

<b>B. Materials</b>	
Seeds (3 kg/ha)	1,650.00
Animal manure (10t)	10,000.00
Fertilizer: 14-14-14 (7 bags)	6,650.00
46-0-0 (4 bags)	4,200.00
Pesticides	10,000.00
Miscellaneous	5,000.00
Subtotal	37,500.00
Subtotal (A + B)	87,540.00
C. Contingencies (15%)	13,131.00
GRAND TOTAL	100,671.00
Gross Income	144,000.00–180,000.00
Net Income	43,329.00–79,329.00

With marketable yield of 12–15 t/ha at a farmgate price of P12/kg.

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# Okra Production Guide



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 Department of Science and Technology (DOST)

## Introduction

Okra (*Abelmoschus esculentus* L. Moench) is also known as *saluyot a bunga* (Ilocano) and *kaluyot* (Ifugao). It is mainly grown for its young immature fruits which are consumed raw, or cooked (fried, broiled, boiled, or blanched). It is a common ingredient in soups and sauces. The fruits can be dried or pickled. The leaves are sometimes used as spinach and the seeds as a substitute for coffee.

Okra is grown in 3,138 ha (Bureau of Agricultural Statistics 2005) all over the country. The country is also growing okra for export to Japan in about 200 ha, mainly in Tarlac. In 2006, the estimated export value is US\$ 7M at an average export price of US\$ 11–12/box of 4 kg net weight.

## Nutritional Value

Per 100 g edible portion, the fruits contain:

Properties	Amount
Water (g)	90.0
Protein (g)	2.0
Fiber (g)	1.0
Carbohydrates (g)	7.0
Calcium (mg)	70-90
Energy Value (kJ)	145.0

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

## Production Management

### Commercial Varieties

- Camiling Smooth
- Green Light
- Smooth Green

### Soil and Climate Requirements

Okra can be grown from low-to mid-elevation areas throughout the year. However, production is best during long warm season in sandy loam soil with pH 5.5–7.0.

### Land Preparation

Plow and harrow the field twice. Make plots 0.75 m wide for two row planting. Apply 1 kg/m<sup>2</sup> fully decomposed chicken manure. For clay soils, incorporate rice hull and compost liberally.

### Planting

Plant okra by direct seeding. About 3 kg seeds are required per hectare. Soak the seeds in warm water overnight to hasten germination. Air dry. Sow 2–3 seeds/hill, 1 cm deep with a distance of 20 cm between hills and 25 cm between rows. Maintain only 2 seedlings/hill. Pull out excess seedling and replant missing hills.

### Fertilization

Apply 1 kg/m<sup>2</sup> fully decomposed chicken manure during bed preparation. At planting, apply 10 g/hill 14-14-14 as basal fertilizer. Thirty days after emergence, sidedress with 10 g/hill 46-0-0.

### Water Management

Water the plants regularly. Use furrow irrigation every week or depending on soil moisture and season.

### Pest and Disease Management

Major pests of okra are green leafhopper, fruit and stem borer, jassids, and stink bugs. To minimize pest incidence, avoid monocropping. Plant different crops like corn and legumes around the area. Grow aromatic crops such as marigold, ginger, basil, lemon grass, and alliums to repel insects. Grow flowering plants like sunflower, cosmos, and zinnia as border rows to attract beneficial insects. Spray pesticides at recommended rates.

To control diseases such as Cercospora blight, powdery mildew, and fruit rot, remove infected plant parts, spray with compost tea and tea manure, prune excess leaves to improve air circulation, and water in the morning. Intercrop with marigold to minimize root damage due to nematodes.

To prepare compost tea, mix one 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 blight and mildew after soaking for 4 hours and against

rot after soaking for 24 hours. To prepare tea manure, soak ¾ sack dry cow/horse manure in a plastic drum filled with 189.25 L water and ferment for seven days.

### Harvesting

Okra pods are ready for harvest when these are about 10–12 cm long or while the pod is young, tender, and snappy. Use a sharp knife or pruning shears during harvesting. The young pods should be gathered everyday.

Store pods at 10°C and 90–95% relative humidity to avoid wilting. The pods are then graded according to market standards and packed in plastic crates or in cardboard trays covered with plastic film.

To facilitate harvesting and control diseases, prune all the leaves below the lowest fruit at regular intervals.

A well-managed okra crop can be harvested 40–45 times in one cropping season.

After harvest, gather severely damaged fruits. They can be included in the compost pile or made into fermented fruit juice. To prepare, mix chopped fruits with equal amount of molasses or brown sugar. After one week of fermentation, extract the juice. Apply as foliar fertilizer at 1 tbs/3.785 L water during the flowering and fruiting stages.

## 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
Furrowing (5MAD)	2,200.00
Manure application (6MD)	1,320.00
Fertilization; basal (2MD), sidedress (10MD)	2,640.00
Planting (2MD)	440.00
Irrigation (2MD)	440.00
Thinning (4MD)	880.00
Weeding (15MD)	3,300.00
Hilling-up (3MAD)	660.00
Irrigation (24MD)	5,280.00
Spraying (8MD)	1,760.00
Harvesting (40 MD)	8,800.00
Sorting/Packaging (40MD)	8,800.00
Miscellaneous activities	10,000.00
Subtotal	50,040.00