

# ***Andrographis paniculata* (KALMEGH)**

THE KING OF BITTERS, PACKED WITH  
NATURAL HEALING POWER



**Regional-cum-Facilitation Centre (Southern Region)  
National Medicinal Plants Board, Ministry of AYUSH, Govt. of India**

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## INTRODUCTION

*Andrographis paniculata*, commonly known as Nela Bevu (Kannada), Nilaveppu or Kiriyatta (Malayalam), Nilavempu (Tamil), and Nilavemu (Telugu), is a slender, sub-erect herb with a branched, four-angled stem. It has simple, opposite, lance-shaped leaves with smooth edges. The plant bears small tubular flowers with a two-lipped corolla, and its fruit is a narrow capsule (1–2.5 cm long) containing numerous seeds..

The leaves and roots of *Andrographis paniculata* have been widely used in traditional medicine for their ability to manage various health conditions, including malaria, diabetes, liver disorders (like hepatitis and cirrhosis), digestive issues, respiratory infections, herpes, and other chronic or infectious diseases. The plant is known for its strong anti-inflammatory, antiviral, antidiabetic, antioxidant,



and heart-protective effects. It has even shown potential in slowing the activity of viruses like HIV. Traditionally, it has been valued as a natural remedy for reducing fever, boosting digestion, and supporting overall health. Leaf powder has been found to ease symptoms of the common cold and sore throat, working as effectively as paracetamol in some cases. Its anti-inflammatory properties also help to reduce swelling and discomfort.

## AGRO-TECHNIQUES

*Andrographis paniculata* is primarily propagated through seeds, although limited vegetative propagation is also possible. Vegetative propagation involves using 10–15 cm long stem cuttings from healthy, mature plants. These cuttings root more effectively when treated with rooting hormones such as IBA and planted in moist soil or sand. Seed propagation remains the most common and effective method. Seeds mature approximately 30–40 days after flowering, indicated by the browning and splitting of capsules. They



are small and lightweight-about 5,00,000 to 6,00,000 seeds per kilogram. Fresh seeds have the highest germination rates, which can be further improved by soaking them in water for a few hours prior to sowing. A seed rate of 4–5 kg per hectare is adequate.

While direct sowing in the field is possible, raising seedlings in a nursery is generally preferred for better uniformity. Transplanting is usually done 25–30 days after sowing, into raised beds measuring 2 m × 4 m, with a spacing of 60 cm between beds and 60 cm × 20 cm between plants. Sowing is ideally timed at the onset of the monsoon season.

For healthy crop growth, 2–3 rounds of hand weeding are recommended during the crop cycle. The first weeding should be carried out about 20–25 days after transplanting. Organic mulches such as straw or dry leaves help retain soil moisture and suppress weed growth. Supplemental irrigation and the application of farmyard manure further enhance crop performance.

The plant thrives in a variety of soil types but performs best in well-drained, fertile sandy loam to red loamy soils with good organic



content and a slightly acidic to neutral pH (6.0–7.5). Although it is hardy and tolerates moderately poor soils under rainfed conditions, it is not suited to waterlogged environments.

## **HARVESTING AND POST-HARVEST MANAGEMENT**

Flowering and fruiting occur approximately three months after transplanting. Seeds are collected just before harvesting the aerial parts of the plant—primarily the leaves and stems—which are cut close to the ground, leaving the roots undisturbed in the soil. After harvesting, the plant material should be thoroughly cleaned to remove soil, weeds, and any damaged or discoloured parts. The leaves and stems should then be dried in the shade in a well-ventilated area to preserve their active compounds and prevent degradation. Once fully dried, the material should be stored in airtight containers or poly-lined gunny bags to protect it from moisture and contamination. Dried Kalmegh can be marketed either as whole plant parts or further processed into powder or herbal extracts, depending on the intended use and market demand.



## ECONOMICS OF CULTIVATION



Kalmegh is a short-duration medicinal crop that offers good economic returns to farmers. For instance, in the dryland agroclimatic zones of South India, farmers can harvest about 30–40 kg of seeds and 4,000–4,500 kg of dried leaves per hectare, generating a gross income of approximately ₹1.60 to ₹1.80 lakh. With an average cultivation cost of ₹1.10 to ₹1.20 lakh, the net profit ranges between ₹40,000 and ₹70,000 per hectare. The benefit-cost ratio lies between 1.33 and 1.64, making Kalmegh a profitable crop option under rainfed or organic farming conditions.



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### NMPB-RCFC (SOUTHERN REGION)

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