THE PRIMARY GENEPOOL OF CASSAVA (Manihot esculenta CRANTZ)

A.C. ALLEM', A.C. ROA², <u>R.A. MENDES'</u>, A.N. SALOMÃO', M.L. BURLE', G. SECOND³, P.C. L. DE CARVA-LHO⁴ AND J. CAVALCANTI⁵

- 1. EMBRAPA/CENARGEN, P.O. Box 02372,70849-970 Brasilia, DF, Brazil
- 2. CIAT, Apdo Aereo 6713, Call, Colombia
- 3. ORSTOM, BP 165, F97323 Cayenne Cx, France
- 4. EAUFBA, Depto Fitatecnia, C.P. 82, 443 80-000 Cruz das Almas, BA, Brazi
- 5. EMBRAPA/CPATSA, P.O. Box 23, 56300-000 Petrolina, PE, Brazil

A crop genepool comprises three distinct categories of gene suppliers, primary, secondary, and tertiary genepools. The primary genepool (GPI) is composed of gene reservoirs that cross easily with the domesticate and the crosses regularly produce fertile offspring. The secondary (GP2) and tertiary (GP3) genepools of a crop comprise wild gene sources that cross with a certain degree of difficulty with the crop species or may not cross at all, the picture implying in less close genetic distances. The GPI is further subdivided into cultivated and wild genepools. The cultivated genepool comprises all comercial stocks of the crop besides all indigenous landraces and folk varieties of the domesticate. The wild primary genepool of a crop comprises putative ancestors and closely related species that show a fair degree of fertile relationships with the domesticated varieties. In this context, we suggest the two South American wild subspecies of cassava (M. flabellifolia and M peruviana) as the original wild stocks which cassava descends from. Another Brazilian species (M. pruinosa) is so close morphologically to the two wild subspecies of cassava that we think the species may become a natural member of the wild GPI of the indigen. The GP2 of cassava is more difficult to delimit as few species have been tested for fertility relationships. Biosystematic crosses carried out between the crop and the Brazilian wild species M glaziovii and M dichotoma suggest that both are among the established species of the GP2. Based on field experience, we guess that three untested Brazilian species are prospective candidates for the GP2 of cassava: M pilosa, M triphylla, and M brachvloba. 'Me inclusion of Mexican species in the GPI or GP2 of cassava will have to wait for specific trials since our knowledge of the fertile relationships between these species and the indigen lags well behind the information available for their South American relatives.