

Local Name:

Upo (Tagalog)
 Tabungaw (Ilocano)
 Kalubay (Bisaya)

Scientific Name:

Lagenaria siceraria (Molina)
 Standley

Brief Description

Bottle gourd is an herbaceous, annual climbing plant with long, strong tendrils and simple leaves. Fruits are globular, bottle, or club-shape up to 1 m long, with hard, durable rind. The most common types are light green and dark green with light green spots.

Uses and Nutritional Value

Young fruits are usually boiled or stewed and used as vegetables, while seeds are popular snack food. Syrup from the green fruit is good for chest pains. The hard shells of dried mature fruits are used as containers, hats, decorative handicrafts, floats, and musical instruments.

The edible portion of immature fruit is

about 84%. Each 100 g edible portion contains:

Nutrient	Amount
Water	95.0 g
Protein	0.5 g
Fat	0.1 g
Carbohydrates	3.5 g
Vitamin A	10.0 IU
Vitamin B1	0.04 mg
Niacin	0.4 mg
Vitamin C	11.0 mg
Calcium	16.0 mg
Iron	0.4 mg
Phosphorus	14.0 mg
Energy Value	63.0 kJ
Oil	45.0 %

Production Management

Varieties Tambuli
 1042-1

Planting

One hectare requires 2 kg seeds. Soak seeds in water for 24 hours and wrap in moist cloth until the seed coat breaks. Sow seeds by drilling 2 seeds per hill. Cover with a thin layer of soil.

A planting distance of 1 m between hills and 3-4 m between rows is recommended. The soil should be light with good aeration.

Fertilization

Apply 20 g/hill of complete fertilizer (14-14-14) at planting. Side-dress 10 g/hill of urea (46-0-0) at early vining stage (30 DAP). After 15 days, mix two parts urea and one part muriate of potash (0-0-60) and apply as side-dress at 10 g/hill.

Trellising

Use trellis to protect the fruits from rotting and malformation. Construct vertical and overhead trellis using ipil-ipil or bamboo poles, wires, abaca twines, or straw twines.

Pruning

Train vines to climb a vertical pole or ladder until it reaches the overhead trellis. Remove lower lateral branches that appear on the climbing part of the main stem to promote branching and fruiting.

Water Management

Provide adequate drainage to avoid water logging. Use mulch to minimize watering.

Pest and Disease Management

Insect pests like leaf folder, fruit fly, and yellow beetle, as well as foliar disease like downy mildew, powdery mildew, anthracnose and *Cercospora* leaf spot attack bottle gourd. Monitoring for pests should be done regularly. Remove infected fruits and leaves to avoid build-up of pest population.

Observe strict sanitation to control insect pests and diseases.

Harvesting

Fruits develop fast & require much attention at harvest time. It usually takes 15 days for fruits to reach marketable stage from the day of fruit set. The fruits are better harvested using sharp knives to cut the peduncle approximately 5 cm long.

Cost and Return Analysis Per Hectare

ITEMS	AMOUNT (P)
I. VARIABLE COSTS	P 74,165
A. Labor (P150/MD)	
Plowing	1,500
Harrowing (2x)	1,000
Bedding	1,500
Manure application	1,000
Planting (2 MD)	300
Mulching w/ rice straw (8 MD)	1,200
Fertilization; basal (2 MD) & Side-dress (12 MD)	2,100
Irrigation (40 MD)	6,000
Spraying (30 MD)	4,500
Weeding (20 MD)	3,000
Trellising (60 MD)	9,000
Vine training, pruning (30MD)	4,500
Harvesting (50 MD)	7,500
Miscellaneous (20 MD)	3,000
Sub-total	46,100

B. Materials	
Seeds (2 kg)	1,450.
Animal manure (5 t)	5,000
Fertilizers	
14-14-14 (5 bags)	1,750
46-0-0 (8 bags)	3,040
0-0-60 (2 bags)	1,200
Trellis	
Posts (1,200pcs) 2 uses	1,750
GI wire (300 kg); 4 uses	2,625
Plastic twine (50 rolls)	1,250
Fuel & Oil	5,000
Miscellaneous	5,000
Sub-total	28,065
II. FIXED COSTS	18,063
Land rental	5,000
Depreciation	
5 pcs. Scythe (2 yrs)	63
5 pcs. Hoe (3 yrs)	125
3 pcs. Shovel (3 yrs)	75
2 knapsack sprayers (5 yrs)	800
Interest on Loans at 20% int. p.a.	12,000
TOTAL COSTS	92,228
GROSS INCOME^a	100,000
NET INCOME	7,772

^a With marketable yield of 20t/ha at P5/kg

Source: Bottle Gourd
Production Guide. Info.
Bulletin No. 158/1999
PCARRD

Reproduced By:
Department of Agriculture
Region IV-B
(MiMaRoPa)

BOTTLE GOURD

Production Guide