# Yield Components of New and Old Maize and Sorghum Hybrids. (C03-mason135549-Poster)

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## Abstract:

An experiment to determine the basis for shift of dryland sorghum to maize production was conducted. Superior hybrids from the 1950, 1970 and 1990 decades were selected and produced on a silty clay loam soil with 76 cm and 38 cm row spacings, and with furrow irrigation in 1999 to 2001. In 2000 and 2001, they were also produced dryland on a sandy loam soil. It was found that yield component variation was due to environment\*crop and hybrid(crop) interactions. Maize yield was most closely associated with the number of ears m-2, intermediate for kernel weight and least associated with number of kernels ear-1. Averaged across the seven environments, maize yields increased from 7.9 Mg ha-1 in the 1950 hybrid to 9.6 Mg ha-1 for the 1990 hybrids, suggesting an increase in maize yield of 0.43 Mg ha-1 decade-1. The number of ears m-2 and kernel weight also increased. Sorghum yields increased from 5.6 Mg ha-1 for the 1950 hybrid to 6.2 Mg ha-1 for the 1990 hybrids, with panicles m-2 being most closely associated with yield. Yield improvement in maize has increased along with yield components, which are determined at different times during growth, while sorghum yield improvement has been small.

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