

Ear to Row Selection and Line Breeding

INTRODUCTION

In plant breeding various types of selection schemes such as mass selection, progeny selection and ear to row selection are applied for genetic improvement of various plant populations. This chapter deals with ear to row selection and line breeding approaches.

EAR TO ROW SELECTION

Ear to row selection may be defined as a method of plant breeding in which selection is carried out on progenies derived from individual ears. The concept of ear to row selection was developed by Hopkins in 1908 working with maize crop in USA.

MAIN FEATURES

Main features of ear to row selection are briefly presented as follows:

1. **Application:** This breeding method was first used by Hopkins in maize. Now this technique is commonly used for genetic improvement of maize. It is the simplest form of progeny selection. Hence it is applicable for the improvement of both self and cross pollinated crops.
2. **Base Material:** In cross pollinated species various breeding materials such as an open pollinated variety, composite, synthetic variety, a mass selected variety, a single cross hybrid, a three-way cross hybrid or double cross hybrid can