



# CFI Research Grant Planning Workshop

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Jain Hills, Jalgaon

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# 1. Project Snapshot



- Project title: Litchi-Based Diversified Fruit Production Models and Participatory Genetic Resource Management for Nutritional Security of Small and Marginal SC and ST Farmers in Nawada and Jamui Districts of Bihar
- Institution: ICAR–National Research Centre on Litchi (ICAR-NRC on Litchi), Muzaffarpur, Bihar
- Principal Investigator: Dr Sunil Kumar, Scientist (Fruit Science)
- Project duration: 24 Months (July 2026 – June 2028)
- Budget: ₹32.00 lakh (Rupees Thirty-Two Lakhs Only)
- Project location(s): Nawada & Jamui districts (rainfed, forest-fringe agro-ecosystems)

## 2. Landscape, problem statement & target communities



- **Agroecological context:** Rainfed farming system in Nawada & Jamui districts, Bihar, 1000–1200 mm rainfall, monsoon dependent agriculture, Small fragmented landholdings with limited irrigation access, Low soil fertility and declining organic carbon
- **Key challenges being addressed:** Low dietary diversity and poor fruit consumption, Limited access to quality planting material, Seasonal income instability in smallholder farming, Climate vulnerability: water stress and low resilience
- **Target beneficiaries:** 300 small & marginal farm households, 70% SC/ST communities targeted, 60% women participation through SHGs, Youth engagement for nursery and orchard management
- **Project landscape:** 300 diversified fruit production models at household level, Integration of 8 fruit species with litchi as core crop, Establishment of 2

# 3. Year-1 Implementation plan

*Summarize key activities planned during Year 1, which will Include:*



- **Site establishment:** PRADAN-led identification of target villages, mobilization of beneficiary households, baseline survey, and site selection in Nawada & Jamui districts.
- **Nursery development activities:** Establishment of 2 community nurseries with technical support from ICAR-NRC on Litchi and community facilitation by PRADAN
- **Demonstrations sites:** Development of 150 household-level litchi-based diversified fruit production models as demonstration units in selected villages.
- **Capacity building programme planned:** Joint training programmes by ICAR-NRC on Litchi and PRADAN on nursery management, orchard establishment, agroecological practices, and nutrition awareness
- **Target community engagement:** PRADAN-supported mobilization of 300 SC/ST households, women SHGs, youth engagement, and strengthening community participation for long-term adoption.

# 4. Fruit Species and production models



- **Key fruit species promoted:**
  - Litchi (core high-value fruit crop)
  - Guava, Papaya, Banana (early and regular fruiting)
  - Drumstick (nutrition-rich crop)
  - Bael, Jackfruit, Pummelo (climate-resilient underutilized fruits)
- **Production systems to be demonstrated**(*ex. Homestead orchards, Community orchards, Agroforestry systems, WADI systems, Nutrition gardens, School gardens*)
  - Establishment of household-level litchi-based diversified fruit production systems integrating multiple fruit species for year-round nutrition, income generation, and climate resilience among small and marginal farm families.

## 5. Year-1 Targets and deliverables :



| Key Performance Indicator | Target (Absolute number)                                                         |
|---------------------------|----------------------------------------------------------------------------------|
| Villages covered          | 10–12 villages across Nawada & Jamui districts                                   |
| Households reached        | 150 households (Phase-I implementation)                                          |
| Women beneficiaries       | 90 women (60% participation through SHGs)                                        |
| Youth beneficiaries       | 30–40 rural youth engaged in nursery/orchard management                          |
| Trees planted             | 2,500–3,000 fruit plants under diversified orchard models                        |
| Fruit species promoted    | 8 species (Litchi, Guava, Papaya, Banana, Drumstick, Bael, Jackfruit, Pummelo)   |
| Trainings planned         | 8–10 training programmes on nursery, orchard management, nutrition & agroecology |
| Nurseries established     | 2 community-managed nurseries                                                    |

## 6. Collaboration Opportunities (Offer and Ask)



| What we can offer                                                               | Support we need                                                       |
|---------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| Technical expertise in litchi and diversified fruit production systems          | Technical guidance on nutrition-sensitive agriculture frameworks      |
| Quality planting materials and elite fruit germplasm                            | Support for baseline, midline and endline assessment methodologies    |
| Established community nursery development protocols                             | MEL (Monitoring, Evaluation & Learning) framework support             |
| Training on orchard establishment, nursery and agroecological practices         | Support for nutrition monitoring and dietary diversity assessment     |
| Scientific expertise in participatory genetic resource management               | Guidance on documentation, case studies and policy briefs             |
| Knowledge products and technical manuals for fruit production systems           | Support for market linkage development and value addition strategies  |
| Field implementation support through PRADAN community mobilization network      | Assistance in strengthening community enterprise and scaling pathways |
| Demonstration models for homestead orchards and climate-resilient fruit systems | Support for convergence with nutrition and livelihood programmes      |
| Capacity building for women SHGs and rural youth engagement                     | Collaboration for long-term sustainability and impact documentation   |

# 7. Baseline, MEL and Next Steps :



- **Baseline Assessment**

Survey of 300 households on nutrition, fruit consumption, income and farming systems

- **Key Indicators**

Fruit consumption frequency, Dietary diversity score

≥75% plant survival, ≥70% households with year-round fruit access, ≥20% increase in income

- **Immediate Next Steps**

Beneficiary & village selection, Baseline survey and community mobilization (PRADAN), Establishment of 2 community nurseries, Distribution of planting materials

- **Year-1 Milestones**

# 8. Budget summary, risk & mitigation strategy:

## A. Budget Summary

| Category                         | Year 1 (₹)       | Year 2 (₹)       | Total (₹)        |
|----------------------------------|------------------|------------------|------------------|
| Personnel                        | 6,00,000         | 6,00,000         | 12,00,000        |
| Planting material & field trials | 4,20,000         | 3,20,000         | 7,40,000         |
| Infrastructure                   | 1,60,000         | 60,000           | 2,20,000         |
| Capacity building & awareness    | 1,60,000         | 1,60,000         | 3,20,000         |
| Travel                           | 90,000           | 90,000           | 1,80,000         |
| Monitoring & documentation       | 1,30,000         | 1,30,000         | 2,60,000         |
| <b>Total</b>                     | <b>15,00,000</b> | <b>15,00,000</b> | <b>30,00,000</b> |

## B. Risk & Mitigation Strategy

| Potential Risk              | Mitigation Strategy                               |
|-----------------------------|---------------------------------------------------|
| Low plant survival          | Quality planting material & technical supervision |
| Drought / water stress      | Mulching, basin management & micro-irrigation     |
| Pest & disease incidence    | Biological pest management practices              |
| Low community participation | SHG-based mobilization through PRADAN             |



# Thanks