

डॉ सीमा जग्गी  
सहायक महानिदेशक (मानव संसाधन विकास)

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**Indian Council of Agricultural Research**  
Krishi Anusandhan Bhawan - II, PUSA, New Delhi - 110 012

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**Date: May 18, 2023**

To,

1. Directors of ICAR Institutes
2. Vice Chancellors of Agricultural Universities (AUs-comprising of SAUs/CAU/ICAR DUs/CUs having faculty of Agriculture)

**Subject: Organization of Summer/Winter Schools and Short Courses - Inviting Proposals for the Year 2023-24.**

Sir/Madam,

As the HRD initiative, the Council supports the organization of Summer/Winter Schools and Short Courses in different disciplines of agriculture and allied sciences in Agricultural Universities (AUs) and ICAR Institutes. The main objective of Summer/Winter School and Short Course is to provide an opportunity to teachers, research workers and specialists working in AUs and ICAR Institutes to update their knowledge and skills in order to keep abreast with the latest developments in the specialized/emerging areas of agricultural and allied sciences. These Summer/Winter Schools and Short Courses also cover specialized new techniques, research methodology and teaching methods and materials.

For the conduct of Summer/Winter Schools and Short Courses, availability of expertise, good laboratory/experimental facilities, adequate number of senior faculty members and research base in the concerned field is necessary. Accordingly, proposals are invited on sharply focused topic of inter-disciplinary nature within the broad disciplinary framework. A suggestive list of topics for ICAR's summer/winter school and short course is attached.

Applicants from ICAR and AU-System need to submit their duly approved proposals online through CBP Vortal of ICAR accessible through <http://cbp.icar.gov.in>. To submit proposals, follow the Guidelines for Summer/Winter School and Short Course given at the homepage of the CBP Vortal. **The last date of submitting the proposals online is June 17, 2023.**

It may kindly be noted that a proposal may have one Course Director and maximum of two Co-Directors. You are further requested to forward a maximum of two proposals from your Institute/University.

For consideration of the proposals, please ensure that the statement of expenditure (ICAR Institute)/audit utilization of all the previous such training programmes conducted by your organization have been submitted to the ICAR.

Yours faithfully,

  
18/05/2023  
**(Seema Jaggi)**

**AGRICULTURAL EDUCATION DIVISION**  
**INDIAN COUNCIL OF AGRICULTURAL RESEARCH, NEW DELHI**  
**Suggestive List of Topics for ICAR's Summer/Winter School and Short Course for the Year 2023-24**

S. No.	Topic/Subject Area	S. No.	Topic/Subject Area
1.	Advances in micro-irrigation for improving water use efficiency and productivity	38.	Physiological approaches to phytoremediation: Advances, impact and prospects
2.	Advances in molecular epidemiology	39.	Power generation from new and renewable energy sources
3.	Agri-business, market intelligence and block chain	40.	Processing value addition and waste utilization technologies for natural fibres
4.	Advances in fish health management for enhancing fish productivity	41.	Recent development in conservation technology in animal genetic resources
5.	Agro-forestry options for livelihood and diversification	42.	Recent developments in organic production systems and natural farming
6.	Approaches for doubling farmer's income	43.	Recent developments in climate change and watershed hydrology
7.	New extension education ARYA, Farmers FIRST and MGMT	44.	Secondary agriculture
8.	Antimicrobial resistance to antibiotics in animals and its impact on human health	45.	Stem cell technologies for clinical application
9.	Bio processing/ food processing / packaging/ product marketing	46.	CAD and CAM for designing of agricultural machinery
10.	Bio-fortification of staple food crops	47.	Precision agriculture
11.	Culturing techniques for bio-fertilizers and bio-pesticides	48.	Agricultural education, entrepreneurship and skill development
12.	Conservation of indigenous breeds in their respective tracts	49.	Advanced statistical tools and measures for agriculture research
13.	Climate change adaptation and mitigation strategies through agroforestry system	50.	Bio-safety, bio-security and intellectual property rights related to PGR
14.	Communication and management skills for extensional professionals	51.	Proteomics in crop plants
15.	Emergence of new disease in globalized world	52.	Handling next generation sequencing based transcriptome and genome data of plants
16.	Enhancing water productivity in scarcity zones	53.	Biotechnological and conventional tools for biotic and abiotic stress management
17.	Entrepreneurship development through agro-processing centers	54.	Allele mining and bioinformatics in fisheries for trait improvement and conservation
18.	Environmental pollutants and food quality standards	55.	Bio-active compounds from marine organisms: A wealth of novelties and opportunities
19.	Exploitation of underutilized vegetables/fruits	56.	Remote sensing and GIS
20.	Farmers empowerment and entrepreneurial development	57.	Recent advances in aquaculture
21.	Gender mainstreaming and gender budgeting	58.	Responsible fisheries management for sustainable development
22.	HACCP, value addition and quality standard in fish products	59.	Health foods
23.	Increasing fish production through reservoir fisheries and cage-culture	60.	Crop diversification and integrated farming
24.	Impact of climate change on production of livestock and poultry	61.	Advances in renewable energy sources
25.	Spatial decision support systems for watershed management	62.	Present state of art technology for processing and value addition
26.	Innovations in educational technology	63.	Digital solutions for enhancing agriculture output
27.	ICT in agriculture	64.	Artificial intelligence and machine learning in agriculture
28.	Renewable energy for environmental protection and energy conservation	65.	Big data analysis
29.	Technological advances to minimize post-harvest losses in agriculture	66.	Smart agriculture and way forward: New age technologies in agriculture
30.	Methods and techniques for testing and evaluation of safety of food and agricultural products for human consumptions	67.	Conservation agriculture and specialty agriculture
31.	Insecticide resistance management strategies	68.	Monitoring and control strategies for mitigation and control of emerging and trans-boundary diseases
32.	Machinery for conservation agriculture and crop residue management.	69.	Genome edited technologies for livestock health and production
33.	Molecular approaches in disease diagnostics and vaccines	70.	Precision livestock farming
34.	Molecular mapping of genomes and genes/QTL	71.	Animal disease informatics
35.	Nano-technology and plant disease management	72.	Nutraceuticals for animal health and production under "One Health"
36.	Pest risk analysis research as support to domestic quarantine system	73.	Assessment of carbon and water footprint for efficient livestock production
37.	Phenotyping and phenomics in agriculture	74.	One health approach to address AMR, Zoonoses and food safety

**Note:** Proposals can also be submitted on other contemporary/ cutting edge / upcoming/ advanced topics