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Sub. Biology

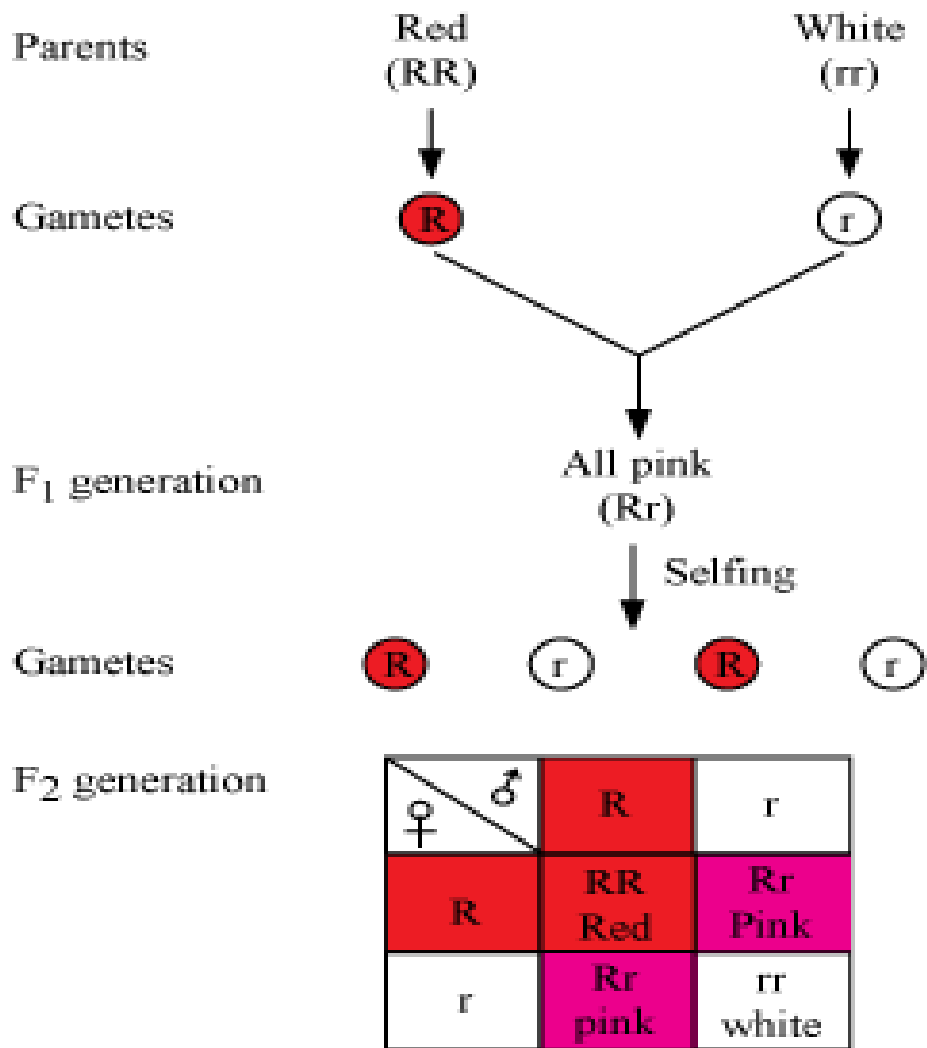
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Law of Segregation

- This law states that the two alleles of a pair segregate or separate during gamete formation such that a gamete receives only one of the two factors.
- In homozygous parents, all gametes produced are similar; while in heterozygous parents, two kinds of gametes are produced in equal proportions.

Incomplete Dominance

- In incomplete dominance, F₁ generation has a phenotype that does not resemble either of the two parents, but is a mixture of the two.
- Example – Flower colour in dog flower (snapdragon), where:
 - RR – Red flowers
 - rr – White flowers
 - Rr – Pink flowers
- Here, genotypic ratio remains same as in Mendelian crosses, but phenotypic ratio changes since complete dominance is not shown by R (hence, incomplete dominance).



- Phenotypic Ratio – 1:2:1 that denotes Red: Pink: White
- Genotypic Ratio – 1:2:1 that denotes RR: Rr: rr

What is Dominance?

- A diploid organism produces two copies of a gene, which need not be identical and may have minor alterations.
- Suppose a normal gene produces a product P. Then, the altered version of it must produce a non-functional product P' or no product at all.
- The altered version of the gene must not perform the functions that a normal gene performs. It must affect the phenotype.
- The original gene is said to be dominant while the modified gene is recessive.