

## **Technology Transfer to a Farmer on a Liquid Bio Plant Growth Promoter, “Amritajal”**

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Sri Lakshmikanta Sen, son of Sri Akupada Sen, a resident of Village – Senkapur, Village Panchayat – Raipur – Supur, Community Development Block – Bolpur-Sriniketan, Dist. – Birbhum, State – West Bengal is a marginal farmer growing Tomatoes on a tiny plot of 0.1 hectare of land until recently. Sri Sen was producing Tomato Var. JK Deshi using chemical fertilizers and pesticides. Getting the Technology from the National Centre of Organic Farming, Department of Agriculture, Cooperation and Farmers Welfare, Ministry of Agriculture and Farmers Welfare, Government of India, we, the Scientists of the Rathindra Krishi Vigyan Kendra, have took up the liquid bio plant growth promoter named, “Amritajal”, for the application in the Tomato field of Sri Sen.

“Amritajal” is a liquid bio plant growth promoter essentially composed of micro-organisms grown in a mixed culture of water, cow dung, cow urine and sugarcane Jaggery (“Chitey Gur” as binding agent). Liquid bio plant growth promoter contains Micro-Organisms which, when applied to seeds, plant surfaces, or soil, colonizes the rhizosphere or the interior of the plant and promotes growth by increasing the supply or the availability of primary nutrients to the host plant.

However, liquid bio plant growth promoters are not fertilizers. Fertilizers directly increase soil fertility by adding nutrients. Bio plant growth promoter add nutrients through natural

processes of fixing atmospheric Nitrogen, solubilizing Phosphorus and stimulating plant growth through synthesis of growth promoting substances. This liquid bio plant growth promoter helps in the vegetative as well reproductive growth of the vegetables, plants etc through supply of plant nutrients like nitrogen, potassium, phosphorus and it also helps in improving the quality of the produce by supplying various essential micro-nutrients like zinc, boron etc.

The technology, “Amritajal”, we brought to Sri Sen and all its ingredients are of very low cost or of no cost and are locally available viz. The ingredients are

Water – 10 litres;

Cow Urine – 1 litre;

Cow Dung – 1 kilo gram;

Sugar Cane Juggery (“Chitey Gur”) – 50 Grams;

Plastic Drum or Earthen Pot of at least 15 litres volume and a bamboo stirrer.

All the materials mentioned above are mixed in the designated Plastic Drum or Earthen Pot / Drum and have to be stirred with a help of a Bamboo stirrer from right side to left side and is to be stored in a shady area to avoid sunlight. The mixture in the Plastic Drum or Earthen Pot / Drum is to be kept for 1 day and should be stirred with a bamboo stirrer at intervals 8 hours. Then the mixture is to be filtered through a sieve-net e.g. Mosquito Net and the filtered mixture and water is to be sprayed 2 - 3 times @ 0.75 litres / 16 square feet area (@ 5045.6 litres of mixture and water / 1 hectare of land) per week while ensuring that there is an equal ratio of the mixture and water. The mixture in the drum is supposed to be covered with a cloth to avoid contamination. This mixture can be used for foliar and soil application. The filtered mixture should be stirred once every day while it is stored in the drum.

Sri Lakshmikanta Sen used to produce 9000 kilo grams of Tomato from his tiny plot of 0.1 hectare of land using chemical fertilizers. After adopting the foliar and soil application of “Amritajal”, Sri Sen has now produced 9900 kilo grams from the same land area. This resulted in an increased production value of Rs. 45,000.00 (Rupees Forty Five Thousands). The cost of

preparation of “Amritajal” is almost negligible as all the ingredients are from his household. The application of “Amritajal” has also reduced the application of chemical fertilizers by 60 per cent, which saved him Rs. 6,000.00 (Rupees Six Thousands) in the form of cost of cultivation of tomatoes. Thus through the use of “Amritajal”, Sri Sen has incurred an additional revenue of Rs. 51,000.00 (Rupees Fifty One Thousands).

**Dr. Prabuddha Ray at the Centre with Sri Lakshmikanta Sen spraying the “Amritajal” along with the Trainees of the Agriculture Skill Council of India (ASCI) and National Skill Development Corporation (NSDC) promoted Skill Training Programme on “Agriculture Extension Service Provider”**





**Dr. Prabuddha Ray explaining the nitty-gritty of the functioning of the “Amritajal” to the Trainees of the Agriculture Skill Council of India (ASCI) and National Skill Development Corporation (NSDC) promoted Skill Development Training on “Agriculture Extension Service Provider” while Sri Lakshmikanta Sen is spraying the “Amritajal”**

