

## The insight of *Angelica glauca* (Smooth Angelica) and *Angelica archangelica* - Growing condition and health benefits.

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### Abstract-

High-value medicinal and edible herb *angelica glauca* is native to and indigenous to the Indian Himalayan Region. This species' roots produce essential oils, which are highly valued because of their several applications in contemporary medicine, including aromatherapy. Especially in Asian nations, the plant and herb genus *angelica* is frequently utilised in traditional medicine. Many kinds of *angelica* have roots that are used to manufacture herbal medications. The benefits of Smooth Angelica for health are highlighted in the current article. It is employed as a spice and a drug. One of the main causes of slow regeneration and quick decline in sparsely populated wild populations has been identified as untimely damaging root harvesting. As corrective actions, the development of sustainable harvesting methods to support natural regeneration and domestication in backyard gardens for use as a spice and medicine at the household level is suggested. More efforts must be made to cultivate this species in a commercially viable manner in order to meet the ever-growing demands of industry. A suitable application of "Smooth Angelia" in cooking is suggested in the article as well.

**Keywords-** Smooth *angelica*, roots, plant, flower, traditional.

### Introduction-

Especially in Asian nations, the plant and herb genus *angelica* is frequently utilised in traditional medicine. Many different kinds of *angelica* have roots that are used to manufacture herbal medications. A plant is *angelica*. Drugs are made from the fruit, seed, and root. The herb *angelica* can reach a height of 250 cm. In the past, Nordic folk medicine has used the root, seed, leaf, and fruit.

However, the species *Angelica archangelica* is commonly referred to as *angelica* root (*A. archangelica*). Additionally, *Angelica sinensis* may be referenced (*A. sinensis*). In Himachal Pradesh, it is referred to by the trade names Chora, Gandrayan, Himalayan *Angelica*, and Chamchora; in Punjab, it is known as Chora or Chura; in Kashmir, Chohore and Chorche; in Garhwal, Choru; and in Kumaon, Gandrayan or Chipi. It is known as smooth *Angelica*, Chora (Chorak in Sanskrit), Choraka, Paruachoraka, Phalachoraka, Kshemaka (by Charak), Tilaparnike (by Sushruta), Nishaachar, Taskara, and Tsa ron (in Tibetan); *Blaugrune engelwurz* (German), and Chur in literature (Pakistan). In Kerala, *Kaempferia galanga* Linn is referred to as choraka. With the same common name, another species might exist.

<b>Common Name</b>	<b>Smooth Angelica</b>
<b>Botanical Name</b>	<b><i>Angelica glauca</i></b>
<b>Uttarakhand</b>	<b>Gandrayan</b>
<b>Hindi</b>	<b>Chora, Choru</b>
<b>Sanskrit</b>	<b>Granthiparna, Canda</b>
<b>Dogri</b>	<b>Chohor</b>
<b>Tibetan</b>	<b>Tsa Ron</b>

### Objective of this study-

- 1) To describe how to use *angelica glauca* and *angelica archangelica*
- 2) To comprehend the developmental phases and environmental requirements for *Angelica glauca* (Smooth *Angelica*) and *Angelica archangelica*

- 3) Describe in further detail how *Angelica glauca* (Smooth Angelica) and *Angelica archangelica* are used medicinally.

### Methodology

Describes the features of *angelica glauca* and *angelica archangelica* and is mostly descriptive in nature. The culinary and medicinal uses as well as the growing circumstances of both plants have been described using secondary data.

### Growing condition

The plant species in the genus *Angelica* feature globe-shaped clusters of green or yellow flowers, which turn into tiny yellow fruits, and can grow as tall as three metres (10 feet).

### Growing information

Transplant: Refrigerate the seeds until sowing. It is preferable to plant in the fall, but early spring plantings will also be successful. Tamp the seeds into the soil mix or just barely cover with soil and moisten. Seed requires light to germinate, along with alternating temperatures of warm and cold. Place the flats or trays outside where they will experience the needed temperature fluctuations. After 21 days, flats should be brought into warmer temperatures to germinate. Transplant seedlings outside in the spring when they are 3-4" tall, spacing seedlings 12-24" apart in rows that are 36" apart. Direct seed: Refrigerate the seeds until sowing. 1/4 to 3/8 sow in the fall or spring "In well-prepared seedbeds, plant 10 seeds per foot deep. 12-24 plants in space "each direction, apart.. Space plants 12-24" apart in each direction. All parts of the plant are edible. The leaves should be harvested carefully the first year so as not to damage the main stem. An example of a biennial is *Angelica*. This means that it completes its life cycle in two seasons, though on occasion, in cooler growth zones, the process could take three or more years. It doesn't change in size the first year, merely producing low leaves.

The stalk grows to astonishing heights in the second season, perhaps reaching eight feet in height. The plant grows big floral umbels and seed capsules during this stage. Usually, the plant perishes after going to seed at the end of the second season. Due to the plant's biennial nature and the fact that its growth pattern changes from one season to the next, different plant portions are harvested every other year. Harvest the young leaves throughout the first year of growth. These can be collected at any time, but late spring or early summer is when they are at their best. Simply cut the leaves you require off each plant while leaving some intact to collect. Take only 1/3 of the leaves at a time while harvesting is a good general rule to remember. Pick leaves gently, being mindful not to harm the main stem.

Different stages of growing Smooth Angelica



Credit- Jitendra Singh Butola

Before the stalks have a chance to shoot up and start producing blooms, harvest the roots either in the fall of the first season or in the early spring of the second. The optimal time to harvest roots is when a plant is

concentrating the majority of its energy on developing roots as opposed to producing flowers, fruit, or seeds. Additionally, the roots may grow harsh and woody if you wait too long to harvest them. Simply dig up the plants with a garden spade to get the roots. To make the plant simpler to handle for harvesting, you can, if you'd like, trim the foliage back to approximately a foot above the soil line. Angelica roots are easy to pull out since they are fleshy and spongy. Harvesting no more than a third of your entire crop means removing some plants while leaving others to blossom and set seed.

### **Therapeutic Usage and Application-**

Although *A. sinensis* has received more investigation, both plants' roots and other components have a long history of usage in traditional and herbal medicine. Traditional Chinese medicine employs *A. sinensis* for a number of functions, including liver purification, support for the digestive system, and hormonal balance. On the other hand, *A. archangelica* has a long history of use in Europe for anxiety, circulatory difficulties, and digestive concerns. However, there isn't much scientific proof to back up many of these applications for any type.

The aromatic molecules they contain give them a strong, distinctive smell, which is another characteristic. Frequently, musky, earthy, or vegetal are used to describe the aroma.

- A. Dong Quai and female ginseng are two of the many names for *sinensis*. It is indigenous to China and other East Asian nations, where traditional medicine predominantly uses it to treat female hormonal problems.
- B. Common names for *A. archangelica* include wild celery and Norwegian angelica. This kind primarily thrives in European nations, where it is utilised as a herbal remedy or in several culinary preparations.
- C. The majority of *A. archangelica* supplements and herbal medicine products comprise the root, seeds, fruits, and/or flowers of the plant, despite the fact that the name "angelica root" implies that only the root is employed. Products created from *A. sinensis* are typically solely made from the plant's root.
- D. Angelica is used to treat a variety of conditions, including heartburn, intestinal gas (flatulence), loss of appetite (anorexia), arthritis, circulation problems, "runny nose" (respiratory catarrh), anxiety, plague, and trouble sleeping (insomnia).
- E. Angelica is used by some women to initiate their menstrual cycles. This is sometimes done to induce abortions. Additionally, angelica is utilised to boost sex desire, enhance phlegm production and secretion, and fight infections.
- F. Some people use angelica topically to treat skin conditions, rheumatoid arthritis, and nerve pain (neuralgia).
- G. Angelica is also used to cure premature ejaculation when combined with other herbs.
- H. Chemicals in angelica *archangelica* may kill cancer and fungal cells, lessen anxiety, and calm the stomach.
- I. There is no reliable scientific evidence to support the use of *Angelica archangelica* for treating rheumatoid arthritis (RA), dyspepsia, stopping smoking, nighttime urine that is excessive, memory loss, or any other condition.



**Angelica archangelica - Pic Credit-Healthline**

### Preservation

Cut the angelica into four-inch pieces to preserve it. 12 hours' worth of salt and water to steep. In a clean brass pan, layer some leaves of cabbage or cauliflower, then some Angelica, then more leaves, and so on, ending with more leaves on top. Add vinegar and water to the cover. Angelica should be slowly boiled until it turns quite green. After that, drain it and weigh the stems for every pound of stems, add a 1 lb loaf of sugar. Pour the syrup over the angelica after heating the sugar in just enough water to cover it for ten minutes. Standing for 12 hours. Pour the syrup again over the angelica after allowing it to boil for five minutes. It is necessary to repeat the process. Place all of the ingredients in the brass pan over a fire and cook until the angelica is tender after it has been in the syrup for 12 hours. When the Angelica pieces are removed, placed in a jar, and covered with syrup or dried on a sieve and dusted with sugar, they transform into candies.

### Literature Review

*A. glauca* is a valuable medicinal plant native to the Himalayas that has become endangered due to a number of factors affecting its populations and habitat. Given the vast knowledge gap, the species' great industrial and ethnobotanical importance, and its threatened status, the following factors should be taken into account for its preservation and sustainable use (Butola and Vashistha, 2013). *Angelica glauca* and *A. archangelica* are medicinal plants that grow at high altitudes. Both the plants are used as flavouring ingredients in a variety of foods. Secondary volatile compounds are present in the Angelica oils. Angelica oils possess antioxidant and antimicrobial activity. Angelica oil can use as a food additive and preservative (Joshi, 2016). More research on this plant is desperately needed because different sources of literature present conflicting data. There are huge weight variations among 1000 seeds, which could cause issues when sowing or figuring out how much is required for growing. Fertilization differs for both greenhouse and outdoor production (Kylin, 2010). At least 30 years, including at least 15 years in the Community, have passed since the usage of angelica sinensis root as a medicine began before the assessment (Dymowski, 2013). A review of the literature indicated that this plant's many sections contain essential oil, coumarins, acids, sugar, a bitter principle, a strange resin known as angelicin, triterpenes, and flavonoids. Since several of them have demonstrated remarkable anti-tumor, antifungal, neurotoxic, anticonvulsant, hepatoprotective, antiulcerogenic, and other actions, research on coumarins has received particular attention recently (Bhatt and Kumar, 2011)

### Conclusion-

In the current review, we have made an effort to explore and provide as much information as possible on *Angelica archangelica* Linn., a medicinal herb used in the Indian system of medicine, particularly Ayurveda. This information includes the botanical, historical, and cultivation, traditional formulation and recipe, nutritional, pharmacological, and toxicological data.

#### **Angelica glauca and Angelica archangelica**

- High-altitude plants like *Angelica glauca* and *A. archangelica* are used as medicines.
- Both plants are utilised in a variety of foods as flavouring agents.
- The oils from angelica contain second-generation volatile substances.
- Angelica oils have antibacterial and antioxidant properties. Angelica oil is a food additive and preservative that can be used.

The facts and information given in this article will unquestionably be useful to researchers and professionals that study this plant. Due to its extensive range of applications in the treatment of severe and chronic ailments, it is fair to conclude that this plant truly is an Angel.

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