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class : 12th

Unit : 1 (Sexual Reproduction in Plants)

chapter : Pollination Continued

Topic : Advantages and disadvantages of Pollination  
Lecture No. - 04

Date : 07/07/2020

### Advantages of Self-Pollination:

- It maintains the parental characters or purity of the race indefinitely.
- Self-pollination is used to maintain ~~pure~~ pure lines for hybridization experiments.
- The plant does not need to produce large number of pollen grains.
- Flowers do not develop devices for attracting insect pollinators.
- Self-pollination eliminates some bad recessive characters.

### Disadvantages of self-pollination:

- New useful characters are seldom introduced.
- Vigour and vitality of the race decreases with prolonged self-pollination.
- Immunity to disease decreases.
- Variability and hence adaptability to changed environment are reduced.

### Advantages of cross-pollination:

- Cross-pollination introduces genetic recombinations and hence variations in the progeny.
- Cross-pollination increases the adaptability of the offspring towards changes in the environment.
- It makes the organisms better fitted in the struggle for existence.
- Plants produced through cross-pollination are more resistant to diseases.
- The seeds produced are usually larger and the offspring have characters better than the parent due to the phenomenon of hybrid-vigour.
- New and more useful varieties can be produced through cross-pollination.
- The defective characters of the race are eliminated and replaced by better characters.
- Yield never falls below an average minimum.

### Disadvantages of cross-pollination:

- It is highly wasteful because plants have to produce a large number of pollen grains and other accessory structures in order to suit the various pollinating agencies.
- A factor of chance is always involved in cross-pollination.
- It is less economical.
- Some undesirable characters may creep in the race.
- The very good characters of the race are likely to be spoiled.