एवं तृतीय पुरस्कारों का भी प्रावधान रखा गया। इसके साथ ही साथ यह भी निर्णय लिया गया कि सरकारी कामकाज में राजभाषा को बढ़ावा देने हेतु प्रशासनिक, तकनीकी एवं वैज्ञानिक वर्ग से जिन अधिकारियों एवं कर्मचारियों द्वारा पिछले एक साल के कार्यकाल में 20,000 या उससे अधिक शब्द हिन्दी में लिखा गया हो उनको प्रथम पुरस्कार रु.



1000/-, द्वितीय पुरस्कार रु. 600/- तथा तृतीय पुरस्कार रु. 300/- दिया जाये। इसके मूल्यांकन के लिए निदेशक महोदय द्वारा एक समिति का गठन किया गया।

दिनांक 20.09.2018 को हिन्दी सप्ताह का समापन निदेशक महोदय की अध्यक्षता में सम्पन्न हुआ। इस अवसर पर प्रतियोगिता में विजयी प्रतिभागियों को पुरस्कार वितरित किये गये। कार्यक्रम की अध्यक्षता करते हुए निदेशक महोदय ने पुरस्कृत प्रतिभागियों को बधाई देते हुए वैज्ञानिकों से अपील की कि वे संस्थान में विकसित तकनीकियों को किसानों तक हिन्दी भाषा में पहुँचाने हेतु और अधिक प्रयास करें।

हिंदी कार्यशाला

जुलाई-सितम्बर 2018, तिमाही की अवधि में संस्थान पर राजभाषा हिंदी की तिमाही कार्यशाला दिनांक 14.9.2018 डा. अनिल कुमार, कार्यवाहक निदेशक की अध्यक्षता में सम्पन्न हुई। कार्यशाला के मुख्य वक्ता संस्थान के मुख्य तकनीकी अधिकारी डा. चन्द्रेश कुमार बाजपेयी थे। व्याख्यान "भारतवर्ष में हिंदी भाषा की वर्तमान स्थिति" विषय पर आधारित था। चर्चा के दौरान शोध-पत्र एवं प्रसार बुलेटिन लेखन में प्रचलित शब्दावली, जोकि जन-सामान्य की समझ के लिए सरल हो, ऐसे सरल शब्दों के प्रयोग पर बल दिया गया। कार्यशाला में संस्थान के अन्य वैज्ञानिकों द्वारा संस्थान के संदर्भ में कृषिवानिकी की विभिन्न पहलुओं पर गहन चर्चा की गयी और यह चर्चा पूरी तरह से हिंदी में सम्पन्न हुई। प्रभारी अधिकारी राजभाषा, डॉ. सी.के. बाजपेयी, ने संस्थान के सभी कार्मिकों से अनुरोध किया कि तिमाही के दौरान आयोजित होने वाली कार्यशाला में सभी लोग अवश्य भाग लें। कार्यशाला में संस्थान के समस्त वैज्ञानिक, अधिकारी तथा कर्मचारी उपस्थित थे।

ICAR-ICRAF Work Plan

Under ICAR-ICRAF work plan ICRAF-Odisha staff (5th -7th September, 2018) and officials from AgriFose2030 (Sweden) and ICRAF, New Delhi (18th & 19th September, 2018) visited the Institute.

MEERA GAON-MERA GARAUV (MGMG)

The plantation drive was carried out by Scientists of ICAR-CAFRI Jhansi in the selected MGMT villages. The scientists also interacted and created awareness about Agroforestry among the farmers. Interface meetings were organized with the farmers of MGMT villages during 2018. Total 7563 plants were distributed to the farmers till December, 2018. The list of clusters (5) and villages (16) are as below:

1. Hastinapur cluster (3 villages- Hastinapur, Karari, Rund Karari). U.P.
2. Domagor cluster (3 villages-Domagor, Dhikoli, Nayakhers). U.P.
3. Ganeshgarh cluster (3 villages- Ganeshgarh, Devgarh, Ramgarh). U.P.
4. Parasai cluster (3 villages- Parasai, Chhatpur, Bachhauni) U.P.
5. Garhkundar cluster (4 villages- Garhkundar, Dabar, Sakuli, Shivrampur) M.P.

Swachh Bharat Abhiyan

- On eve of Mahatma Gandhi Birth Anniversary (2nd October) awareness programmes about or cleanliness were organized. A debate on Swachh Bharat Abhiyan was also organized in which all the staff members participated. On this occasion, Swachhata Karmi (7 no's) of the institute were given gloves, face mask and apron.
- Various awareness programmes on cleanliness were organized during 17th to 30th October, 2018. During this period, awareness campaign in eight villages were organized besides various activities eg. Slogan, eloquence competitions etc. at the Institute.
- A fortnight long *Swachhata Pakhwada* (16-31 December, 2018) was organized at ICAR-CAFRI, Jhansi. Cleanliness drive programmes have also been organized in the Institute campus as well as in different villages. The events were widely covered in various newspaper.



महिला किसान दिवस

केन्द्रीय कृषिवानिकी अनुसंधान संस्थान द्वारा दिनांक 15 अक्टूबर, 2018 को संस्थान में महिला किसान दिवस का आयोजन किया गया। कार्यक्रम के मुख्य अतिथि केन्द्रीय कृषिवानिकी अनुसंधान संस्थान के संस्थान प्रबंधन समिति के सदस्य श्री अशोक राजपूत रहे। कार्यक्रम में विशय विशेषज्ञों डा. रमेश सिंह, डा. सुधीर कुमार, डा. वीरेश ने कृषिवानिकी, भूमि एवं जल संरक्षण, उद्यानिकी एवं पौध सुरक्षा के बारे में विस्तृत जानकारी दी। कार्यक्रम में झॉसी जनपद के परवई, करारी एवं रून्द करारी गाँव से 35 महिला कृषक उपस्थित रहीं।



Commemorating 150th birth anniversary of Mahatma Gandhi from 2nd October, 2018 to 2nd October, 2019

- A quiz programme on Mahatma Gandhi was organized by the ICAR-CAFRI, Jhansi on 14th November, 2018 at 03:00 PM in the institute auditorium. Dr. Anil Kumar, Director (A) briefed the audience about the programme, it was followed by ICAR song and a patriotic song sung by the Scientist. Questions on life of Mahatma Gandhi were asked and all staff members participated in the programme. To make this quiz programme more interesting, it included Visuals, Videos, Songs etc. Token prizes were distributed to all participants and the programme was appreciated by one and all.
- A field demonstration on “Farm waste management through composting” was organized by the ICAR-CAFRI, Jhansi on 01.12.2018 at 11:00 AM at the Institute farm. Dr. Anil Kumar, Director, CAFRI briefed the audience about the programme. Three composting demonstrations are being conducted by scientists (Dr. Asha Ram and Sh. Lalchand). These scientists explained about the preparation of farm residual composting, vermicomposting and nursery waste management and its role in maintaining farm cleanliness. All staff members participated in the programme.

World Soil Day



World Soil Day cum Farmers' workshop on 05th December, 2018 was organized at ATIC conference hall of the institute. The chief guest of the programme was Smt. M. Arun Mozhi, IAS Joint Magistrate, Jhansi. On the occasion, an exhibition on importance of soil health cards and agroforestry technologies were also organized. The programme was attended by 265 participants of which 110 farmers from 7 districts of Bundelkhand (Jhansi, Jalaun, Lalitpur, Mahoba, Hamirpur, Banda and Chitrakut), 55 students of RLBCAU, Jhansi and all staff members of CAFRI, Jhansi, NGOs people, and state line departments.

Kisan Diwas and Swacchata Pakhwada



On the occasion of Birth day of Former Prime Minister Late Sh. Chaudhary Charan, Singh Kisan Diwas and Swacchata Pakhwad was jointly organized by the ICAR-CAFRI, Jhansi and ICAR-IISWC regional centre, Datia at Hastinapur village on 23.12.2018. The programme was conducted to create awareness to the farmers regarding recycling and efficient utilization of farm waste. Scientists also emphasized on the adaptation of Agroforestry systems and its role in Doubling Farmer Income. All categories of farmers including youths and farm women were participated (42) in the programme.

Institute Management Committee

The 19th IMC meeting was held on 27th November, 2018 at ICAR-CAFRI, Jhansi under the chairmanship of Dr. Anil Kumar, Director, ICAR-CAFRI, Jhansi. Chairman IMC appraised to the house about the Human Resource Development, Education, nomination of Scientists, Technical and Administrative staff to Training/Workshop organized by the different scientific organization for their exposure and to update their knowledge. The Chairman also appraised about the training imparted to the farmers sponsored by the State Govt. After the discussion, the Committee confirmed the proceedings of 18th IMC. The Committee, thereafter, discussed the new proposals.

Participation in International Training

Dr. Asha Ram, Scientist (Agronomy), Dr. Dhiraj Kumar, Scientist (Soil Science) and Dr. Veeresh Kumar, Scientist (Entomology) participated in 5 days International Training on “Introduction course in meta-analysis” at the World Agroforestry Centre (ICRAF) in Bogor, Indonesia during August 27-31, 2018. The Agriculture for Food Security 2030 - AgriFoSe2030 programme, a Swedish initiative conducted the training for 30 young Asian researchers.

Participation in Trainings

Duration	Event	Venue	Participants
05th -10th September, 2018	SAARC Regional Training on "Integrated Nutrient Management for Improving Soil Health and Crop Productivity"	ICAR-IISS, Bhopal (MP)	Dr. Dhiraj Kumar, Scientist
14th -20th September, 2018	Capacity building and skill upgradation programme on "Farm Management"	ICAR-IIFSR, Modipuram, Meerut (U.P.)	Sh. Sunil Kumar, Chief Tech. Officer
11th September - 1st October, 2018	Winter school on Maintenance breeding and assured quality seed production in dual purpose crops and grasses	ICAR-IGFRI, Jhansi (UP)	Dr. Veeresh Kumar, Scientist
26th to 28th September, 2018	Training on "Administrative & Financial Rules"	ICAR-IIPR, Kanpur (UP)	Sh. S B Sharma, AF&AO Sh. Birendra Singh, AAO and Sh. J.J. Singh, Assistant
24th -29th September, 2018	Training programme entitled "Innovative practices in extension research and evaluation"	ICAR-NAARM, Hyderabad (Telangana)	Dr. R P Dwivedi, Pr. Scientist

Participation in Workshop/Conference/Meetings/Symposia

Duration	Event	Venue	Participants
28th -30th July, 2018	Annual Group Meeting of AICRP-Agroforestry	Birsa Agriculture University, Ranchi (Jharkhand)	Dr. Anil Kumar, Dr. Ram Newaj, Dr. Sudhir Kumar, Dr. A K Handa, Dr. R P Dwivedi, Dr. Mahendra Singh, Dr. Naresh Kumar, Dr. Asha Ram, Dr. C K Bajpai & Sh. S B Sharma
13th September, 2018	First meeting of State Level technical Committee of UP State Agroforestry Mission	Lucknow (UP)	Dr. A K Handa
18th -19th September, 2018	National Conference on Agriculture for Rabi campaign 2018 as Subject Matter specialist for Agroforestry, organized by DAC&FW, Ministry of Agriculture and Farmers Welfare, New Delhi	NASC Complex, New Delhi	Dr. A K Handa
11th -12th October, 2018	National workshop on productivity enhancement and post-harvest management of Bamboo	Indore (MP)	Dr. K B Sridhar

Duration	Event	Venue	Participants
16th October, 2018	World Food Day Function along with Agri-startup & Entrepreneurship Conclave	NASC Complex, Pusa, New Delhi	Dr. R P Dwivedi
20th -22nd October, 2018	2nd International Conference on "Advances in Agricultural, Biological and Applied Sciences for Sustainable Future (ABAS-2018)	Sardar Patel Auditorium, Swami Vivekanand Subharti University, Meerut (U.P.)	Dr. Naresh Kumar
26th -28th October, 2018	Krishi Kumbh Exhibition	ICAR-IISR, Lucknow(UP)	Dr. R P Dwivedi
15th -17th November, 2018	9th NEE Congress-2018 Climate Smart Agricultural technologies: Innovations and interventions Organized by Society of Extension Education, Agra, CAU, Imphal, ICAR-RC for NEH Region, Umiam, Meghalaya and ICAR-NRC for Orchid, Pakyong, Sikkim.	Pakyong (Sikkim)	Dr. R P Dwivedi & Dr. Mahendra Singh
16th -18th November, 2018	39th Annual Conference & National Symposium on Plant and Soil Health Management: New Challenges and Opportunities	ICAR-IIPR, Kanpur (UP)	Dr. Sudhir Kumar
27th November, 2018	Multi-stake holder consultation on harnessing potential of trees outside forest to meet India's NDC Commitment, organized by TERI	New Delhi	Dr. A K Handa
2nd -5th December, 2018	4th International Plant Physiology Congress-2018	Lucknow (UP)	Dr. Badre Alam
4th -5th December, 2018	Nodal Officer's Workshop on KRISHI	NASC, New Delhi	Dr. R H Rizvi
5th - 7th December, 2018	National Symposium on "Entomology 2018: Advances and Challenges"	PJTSAU, Hyderabad (Telangana)	Dr. Veeresh Kumar
13th -14th December, 2018	National symposium on 'Forage and livestock based technological innovations for doubling farmers' income'	UAS, Dharwad (Karnataka)	Dr. Inder Dev, Dr. Naresh Kumar & Dr. Asha Ram
27th December, 2018	First meeting of the committee to include agroforestry under Prime Minister Crop Insurance Scheme	Krishi Bhavan, New Delhi	Dr. A K Handa

Transformation of Parasai into Climate Smart Village through Rejuvenation of Haveli cultivation in drought prone Bundelkhand region

Background

Parasai-Sindh selected in 2011 is part of Sindh river catchment and located at 25 ° 23' 47.6" - 25 ° 27' 05.1" N and 78° 20' 06.5" - 78° 22' 33.0" E, and about 270-315 m above mean sea level in Jhansi district of Uttar Pradesh. Watershed spreads over 1246 ha area in three villages of Parasai, Chhatpur and Bachhauni. The watershed has independent hydrology. Its 90% area is under crops, while rest in the form of habitation, forest (scrub) and water channels. The Parasai village is on the upper most reach of the Parasai-Sindh watershed. Villagers of this village were doing the traditional agriculture due to the lack of irrigation facilities, lack of awareness about climate resilient knowledge system, non-availability of seeds of climate resilient crops/verities etc. Although, the livestock rearing is one of the important components for the support of their livelihood, but during summer season farmers have to leave their cattle in the open (unattended- locally known as *anna pratha*) due to shortage of drinking water and green fodder. The situations were worst during the drought periods especially during summer seasons when all the wells, hand pumps and other water reservoirs dried up. Although, farmers were growing different crops, but crop failure frequency was higher due to non-availability of irrigation water, below-average rainfall and extreme climatic conditions. Under such adverse situations, the villagers were facing the difficulties to support their livelihood and productive males were forced to migrate to big cities in search of daily wages or other petty jobs to support the livelihood. During the course of planning, it was learnt and emphasized by watershed dwellers that until unless water resource is developed, no other developmental activities will succeed. Therefore, soil & water conservation activities (c/o checkdams, community/farm ponds, marginal and field bunding, field drainage structures, renovation of abandoned haveli structures etc.) were initiated as a tool to facilitate speedy adoption of agroforestry land use as first priority. Various watershed interventions were initiated in consortia mode by ICAR-CAFRI, Jhansi and International Crop Research Institute for Semi-Arid Tropics (ICRISAT) in 2011-12 and were completed by 2016-17 in a move to make this village a climate resilient village.

Climate resilience through cost effective water rejuvenation of traditional rainwater harvesting system (Haveli cultivation) in Parasai village



Shallow open dug wells are the only means of irrigation and drinking in rainfed eco-system of Bundelkhand region. These wells are located in unconfined aquifer lying over massif granite rock. In general, discharge of these wells is very low. Rainwater harvesting during rainy season in ephemeral streams at appropriate interval is the only option to enhance the recharge of these wells. In turn, it improves yield of wells for sustainable crop cultivation. Haveli system of rainwater harvesting is the age old practice in Bundelkhand region to recharge the weathered zone. ICAR-CAFRI, Jhansi in consortia with ICRISAT, Hyderabad selected Parasai-Sindh



watershed in Babina block of Jhansi district to manage its natural resources through agroforestry in conjunction with engineering measures. About 100 years back, rainwater harvesting on Haveli principle was done by community near village Parasai. Almost all the wells situated in Parasai village used to get recharged from this haveli. In early eighty's its outlet was clogged through debris and earthen embankment breached out in a length of 20 m. Community made several efforts to make it functional but did not succeed in absence of technical guidance. In 2012, the community requested ICAR-CAFRI, Jhansi for repair and maintenance of Haveli system. Team of scientist visited the site and suitable cost-effective design

of outlet was prepared and it was constructed in December, 2012. Area of submergence and volume were found 8.79 ha and 73000 m³, respectively. The cost of rainwater harvesting in *haveli* is about ₹ 4.53 m⁻³ of storage. It was filled up by mid-July 2013 and all the wells of village Parasai got fully recharged to support drinking water during summer season. The system is very common in Bundelkhand therefore the experience gained from this will help this region in getting the benefits of rainwater harvesting. Renovated *haveli* with due support from series of checkdams in ephemeral streams resulted in one lakh m³ surface water storage besides saturation of weathered zone in the watershed.

Pre and Post impact of haveli rejuvenation implementation scenario

Particulars	Before intervention	Post intervention
Increase in Ground Water Table	 <p>more than 80% wells were dry during summer season</p>	 <p>More than 95% well were wet during summer</p>
Surface water availability for lifting	July - August	Up to 500 distance on both side of water course round the year in case of normal rainfall year
Cropping Pattern - Crops		
<i>Rabi</i>	Wheat, Chickpea, Mustard	Wheat, Chickpea, Barley, mustard and vegetables
<i>Kharif</i>	Black gram, green gram, sesame, Sorghum.	Ground nut, Chikpea, soyabean, Urd, Moong.
<i>Zaid</i>	Fallow	Vegetables, Forage in fields and Bunds
Changes in vegetation	<i>Azadirachta indica, Butea monosperma, Terminalia arjuna, Anogeissus pendula, Madhuca longifolia, Holoptelia integrifolia</i> and <i>Ziziphus</i>	<i>Tectona grandis, Aegle marmelos, Emblica officinalis, Moringa olerifera, Dalbergia sissoo, Syzizium cumini, Punica granatum, Annona squamosa, Carissa carandas, Eucalyptus tereticornis, Acacia senegal.</i>
Fodder Resources	Berseem	M.P chari, Guinea, Napier hybrid

Haveli rejuvenation in Parasai-Sindh village has led to transformation of the Parasai village of Babina block of Jhansi district into a climate smart village as the farmers are now able to decide the crop/varieties as per their choice as there is no dearth of water even in case of 20-30% deficit in

annual rainfall. The farmers have successfully transformed their traditional and climate risky agriculture to Climate Smart Agriculture (CSA). Further, the rejuvenation of haveli system has changed thought process of the watershed dwellers about dealing with hazards of climate change.



Haveli renovation in Parasai-Sindh watershed; Masonry drop spillway (rectangular weir) and embankment along with corewall was constructed in 50 m breached area. Water harvested in Haveli during the monsoon period.

Ramesh Singh, Kaushal K Garg, Inder Dev, R K Tewari, R H Rizvi, R P Dwivedi, K B Sridhar, Dhiraj Kumar and Mahender Singh

ICAR-Central Agroforestry Research Institute, Jhansi, 284 003 (U.P) India

NEW STAFF

1. Sh. Hirdayesh Anuragi, Scientist (Genetics & Plant Breeding) joined the Institute on 6th October, 2018.
2. Sh. Sukumar Taria, Scientist (Plant Physiology) joined the Institute on 8th October, 2018.

Swachh Bharat Abhiyan



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