

11. Use of the Homestead, Florida location in three generations per year breeding programs.

Six complete, successive generations involving a comprehensive and extensive array of corn breeding projects were grown during the two calendar years beginning September 1953, and ending September 1955, alternating two winter generations at Homestead with one summer generation in the Corn Belt.

Material involved in these nurseries ranged in maturity from Northern corn belt lines to "deep" south material. Usual planting dates for the fall generation were September 5-11, and for the spring generation were December 5-21, and for the summer generation were May 1-11.

Porous, higher, rockland soils were utilized for the fall "rainy season" crop, and lower marl (glade) soils for the spring "dry season" crop. By far the most critical aspects of this program have been

1. Need for adequate plant food supplies to replace leaching losses from open rockland soil.
2. Adequate and timely irrigation facilities for fall nursery on rockland soils with extremely low water holding capacity.
3. Adequate insect control during "off season" fall crop, when general insect population level is extremely high.
4. Satisfactory seed germination in the second winter generation, which is planted at mid-winter when low soil temperatures sometimes prevail in the cool, moist glade soils.

It is assumed that corn does best in the deeper, older, finer types of rockland soils, and has done very well in such soils known to be heavily infested with the common tomato and garden bean nematode. It is reportedly sensitive to the extreme pH of newly scarified soils.

Average breeding success during these four winter generation ran higher than during the two interspersed summer generations.

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Information from projects carried on while at Pfister's Associated Growers, Inc.