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Dihybrid Cross

When two pairs of contrasting characters are taken to cross two plants, it is known as dihybrid cross.

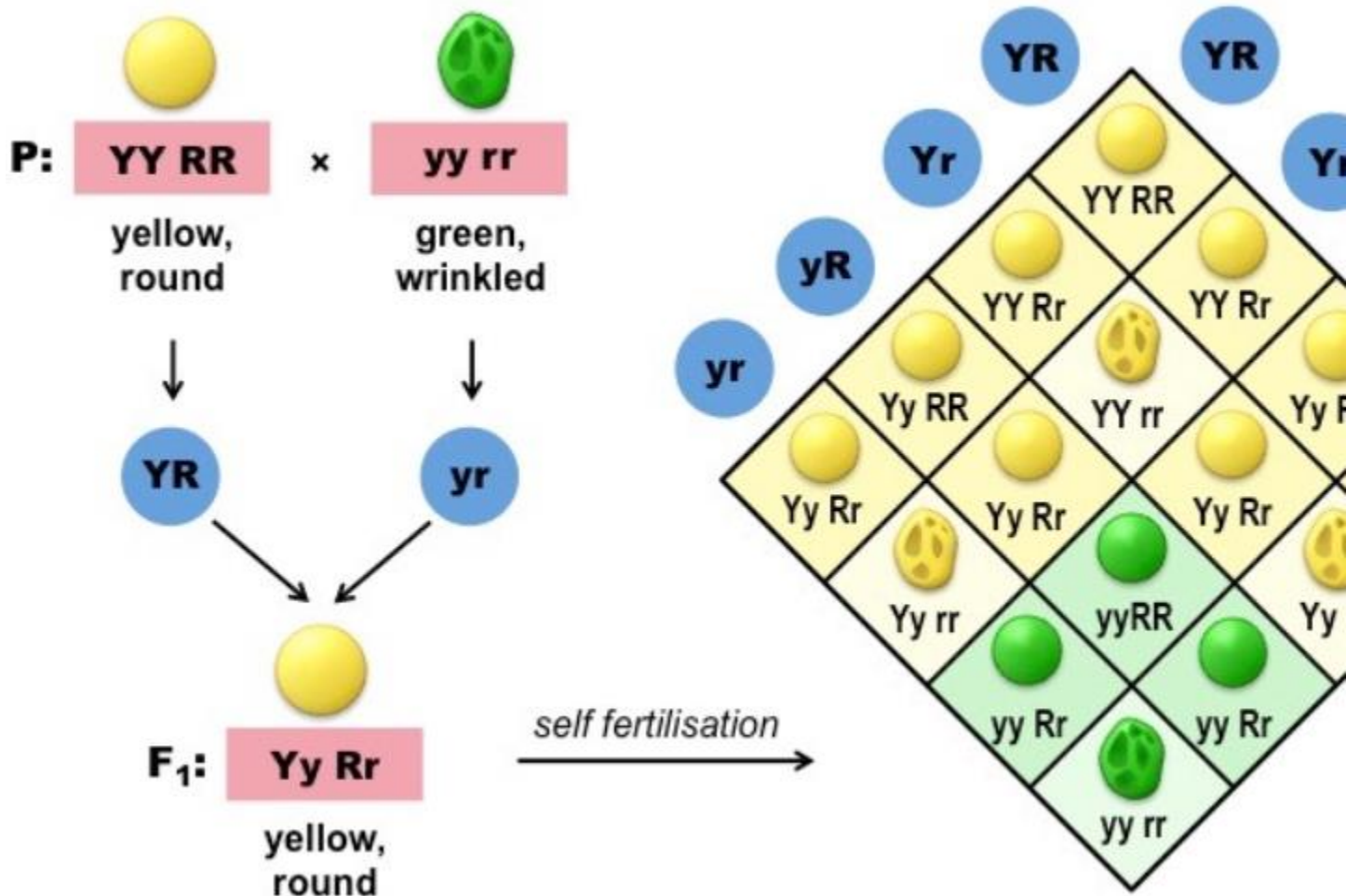


Fig.3. Dihybrid Cross

The phenotypic ratio was found to be 9:3:3:1

9 are round yellow

3 are round green

3 are wrinkled yellow

1 is wrinkled green

But the genotypic ratio was found to be 1:2:1: 2:4:2: 1:2:1.

Sex Determination

Sex determination is used to define the sex of the offspring's. Environment and genetic factors determine the sex of the offspring's. Environment factor includes temperature such as gender in turtles are determined according to the temperature.

Types of Sex Determination

Different types of sex determination are- XX-XY type (humans), XX-XO type (insects), ZW-ZZ type (chicken) and ZO-ZZ type (moths and butterflies).

Genetic factors include the presence of sex chromosomes.

For example, in humans, presence of two X chromosomes leads to female offspring whereas presence of one X and one Y chromosome forms male offspring's.

In human beings there are 23 pairs of chromosomes.

Out of these 22 pair of chromosomes are known as **autosomes** whereas 23rd pair of chromosomes are known as **sex chromosomes** or **allosomes**.

Sex of the offspring's is determined by the chromosome inherited from the father.