Report on

CERTIFIED RICE SEED PRODUCTION TRAINING

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1. Introduction

Agriculture is the backbone of Myanmar economy, especially rice production. Most of farmer should be conducted with advanced agriculture techniques to obtain the maximum yield in their rice production. Rice production is controlled by many factors such as the usage of pure seed, soil nutrients, water management, insect and disease, and post harvest technique. These factors are called gene and environment by abstract. Seed included in gene factors. Most of farmer used to the grain as seed for their rice cultivation and they don’t obtain the maximum yield. The requirement of pure seed is high but not produced by most of the farmers. So, pure seed production should be done with farmers by themselves. One of vital important is technical support in pure seed production. And the farmers from Radanar Ayar Targeted Villages have a little knowledge for pure seed production by themselves and or other organization. But their knowledge had not completed in pure seed production, quality crop production and not in certified rice seed production. The traditional rice varieties used by the farmers in their villages need to be regenerate by producing quality seed such as certified seed by themselves. So, they need the technical support and production of certified rice seeds. If farmers receive the technical support such as how to produce and manage in certified seed and quality seed production, they will produce the pure seed and distribute to other farmers to obtain the satisfactory yield.

2. Objectives

- To obtain the knowledge of Pure seed and grain
- To compare the benefit between by using of their traditional rice seed and qualified pure seed in their rice production farm
- To know the differences between qualified rice seed production and qualified grain production systems
- To train the concepts of seed production techniques to the farmers who produce certified rice seed in their farm by themselves.
3. Participants

Participants are farmers who will produce certified rice seed and selected by villages and village's farmer pool as Certified Rice Seed producers (CRS Farmers) and others who are interested in certified rice seed production.

The names and villages are described in attended lists.

Male – 29
Total - 29

4. Methodology

The training in 26.3.2012 are leaded by the trainers: U Nay Myo Win (Livelihood Technician), U Aung Soe Win (Livelihood Technician) and Daw Khaing Wah Soe (Agro-lab Technician) from Radanar Ayar (Bogalay Office) according to introduction, the knowledge of seed and grain, soil preparation for certified rice seed production, the benefit of using pure seed, the process of certified rice seed production and post harvest technology from the Agricultural technical point of view.

5. Training Titles

- The Knowledge of Seeds and Grains
- Seed Quality Control
- Soil Preparation for Certified Rice Seed Production
- The Process of Certified Rice Seed Production
- Post Harvest Technology

6. Training Inputs

(1) Seeds and Grains
Seed is leading to plant for next year and grains are aimed to eat.

(2) Seed Quality Control
(a) Why is seed quality important?
(b) What are seed quality characteristics?

(c) Factors used to classify seeds

- Seed lot purity
- Varietal purity
- Chemical analysis
- Crop factors
- Other characteristics

(d) How to increase seed quality?

(e) Practices for producing high quality seeds

- Proper maintenance of genetic purity
- Good crop establishment (e.g. leveling)
- Good growing conditions
- Proper timing and methods of harvesting
- Appropriate threshing, cleaning
- Timely and proper drying
- Appropriate seed storage and seed distribution systems

(f) Timely harvesting

(g) Threshing

(h) Winnowing

(i) Cleaning

(j) Effect of improper drying on seeds

3) Soil Preparation for Certified Rice Seed Production

(a) How to take soil sample in their farms

(b) Soil pH – the cause of acidic soil, soil salinity, how to measure the soil pH and how to solve the problems

(c) Procedure of Land Preparation Techniques and its advantages

- Why do we need fine tillage, leveling the soil and making bund enough to control irrigation system?
(d) Macro and Micronutrient in soil

- Cause of deficiency, deficiency symptoms, toxicity symptoms and how to solve these problem

(e) Mention about the Chemical fertilizer, Natural fertilizer and Bio fertilizer

- Advantages of organic fertilizer
- Nutrient content in organic fertilizer
- Groups of fertilizers
- Use of fertilizers in soil preparation

(f) Nutrient toxicity in rice production and how to solve the problems

(4) The Process of Certified Rice Seed Production

(a) The characteristic of qualified seed

(b) The characteristic of pure seed

(c) The objective and production process of pure seed

(d) Four classes of pure seed and multiplication steps

(e) Formation of a new rice variety

- Breeding method
- Selection of foreign varieties
- Selection of local varieties
- Mutation method
- Breeding with DNA method

(f) Certified Rice Seed production Techniques

- Objective and importance of CRS
- How to select seed for CRS production
- Use of growing system (transplanting)

(g) Seed bed preparation

- How to select place of seed bed
- Usage of natural and inorganic fertilizer ratio in seed bed
- Seed rate for one acre
- Seed bed dimension

(h) Seed Germination

(i) Seed Broadcasting in seedbed

(j) Nursery management

(k) Land preparation

(l) Transplanting

(m) Fertilization and water management after transplanting

(n) Roughing

(o) Integrated Pest Management for CRS Farm

(p) Harvesting

(5) Post Harvest Technology

Rice is a living product that must be harvested and processed properly and timely to maximize its viability and quality for the longest period of time.

(a) Harvesting

- 20-25% grain moisture
- 80-85% straw colored and
- the grains in the lower part of the panicle are in the hard doe stage
- 30 days after flowering

(b) Threshing

- Avoid stacking the cut crop in the field
- Avoid delays in threshing after harvesting
- Use the proper machine settings when using a threshing machine
- Clean the grain properly after threshing
- Avoid delay in drying after threshing

(c) Winnowing
• Principle: lighter materials are blown away by air
• Removes chaff, straw and empty grains
• Hand or mechanical winnowing
• Does not work for materials heavier than grain (dirt, stones, other seeds)

(d) Cleaning
• Combination of winnowing and sieving
• Air delivered by fan removes lighter materials
• Top sieves with large holes remove larger straw particles
• Bottom sieves with smaller holes remove small particles
  (e.g. weed seeds, dirt)

(e) Sundrying seeds
• Management
• Protection

(f) Storing of seeds

(g) Distribution to market

➢ Details are seeing in the attachment, training handout.

7. Outputs

By attending this training, many of farmers / trainees (Certified Rice Seed producers) got knowledge in the knowledge of seed and grain, seed quality controlling, soil and soil pH, soil preparation for certified rice seed production, process of certified rice seed production techniques and post harvest technology after harvesting seed and will sufficient quality seeds in their villages, they can produce quality crops by themselves and increase their families’ income.
8. Training Recording Photos