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From the Director's Desk



IISWC endeavours are focussed and directed towards conservation and management of natural resources, especially soil and water for crop production through various ways and means. A number of scientific and extension programs including technical lectures, awareness camps, training and workshops have been organised on capacity building besides research programme on Soil and Water Conservation and NRM. The Institute is in the constant pursuit of establishing linkages with other R&D organisations to bring a convergence on soil and water conservation, improve livelihoods and food security. A MoU was signed with CCSU, Meerut to promote an inter-institutional collaborative research, and academic engagements in areas of common interest. The MoU aims at bringing a wide spectrum of research and scientific collaboration and expected to benefit the students, scholars and faculty members.

During the month a number of farmer outreach programmes viz. *Kisan Bhagidari Prathmikta Hamari (KBPH)*; *Annadata Deva Bhawa (ADB)* etc. were successfully organised at Institute Head Quarters Dehradun and its Research Centres under *Azadi Ka Amrit Mahotsav*. Also, the flagship regular training program, the 123rd four month "Certificate Course on Soil & Water Conservation & Watershed Management" got underway on 22nd April 2022.

During this period, the institute celebrated its 69th Foundation Day on 07th April, 2022 with great fervour. The foundation day gave us a chance to cherish the achievements and motivated to rededicate ourselves to the renewed vision. Fondly remembering the contributions of the retired employees, and the retired staff members of the Institute, they were invited and participated in large numbers and involvements in various events of the celebrations. The event was celebrated, on full scale, after a gap of two years for the reason of restrictions on account of Covid-19 pandemic. Best Research Centre and worker awards for the year 2019-20 and 2020-21 were also distributed to the winners. I congratulate all the awardees and hope this will encourage and inspire other staff members to deliver their best and vie for laurels next year.

I wish that the information included in the newsletter would be helpful for the stakeholders to peek in to the wide range of activities being pursued at the institute. I thank all the staff members associated with the PME Cell for bringing out this newsletter.

M. Madhu

New Initiatives

➤ MoU inked with Chaudhary Charan Singh University (CCSU) Meerut

ICAR-IISWC, Dehradun has signed a MoU with Chaudhary Charan Singh University (CCSU) Meerut on 15th April, 2022 to promote an inter-institutional collaborative research, and academic engagements in areas of common causes. Dr M Madhu, Director in presence of Dr M Muruganandam, Principal Scientist and OIC (PME Cell), Dr Raman Jeet Singh and Dr Sadikul Islam, Scientists on behalf of the IISWC, Dehradun and Prof. (Dr) Sangeeta Shukla, Vice Chancellor in presence of Prof. Y. Vimala, Pro-VC and Chairperson, IQAC, Sh Dharendra Kumar, Registrar, Prof. Beer Pal Singh, Proctor, Prof. Bindu Sharma, Prof. SS Lal, Prof. Neelu Jain Gupta, Prof. Sanjay Bharadwaj, Prof. Ashok Kumar Chaubey, Prof. Dushyant Kumar Chauhan of the CCSU signed the MoU. Dr Madhu emphasized that the MoU is aimed to stimulate and facilitate collaboration and promote mutually interested common programs that help advance the interests of the scientific studies and societal development.

National and international level collaborative programs and engagements for enhanced outreach, and awareness on technological outcomes and success stories would be aimed through the MoU. Dr Sangeeta Shukla called for the active collaborations in diverse fields of science and technologies, especially between the Faculty of Science and Faculty of Agriculture of the CCSU and the IISWC. She was keen to bring in collaborative projects and programs at both the campuses.



To begin with, she called for expert opinion from the IISWC of on the potentials of rainwater harvesting and soil conservation measures suitable for the campus and research farms of the CCSU.

Dr Muruganandam informed that the MoU is in line with the growing need for improving collaborations and linkages between research organizations and academia in order to strengthen quality education, research and production of quality human resource pool in various spheres of science and technology. As a mark of the beginning of the MoU, he presented an invited seminar on the “science of rivers and their management” to the scholars and faculty members of the CCSU. Dr Vimala shared the views on the needs of the collaborations in current scenarios of education especially in light of new education polices and growing perspectives of the knowledge spectrum. Dr Bindu Sharma facilitated the discussions during the MoU at the CCSU. Dr Shailendra S Gaurav, Dean Agriculture Sciences and M K Gupta, Dean Faculty of Sciences of the CCSU deliberated in the discussions



Important events

> Institute foundation day celebrated

ICAR-IISWC Dehradun celebrated its 69th Foundation Day on 07th April, 2022. Shri Ganesh Joshi, honourable Agriculture Minister, Govt of Uttarakhand, graced the occasion as the Chief Guest. Delivering the inaugural address the Chief Guest stressed that water is the prime Natural Resource that needs to be conserved and protected to avert major catastrophes. Shri Joshi stated that the world population is already phasing through the problems of land degradation and soil health, water related problems compounds to the challenges. He extended his congratulations to the staff members and gathered guests on the occasion of 69th foundation day and appreciated the relentless efforts made by the Institute towards soil and water conservation research and training.

Dr S. K. Chaudhari, Deputy Director General (NRM, ICAR) in his online video message remarked that this Institute is unique in itself in the country that it has been developing innovative technologies and human resource capacities. He urged the institute to play a leading role in addressing the state-specific soil-water problems and to develop relevant technologies to tackle them.

Dr A. K. Karnatak, Vice-Chancellor, V.C.S.G. Uttarakhand University, Bharsar, the Guest of Honour appreciated the scientists and staff of the Institute for bringing out time-tested technologies for soil conservation, water harvesting, watershed management, and enhanced agriculture production. Dr M. Madhu, Director, ICAR-IISWC, Dehradun spoke on the progress of the Institute specifying the reports of 60 years of research and development made in soil and water conservation besides the ecosystem services assessment protocol and methodologies, Decision Support Systems (DSS) and water harvesting potential, soil loss tolerance limits, and vulnerability assessment methodologies brought out by the Institute in the recent past.

He informed that the Institute is trying to bring out panchayat-level soil-water conservation information for the benefit of farmers and stakeholders. Dr P.R. Ojasvi, Head, H&E Division highlighted the changing paradigm in the research of soil and water conservation with reference to ongoing

climate change, rain water harvesting, and the farming scenarios.



Earlier, welcoming the dignitaries Dr N. K. Sharma, Head, SS&A briefed about the history and the periodic progress of the Institute on research and training.

On the occasion, Best Research Centre and best workers, in different categories, were awarded with medals and recognition certificates. The winners of various sport events organised on the occasion were also awarded. Dr Charan Singh, Head, Plant Science, Dr D. Mandal, National Fellow and Dr Gopal Kumar, Principal Scientist diligently coordinated various events. The inaugural program was attended by staff members of the Institute and the invited guests from various organizations, NGOs and academia besides 70 online participants. Staff and children of theh



➤ Certificate Course (123rd batch) on “Soil and Water Conservation and Watershed Management” inaugurated

The inaugural function of the four months Certificate course on 'Soil & Water Conservation and Watershed Management' was held at ICAR- Indian Institute of Soil & Water Conservation, Dehradun on 22nd April 2022. A total of 26 trainees representing 7 different states (Nagaland-2; Chhattisgarh- 4; Punjab-9; Kerala-1; Madhya Pradesh-4; Uttarakhand-2; Meghalaya-4) are attending the four month course. In the inaugural address, Dr N K Sharma, I/C Director of the institute emphasized on the importance of conservation of natural resources and how this training program helps to percolate knowledge to different stake holders through the officer trainees to all parts of the country. He highlighted the importance of the training and its significance particularly for the rain-fed areas of the country. Dr D V Singh, Head I/C, HRD & SS division, welcoming the participants

briefed about the training programme which began in 1956 at ICAR-IISWC and has been continuing since then. He emphasized how the training programme equally focuses on theory and practical modules to teach the know-how and do-how to the officer trainees and is a unique program on the aspect of Natural Resource Management. The inaugural function was attended by Dr Charan Singh, I/C Head, Plant Science Division and other staff members. Dr Indu Rawat, Scientist and Course Coordinator proposed vote of thanks.



Azadi ka Amrit Mahotsav (AKAM)

➤ Training- cum input distribution programme

ICAR-IISWC, R.C. Koraput organised a training programme on use of portable vermibed cum micronutrient fertilizer distribution programme on 16th April, 2022 at Dandabada village of Dashmantpur block, Koraput district under TSP. During the training programme, tribal farmers and officials also celebrated Azadi ka Amrit Mahotsav. Around 50 tribal farmers participated in the training programme. Dr D. C. Sahoo, Head of the Centre, interacted with the farmers and discussed use of portable vermibed. He also highlighted the importance of the micronutrient fertilizer in maintaining soil health. Dr Sahu guided the tribal farmers for successful implementation of Diversion based Irrigation system. HDPE pipes were distributed to tribal farmers for installation of DBI system in their village.



Dr Rajesh Bishnoi, Scientist (Agricultural Extension) urged tribal farmers to judiciously use the water for agricultural and household purpose and to adopt water saving habits in day to day life. Portable vermin bed and micronutrient fertilizer were distributed to the tribal women farmers. During the interaction, the farmers were made aware about the management and maintenance of the DBI.



➤ Sensitization campaign on “Natural and Organic Farming”

ICAR-IISWC, Dehradun organised one-day sensitization campaign on the topic “Natural and Organic Farming” under AKAM. as an initiative of the

Government of India to celebrate and commemorate 75 years of independence of progressive India and the glorious history of its people, culture and achievements under the Tribal Sub-Plan at Shivalik Anusuchit Janjati Adrash Vidhyalay (SAJJAV), Shahpur-Kalyanpur, Vikasnagar, Dehradun on 23rd April, 2022. During the programme, importance of natural and organic farming in today's context in crop production, natural resource conservation, and improvement in human health was emphasised. While delivering inaugural address Dr N. K. Sharma, I/C Director, ICAR-IISWC, Dehradun emphasised on "adoption of natural and organic farming in cultivation of various crops, fruit, vegetables, etc as a part of agroforestry for improving soil health, water quality and conserving natural resources. Dr Charan Singh, Head (Plant Science Division) and Coordinator (TSP) narrated the benefits of natural and organic farming and appealed the farmers to reduce use of chemicals (Fertilizers/ pesticides/weedicides etc) in agriculture and to include more and more plants / animal wastes (manures, urine, residues, etc) in cultivation. On this occasion, Dr A.C. Rathore, Principal Scientist (Horticulture) delivered a talk on use of organic sources of fertilizers, pesticides, etc in integration with liquid fertilizers (Jeevamrit, Beejamrit, Panchgavya and Cow Urine) to be used in cultivation of various fruits and vegetables for improving plant growth, yield and quality of the produce. Dr Ramanjeet Singh, Scientist also urged the farmers to maximize the use of organic sources of nutrients for cultivation of wheat, maize, pulses, etc. Dr Jayprakash, Sr. Scientist (Forestry) proposed the vote of thanks. A total of 100 farmers/ female farmers and students of Shahpur-Kalyanpur actively participated in the campaign. Mr. Satish Kumar, Principal, Shivalik Anusuchit Janjati Adrash Vidhyalay (SAJJAV), Mr. Raj Kumar, Sanjay Kumar, Amit Kumar, Mr. Surender Kumar, Mr. Rajesh Kumar, Mr. Balvir, Mr. Atmaram, Mr. Paliram, Vijay Singh, and other tribal farmers attended the programme.



➤ Kisan goshti on "Annadata Devo Bhawa"

A Kisan Goshti was organised on 23rd April, 2022 at Saheeddwala Grunt, Bhagwanpur Block, Haridwar District, Uttarakhand a, village under SCSP programme

under Annadata Devo Bhawa (ADB) campaign to promote natural/organic farming, use of coarse grain and pulses for nutritional security. The programme was attended by a total of 100 farmers.

Dr Devideen Yadav (coordinator), highlighting the importance of natural/ organic farming and elaborated upon the need of organic farming and how this can help to enhance resources sustainability and enhance farmers income. In continuation, Dr Trisha Roy, Dr Indu Rawat also expressed their views on the occasion and emphasised upon the importance of adopting organic farming practices on sustaining soil health and its role in quality produce/ utility of coarse grain and pulses in food and nutritional security of the nation. Next in the program, Dr Akshay Dheeraj highlighted the various government initiatives to promote natural and organic farming among rural population



➤ Campaign on Kisan Bhagidari Prathamika Hamari (KBPH)

■ ICAR-IISWC, RC, Koraput organised Campaign on Kisan Bhagidari Prathamika Hamari and Celebrated International Year of Millets 2023 on 28th April, 2022 at research farm, Sunabeda, Koraput under TSP. During the programme, farmers and officials also celebrated AKAM. Fifty one (51) tribal farmers from four villages namely, Mukhibedai, Rajbedai, Joraput and Jhoraput from Semiliguda block, Koraput District participated in the programme. During scientist-farmer's interaction meeting, Dr Rajesh Bishnoi, Scientist (Agricultural Extension) explained the main objectives of the campaign and urged the farmers for adoption of climate resilient technologies including bio-fortified crops. He also enlightened the farmers on crop insurance scheme of government. Dr Jotirmayee Lenka, Scientist (Fruit Science), delivered lecture on the role of millets in crop diversification and use of portable vermibed. Dr Lenka highlighted the importance of the millets in the daily diet and value addition of millets. Seeds of little millet (Suan) were

distributed to the tribal farmers. Farmers were made aware about the system of millet intensification (SMI) technique through videos. All the staff of the research centre participated and actively involved in the organisation of the programme



■ ICAR-IISWC, Research Centre, Udhagamandalam organised campaign on Kisan Bhagdhari Prathamikta Hamari (KBPH) at Doddani village on 28th April, 2022. Dr P. Sundarambal, Pr. Scientist discussed the possible ways of involving farmers in implementation of government schemes and maintenance of Common Property Resources and Soil and Water Conservation structures and water resources. SWC measures for vegetable crops and organic farming in vegetable cultivation were also explained. Demonstration on lining of water harvesting structure with Silpaulin sheet and vermi compost preparation with kitchen and farm waste was also carried out. The participants were also sensitized about cleanliness and hygienic. About 35 farmers participated in the programme.



■ ICAR-IISWC, Research Centre, Ballari organized “Kisan Bhagidari, Prathamikta Hamari (KBPH)” Campaign at S. Hanumapura village, Molakalmuru Taluk, Chitradurga district of Karnataka.

This special campaign focussed on “Natural farming, Soil and water conservation techniques, Bio-char Technology, and benefits growing millets for sustainable agriculture and more farm income”. Dr B S Naik Sr. Sci. & Head of Centre addressed the farmers on importance of soil and water conservation techniques and their role in protection and effective utilization of resources for sustainable farming.

He sensitized the farmers to grow millets and adopt micro irrigations in place of flood irrigation for judicious use of water to have more crops per drop of water. Dr Naik asked farmers to participate in government sponsored programmes and avail the benefits of various agriculture schemes.



Dr Prabhavathi, Scientist explained the important benefits of Bio-char Technology and its application to soil. She also elaborated upon the benefits of millets and pulses production for diversification and supplement prevailing groundnut mono crop system in the region. Mr Ravi, K N. Scientist speaking on the occasion explained the importance of participation of people in watershed and other schemes and their benefits. He further explained the different techniques of Natural farming, their benefits and how to utilize cow based liquid manures as alternative to chemical based farming. A total 78 farmers and students actively participated in the event.

Human Resource Development

[A] Capacity Building (in house employees)

- Five day training module for Advance skill development in Soil Testing for Technical Officers from ICFRE prepared and submitted.
- Research Centre Chandigarh organized one day Hindi workshop on 15th March 2022. The workshop was attended by 23 scientists.
- ICAR-IISWC, Research Centre, Udhagamandalam organized online training on use of “SPARROW” interface for APAR at ICT Unit, ICAR Headquarter, New Delhi. The training was attended by staff of Technical (6) and Administrative (2).
- ICAR-IISWC, RC, Koraput organized four days training “Orientation programme of reward project” sponsored by REWARD project.

[B] Capacity Development (programmes organised for stakeholders)

- One Month Course on “Efficient Water Management for Precision Agriculture” for B.Sc. third year students of ANGRAU, Hyderabad
- ICAR-IISWC, Dehradun organised four Month Certificate Course on “Soil and Water Conservation and Watershed Management” for State Government Officers from 22nd April, 2022 to 21st August, 2022. The training was attended by 27 State Government officers of different states
- ICAR-IISWC, Research Centre, Udhagamandalam organised 3 days on-line training programme on “Climate Smart Vegetable Farming for Ensuring Nutritional Security” with collaboration of MANAGE, Hyderabad during 27 to 29th April, 2022. The training was attended by 45 candidates.
- ICAR-IISWC, Research Centre, Vasad organised three different programmes at villages Rajupura, Rajjipura and Adas, in District - Anand on dates 14th, 23rd and 25th April, 2022 respectively. Concept of Organic farming was deliberated in detail by the Scientists of the Centre in detail.
- An interaction programme was organised with the heads (सरपंच) and other reputed persons of twelve nearby villages on 23rd April, 2022. Scientists of the Centre deliver lecture on Organic farming.

Farmers Outreach Activities

- ICAR-IISWC, R. C. Udhagamandalam organised Awareness campaign on “SWATCH BHARAT” at Doddani village on 28th April, 2022. The programme was attended by 35 farmers.
- ICAR-IISWC, Dehradun demonstrated “introduction of Hydrogel and Integrated Nutrient Management in Sugarcane crop” at village Buggawala, Dist-Haridwar. The programme was attended by 5 farmers.
- ICAR-IISWC, Dehradun demonstrated and training of small farm implements to farm women.
- ICAR-IISWC, Dehradun organized Kisan Goshthi : *Kisan Bhagidari; Prathmikta hamari* on the topic 'Role of crop diversification in Natural Resource Management' at Koti Mechak, Raipur Block, Dehradun on 28th April 2022. The programme was attended by 2 professionals.
- ICAR-IISWC, Dehradun organised Kisan Goshthi on '*Annadata Devo bhava*' in SCSP village at Shahid Grunt, Buggawala, Haridwar on 23rd April, 2022. The programme was attended by 100 farmers.
- ICAR-IISWC Research Centre Agra organized Kisan Goshthi on 20th April, 2022 at Chiryari, Etmadpur village. The programme was attended by 20 farmers.
- ICAR-IISWC, RC, Koraput organised a training programme on use of portable vermibed cum micronutrient fertilizer distribution programme on 22nd April, 2022 at main office, Sunabeda, Koraput district under SCSP. A total of 25 SC farmers participated in the training programme.
- ICAR-IISWC Research Centre Agra organized awareness camp of Millet day on 28th April, 2022 at Mudhera village, Agra. The programme was attended by 31 farmers.
- ICAR-IISWC Research Centre, Ballari demonstrated and awareness campaign on construction techniques of bore well recharge filter for augmentation of low yielding bore wells under SCSP and TSP programme at Chelumehalli (SCSP)

village) and Mattajanahalli (TSP village). The programme was attended by 50 farmers.

- ICAR-IISWC Research Centre, Ballari demonstrated on preparation of liquid manures including jeevamrutha, panchagavya for augmenting soil fertility and awareness on Natural Farming Techniques under SCSP programme at Chelumehalli Tanda village in Kudligi taluka of Vijayanagara district. The programme was attended by 20 farmers.
- ICAR-IISWC Research Centre, Ballari organized one day farmers training programme on “Soil and Water Conservation and Watershed Management for Sustainable Agriculture” under TSP project at Mattajanahalli village in Sandur taluka of Ballari district. The programme was attended by 30 farmers.
- ICAR-IISWC Research Centre, Ballari organized one day farmers training programme on “Soil and Water Conservation and Watershed Management for Sustainable Agriculture” under SCSP project at Chelumehalli Tanda village in Kudligi taluk of Vijayanagara district. The programme was attended by 28 farmers.
- ICAR-IISWC Research Centre, Ballari organized one day farmer's exposure field visits to Vasundara Krishi Farm at B.G. Kere and Ramasagara model watershed respectively under SCSP programme at B.G.Kere and Ramasagara villages in Molkalmuru taluka of Chitradurga district. The programme was attended by 32 farmers
- ICAR-IISWC, Research Centre Datia, interacted with the farmers to discuss about the ill effects of residue burning.
- ICAR-IISWC, RC, Datia organised programme on “*Kisan Bhagidari Prathmikta Hamari* (KBPH) and Celebrated International Year of Millets 2023 at village Sunar, Samrauli. The programme was attended by 30 farmers.
- ICAR-IISWC, R C, Koraput organised one day training “*Kisan Bhagidari Prathmikta Hamari* (KBPH)” and Celebrated International Year of Millets 2023. The programme was attended by 51 farmers.
- ICAR-IISWC R. C. Kota organised programme on “*Kisan Bhagidari Prathmikta Hamari. (KBPH) and International Year of Millets*” at Pali / banswara village. The programme was attended by 60 farmers.
- ICAR-IISWC, RC-Vasad, organized “*Aatm Nirbhar Kisan Abhiyan*” together with representatives of Brahmakumari Ishwariya Vishvavidhyalaya, Abu, Rajasthan, at the Centre under AKAM on 08th April, 2022. The programme was attended by 15 farmers.
- ICAR-IISWC, RC-Vasad, participated in “*Aatm Nirbhar Kisan Abhiyan*” together with Brahmakumari Ishwariya Vishvavidhyalaya, Abu, Rajasthan, at Vasad under AKLAM on 16th April, 2022. The programme was attended by 100 farmers.
- ICAR – IISWC, RC-Vasad, with Farmers of village – Rajupura & Rajjipura, Dist – Anand, organized “*Annadata Devo Bhava*” programme at the farm Office of the Centre on 14th April, 2022. The programme was attended by 25 farmers.
- ICAR – IISWC, R.C. Vasad, organised a programme under the Campaign “*Annadata Devo Bhava*” on 23rd April, 2022, at Village- Adas, District – Anand, Gujarat. About 30 farmers were participated in the programme.
- ICAR – IISWC, RC-Kota, organised Programme on Organic Farming Awareness Campaign under the Campaign “*Annadata Devo Bhava*” on 24th April, 2022
- ICAR – IISWC, R.C. Vasad organised an event at its farm office under the campaign “*Annadata Devo Bhava*” on 25th April, 2022. About 30 farmers from nearby villages – Rajjipura & Rajupura participated in the programme.

Publication

Research Papers

- Jena, R.K., Bandyopadhyay, S., Pradhan, U.K., Moharana, P.C., Kumar, N., Sharma, G.K., Roy, P.O., Ghosh, D., Ray, P., Padua, S., et al. 2022 Geospatial Modelling for Delineation of Crop Management Zones Using Local Terrain Attributes and Soil Properties. *Remote Sens.* 14, 210 I. ht tps://doi .orl/ I 0.3390/rs 1-W92 IO I. (NAAS.. I 0.85).
- Jena, R.K. . Moharana. P.C., Sahoo, S., Dash, B., Kumar, N., Sharma, G. K., Ray, P., Chattaraj, S., Sharma, R.P., Roy, P.O., Sandeep, P., Das, B, Singh, S.K., 2022. Soil erosion risk assessment through morphometric indices for prioritization of watersheds in northeastern region of India using multi-criteria analysis methods. *Journal of Soil and Water Conservation* 21 (1): 7-20. (NAAS.. 5.2).

Popular articles

- Vikas Yadav, Ak Singh, Sanjay Singh (2022). Thar gaurav: a new wood apple variety, *Nature Science e-Magazin*, 19-22.
- Tejpal Singh Bisht, Vikas Yadav, Laxmi Rawat (2022). kiwi fruit: a potential fruit for foothills of Himalaya of India , *Nature Science e-Magazine*, 12-16.

Book chapters

- Roy, Trisha., Rashmi, I., Sarkar, A. and Justin George K (2022) “The Panorama of Phosphorus Fertilization in Crop Production” In *Soil Management for Sustainable Agriculture* (pp. 329-354). Apple Academic Press.
- Rawat, I. (2021). “Women empowerment through

micro enterprise development”In: Entrepreneurship development in community science. By GBPUA&T, Pantnagar Ocean publication, Rampur (UP) ISBN 978-81-952124-4-6.

- Jha, Sujeet K.; Niranjana, Alagu D. and Bhuyan, M. (2022). “Climate Change and Indian Farming Community: Researchable Issues from Social Science Perspective” In Sanjit Maiti, Sanchita Garai, Manjunath K.V., B.S. Meena, Gopal Sankhala & K.S. Kadian (Eds.), Analytical Approaches for Vulnerability and Adaptation to Climate Change in Agriculture (pp. 49-53). Published by Dairy Extension Division, ICAR-National Dairy Research Institute, Karnal-132001, Haryana, INDIA. [ISBN: 978-81-952712-1-4].
- Jha, Sujeet K. (2022). “Extension at the Crossroads!?” In U.S” Gautam, Manjeet Singh Nain, Dheeraj Mishra & Vister Joshi (Eds.), Novel Extension Approaches for Reshaping Indian Agriculture (pp. 191-196). Published by Biotech Books, New Delhi. [ISBN: 978-81-7622-514-4]

Radio talk

- Dr Ashok Kumar, Head ICAR-IISWC, R.C. Kota delivered a radio talk (AIR, Kota) “Soil and water conservation measures for Higher income” on 20th April, 2022.

Press Release / reports

- Fasal Awashes Prabandhan hetu Krishi yantikiran Visyak Rastriy complain, Chambal Sandesh , Kota, 05th April, 2022.

- Anna data Deva Bhawah Javik Kheti Jagurakta Abhiyan, Dainik Bhaskar, Kota, 25th April, 2022.
- Kisan Bhagidari Prathimikta Hamari Chambal Sandesh, Kota, 29th April, 2022.

Awards and Recognitions

- ICAR-IISWC, RC Udhagamandalam awarded Institute best Research Centre award for the year 2019-20.
- Dr H.C. Hombe Gowda, scientist awarded best scientist award for the year 2019-20.
- Sh. G.B. Naik, Technical awarded best technical worker for officer category-2019-20
- Sh. S. Kindal awarded best technical worker for officer category-2019-20
- Smt. Arnapurna Nayak, awarded best worker in administrative category award-2019-20
- Dr Trisha Roy awarded best scientist award for the year 2020-21.
- Smt. H.N. Lakra awarded best worker in administrative category award-2020-21
- Dr P. Sundarambal, Sr. Scientist invited an interview committee member for selection of JRF on 29th April, 2022 “under the Project “Carbon Footprint in Agricultural Land Use System from the Temperate and Tropical Ecosystem Western Ghats under Climate Change Scenario” sponsored by DST”.
- Dr P. Raja, Pr. Scientist invited speaker MANAGE, Hyderabad & ICAR-IISWC, RC, Ooty delivered an invited talk on “Tackling Climate Change Effects through Climate Smart Agriculture” in the MANAGE Funded collaborative online training programme entitled “Climate Smart Vegetable Farming for Ensuring Nutritional Security” during 27-29th April, 2022

Miscellaneous

- Dr Indu Rawat delivered an Oral presentation in webinar conducted by CSIR-NAL, Bengaluru during 21-22nd April, 2022.
- Sujeet K. Jha, Scientist invited as a “Resource Person” at ICAR-NDRI, Karnal. Contributions vis-à-vis National Workshop on "Advanced Analytical Approaches to Appraise Vulnerability and Adaptation Strategies to Climate Change in Agricultural Sector" ... Sponsored by SERB, DST Govt. of India organised by Division of Dairy Extension, ICAR-NDRI, Karnal (Haryana) during 25th April, 2022 to 02nd May, 2022.
- Er. Manoj Kumar, Scientist invited as a “Speaker” BAMETI, Patna, Bihar. Workshop on "WDC 'under PMKSY 2.0 in Watershed Development" during 21-23rd April, 2022.
- Research Centre Datia provides meteorological data on daily basis to local media.
- All the Scientist attended the webinar on” Rainfall breakpoint data rainfall energy an erosivity standard operating procedure by Dr Uday Mandal organised under AKAM at IISWC, Dehradun.
- Dr Ashok Kumar, PS and Head attended the RAC meeting (Virtual mode) of NRCSS Ajmer in the capacity of RA Member on 23rd April, 2022.
- Dr Ashok Kumar, PS and Head attended the Phone live-in programme of AIR Kota and delivered the talk on "Soil and water conservation measures for Higher income" on 20th April, 2022.

- Dr R. A. Jat attended Zero budget natural farming meeting organized by University of Reading, UK and Andhra Pradesh govt at Hyderabad during 25-26th April, 2022.
- Dr R. A. Jat accredited by Kota Agricultural University for teaching and guiding M.Sc. and Ph.D students.
- Dr H. R. Meena organised field visit of Centre's research farm for the students of B.Sc. Ag (VI Semester) and staff of Career Point University, Kota on 11th April, 2022.
- Dr H. R. Meena, G.L.Meena and Kuldeep kumar participated in Kisan Mela organized under Kisan Bhagidari Prathmikta Hamari programme by K YK, Borkheda of AU, Kota on 26th April, 2022.
- Dr I.Rashmi organized soil science laboratory visit for the students of B.Sc. Ag (VI Semester) and staff of Career Point University, Kota on 1.04.2022
- Dr G.L. Meena- coordinated and organized national campaign on "Krishak Hissedari Prathimkat Hamari" and International Year of Millets-2023" at Baswara Gram Panchayat Head quarter with farmers of Pali village under TSP on 28th April, 2022.
- Dr Kuldeep kumar- organized exposure visit of farmers and staff for awareness to organic farming at Shri ram Shantai organic research and training Centre, Jakhora, Kota on 24th April, 2022.
- Dr G.K.Sharma organized the visit of Centre laboratory and farm for the newly recruited agricultural supervisor of Rajasthan Gov. on 28th April, 2022.
- Dr P. Sundarambal and Dr Sudheer Kumar Annepu organised an awareness camp on Natural and Organic Farming under AKAM at MGMG village Melkavatty on 23rd April, 2022 wherein 31 farmers participated.
- Dr P. Sundarambal and Dr Sudheer Kumar Annepu conducted one exposure visit on Mushroom production for farmers of SCSP village on 22nd April, 2022.
- Dr S.M. Vanitha delivered lecture on "Farmer Friendly Climate Smart Technologies in Vegetable Crops" in the MANAGE sponsored collaborative online

Salient Research Findings

Biochar for acid soil improvement and climate change mitigation in temperate

Highly acidic lateritic soils of Western Ghats are nutrient deficient and grossly poor in overall quality, as the base nutrients such as calcium, potassium and magnesium are leached severely. Severe acidity and low nutrient availability results in marked reduction in crop productivity. The manures, applied by the farmers, were converted into biochar (fully or partly). Biochar was prepared with four pyrolysis temperatures viz 450, 600, 750 and 900°C and five doses viz., 4, 8, 12, 16 and 32 t ha⁻¹ from FYM and Poultry Manure (PM) were applied. There were two liming treatments with dolomite, one with blanket recommendation of 5 t ha⁻¹ and another was Soil Test Based (STB) application of 14 t ha⁻¹ along with absolute control.



Control (no biochar)

The soil incubation studies conducted in temperate ecosystem (Udhagamandalam) revealed that the poultry manure (PM) biochar raised the soil pH to the desired level i.e. towards neutral range whereas FYM biochars did not raise the pH of acidic soil. Exchangeable acidity was found to be drastically reduced from 0.38 to 0.09 meq/100 g with the application of biochar at the rate of 4 to 32 t ha⁻¹. Biochar prepared with 600°C and application at the rate of 8, 16 and 32 t ha⁻¹ was effective to maintain required level of soil pH. It was found that the PM biochar application at the rate of 8 t ha⁻¹ onwards increased the soil pH more than 5.5, at the same time the application of PM biochar at the rate of 32 t ha⁻¹ maintained the pH up to 6.39 up to 30th day. Application of biochar of alkaline material neutralizes soil acidity, improves soil quality, increases retention properties of soil and improves the growth and yield of crops.



PM biochar (32 t ha⁻¹)

In News



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ICAR-IISWC to celebrate 69th Foundation Day today

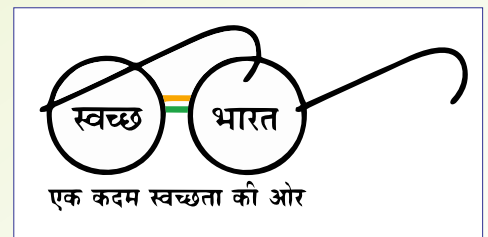
Dehradun, April 06 (HTNS): The Indian Institute of Soil and Water Conservation (ICAR-IISWC), Dehradun will celebrate its 69th Foundation Day on 7 April. The celebration has been organized with various kinds of events including deliberations on the past achievements of the Institute and the future course besides the sports, and cultural events spanned over a week from 1 to 7 April. The main program in the forenoon is being organized in a hybrid mode, both online and offline.

Ganesh Joshi, Agriculture Minister, Govt of Uttarakhand will be the Chief Guest of the Foundation Day celebrations. Dr Suresh Kumar Chaudhari, Deputy Director General (NRM, ICAR), Dr. A. K. Kamatak, Vice-Chancellor, V C S G, Uttarakhand University, Bharsar, and Dr Prem Kumar, Director Animal Hus-

bandy Department, Uttarakhand will be the Guests of Honor during the celebrations.

Arun Pratap Das, Chief General Manager, NABARD, Dehradun will be the Chief Guest during the cultural evening. The Foundation Day seminar will be presented by Dr Kamatak.

Dr M Madhu, Director, ICAR-IISWC will present the highlights and achievements of the Institute



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M. Madhu, Director

Compiled & Edited by

- M. Muruganandam, Pr. Scientist
- M. Chandra, CTO
- Mrs Minakshi Pant, PA

ICAR-Indian Institute of Soil & Water Conservation (IISWC)

218- Kaulagarh Road, Dehradun - 248 195, Uttarakhand
Tel. : +91- 135-2758564, +91-135-2754968
Email : director.iiswc@icar.gov.in, directorsoilcons@gmail.com
website: www.cswcrtiweb.org