

PIPPALI (LONG PEPPER)



Plant Profile

Family	:	<i>Piperaceae</i>
English name	:	Indian long pepper, Long pepper
Indian name	:	Pippali, Magadhi (Sanskrit) Pipli, Piplamul (Hindi) Hippali (Kannada) Pippili, Tippili (Tamil)
Species	:	<i>Piper longum</i> Linn. <i>P. pepuloides</i> <i>P. officinarum</i>

Long pepper is the unripe spike of *Piper longum* Linn.

MEDICINAL PROPERTIES AND USES

- The spikes of this plant contain **piperine and piperlongumine alkaloids**.
- The roots and fruits are used in palsy, gout and lumbago.
- The fruit and root both have a bitter and hot sharp taste.
- In Ayurveda the root is used as a carminative, tonic to the liver, stomachic, emmenagogue, abortifacient, aphrodisiac.
- fruit is said to possess haematinic, diuretic, digestive, general tonic properties, besides being useful in inflammation of the liver, pains in the joints, lumbago, snakebite, scorpion sting and night blindness.

PRODUCTION TECHNOLOGY

SOIL

- It flourishes well in rich, well-drained loamy soil.
- Also cultivated on a large scale in limestone soil below the Chirapunji region.
- Laterite soils rich in organic matter content with good moisture holding capacity are also suitable.

CLIMATE

- The plant requires a hot moist climate and an elevation between 100 and 1000 m for its cultivation.
- It can be grown successfully even in areas which receive heavy rainfall with high relative humidity.
- In its natural habitat, the plant is found growing as an under shrub. Hence it is especially suited as a under crop in coconut and areca nut gardens with **20-25 per cent shade intensity**.

VARIETIES

- `Viswam' is the improved variety released from Kerala Agricultural University. Other local varieties include,
 - ✓ Gol Thippali
 - ✓ Pipal Nonsori
 - ✓ Asali, Suvali
 - ✓ Cheemathippalli



Long pepper "Viswam"

Inputs

Sl.No.	Materials	Per acre	Per hectare
1.	No. of cuttings	10,000	25000
2.	Farm Yard Manure (t)	8	20

3.	Fertilizers (kg)	20	50
	N	8	20
	P ₂ O ₅	28	70
	K ₂ O		

CULTIVATION

Propagation

- Long pepper can be propagated through seeds, suckers or cuttings or by layering of mature branches at the beginning of rainy season.
- However, it can be easily propagated through the **terminal stem cuttings obtained from one year old** growth and 3-5 internodes.
- Vine cuttings can be rooted in polythene bags filled with the common pot mixture. The nursery can be raised during March and April.
- The cuttings planted in March-April will be ready for planting in the main field by the end of May.

Planting

- Before planting, the land should be ploughed 2 to 3 times and levelled properly.
- Then the field is divided into convenient size of plots in which the pits are dug at a spacing of 60 cm x 60 cm.
- These pits are filled with soil mixed with well decomposed FYM or compost. In heavy rainfall areas, channels are made to drain excess water.
- Afterwards, with the onset of monsoon the rooted cuttings are planted in the pits at the rate of 2 per pit. The pits are gap filled one month after planting.
- Long pepper is planted as an inter crop in *Subabul*, Eucalyptus and under coconut in different parts of the country.

Irrigation

- The crop should be irrigated once in a week if it is grown as a pure crop.
- In case the crop is grown as an inter crop with other crops, the irrigation provided to the main crop is sufficient.
- Sprinkler system of irrigation may be adopted for economising the irrigation water.

INTERCULTURE AND MULCHING

- During the first year of planting, weeding is done when weed growth is noticed in the beds.
- After the application of FYM to the beds, earthing up is done from the channels.
- During summer, to prevent the moisture loss or losses from the soil surface, the beds may be mulched with dry leaves or straw.

PLANT PROTECTION

Major insect : Mealy bugs, *Helopeltis theiveora*

Major diseases: Leaf and vine rotting, yellowing and crinkling of leaves.

Schedule

1. To control mealy bugs, apply systemic insecticide like Roger @ 0.2%.
2. Application of neem kernel extract at 2.5 per litre of water will control *Helopeltis*.
3. Spray 1% Bordeaux mixture during May and 2 or 3 sprays subsequently during the rainy season to control rotting of leaf and vine.

HARVESTING AND YIELD

- The first harvest from vines is available after **six months of planting**.
 - The spikes are ready for harvest 2 months after their formation on the plants. Spikes are picked when they are blackish green and most pungent.
 - The harvested spikes are dried in the sun for 4 to 5 days until they are perfectly dry.
 - The green to dry spike ratio is around 10:1.5.
 - The dried spikes are then stored in the moisture proof containers.
- During the **first year**, the dry spike yield is around **400 kg per hectare**. The yield increases there after up to 3 years and it will be about **1000 kg per hectare** during the **third year**. After three years, the productivity of the vines decreases and should be replanted.
- Besides the spike, the thick parts of stems and roots which have medicinal value may also be harvested from 18 months after planting. While harvesting the stems are cut close to ground, the roots are dug up, cleaned and heaped in shade for a day, after which they are cut in to 2.5 to 5 cm long pieces.
- The average yield of dried roots is 500 kg per hectare.



Dried Spikes