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ORIGINAL PAPER



State Government Coconut Hybrid Seed Garden, Navlock, Ranipet District, Tamil Nadu Visited by Students at Rural Agricultural Work Experience (RAWE) Programme

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ABSTRACT

The students of B.Sc., (Hons.) Agriculture students of Adhiparasakthi Agricultural college, Kalavai attending the Rural Agricultural Work Experience (RAWE) Programme at Walajah Block. In that, the students have visited different places and met the different farmers to disseminate information regarding Agricultural 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 visit of the State Government Coconut Hybrid Seed Garden, Navlock, Ranipet District, Tamilnadu by students about Various hybridization practices in coconut.

Key Words: B. Sc., (Hons.) Agriculture Students, Adhiparasakthi Agricultural college, RAWE programme.

INTRODUCTION

Rural Agricultural Work Experience (RAWE) is a course offered to the B.Sc., (Hons.) Agriculture students to get attached to the farming community and gain cultivation practices related to Agricultural 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 six students have engaged in various practices as a part of course work.

The Government coconut hybrid seed garden

On 17th December 2022, students have visited **The Government coconut hybrid seed garden**, Navlock, Near the Banks of Palar River, Maniyambattu, Ranipet District, Tamilnadu. The coordinates are Latitude:12.932265⁰ and Longitude:79.281894⁰. The name 'Navlock' comes from Arcot Nawab during his Ruling period has Planted 9 lakh tree samplings. The word Navlock in Urdu Means '9 Lakh'. Then it is undertaken by the State Government of Tamil Nadu. This Coconut Farm in Navlock was established in 1967. On the Farm, we met **Farm Agricultural Officer (Farm AO) Ms. S. PremaKumari**. She explained the details about the farm and the hybrid seedling production methods carried out on this farm. The Area covers about 206 Acres. The cultivable garden area consists of four blocks (A, B, C, D). The texture of the Soil is sandy loam, Sandy, and clay loam. Trees of tall varieties (West coast tall and Lakshadweep Micro Tall) and dwarf varieties (cowghat Orange Dwarf, Malaysian yellow Dwarf) ageing nearly 30-45 years are being maintained here. Tall, T x D, D x T & Dwarf seedlings are cultivated here.

Hybrid Production

Coconut is a Monoecious crop where female and male flowers are present in the same plant but in a different positions. The Tall hybrid is produced between the Tall (T) x Dwarf (D) plant where the Tall plant is considered as mother plant (female) and Dwarf as male plant and similarly for Dwarf hybrid is produced vice-versa. In this Breeding method, West coast tall and cowghat Orange Dwarf variety used.

Crossing Techniques

After the emergence of flowers, the male flowers are removed from the female plant and discarded. During honeydew-like water spots appear on the female flower, the desired male flowers are collected and it is grinded by using a pestle and mortar then the pollens are exposed which are dusted on the female flower. It is covered with a cloth bag to avoid contamination by foreign pollen. This dusting process is carried out continuously for four days (14,15,16,17th day of flower emergence). The indication of successful crossing is the change of Branch from yellow to Greenish Orange with faster growth. The time taken for the fruit formation from the flower is 10-11months. The crossing percentage is 10-15%.

Coconut nursery seedlings production

Consists of 3 important processes.

1. Air curing.
2. Sand curing.
3. Sowing in beds.

The Air curing is done for 2 months to decrease the water content inside the nut. The sand curing is done by arranging the coconuts inside the pit layer by layer to avoid

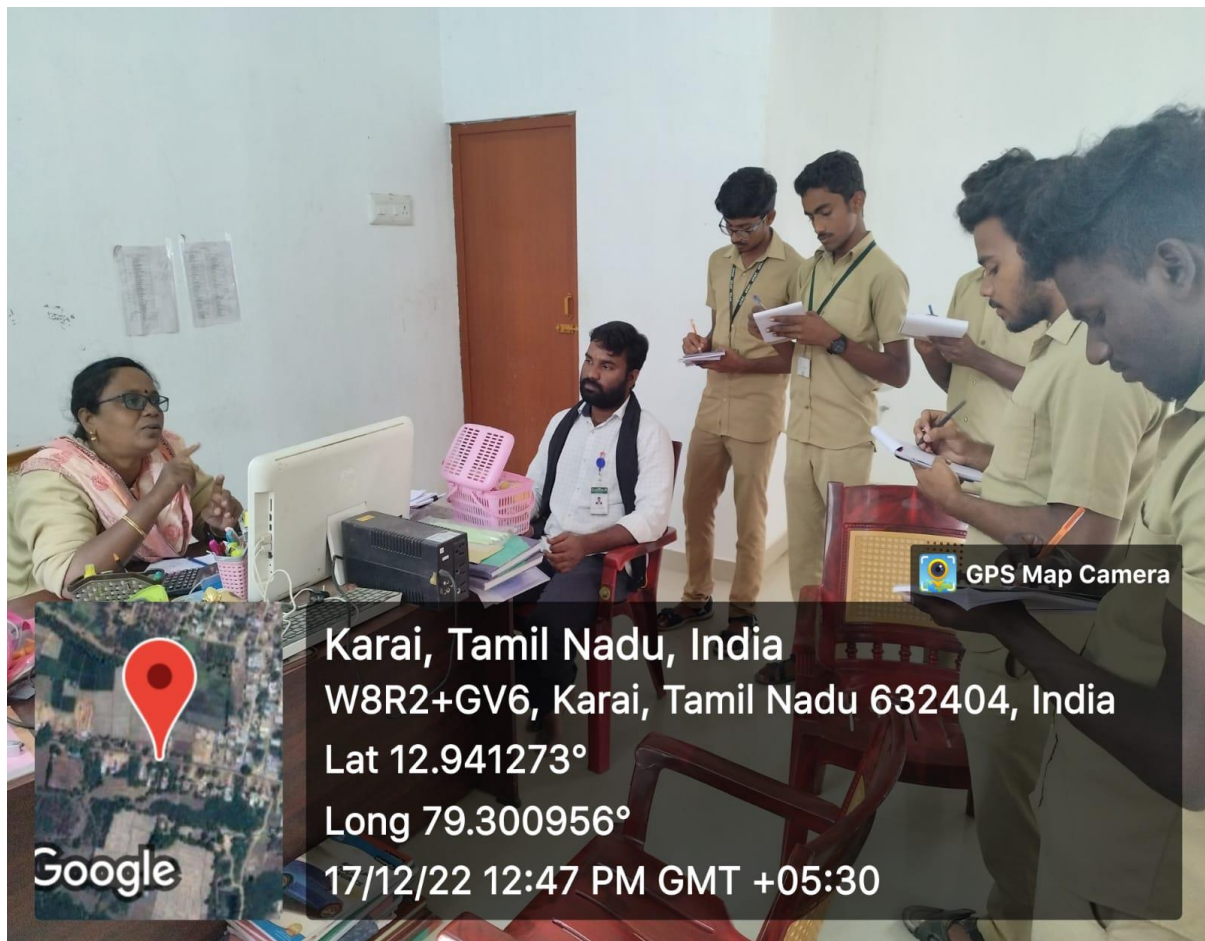
sprouting damage. It is done until the sprout emerges. Then it is planted in the nursery bed.

The Harvested nut form this year will be produced as seedlings and kept it sale for next year. The price of a Tall hybrid is Rs.120 and a Dwarf hybrid is Rs.300.The variety of west coast tall (medium-sized) is cultivated widely in this region.

Practical Constraints In This Farm:

1. Rugose Spiralling Whitefly (*Aleurodicus rugioperculatus*) major exotic pest .The dwarf varieties are most susceptible due to their being yellow. So the nursery is covered with yellow sticky traps.
2. Theft of the coconuts.
3. The Long Duration of the Breeding programme.





CONCLUSION

In this article we have framed out the visit done by students of B. Sc., (Hons.) Agriculture 2019 Batch under the Rural Agricultural Work Experience (RAWE) Programme. Through this, the students had a good experience with various practices about coconut hybridization.