Package of Practice

Bottle Gourd Farming

ADVANCING NORTH EAST

An Initiative of North Eastern Council (NEC)

Implemented by North Eastern Development Finance Corporation Limited (NEDFi)

Bottle gourd
Lagenaria siceraria
Cucurbitaceae



Bottle gourd is cultivated for immature fruits used for culinary purpose and preparation of sweets. Fruit pulp is very good source of fibre-free carbohydrates and fruit pericarp for crude fibre. The oil extracted from kernels of seed, a fine cooking medium and also used as hair oil. It is also known as white flower gourd.

Climate and Soil: Bottle gourd is a sub-tropical vegetable crop. It requires hot and humid climate for better growth and higher yield. Night and day temperature of 18-22^{0}C and 30-35^{0}C respectively is optimum for its proper growth and fruit set. He soil should be rich in organic matter and with good drainage. Loam or sandy loam soil is most suitable. A soil pH of 6.5 to 7.5 is ideal.

Varieties/Hybrids: Arka Bahar, Kalyanpur Hari Lambi, NDBG 1, NDBG4, PBOG 1, Phule BTG 1, Punjab Komal, Punjab Long, Punjab Round, Pusa Manjari, Pusa Meghdut, Pusa Naveen, Pusa Summer Prolific Long, Pusa Summer Prolific Round, Rajendra Chamatkar, Kashi Ganga, Kashi Bahar, Pusa hybrid-3, Pant sankar Lauki-1, Pant sankar Lauki-3, Azad sankar Lauki-1, Pant sankar Lauki-4.

Seed rate: 3-4kg /ha. Treat the seed with Thiram or Bavistin @2.5g per kg of seed to protect the young seedlings from the seed born diseases.

Spacing: Dig pits of the 30 cm x 30 cm x 30 cm size at 2.5 x 2 m spacing.

Sowing time: June-July and January-February are suitable for sowing. Sow the seeds @ three seeds/pit and thin the seedlings to two/pit after 15 days.

Manures and Fertilizers: Apply 10 kg of FYM (15-20 t/ha), 100 g of NPK 6:12:12 mixture/pit as basal and 10 g of N/pit 30 days after sowing.

Weed Management: Weeding can be done by hoeing as and when necessary for proper crop growth.

Water Management: Irrigation is given at 4-5 days interval in summer season and 7-8 days interval in Kharif season.

Harvesting and Yield: Bottle gourd may be harvested 55-75days after sowing. The fruits should be harvested when they are still tender. Yield for open pollinated varieties: 20-25tonnes/ha. Yield of Hybrid: 30tonnes/ha.

Post Harvest Management: The harvested fruits should be sprinkled with water after every 4-5hr or put in cold storage during pre market period.

Plant Protection Measures:

Diseases:

Powdery mildew: Spraying the crop once or twice with karathane @ 0.06% or Bavistin @ 2.0 per liter of water is useful to control the disease.



Anthracnose: Treatment of the seed with Bavistin or benlate @ 0.2 to 0.3% is suggested.



Bottle gourd stunting and papaya ring spot virus: To control the vector spray of Imidachlopid @ 0.25% at 15-20 days interval

Pests

Red pumpkin bettle: Soil application of carbofuran granules at 15 kg/ha before sowing the seed controls the insect. 2-3 spraying of carbaryl @2g/l of water early in the morning is very effective to control the beetle.





Aphids: Spraying the crop with malathion or endosulfan @ 2.0 ml per litre of water.

Fruit fly: The affected fruits should be plucked and destroyed along with the maggots inside them. Spray the crop with malathion @ 2ml per litre of water either very early in the morning or very late in the evening as during noon time anthesis(opening of the flower) takes place and useful insects like honey bees are active in the crop for pollination and fruit setting.





Cost and Returns of Bottle gourd Crop (Rs/ ha.)

Particulars	Approx. amount of Cost/Returns (Rs)
Land Preparation	10000
Seed Cost	8400
Sowing / Planting Cost	5000
Manures and Fertilizers	15800
Labour cost (Intercultural operations)	16000
Plant Protection Cost	13800
Irrigation cost	5400
Equipment and farm machinery cost	3000
Rental cost of land	24000
Cost of Harvesting	8000
Cost of marketing	5000
Miscl. Expenditure	3000
Total Cost of Cultivation	117400
Yield	20 tonnes/ha
Average selling price of Bottle gourd	Rs.15/kg
Total Income / Return	300000
Net Income	182600

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