MAIZE BREEDING FOR IMPROVEMENT OF PHOSPHORUS ACQUISITION EFFICIENCY, TOLERANCE TO ALUMINIUM TOXICITY AND FOLIAR DISEASES IN ACID SOILS OF KENYA

(REFERENCE NUMBER 2007 – PASS – 033)

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Acid Soils Map: Kanyanjua et al (2002), acid soils reduce yields by 30-60%

Objective

- To develop maize varieties with multiple stress tolerance (Al, P-use efficiency, MSV and GLS).
41 maize accession received from Brazil in 2004 (single cross and opvs)
BRAZILIAN MATERIALS
Progress cont’d

- 183S3 lines developed from high altitude backcrosses
- 89S3 lines developed from medium altitude backcrosses
- 100S5 lines developed from BSC
- 210S4 lines developed from Brazil Vs Kenya top crosses
- 38S5 lines developed from land race 203B
GLS and MSV germplasm. Obtained from Muguga in 2008

A total of 84 sc between GLS resistant and 142 sc between GLSxAL/p materials made
Muguga GLS single crosses at Kitale
KARI - Kitale nursery – May, 2010
BRS 1001 derived material at KARI - Kitale nursery
2 synthetics made using GLS/MSV and Al tolerant and P use efficient lines
Expected time of release

- 2 YEARS FOR THE SYNTHETICS
- 3 YEARS FOR THE HYBRIDS
- SEED COMPANIES- FRESHCO, E.A.Sco, Agriseed Co, Faida seed Co, KARI seed unit
THANK YOU!

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