Evaluation of grain yield and yield components in maize using diallel crosses

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Introduction

The present study was conducted to evaluate the yield and yield components of 12 maize inbreds using a full diallel cross design. The inbreds were evaluated under different environments to assess the performance and stability of their yield and yield components.

Materials and Methods

A full diallel cross design was used to evaluate the performance of 12 maize inbreds. The evaluation was conducted under two environments, namely the rainy and the dry season. The data were analyzed using Griffing's (1956) method.

Results

The results showed that the inbreds varied significantly in their yield and yield components. In general, the inbreds performed better in the rainy season compared to the dry season. The inbreds that showed higher yields were found to have higher values for all the yield and yield component traits evaluated.

Discussion

The results indicate that the yield and yield components of maize can be improved through breeding. The inbreds that showed higher yields in the rainy season are suitable for cultivation in areas with high rainfall. The inbreds that showed better performance in the dry season are suitable for cultivation in areas with low rainfall.

Conclusion

The results of the present study indicate that the yield and yield components of maize can be improved through breeding. The inbreds that showed better performance in the rainy and dry seasons are suitable for cultivation in different environments.

References

Matzinger et al. (1959)

Jinks and Hayman (1953)

Griffing (1956)

Mahajan et al. (1993)

Date of Preparation: 1380/5/18 (2021/6/18)

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