ABSTRACTS

Performance of Exotic Sources of Oil Palm Hybrids in Coastal Andhra Pradesh, India

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Under irrigated condition oil palm is found to perform well in varied soil and climatic conditions of India, if we give enough fertilizer, water and other inputs. As a part of oil palm improvement, the performance of Palode (Indian bred cross combinations), ASD Costa Rica, Papua New Guinea and IRHO oil palm hybrid 'teneras' was evaluated in a trial at Navabharath plantation, West Godavari district of Andhra Pradesh. Number of bunches, fresh fruit bunches yield, and bunch components were studied. Among the different sources, the mean highest FFB yield (180.08), number of bunches (13.42) bunch weight (18.8), fruit weight (14.7) kernel/bunches, (7%) were recorded in Palode source. Other exotic hybrids mostly showed close results for bunch weight, fruit weight. There were significant difference observed among all the bunch components except fruit weight and kernel/ palm. The PNG was observed superior with regard to fruit/ bunch, mesocarp/ friut, oil/ bunch and oil/ palm.

Collection and Evaluation of Oil Palm (*Elaeis guineensis*, Jacq) Germplasm in India

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Oil palm is being tested on substantial scale at different agro climatic conditions like high altitude, semi drought and under irrigation to meet the growing demand of vegetable oil and other byproducts in different countries. In India, it is cultivated predominantly in the states of Andhra Pradesh, Karnataka, Tamil Nadu, Kerala and other identified states as an irrigated crop. Being a newly introduced crop, collection of germplasm was initiated by assembling commercial material introduced to the country or from secondary sources during 1970s. The inadequacy of genetic variability in these materials was felt which necessitated the introduction of more materials having different characteristics for enriching the existing breeding programme which was started by the then Central Plantation Crops Research Institute, Regional Station, Palode (Kerala). Accordingly, germplasm collections were assembled with an aim to ameliorate narrow genetic base and produce superior hybrid seeds suitable to different agro-climatic conditions of identified areas. In 1981, 73 exotic accessions were collected from ASD Costa Rica, Papua New Guinea and Cameroon. To extend the growing areas of oil palm in the areas with distinct dry or high altitude conditions, cold and drought tolerant materials from African countries (Guinea Bissau, Cameroon, Tanzania and Zambia) were collected and they were planted for evaluation in different target areas. In 1981-82 Tenera accessions were introduced from NIFOR-Nigeria, Ivory Coast and Zaire. Also, two accessions of American oil palm (*Elaeis oleifera*) were introduced from Malaysia and Costa Rica and they were planted at Palode (Kerala). During the year 2000, two advanced generation *Dura* accessions from ASD, Costa Rica were imported under UNDP programme "Breeding for oil palm seed production" and planted as seed garden at National Research Centre for Oil palm, Pedavegi (Andhra Pradesh). Apart from these, 24 tenera accessions received from Costa Rica were being evaluated at different locations viz., Pedavegi (Andhra Pradesh), Palode (Kerala), Bheemanakoli (Karnataka) and Mulde (Maharashtra). During the year 2000, *dura* accessions were collected from indigenous sources namely, Tadepalligudem (Pune) and Andaman and Nicobar Islands and they are under preliminary evaluation. All the germplasm accessions collected are being evaluated for different traits of interest and their results are also discussed in this paper. National Research Centre for Oil palm is committed for the cause of expanding genetic resource of oil palm either through exchange or other means.