

## Kalmegh – A Potential Herbal Plant

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Kalmegh is botanically *Andrographis paniculata* belongs to Acanthaceae family. It is an annual, tall herbaceous plant that grows upto a height of 50 cm to one meter. Due to its bitter taste it's called as the King of Bitters. It is found in various parts of Southeast Asia, China, America, and the West Indies.



**Chemical Constituents:** The leaves contain three bitter principles; deoxyandrographolide, andrographolide and neoandrographolide. These are also present in whole plant. The leaves should yield 2.5% chemical constituents on analysis.

**Healing Properties of Kalmegh:** Kalmegh is an important herb for its benefits for health as it acts by inducing enzymes. The potential beneficial properties are,

1. Immunity building properties
2. Antithrombotic properties that may help to reduce the risk of blood clots
3. Potential to help with typhoid
4. Antimalarial properties
5. Antibiotic properties
6. Liver protecting properties
7. Anti-inflammatory activity.

Part	Medicinal uses
Whole Plant	Snakebite and insect sting treatment, dyspepsia, influenza, dysentery, malaria and respiratory infections.
Leaf	Fever, colic pain, loss of appetite, irregular stools and diarrhea, common cold, cough, fever, hepatitis, tuberculosis, mouth ulcers, bronchitis gastro-intestinal disorder and sores.
Aerial part	Common cold, hypertension, diabetes, cancer, malaria and snakebite, urinary tract infection.
Root	Febrifuge, tonic, stomach ache and anthelmintic.

**Environmental Requirement:** They grows very well in tropical and subtropical regions in India. It is a hardy plant, so it can be grown in medium fertile sandy loam to clay-loam soils. It can withstand partial shades.

**Propagation:** It can be easily raised through seed and vegetative methods. But in commercial cultivation, propagation through seed is easy and economical.

**Nursery Technique:** Seeds are soaked in water for 24 hours and sown in the nursery beds in early September. About 650-750 gm seeds are required to raise one hectare of land. Nursery is prepared with soil, sand and organic matter in 1:1:1 ratio and sown in early September at 5

cm spacing in rows and it takes 8-10 days for germination to commence. Direct sown crop is broadcasted thinly and has a seed rate of 1.5 kg/ha. It matures early, but nursery raising is preferred. For nursery beds, FYM @ 20 kg per square meter as basal dose is mixed in the soil.

**Planting in the Field:** The land should be prepared well by repeated ploughing to make soil pulverized. Six weeks old seedlings are planted in field at 30 x 15 cm or 15 x15 cm spacing.

**Intercultural operations:** For main field, FYM @ 20 t/ha is given as basal application. It is given NPK (75:75:50 kg/ha) in two split doses i.e. first at planting stage and second 40 days after plantation. Use of 5 kg Azospirillum + 5 kg Phosphobacteria per hectare has also given good results. 4-6 light irrigations are required till harvesting the crop.

Since it is a herbaceous plant, the field should be free from weeds. Two to three weedings are essential during the crop season viz. at 20 days and 60 days after transplantation.

**Disease and Pest Control:** It is a hardy plant and not attacked by any pest and disease.

**Harvesting:** The crop matures after 120 days of sowing. It is harvested when most plants are in bloom. It is at this stage, the plants should be uprooted. However, a small lot of healthy plants should be left in the field for seed production. When the fruits become mature, these should be picked up and dried in the sun and seeds are collected. The seeds should be kept in open sun for complete drying. After this, these are stored in air-tight containers for next sowing. The yield (whole plant) is 2.5 t/ha.

**Post-harvest Management:** After uprooting the plant, first it should be dried in the sun for two days and afterwards in the shade. This properly dried material should be packed in laminated gunny bags, lest it absorbs moisture. The harvested dry material should be stored in dark, airy and moisture-free places.

## References

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