



In this Issue

- NEW INITIATIVES
- IMPORTANT EVENTS
- HUMAN RESOURCE DEVELOPMENT
- OFFICIAL LANGUAGE ACTIVITIES
- DISTINGUISHED VISITORS
- SUCCESS STORIES
- RESEARCH NOTES
- PUBLICATIONS
- AWARDS AND RECOGNITIONS
- PERSONNEL



From The Director's Desk



It is always a delight and honour to share the accomplishments of the institute with the stakeholders and well-wishers. This issue highlights the salient initiatives/activities pertaining to research, extension and related developments pursued during the last quarter of the calendar year. Institute is at the forefront of technological developments, innovations and its dissemination to the farmers and other relevant stakeholders. The research advances made in soil and water conservation technologies has huge potential to provide farmer centric solutions to the lingering agricultural problems, also, to alleviate the impacts

of climate change through Green House Gas (GHG) mitigation and to ensure food and nutritional security. The training programmes and workshops conducted, focussed primarily on environment, agroforestry, natural farming *etc.*, Trainings, awareness and exposure visits were conducted for 357 farmers, 383 students and 188 officers during the period.

International workshop, in virtual mode, on “Climate Proofing of Watershed Development Projects with Special Reference to Soil and Water Conservation Technologies in the Context of Climate Smart Agriculture” was organised in collaboration with KSCSTE- CWRDM, Calicut, Kerala. Institute collaborated with relevant organisation to have consultative discussion on soil and water conservations and NRM issues. Institute has signed four MoUs, covering an exhaustive list of activities for collaboration in research and academic activities for the mutual benefit of the organisations and the stake holders from the long-standing experience of the IISWC.

The information placed under research note and success stories reflects upon some of the innovations being pursued/perfected at the institute and their impact on farmer's field. During the quarter, in addition to, two books, four bulletins and five popular articles, the Institute published fifteen (15) research papers in refereed journals, out of which, eight (8) were having NAAS ranking greater than seven.

On the occasion of World Hindi Day, National technical Hindi workshop on “Useful Unicode and other Hindi e-tools” was organised. About 94 scientists, officers and other staff members from seventeen institutes participated in this online workshop. The topics like Microsoft Indic, Unicode, Google Voice Typing, Mantra, E-MahashabdKosh, Leela, Machine Translation were elaborated upon in detail.

ICAR- North Zonal Sports Meet- 2022 was held at ICAR-IISWC, Dehradun during the month of November. About 780 sportspersons from 25 different ICAR institutions located in 06 Northern States of India participated. The event was hugely successful and imbued sense of pride and satisfaction.

I wish and hope the contents of this document would be informative and useful to the readers.

M. Madhu

New Initiative

Signing of MoU

- ICAR-IISWC, RC, Udhagamandalam and Centre for Disaster Mitigation and Management (CDMM), VIT, Vellore on 28th September, 2022.
- ICAR-Central Inland Fisheries Research Institute, Barrackpore, Kolkatta on 18th October, 2022 for Determination of sediment accretion rate and age of wetlands through radiotracer technique (Project funded by IISWC and CIFRI)
- ICAR-IISWC, RC, Vasad signed a MoU with Dr Panjabrao Deshmukh Krishi Vidyapeeth, Akola, Maharashtra on 10th November, 2022 for collaboration in research and academic activities.
- ICAR-IISWC, RC, Ballari, signed a MoU with Deputy Conservator of Forest, DCF Ballari, Karnataka Forest Department, Govt. of Karnataka, Ballari for Soil conservation and watershed management and evaluation of various related programmes on 11th November, 2022



MoU with Dr Panjabrao Deshmukh Krishi Vidyapeeth, Akola



MoU with Karnataka Forest Department, Govt. of Karnataka

Important Events [Meetings/Seminars/Workshops etc.]

Training on “Soil and Water Conservation Engineering and Administrative Issues”

ICAR-IISWC, Dehradun organised an on-field training programme “Skill Development in Soil and Water Conservation Engineering” during 01 - 30th September, 2022. The programme aimed at capacity building of technical staffs with diverse non-engineering educational background to plan, implement and coordinate field level engineering



measures according to problem types. In the training programme total 66 technical staff members (level T1 to T6) from IISWC H Q, Dehradun and its eight Research Centers participated.



Himalayan Day

On the occasion of Himalaya Diwas ,09th September,2022, awareness programme for

conservation of biodiversity through a plantation drive was organised at Shivalik Anusuchit Janjati Adarsh Vidhyalaya, Shahpur-Kalyanpur, Vikas Nagar. Dr M. Madhu, Director, ICAR-IISWC, inaugurated the function and emphasised upon the importance of trees in conserving biodiversity of the Himalayas.



Himalayan day celebrated at at Shahpur-Kalyanpur, Vikas Nagar, Dehradun, Uttarakhand

National Conference on “Landscape Management for Preventing Flood and Reservoir Sedimentation (LMPFRS-2022)”

ICAR-IISWC, Dehradun in collaboration with Indian Association of Soil and Water Conservationists (IASWC), Birsa Agricultural University (BAU), Ranchi and ICAR-MGFRI, Motihari organized a national conference on “Landscape Management for Preventing Flood and Reservoir Sedimentation (LMPFRS - 2022)” at BAU Ranchi during 22-24th September, 2022 . The conference was inaugurated by Hon'ble Governor of Jharkhand Sh. Ramesh Bias ji. Hon'ble Governor appreciated the efforts for organizing the conference at right time and at right place and elaborated upon the issues of erosion of biodiversity, environmental pollution and above all climate change in respect of management of agro-ecosystem. Dr Manish Ranjan, Secretary, DORD, Govt. of Jharkhand and Dr A. K. Sikka former DDG (NRM) also expressed their views on soil and land degradation issues of the Eastern region of India and



congratulated the organizers. Dr M. Madhu, Director, ICAR-IISWC, Dehradun attended the inaugural function as guest of honour.



National conference on “Landscape Management for Preventing Flood and Reservoir Sedimentation (LMPFRS - 2022)” at BAU Ranchi during 22-24th September, 2022.

National Workshop on “Climate Change Implications on Agriculture, Environment and Food Security”

ICAR-IISWC, Research Centre, Udhagamandalam organised a National Workshop on “Climate Change Implications on Agriculture, Environment and Food Security” during 28 - 29th September, 2022. The workshop was attended by participants from different organisations viz., NRSC-ISRO, Hyderabad; Vellore Institute of Technology, Vellore; CWRDM, Calicut; Karunya Institute of Technology, Coimbatore; RAC-TIFR, Ooty; TNAU, Coimbatore and other ICAR organizations such as ICAR-IARI, RC, Wellington and ICAR-CPRI, RC, Udhagamandalam, etc. Dr M. Madhu, Director, ICAR-IISWC, Dehradun presided over the inaugural session whereas Dr Prakash Chauhan, Director, NRSC-ISRO, Hyderabad graced the event as chief guest. Dr S.S. Chandrasekaran, Professor and Director, Centre for Disaster Management, VIT, Vellore was felicitated as the guest of honour.





Glimpses of the national workshop on “Climate Change Implications on Agriculture, Environment and Food Security” during 28 - 29th September, 2022

Certificate Course (124th Batch) on “SWC&WM”

The four months Certificate course on “Soil & Water Conservation and Watershed Management (SWC&WM)” was inaugurated on 10th October, 2022 at ICAR- IISWC, Dehradun. A total of 26 trainees representing 07 different states (Chhattisgarh- 4; Punjab-13; Uttarakhand-1; Meghalaya-03 Karnataka-01, Meghalaya-03, and Jammu & Kashmir-04) registered for the course.



In-plant Training on “Soil and Water Conservation and Watershed Management (SWC&WM)”

- The valedictory function of one-month In-plant training programme on “SWC&WM” was organised at ICAR-IISWC, RC, Koraput on 31st October, 2022. Total 15 students from BRSM College of Agricultural Engineering and Technology and Research Station, Indira Gandhi Krishi Vishwavidyalaya, Mungeli, Chhattisgarh registered and attended the training programme.



The training programme covered all the relevant topic of watershed management, soil and water conservation measures, soil erosion and its control measures, economics of soil and water conservation, agroforestry and its importance, remote sensing and GIS, climate change, PRA tools, community organization and institutional development.

- In-Plant Training on “Soil and Water Conservation and Watershed Management” for B. Tech. (Agric. Eng.) students from College of Agricultural Engineering & Technology, Dr. Rajendra Prasad Central Agricultural University, Pusa (Samastipur), Bihar and



College of Agricultural Engineering and Technology, Shalimar Campus Srinagar, Sher-e-Kashmir University of Agricultural Sciences and Technology, Kashmir was organised at ICAR-IISWC, R C, Chandigarh during 07th November, 2022 to 06th December, 2022. Total 35 f students registered and attended the training programme. The valedictory function of the training programme was held on 06th December, 2022, Dr. M. Madhu, Director, IISWC, Dehradun graced the occasion as chief guest.



Training cum Demonstration on Production Technology of Seed Spices

ICAR-IISWC, RC, Koraput and ICAR-NRCSS, Ajmer jointly organised one day training programme cum demonstration on production technology of seed spices on 12th November, 2022 under the project “Entrepreneurship development through seed spices-based science & technology intervention to improve the livelihood of farmers from Koraput district in Odisha” approved by Koraput District administration at ICAR-NRCSS, Ajmer. More than 80 farmers were selected for cultivation of eight seed spices crops in six blocks of



Koraput district. The basic training on seed spices and demonstration for cultivation of seed spices were given to the farmers. The input including quality seed of improved varieties (produced by NRCSS) and biocontrol agents for seed treatment were distributed to all the farmers. Crop demonstration of eight seed spices covering more than 90 acres of land in different blocks of Koraput District namely, Pottangi, Laxmipur, Semiliguda, Kotpad and Boriguma was carried out.



ICAR-North Zonal Sports Tournament Hosted

ICAR- North Zonal Sports Tournament hosted by ICAR-IISWC, Dehradun during 23-26th November, 2022 at the Indira Gandhi National Forest Academy (IGNFA) located in the Forest Research Institute (FRI) Campus in Dehradun. Sh. Ashok Kumar, IPS, DGP, Uttarakhand inaugurated the sports meet. About 780 sports-persons from 25 different ICAR institutions located in 6 Northern States of India took part in different sports events organised.

Dr M Madhu, Director, ICAR-IISWC welcomed the chief guest and participants, and briefed details of the contingents who are participating and the associated Institutes and Subject-Matter Divisions of ICAR.





Glimpses of events conducted on the occasion of inauguration of sports meet [Lighting lamp (Left top:) and address the participants by Dr M Madhu, Director ICAR-IISWC, Dehradun (Right top); Sh. Ashok Kumar, IPS, DGP, Uttarakhand inaugurated the sports meet by flaming the torch (bottom left) and also address the event (left middle), Cultural program (middle right) and torch relay by participants (bottom right)].

World Soil Day

The World Soil Day was celebrated on 05th of December, 2022 at ICAR-IISWC, Dehradun and its Research Centers. This year the theme for World Soil Day was “Soil: Where Food Begins”. At ICAR-IISWC, Dehradun the programme was organised in association with the State Bank of India, Dehradun and IFFCO, Dehradun. People from all walks of life

attended the proceedings, a total of around 400 individuals participated in the event. About 100 students from the Graphic Era University, Dehradun and Himgiri Zee University, Dehradun, 160 farmers from the TSP villages, officials from the State Bank of India, Dehradun and officials from IFFCO, Dehradun, Officer Trainees of the 124th Regular Training Batch, staff members of the Institute were present on the occasion.





Activities conducted on the occasion of World Soil Day celebrations.

On the occasion, a number of awareness programmes were organised at Research Centers of the institute. ICAR-IISWC, R C- Vasad, celebrated “World Soil Day- 2022” at SCSP village –Gudel, Taluka – Khambhat, District – Anand, Gujarat. ICAR-IISWC, R C, Ballari organised an awareness programme at Mattajanahalli village of Santur taluk, Ballari district, Karnataka. ICAR-IISWC, R C, Udhagamandalam organized a function at Sri Sathya Sai School, Thuneri, Udhagamandalam, The Nilgiris in collaboration with ICAR-Central Potato Research Institute (CPRI), Regional Centre, Udhagamandalam and Isha Foundation, Coimbatore. ICAR-IISWC, RC, Sunabeda, Koraput celebrated the World Soil Day in collaboration with Agriculture Department, Nabarangpur.

Workshop on “Useful Unicode and other Hindi e-tools”

National Technical Hindi Workshop

“Useful Unicode and other Hindi e-tools” on 22nd December, 2022 was organised at ICAR-IISWC, Dehradun.

The workshop was intended to provide information about Unicode and other Hindi e-tools useful for working in Hindi on computer. About 94 scientists, officers and staff participated from institutes like Bhubaneswar, CIAE-Bhopal, IVRI-Bareilly, NBSSLUP-Nagpur, DKMA-Delhi, NRCL-Muzaffarpur, IIHR-Bangalore, - NDRI-Karnal, NBAIM- Mau, NBPGR-Delhi, NBAGR-Karnal, IISR Lucknow, IIPR- Kanpur, NRC-PIG Guwahati, IIVR-Varanasi, ISRI-Delhi, DCFR-Bhimtal, CIFA in this online workshop. The keynote speaker and trainer Dr Ban Bihari Sahu, Chief Manager (Official Language), State Bank of India, Berhampur (Odisha) discussed in detail the topics like Microsoft Indic, Unicode, Google Voice Typing, Mantra, E-MahashabdKosh, Leela, Machine Translation *etc.*



भाकृअनुप-भारतीय मृदा एवं जल संरक्षण संस्थान,
२१८ कौलागढ़ मार्ग, देहरादून



तकनीकी हिंदी कार्यशाला

आयोजक
डॉ एम. मधु
निदेशक

दिनांक: 22 दिसंबर, 2022
अपराह्न 3.00 बजे

संयोजक
श्री आशुतोष कुमार तिवारी
उप-निदेशक (राजभाषा)

प्रशिक्षक
डॉ बन बिहारी साह
मुख्य प्रबंधक (राजभाषा)
भारतीय स्टेट बैंक

जूम मीटिंग में जुड़ने के लिए

<https://us02web.zoom.us/j/86814275175?pwd=CHF0K0dWTHBkWEZXU0Q4ZDIma2JHUT09>



SCAN ME

Zoom Meeting ID: 868 1427 5175
Password: 112233

Human Resource Development

Capacity Building (in-house employees)

Period	Training Programme	Sponsoring Agency	Participant
One month (1-30 th September, 2022)	Skill Development Training on “Soil and Water Conservation Engineering and Administrative Issues”	ICAR-IISWC, Dehradun	Institute Technical Staff (66) [level T-1 to T-6]
Three Days (1-03 rd September, 2022)	“Skill Development Programme for administrative staff” (In-person mode)	ICAR-IISWC, Dehradun	Mr. Jagdish Chand Mrs. Ruchika Raina
Four Days (13- 16 th September, 2022)	Competency Enhancement Training Programme on Motivation, Positive thinking and Communication Skills for the Technical Officers (T-5 and above) of ICAR institutes (In-person mode)	NAARM, Hyderabad	Mr. Shailendra Kumar Yadav
Twenty-One Days (01-21 st November,2022)	NGP-DST Winter School on Geospatial Technologies (Level-1)	ICAR-CAZRI Jodhpur	Dr R.B. Meena
12 Days (12-23 rd December, 2022)	Management Development Programme – a leadership development training	ICAR- NAARM, Hyderabad	Dr K.K. Sharma
22 nd December, 2022	Technical Hindi webinar by Dr Ban Bihari Sahoo, Chief Administrator (Rajbhasha) Brahmpur Odisha	ICAR-IISWC, Dehradun	All The staff members
04 th November,2022	Webinar on preventive vigilance and good governance	ICAR- NAARM Hyderabad	All The staff members



Capacity Development (Programmes organised for stake holders)

S.N	Theme/Title of Training	Sponsoring Organisation	Participation	Duration
Farmer/Female Farmer				
1	Awareness Programme on Azolla Units, demonstration and distribution	TSP / SCSP	50	08-11 th Oct,2022
2	Training programme on Mushroom Cultivation	SCSP	30	13-14 th Oct,2022
3	Awareness programme on "Improving Goat Breed and Distribution of <i>Sirohi</i> Breed"	TSP /SCSP	40	18 th Oct,2022
4	Training cum awareness campaign on "Improved package of practice of Rapeseed – Mustard"	SCSP	28	18 th Oct,2022
5	Awareness program for promoting natural farming practices among the farmers	TSP	55	03 rd Nov, 2022
6	Training on "Post-harvest Processing and Value Addition of Horticultural Crops"	SCSP	22	09-11 th Nov, 2022
7	Training on "Mushroom cultivation"	SCSP	52	25 th Nov,2022
8	Awareness programme on "Soil Health and <i>Har Med par Phed</i> "	TSP	80	05 th Dec,2022
Total			357	
Students				
1	In-plant training of B. Tech students on "Soil and Water Conservation and Watershed Management"	CAET, Parbhani, Maharashtra	08	08 th Aug.,2022 to 07 th Dec., 2022
2	Summer training programme on 'Soil and Water Conservation & Watershed Management'.	-Dr NTR College of Agric. Eng., Bapatala, (Andhra Pradesh) -BRSM College of Agric. Eng. & Tech., Mungeli, (Chhattisgarh)	29	08 th Aug.,2022 to 07 th Sept,2022



3	In-plant training of B. Tech students on “Soil and Water Conservation and Watershed Management”	BRSM College of Agric. Eng. and Tech. and R S, IGKV, Raipur, Chhattisgarh	15	01-31 st Oct.,2022
4	Training of B.Tech. students on “Soil & Water Conservation Engineering”	-DYPCAET, Talsande, (Maharashtra) -DMCAET, Rajmachi, (Maharashtra)	15	01-30 th Nov, 2022
5	Summer/In-plant Training Programme of B. Tech. (Agri. Eng.) students on “Soil and water conservation and watershed management”	-Dr. RPCAU, (Pusa, Bihar) -SKUAST, (Kashmir)	35	07 th Nov.,2022 to 06 th Dec, 2022
6	Training Programme on “Rural Agricultural Work Experience” (RAWE) Batch-A	Graphic Era Hill University, Dehradun (Uttarakhand)	65	15 th Sept,2022 to 07 th Oct, 2022
7	Training of M. Tech. Students on “Soil & Water Conservation Engineering”	CAET, VNMKV, Parbhani, Maharashtra	06	26 th Sep,2022 to 17 th Oct, 2022
8	Training of M. Tech. Students on “Soil& Water Conservation Engineering”	SVCAET & RS, , Raipur (Chhattisgarh)	13	10-31 st Oct, 2022
9	Training Programme on “Rural Agricultural Work Experience” (RAWE) Batch-B	Graphic Era Hill University, Dehradun (Uttarakhand)	66	10 th Oct, 2022 to 02 nd Nov, 2022
10	Training Programme on “Rural Agricultural Work Experience” (RAWE) Batch-C	Graphic Era Hill University, Dehradun (Uttarakhand)	63	04 -11 th Nov, 2022 and 28 th Novr,2022 to 10 th Dec, 2022
11	Training Programme on “Rural Agricultural Work Experience” (RAWE) Batch-D	Graphic Era Hill University, Dehradun (Uttarakhand)	68	20 th Dec, 2022 to 09 th Jan. 2023
Total			383	
Government /SAU Officer's				
1	Farm Diversification and Dimensions on Resource Conservation	MANAGE Hyderabad	120	16-18 th Nov., 2022

2	The ICAR- Consortium @UK with reference to the “Adarsh Champawat” held sensitization meeting of all the ICAR Institute located in Uttarakhand.	IISWC, Dehradun	15	02 nd Sep,2022
3	UGC sponsored Refresher Course for professors and teachers on “Environment Studies & Sustainable Development”	UGC-HRD Center of Dr. Babasaheb Ambedkar Marathwada University, Aurangabad	53	22 nd Sep,2022
Total			188	

Official Language Activities

- ICAR-RC Chandigarh, organised Hindi workshop on 26th September,2022.
- ICAR-RC. Agra organised Hindi workshop on 28th September, 2022. Dr. Sanjay Pachouri, Hindi Officer, ADRDE, Agra graced the occasion as guest speaker.
- ICAR-IISWC, R.C. Kota, organised Hindi Kavya Gosthi on 29th September,2022.
- ICAR-IISWC, R.C. Koraput organised Hindi Workshop on 30th September,2022.
- ICAR-IISWC, R.C. Udhagamandalam organised Hindi quarterly meeting on 11th November,2022.
- ICAR- IISWC, R.C. Agra organised Hindi workshop on 09th December,2022.
- ICAR- IISWC, RC. Chandigarh, organised Hindi workshop on 21st December,2022.
- ICAR-IISWC, RC. Agra secured third position among all the Central Government offices in Agra city for implementation of official language Hindi during the year 2020-2021.
- National Technical Hindi Karyashala “Useful Unicode and other Hindi e-tools” on 22nd December,2022



Farmers Outreach Activities {extension (TSP/SCSP)}

1. ICAR-IISWC, RC, Koraput organised training cum distribution programme for adopted tribal farmers under DBT BIOTECH KISAN HUB project on 11th November, 2022, benefiting 20 farmers.
2. ICAR-IISWC, R.C. Kota, Planted 180 fruit plants on 28 Farmer's field under SCSP programme.
3. ICAR-IISWC, RC Kota planted 185 fruit plants on 37 Farmer's field under TSP programme and conducted block plantation of 45 plants on farmer fields (in TSP and SCSP villages).
4. ICAR-IISWC, RC, Ballari organised sprinkler set distribution programme under SCSP at Chelumehalli Tanda, Vijayanagara District on 10th November, 2022. Beneficiary: 05farmers
5. ICAR-IISWC, RC, Koraput constructed 30Nos of Jhola Kundi in 7 blocks of Koraput district to harvest the sub-surface water and its utilization for off season vegetable cultivation. Beneficiaries: 115 stake holders
6. ICAR-IISWC, RC Datia planted 5000 bamboo seedlings to create a bio-fence along with the boundary (about 3.5 Km).
7. ICAR-IISWC, R.C. Udhagamandalam conducted demonstration on cover crop (fodder oats) for soil conservation in Doddani and Ganganagar villages.
8. ICAR-IISWC, R.C. Udhagamandalam conducted awareness campaign on *Swatch Bharat Abhiyan* at Jivanagar village on 08th December, 2022.
9. ICAR-IISWC, RC, Udhagamandalam, Tamil Nadu organised Field Day cum training programme on "Improved sunflower production" at Passaihnapura village Gundlupet taluk, Chamarajanagar district, Karnataka, benefiting 60farmers
10. ICAR-IISWC, RC, Udhagamandalam, Tamil Nadu organised Demonstration of Agri-horti and Agroforestry cropping systems under SCSP at Passaihnapura, Bendarawadi Chamarajanagar, Gundlupet. Saplings (Mango-400 nos., Coconut-725 nos, Lemon-312 nos, Melia-600 nos) and 1600 kg seed (Maize) was distributed, benefitting 15 farmers.
11. ICAR-IISWC, RC, Udhagamandalam, Tamil Nadu organised Demonstration on improved crop production – rainfed Bengal gram production at village Bendarawadi, Chamarajanagar, Gundlupet. 1000kg Bengal Gram seed was distributed, benefitting 43 farmers.
12. ICAR-IISWC, RC, Agra conducted 31 demonstrations on summer Moong bean (*Vigna radiata L.*) at selected farmers filed for generating awareness towards efficient utilisation of land and resources/ buildup of soil fertility and to improve the cropping intensity for increasing the framer's income.
13. ICAR-IISWC, RC, Agra constructed a Pipe Spillway for farmers in the selected SCSP village Andaunkapura. A 900 mm diameter and 7.5 m length RCC Hume pipe was used for constructing this outlet for spilling over inundated water in the area of 20 ha agriculture land during heavy rains, benefiting 20 farmers.

Distinguished Visitors

- Dr. S. Bhasker, Honourable ADG (Agronomy, Agroforestry & Climate Change) visited the ICAR-IISWC, RC, Ballari during 16-17th September, 2022. ADG was accompanied by Prof. T. Venkatesh, Rani Chennamma University, Mr. Srikanth Modi, IT professional and a progressive farmer from Belagavi, and Mr. Gururaj Mahajan, Coordinator of Indo-Finnish student exchange programme under National Agriculture Higher Education Project (NAHEP).
- Dr P.V. Raju, Group Head, National Hydrology Project, NRSC/ISRO, Hyderabad visited the RC, Udhagamandalam on 20th September, 2022.



- Students from University of Agricultural and Horticultural Sciences, Shimoga visited ICAR-IISWC, RC, Ballari on 14th October, 2022.
- Group of farmers from Arrakonam and Ranipet Districts, Tamil Nadu under ATMA Scheme visited ICAR-IISWC, RC, Ballari on 14th December, 2022.



- Dr M. Madhu, Director, ICAR, IISWC visited



- the RC, Chandigarh during 05-07th December, 2022.
- The team of forest officials from Gir Reserve Forest, Junagadh Forest Division and Anand Forest Division visited ICAR-IISWC, RC, Vasad on 21st December, 2022.





❖ *Miscellaneous*

• ICAR-IISWC, RC, Udthagamandalam organised a special cleanliness drive on 14th October, 2022 at Fern Hill Junction, Ooty, The Nilgiris, Tamilnadu.

• ICAR-IISWC, Dehradun and its Research Centers organised Fitness Rallies under 3rd edition of Fit India Run on 21st October, 2022.



- ICAR-IISWC, Dehradun and its Research Centers observed "Rashtriya Ekta Diwas" on 31st October, 2022.
- ICAR-IISWC, Dehradun and its Research Centers celebrated Constitution Day on 24th November, 2022.
- ICAR-IISWC, RC, Udhagamandalam organised an awareness camp and a rally at major tourist spots of Udhagamandalam *i.e.*,

Karnataka State Horticulture Garden, Udhagamandalam and Boathouse, Udhagamandalam to create mass awareness among the tourists, students and other local residents on 22nd December, 2022. B.Tech students (60) from Karunya University of Technology and Sciences, staff members of the RC, Udhagamandalam and ICAR-CPRI, Regional Station, Udhagamandalam participated in the event.



Success Stories

❖ *Increase in farm income through improved rainfed crop production with adoption of site-specific Soil and Water Conservation (SWC) measures*

ICAR-IISWC, RC, Udhagamandalam demonstrated improved hybrid sunflower production under rainfed conditions along with adoption of site specific SWC measures in SCSP adopted villages of Gundlupet Taluk, Chamarajanagar District of Karnataka. The area received an average annual rainfall of around 500-600 mm. good quality improved hybrid seeds of sunflower was distributed along with the demonstration of effective and efficient use of available resources like water, seeds, manures *etc.*, package of practices for timely agricultural operations was made. More than 80 rainfed farmers got benefitted covering an area of around 40 ha by earning an average net income of Rs. 30,000/- per acre. The estimated BC ratio was 2.25. The estimated return for adopting the field bund technology as a site specific SWC measure was

around Rs. 5,440/- per acre. Estimated average gross return due to this intervention in the selected village was around Rs. 53,00,000. To commemorate the success of the rainfed hybrid sunflower production in increasing the farmer's income, a field day cum training programme was organized from IISWC, RC, Ooty at the farmer's field in Passaihnapura village, Karnataka in which more than 50 farmers participated and expressed their views on adoption of SWC measures and improved technologies of rainfed agriculture.



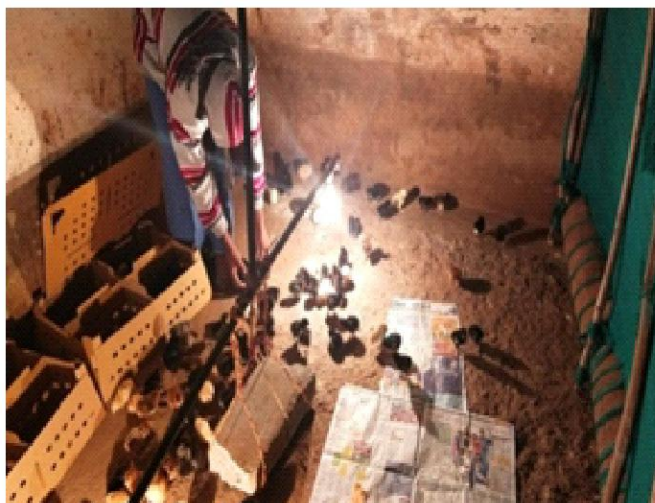
Improved hybrid sunflower production with site specific SWC measures



Field day cum training programme conducted on success of rainfed farming technology

❖ Backyard poultry farming as a livelihood option for economic empowerment of landless farmers

ICAR-IISWC, RC, Udhagamandalam introduced and demonstrated backyard poultry farming at SCSP adopted villages of Gundlupet Taluk, Chamarajanagar District of Karnataka. The area received an average annual rainfall of around 500-600 mm and mainly dominated by rainfed agriculture. From the backyard poultry activity 45 numbers of small & marginal farmers and landless labourers of the region got benefitted due to their income diversification. Dual purpose one day-old poultry chicks procured from Central Poultry Development Organisation & Training Institute, Bengaluru, Karnataka was distributed along with introduction of scientific method of poultry rearing providing poultry feeds and vaccinations at regular intervals. Around 3000 chicks were distributed under SCSP, generating gross return of Rs.7,00,000/- from the sale of birds and Rs 6,00,000/- from the sale of eggs



Backyard poultry farming under SCSP

❖ Enhancing farm income and livelihood status of Tribal people by adoption of Jhola kundi- A Success Story under Rashtriya Krishi Vikash Yojana (RKVY)

Koraput district is one among the backward



tribal dominated district of Southern Odisha. It is the home of many indigenous tribal communities. Many of the tribes are living in remote areas and they have limited access to the developmental activities. The major occupation of tribes in the region is agriculture and its allied activities. From the preliminary survey of RKVY showed that the average farm size owned by them was less than 1 ha per family and they are extensively growing millets and rice crops. Tribal farmers were growing vegetables in kharif season in low and medium lands in a limited area mostly as an inter crop and or as main crop where the water source is available to them. Jhola land are low lands- widened and terraced extended gully beds, comprising 5% of the

land scape of the Eastern Ghat High Land zone of Odisha and are rich in water due to flow of perennial streams and springs. As majority of the area of the district falls under rain-fed mixed farming and the dependency on rainfall is very high, provision of water during post-monsoon is a pre-requisite to improve the economic condition of small and marginal farmers, in this context, construction of water harvesting structures and efficient utilization of stored water is need of the hour.

Among various water harvesting structures, *Jhola kundi* can be considered as a viable source of irrigation during post monsoon and summer season, and the harvested water in *Jhola kundi* can be used for vegetable production. ICAR-IISWC, Research Centre, Koraput constructed 28 nos. of stoned pitched *Jhola kundi* a water harvesting technology with solar operated 1 HP pumps along with water distribution system to tribal farmers belongs to 7 blocks of Koraput district (Pottangi, Boipariguda, Koraput, Nadapur, Semiliguda, Lamataput and Dasamantapur). This low-cost environmentally friendly water harvesting technology helped farmers to cope up with water-related uncertainties during *rabi* and summer seasons and to avert the impending water crisis in vegetable production from this technology the harvested water was able to irrigate nearly 64 ha of land covering 136 farm families. Apart from this, high yield vegetable seeds were distributed to farmers. This technology benefited tribal farmers for taking up off season vegetable and it has improved the farm net income up to 170% and reduced rain dependent agriculture and drudgery of farm women.

❖ *Eucalyptus Paired Row Agroforestry for improving farm income in high land region of Eastern Ghats*

In order to improve the land productivity and farm returns of tribal farmers in the central Eastern Ghats, ICAR-IISWC, Research Centre, Sunabeda developed and introduced an new agroforestry systems called Eucalyptus paired row agroforestry model. In the model, two paired row of Eucalyptus clones are planted at six/eight meter wide and in between the rows, agriculture crops were cultivated with standard practice. In this model, the wide spacing and east-west orientation of the Eucalyptus rows allows sufficient light for the agricultural crop production. Additionally, the vertical up right canopy of eucalyptus hybrid clone



Jhola kundi: A water harvesting technology with solar operated 1 HP pumps along with water distribution system installed/constructed at farmer's field

does not interfere with the sunlight. In addition, the annual soil turnover helps in pruning the spreading top lateral roots and helps in mixing of fallen leaf and bark, which ultimately minimize root competition and decomposition of leaves/bark and adds organic materials to soil.

The crops such as Nizer, Finger millet, Small millet, Zinger, Chilli and Maize can be grown and found no difference in yield between agroforestry systems and monoculture. Apart from the agriculture production, sale of eucalyptus wood in four years rotation provides fuel wood for the rural farmers. Additionally young branches of the Eucalyptus trees provide fuel wood and staking material for the rural population which reduces the pressure on the forest.

Considering scope and advantageous, ICAR-IISWC, Research Centre, Sunabeda introduced this Eucalyptus paired row model in the 48 farmer's field covering 65 ha area in six TSP adopted villages. Among all the farmers adopted, Sh. Domburu Guntha, 45yr, Sh. Jaggu, 36 yr. and many other old tribal farmers achieved a good success from the adaptation of the agroforestry model.

Sh. Domburu has adopted this model in 1.5 ha area with Zinger and Finger millet as inter crop. Due to the Eucalyptus trees in the agroforestry system, the effective area for crop cultivation is reduced to 0.9 ha area. Even though with 40% reduced crop area, the Domburu obtained nearly equivalent quantity of Zinger and Finger millet in comparison to solo crop due to the improved productivity of the zinger and finger. Sh. Jaggu has also adopted the agroforestry model in a 1 ha area with finger millet as inter crop. He obtained 13.6 quintal of Finger millet in Agroforestry model which is nearly equivalent to the productivity of the sole Finger millet even after the reduced area due to Eucalyptus trees.

The improved productivity is due to the microclimate modification and sheltering effect created by the Eucalyptus paired row. During 2021-22, majority of the farmers harvested the Eucalyptus trees and obtained an average of Rs, 1.43 lac/ha from the sale ha after 5 years of planting. The technical guidance, support and field visit provided by the scientific team of ICAR-IISWC, RC, Sunabeda helps them to attain high productivity of agriculture crop in addition to the revenue generated by the sale of Eucalyptus trees for pulp wood industry.



a) Eucalyptus paired row with Finger millet crop



b) Paired row with zinger crop

Research Note

❖ *Soil erosion and runoff studies in system crop intensification of different crops with mulching*

System Crop Intensification methods are particularly relevant for resource limited, nutritionally vulnerable households because SCI like SRI relies minimally on purchased inputs.

Planting of crops across the slope is one of the important practices to create resistance against the runoff water, since plant to plant distance is quite less (close growing) in comparison to row-to-row distance. In system crop intensification (SCI), both plant to plant and row to row distances are kept equal, hence, it may differ in terms of run off and soil

loss. Furthermore, the response of mulching in SCI may prove beneficial to reduce soil erosion.

Crops: (System crop intensification)

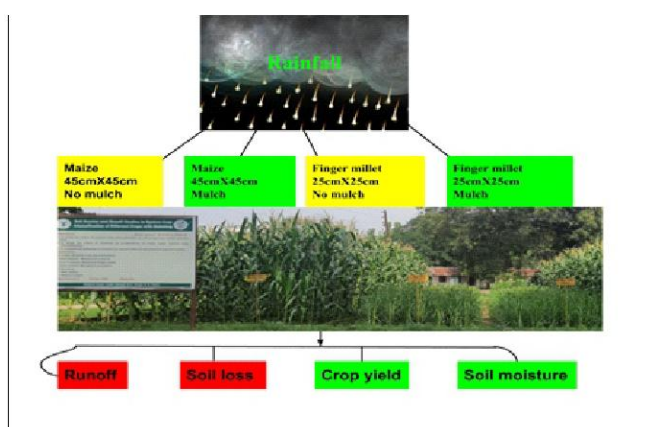
1. Rabi season: Wheat and mustard
2. Kharif season: Maize and ragi (finger millet)
3. Zaid season: Summer mungbean (new crop) and fallow

Mulching

1. With mulch
2. Without mulch

❖ Salient findings:

- Crops grown under system cropping intensity package, responded differently under mulching treatment. Grain yield of ragi (2.5 t ha^{-1}) wheat (4.5 t ha^{-1}) and mustards (1.5 t ha^{-1}) was higher with mulch treatment whereas, maize produced higher yield (5.4 t ha^{-1}) under without mulch treatment in comparison to the treatment with mulch.
- The highest system productivity during rabi 2021-22 was recorded under maize-mustard system without mulching (4.8 t ha^{-1}) which remained statistically superior to rest of the treatments, whereas, the highest system productivity recorded under the treatment ragi-wheat (5.4 t ha^{-1}) during kharif 2022 but remained statistically at par to rest of the treatments.
- The highest run off (%) was recorded under the treatment maize -mustard without mulch (32.2%) and the minimum under the treatment ragi+ mulch – wheat + mulch (17.3%).
- Similarly, the maximum soil loss (t ha^{-1}) recorded under treatment maize-mustard without mulch (8.1 t ha^{-1}) and the minimum under ragi + mulch - wheat + mulch (2.0 t ha^{-1}).



Graphic abstract

- Effect of mulch treatment showed trend of higher soil moisture content (%) at 0-15 and 15-30 cm soil depths
- ❖ *Improvisation of soil working techniques for enhancing tree establishment under rainfed conditions of North-Western Himalayas*

This study has been taken up to develop effective soil working techniques which can counter water scarcity and low temperature and enhance tree establishment under rainfed conditions. At research farm Selaqui, two field experiments on horticulture are conducted where Mango (*Mangifera indica*) has been planted with seven treatments while Malta (*Citrus sinensis*) with six treatments. These field experiments were laid in Randomized Block Design (R.B.D.).

Treatments imposed under different field experiments

Treatment	Mango planted in 2018	Malta planted in 2019
T ₁	Recommended Practice (RP)	
T ₂	Hydrogel application (HA) @20g plant ⁻¹	Not imposed in Malta
T ₃	Modified sub-surface planting (MSP) through pipe /waste plastic bottles / hollow bamboo	
T ₄	Plastic mulching (PM) in tree basin (Reflective 70 gsm / LDPE 100 micron)	
T ₅	T ₃ + T ₄ (MSP+PM)	
T ₆	Enriched compost application (ECA - VAM 2 kg, PSB 100 ml, Trichoderma 0.5 kg, SSP 15 kg and Urea 1.5 kg per 50 cft of FYM)	
T ₇	T ₃ + T ₆ (MSP+ECA)	

Data on on yield attributes recorded in both Mango and Malta (sweet orange) shows that significantly higher Mango fruit yield of 7.8, 9.5 and 8.2 kg plant⁻¹ were recorded in treatment MSP, MSP+PM and MSP+ECA, respectively, due to the adoption of sub-surface planting in comparison to all the other treatments imposed. In Malta also, similar results were observed. Other treatments of

Fruit yield attributes of mango and Malta under different treatments

Treatment	Mango			Malta		
	Av. No. of fruits plant ⁻¹	Av. fruit weight (g)	Fruit yield (kg plant ⁻¹)	Av. No. of fruits plant ⁻¹	Av. fruit weight (g)	Fruit yield (kg plant ⁻¹)
RP	6.4	9.0	4.7	88.6	127.5	11.3
HA	26.7	185.4	5.0	Not imposed		
MSP	38.6	201.5	7.8	120.3	140.4	16.9
PM	25.5	191.4	4.9	116.3	133.4	15.5
MSP+PM	39.0	242.3	9.5	139.6	139.0	19.4
ECA	30.3	207.1	6.3	129.5	138.1	17.9
MSP+ECA	39.8	205.2	8.2	137.2	143.8	19.7
CD ($p \leq 0.05$)	7.2	36.9	2.0	21.2	6.6	3.1

plastic mulching in tree basin and application of enriched compost in Malta also performed significantly better than control.

During summer months, in sub-surface soil layer, the soil moisture recorded was 45.5% higher in 15-30 cm layer and 71.9 % higher in 30-45 cm layer as compared to that was recorded in upper layer (0-15 cm); while in winter season soil moisture was observed to be 42.1% higher in 15-30 cm layer and 53.2 % higher in 30-45 cm layer in sub-surface as compared to surface layer (0-15 cm). Similarly, in case of Malta field, during summer months 28.5 % higher moisture was recorded in 15-30 cm layer, 62.3 % higher in 30-45 cm layer and during winter it was 34.6% higher in 15-30 cm layer

and 53.3 % higher in 30-45 cm layer as compared to that was recorded in surface layer. Thus, sub-surface soil, moisture was retained even during dry period. Modified sub-surface planting provided proofing against moisture stress in surface layer during dry spell.

Salient findings:

- Sub-surface tree planting method found to be innovative and effective in providing proofing against low moisture stress in tree establishment.
- Utilization of favourable moisture condition in the sub-surface with the imposition of this planting technique resulted to better plant growth and yield of horticultural trees.



Malta under sub-surface planting



Mango under sub-surface planting



Publication [Research Papers/Books / Bulletins etc.]

Research Papers:

- A Barh, K Sharma, P Bhatt, SK Annepu* *et al.* 2022. Identification of key regulatory pathways of basidiocarp formation in *Pleurotus* spp. using modeling, simulation and system biology studies. *Journal of Fungi*, 8: 1073. <https://doi.org/10.3390/jof8101073> (NAAS Rating 11.82).
- T Rajasivaranjan, Aavudai Anandhi, N R Patel, C V Srinivas, Kumar Veluswamy*, U Surendran and P Raja (2022) . “Integrated use of Regional Weather Forecasting and Crop Modelling for Water Stress Assessment on rice yield”. *NATURE SCIENTIFIC REPORTS*. <https://doi.org/10.1038/s41598-022-19750-z>. ISI Thomson Reuters Impact Factor IF.4.89; (NAAS Rating 10.89).
- R.B. Meena, S.C. Meena, R.H. Meena , Ramu Meena , Mahaveer Nogiya, R.L. Meena , R.S. Meena and Shiv Singh Meena 2022 “Appraising Physical Properties of Soil Under Different Prevailing Land Use Systems in the Sub-humid Southern Plains and Aravalli Hills of Rajasthan” published in *The Journal of Plant Science Research* 2022-38 (1)205–214 (NAAS Rating 10.64)
- Dutta, S., Pal, S., Panwar, P., Sharma, R.K. and Bhutia, P.L., 2022. “Biopolymeric Nanocarriers for Nutrient Delivery and Crop Biofortification. *ACS omega*, 7(30), pp.25909-25920. (NAAS Rating 9.51).
- Paul S., Premi O.P., Meena S.L., Asha A.D., Nivetha N., Vikram K.V., Lavanya A.K., Rathi M.S., Bandeppa S. and Manjunatha B.S., 2022 “PGPR improve physiological and yield attributes in mustard under different regimes of water suppl”y. *Archives of Agronomy and Soil Science*, DOI: 10.1080/03650340.2022.2099540 (NAAS Rating 9.09).
- Panwar Pankaj, Devagiri G. Mahalingappa, Rajesh Kaushal, Daulat Ram Bhardwaj, Sumit Chakravarty, Gopal Shukla, Narender Singh Thakur , Sangram Bhanudas Chavan , Sharmistha Pal, Baliram G. Nayak, Hareesh T. Srinivasaiah, Ravikumar Dharmaraj, Naveen Veerabhadraswamy, Khulakpam Apshahana, Chellackan Perinba Suresh, Dhirender Kumar, Prashant Sharma, Vijaysinha Kakade, Mavinakoppa S. Nagaraja , Manendra Singh, Subrata Das, Mendup Tamang, Kanchan, Abhilash Dutta Roy and Trishala Gurung (2022) “Biomass Production and Carbon Sequestration Potential of Different Agroforestry Systems in India: A Critical Review”. *Forests* 13(8): 1274. <https://doi.org/10.3390/f13081274> (NAAS Rating 8.63).
- Maurya, U. K., Roy, T., Bihari, B., Chand, L., Kumar, S., Bishnoi, R., Singh, M., Kadam, D. M., Muruganandam, M., Singh, L., Shrimali, S. S., Sharma, S. K., Kumar, R., Mallik, A. and Verma, R. (2022). “Impact of altitude on soil physico-chemical properties in a topo-sequence in mid Himalayan watershed: a case study from Dehradun District, Uttarakhand”, *Journal of the Geological Society of India* (NAAS Rating 7.46).
- Berliner, J., Alfred-Daniel, J., Rajkumar, B., Hombegowda, H.C., Manimaran, B., Parvez, R., Khan, M.R., Mhatre, P.H. and Govindharaj, G.P.P., 2022. “Fauna associated with wheat cultivation in high altitudes of the Nilgiris, India”. *Current Science* (00113891), 124(4). (NAAS Rating 7.169)
- Pal S., Yadav R.P., Arya S.L., K Sathiya and Bhutia, P.L., 2022. “Depth wise variation in selected soil properties as influenced by tillage and residue management in sandy loam soil of North-West Himalayas, India”. *Indian Journal of Agricultural Sciences*, 92 (8): 978–981. (NAAS Rating 6.37).
- G.L. Bagdi, S.L. Arya, P. Sundarambal, Om Prakash and Bankey Bihari 2022. “Determinants for Diffusion of mechanical soil and water conservation technologies of watershed management in India”. *International J. of Ext. Educ.* Vol. XVIII: ISSN:2319-7188: pp111-123. (NAAS Rating 5.95)



D. C. Meena, R. K. Dubey, Rama Pal, S. K. Dubey and Rajesh Bishnoi "Assessment of Farmer's Attitude and Social Vulnerability to Climate Change in the Semi-arid Region" *Indian Journal of Extension Education* Vol. 58, No. 3 (July–September), 2022, (46-50) ISSN 0537-1996 (NAAS Rating:5.95)

Mohapatra P, Acharya GC, Mohanty P, Kar DS, Lenka J and Pattanaik, K 2022. "Value addition in wood apple (*Limonia acidissima* L.)". *The Pharma Innovation Journal*: 11(1): 1673-1676. (NAAS rating 5.23).

D. Dinesh, P. Sundarambal, S. Manivannan, G.L. Bagdi, A.K. Singh, O.P.S Khola and S.M. Vanitha, 2022. "Farmer's behavioural perspective towards soil and water conservation interventions in Salaiyur watershed from semi-arid region of Tamil Nadu". *Indian Journal of Soil Conservation*, Vol. 50, No. 2, pp 159-166. (NAAS Rating 5.20)

G.L. Bagdi, S.L. Arya, P. Sundarambal, Om Prakash, Bankey Bihari, Ashok Kumar, A.K. Singh, R.B. Meena, S.L. Patil and M.N. Ramesha 2022. "Post-adoption behaviour of farmers towards agronomic soil and water conservation technologies of watershed management in India". *Indian J. Soil Cons.*, 50(3): pp232-239, (NAAS Rating 5.2)

Kant V., Patil R., Pal S., Sharma R. K., Dutta S., Panwar P. and Khola O.P.S., 2022. "Effect of Wood-Derived Porous Carbon Framework on Zinc Adsorption–Desorption Kinetics for Nutrient Flow". *ACS Agric. Sci. Technol.* 2 (6) pp1171–1178. (No NAAS score).

Books published:

Pankaj, P., Shukla, G., Bhatt, J.A. and Chakravarty, S. 2022 (edited). *Land Degradation Neutrality: Achieving SDG 15 by Forest Management*. Publisher - *Springer Nature*-Singapore

Vanitha, S. M., Renuka Rani, B., Kannan, K., Hombegowda, H. C., Sundarambal P. and Jamanal, S.K. (2022). *Community Based Climate Risk Management through Watershed Development*. Hyderabad:

National Institute of Agricultural Extension Management (MANAGE), Hyderabad, India. ISBN: 978-93-91668-06-8 (E-Book).

Book chapter:

Kumar N., Chhokar R.S., Tripathi S.C., Gill S. C. and Kumar M., 2022 "Frontier Mechanization Technologies for Wheat Based Cropping Systems". *Springer Nature*, 491-510. https://doi.org/10.1007/978-981-16-4134-3_18

Bulletin/Booklet/Folder etc.:

Ojasvi P.R., Patil N.G., Shrimali S.S., Naik B.S., Kar S. K., Sharma K.K., Manivannan S., Thilagam V. K., Sahoo D.C., Dash Ch.J., Singh A.K., Khola O.P.S., Ali S., Kumar S., Kumar M., Singh G., Madhu M., Reddy K.S., Sethy B.K., Nagdeve M.B. and Patode R.S., 2022 "Rainwater Harvesting Potential Database of India (1.0)". ISBN:978-81-954744-2-4.

Madhu. M/, Dash. Ch. J., Singh, C., Sahoo, D.C., Adhikary, P.P., Kumar, S., Hombegowda, H.C., Naik, G.B., Barla, G.W., Kindal, S., Kumar, S. (2022). "Empowering tribal communities through climate resilient good agricultural practices and livelihood enterprises in Eastern Ghats region of Odisha", 19p. ICAR-IISWC, Research Centre, Koraput, Odisha. ISBN: 978-81-954744-4-8.

Ch. J Dash, K Lenka, J Lenka, DC Sahoo, Suresh Kumar, S Kumar, Rajesh Bishnoi, PP Adhikary and M Madhu (2022). "Role of soil testing in food and nutritional security (In Odiya)"

Ch. J Dash, K Lenka, J Lenka, DC Sahoo, Suresh Kumar, S Kumar, Rajesh Bishnoi, M Madhu and PP Adhikary (2022). "Nutrient deficiency symptoms in plant (In Odiya)"

Popular articles

Bhutia P. L., Pal S., Singh N.R. and Kumar M., 2022 *Vegetative Measures for Soil and Water Conservation in Agricultural Lands. Agriculture and Food: E-Newsletter (E-ISSN: 2581-8317). Article ID: 38693, 4(12):281-283.*



- Bhutia P. L., Pal S., Singh N.R. and Kumar M., 2022 Vegetative Measures for Soil and Water Conservation in Agricultural Lands. Agriculture and Food: E-Newsletter (E-ISSN: 2581-8317). Article ID: 38693, 4(12):281-283.
- J Lenka, and S Behera (2022). Drumstick (*Moringaolerifera*) - A Miracle Tree. Agriculture & Food: e-Newsletter, 04(02):6-9 Blog has been published in Mssrf website (<https://www.mssrf.org/small-blog/enhancing-knowledge-with-hands-on-trainings>)
- Kumar, P., Deo, C., Chand, G. and Yadav, D. 2022. Potato Processing: Way to Increase Income Souvenir, State Level Kisan Mela was published on “Innovative farming approaches in potato and other tuber crops farming for empowering farmers” in CAU, Imphal.
- Anita Kumawat, Dinesh Krmar, Devee Din Yadav, I Rashmi and S. Kala (2022) “Rabi Phaslon main Jal Prabandhan, Khad Patrika 9:18-26
- Conference/Symposium papers**
- Hombe Gowda HC presented a lead paper on “Model Watershed Planning and Implementation Experiences from Odisha” in National Conference on “Landscape Management for Preventing Flood and Reservoir Sedimentation” (LMPFRS-2022) 22-24th September, 2022 held at BAU, Ranchi (Jharkhand).
- Singh, Raman Jeet, Kumar, G., Sharma, N.K. Deshwal, J.S. and Madhu, M. (2022). Hydrologic and Sedimentologic Behaviour of Conservation Tillage Based Agro-geo-textiles in Sloping Croplands of Indian Himalayan Region. In: National Conference on “Landscape Management for Preventing Flood and Reservoir Sedimentation” (LMPFRS-2022) 22-24th September, 2022 at BAU, Ranchi (Jharkhand). pp. 29.
- Singh, Raman Jeet, Sharma, N.K., Kumar, G., Roy, T., Mandal, U., Gupta, A.K., Pal, R., Deshwal, J.S. and Madhu, M. (2022). Conservation Agriculture in Himalayan States of India: Prospects and Research Challenges Ahead. In: International Conference on Reimagining Rainfed Agro-ecosystems: Challenges & Opportunities during 22-24th December, 2022 at ICAR-CRIDA, Hyderabad. pp. 599-600.
- Kumar, S.S., Wani, O.A., Mir, S.A., Babu, S., Sharma, V., Chisti, M.H., Wani, F., Dar, S.R., Singh, R. and Yadav, D. 2022. Soil carbon dynamics in the temperate Himalayas: Impact of land use management. *Frontiers in Environmental Science*, p.2477. <https://doi.org/10.3389/fenvs.2022.1009660>
- Das, A., Babu, S., Singh, R., Kumar, S., Rathore, S.S., Singh, V.K., Datta, M., Yadav, S.K., Wani, O.A. and Yadav, D., 2022. Impact of Live Mulch-Based Conservation Tillage on Soil Properties and Productivity of Summer Maize in Indian Himalayas. *Sustainability*, 14(19), p.12078.
- K Kannan, VK Thilagam, P Raja, D Dinesh and OPS Khola. 2022. Cover Crops for ecosystem services and climate resilient farming. presented in National Conference on “Landscape Management for Preventing Flood and Reservoir Sedimentation” (LMPFRS-2022) during 22-24th September, 2022 held at BAU, Ranchi (Jharkhand)
- SM Vanitha, Suresh Kumar, HC Hombe Gowda, K Kannan, OPS Khola, DV Singh, V Selvi and Murugesan. 2022. Impact Assessment of Catchment Treatments on Agriculture Production and Livelihood of Farmers in Semi-Arid Region of Tamil Nadu presented in National Conference on “Landscape Management for Preventing Flood and Reservoir Sedimentation” (LMPFRS-2022) during 22-24th September, 2022 held at BAU, Ranchi (Jharkhand)
- P.Raja, K.Kannan, P.Mahesh, U.Surendran, A.R.Suguna and R.Keerthana (2022). Developing Grassland towards soil health improvement and reducing Greenhouse Gas emission in the Nilgiris of Western Ghats Region in Southern India. Oral presentation done during the National convention of ISSS, New Delhi at MPKV, Rahuri, Maharashtra during 15-18th November, 2022.

Lectures Delivered/Academic Services Offered

- Dr P Sundarambal, Principal Scientist delivered lectures on “Conservation measures in young tea plantation” in the programmes on “Training cum awareness programme on Soil and Water Conservation practices for Erosion Control in Hill Farming” conducted during 16-30th November, 2022 by the Research Centre Udhagamandalam.
- Dr Sudheer Kumar Annepu, Scientist delivered an invited lecture on the topic “Marketing of Mushrooms: Opportunities and Strategies” during the National Training Programme on Mushroom Cultivation for Entrepreneurs organized by ICAR-Directorate of Mushroom Research, Solan on 17th November, 2022.

Publication Summary

Name of the publication		No.
Research Papers	NAAS Rating >7	8
	NAAS Rating <7	7
	Total	15
Books Published		2
Book Chapters		1
Bulletin/Booklet/Folder <i>etc.</i> ,		4
Popular Articles (4)	Hindi	1
	English	3
	Total	4
Conference/Symposia Papers		8
Lectures /Academic Services <i>etc.</i> , offered		2

Awards and Recognitions

- Dr Indu Rawat received first prizes in Debate, Speech and Dictation competition and 3rd prize in noting and drafting competition on 19th September, 2022.
- Dr Indu Rawat received Women Scientist Award in International Conference on Contribution of Agriculture for Challenges and Opportunity of Food Security till 2030 during 15-16th October, 2022.
- Dr Indu Rawat received best paper award in 14th International Conference at New Delhi organized by the society of Tropical Agriculture during 17-18th December, 2022.
- Dr Trisha Roy received the Budding Scientist Award 2021 by Indian Association of Soil and Water Conservationists during LMPFRS, 2022 held during 23-25th September, 2022 at Ranchi, Jharkhand.
- Dr Lekh Chand invited as guest of honour in 'Kisan Udyamita Utsav, programme held in Alpine Group of Institute, Dehradun on 24th December, 2022.
- Dr Matber Singh awarded merit certificate in “Forestry” in four-month certificate course on “Soil and Water Conservation and Watershed Management” (123rd Batch).
- Dr Abimanyu Jhajhria awarded merit certificate in “Overall Soil Management for Controlling Land Degradation” in four-month certificate course on “Soil and Water Conservation and Watershed Management” (123rd Batch).
- Dr Abimanyu Jhajhria awarded merit certificate in “Local Project” in four-month certificate course on “Soil and Water Conservation and Watershed Management” (123rd Batch).
- Dr Abimanyu Jhajhria awarded merit certificate in “Integrated Watershed Management” in four-month certificate course on “Soil and Water Conservation and Watershed Management” (123rd Batch).
- Dr Abimanyu Jhajhria awarded merit certificate in “Conservation Agronomy” in four-month certificate course on “Soil and Water Conservation and Watershed Management” (123rd Batch).
- Dr Raman Jeet Singh, Senior Scientist (Agronomy) secured Best oral presentation award during a National Conference on “Landscape Management for Preventing Flood and Reservoir Sedimentation” (LMPFRS-2022) during 22-24th September, 2022 at BAU, Ranchi (Jharkhand).



- Ministry of Home GOI, NARAKAS (Central Gov.) awarded IISWC-Research Centre Agra IIIrd prize for its work done in Rajbhasha Hindi during 2020-21 among all the Central Government Offices at Agra on 09th November, 2022. Offices at Agra on 09th November, 2022.
- Dr Sharmistha Pal, Senior Scientist (Soil Science) received IASWC Gold Medal Award for the year 2021 (Field Functionary)
- Dr Pankaj Panwar, Principal Scientist received Fellow Award of Range Management Society of India for the year 2018.
- Dr. Rajesh Bishnoi got appreciation Certificate from IASWC for his services towards the association as “Business Manager” during the period 2020 and 2021.
- Dr K Kannan got Best oral presentation award from Indian Association of Soil and Water Conservation (IASWC), Dehradun
- Dr Vanitha SM received best poster for “Profitability analysis of sericulture as a subsidiary enterprise for farm income diversification” authored by Vanitha SM, BV Chinnappa Reddy and Nalina CN presented at the National Conference on Sericulture based multi-disciplinary approaches for climate resilience sustainability and livelihood security held from 26-27 August, 2022 at College of Sericulture, Chintamani, Chikkaballapur district, Karnataka.
- Dr P Raja, Principal Scientist elected as a Councilor of Indian Society of Soil Science, New Delhi for the biennium 2023-2024
- Dr P Raja, Principal Scientist co-chaired the Technical Session of Soil Genesis and Soil Mineralogy during the National Convention of Indian Society of Soil Science.
- Dr P Raja, Principal Scientist acted as external examiner for Ph.D Viva Voce in the faculty of Science at Periyar University, Salem on 29th Nov.2022 during the National convention of ISSS, New Delhi at MPKV Rahuri during 15-18th November,2022.
- Dr D. V. Singh served as expert member of Project Expert Group of ICFRE, Dehradun
- Dr D. V. Singh served as RAC member of the Forest Research Institute, Dehradun.
- Dr D. V. Singh served as member of the High-Powered Committee constitute by the Hon'ble Supreme court for Char Dham Priyojana in Uttarakhand.
- Dr D. V. Singh attended the National Level Event organized for Release of Evaluation Report on Innovation Excellence Indicators of R&D output and activities - a functional framework being designed by the Office of the Principal Scientific Adviser (PSA) to the Government of India.
- Dr D. V. Singh participated in Transformation Tour – Accelerating IT Transformation for New India organized by CRN powered by Dell Technologies at Dehradun on 9th November, 2022.
- Dr D V Singh evaluated master thesis on “Comparison of STCR and GRD Approach for Fertilizer Recommendation and Maize-Wheat Crop Rotation in North Western India” by Sandeep Kumar (Id. No. 56665) from GB Pant University, Pantnagar, Uttarakhand.
- Dr D V Singh evaluated master thesis on “Effect of Irrigation regime and sowing methods on productivity of radish” by Sushmita Silori (F-2020-63-M) from Dr YS Parmar University of Horticulture and Forestry, Solan, Himachal Pradesh.

- Dr Lekh Chand evaluated thesis and conducted thesis viva of M.Sc. (Agronomy) student, FOA, Wadura, SKUAST-Kashmir, Srinagar on September 21, 2022.
- Dr Lekh Chand invited as examiner in viva voce of Ph. D student of Agronomy, FOA, Wadura, SKUAST-Kashmir, Srinagar on 21st September, 2022.
- Dinesh Jinger, Rajesh Kaushal, D. Dinesh, Gaurav Singh & A.K. Singh received best paper award in national conference on “Landscape Management for Preventing Flood and Reservoir Sedimentation (LMPFRS-2022)” for paper entitled “Sivlo-aromatic system for enhancing ecosystem services in Mahi ravines of Central Gujarat” organised by the Indian Association of Soil and Water Conservationists, Dehradun during 22 – 24th September, 2022 at Birsa Agricultural University, Ranchi (Jharkhand).
- Dr RS Yadav, Pr. Scientist & Head, co-chaired the technical session I on 'Integrated Land & Water Management' on Sept. 24, 2022 in SUFLAM -22 at RLBCAU, Jhansi
- Dr RS Yadav, Pr. Scientist & Head, acted as a panelist in technical session I on 'Integrated Land & Water Management' & technical session II on 'Success story in sustainable soil health development from Bundelkhand region' on Sept. 24, 2022 in SUFLAM -22 at RLBCAU, Jhansi
- Mrs. Varsha Gupta, Technician participated in ICAR North Zone Sports Tournament- 2022 and got a gold medal in the relay race(women), a silver medal in Javelin throw, and a bronze in Discus throw.
- Mrs. Varsha Gupta, Technician participated in a quiz competition on “Vigilance, Integrity, Good Governance, CCS (CCA), administrative, store and Purchase Rules/Procedures” under Vigilance Awareness Week (31st October to 6th November 2022) and got 2nd position.
- Mrs. Varsha Gupta, Technician participated in the debate competition “Is corruption free India a Reality in the Future” under Vigilance Awareness Week (31st October to 6th November 2022) and got 3rd position.
- Dr P Sundarambal, Principal Scientist evaluated thesis on “Geospatial based watershed characterization and modelling in Nanjanad hill watershed of Western Ghats region” submitted by Mr. Gangannagari Karthik Reddy for M.Tech in Soil and Water Conservation Engineering from TNAU, Coimbatore.
- Dr M Muruganandam, Principal Scientist invited and deliberated in a Two-days Inter-State Level Capacity building workshop on compilation of environment account in India organized by Uttarakhand State Economics and Statistics Department in collaboration with Ministry of Statistics and Programme Implementation [MOSPI], New Delhi during 17-18th November 2022 at Dehradun.
- Dr M Muruganandam, Principal Scientist presented an invited presentation in international webinar on sustainable agriculture organized by Govt. Degree College, Kathua, Jammu during 10-11th October, 2022.
- Dr M Muruganandam, Principal Scientist as an invited resource person, sensitized 50 college teachers on environmental concerns in agriculture and subsectors in the “Online Refresher Course in Environment Studies and sustained development organized by Dr. Babasaheb Ambedkar Marathwada University, Aurangabad, on 22nd September, 2022.

Personnel (Appointment/Superannuation / Promotion/ Transfer etc.)

New appointments/Joining:

1. Sh. Hukum Singh, Tech. Officer & Vehicle Driver joined on transfer from RC Kota on 26th September, 2022
2. Sh. Sanjay Pant, AAO joined on transfer from RC Kota on 12th October, 2022.
3. Md. Basit Raza, Sr. Technical Officer, joined at RC, Koraput on 17th October, 2022
4. Ms. Chaithra T S, Sr. Technical Officer joined on 23rd December, 2022

Retirement:

1. Sh. Ram Singh, SSS retired on 30th September, 2022
2. Sh. Than Chand Sharma, Tech. Officer retired on 30th September, 2022
3. Sh. Krishan Kumar, Assistant retired on 30th September, 2022
4. Smt. Seema Khanna, ACTO (Library), retired on 31st October, 2022
5. Sh. Mangalbhai N. Parmar, SSS retired on

31st October, 2022

6. Sh. Sohan Singh Bisht, SSS retired on 31st October, 2022
7. Sh. Pradeep Kumar, SSS retired on 31st October, 2022
8. Sh. Bhagat Ram, SSS retired on 31st December, 2022
9. Sh. Vijay Kumar, SSS retired on 31st December, 2022
10. Smt. Satya Devi, SSS retired on 31st December, 2022

3. Dr Jotirmayee Lenka, Scientist, Promoted to Scientist Senior Scale
4. Dr Rajesh Bishnoi, Scientist, Promoted to Scientist Senior Scale
5. Sh G.B. Naik, Sr. Technical Officer, Promoted to Asst. Chief Technical Officer
6. Sh. G.W. Barla, Technical Officer, Promoted to Sr. Technical Officer
7. Sh. Lallan Mishra, Assistant promoted to Asst Administrative Officer

Promotion/Up-gradation:

1. Dr H.C. Hombegowda, Scientist, Promoted to Senior Scientist
2. Dr Ch. Jyotiprava Dash, Scientist, Promoted to Senior Scientist

Transfer:

1. Dr. Rajesh Bishnoi, Scientist (Agril. Extn.) relieved on 30th December, 2022 to join IIPR RS Bikaner.
2. Smt. Poonam Khatri, Technical Assistant relieved on 30th December, 2022 to join CPCRI Kasargod, RS Kayamkulam

In News



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