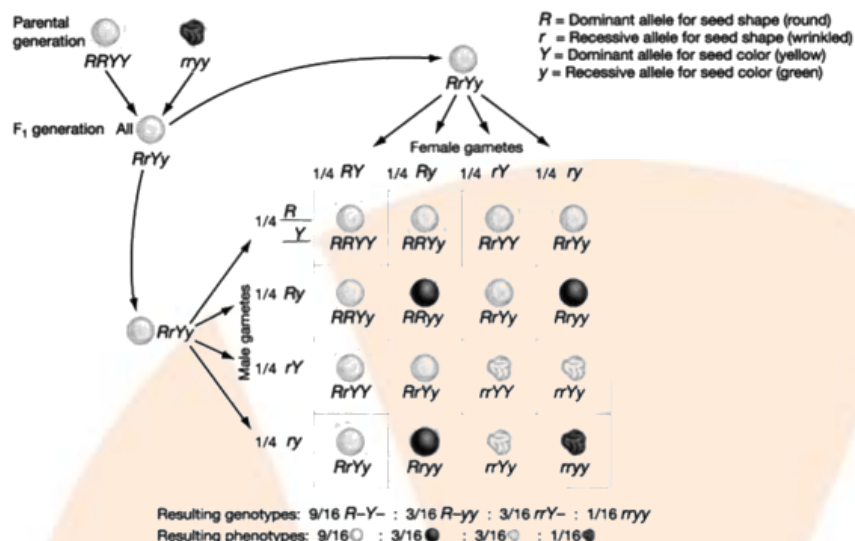




Inheritance of one gene

The inheritance of one gene using Mendel's law can be explained with the help of a monohybrid cross. In this experiment, the cross between tall and dwarf plants is done which will result in all tall hybrid plants in the F₁ (First Filial or First) generation. Then these progenies are self-pollinated and will result in the production of F₂ generation where three tall plants and one dwarf plant will be formed. Thus, the ratio will be 3:1.

Incomplete dominance

Incomplete dominance is a type of inheritance in which one allele for a specific trait is not completely dominant over the other allele i.e. neither allele is dominant over the other in heterozygous organisms. This results in a combined phenotype. Incomplete dominance is also called mosaic or partial dominance. Here new phenotypic characters are expressed entirely.

Mirabilis jalapa, the marvel of Peru commonly called a 4 o'clock plant. It is a very good example of incomplete dominance because of its Inheritance of flower color. It is shown in the figure given below where red flowers (dominant) were crossed with white flowers (recessive), the F₁ generation contains flowers that are pink in color (intermediate).