

## OIL PALM GENETIC RESOURCES AT EMBRAPA AND ITS UTILIZATION (*Elaeis guineensis*, Jacq. AND *E. oleifera* (Kunth), Cortés)

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Although oil palm has the highest productivity among the major cultivated oil crops, commercial varieties have a narrow genetic base due to the restricted number of ancestral progenitors. The major oil palm breeding programs are facing various challenges at present, and broadening the genetic base is a high priority for solving many of them. New varieties should present disease resistance, low trunk growth, better oil quality and broad ecological adaptability. To broaden the used genetic base, wild and semi-wild oil palm (*Elaeis guineensis*, Jacq.) populations in Africa, the geographical center of origin of the species, were intensively sampled lately. The American species (*E. oleifera* (Kunth), Cortés), broadly dispersed in the American continent is receiving close attention, and has been heavily collected also. Considering the gravity and importance of problems faced by this crop in the different regions where it is planted, and the spite of the abundance of the genetic resources available in the research centers, very few of these have been used by the breeders to create new varieties. Since its decision to do research with oil palm in the beginning of the eighties, Embrapa is promoting the introduction, collection, maintenance, evaluation and utilization, having, at present, one of the most important oil palm collections in the world. For the African species, the Embrapa collection has 207 advanced breeding lines presently used to produce high quality seed, and 330 other lines representing wild and semi-wild populations. This broad representative collection covers adequately the natural geographical distribution of this species in its origin center. The American species, broadly dispersed from southern Mexico to the east of Amazonas state, is represented at Embrapa by 223 lines covering all of Brazilian Amazon. Overall, 136 hectares are occupied by the oil palm germplasm collection at Embrapa's Rio Urubu Oil Palm Research Station, located 140 km

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east of Manaus. Embrapa's oil palm germplasm collection is a outstanding base line for the breeding program for the crop being executed by Embrapa. This collection requires a special care and it has been characterized and evaluated by using conventional methodology and by advanced molecular techniques.