Indian Council of Agricultural Research
National Agricultural Higher Education Project
&
Crop Science Division of ICAR

कृतज्ञ : कृषि तकनीक ज्ञान

A National level AgriTech Hackathon on "Speed Breeding for Crop Improvement"

REGISTRATION GUIDELINES

26 August 2022

EVENT RATIONALE

KRI-TA-GYA explains, *KRI for Krishi* (Agriculture), *TA for Taknik* (Technology), *and GYA for Gyan* (Knowledge). This event will allow the students/faculties/entrepreneurs/innovators and others to showcase their innovative approaches & technological solutions to promote speed breeding for crop improvement to ensure overall sustainability and resilience in crop production in India. Such initiatives under NAHEP along with the Crop Science Division of ICAR will also help in enhancing the learning capabilities, innovations and disruptive solutions, employability, and entrepreneurial drive in the crop science sector.

ELIGIBILITY FOR PARTICIPATION

Students/ faculties/ innovators from any university / technical institution across the country can participate in the form of a group. This group will comprise a maximum of 4 participants, with not more than one faculty member and/or more than one innovator or entrepreneur. Participating students can collaborate with local start-ups/ industry, students from universities and technological institutes including SAUs, CAUs, ICAR Institutes, IITs and NITs, etc. but group size must not exceed 4 members. Participation of at least one student in each group is mandatory. Participation of all team members and leaders should be restricted to only one team. Faculties from agricultural universities/ ICAR institutes involved in zonal level organizing/ evaluation committees cannot participate in the event.

THEME

Applicants will be presenting the potential solutions on the very specific issues of Crop Improvement like cheaper and more effective materials for rapid generation advancement facilities, precise and handy diagnostic tools for diseases, insect pests, quality of produce etc.; use of ICT for seed traceability, digital breeding platforms and other challenges related to varieties, seeds, biotic and abiotic stresses faced in the vicinity of applicant/specific area/state/zone/at national level. The event will invite and encourage the applicants with innovative, disruptive and out of box problem solving proposals by leveraging the application of technologies or practices in the field of crop science. The problem statements and solutions will be focusing on "Speed breeding for crop Improvement".

Focus on learning, questioning and solving. When you learn, you get the wisdom to question; when you question you get out of the box innovative methods to solve problems; when you do that you grow, nation grows, planet prospers.

- Sh. Narendra Modi, Hon'ble Prime Minister of India

PROBLEM STATEMENT

Following are the problem statement on which applicants can showcase their innovative approaches and technological solutions to promote speed breeding for crop improvement in India.

1. Business models for biofortified crops value chain
2. Business models for bringing efficiency to the edible oil value chain
3. Traceability solutions for seed supply chain management
4. Digitalization of Breeding platforms
5. Smart LED lights for speed breeding
6. Innovative models for technology commercialization
7. ERPs (Enterprise Resource Planning software) for seed production and distribution
8. Application of Augmented Reality (AR) and Virtual Computing (VR) in seed quality management
9. Digital technologies for high throughput phenotyping
10. Devices/Rapid methods for micronutrient detection in crops
11. Decision support system for pest forewarning and management
12. Value added products from crop residues/milling by-products
13. Technologies to reduce food miles and carbon footprints of agriculture
14. Intelligent audio chatbots for farm advisory
15. IoT applications for production planning and price risk reduction
16. Quality seed management – blockchain technology for ensured quality
17. Smart storage structures for food grain storage with an application of AI

ORGANIZING FRAMEWORK

A 2-tier event framework and committees have been constituted to organize this event at the national & zonal level with clear guidelines and procedures. A 2 tier framework will be managed under the strategic guidance of the National Steering Committee (NSC) for the event.

AWARDS

Winners from the national level event will be felicitated with a cash prize and citations with a participation certificate. Cash Prize will be INR **5 Lakhs** for 1st Winner, **3 Lakhs** for 2nd Winner and **1 Lakh** for 3rd Winner.

ROUND OF EVENT

1. Registration and Concept entries
2. Uploading Concept Notes by applicants
3. Zonal level screening
4. Zonal level evaluation (Technical Presentation by applicant)
5. Mentor allotment to zone level winner
6. National level finale (Final Presentation)
7. Award/Announcement of Result

Project Implementation Unit

5th Floor, Krishi Anusandhan Bhavan, Pusa Road, New Delhi - 110012

Website: https://nahep.icar.gov.in Email: kritagya@icar.gov.in

@nahep.icar.goi @nahep.icar @icarnahep