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### **A Training Manual**

This manual uses fact sheets to lay out a planned approach for successful technology development and transfer. The manual follows the structure of the fact sheet: Increasing impact: a checklist

### Four key principles for success:

1. Real world: Address a real problem and need

2. **Participation**: Work with farmers to identify viable, beneficial solution(s)

**Note**: In general, farmers would rather avoid risk then choose profit. Therefore, new technologies must have an acceptable level of risk as well as clear benefit for the farmer. Benefit can come in many forms – increased profit, increased yield, less labor, etc..

- 3. Appropriate technology: Promote technologies such that farmers
  - a. can see benefit in the alternative(s) (and are therefore motivated to try the technology),
  - b. can access and afford the needed inputs,
  - c. can sell their product profitably
- 4. Communicate: Communicate so that farmers and others
  - a. are aware of the alternative(s),
  - b. can understand the alternative and
  - c. so can try it correctly



## Step 1. Pre-Project

### Before you start major field activities:

- Identify the project region in response to demand, perceived opportunity and experience of those working in the region
- 2. Evaluate the potential for impact. What agricultural, institutional and political factors are required for success?
- 3. Identify potential partners and the likely project driver. A project driver is the person (or group) who will make sure the project is on track. A project driver is essential. Develop strong relationships.
- 4. Plan the project from needs assessment through to scaling-up and monitoring and evaluation
- 5. Establish benchmarks for collaboration with partners . What is expected and required from each?



### **Resource materials (Fact sheets)**

1. " Checklist for Creating Impact "

A framework for successful technology development and transfer

### 2. " Choosing partners "

How do you choose who to work with?

### 3. " Domains for Testing or Upscaling Technology Options "

Where should I work?

### 4. " Facilitating Technology Transfer "

What are some of the key characteristics of technology transfer?

5. " Three Roles of Rice Research in Development "

Where does research fit in development?

### Planning Form (Word document)

Impact Planning Framework (Word)

### Support materials (PowerPoint & Word documents)

- Marketing exercise (PPT) Understanding principles of marketing & technology transfer
- Designing a community development project (Word Lesson plan)

   what to keep in mind when promoting a technology and community development
- **Project management** (PPT) how do you plan and manage a project
- **Project management** (Word Lesson plan) support material for the above PowerPoint

### Step 2. Needs and opportunities assessment

Before promoting a technology, it is essential that the needs of the target group (and perception of their needs) be clearly understood.

It is essential to promote technologies that address the needs of the target group and not promote those technologies that are simply interesting to the researchers

# Conduct a needs assessment with the "project driver" and collaborators

- a. Select and characterize target sites and zones for survey
- b. Stakeholder analysis (communication network analysis)
- c. Field and farmer visits to identify problems, root causes and possible options
- d. Conduct baseline survey (identify indicators of impact)
- e. Select options for validation and/or gaps for research

### **Resource materials (Fact sheet)**

### The NOA - Needs and Opportunities Assessment

There are various forms of determining needs. This fact sheet outlines the steps involved in one type of needs and opportunities assessment.

" Domains for Testing or Upscaling Technology Options "

Where should I work?

### Support materials (PowerPoint & Word documents)

• NOA (Reference Guide)

This manual outlines the full steps involved in one type of needs and opportunities assessment.

• NOA (PPT)

This PowerPoint outlines the steps involved in one type of needs and opportunities assessment.



# Step 3. Research

Research takes two major forms – developing new technologies (where gaps were identified) and validating or modifying existing technologies.

Ensure new technology matches farmers' needs and priorities.

### Resource materials (Fact sheets)

• " Technologies: Economic and Other Considerations "

Technologies need to meet the various needs of the target group.

### Support materials (PowerPoint & Word documents)

• Farmer Participatory Research (Reference Guide)

A guide to working with farmers to ensure relevance of material.

• Farmer Participatory Research (PPT)

A PowerPoint for highlighting the principles of farmer participation in research



# Step 4. Capacity Building

Capacity building will occur throughout the whole process. The major participants are the project driver and collaborators

Train partners & collaborators in the technology Train partners & collaborators in participatory research

The following materials help you plan and implement your classes better.

**Resource materials (Fact sheets)** 

### Capacity building - classroom

• " Checklist for Preparing a Class "

What do I need to prepare before having the class?

• " Designing Effective Training Interventions "

How do you structure your class for maximum benefit?

• " Presentation Skills Checklist "

Do's and Don'ts of giving good presentations

• " Teaching Effectively "

Engage your class for maximum benefit.

• " Engaging Participants: Some Ideas "

Practical ideas to engage your class.



Working with groups (Fact sheets)

### • " Building Consensus "

Practical tips to build consensus

" Choosing partners "

How do you choose who to work with?

" Conflict Resolution "

Some practical tips for resolving (and avoiding) conflict?

### • " Facilitating Groups "

How do you make group work easier?

• " Running Effective Meetings "

Get more out of your meeting with these practical tips.

### Support material:

• Presentation Skills Course (PPT)

A workshop on developing presentation skills

• Presentation skills manual (Word)

A manual explaining the components of good presentations – supports the above PowerPoint.

• Effective Presentations: Some essential skills (word doc)

A summary of essential skills for giving good presentations

• Presentation Evaluation Form (Word)

A checklist of essential features of good presentations. The appendix highlights the importance of each component

### • Communication skills (PPT)

Covers the basic principles of communication.

### • Communication exercise (designing a tea bag) (Word)

Exercise to develop people's thoughts about the basics of communication

### • Lateral thinking (PPT)

Famous lateral thinking exercises – for fun and to have people think "outside the box"

### • Marketing exercise (PPT)

An exercise to have people think about the lements of successful marketing (and by inference successful technology transfer).

• Facilitation unit (Lesson plan) (Word)

An exercise to identify the fundamental of good facilitation

### • Principles of Leadership & Management (PPT)

Covers the basic principles of leadership & management.

- Qualities of winners (PPT)
- 10 principles of people who succeed

# Step 5. Validating technology

Technology must be validated as appropriate for the farmers and for the region.

# Validation requires working with the project driver and collaborators to:

- a. Define parts of region and potential technology matches
- b. Identify target communities
- c. Identify and contact potential partners collaborators
- d. Visit/meet with farmers to plan demonstrations and select participants
- e. Choose options and sites with farmers
- f. Train farmers
- g. Establish sites
- h. Visit and evaluate fields
- i. Field days and/or farm walks farmer-farmer awareness raising
- j. Collect farmer feedback, record adaptations, identify further opportunities
- k. Adapt technologies if necessary and conduct further field-testing
- I. Evaluate partnerships

### Resource materials (Fact sheets)

### • " Domains for Testing or Upscaling Technology Options "

Where should I work?

• Farm Walk

Farmer-led demonstrations

Running Field Demonstrations

Principles of running good technology demonstrations

Test Strips

How to do simple test strips in farmers fields.

### • " Technologies: Economic and Other Considerations "

Technologies need to meet the various needs of the target group. Support materials



# Step 6. Scaling up

Once validated, a technology has to be "promoted" to reach a wider body of farmers.

Scaling-up requires work with project driver and collaborators to:

- a. Check availability of both required inputs and markets for product surplus.
- b. Identify target zones for expansion (needs assessment, baseline survey)
- c. Re-assess partnerships and identify other key stakeholders
- d. Distil and package farmer-preferred technologies
- e. Understand your target audience and their communication networks
- f. Establish communication campaign committee
- g. Design and plan communication campaign (eg. message design workshop)
- h. Design, test, adapt, produce multi-media communication materials
- i. Initiate campaign and distribute materials
- j. Monitor and evaluate information diffusion and technology adoption

### Resource materials (Fact sheets)

### **Developing extension materials**

### Creating extension materials

Principles of developing promotional extension materials.

Making posters

Key points for developing promotional posters as extension materials.

### Making brochures and bulletins

Key points for developing brochures and bulletins as extension materials.

### **Demonstrating technologies**

### " Domains for Testing or Upscaling Technology Options "

Where should I work?

### • Farm Walk

Farmer-led demonstrations

### Running Field Demonstrations

Principles of running good technology demonstrations

Test Strips

How to do simple test strips in farmers fields.

Facilitating technology transfer

What linkages and institutional arrangements are needed for success?

### Persuasive writing: can you convince people

What's involved in writing persuasively?

• " Technologies: Economic and Other Considerations "

Technologies need to meet the various needs of the target group.

#### · Three roles of rice research in development

Why not just development? What's the role of research in development?

### Working with groups (Fact sheets)

#### " Building Consensus "

Practical tips to build consensus

" Choosing partners "

How do you choose who to work with?

" Conflict Resolution "

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• Qualities of winners (PPT)

10 principles of people who succeed

### Building Country Sites on the RKB

What's involved in using ICT in technology transfer and developing your own on-line knowledge site?

### Support materials

• Upscaling in Vietnam (PPT)

Lessons from successful upscaling in Long An in Vietnam

• Scaling up (PPT)

An overview of the types and principles of scaling up.

# Step 7. Monitoring and evaluation

Assessing impact and lessons learnt are key ingredients of monitoring and evaluation.

# Monitoring and Evaluation – with project driver and collaborators

- a. Post-intervention surveys
- b. Field day evaluations
- c. Record lessons learned in all aspects of research-impact continuum
- d. Assess impact against benchmark surveys and project goals
- e. Develop and implement exit strategy
- f. Document and disseminate outputs to scientific and development communities

### **Resource materials (Fact sheets)**

### Support materials

• Baseline survey and impact analysis (PPT)

An overview of the steps involved in monitoring and evaluation.

# Contributors

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