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Practices for Cultivation of Aloe Vera

INTRODUCTION

- *Aloe vera* is a wonder plant with health benefits so myriad and astounding that hardly any part of human body remains uninfluenced by its healing touch.
- It has been used for its medicinal value for several thousand years. Its applications have been recorded in ancient cultures of India, Egypt, Greece, Rome and China.



Synonyms:

Aloe, Musabbar, Lolesara(in kannada).

Biological source:

Aloes is obtained from the dried juice of the leaves of

- *Aloe barbadensis* Miller, known as Curacao aloes, (Aloe Vera).
- *Aloe perryi* Baker, known as Socotrine aloes.
- *Aloe ferox* Miller and hybrids of this species with *Aloe africana* Miller and *Aloe spicata* Baker, known as Cape aloes, belonging to family Liliaceae.

Family: Asphodelaceae

(In past, it has been assigned to broadly circumscribed family Liliaceae)

Nomenclature

- Kingdom: Plantae
- Order: Asparagales
- Family: Xanthorrhoeaceae
- Sub-family: Asphodeloideae
- Genus: *Aloe*
- Species: *A.vera*
- Botanical name: *Aloe Vera*

Morphology:

All the 4 commercial forms are compared below here for their morphological characters.

Curacao aloe (Aloe Vera):

- These are distinguished by their Transparency
- It occurs as Opaque mass
- It is Waxy and some what resinous
- Colour: Yellowish brown to chocolate brown
- Odour: strong odour resembles with Iodoform
- Taste: Bitter & Unpleasant
- It is a short stemmed plant growing to 60-100cm tall, spreading by offsets.



Cape aloe:

- It is Vitreous form
- Occurs as olive brown masses
- It breaks with Glassy fracture
- Colour: Dark brown to greenish brown
- Odour: Characteristic, Sour
- Taste: Bitter & Unpleasant



Socotrine aloe:

- Masses of different shapes and sizes
- Colour: Yellow brown to dark brown
- Irregular and porous surface
- Taste: Bitter
- Odour: Unpleasant
- It is totally soluble in 60% alcohol



Zanzibar aloe:

- Opaque, more firm than Socotrine
- Colour: Liver Brown
- It is Smooth as wax
- Odour: pleasant
- Taste: Bitter



- It is also known as “Wonder Plant”
- It is a multi useful medicinal crop.
- It is also known as “Ghritkumari, Gvar, Gvarpatha”.
- Normal height of this plant is 30-60 cm.
- It is used to make “aloe gel”.
- It is also used in treatment of “cough”.

Soil & Climate

- **Well drained laterite to loamy soil is suitable for aloe cultivation**
- **The soil pH must be ranged from 7.0 to 8.5**
- **Commercially cultivation of aloe can be done in region 25-30°C temperature.**

Seed and Sowing

- **It is propagated through suckers.**
- **The suckers are dipped in 0.1% of carbendazim for five minute.**
- **10000 suckers are required for plantation in the field.**

Spacing

Normally spacing of 45 cm x 40 cm or 60 cm x 30 cm is followed.

Sowing Depth

Plant three to four month old suckers in a pit having depth of 15 cm.

Method of sowing

Parts used

Aloevera is obtained by cutting the leaves at their base and letting yellow, bitter Juice drain out. The water is evaporated off from the juice by heating and that result to light to dark brown mass.

Planting Season

- The planting can be done during two seasons.
- Namely June-July and September-October.

- **Planting**

- Field in thoroughly ploughed and bed of suitable sizes are formed.
- Suckers are planting at 90-90 cm. spacing.

Irrigation

- It is grown as rainfed crop.
- During summer months irrigations are required
- In summer season 15 days interval is required for irrigation.
- In winter season 30 days interval is required for irrigation

Manure& Fertilizer

- **10 t\ha of FYM is required for aloe cultivation.**
- **For the fertile soil manuring is not required.**
- **For the low fertile soil 50:50:25 kg N.P.K. is sufficient for one hactare**

HARVESTING

Aloevera crop take 18-24 months to fully mature. In year time, it bear yellow color flower. It can be harvested 4 times a year. 3-4 leaves cut from each plant. Carry out picking in morning or in evening. The leaves are regenerated and thus crop can be harvested up to 5 years.

Pest and their control:

Mealy bug: Caused by *Lepidocephalus* and *Pseudococcus*. The leaves start yellowing and withering.

Application of Methyl parathion@10 ml or Quinalphos@20 ml in 10 Ltr of water is done on roots and shoots of the plant.



Disease and their control:

Black brown leaf spots: Black Brown spots are characterized by reddish- brown spores that occur in oval or elongated pustules. The disease can develop rapidly when free moisture is available and temperatures are near 20°C. Successive generations of urediniospores can be produced every 10-14 days if conditions are favorable.

Anthracnose: It is a disease that causes many diseases such as dieback, twig cankers, blotches, defoliation and shoot blight. Spraying of 70% Neem oil helps to cure from this disease.

