

Weeding (30MD)	6,600.00
Harvesting (20MD)	4,400.00
Miscellaneous activities (20MD)	4,400.00
<b>Subtotal</b>	<b>54,120.00</b>
<b>B. Materials</b>	
Seeds (200 g/ha)	4,500.00
Manure (10t)	10,000.00
Fertilizer: 14-14-14 (5 bags)	4,750.00
46-0-0 (5 bags)	5,250.00
0-0-60 (2 bags)	1,900.00
Pesticides/Fungicides	15,000.00
Fuel and oil	10,000.00
Miscellaneous	10,000.00
<b>Subtotal</b>	<b>61,400.00</b>
<b>Subtotal (A + B)</b>	<b>115,520.00</b>
<b>C. Contingencies (15%)</b>	<b>17,328.00</b>
<b>GRAND TOTAL</b>	<b>132,848.00</b>
Gross Income	250,000.00–375,000.00
Net Income	117,152.00–242,152.00

With marketable yield of P10–15 t/ha at a farmgate price of P25/kg.

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 Department of Science and Technology (DOST)

# Sweet Pepper Production Guide



## Introduction

Sweet pepper (*Capsicum annuum* L.) also known as capsicum, kampana or lara is the most widely used condiment all over the world. It is consumed fresh, dried, or processed. There are several types: green, yellow, orange, violet, and brown.

In the Philippines, production area covers 2,439 ha including other sweet pepper types. Top producers are the Cordillera Administrative Region (676 ha), Region 10 (449 ha), Region 1 (255 ha), and Region 7 (224 ha) (Bureau of Agricultural Statistics 2005). Pizza parlors, which require regular supply in big volume, are lucrative markets. There are also processors requiring bigger volumes at a lower price.

## Nutritional Value

Per 100 g edible fresh portion, sweet pepper contains:

Properties	Amount
Water (g)	92.0
Protein (g)	1.2
Fat (g)	0.35
Carbohydrates (g)	5.4
Iron (mg)	0.60
Calcium (mg)	9.0
Vitamin A (IU)	420-5700
Vitamin C (mg)	163
Energy Value (kJ)	109

Source: Siemonsma, J.S. and Piluek, K. (Editors). 1994. PROSEA Handbook No. 8. Vegetables. Pudoc, Wageningen. 1993/Prosea, Bogor.

## Production Management

### Commercial Varieties

Bless	Maxi Bell
California Wonder	Redondo
Haifa Wonder	Sweet Plastic
Improved Smooth Cayenne	Tosca
King Solomon	Yolo Wonder

### Soil and Climate Requirements

Sweet pepper requires cool weather for best fruit quality. In low elevation areas, start planting on the second week of October up to the first week of November. In mid-and high-elevations, it can be grown throughout the year.

Sweet pepper grows best in sandy loam soil with a pH of 5.5–6.5. It cannot tolerate waterlogged conditions.

### Seedling Production

About 100–200 g of seeds are needed for 1- hectare planting. Prepare five seedbeds measuring 1 x 10 m each. Pulverize the soil and incorporate 1 kg fully decomposed chicken manure and 300 g carbonized rice hull per m<sup>2</sup>. Wet the seedbeds and make shallow lines 7–10 cm apart across the seedbeds. Soak the seeds overnight to hasten germination. Air dry and sow thinly. Cover lightly with soil and mulch with rice hull or chopped rice straw. For hybrid seeds, prick in nursery trays at two-leaf stage. Provide partial shade. During wet season, provide plastic roofing to protect the seedlings from heavy rain. Harden seedlings one week before transplanting by exposing fully to sunlight and watering only when the plants show signs of temporary wilting.

### Land Preparation

Prepare the area by plowing and harrowing twice. For double row planting, make beds 1.0 m wide and 0.75 m apart. Make furrows 0.75 m apart for single row planting. Incorporate 1 kg fully decomposed chicken manure and 300 g carbonized rice hull per m<sup>2</sup>. Dig holes with a distance of 0.4 x 0.4 m for double row planting and 0.4 m between hills for single row planting.

### Transplanting

Wet the soil before transplanting. Apply 10 g/hill 14-14-14. Plant one seedling per hill and mulch with rice straw. If mulching film will be used, apply after bed preparation. If possible, transplant in the afternoon to avoid wilting. Replant missing hills at once.

### Irrigation

Irrigate weekly or depending on soil moisture and prevailing weather conditions.

### Fertilization

During planting, apply 10 g/hill 14-14-14. Sidedress with 46-0-0 every two weeks at 5–10 g/hill depending on plant growth. During flowering stage, apply a 1:1 mixture of 46-0-0 and 0-0-60 at 10 g/hill. Apply tea manure and fermented plant juice as supplementary fertilizer during the vegetative stage and fermented fruit juice during the fruiting stage. To prepare tea manure, soak ¾ sack dry cow/horse manure in a plastic drum filled with 189.25 L water for seven days. To prepare fermented plant juice, mix equal parts of chopped actively growing plant parts and molasses or brown sugar. Prepare fermented fruit juice in the same way using chopped fruits. After one week of fermentation, extract the juice and apply as foliar fertilizer at 1 tbs/3.785 L water.

### Pest and Disease Management

Major pests of sweet pepper are aphids, spider mites, and fruitfly. To minimize pest incidence, intercrop with herbs, alliums, ginger, lemon grass, and other aromatic plants; spray recommended pesticides; use fruitfly attractant; wrap the fruits with net bags; or grow inside screenhouses. Grow flowering plants like cosmos and sunflower as border rows to attract beneficial insects and predators.

Major diseases are bacterial wilt, leaf spot, and anthracnose. To avoid bacterial wilt, plant after irrigated rice or plant in areas not previously grown to solanaceous crops. To control nematodes, intercrop with marigold and grow corn in rotation. To control leaf spot and anthracnose, observe strict sanitation, spray with recommended fungicides, and use compost tea and tea manure. Rogue out virus-infected plants or spray with tea manure or fermented plant juice to increase plant vigor and resistance.

To prepare compost tea, mix 1 cup compost with ¼ cup molasses. Place the mixture in used stockings and tie into a ball. Soak the compost tea bag in 18.9 L water in a colored jar and place under the sun. The mixture is ready for use as spray against leaf spot after soaking for four hours and against anthracnose after soaking for one week.

### Harvesting

Harvest mature green fruits at 80–100 days from transplanting or three to six weeks after flowering.

### Postharvest

Sort fruits according to market standards and separate deformed and damaged fruits. Fresh fruits can be stored up to five weeks at 4°C and 95% relative humidity.

## Costs and Returns Analysis Per Hectare

ITEMS	AMOUNT (P)
VARIABLE COSTS	
A. Labor (@P220/MD; P440/MAD)	
Plowing (5MAD)	2,200.00
Harrowing (3MAD)	1,320.00
Bedding (5MAD)	2,200.00
Manure application (6MD)	1,320.00
Seedling production(15MD)	3,300.00
Mulching (15MD)	3,300.00
Transplanting (10MD)	2,200.00
Fertilization; basal (2MD), sidedress (6MD)	1,760.00
Irrigation (64MD)	14,080.00
Spraying (32MD)	7,040.00