

SUBTHEME TWO

**PARTICIPATORY VARIETY SELECTION OF DROUGHT
TOLERANT DRY BEAN GENOTYPES IN MWEA, KIRINYAGA
SOUTH DISTRICT OF KENYA**

**Aufa Munyasa, J., Kabutbei, J.I., Chemining'wa, G.N., Kimani, P.M.,
Mburu, M.W. and Nderitu, J.H.**

Department of Plant Science and Crop Protection, University of Nairobi
Corresponding author: j.alufa@yahoo.com

Abstract (C2004)

A key agronomic strategy to enhance dry bean productivity in drought prone areas of Kenya is to develop and deploy drought tolerant varieties. Dry bean nurseries in the national research institutions within the eastern Africa region hold many drought tolerant genotypes whose impact has not been felt at the national level. The objective of the study was to introduce high yielding, drought tolerant bean varieties to farmers in Mwea, Kirinyaga South district. Participatory variety selection (PVS) trials were set up in Mwea for farmers to select preferred drought tolerant dry bean varieties. Separate field experiments involving Mesoamerican (84) and Andean (88) varieties, respectively, were set up under rainfed and irrigated conditions. Twenty seven male and female farmers participated in the exercise using their own criteria. Researchers and extension workers demonstrated the PVS process. Men and women used different coloured ribbons to indicate preferred and rejected varieties. Key criteria used to select varieties were grain yield, colour, drought tolerance, pest resistance, uniformity of maturity and growth habit. Men preferred high yielding varieties irrespective of grain colour while women preferred varieties with red grain. Men rejected climbing varieties as they considered them unsuitable for intercropping with maize and preferred varieties with high shoot biomass for fodder. Preferred genotypes included DMC 11-11, SEN 53, DSS 11-08, DRK 11-18, and those rejected included GLP585, KAT B1, DSS 11-03, and GLP92. This study shows that farmers' criteria for selecting drought tolerant varieties overlap with those of scientists, though with some exceptions. Gender differences noted in the selection criteria emphasize the need to involve both men and women in PVS.

Key words: Mesoamerican, Andean, dry bean, selection, criteria, drought, PVS