The effectiveness of selection in cross-fertilized crops such as maize may be explained upon the following principles:

1) There are heritable variations existing among the different individuals of the population at the beginning.
2) There is a gradual elimination of the undesirable type because the selected types consist of more desirable and fewer undesirable individuals in each generation.
3) Desirable mutations which may occur are retained and caused to combine with the desirable factors present.
4) Recombination of the desirable factors produces more desirable types.

Selection for a given type not only tends to bring the population to that type but is expected to decrease the variability. This decrease in variability of the population is brought about by a reduction in the percentage of heterozygous individuals. After the population becomes homozygous for the selected character, no further reduction in variability through selection can be expected. The variability that still remains is attributed to environment, upon which selection has no influence.