

## KALIHARI / GLORY LILY



### Plant Profile

**Family** : Wurmbaeoidae of Liliaceae

**English name** : Glory Lily

**Indian name** : **Langali, Visalya** (Sanskrit)  
**Kalihari, Languli** (Hindi)  
**Agnishike, Gowrihoovu, Akkatangiballi** (Kannada)  
**Kalappaikkilanku, Nabhikkodi** (Tamil)

**Species** : *Gloriosa superba* Linn.

**Distribution** : Indian, Africa, Asia, Indochina  
Madagascar, Sri Lanka, USA

### MEDICINAL PROPERTIES AND USES

- Seeds are rich source of **Colchicine** used against gout, rheumatism and in botanical researches inducing polyploidy.
- The tubers are used as tonic, antiparrotic, antihelminthic and also against snake bite in Indian systems of medicine.



## PRODUCTION TECHNOLOGY

### SOIL

- In Southern India, it is found growing successfully in red or black loamy soils with medium water holding capacity and good drainage.
- A soil pH range between 6-7 has been found suitable to raise this crop.

### CLIMATE

- It is a tropical plant and comes up well under warm humid regions.
- It grows upto an elevation of 600 m from sea level.
- An annual rainfall of about 375 cm, well distributed throughout the year is ideally suitable for the crop.

### VARIETIES

It is a newly domesticated crop and there are no identified varieties.

### INPUTS

Sl.No.	Materials		Per acre	Per hectare
1.	Tubers (t)		1	2.5
2.	Farm Yard Manure (t)		6	15
3.	Fertilizers (kg)	N	50	125
		P <sub>2</sub> O <sub>5</sub>	20	50
		K <sub>2</sub> O	30	75

### CULTIVATION

#### Propagation

- Kalihari is commercially propagated from its underground 'V' shaped tubers.
- The tuber should not weight less than 50-60 gm in weight otherwise the plant does not flower and fruit.
- The dormant tubers start sprouting from the month of May to August.
- Planting should be done during the months of July and August
- The selected tubers should be treated with 0.1% organ mercurial fungicide of Bavistin before planting to avoid rotting of the tuber.



### **‘V’ Shaped Gloriosa tubers used for planting**

#### **Planting**

- The land should be ploughed and harrowed to get a fine tilth. Subsequently, the field is levelled and subplots of convenient size are made.
- The entire quantity FYM is applied and mixed well.
- Furrows are opened at 60 cm apart and the treated tubers are planted at a distance of 45 cm and 6-8 cm deep.
- Fertilizers are applied in shallow furrows using the entire quantity of  $P_2O_5$  and  $K_2O$  and 50 per cent of N.
- The remaining dose of N is applied in two equal doses at 30 and 60 days after planting.

#### **Irrigation and interculture**

- Early stage irrigation at 4 days interval and later at weekly intervals will be sufficient to meet its water requirements.
- In initial stages Kalihari requires frequent weeding.
- Utmost care should be taken to avoid any damage to the growing tips as once damaged it does not sprout again during the season. In all about 4-5 weedings are required.

#### **Crop monitoring**

- Being a climber Kalihari needs some support to get it exposed in the maximum sunlight and reduced physical damage. This is achieved by either staking the individual plants or the entire row of plants.
- Care should be taken to avoid any damage to the tubers during staking.

#### **PLANT PROTECTION**

Major insects : Lily caterpillar and green caterpillar  
Major diseases: Leaf blight and rhizome rot

#### **Schedule**

1. For control of pests, spray 0.2 per cent Metacid at fortnightly intervals
2. Leaf blight can be controlled by spraying 0.3 per cent Dithane M-45 (or contaf 10 ml/10 litres of water) at fortnightly intervals.
3. Drench the soil with Bavistin at 0.2 per cent in order to control rhizome rot.

## HARVESTING, PROCESSING AND YIELD

- Kalihari is about **170-180 days** crop.
- Harvest the **Pods** when its colour starts **turning to light green from dark green** and the skin of the fruit shrinks.
- After picking, shade dry the pods for 10-15 days, when the fruits turn yellow and open out showing deep orange yellow coloured seeds.
- Collect the seeds, dry them in shade again for a period of one week before packing them for storage.
  
- In a well managed plantation an yield of **200-250 kg seeds** and 150-180 kg of pericarp per hectare can be obtained.



**Kalihari seeds**