Introduction

Eggplant (*Solanum melongena* L.) is also known as aubergine and brinjal (English), *talong* (Tagalog), *tarong* (Ilocano), or *bringhinas* (Bisaya). It is cultivated for the immature fruits which are either roasted, fried, stuffed, pickled, or processed. Young fruits are also eaten raw.

Eggplant is grown in 20,907 ha (Bureau of Agricultural Statistics 2006) all over the country. Top producers are Ilocos, Central Luzon, and Southern Tagalog.

Nutritional Value

Per 100 g edible portion, the fruits contain:

Properties	Amount
Water (g)	92.0
Protein (g)	1.6
Fat (g)	0.2
Fiber (g)	1.0
Carbohydrates (g)	4.0
Calcium (mg)	22.0
Iron (mg)	0.9
Vitamin B_1 (mg)	0.08
Vitamin B_2 (mg)	0.07
Niacin (mg)	0.7
Vitamin C (mg)	6.0
Energy Value (kJ)	100.0

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

Production Management

Commercial Varieties

Black Ninja
Casino 901
Dumaguete Long Purple
Jackpot
Mara
Mistisa
Mustang
Spitfire

Soil and Climate Requirements

Eggplant can be grown from low-to mid-elevation areas throughout the year. Highest production could be achieved during the cool, dry months. It thrives best in sandy loam soil with pH 5.5–6.5.

Seedling Production

Prepare five seedbeds measuring 1 x 10 m each. Incorporate 1 kg fully decomposed chicken manure and 300 g carbonized rice hull/m^2. Wet the seedbeds and make shallow lines 5 in apart. Sow thinly 200–250 g of seeds and cover lightly with soil. Mulch with rice hull or chopped rice straw. Provide partial shade during the dry season and rain shelter during the wet season. Water regularly. Harden seedlings one week before transplanting by decreasing the frequency of watering and by exposing fully to sunlight to minimize transplant shock. Transplant at four weeks after emergence.

Land Preparation

Prepare land by plowing and harrowing twice. Make furrows 1 m apart. Spread fully decomposed chicken manure along rows at 1 kg/linear meter or 500 g/hill. Apply complete fertilizer (14-14-14) at 10–15 g/hill and cover lightly with soil.

Transplanting and Maintenance

Irrigate area before transplanting. Plant 1 seedling/hill at a distance of 0.5–1.0 m depending on variety. Provide 1 m-long stake to prevent lodging. Irrigate by furrow every 7–14 days depending on season and soil type. Sidedress with 46-0-0 at 10 g/hill every two weeks during the vegetative stage. Use equal parts 46-0-0 and 0-0-60 at the start of fruiting. Weed two-three times during the growing season, or as necessary.

Use plastic mulch to minimize weed growth and maintain uniform soil moisture.

Pest and Disease Management

Major pests include tip borer, aphids, thrips, and green leafhopper. To minimize pest incidence, avoid monocropping. Intercrop with other vegetables, cereals, and legumes. Plant 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.

Remove and burn fruits and shoots damaged by borers. Gather and destroy eggmasses of fruit and shoot borers found on the underside of the leaves. To control green leafhopper, grow sacrificial plants like okra around the area or use recommended pesticides.

To control Phomopsis rot, mulch and prune infected basal leaves and fruits.

Harvesting

Harvest mature fruits which are shiny and still soft. More frequent harvesting can reduce damage from fruit borers. Harvest all fruits including deformed and damaged ones to prevent spread of pests and diseases. Harvesting can last for 3–6 months. Several varieties can be grown for 1–2 years.

Postharvest

Grade according to market standards. Pack in crates lined with banana leaves. Do not expose to high temperature.

Severely damaged fruits can either be included in the compost pile or used as fermented plant juice. Prepare fermented plant juice by mixing chopped actively growing plant parts with equal amount of molasses or brown sugar. Allow mixture to ferment for one week. Extract the juice and apply as foliar fertilizer at 1 tbsp/3.785 L water. Apply weekly during the fruiting stage.

Costs and Returns Analysis Per Hectare

ITEMS	AMOUNT (₱)
VARIABLE COSTS	
A. Labor (@₱220/MD; ₱440/MAD)	
Plowing (5MAD)	2,200.00
Harrowing (3MAD)	1,320.00
Furrowing (5MAD)	2,200.00
Manure application (6MD)	1,320.00
Seedling production (15MD)	3,300.00
Mulching with rice straw (10MD)	2,200.00
Transplanting (10MD)	2,200.00
Fertilization: basal (2MD); sidedress (10MD)	2,640.00
Irrigation (30MD)	6,600.00
Spraying (30MD)	6,600.00
Weeding (20MD)	4,400.00
Pruning (24MD)	5,280.00
Harvesting (50MD)	11,000.00
Miscellaneous activities (20MD)	4,400.00
Subtotal	55,660.00
B. Materials	
Seeds (F_1 Hybrid) 250 g/ha	2,550.00
Animal manure (10t)	10,000.00
Fertilizer: 14-14-14 (7 bags)	6,650.00
46-0-0 (12 bags)	12,600.00
0-0-60 (4 bags)	3,800.00
Pesticides	10,000.00
Fuel and oil	10,000.00
Miscellaneous	10,000.00
Subtotal	65,600.00
Subtotal (A + B)	121,260.00
C. Contingencies (15%)	18,189.00
GRAND TOTAL	139,449.00
Gross Income	300,000.00
Net Income	160,551.00

With marketable yield of ₱15 t/ha at a farmgate price of ₱20/kg.

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Information Bulletin No.147-A /2007

Eggplant
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PHILIPPINE COUNCIL FOR AGRICULTURE, FORESTRY AND NATURAL RESOURCES RESEARCH AND DEVELOPMENT
Department of Science and Technology

ISO 9001:2000