

## AMLA



### PLANT PROFILE

Family	:	Euphorbiaceae
English name	:	Indian gooseberry, Embelic
Indian name	:	<b>Dhatri, Amlaka, Adiphala</b> (Sanskrit) <b>Amla, Amlika, Aonla</b> (Hindi) <b>Nelli, Malanelli</b> (Tamil) <b>Amalakkamu, Usirikai</b> (Telugu) <b>Amalak, Bettadanelli</b> (Kannada) <b>Amali, Ambala</b> (Gujarathi) <b>Amla, Amlaki</b> (Bengali) <b>Nelli</b> (Malayalam)
Species	:	<i>Phyllanthus emblica</i> Linn. <i>Embelica officinalis</i>

### MEDICINAL PROPERTIES AND USES

- Amla is an important crop in Ayurveda
- Fruits have the richest source of vitamin-C (700 mg per 100 g of fruits)
- Preparations ([Products](#)) using Amla :
  - [Chyawanprash](#)
  - *Triphala churna* (mixture of Amla, *Terminalia chebula* and *T. bellerica*)
  - *Brahma Rasayana*
  - *Madumegha churna*
- Medicinal properties:
  - Anti scorbutic, diuretic, laxative, antibiotic and anti-dysenteric.
  - **Phyllemblin**, obtained from fruit pulp has been found to have mild depressant action on central nervous system.
  - Good liver tonic
- Good demand from the industries for the preparation of various health care products also like hair oil, dye, shampoo, face creams and tooth powder.

## PRODUCTION TECHNOLOGY

### Soil

- Light and medium heavy soils
- Avoid purely sandy soil
- The tree is well adapted to dry regions and can also be grown in moderate alkaline soils also.

### Climate

- It is a tropical plant.
- Annual rainfall of 630-800 mm is ideal for its growth.
- The young plant up to the age of 3 years should be protected from hot wind during May-June and from frost during winter months.
- The mature plants can tolerate freezing temperature as well as a high temperature up to 46°C.

### Varieties

- Banarasi
- Chakaiya
- Francis
- NA-4 (Krishna)
- NA-5 (Kanchan)
- NA-6
- NA-7 (Promising variety)
- NA-10
- BSR-1 (Bhavanisagar).

### Inputs

S.No.	Materials	Per acre	Per hectare
1	Number of seedlings (grafts)	200	500
2	Farm Yard Manure (t)	4	10
3	Fertilizers (kg)		
	N	90	225
	P <sub>2</sub> O <sub>5</sub>	120	300
	K <sub>2</sub> O	48	120

**Note:** 15 kg FYM and 0.5 kg phosphorus should be applied to each pit before planting. Application of 30 g of nitrogen each year during September - October upto 10 years for each tree is recommended.

## Cultivation techniques

### Planting

- Dig pits of 1 m<sup>3</sup> during May-June at a distance of 4.5 m x 4.5 m
- Leave for 15-20 days exposing to sunlight.
- Each pit should be filled with surface soil mixed with 15 kg farm yard manure and 0.5 kg of phosphorus before planting the grafted seedlings.

**Important Note:** Plant at least 3 varieties in a ratio of 2:2:1 for the purpose of pollination and maximum yield. For e.g. in an acre, plant 80 grafts of NA-7, 80 grafts of Krishna and 40 grafts of Kanchan for best results.

### Irrigation

Young plants require watering during summer months at 15 days interval till they are fully established. Watering of bearing plants is advised during summer months at bi-weekly interval. After the monsoon rains, during October - December about 25-30 litres of water per day per tree through drip irrigation should be given.

### Training and pruning

Leaving only 4-5 well shaped branches with wide angle at about 0.75 m from the ground level, other dead, diseased, weak crisscrossing branches and suckers should be pruned off at the end of December.

### Mulching and Intercropping

During summer, the crop should be mulched with paddy straw or wheat straw at the base of the tree up to 15-20 cm from the trunk. Inter crops like green gram, black gram, cow pea and horse gram can be grown up to 8 years.

### Plant Protection

- |                 |  |
|-----------------|--|
| Major insect :  | Bark Eating Caterpillar ( <i>Inderbella tetronis</i> ) |
| Major disease : | Rust ( <i>Ravenellia emblicae</i> )                    |

### Schedule

1. Injection of Endosulphon 0.05% or Monocrotophos 0.03% in holes and plugging with mud is effective in protecting the tree against bark eating caterpillar.
2. Spraying of Indofil M-45 @ 0.3% twice, first in early September and second 15 days after first application controls the spread of rust.

### Harvesting and Yield

- Amla tree starts bearing after 2 years of planting.
- The fruits are harvested during February when they become dull greenish yellow from light green.

- The mature fruits are hard and they do not fall at gentle touch and therefore vigorous shaking is required.
- Fruits can also be harvested using long bamboo poles attached with hooks.
- A mature tree of about 10 years will yield 50-70 kg of fruit.
- The average weight of the fruit is 60-70 g and 1 kg contains about 15-20 fruits.
- A well maintained tree yields up to an age of 70 years.



**Dried Amla fruit**

## **PRODUCTS**

### **1. Home made products**



**Amla pickle**



**Amla burfi**



**Murraba & Laddu**

## 2. Commercial products

### Chyawanaprash

Chyawanprash has anti-oxidant properties & strengthens our body's internal defense mechanism, the immune system. Thereby protecting us from everyday infections, cough, cold & stress. Amla is the major ingredient of chywanaprash. Other ingredients include herbs like *Ashwagandha*, *Hareetaki*, Dashmul, Ghrit and several other herbal extracts.

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