

2. **Use of Chili Extract** – the liquid can be used for various insect pests (soft bodied insects, sucking insects). Use the same method in extracting panyawan. When using fresh chili, select 20-25 regular size fruits for every 16 liters of water.
3. **Use of Garlic , Onion and Ginger Extracts** – these are sulphur accumulators. These can effectively control fungal diseases common in rice plant.
4. **Use of Compost tea and Vermi tea** to control foliar diseases and to strengthen plants' immune system.
5. **Spraying of Lactic Acid Bacteria Serum (LABS)** to increase the number of beneficial microorganism that will help suppress pathogenic microbes.
6. **Manual collection of larvae and pupae** to help control the population of insect pests.
7. **Gradual removal of disease plant** parts reduces incidence of disease outbreak.
8. **Weeds must be constantly removed** to avoid competition in nutrients, moisture and sunlight. Weeds also serve as alternate host for insect pests and source of disease inocula. However, there are some weeds species that must be preserved such as the spiny amaranth (*Amaranthus spinosus*) which harbour various species of spiders and predatory flower bug.
9. **Spiny Amaranth (*Amaranthus spinosus*)** which Harbour various species of spiders and predatory flower bug.

Harvesting

Drain the field 1 -2 weeks before harvesting. Rice plants can be harvested when 85% of the grains are mature. As much as possible, immediately thresh and dry it up to 14% moisture content or below.



Reproduced by:
**Organic Agriculture Program and
 Regional Agricultural & Fisheries
 Information Section (RAFIS)**

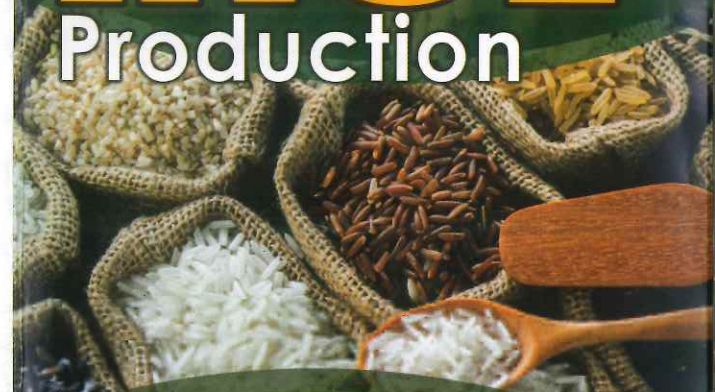
DEPARTMENT OF AGRICULTURE

Regional Field Office No. 02
 Tuguegarao City, Cagayan
 Tel. Nos. 844-1331/1328
 Fax Nos. 844-1031
 Website: <http://rfo02.da.gov.ph>
 Email Address: ored.rfo2@da.gov.ph



DEPARTMENT OF AGRICULTURE
 Organic Agriculture Program
 Regional Field Office No. 02
 Tuguegarao City, Cagayan

Region 02 Organic RICE Production





Introduction

Rice, being the staple food of most Filipinos, is grown in about 4.2 million hectares of land. Thirty five percent (35%) of the country's workforce depends on this commodity.

Land Preparation

Plow and harrow the field twice to minimize weeds and stubbles. Make sure that the field is well-levelled during the last levelling to facilitate ease in irrigation and for easy control of weeds and golden apple snail.

Sowing

Soak the seeds in clean water for 24-36 hours. Do not oversoak the seeds for it will affect its germination. If possible, replace the water every 6 hours to avoid pathogenic microbes build up. Put the seeds in a box or empty drum for incubation of another 24 hours or until the roots start to grow.

Seed inoculants, such as Bio-N, can be used prior to sowing. Bio-N is a microbial inoculant which contains nitrogen-fixing bacteria that enhances seedling growth.

Prepare 400 sq. m. seed for every 40 kilos of seeds. Make 20 plots of 1m x 20m each to accommodate the 40 kilos of seeds to be sown. It is recommended to incorporate 10 bags of Carbonized Rice Hull (CRH) in the seedbed prior to sowing for easy pulling of seedlings.

Transplanting

Rice can be transplanted at the age 10-15 days after sowing at 25 x 25 centimeter-distance. This method provides enough space for the plant to minimize its tillering potential. For golden apple snail infested field, 21-25 days old seedling is recommended.

Fertilization

Apply vermi compost at the rate of 3-5 tons and 40 bags of CRH per hectare before transplanting. For fields that are heavily treated with synthetic fertilizer and/or pesticide, it is recommended to double the volume of vermin compost and CRH to be applied. Foliar fertilization starts at 2 weeks after transplanting.

In addition, ½ liter cocktail of Naturally

Fermented Solutions (NFS) per 16 liters of water is recommended. Foliar spraying on a weekly basis is recommended until two weeks before harvest. Below is the recommended percent of mixture of NFS cocktail corresponding to the growth stage of rice:

NFS-Inputs	Vegetative	Reproductive	Ripening
MO	5%	5%	5%
FAA	50%	20%	10%
FPJ	20%	25%	15%
FPJ	15%	25%	50%
CalPhos	10%	25%	20%
Total	100%	100%	100%

Weed Management

Weeding should be done 2 weeks after transplanting. Weeding on this stage allows air to penetrate the soil. If possible use a rotary weeder for fast and ease in weeding.

Pest and Disease Management

The following are the Recommended Practices:

1. **Use of Panyawan/Makabuhay extract for various kinds of pests** – to be extracted using: 1:1: 2 (panyawan: molasses: Water) ratio. Use 3 tablespoons of the solution/liter of water. Spray directly to the target organism. It can also be extracted by pounding using mortar and pestle and added with water on a 1:1 Panyawan-Water Ratio. The same can be sprayed directly to the target organism using the same dosage of 3 tablespoons per liter of water.