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(54) Title: METHODS AND SNP DETECTION KITS FOR PREDICTING PALM OIL YIELD OF A TEST OIL PALM PLANT

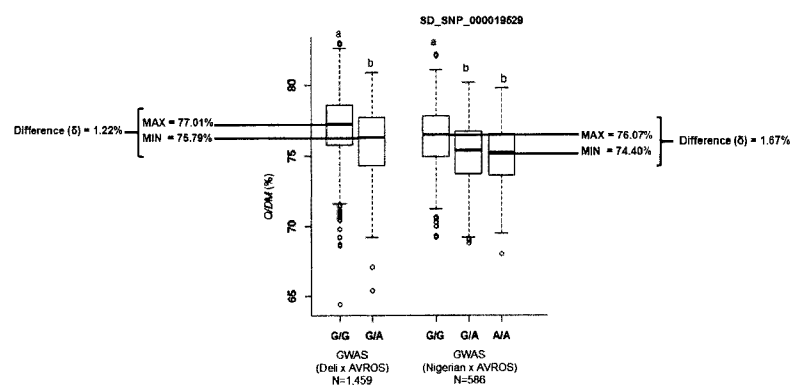


FIG. 4

(57) Abstract: Methods for predicting palm oil yield of a test oil palm plant are disclosed. The methods comprise determining, from a sample of a test oil palm plant of a population, at least a first SNP genotype, corresponding to a first SNP marker, located in a first QTL for a high-oil- production trait and associated, after stratification and kinship correction, with the high-oil- production trait with a genome-wide  $-\log_{10}(p\text{-value})$  of at least 4.0 in the population or having a linkage disequilibrium  $r^2$  value of at least 0.2 with respect to a first other SNP marker linked thereto and associated, after stratification and kinship correction, with the high-oil-production trait with a genome-wide  $-\log_{10}(p\text{-value})$  of at least 4.0 in the population. The methods also comprise comparing the first SNP genotype to a corresponding first reference SNP genotype and predicting palm oil yield of the test plant based on extent of matching of the SNP genotypes.



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