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## Oversight of Success story and Farmers meeting Conducted by Students at Rural Horticultural Work Experience (RHWE) Programme

Shanmugam A<sup>1</sup>, Suganeshwaran L<sup>2</sup>, Thirumoorthy P<sup>3</sup>, Vasanth Kumar S.S<sup>4</sup>, Krishna moorthy V<sup>5</sup>, Sriram H<sup>6</sup>, Suriya Prakash V<sup>7</sup>, Ashok S<sup>8</sup>, Sarankumar C<sup>9</sup> and Sampath S<sup>10\*</sup>

<sup>1-7</sup>Students, Adhiparasakthi Horticultural College, Kalavai, Ranipet, Tamil Nadu, India.

<sup>8</sup>Department of Crop Physiology, Adhiparasakthi Horticultural College, Kalavai, Ranipet,

<sup>9</sup>Department of Plant Breeding and Genetics, Adhiparasakthi Horticultural College, Kalavai

<sup>10</sup>Department of Vegetable science, Adhiparasakthi Horticultural College, Kalavai, Ranipet,  
Tamil Nadu, India

Corresponding Author: [samhorti@gmail.com](mailto:samhorti@gmail.com)

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### ABSTRACT

The students of B.Sc., (Hons.) Horticulture students of Adhiparasakthi Horticultural college, Kalavai have attended the Rural Horticultural Work Experience (RHWE) Programme at Melarasampattu village. In that, the students have visited different places and met the different farmers to disseminate information regarding Horticulture cultural practices and also to get knowledge from the farmers about field cultivation aspects. As a part of this students have been involved in the demonstrations, conducting farmers' meetings, etc., This article elaborates on the success story of the farmer met by students about High-density planting of Banana and farmers meeting on High-density planting of Mango.

**Key Words:** B. Sc., (Hons.) Horticulture Students, Adhiparasakthi Horticultural college, RHWE programme.

### INTRODUCTION

Rural Horticultural Work Experience (RHWE) is a course offered to the B.Sc., (Hons.) Horticulture students to get attached to the farming community and gain cultivation practices related to Horticultural crops. Also, the students are engaged in demonstrating the newer technology to the farmers for better exposure. This helps both the students and

farmers in sharing their knowledge and disseminating the same to other people. Here totally 6 students have engaged in various practices as a part of course work.

### **Success Story on High-Density Planting of Tissue Culture Banana**

We met a farmer called **Srinivasan** from 'Melarasampattu' Village belongs to the Vellore district. He has been involved in the practice of growing Tissue culture banana (High-Density Planting). The main purpose of this work is to control and maintain the disease-free culture of Banana since it is a commercially large-scale cultivated crop by the farmers. Here the farmer grows the high-density planting of Banana in 2-3 acres. The banana under cultivation is 'Grand Naine' Variety.

### **Planting Methods**

Initially, plants are isolated from the container without disturbing the root ball and then the plants are planted in the pits by placing the pseudo - stem at 2cm below the ground level. Further, the soil around the plant is gently pressed. Deep planting should be avoided. For which the fields have to be ploughed well and the furrows are formed six feet apart, and planting should be done at a distance of 5-6 feet apart in each furrow. Planting should be done at a depth of six inches on the furrows.

### **Cultural Practices**

Banana, a water-loving plant, requires a large quantity of water for maximum productivity. But banana roots are poor withdrawal of water. Therefore under Indian conditions banana production should be supported by an efficient irrigation system like drip irrigation. There is a saving of 56% of water and increasing yield of 23-32% under drip irrigation. Immediately after planting irrigation should be given. Irrigation is practiced once in a week. Farmer also practices drip irrigation for well maintain the water capacity under the field throughout the cultivation period. Hand weeding is prominently practiced to control the weeds in the field. Since banana requires a high amount of nutrients they are often supplied only in part by the soil. Fertilizers are applied through drip irrigation by mixing the fertilizers in the ration viz., Farm Yard Manure (20 kg); 200gm Nitrogen (200 grams); Phosphorous (60-70 grams); Potassium (300grams) per plant. The major pest attacking the Tissue culture banana is Rhizome Weevil Nematode which can be maintained by phytanol, furadon spray. Also, the disease affecting is Sigatoka leaf spot which can be controlled by copper oxychloride. Ratoon management is important for sustained income. Especially this is practiced in banana. They have followed two ratoons in 22 - 24 months. Since the pest and disease infestation is more in ratoon it has been restricted up to twice.

### **Advantages of Tissue culture banana**

1. True to the type of mother plant under well management.
2. Pest and disease-free seedlings.
3. Uniform growth, increases yield.

4. Early maturity of crop - maximum land use is possible in low land holding countries like India.
5. Round-the-year planting is possible as seedlings are made available throughout the year.
6. Two successive ratoons are possible in a short duration which minimizes the cost of cultivation.
7. No staggered harvesting.
8. 95% - 98% plants bear bunches.
9. New varieties can be introduced and multiplied in a short duration.



### Farmers Meeting on High-Density Planting of Mango

In part of the RHWE programme we have conducted a meeting with farmers entitled 'Cultivation Practices of High-Density Planting of Mango'. High-density planting is a new technology that emerged worldwide which is most beneficial when compared with the traditional methods, especially in Mango. The main purpose of this technique is to produce uniform fruits in all aspects viz., morphological, physiological, and biological. The objective of this technique is to cultivate more plants by altering their size and planting them at a short system.

### **Genotypes suitable for High-density planting**

In general, the plants which are dwarf in nature are most suitable than that of the tall plants. Cultivars most suitable for this technique include (Neelam, Bombay, Totapuri, Kesar, Bombay Green, Baneshan, Bangalora, Alphonsa, Langra, Alampur, Mankaurad, Chausa, and Dashehari). Further various varieties have been evolved by IARI scientists and from other research stations.

### **Cultural Practices**

In order to maintain uniform vegetative growth, Training and Pruning are practiced. The first training is done after one growing season. Each plant is allowed to maintain a single stem with upward growth up to 70 cm. Also, four branches are allowed to maintain the tree frame. Shoots that arise from the primary branches are allowed to grow up to 70 cm and the shoots that arise from the secondary branches are allowed to grow up to 15 cm. It is necessary to spray 1% urea and 0.2% copper fungicide to enhance the vegetative growth of the plant.

The main constraints in mango production are prolonged dormancy, excessive vegetative growth, reduced flowering, and extreme fruit drop. Thus the application of growth retardants (0.0001%) Placlobutrazol helps to stop the growth of the main stem and enhances the lateral growth. Supplementarily, spraying of 2, 4D AT 10-15 ppm or NAA 50 ppm helps in preventing the fruit drop.

Drip irrigation is most suitable for high-density planting. Initially, it requires 4 lit of water per plant and after one year it increases up to 10 lit per plant. The economic trees have to be supplied with 25 lit of water per plant. Planting is usually done in a pit of 1.0 m x 1.0 m x 1.0 m size. After planting applying some amount of nitrogen and 50 kg of well decomposed Farm Yard Manure enhances the growth of the seedlings.

A soil with a better drainage facility and good water holding capacity is the ideal soil for the cultivation of mango. During the non-bearing stage, nitrogen is essential for fast-growing and development which can be supplied in the form of organic matter. Harvesting of fruits is done usually by simply picking the fruits with the help of a step ladder without getting injured fruits.



## CONCLUSION

In this article we have framed out the work done by students of B. Sc., (Hons.) Horticulture 2018 Batch under the Rural Horticultural Work Experience (RHWE) Programme viz., Conducting farmers meeting and meeting farmers. Through this, the students had a good experience with various practices about cultivation and meeting exposures.