Indian Long Pepper

_Piper longum_ Linn.

**Family: Piperaceae**

A slender aromatic climber with perennial woody roots; stems creeping, jointed; young shoots downy; leaves 5-9 cm long, 3-5 cm wide, ovate, cordate with broad rounded lobes at base, sub-acute, entire, glabrous; spike cylindrical pedunculate, axillary or extra axillary, green at first turning to yellow later. Flowers minute, unisexual, male larger and slender, female 1.3-2.5 cm long and 4-5mm. diam.; fruits small drupe, dark red when ripe, ovoid, yellowish orange, sunk in fleshy spike.

**Distribution:**

P. longum distributed in India, Srilanka, Nepal, Malaysia, Indonesia, Philippines. It is found in the hotter parts of India, from central Himalayas to Assam, Khashi and Mikir hills, lower hills of Bengal, and evergreen forests of western ghats from Konkan to Travancore; it also been recorded also from Car Nicobar Islands.

**Vernacular Names:**

- Sanskrit – Pipali
- Hindi – Pipal
- English – Long Pepper
- Kannada – Hippali,
- Telugu – Pippuloo
- Tamil – Tippili, Pippili
- Malayalam – Tippali, Pippali, Magadi

**Verities:**

Gol tipalli of West Bengal, Pipal nan sori of Maharashtra, Asli and Suvali of Assam, Vishwam from Kerala Agriculture university and CIMAP
Agro-climatic requirements:

The long pepper thrives best under tropical forest conditions having cool shade, considerable humidity and a good supply of soil moisture and which has good drainage. The best soil for the pepper is clayey loam which as friable, rich in organic matter, it is cultivated in large scale in limestone soil, 450-600m. below the Chirraapunji region which receives very heavy rains from the end of March to the middle of September and where the relative humidity is high.

Cultivation:

Pepper longum are also grown as an inter- or subsidiary crop along with other plantation like coconut, areca nut, coffee, cardamom and orange. The vines are propagated mainly by layering of mature branches or by suckers planted at the beginning of the rainy season. They are well manured with cowdung cake. Weekly once irrigation is required for the fully grown pepper plantation, when grown as subsidiary crop irrigation to main crop will be sufficient.

Intercultural and pruning:

Weeding and digging are done once during south-west monsoon and again during north-east monsoon, to conserve the soil moisture, and prevent weed growth and surface run off. And also contour bunding and terracing are done to prevent soil erosion.

Manure and fertilizer:

It requires more of farmyard manure or compost, given at the rate of 20 ton per hectare. Fertilizer 50 kg N in 2 divided doses, one part of Nitrogen, 20 kg P$_2$O$_5$ and 70 kg K$_2$O per hectare applied during transplantation.

Plant protection:

The wilt and pollu are the two important diseases of long pepper. The wilt is characterized by the death and decay of the roots, yellowing and shedding of the leaves and the ultimate drying of the plant. Pollu not only causes hollowness of the fruit but also leads to their complete destruction.

Spraying Bordeaux mixture (0.1%) in the month of May and 2-3 times in rainy season found effective in reducing the extent of damage.

Helopeltis thivora, a pest which cause destruction of leaves. To control this pest decoction prepared out of neem (0.25%) has to be sprayed.

Harvesting and yield:

After 6 months of planting start bearing spikes, after spike appear to mature fully it takes 2 months. The spikes are harvested in the month of January, while still green and unripe, as they are more pungent at this stage. They are dried in sun when they turn grey.

The yield increases from 560 kg. per hectare in first year to 1680 kg. per hectare in third year. After third year vines becomes less productive and should be replaced.

Plants without spikes are harvested for roots and stem after 18 months.
Such Long pepper yields around 500 kg. of roots per hectare.

Cost of Cultivation: Approximate cost of cultivation comes around Rs.62,500/- per hectare.

**Inputs:**

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Materials</th>
<th>Per acre</th>
<th>Per hectare</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No.of rooted cuttings</td>
<td>10,890</td>
<td>27,660</td>
</tr>
<tr>
<td>2</td>
<td>Farm Yard Manure (t)</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>Fertilizer (kg)</td>
<td></td>
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<tr>
<td></td>
<td>N</td>
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</tr>
<tr>
<td></td>
<td>P$_2$O$_5$</td>
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<td></td>
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<tr>
<td></td>
<td>K$_2$O</td>
<td>Mostly grown as an under crop on residual fertility.</td>
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<tr>
<td></td>
<td>The fertilizer requirements of this crop is yet to be worked out.</td>
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</tbody>
</table>

**Parts used:** Fruit, Root and thicker parts of stem.

**Medicinal uses:**

The fruits as well as the roots are attributed with numerous medicinal uses, and may be used for diseases of respiratory tract, viz. cough, bronchitis, asthma, etc; as counter-irritant and analgesic when applied locally for muscular pains and inflammation; as snuff in coma and drowsiness and internally as carminative; as sedative in insomnia and epilepsy; as general tonic and haematinic; as cholagogue in obstruction of bile duct and gall bladder; as an emmenagogue and abortifacient; and for miscellaneous purposes as anthelmintic, and in dysentery and leprosy. Fruits are capable of increasing intellect and memory power. Long pepper root pungent and bitter in taste producing numbness on the tongue. Roots are aphrodisiac, febrifuge, useful in rheumatism, arthritis. It is an antidote for scorpion bite.

A special method of taking pepper in increasing order known as Vardamana pippali, is useful in paraplegia, elephantiasis, chronic cough, tumors and stomach disorders.

Compound preparations: Bhaskara lavana, Panchkola churna and Asta churna – are useful in dyspepsia, flatulence, gastritis and enlarged spleen.

Pippali arista used in asthma, cough, anorexia, piles etc.