



# **A National level Hackathon on Precision and Economical Animal Farming**

**कृतज्ञ : कृषि तकनीक ज्ञान**

*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. Prime Minister of India

## THEME

Applicants will be presenting a potential solution with animal science technologies, precision farming practices as an enabler for addressing the emerging challenges in their vicinity / localized areas / state/zone/national level specific. This event will invite and encourage applicants to come out with an innovative, out of box and disruptive solution by leveraging the application of technologies or practices in the field of animal sciences. The problem statement and solutions will be preferably on promoting 'Innovations for Precision and Economical Animal Farming'.

## **REGISTRATION STARTS**

**15th September, 2021**



**Indian Council of Agricultural Research**  
Krishi Anusandhan Bhawan II, Pusa Campus, New Delhi (India)  
<https://nahep.icar.gov.in/>



@nahep.icar.goi



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@lcarnahep



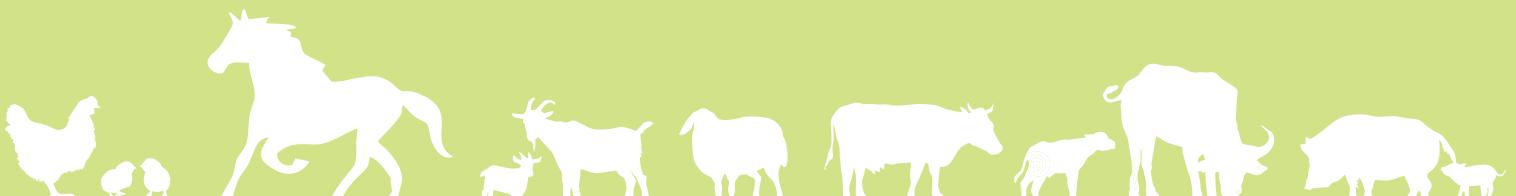
**Indian Council of Agricultural Research  
National Agricultural Higher Education Project  
&  
Animal Science Division of ICAR**

**KRITAGYA**

**A National level Hackathon on  
Precision and Economical  
Animal Farming**

**कृतज्ञ : कृषि तकनीक ज्ञान**

**EVENT BROCHURE**



**Indian Council of Agricultural Research  
Krishi Anusandhan Bhawan II  
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## EVENT RATIONALE

**KRI-TA-GYA** explains, *KRI* for *Krishi* (Agriculture), *TA* for *Taknik* (Technology) and *GYA* for *Gyan* (Knowledge). This event will give an opportunity to the students / faculties / entrepreneurs / innovators and others to showcase their innovative approaches & technology solutions to promote the livestock farming in India. Such initiatives under NAHEP along with Animal Science Division of ICAR will also help in enhancing the learning capabilities, innovations and disruptive solutions, employability and entrepreneurial drive in the livestock 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 of maximum 4 participants, with not more than one faculty and / or more than one innovator or entrepreneur. Participating students can collaborate with local start-ups/industry, students from technology institutes including 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 leader should be restricted to only one team. Faculties from Agricultural Universities/ICAR institutes involved in zonal level organizing/evaluation committee can not participate in the event.



## THEME

Applicants will be presenting a potential solution with animal science technologies, precision farming practices as an enabler for addressing the emerging challenges in their vicinity / localized areas / state/zone/national level specific. This event will invite and encourage applicants to come out with an innovative, out of box and disruptive solution by leveraging the application of technologies or practices in the field of animal sciences. The problem statement and solutions will be preferably on promoting '**Innovations for Precision and Economical Animal Farming**'.





## PROBLEM STATEMENT

Following are the problem statement on which applicants can **showcase their innovative approaches & technological solutions to promote innovation for precision and economical animal farming in India.**

S.No.	Problem Statements
1	Innovative tools for reducing drudgery in animal farming
2	Telemedicine module
3	Artificial Intelligence and Machine Learning based forecasting models of livestock & poultry diseases
4	Digital / analog tools for disease diagnosis
5	ICT based solution for faster disease reporting, networking and risk communication
6	Multianalyte and high throughput milk and milk product testing
7	Calving alert tool/ system
8	Innovative tools for oestrus and early pregnancy detection in large animals
9	Green energy from animal bio-wastes
10	Smart technologies for transportation of animal and animal products
11	Real time animal data recording under field conditions
12	Innovative methods for animal identification and traceability
13	Multiparametric and high throughput testing of feed ingredients
14	Animal welfare through IoT application
15	Digital platform/e-market module for animal, animal products/byproduct marketing



## ORGANIZING FRAMEWORK

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



## National Steering Committee

S.No.	Name & Designation	Position
1	Dr T. Mohapatra, Secretary-DARE, DG-ICAR	Chairman
2	Dr B. N. Tripathi, DDG- Animal Science	Co-chairman
3	Dr R. C. Agrawal, DDG- Education	Co-chairman
4	Dr Hema Tripathi, NC- NAHEP	Member
5	Dr Prabhat Kumar, NC- NAHEP	Member
6	Dr R. C. Hazary, DGM, VENCO Research and Breeding Farm Pvt Ltd. Hyderabad	Member
7	Dr M. S. Chauhan, Director ICAR-NDRI, Karnal	Member
8	Dr Triveni Dutt, Director ICAR-IVRI, Izatnagar	Member
9	Dr R. Bhatta, ICAR-NIANP, Bangalore	Member
10	Dr Vipin Kumar, Director and Chief Innovation Officer, National Innovation Foundation	Member
11	Dr V. K. Saxena, ADG, Animal Production and Breeding	Member Secretary



## ORGANIZING FRAMEWORK: TIER 2

**5 Zonal level committees** representing all the states and UTs have been constituted at this tier for primary screening of entries, technical evaluation of select entries and finalizing zonal level winners.

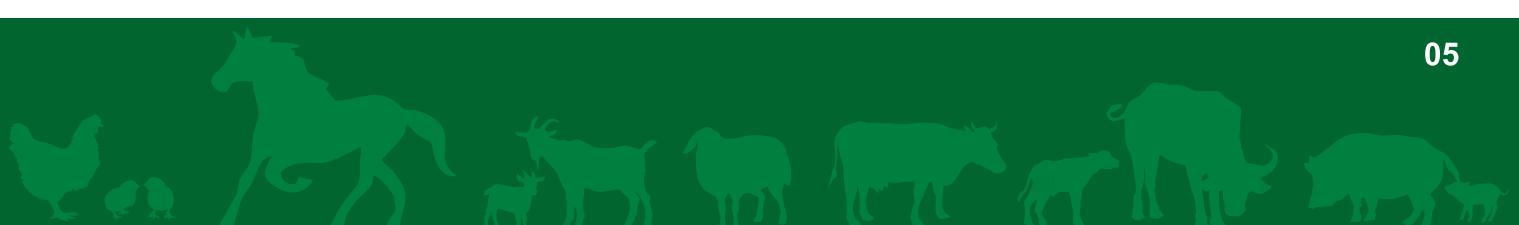
S.No.	Zone	States / UTs covered
1	North	Haryana, Himachal Pradesh, Punjab, Uttar Pradesh, Uttarakhand, Chandigarh, Delhi, Jammu and Kashmir, Ladakh
2	East	Arunachal Pradesh, Assam, Bihar, Jharkhand, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, West Bengal, Andaman and Nicobar Islands
3	South	Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, Lakshadweep, Puducherry
4	West	Goa, Gujarat, Maharashtra, Rajasthan, Dadra and Nagar Haveli and Daman and Diu
5	Central	Chhattisgarh, Madhya Pradesh, Odisha, Telangana

This stage can be called as '**Screening cum Zonal Evaluation Round**'. In order to conduct this round, organizing committee will draft and communicate the separate guidelines and operational procedures to the zonal level committee members.



## ZONAL LEVEL COMMITTEE

S.No.	Name & Designation	Position
<b>North Zone</b>		
1	Dr Inderjeet Singh, VC GDVASU, Ludhiana	Chairman
2	Dr B P Mishra, Director, ICAR-NBAGR, Karnal	Co-chairman
3	Dean - College of Veterinary Science and Animal Husbandry	Member
4	Domain Expert- Agri-Business Firm- Senior Level (1)	Member
5	Team Leader- National level agri-incubator (1)	Member
6	Representative from NGO/Social Sector (1)	Member
7	Venture Capitalist/ Angel Investor (1)	Member
8	Principal Investigator - NAHEP, GADVASU, Ludhiana	Member Secretary
<b>South Zone</b>		
1	Prof. (Dr) M. R. Saseendranath, VC KVASU, Pookode, Wayanad	Chairman
2	Dr R. N. Chatterjee, Director, ICAR-DPR, Hyderabad	Co-chairman
3	Dean- College of Veterinary Science and Animal Husbandry	Member
4	Domain Expert- Agri-Business Firm- Senior Level (1)	Member
5	Team Leader- National level agri-incubator (1)	Member
6	Representative from NGO/Social Sector (1)	Member
7	Venture Capitalist/ Angel Investor (1)	Member
8	Principal Investigator- NAHEP, KVASU, Wayanad	Member Secretary
<b>East Zone</b>		
1	Dr Rameshwar Singh, VC, BASU, Patna	Chairman
2	Dr R. P. Singh, Director, ICFMD Bhubaneshwar	Co-chairman
3	Dean- College of Veterinary Science and Animal Husbandry	Member
4	Domain Expert- Agri-Business Firm- Senior Level (1)	Member
5	Team Leader- National level agri-incubator (1)	Member
6	Representative from NGO/Social Sector (1)	Member
7	Venture Capitalist/ Angel Investor (1)	Member
8	Principal Investigator- NAHEP, BASU, Patna	Member Secretary



## West Zone

1	Dr A. M. Paturkar, VC MAFSU, Nagpur	Chairman
2	Dr Arun Kumar Tomar Director CSWRI, Avikanagar	Co-chairman
3	Dean- College of Veterinary Science and Animal Husbandry	Member
4	Domain Expert- Agri-Business Firm- Senior Level (1)	Member
5	Team Leader- National level agri-incubator (1)	Member
6	Representative from NGO/Social Sector (1)	Member
7	Venture Capitalist/ Angel Investor (1)	Member
5	Principal Investigator- NAHEP, MAFSU, Nagpur	Member Secretary

## Central Zone

1	Dr S. P. Tiwari, VC, NDVSU, Jabalpur	Chairman
2	Dr V. P. Singh, Director, NIHSAD Bhopal	Co-chairman
3	Dean- College of Veterinary Science and Animal Husbandry	Member
4	Domain Expert- Agri-Business Firm - Senior Level (1)	Member
5	Team Leader- National level agri-incubator (1)	Member
6	Representative from NGO/Social Sector (1)	Member
7	Venture Capitalist/ Angel Investor (1)	Member
8	Principal Investigator - NAHEP, NDVSU, Jabalpur	Member Secretary



## ORGANIZING FRAMEWORK: TIER 1

The final stage i.e., '**National Round**' will be organized by **National Organizing Committee**. The zonal level winners under this round will make technical presentation before the national level committee and 3 winners will be selected as National Level winners. Organising committee will identify the moderators from different domains under the chairmanship of National Director- NAHEP and DDG- Animal Science Division of ICAR. Under the guidance of NSC, event will be organised by organizing committee.



## National Organising Committee

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2	Dr R. C. Agrawal, DDG - Education	Chairman
3	Dr Hema Tripathi, NC - NAHEP	Co-chairman
4	Dr Prabhat Kumar, NC - NAHEP	Co-chairman
5	Dr Sudeep Marwaha, PI - NAHEP	E-Platform Management
6	Dr S. B. Barbuddhe, Director NRC on Meat Hyderabad	Member
7	Dr Sudha Rao, Ex. VC - Karnataka University	Member
8	Dr Ashok Kumar, ADG - Animal Health	Member
9	Dr Amrish Tyagi, ADG - Animal Nutrition and Physiology	Member
10	Dr V. K. Saxena, ADG - Animal Production & Breeding	Member Secretary

## Awards

Winners from the national level event, will be felicitated with cash prize and citations with participation certificate.

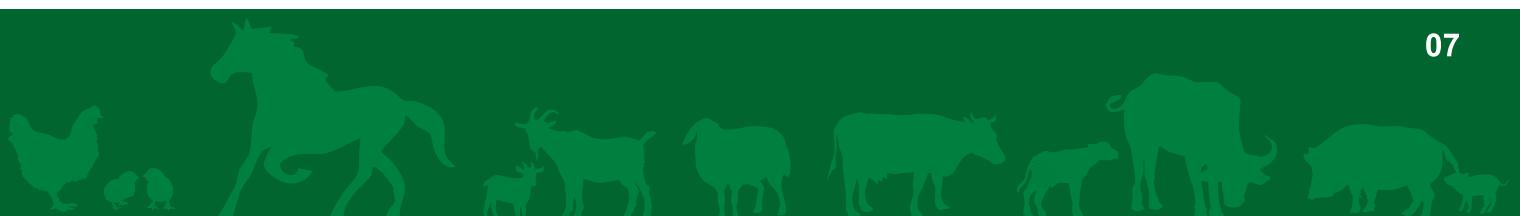
Position	Cash Prize (INR Lakhs)
1	5,00,000
2	3,00,000
3	1,00,000

## TIMELINE

Particulars	Deadline
Announcement	10 <sup>th</sup> Sept 2021
Registration	15 <sup>th</sup> Sept to 10 <sup>th</sup> Oct 2021
Screening	10 <sup>th</sup> to 15 <sup>th</sup> Oct 2021
Zonal level evaluation	5 <sup>th</sup> to 20 <sup>th</sup> Nov 2021
Zonal level results	25 <sup>th</sup> Nov 2021
National level Event	5 <sup>th</sup> Dec 2021
Results announcement and awards	15 <sup>th</sup> Dec 2021

### ***Disclaimer to be used for the event***

The KRITAGYA webpage / web site of ICAR- NAHEP may contain IPR protected materials / prototypes / unique innovations related to the KRITAGYA event. If someone wish to use this IPR protected material/ prototype/ innovation for any commercial purposes, he/she must first obtain permission from the owner of such IPR holder.



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**Project Implementation Unit**

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

Website: <https://nahep.icar.gov.in>

Email: [kritagya@icar.gov.in](mailto:kritagya@icar.gov.in)



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**N A H E P**

&

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## PRESENTATION DURING REGISTRATION

Please provide the concept note (PPT Presentation - Not more than 10 Slides - should Showcase Problem Statement, Solution Concept, Team, Background, Value Proposition and Way forward). Presentation to be prepared in PPT format and to be uploaded in PDF version.



## AWARDS

Winners from the national level event, will be felicitated with cash prize and citations with participation certificate. Cash Prize will be INR 5 lakhs for 1<sup>st</sup> Winner, 3 lakhs for 2<sup>nd</sup> and 1 lakh for 3<sup>rd</sup> winner.



## ROUND OF EVENT

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



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