

Estimation of variability of some genotypes of maize zea mays

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Abstract

Nine genotypes of maize (zea mays L.) were evaluated at the demonstration farm of the college of Agricultural Studies, Sudan University of science and technology shambat, during the period from 9th July to September 2012. to determine the genetic variability for growth, yield and yield components.

The design used was a Randomized complete block design with three replications, in order to study the phenotypic (6^2 ph) genotypic (6^2 g) variances, genetic coefficient of variation (GCV%),

heritability (h^2), and genetic advance (GA). Data on eleven characters were collected the results revealed high significant differences in days to 50 % tasseling and silking, leaf area and stem diameter at the first reading .

Non-significant differences were observed for plant height, number of leaves per plant, length of cob, weight of grains per plant, 100- grain weight, number of grains per cob and grains yield per hectare.

The highest mean of GCV was exhibited for leaf area (339.1%) whereas the lowest mean of GCV was observed for the number of leaves per plant (0.35%) at first reading .

The high estimated heritability ($h^2 > 60\%$) were recorded for days to 50% tasseling, and silking. While the lowest estimated ($h^2 < 40\%$) was obtained for leaf area, stem diameter at the first reading, plant height at third reading, length of cob and plant height at the second reading and number of leaves at third reading, weight of grains per plant, plant height at first reading, number of leaves at the second reading, number of leaves per plant at first reading, 100-grain weight, number of grains per cob and stem diameter at the second reading.

Biography:

Hajer Mohamed Ibrahim is a Researcher in National center for Research- Medicinal and Aromatic Plants and Traditional Medicine Research Institute (MAPTMRI) and Head of Department of agro technology, Sudan.

Speaker Publications:

1. "Antioxidant activity and Cytotoxicity of Ethanolic Seeds Extract of Nigella sativa (Linn) in Sudan"

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