



ICAR-IIFSR

Newsletter



ICAR-Indian Institute of Farming Systems Research
(ISO 9001:2015 Certified Institute)

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From the Director's Desk



Dear Readers,

With Immense pleasure I present to you this issue of the ICAR-IIFSR Newsletter, covering significant events, activities, and achievements spanning from July to December 2023. Our unwavering dedication to research and extension is unmistakably evident in the concrete outcomes we have attained. Over the past six months, we have borne witness to breakthroughs that hold the promise of shaping the future of our field, while our steadfast commitment to excellence remains resolute. Through collaborative endeavors, we have not only bolstered our internal capacities but also garnered commendation for the institute, with 8 technologies/ concepts/ models being duly recognized by ICAR and awarded certificates of recognition on the occasion of ICAR Foundation Day. As we persist in our journey of exploration and dissemination, I implore each member to sustain their inspiration and active engagement, contributing to our collective pursuit that truly yields a significant impact.

Let us continue to foster an environment where innovation flourishes and achievements are duly acknowledged. Together, we possess the potential to achieve remarkable outcomes and leave an enduring imprint on the farming community.

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About the Institute

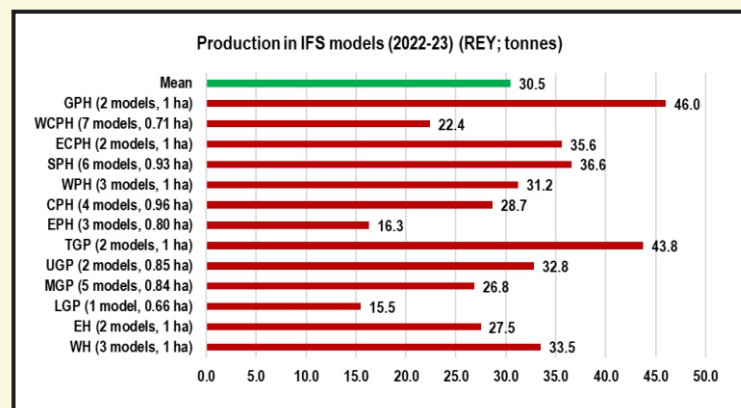
With a 70-year history, the ICAR-Indian Institute of Farming Systems Research has played a pivotal role in advancing agronomic management practices and advocating for alternative cropping systems. Originally focused on fertilizer experimentation, it initiated the "Simple Fertilizer Trials on Cultivators' Fields" in 1953 under the Indo-American Technology Cooperation Agreement. This initiative expanded into the 'All India Coordinated Agronomic Experiments Scheme (AICAES)' in 1956, emphasizing agronomic research encompassing cultural practices, irrigation, nutrition and multiple cropping. Recognizing the necessity for a holistic approach, the institute underwent a transformation during the 7th five-year plan in 1989, becoming the 'Project Directorate for Cropping Systems Research (PDCSR)'. Subsequently, during the 11th five-year plan, it was re-designated as the 'Project Directorate for Farming Systems Research (PDFSR)'. In 2014, during the 12th five-year plan, PDFSR attained the status of a full-fledged institute and was renamed the "ICAR-Indian Institute of Farming Systems Research." The institute, comprising the AICRP on IFS (74 centers) and NPOF (20 cooperating centers), covers 26 States/UTs and is organized into three research divisions (Integrated Farming System, Organic Agriculture Systems and Cropping Systems & Resource Management), one Project Coordinating unit, and one section (Technology Transfer and Assessment) to comprehensively address its mandate.

Research Highlights

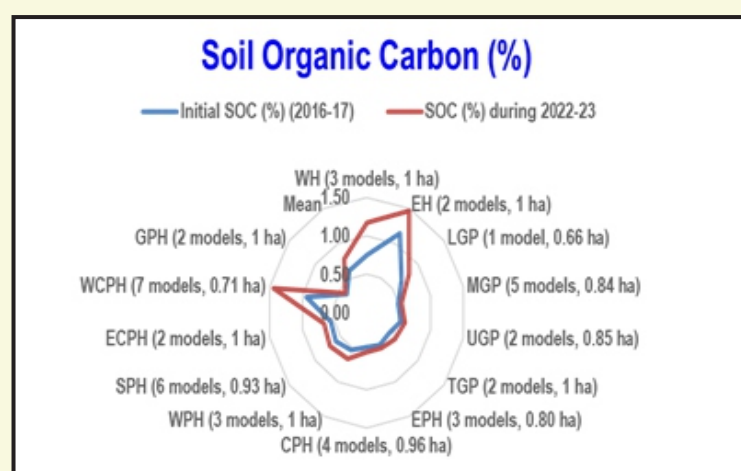
AICRP on Integrated Farming Systems (On-station National)

(AK Prusty, M Shamim, MA Ansari, Raghuveer Singh and Raghavendra KJ)

Under All India Coordinated Research Project (AICRP) on Integrated Farming Systems (IFS) on station experimentation on sustainable resource management for climate smart IFS were implemented (25 main, 11 sub and 5 ICAR institute centres). Mean system production from IFS models in terms of REY was found to be 30.5 tonnes.



Other key performance indicator like improvement in soil organic carbon were recorded for the IFS models and presented as mean of IFS models of different ACZ.



Modelling the effect of nitrogen options under conventional and conservation tillage on growth, yield and nitrogen dynamics in maize

(Kamlesh Kumar, AL Meena, PC Ghasal and Nirmal)

CERES-Maize model, embedded in the DSSAT (Decision Support System for Agro-technology) the CERES-Maize model, incorporated into the DSSAT framework, accurately simulated maize crop growth, yield and nitrogen dynamics under various tillage conditions. It effectively predicted phenological stages, with days to anthesis aligning within 5% of observed values. The model demonstrated good accuracy in leaf area index simulation (RMSE 0.49, nRMSE 8.11%) and yielded precise predictions for grain and biomass (RMSE 323 kg ha⁻¹, 1119 kg ha⁻¹). Despite a slight over-prediction in grain yield under specific conditions, the overall performance highlighted the model's efficacy in simulating maize productivity and nitrogen dynamics.

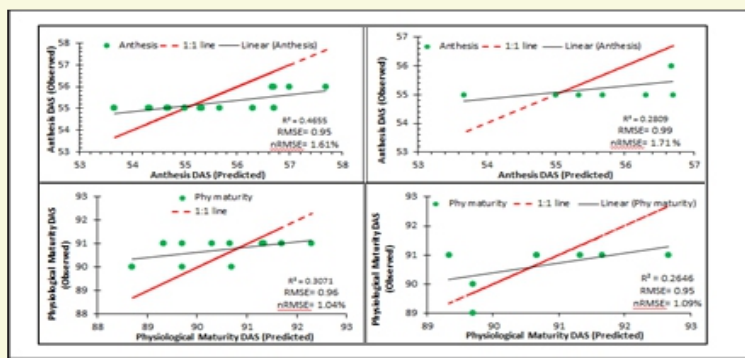


Fig 1. Simulated and observed anthesis and physiological maturity of Maize (cv. JC4 and Sujata)

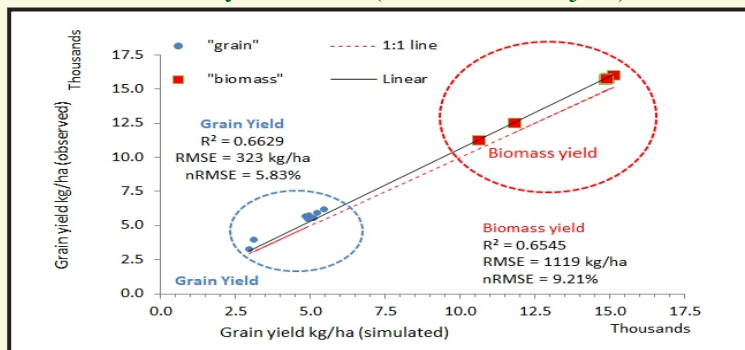


Fig 2. Simulated and observed grain and biomass yield of Maize (Sujata)

Establishment of ornamental and biofloc fisheries modules for farm livelihood improvement

(Peyush Punia, Lalit Kumar, Sunil Kumar and Jairam Choudhary)

A new carp breeding hatchery unit was introduced, featuring breeding and hatching pools, along with a spawn collection chamber, aimed at producing high-quality seeds for pond culture and the Biofloc system



Plate 1. Small scale fish hatchery unit, Injecting the brood fishes with Ovaprim and Comma Shaped fertilized eggs

A breeding trial for *Labeo rohita* involved injecting two 1.5 kg female fish with Ovaprim and four male fish with 0.2 mg/Kg body weight to induce spawning.



Plate 2. Hatched spawn in spawning pool, Collected Spawn from hatching pool



Plate 3. Spawn ready for stocking, spawn being stocked in the pond

The trial resulted in the production of 7-7.5 lakh fertilized eggs with 90% fertilization, which were incubated in the hatching pool for 48 hours. Subsequently, around 5.0 liters of spawn, equivalent to 5.0 lakh spawn were collected and released into a small pond. However, due to the absence of a suitable nursery pond, survival rates were suboptimal, prompting plans for improvements in the upcoming season.

Crop improvement for organic production system (Development of mustard strains for organic production system)

(D Kumar, LR Meena, KH Singh and Raghavendra KJ)

An attempt was made by Institute to develop high-yielding strains of mustard for production under a organic environment. The lines were produced from F₂ progenies derived from hybridization of indigenous and exotic parental lines of Indian mustard (*Brassica juncea* L.). The transgressive segregants selected from F₂ population of the crosses were subjected to continuous selfing and selection up to F₈ generations to achieve homozygosity stabilization. Nine promising homozygous strains of mustard were tested against locally adapted mustard variety "RH-749". Among them, MM16A241 (29.84 q ha⁻¹) and MM16A 082 (29.07 q ha⁻¹) were found significantly superior over standard check RH-749 (26.38 q ha⁻¹) in terms of seed yield. Duo varieties have recorded an average 11.64 % higher yield over the standard check along with 46% oil content.

Development of integrated organic farming system (IOFS) model for different regions of India (Uttar Pradesh, Uttarakhand and Punjab)

(N Ravisankar, MA Ansari, PC Jat, S Malik, Poonam Kashyap, Chandra Bhanu, Jairam Choudhary, Lalit

Kumar and CC-PI from NPOF centres)

Development of 3 IOFS models for 3 States namely Uttar Pradesh, Uttarakhand and Punjab are being undertaken. A total of 14 vegetables grown in 1800 m² (600 m² in kitchen garden and 1200 m² in fruit garden) gave yield of 1173.45 kg of vegetables. One-acre IOFS comprising of 3 modules such as food and fodder system (0.31 ha), livestock (0.06 ha) and fish (0.03 ha) established for Uttarakhand and food system recorded net income of Rs 46,305 with B:C ratio of 2.47. One-acre IOFS comprising of food and fodder system (0.30 ha), livestock (0.10 ha) established in Punjab recorded net income of Rs 45,634 with B:C ratio of 1.85.

Identification of climate resilient production system for different farming systems

(M. Shamim and CC-PI from AICRP-IFS on-Station centres)

Study on effect of rainfall situations during crop season on the grain yield of Dolichos bean in a particular production system revealed significant effect of annual rainfall amount on inorganic (3426 kg/ha) in deficit rainfall year. However, no significant effect on yield was recorded under inorganic production system during high and deficit rainfall year. Under the scenarios of organic and integrated crop management practices, no significant yield variations were recorded due to different rainfall scenarios.

AICRP on integrated farming systems- on farm research (AICRP-IFS OFR) (National)

(N Ravisankar, M Shamim, Raghuvver Singh, MA Ansari and Raghavendra KJ)

On-farm system yield gap between recommended dose of N, P₂O₅, K₂O and farmer's package was found to be 741, 2096, 1191 and 2035 kg ha⁻¹ in rice-rice, rice- wheat, rice-mustard and maize-wheat which can enhanced up to 1760, 2853, 1720 and 2511 kg ha⁻¹ with application of micronutrients.

If we consider all system together than yield gap between recommended dose of N, P₂O₅, K₂O and farmer's package was found 1531 kg ha⁻¹, which can have enhanced

up to 2116 kg ha⁻¹ with application of micronutrients. Agronomic Efficiency (AE) of N can be enhanced to 33, 25, 29 and 19 kg (grain yield /kg of N) from 8, 10, 9, 10 (grain yield /kg of N) in rice-rice, rice-wheat, rice-mustard and maize-wheat systems respectively by application of recommended dose of N with P and K instead of N alone. Mean economic response of cropping systems to applied nutrients indicates, a return of Rs 8.0, 5.7 and 5.8 per rupee invested on N, P₂O₅ and K₂O, respectively.



Plate 4. View of crop demonstration under OFR programme All India Network Programme on Organic Farming (AI NPOF) (National)

(N Ravisankar, M Shamim, Raghuvver Singh, MA Ansari and Raghavendra KJ)

An organic farming package of practices for 4 cropping systems suitable to 4 States has been developed besides the characterization of 690 organic and 214 natural farming farmers for identification of yield gaps under organic and natural farming. One acre integrated organic farming system model developed for Tamil Nadu has been established in 14 KVKs with financial support from the Government of Tamil Nadu.

Assessing the role and contribution of integrated farming systems for addressing One Health at household and landscape levels

(M Shamim, N Ravisankar, MA Ansari, AK Prusty and P Punia)

Under the Arid Agroecosystem, eight cropping systems such under soil health, family nutrition, livestock

nutrition and income enhancement crop modules have been taken. The results revealed that livestock crop module was found to be more promising with 120.6 q/ha/annum. Soil organic carbon as an indicator of soil health was found to be highest with the value of 2.83% under Groundnut + wheat – green gram.

Updating of cropping system atlas of India and preparation of futuristic crop plan for 2030, 2040 and 2050

(Raghuveer Singh, N Subash, V Ramamurthy, CA Ramarao, BMK Raju and M Shamim)

In last two decades across the different agro-climatic zones highest changes recorded in Western Himalaya (maize to rice dominance), Southern Plateau and Hill region (rice to cotton and maize dominance) and Central Plateau & Hills Zone (diversified to soybean-based system).

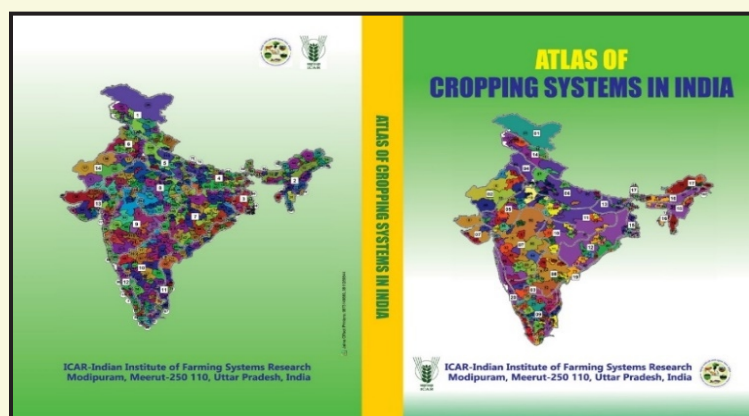


Plate 5. Updated cropping systems atlas of India

Area under rice-wheat system increased significantly in Middle, Upper and Trans Gangetic Plains while sugarcane-ratoon-wheat increased in Upper Gangetic Plains.

Estimation and valuation of ecosystem services from organic and natural farming systems in different agro-ecology.

(MA Ansari, N Ravisankar, M Shamim, Jairam Choudhary, Raghavendra KJ and CCPI from Modipuram, Ludhiana, Pantnagar, Bajaura, Gangtok, Almora, Coimbatore and Dharwad centre)

The experiment was conducted under AINP-OF at eight locations namely Modipuram, Ludhiana and Pantnagar in maize + cowpea (fodder) - wheat + chickpea; Bajaura, Gangtok and Almora in soybean + maize for grain - vegetable pea + green coriander and Coimbatore and

Dharwad in Cotton + green gram -rabi sorghum +chickpea cropping systems to monitor soil health, estimate and value the ecosystem services from organic and natural farming systems The higher valuation of maize + cowpea (fodder) - wheat + chickpea was recorded under AINPF (87% over control and 83.4% over NF) package. Similarly, cotton + green gram -rabi sorghum +chickpea cropping systems it was varied from 6.8% in NF to 65.6% over control.

Scaling and impact assessment of integrated farming system for livelihood of farmers

(Raghavendra KJ, AK Prusty, MA Ansari, Nirmal, P Punia, T Rajendran, Jacob John and Alibaba)

Impact analysis of integrated farming systems from Tamil Nadu and Kerala States indicated that the cost of cultivation has reduced by 27 % in IFS farmers compared to nonadopter while net return increased by 21% due to IFS. The B:C ratio for IFS farmers was 3.57 compared to others (2.60). Large quantity of residue recycled from crop+dairy+goat+poultry farming system and mean recycling was 22.5 tonnes per ha for IFS farmers. Residue for recycling was generated more from crop-based FS compared to vegetable-based IFS. There is an improvement in dietary diversity of food consumption for IFS farmers by 6.1 % with a mean score of 9.1 out of 13 food components. IFS also created additional employment of 18 % with a mean of 922 man-days per year compared to non-IFS farmers.

Pilot Project for Crop Diversification

(N Ravisankar, MA Ansari, Raghuveer Singh, Raghavendra KJ, M Shamim, AK Prusty, Poonam Kashyap and Nisha Verma)

Field implementation of crop diversification has been initiated in 4 districts, namely, Ahmednagar, Jhagram, Balangir and Khammam, respectively. Chickpea, green pea + mustard, groundnut + green gram, groundnut, soybean + pigeon pea, and maize + black gram + green gram was grown by diversifying the rice-based cropping systems. An area of 464.24 ha has been covered under the same. Training of extension officers is an important aspect of the project as it is critical to effectively disseminate knowledge and support farmers in crop diversification. A total of 40 trainings in 29 districts were conducted in which 790 personnel were trained of which 77.63 % are male and 22.37 % are female. A total of 32

trainings were conducted in 29 districts in which a total of 1021 farmers attended the training out of which 91.87 % were male, while, 8.13 % were female.

Co-creating sustainable water use in the Hindon sub-basin: A multiscale participatory approach

(AK Prusty, N Ravisankar, M Shamim, Raghavendra KJ, MA Ansari, Raghuveer Singh and Poonam Kashyap)

Study of income sources across surveyed locations revealed, Bhojpur has high % of income from daily wages. Sadholi Hariya has higher average income and Bhojpur and Sadholi Hariya has higher average income from livestock. It was observed that, Smaller farms supplement farm income with daily wage labour Larger farms have higher average livestock income but becomes a smaller % of total income. During the reporting period series of district-level stakeholder meetings (Four nos.) were held during July 18th to 31st in the Hindon basin. Collection of soil and water data are being done regularly for their qualitative study. During the period farmers were provided with improved fodder (Hybrid Bajra Napier) for higher green fodder yield to meet demand of animals while groundnut was introduced in the village.



Plate 6. View of stakeholder meeting conducted on 28th July 2023 at ICAR-IIFSR, Meerut

The Economics of Ecosystems and Biodiversity: Agriculture and Food initiative in Uttar Pradesh, India

(MA Ansari, M. Shamim, N Ravisankar, AK Prusty, Raghavendra KJ and Raghuveer Singh)

Under Natural Capital, in the form of water and sediment yield was modelled using Soil and Water Assessment Tool (SWAT) and evaluated under predefined land use policy and CC scenario considering monetary value of Rs. 18.43/ cum (0.223 USD/cum) for water. The social capital is estimated in terms of the Sustainable

Livelihood Security Index (SLSI), which was higher under organic farming as compared to inorganic farming. The participation of women in decision-making in different activities shows that about 43 and 21% women were involved in decision-making in field activities like which crop to be sown and labour being hired under organic farming as compared to conventional farming. Higher Agro-diversity index (ADI) values typically correspond to a more diverse system with greater resilience and CC impacts and market fluctuations. Under the OF the ADI value for Meerut, Bulandsahar, Aligarh, Mirzapur, and Hamirpur, are 57.21 (\pm 7.00), 53.33 (\pm 5.79), 51.50 (\pm 6.64), 57.74 (\pm 4.42), and 51.35 (\pm 4.78), while, for the conventional farming system the obtained values are 50.86 (\pm 6.31), 43.13 (\pm 5.16), 41.95 (\pm 5.38), 47.27 (\pm 4.65), and 43.21 (\pm 3.67), respectively..

Consortium for scaling-up climate smart agriculture in South Asia (C-SUCSes)

(MA Ansari, M Shamim, N Ravisankar, DK Singh, Rohitashv Singh and Subash Chandra)

Under the project, Kharkiya, Matila, Gairoli, Deolikhana, Champakhali and Khunt villages of Almora districts were selected for the demonstration of Organic and natural farming in finger millet +soybean cropping system and Agri-livestock-vegetable-allied enterprises based integrated farming system. Altogether, 60 farmers were selected for demonstration in 53 ha area. The improved organic farming practice increase 12.30% system yield over farmer practice and increased the 28.5% net returns and 5% benefit cost ratio. Similarly, adoption of the improved IFS model (Agri-livestock-vegetable-allied enterprises) increased the 6.7% system productivity, 17% net returns and 3.5% B:C ratio over existing farmer practice. Altogether 185 farmers were benefited with capacity building and awareness programme.

Atlas of Climate Adaptation in South Asian agriculture (ACASA)

(MA Ansari)

Identified the key hazards include i.e. frost, floods/waterlogging, hailstorm, high humidity (pests & diseases), extreme rainfall, low temperature (lower than optimal to record the key risks that may arise include yield losses, economic losses, crop failure, pest & disease

infestation, soil degradation and Crop damage in South Asia. Unseasonal heavy rains/hailstorm also recorded 43.6±18.3% yield reduction at harvesting stage. Some adaptation approaches like crop diversification and intercropping enhanced nearly 59.7±34 % production efficiency over sole cropping.

Characterization of existing farming systems in Uttarakhand

(Nisha Verma, VP Choudhury, Amit Nath and Vipin Kumar Choudhary)

A Survey was conducted to characterize the farming systems of Mid Hills of Uttarakhand comprising a random sample of 60 households covering Bechuradi, Balleigh and Lodh villages of Takula block (high productive) ; Dhamas, Canalbunga and Lodh villages of Hawalbagh block (Low productive), located in Almora district. The area is characterized by the average altitudes ranging from 1146 to 1541 MSL. Around 98.34 % of farm households found to be of marginal category whereas, only 1.66% was small category farmers in Mid hills of Uttarakhand. Mean operational landholding for Takula block was found to be 0.20 ha whereas, mean non-operational (uncultivated) landholding was found to be 0.057 ha. Similarly, mean operational and non-operational (uncultivated) landholdings for Hawalbagh block were found to be 0.25 and 0.05 ha respectively. Crop (kharif rice + millets+ legumes –wheat/lentil/mustard-summer rice) + Livestock (dairy/goatary) found to be the dominant farming system of Takula block, practiced by 96% of farmers whereas, Crop (millets/kharif rice +legumes –wheat/lentil/vegetables-maize) + Livestock (dairy/goatary/poultry) was the dominant farming system of Hawalbagh block, practiced by 94% of farmers. Meagre proportions (4-6%) of farmers are practicing horticulture based farming system as protected mode in surveyed population.



Plate 7. Women farmer of mid hills performing (a) weeding in maize (b) carrying fodder for livestock

The mean productivity of all the field crops is insignificant (40-60% lower than national average) except kharif rice. Finger millet (~1057 kg ha⁻¹), barnyard millet (~685 kg ha⁻¹), summer rice (~1220 kg ha⁻¹), black soyabean (~925 kg ha⁻¹), white soyabean (921 kg ha⁻¹), horsegram (661 kg ha⁻¹), maize (1258 kg ha⁻¹), blackgram (927 kg ha⁻¹), kharif rice (2791 kg ha⁻¹), wheat (959 kg ha⁻¹), lentil (362 kg ha⁻¹), mustard (462 kg ha⁻¹). The major reason for low productivity is wild animal menace and rainfed farming situation which are also the prominent constraint of the region.

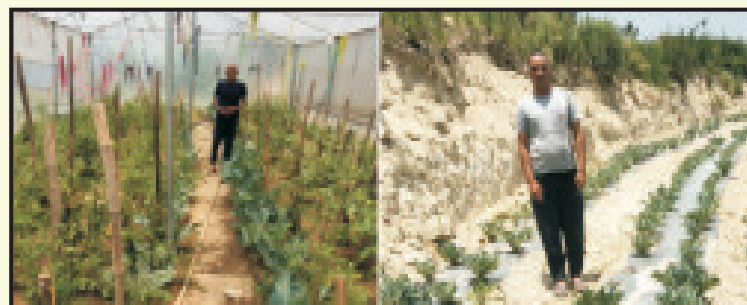


Plate 8. Horticulture based farming system in mid hills (a) protected cultivation (b) soil and moisture conservation through mulching

Ensuring food and nutritional security through integrated farming systems in western Uttar Pradesh (Farmer's FIRST)

(PC Jat, AK Prusty, Poonam Kashyap, M Shamim, Sunil Kumar, Nisha Verma, Raghuvver Singh and Raghavendra KJ)

The impact study of first phase in the adopted clustered villages (viz. Satheri and Bhangsi Bhangela) while problem cause analysis and farm characterization of second phase in the selected villages (viz. Rukanpur, Mubarikpur,

Dudhli, Tabeta, Madh Kareempur and Tigai) were done under Farmer FIRST project. The results of impact study revealed that crop diversification index (simpson's index) have significantly improved from 0.42 to 0.53 due to integrated farming system interventions. Highest sugarcane equivalent yield (1241.8 q ha^{-1}) was noticed in sugarcane + mustard intercropping followed by Sugarcane + blackgram intercropping (1068 q ha^{-1}). The increase in system yield was noticed to be 36 and 17% for intercropping of mustard and blackgram respectively with sugarcane as compared to sole sugarcane crop. Livestock interventions viz. improved fodder availability, mineral mixtures, calcium and vitamin mixtures leads to overall improvement in gross income by 28% in cows and 20% in buffalo's as compared to benchmark.



Plate 9. Diversification through intercropping of Rapeseed mustard var. GSC 7 at farmer's field

The highest increase in net income was noticed in labour + goat farming system (201%) followed by labour + dairy + small ruminants (65%). Introduction of piggery leads to additional gain of Rs 23621 per landless household whereas backyard poultry leads to additional gain of Rs 8643 per landless household. Multitier horticulture based integrated farming system leads to 136% increase in net income over the benchmark. Introduction of secondary agriculture module leads to additional gain of Rs 206650 to formulated Self Help Group registered in the name of Devanjali Mahila Swayam Sahayata Samuh. The group is linked to ABI (Agri-business incubation) programme of the institute for skill and marketing upgradation. Significant improvement in food consumption pattern was noticed in

terms of GLV's, (22 to 46%) other vegetables, (15-36%) fruits, 52-84%, milk (9-27%) meat products (0-88%). Sugar and Jaggary (-50 to -77% i.e. equivalent to RDA.



Plate 10. Scientist-Farmer interaction at Farmer field



Plate 11. G20 Leaders Summit Spouse Programme at NASC Complex, New Delhi on 9th Dec. 2023



Plate 12. Horticulture module development at Bhangela Village of Farmer FIRST Project

Technology/ Models/Concepts/Methods developed by ICAR-IIFSR and certified by ICAR

1. Climate smart IFS model for marginal farm households of western Uttar Pradesh. (Model):



3. Packages of practices for organic production of 64 cropping systems (PAN India):



2. Integrated Farming System model for small farmers of Upper Gangetic Plains (Model)



4. Orchard and vegetable based farming system for small farmer of Upper Gangetic Plains (Technology)



5. Methodology for sustainable livelihood security analysis in integrated farming system

ICAR-NRM-IIFSR-Methodology-2023-042



INDIAN COUNCIL OF AGRICULTURAL RESEARCH

Certified that

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Associate Developers
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Dr. Raghuveer Singh, Dr. A S Panwar, Dr. Debashis Dutta
Dr. Cini Varghese, Dr. Sukanta Dash, Dr. Arpan Bhowmik

of

ICAR-Indian Institute of Farming Systems Research (IIFSR)
Modipuram, Meerut

has developed the technology

Methodology for sustainable livelihood security analysis in integrated farming systems

16th July, 2023
New Delhi


(Rajbir Singh)
Assistant Director General (A&AF)


(S.K. Chaudhari)
Deputy Director General (NRM)

7. Wide row inter-cropping of garlic and onion in sugarcane-ratoon system

ICAR-NRM-IIFSR-Technology-2023-048



INDIAN COUNCIL OF AGRICULTURAL RESEARCH

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Dr. A L Meena, Dr. P C Ghasal, Dr. Jairam Choudhary

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Modipuram, Meerut

has developed the technology

Wide row inter-cropping of garlic and onion in sugarcane-ratoon system

16th July, 2023
New Delhi


(Rajbir Singh)
Assistant Director General (A&AF)


(S.K. Chaudhari)
Deputy Director General (NRM)

6. Intensification of Autumn Sugarcane with Mustard through paired row trench planting: (Technology)

ICAR-NRM-IIFSR-Technology-2023-045



INDIAN COUNCIL OF AGRICULTURAL RESEARCH

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Modipuram, Meerut

has developed the technology

Intensification of Autumn Sugarcane with Mustard through paired row trench planting

16th July, 2023
New Delhi


(Rajbir Singh)
Assistant Director General (A&AF)


(S.K. Chaudhari)
Deputy Director General (NRM)

8. Integrated Farming System models for different regions of India (Technology/Package of Practices)

ICAR-NRM-IIFSR-Technology-2023-001



INDIAN COUNCIL OF AGRICULTURAL RESEARCH

Certified that

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(Lead Developer)

Associate Developers
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Dr. Raghuveer Singh, Dr. Raghendra K.J., Dr. Anil Kumar (IASRI)
Dr. Sunil Kumar, Dr. S. Bhaskar, Dr. Rajbir Singh

of

ICAR-Indian Institute of Farming Systems Research (IIFSR)
Modipuram

has developed the technology

Integrated Farming System Models for different regions of India (Technology/Package of Technology)

16th July, 2023
New Delhi


(Rajbir Singh)
Assistant Director General (A&AF)


(S.K. Chaudhari)
Deputy Director General (NRM)

New Appointments/ Transfers/Superannuation



Dr. Raghavendra Singh joined as **Head, Cropping Systems Resource Management division at ICAR-IIFSR, Modipuram w.e.f. 13-07-2023.**



Dr T. Swarnam joined as **Head, Organic Agriculture Systems at ICAR-IIFSR, Modipuram w.e.f. 27-07-2023.**



Dr Mohd. Arif, Scientist (Agronomy) transferred from **ICAR-CIRG, Makhdoom, and joined at ICAR-IIFSR, Modipuram w.e.f. 27-12-2023**

Meetings Organized



- First meeting of QRT for 2018-2022 was organized during 8-9 December, 2023 under the Chairmanship of Padmashree Dr Arvind Kumar.

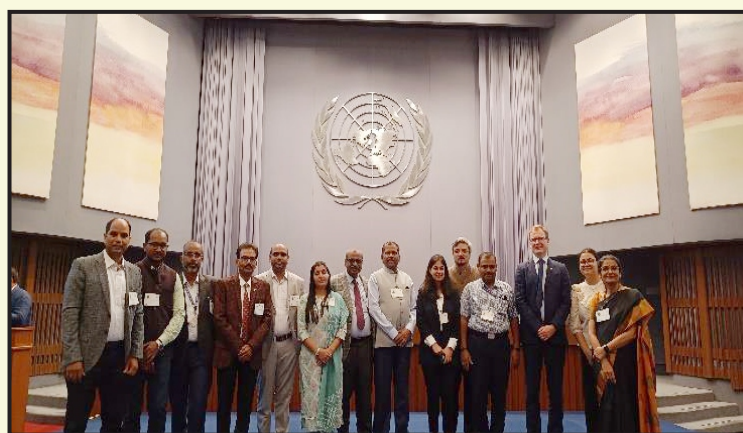


- Stakeholders workshop of DST project at Modipuram organized on 28 July, 2023 to prepare roadmap for intervention planning in Hindon sub-basin.
- State-level workshop of UNEP TEEB project organized at ICAR-IISR, Lucknow on 1 August, 2023

HRD and Capacity Building Activities



- A 5 days training programme on Whole Farm Bio-economic modelling and Integrative Sustainability Assessment Tool was organized in collaboration with ICRISAT, for 25 researchers during 11-15 September, 2023.
- A training program on 'Value addition of Millets' was organized on 10 October, 2023.
- One day training programme on "Farm Design for component optimization using multi objective tools" was organized on 20 December, 2023 in virtual mode for researchers of AI-NPOF.
- UNEP-TEEB team from ICAR-IIFSR participated in TEEB agri-food global symposium at Bangkok, Thailand on 6-11 November, 2023.



- UNEP-TEEB team from ICAR-IIFSR participated in National symposium for TEEB agri-food India at New Delhi during 16-17 November, 2023 which was chaired by Dr Ramesh Chand, Chairman, Niti Ayog.

Exhibition of IIFSR Technologies



- Hon'ble Secretary, DARE and DG, ICAR, Dr Himanshu Pathak at ICAR-IIFSR stall at NASC complex on ICAR Foundation day 16th July 2023.



- Display of IFS, Organic Farming, and Natural Farming technologies during 10-13, October at Agricultural Science Congress (ASC) held at Kochi represented by ICAR-IIFSR and AICRP-IFS Karamana centre.



- Display of Integrated Farming System technologies at exhibition held at ICAR-CIRC, Meerut.

Celebration of Events

Celebration of Har Ghar Tiranga and Independence day

Institute organised a campaign on "Har Ghar Tiranga" under the aegis of 'Azadi ka Amrit Mahotsav' from 13-15 August, 2023. Under this campaign, various activities like motivation of citizens to use "Har Ghar Tiranga" Hashtag, Selfie, banner etc. through various social media group and digital platforms; Tiranga Vitran Samaroh; Tiranga Yatra, Flag Hoisting, sports and cultural programmes were organized. Total 1388 person along with 33 VIPs participated in the campaign.

Institute celebrated Independence Day on August, 15th, 2023 with great fervour. On this day friendly Tug of war competition among staffs and cultural evening was organized. Winners of Tug-of-war competition receiving certificates and trophy from Director, ICAR-IIFSR on Independence day.



Celebration of Swachhata Pakhwada

Institute celebrated Swachhata Pakhwada w.e.f. 16-31 December, 2023. During the programme total 1040 participants participated along with 27 VIPs. During the pakhwada Cleanliness and sanitation drive was carried out at institute, office residence and adopted villages. Kisan Gosthies and Farmers-Scientists interaction on Swachhata through integrated farming systems and organic farming were also organized at Johdi, Sathedi and Samoli-Salempur villages of Baghpat and Muzaffarnagar districts of UP.





Institute also organized a Swachata program at Dudli Village, in Khatauli block of Muzaffarnagar under Farmer First project for farmers and school children on 12 December, 2023



MoU signed with Galgotias University



MoU was signed between ICAR-IIFSR and Galgotias University, Greater Noida on 8th December, 2023 for students training and post graduate research

Monitoring of Field Experiments



Dr Sunil Kumar, Director, ICAR-IIFSR, Dr N Ravisankar, PC, AICRP-IFS along with team of scientists from Coordination unit visited the AICRP-IFS on station experiment at ICAR-CCARI, Goa during 23 November, 2023.



Visit of QRT team to vegetable based farming system model developed at Siwaya farm of ICAR-IIFSR on 9th December, 2023.

Outreach/Extension activities



Visit of farmers to ICAR-IIFSR farm for awareness creation on millets on the eve of Shree Anna Divas celebration on 21st September, 2023.



- Farmers field day on demonstration of FLD on oil seeds 16 October, 2023 at Atali village.

Awards and Honours



- Dr Sunil Kumar, Director, ICAR-IIFSR receiving prestigious ISA Gold Medal during XXII Biennial National Symposium organized by Indian Society of Agronomy during 21-24 November, 2023.
- Dr. R. P. Mishra, Head, IFS division received prestigious ISA fellow award during XXII Biennial National Symposium organized by Indian Society of Agronomy during 21-24 November, 2023.



- Dr. N. Ravisankar, PC, AICRP-IFS receiving Technology certificate from Minister of State, Agriculture and Farmers Welfare on ICAR Foundation Day on 16th July, 2023.



- Dr Meraj Alam Ansari receiving ISA Associate award during XXII Biennial National Symposium organized by Indian Society of Agronomy during 21-24 November 2023.
- Best Oral Presentation Award won by Dr. P. C. Ghasal, Scientist at XXII Biennial National Symposium organized by Indian Society of Agronomy during 21-24 November 2023.
- Best Poster Presentation Award won by Dr. A.K. Prusty, Senior Scientist and Dr Jairam Choudhury, Scientist at XXII Biennial National Symposium organized by Indian Society of Agronomy during 21-24 November 2023.

TV/ Radio Talks/ Resource persons

- Dr. N Ravisankar delivered Live Question and Answer Programme on IFS, Organic and Natural Farming on All India Radio-Kodai FM (Kodaikanal, Tamil Nadu) aired on 19 April, 2023.
- Dr. Raghuveer Singh delivered talk on impact of pollution on field crops and Round the year fodder production for Western Uttar Pradesh on News 18 television network on 24 November, 2023.
- Dr N Ravisankar and Dr A K Prusty invited as resource person for 12th Advanced course on CA for Asia and North Africa gateway for by BISA and CIMMYT during 09-24, December 2023.



Snapshots from Different Events Organized



Plantation programme in the ICAR-IIFSR campus on 10th August, 2023.



Visit of Project Monitoring and Evaluation Committee (PMEC) to experimental fields on 6th September 2023.



Celebration of Gandhi Jayanti and Shastri Jayanti on 2nd October 2023 at ICAR-IIFSR.



One day training programme for women SHGs under ABI on 10th October, 2023.



Exposure visit of students from PM Shree Central School, Muzaffarnagar on 21st November, 2023.



Visit QRT team to adopted villages under Farmers FIRST



Visit QRT team to Neer Adarsh Organic Farmers Producer Co. Ltd. Kushawali, Sardhana, Meerut



Celebration of Kisan Divas at Johri village, Baghpat on 23rd December, 2023.



Dr. Sunil Kumar (Director IIFSR) conferred the prestigious Dr. K.G. Tejwani Award for Excellence in Agroforestry Research and Development by ISAF, 16th Oct. 2023 Hyderabad.

Training Attended by Scientists

Sl. No.	Details of training attended by scientists
1.	SAARC regional training on climate smart agriculture in South Asia: Technologies, Policies and Digital Innovation was attended by Dr MA Ansari, Dr AL Meena, Dr P C Ghasal held during 25-28 July, 2023 at ISARC, Varanasi
2.	CeRA regional training cum awareness workshop for the northern region was attended by Dr Sunil Kumar held on 17 October, 2023 at CSKHPKV, Palampur



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Agrēsearch with a human touch

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