



Crossing in progress

COCONUT PEST CONTROL AND BETTER AGRONOMY FOR MORE YIELD

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PLANTATION crops which occupy about two per cent of the area cultivated under all crops in India accounts for considerable export earning. While production of crops, such as tea, coffee, cashew, pepper and cardamom is highly export-oriented, coconut, cacao, etc., are industry-based and oriented towards import substitution.

The coconut palm, rightly eulogised as the 'Kalpa Vriksha' (heavenly tree) or the tree that provides all the necessities of life, not only supplies substantial quantity of food but also provides raw material for a number of important

industries. ✓ The crop is of considerable economic importance to the states of Kerala, Mysore and Tamil Nadu which have about 90 per cent of the total area of 9,21,900 hectares under this crop. The cost of the annual production of 5,319 million nuts which comes to about 2,659 million rupees, alone does not reflect the importance of this crop. ✓ The coir industry which utilises the coconut husk and is earning considerable foreign exchange and the soap, vanaspati and perfumery industries which utilise the oil are some of the important industries which directly depend on

the coconut palm. The internal production of coconut was all along inadequate resulting in the import to varying extents. During the year 1967-68, India imported copra valued at Rs 44.2 million rupees. The urgency for the country to become self-sufficient in coconut production needs no emphasis.

Problems of Production

Adequate research data on the three essential inputs of production, viz. genetically superior planting material, proper agro-technique for all the important agro-climatic zones under which coconut is grown and plant protection measures for some of the diseases are not available. Research on coconut improvement done so far has shown that hybrids involving West Coast Tall and the dwarf as well as Gangabondam (semi-tall) have considerable hybrid vigour. Their performance has been highly satisfactory and superior to the parents. Exploitation of

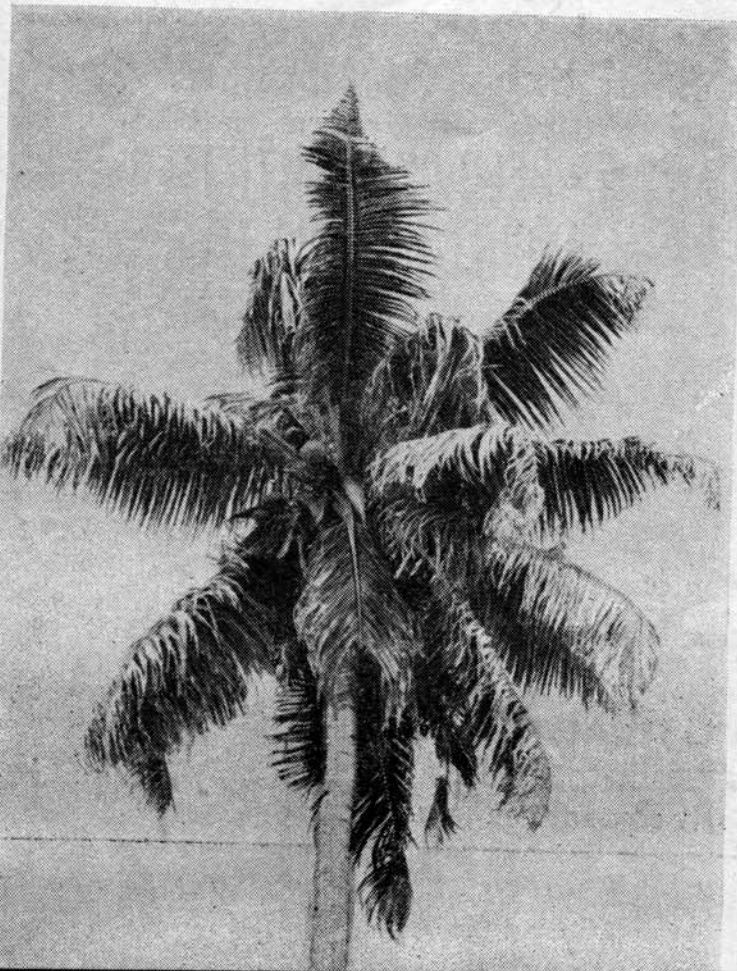
these hybrid varieties has been delayed by the limited availability of the hybrid seed-nuts and lack of information on their agronomic requirements. Much headway in the isolation of high-yielding varieties could not also be made due to the restricted collection of world varieties available on hand.

Research work done on the manurial requirements of the crop has shown that a bearing tree requires 0.5 kg N, 0.32 kg P_2O_5 and 1.2 kg K_2O under the west coast conditions. Intercultivation in October-November by digging or ploughing has been found to increase the yield considerably. In an all-out effort to increase production there should be similar data available for all agro-climatic regions where coconut is grown. Being a perennial crop which yields nuts all the year round, the nutrient requirements of the crop are bound to be continuous. Response of coconut to split application of fertilizers

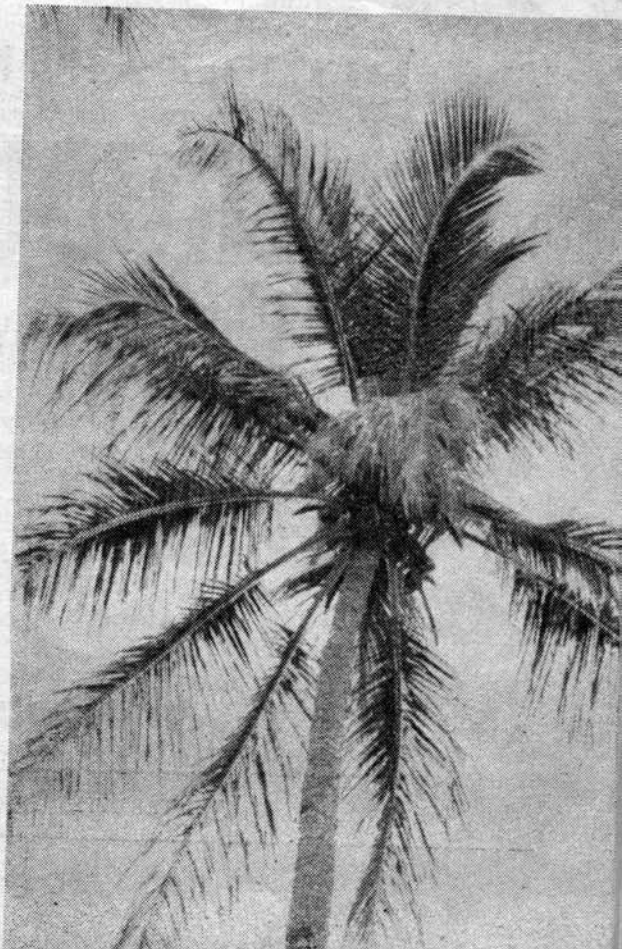
in conjunction with optimum irrigation will be an aspect of great impact on production provided scientific data are gathered.

Effective control measures for some of the pests and diseases have been found out. The red palm weevil can be controlled by one per cent Pyrocon-E in water. The coconut caterpillar which feeds on the leaf can be kept under check by spraying 0.2 per cent DDT. Damage due to rhinoceros beetle can also be considerably reduced by treating the breeding places, such as compost heaps with BHC at 0.01 per cent strength and also treating the crowns of the coconut palm similarly. Bud rot disease can be controlled by spraying the crown with one per cent Bordeaux mixture. However, the large size and height of the palms come in the way of adoption of the recommendations for the control of many of these pests and diseases. The most important and damaging disease,

A palm affected by root-wilt disease



Attack of leaf caterpillar





namely, the root-wilt disease of the coconut palm which has affected the coconut plantations in Kerala on an extensive scale is yet to be brought under check. As a result of all this, increase in production of the crop on the whole has been rather slow.

Solution

The cultivation of coconut has been mostly confined to the sandy and sandy loam soils of the coastal areas and to some of the favourable pockets of the inland in the remaining areas of peninsular India. Extensive areas fit for the coconut cultivation are available in the interior laterite belt of west coast and other soil types of different states where the crop can be raised, provided the agronomic requirements of the crop for these conditions are known. Research-cum-demonstration plots are being organised in such areas. Production of hybrid seeds on a large scale has been programmed through the establishment of hybrid seed gardens. Large-scale introduction of superior

varieties from outside India as well as intensification of germ-plasm collection has been taken up. Comprehensive experiments to elucidate information on the manual and cultural requirements of the crop under varied soil and climatic conditions is being planned. Many of the treatment interactions in these experiments are expected to make the cultivation of the crop more economic. On the pests and diseases front biological control for devastating pests, such as leaf caterpillar and rhinoceros have been found to be effective. Organised release of the parasites has to be taken up in all the pest-affected areas. The root-wilt disease of coconut requires a multi-pronged approach. Very interesting indications have been obtained on the virus association in this disease complex. Mapping of the diseased areas using the techniques, such as 'remote sensing' and intensified work on the virus transmission and pre-disposing factors of the disease should make it possible to keep the disease under check. Isolation of resistant varieties by extensive screening is yet another useful line that is being pursued.



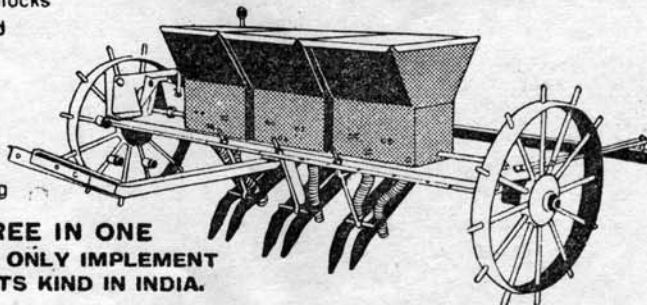
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