

To prepare botanical pesticide, weigh and chop 1 kg of the material to be used. Add 2 L distilled water before blending in a blender. Ferment the solution for 24 hours. Squeeze off the solid particles in a fine cloth. To be more effective, prepare the extract a day before spraying. With a knapsack sprayer, spray the extracts to run-off on plants at weekly interval. Dilute 4 cups of the extracts in 16 L to produce one spray load of solution.

In combination with the botanical insecticides, use other methods of pest management, such as use of biological control (parasitoid) and trapping (sticky traps).



Source of Information: CLARRDEC write-up, 2007.

*Providing science solutions
for a vibrant agriculture
and sustainable environment*

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Information Bulletin No. 277/2008

Organic Vegetable Production



ISO 9001:2000

PHILIPPINE COUNCIL FOR AGRICULTURE, FORESTRY AND NATURAL
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Introduction

The huge volume of organic waste which can be converted into valuable input, the use of indigenous microorganisms and effective microorganisms, and the exploitation of plants with pesticidal properties together make possible the production of organic vegetables.

Vegetables play a very important role in human nutrition. However, successful and profitable production is threatened by high pest and diseases incidence that often redounds to indiscriminate use of pesticides. Moreover, pesticides and chemical fertilizers are dangerous to human health and are frequently associated with the occurrence of dreadful diseases in man. Their use causes soil acidity and water pollution.



Organic agriculture and organic vegetable production are anchored on four principles: health, ecology, fairness, and care. Organic vegetable production can thus be an important innovation to combat malnutrition and provide a safe source of vegetables for the populace.

Features

Production of Organic Vegetables

Organic vegetables are produced without the use or application of synthetically-based inputs such as chemical fertilizers and pesticides.

Compost and animal manures can be used as fertilizer in the form of compost and manure tea. To prepare manure tea, soak 32 kg of animal manure in 120 L of water. Place the manure in a sack and soak in water. Water will penetrate and diffuse the solution out of the sack. Incubate for 1 week to 1 month.

After a week, nitrogen in the solution ranges from 300 ppm to 400 ppm and after a month, 800 ppm to more than 1000 ppm. Dilute the tea to about 75 ppm to 100 ppm and use it to drench the leafy/green vegetables at 1 L/week. For fruit vegetables, dilute the tea to about 100 ppm to 180 ppm (lower rate is used if the plants are still young) and drench at the rate of 1 L –1.5 L /hill per week.



Botanical Pesticide Preparation

You can use the following plants as bio-pesticide to control insect pests: ‘oregano’ (leaves); mint (leaves); hot pepper fruit, *Capsicum annum* (‘siling labuyo’, fruits); marigold *Tagetes erecta* (leaves and flower), Euphorbia *Euphorbia* sp. (stem and leaves), fire plant, *Lantana camara* (leaves and flower); ‘luyang dilaw’ (tuber); and *Jatropha* (leaves).