☐**02:00PM** - Tuesday June 4, 2013

Session 2: Genetics, breeding and biotechnology / S2-07

Three cycles of evaluation among monoembryonic mango progenies in the São Francisco River Valley, Brazil

Francisco Pinheiro Lima Neto[1], Carlos Antônio Fernandes Santos[1] and Hilçana Ylka Gonçalves de Albuquerque[2]*

[1]Centro de Pesquisa Agropecuária do Trópico Semiárido, Petrolina, Pernambuco, Brazil, CEP: 56.302-970. *E-mail: pinheiro.neto@embrapa.br.

[2]Universidade de Pernambuco, Petrolina, Pernambuco, Brazil, CEP: 56.302-970.

Abstract

The goal of this study was to evaluate mango progenies derived from crosses among Tommy Atkins and other three monoembryonic mango varieties - Keitt, Palmer and Van Dyke. The progenies were installed at the Embrapa Semi-Arid Experimental Field Station, located at Juazeiro, Bahia, Brazil. Some fruit characters, important to new mango varieties, such as weight, length, width, soluble solids content (°Brix), acidity content and °Brix/acidity content ratio were evaluated in true hybrids. Putative progenies for all crosses were obtained in 2002 by harvesting fruits from 'Keitt' or 'Palmer' or 'Van Dyke' plants dispersed in 'Tommy Atkins' orchards found in São Francisco Valley, in order to take advantage of natural crosspollination that occurs in the mango species. True progenies were declared based on microsatellite analyses. Management with paclobutrazol, silver nitrate and irrigation were applied to reduce the mango juvenile period. Progenies were evaluated in three successive cycles: 2007-2008, 2009-2010 and 2010-2011. Fruit weight ranged from 151.74 to 1,219.48 g, fruit length ranged from 6.8 to 22.7 cm, fruit width ranged from 4.3 to 12.5 cm, soluble solids content ranged from 9.9 to 27.0°Brix, acid content ranged from 0.06 to 1.34 and the °Brix/acidity content ratio ranged from 10.34 to 234.29. The results showed that natural hybridization among monoembryonic mango varieties generate a great level of genetic variability and also proportionate the identification of progenies with some desirable economic fruit attributes. The adopted strategies were also important to quickly generate and evaluate mango progenies, and should be integrated in mango breeding programs around the world.

Keywords: *Mangifera indica*, hybrids, juvenile period reduction.