

## ***Swertia chirayita*, critically endangered medicinal plant conservation through *ex-situ* cultivation in Shillong**

*Swertia chirayita* (Roxb. ex Fleming) Karsten belonging to Family Gentianaceae. It is internationally renowned and critically endangered plant of temperate Himalayas. Reduction in its natural populations from wild has necessitated *ex-situ* cultivation for its conservation. A study was conducted for the *ex-situ* cultivation of *S. chirayita* at altitude 1500±10 m above MSL in Upper Shillong region of Meghalaya, India and the eco-physiological adaptation study was conducted by scientists from DBT's Institute of Bioresources and Sustainable Development (DBT-IBSD), Imphal. The plant showed the successful growth and yield during its seed to seed cycle showing varied adaptive strategies during its pluri-annual life cycle of more than two years.



The successful seasonal harvest of bitter glycosides rich leaves and growth performance results encourages its incorporation into mixed crop cultivation or on marginal lands for additional income of farmers. The study showed successful growth and yield during its seed to seed cycle. Two to three leaves harvestings per year can be taken and suggested from the plant cultivated in the niche environment of Upper Shillong, Meghalaya while maintaining the plant for further growth before the final yield after two and half years.

*S. chirayita* is among the foremost reputed plants of Indian system of medicine (Ayurveda) which was incorporated in the Indian Pharmacopoeia List 1946. It is one of the 32 prioritized medicinal plants by National Medicinal Plants Board, New Delhi, Government of India. *S. chirayita* is medicinal importance due to the presence of bitter glycosides, xanthenes, flavonoids,

triterpenoids and iridoid. It shows anti-carcinogenic, hepatoprotective, hypoglycemic, anti-hepatotoxic, anti-inflammatory, antimicrobial, antileprosy, antimalarial, antioxidant and CNS depressant activities. *S. chirayita* is used traditionally as a home remedy for malarial fever, indigestion, intestinal worms in children, liver diseases, cough, cold, asthma, headache, boils, scabies, etc.

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