

1. Mutations in the expression of cytoplasmic pollen sterility.

Pollen producing plants occur rarely in sterile inbreds that are unaltered in type in other characters and are not outcrosses. Such plants have been crossed on other sterile lines of the same inbred. All of these crosses in replicated tests have remained completely pollen sterile. The change to partially fertile plants is therefore not a mutation to a dominant pollen restoring gene. It could be due to a mutation to a recessive gene or to a change in the cytoplasm. Evidence for these possibilities is being sought.