

## Stevia and its Cultivation: An Opinion

Manpriya Chopra\*

Department of Botany, Lovely Professional University, Jalandhar, India

\*Corresponding author: Manpriya Chopra, M.Sc. Botany, Lovely Professional University, Jalandhar, India,  
E-mail: [mnpriyachopra25@gmail.com](mailto:mnpriyachopra25@gmail.com)

### OPINION

In the era of 20<sup>th</sup> century, demand of food arises as the population is expanding. Moreover, the food with less calories is more preferred over the one rich in sugars as diabetes and obesity are becoming major problems for today's generation. I noticed a newly born child suffering from diabetes, children of 5-year suffering from diabetes and doctor suggest his parents to give products of Stevia to him instead of sugar which came from sugarcane. So, to fulfill the demand of people products formed by Stevia leaves are used extensively. Stevia rebaudiana is a natural sweetener plant. It significantly contributes towards the human welfare as it provides solution for complex type 2 diabetes, obesity and hypoglycemics in humans. Due to its unique properties it is considered as boon to diabetics. Stevia is emerging as an alternative to sugarcane with more good qualities, properties. Leaves of Stevia are used as it contain low calories glycosides (Diterpenoids steviol), that is around 220-300 times much sweeter than sugarcane. The demand of Stevia is increasing day by day, but unluckily Stevia cultivation has to face many biotic and abiotic stress. The major challenge in the cultivation of Stevia crop is its poor competency with weeds. Weeds are massively present in Stevia field which affect the growth of the Stevia plants and also yield is suppressed. To overcome this problem mulching and herbicide treatment are given in the Stevia field to enhance the growth.

I talked to the MD of Stevia Biotechnol, Baddi, what I observe is another one big reason behind the cultivation of Stevia crop is the unawareness of farmers. Farmers are not aware about this. They do not have proper knowledge and technique about the Stevia farming, due to which Stevia industry does not get proper raw material to make end products. The cultivation of Stevia will be economically beneficial for the farmers. A plantlet of height 2 cm-4 cm costs 3 rupees and when the plant gets fully mature it costs 200 to 300 rupee or farmer will be paid according to the quality and quantity of the leaves.

Stevia can be grown in temperate and tropical regions as annual or perennial crop. Stevia is used as a flavor enhancer. It possesses antimicrobial activity as it helps to retard the reproduction and growth of certain bacteria. It also possesses antiplaque and antimicrobial activity [1]. Due to its massive use it is used widely in pharmaceutical industry. Initially the growth of plantlets is slow and at the time chances of infestation are very high, which leads to decrease the quality and quantity of the main crop. To get rid of it, mulches and herbicides are used.

Mulch is the any material that is used to cover the soil surface to control weeds. Mulch suppress the weed growth as it covers the soil surface and weeds does not get proper condition to grow and to compete with the main crop. Different types of mulches are used in different fields depending upon the weather conditions and soil type of the area [2].

Different mulching treatments were given to Stevia crop. In one experiment plastic mulch, organic mulch (rice stubble) with different herbicides are used in Stevia field. The study has revealed that yield has increased in the plot with organic mulch treated with glufosinate spray rather than plastic mulch plot [3]. Compost mulch made up of vegetable was used in Stevia plots, that massively decrease the weed growth in crop and enhances the crop yield and also enhances soil properties. Soil moisture content of the soil increases [3,4]. Stevia plots when treated with the leaves of the *Populus deltoids* (poplar), *Pinus sp.* (pines needle), *G. robusta* (silver oak), enhances the yield, soil micro fauna (growth of useful microorganism in soil) that increase the fertility of the soil [5].

In conclusion, I hold my strong opinion that Stevia is the best alternative of sugarcane. It provides us sweetening as well as healthy life. Approximately 2 Kg of Stevia powder is equivalent 50 Kg-60 Kg of sugarcane. So, Stevia cultivation must be promoted. Different webinars and seminars are arranged by Stevia industrialists to promote the cultivation of Stevia-a boon crop. Farmers need to cultivate it at large scale so that Stevia companies can manufacture their products with ease and sell them at cheaper rate. Now a days, Stevia products costs very high because of the unavailability of raw material. Stevia cultivation done with mulching treatment along with proper herbicide enhances the growth of plants, yield and soil fertility and decrease the weed growth. Organic mulches show better

results as compared to synthetic mulches. Stevia crop is beneficial to us in all aspects, so farmers must cultivate it using proper techniques and take the benefit of this natural sweetener.

#### REFERENCES

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