



Terms of Reference

Development of comprehensive training module for DRE driven Paddy Post Harvest Processing

Terms of Reference (TOR)

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Title	Development of comprehensive training module for DRE driven Paddy Post Harvest Processing
Contract Supervision	Sr. Program Manager
Timeline	4 Months
Expected area of expertise	Rice sector Knowledge, Content development, Content Writing, Module Development, Training
Google form Link to apply	https://forms.gle/5umVWvZmgZsvH9bw9

Background

SELCO Foundation seeks to inspire and implement sustainable energy driven solutions that alleviate poverty. These sustainable energy driven solutions inclusive of energy efficiency and green built environments are aimed at improving quality of life and livelihoods. SELCO firmly believes that an end-user centric, demand driven approach that focuses on ecosystem building, leads to interventions that are long-term and replicable.

As one of the priority sectors, SELCO Foundation is actively integrating sustainable energy driven solutions for challenges in the Agriculture sector for commodity value chains such as rice, paddy, spices, tomato, potato and other horticulture produce. The goal is to develop sustainable energy solutions across these agricultural value chains in order to increase food security, diversify farm incomes and reduce drudgery across processes for on-farm technology, post harvest processing & value addition. Specifically, looking at technologies that bring about value among small marginal farmers and entrepreneurs, FPOs, FPCs, SHGs and other stakeholders. In this regard, SELCO seeks consultancy services to develop a training module with a detailed curriculum for training stakeholders on post harvest processing in paddy value chain.

Goal

The aim of the project is to develop the training module with a comprehensive training curriculum to train community-based organizations as well as individual farmers for DRE-driven paddy post-harvest processing

Requirement

Consultant (agencies) to develop training modules for Paddy Post Harvest Processing, respectively



Terms of Reference

Development of comprehensive training module for DRE driven Paddy Post Harvest Processing

- Single Stage
- Multi-Stage

Timeline:

Duration of contract: 4 months

- Start Date: 15 December 2023
- End Date: 31 March 2023

Objective

- The objective of the training module development is to provide knowledge and skills to individuals or groups involved in decentralized paddy processing on the different stages involved in processing paddy such as Processing, O&M- step-by-step, troubleshooting and safety measures

Scope of work

Under this work, the consultant/agency is expected to develop training module booklets, decks, videos, and training tools (Posters & other IEC) for the following.

Manual (booklet)

- Background, need & importance of paddy in the Indian agricultural context
- Introduction to processing technology and its various types, applications
 - Rubber Roller Technology
 - Engelberg Technology
 - Single stage
 - Multi-stage
 - Dual stage
- Importance and need of Decentralised Renewable Energy driven solutions in the paddy value chain.
- Training manual should comprise illustrations and the essential procedures that are supposed to be followed in paddy processing and primary value addition
- How to choose your machines: Factors to take into consideration before choosing a technology
 - Production capacity
 - Infrastructure
 - Bank Loan
 - Others
- Types of users and technology combinations offered as per varying user typologies (scale of operation, ownership, business & financial model)
- The training manual should include
 - Standard package of practice and processes in paddy processing
 - Technology specifications, process flow and handling machinery & solar in paddy post-harvest processing
 - **Paddy post-harvest processing Machinery** - Precleaner, Huller, Destoner, Grader, Polisher and Pulveriser - its key features and usage
- Standard operating procedures



Terms of Reference

Development of comprehensive training module for DRE driven Paddy Post Harvest Processing

- Do's and Don'ts,
- Precautionary measures for operating and handling the machinery, &
- Safety measures
- Maintenance - Scheduled and unscheduled maintenance of machine and solar
 - Basic checklist for end user for minimum maintenance before contacting vendor or troubleshooting
- Troubleshooting
- Processing unit layout design: Infrastructure requirements and appropriate spacing of machines
 - Single stage
 - Multi stage
- Vendor guidelines
 - Roles and responsibilities of vendor

Toolkit:

- **Trainers and trainees tool-kit**
 - User manual briefing for master trainers and facilitators
 - User guidelines booklet for trainees / end user

Video

- The training video should be comprehensive, user friendly, catering to the UI/UX of the target group of end users
- Language of the video needs to be simple and clear : English/Kannada [*Note: The video would be translated to other languages*]
- Animations across the video are ideal
- Flow of components
 - Introduction to various processing types:
Rubber Roller, Engelberg
Single stage, Multi stage
 - Steps to choose the appropriate machine combination
 - Step by step introduction to machine, its working principle, standard operating procedure
 - Maintenance
 - Safety: Do's and Don't
 - Troubleshooting
 - Infrastructure requirements for processing unit
 - Champion end user testimonial: Impact of DRE driven paddy post harvest processing unit

Methodology and SoP:

The **agency/consultant** will undertake the following standard operation procedure towards developing the module:

1. **Prioritize the training need:** A desk review of existing program documents, reports to know the training needs of the targeted audience



2. **Define the learning objective:** Learning objectives should be specific, measurable, achievable, relevant, and time-bound (SMART) and should align with the identified training needs.'
3. The agency/consultant will **meet the experts and technology providers** within the organization and its partners, discuss and understand the subject-specific write-up and the flow of the content.
4. **Field visits with partner end users** for better understanding of the process with SF team and representatives from technology providers.
5. **Two rounds of review and feedback of content developed** from the review team from SELCO Foundation
6. **Design the training content:** Designing and finalization of training module after the review from SELCO Foundation.

Based on the learning objectives, design the content for the training module. Use of multimedia, case studies, and interactive activities can help to make the training more effective and engaging.

7. **Develop the training materials:** After designing the content, develop the training materials, including PowerPoint presentations (*comprehensive deck of the booklet*), handouts, video bytes and other training aids. Ensure that the materials are visually appealing, easy to read, and accessible to all learners.
8. **Pilot test the training module:** Before finalizing the training module, pilot test it with the **support consultation of SELCO Foundation's farmer champion farmer- a small group of learners to get feedback on the content, materials, and delivery.** Use the feedback to make any necessary revisions and improvements to the module to ensure that the delivery is engaging, interactive, and meets the needs of the learners.
9. **Evaluate the training:** After the pilot consultation, evaluate its effectiveness using a variety of methods such as surveys, quizzes, or feedback forms. Use the evaluation data to make improvements to the training module for future delivery.

Responsibilities of SELCO Foundation


1. SF project team will lead the project and can take certain decisions which are important as per the prevailing conditions on ground i.e alter our plan at any time.
2. The SF project team will work with the consultant on every part of the project i.e. providing knowledge base, Identification of sites, template setting, assessment towards training module development.
3. All content approvals prior finalization will be reviewed by SF project team
4. SF team will ensure any feedback provided by project team and its partners (technology providers and end users) will be incorporated by consultant.

Deliverables:

1	Training Curriculum Booklet & Comprehensive Deck	Multi stage -1 unit Single stage- 2 units: Integrated Huller cum Polisher + Integrated huller cum polisher cum pulveriser
2	Training Videos	A comprehensive video containing: Multi stage -1 unit Single stage- 2 units: Integrated Huller cum Polisher +

		Integrated huller cum polisher cum pulveriser
3	Trainers and Trainees toolkit IEC Material	Multi stage 1 unit Single stage- 2 units: Integrated Huller cum Polisher + Integrated huller cum polisher cum pulveriser

Paddy Processing and Combinations Offered

1	Integrated huller cum polisher (Single Stage)	 3 HP 180 kg/hr (polished rice)
2	Integrated Rice Huller Polisher, Pulverizer (Single Stage)	 3 HP 150 kg/hr (polished rice) 10-15 kg/hr (flour)
3	Pre cleaner, Huller, Separator, Destoner, Polisher, Grader (Multi Stage)	 Pre cleaner: 250 kg/hr 1 HP Huller: 180 kg/hr 1 HP Separator: 200 kg/hr 1 HP Destoner: 250 kg/hr 2 HP Polisher: 120 kg/hr 3 HP Grader: 250 kg/hr 0.5 HP

1. Training modules with detailed curriculum booklet - *Of technology typology as per varying user base: Single Stage, Multi Stage*

ToC

[All points included in scope of work need to be included]

1. Background and Introduction
2. Standard Package of Practices: Paddy Post Harvest Processing *[Process flow]*
3. Introduction to different processing types *[Engelberg/Rubber Roller: Single Stage/Multi stage]*
4. Gaps and Challenges in existing centralized paddy milling ecosystem
5. The importance and need for DRE driven solution
 - a. Introduction to solution type
 - b. User typology
 - c. Geography fit
6. Schematic Design and Processing Unit Design and Layout
 - a. Processing Unit layout design: Infrastructure and Technology
 - b. Basic solar layout (panels)
7. Technical specification of components
8. Key features and FAQs of components
 - a. How to choose the appropriate combination of machines based on user characteristics
9. Step by step Installations and Operations
10. Maintenance
11. Safety SoP



Terms of Reference

Development of comprehensive training module for DRE driven Paddy Post Harvest Processing

- 12. Troubleshooting
- 13. Business Model Calculator
- 14. Case studies

**This draft ToC is a basic outline, each chapter is expected to cover all the sub themes within the enlisted contents and scope of work*

**Contents mentioned are not restricted to the above components and need to be further elaborated upon*

- 1.1 Training deck / ppt
- 2 Video Production: Training Videos
- 3 Trainers and trainees tool-kit | IEC Materials
 - 3.1 User manual briefing for master trainers and facilitators
 - 3.2 User guidelines booklet for trainees / end user
 - 3.3 IEC Materials: Posters, Brochures and Safety stickers

Deliverables timeline

Deliverables	Dec 24	Jan 24	Feb 24	Mar 24
Content Development: Booklet and deck				
Design and formatting: UI of the booklet and deck				
Production Video and photos for different content as per the requirements				
Trainers and trainees tool-kit IEC Materials				

Annexure:

- 1. [Proposal format: Annexure 2](#)
- 2. [Skill set: Annexure 1](#)

Interested consultants/ organizations, with relevant experience (please include samples and/or references of the previous similar work as proof of experience) and based out of India are requested to reach out with a detailed proposal giving a brief on the methodology and the process they will uptake for this project, including budgets (with break-ups and explanation), timelines and milestones and submit the same to google form <https://forms.gle/5umVWvZmgZsvH9bw9> on before 12th December 2023.

Any further queries please write to procurement@selcofoundation.org with a subject line: “Proposal for Developing Vendor and Supply Chain Management”



Skill Set – Annexure 1

1. **Subject Matter Expertise:** The individual should have a deep understanding of the rice sector especially on post-harvest processing, including processing techniques, equipment, and technologies used for millet processing, packaging, branding, and marketing. They should have knowledge of the latest trends and best practices in the paddy processing industry.
2. **Technology familiarity:** The individual should have some familiarity with working across agro technology in the past (this would be an added bonus)
3. **Curriculum Development:** The individual should have experience in developing training curriculum and instructional materials.
4. **Technical Writing:** The individual should have excellent technical writing skills to develop clear and concise training materials, including training manuals, PowerPoint presentations, handouts, and other training aids.
5. **Training Delivery:** The individual should have experience in delivering training to different types of audiences, including farmers, entrepreneurs, and community-based organizations. They should be able to design and deliver engaging, interactive, and effective training sessions.
6. **Communication Skills:** The individual should have excellent communication skills, including the ability to communicate complex technical concepts in a clear and concise manner. They should be able to collaborate effectively with stakeholders and build positive relationships.

Overall, an individual with a combination of technical, project management, and communication skills, along with subject matter expertise in paddy post-harvest processing, would be well-suited to develop a training module for this project.



Proposal Format – Annexure 2

Training module development for DRE driven Post harvest processing in Paddy

Cover Page

- The cover page should include the Title of the project, name of the consultant/agency, the title of the proposal, the name of the client, and the date of submission.

Executive Summary

- The executive summary should be a brief overview of the proposal, including the background, goal, objective, scope of work, methodology, and deliverables.

Introduction

- The introduction should provide a brief overview of the project and its importance. It should also introduce the consultant/agency and provide relevant background information.

Background

- The background section should provide a detailed description of the project, including the challenges faced in the paddy value chain especially in post harvest processing and the need for training material for sustainable energy-driven solutions. The training material should also highlight the importance of paddy in the indian food system and culture

Goal

- The goal section should clearly state the overall goal, which is to develop a comprehensive training module for the paddy post harvest processing .

Objective

- The objective section should clearly state the objective of the training module development, which is to provide knowledge and skills to individuals or groups involved in decentralized paddy processing.

Scope of Work

- The scope of work section should provide a detailed description of the work to be undertaken by the consultant/agency. This should include the development of training modules, training tools (PPT, Posters, IEC), and training manuals.

Methodology

- The methodology section should provide a detailed description of the methodology to be used by the consultant/agency. This should include prioritizing the training need, defining the learning objectives, meeting with experts, field visits, review and feedback, designing the training content, developing the training materials, pilot testing the training module, delivering the training, and evaluating the training.

Deliverables

- The deliverables section should clearly state the expected deliverables of the project

Timeframe

- The time frame section should provide a detailed timeline for the project, including the start and end dates for each phase of the project.
- Strategy to meet the promised timeframe of deliverables



Terms of Reference

Development of comprehensive training module for DRE driven Paddy Post Harvest Processing

Budget

- The budget section should provide a detailed breakdown of the costs associated with the project. This should include the consultant/agency fees, travel expenses, expenses related to documentation, illustration, forating, printing and any other expenses related to the project.

Conclusion

- The conclusion should summarize the key points of the proposal and reiterate the importance of the project. It should also provide contact information for the consultant/agency.

Relevant Past Work

- The proposal must also highlight the value proposition of the consultant/agency and past relevant work done in the sector



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