

Hack4Agri

A TERI Initiative Supported by the Australian Government

The project, Hack4Agri aims to engage the youth of Karnataka to ideate, innovate, incubate, and implement scalable solutions to address post-harvest losses in the agricultural sector. Food wastage significantly impacts the economy and environment, compromising India's food security. In developing countries, it contributes to higher carbon footprints, water footprints, land degradation, and biodiversity loss. Approximately 40 percent of food produced in India is wasted annually, which not only represents a significant loss of resources but also contributes to environmental degradation. Reducing food wastage can alleviate pressure on natural resources, lower greenhouse gas emissions, and enhance food security. Agricultural food waste is seen across various **agricultural sectors** (cereals and pulses, vegetables and fruits, meat, dairy, poultry, fisheries and aquaculture) as well as different **agricultural stages** (on farm harvesting losses, transportation, storage, processing, market and distribution, retail and consumption).

The agriculture sector also faces a decline in the number of farmers and youth interest. With an aging farming population and increasing urbanization, there is a critical need to re-engage youth in agriculture. This concern is exacerbated by the mismatch between agricultural education and market needs, leading to a phenomenon known as "agri-brain drain." By making education relevant to market needs through student-led real-time solutions, the programme aims to bridge this gap. Encouraging youth to develop innovative solutions leveraging technological and digital tools can help in addressing these issues effectively.

Project Hack4Agri tackles the above challenges by providing a platform for innovation, thereby enhancing youth skill sets in problem-solving, critical thinking, technology adaptation, and solution-based approaches. These skills are essential for fostering a sustainable agricultural ecosystem.

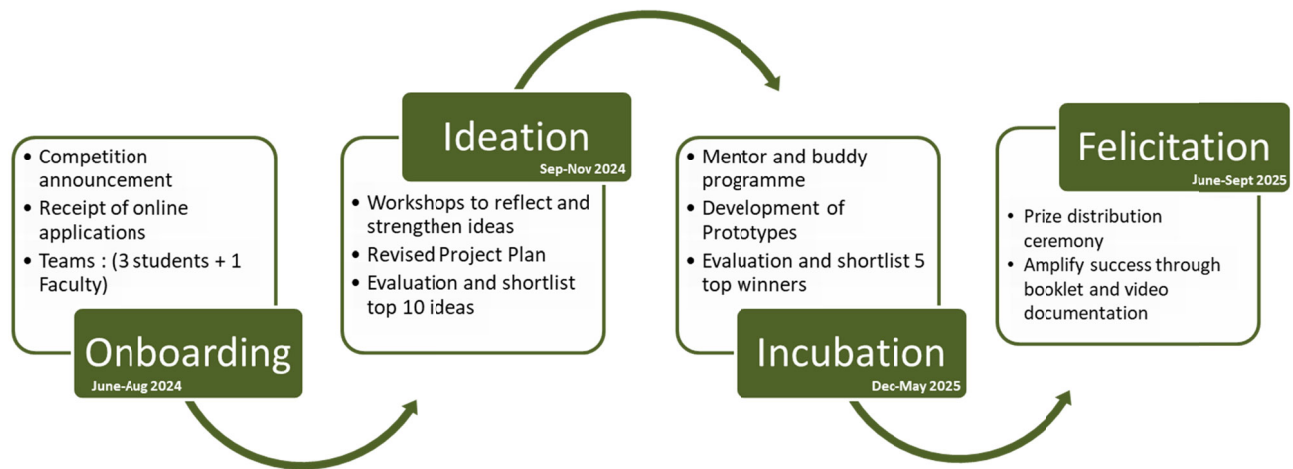
What do we mean by Hacks?

The programme seeks hacks that harness the power of science and technology to effectively address the problems related to post harvest agricultural waste. All hacks should be problem-driven, with the goal of creating and applying knowledge for sustainability. Hacks can be in the form of a method, process or product, and need to have science, technology and innovation at their core. They must be scalable, addressing issues and problems in the local context.

Programme Structure and Timeline:

The programme is organized under four broad sections in a linear relationship which is visually represented in the flow chart below. The timeframe for each section is also detailed.

Figure 1: Programme flow



Onboarding Phase:

Duration: June-August 2024

Activities: The competition announcement and promotion, receipt of online applications in the prescribed format. Applicants need to share their ‘Hacks’ and detail how they are addressing the issue of post-harvest agricultural waste. Application from teams comprising 3 students and 1 faculty is sought.

Ideation Phase

Duration: September - November 2024

Activities: Workshops will be conducted for applications to reflect and strengthen their ideas. Technical sessions aimed at strengthening the submission of revised applications in prescribed format will be followed. A jury of experts will review the revised applications and shortlist 10 hacks.

Incubation Phase

Duration: December – May 2025

Activities: The shortlisted 10 hacks will be closely mentored to develop solution prototypes. The viability and scalability of the programme will be emphasized by linking the teams to diverse stakeholders linked with agricultural sector.

Evaluation Phase

Duration: June – September 2025

Activities: The shortlisted 10 hacks will undergo another round of evaluation by an eminent jury panel. A grand finale will be organized to felicitate the top 5 entries. In order to amplify the success of the programme as well as inspire and motivate youth, A booklet and video documenting the journey of hacks and its potential impacts to address the prevailing problems of the agricultural sector.

Intended Outputs and Outcomes:

- Development of five scalable agri-based innovative solutions.
- Database of sustainable and innovative ideas to address post-harvest agricultural waste
- Process documentation to inspire future youth entrepreneurs.
- Establishment of a supportive agriculture-based ecosystem.
- Enhancement of problem-solving, critical thinking, and technological skills among youth.
- Reduction of environmental impacts associated with post-harvest wastage.
- Contribution to food security and addressing hunger and malnutrition issues.
- Generation of livelihood opportunities and stimulation of local economies.

Programme Guidelines:

1. **Eligibility:** Open to students and their faculty from HEIs in the state of Karnataka.
2. **Team Composition:** Each team will consist of four members: three students and one faculty member.
3. **Number of application:** One team can submit only one application with no overlap of team members. However the faculty member can advice and mentor multiple teams from the same college.
4. **Submission:** *Stage 1:* This submission aims at understanding how the proposed idea addresses the problems related to agricultural food waste. The online submission is to be made through the link: <https://forms.gle/Sr3hngGkFYNAKfV17>
5. **Deadline:** The last date for submission of the online application is **15 August 2024**
6. **Acknowledgement:** All applicants are required to acknowledge the project-Hack4Agri and its partners during and after the project.



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7. **Promotion:** The organizers have the right to showcase and promote the ‘hacks’ as an outcome of the project at various platforms.
8. **Evaluation:** A panel of Environment Technology Experts will evaluate the hacks for the following criteria
 - Environmental Impact
 - Idea Innovation
 - Technical maturity
 - Scalability and replication of idea
 - Business Value.

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