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Abstract

Genetic Diversity of Some Quality Protein Maize Lines (Genotypes) As Revealed By Molecular Markers

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Abstract:

Unmasking of genetic diversity in maize breeding populations can greatly assist in designing appropriate breeding strategies. Six quality protein maize inbred lines (parents) together with their respective progenies were characterized using molecular (RAPD) markers primarily to determine the genetic diversity within the population and to establish the genetic relationship between the parents and their progenies at molecular level. The primer; OPERON- AF 13 gave the highest number of DNA polymorphic bands (9), suggesting that it could be used as an effective marker in more detailed genetic studies involving these lines and possibly other maize lines. The results of the Dendrogram revealed the relationships between the parents and their respective single cross hybrids with 33.33% of the progenies resembling more like the female parents and 60.67% resembling more like the male parents respectively, this may indicate less maternal effect within the maize population under study which is often desirable in breeding work.

Biography:

Mansir Yusuf is currently working as a Faculty member at Department of Plant Science, Faculty of Agriculture/Institute for Agricultural Research, Ahmadu Bello University, Zaria, Nigeria.

Recent Publications:

1. Performance of single cross quality protein maize hybrids evaluated at Samaru-northern guinea savanna zone of Nigeria
2. Genetic Variability and Correlation in Single Cross Hybrids of Quality Protein Maize (Zea Mays L.)
3. Regeneration efficiency of cowpea (Vigna unguiculata (L.) Walp.) via embryonic axes explants

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