

RESEARCH NEWS

**PRODUCTION OF SAVANDERA (*CHRYSOPOGON ZIZANIOIDES*)
ROOTS FOR HAIR OIL INDUSTRY THROUGH HYDROPONIC
CULTURE**

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Roots of Savandara (*Chrysopogon zizanioides*) are widely used in Ayurveda to formulate several indigenous medicines. As the formulation of commercial level medicinal oil started in the recent past, a new demand for clean Savandara roots with special characters has been created due to inserting of Savandara roots to oil bottles to improve their medicinal value. Importation or cultivation of savandara is commonly practiced to achieve the demand, but both of these methods involve high cost and labour. Therefore, an efficient, clean savandara root production procedure was investigated through hydroponic culture. Discarded empty plastic barrels, which were used to import fungicides, were used for hydroponic culture of Savandara. Four holes, each at 12 cm diameter, were made in the bottom of the barrels. The barrels were filled with nutrient solution (1g/l Albert solution - Unipower Co. Pvt. Ltd and 0.1g/l $\text{Ca}(\text{NO}_3)_2$ mixture) and pH of the solution was adjusted to 6. Plastic pots filled with disinfected coir dust were used to plant Savandara plants and 25-30 holes with ½ cm diameter were made in the bottom of the pots to facilitate a vigorous root growth. The Savandara plants in the pots were allowed to grow in the hydroponic barrels.

Harvesting of roots, which were grown in the solution, was started from 6th months by lifting the pots and continued for 2 years. Open field cultivated roots and imported roots were used to compare the products and cost. Cost of the first year for 40 bushes in hydroponic culture was Rs. 13,200.00. Selected harvest of roots was 20g/bush/week and the annual yield of roots (from the 6th month onwards) that was suitable for direct use (95 % from the harvest) was 36.5 kg. Cost of production of 1 kg in the first year was Rs. 360.00 using unskilled labour. Cost of the first year for cultivation of 40 bushes in the field was Rs. 16,600.00. Harvest of roots was 1-2 kg/bush and the total yield of roots that was suitable to be used in hair oil bottles (34 % of the harvest) was 27.2 kg. The cost of production per 1 kg in the first year was Rs. 976.00 and required skilled labour. Landing cost of imported Savandara root was Rs. 540.00/kg and the yield that was suitable for the purpose is 27 %. The cost of 1 kg of suitable roots was Rs. 2000.00. This indicates that hydroponic method can be utilized profitably to grow Savandara to fulfill the demand.