

2. A new cycle of recurrent reciprocal selection with maize varieties that combine well.

Although a reciprocal recurrent selection program was started some time ago, no lines of outstanding merit could thus far be obtained from the local varieties chosen for their adaptability to the local hot and dry climatic conditions. A large number of varietal crosses was, however, compared in a yield trial, and fairly high yields in some cases showed good combining ability between certain varieties. In this respect it was noticeable that the highest yields came from dent-flint crosses. The two best combining white and yellow varieties were chosen for a new recurrent reciprocal selection cycle.

H. C. Kuhn
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3. Hybrid maize seed production.

Mr. C. Kuhn resigned from the Union of South Africa Department of Agriculture during September 1958 to take up the appointment of maize breeder to the Golden West seed company at Klerksdorp. Considering that hitherto crop breeding work has been almost entirely in the hands of the Department of Agriculture, this is a step in the direction followed in the United States where, it is understood, mainly fundamental work is carried out at the experiment stations, and private initiative furnishes hybrid seed under well-trained guidance.

In South Africa the experiment station at Pretoria, Bethlehem and Potchefstroom conduct the initial breeding work and hands over to the Maize Control Board the inbreds, recommended for large-scale production. The Board has a team of officers who (a) arrange contracts for the multiplication of inbred and single cross seed and (b) certify the hybrid seed produced by its agents who are either seedsmen or cooperative societies.

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1. Breeding for sugar in the stalk: correlation between refractometric reading and resistance to Diplodia and Gibberella Zea.

Nine different hybrids of medium maturity period were elected for