

5.3 Law of Segregation

Single Trait Inheritance

Law of Segregation

Separation

↳ Law of Purity of gametes

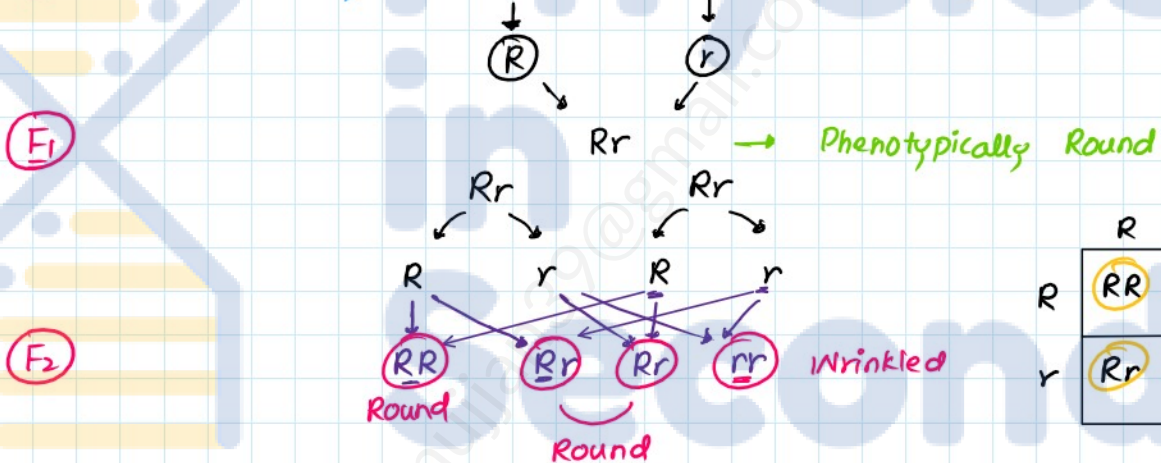
STATEMENT:

"The two co-existing alleles for each trait in an individual segregate (separate) from each other at meiosis, so that each gamete receives only one of the two alleles. Alleles unite again at random fertilization of gametes when zygote is formed."

SINGLE TRAIT INHERITANCE (Mono-Hybrid cross)

TRUE BREEDING → Self fertilization results in Homozygous

P₁ (True Breeding Round) RR × rr (True Breeding wrinkled)



GENOTYPIC RATIO

PHENOTYPIC RATIO

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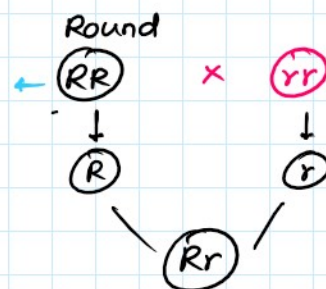
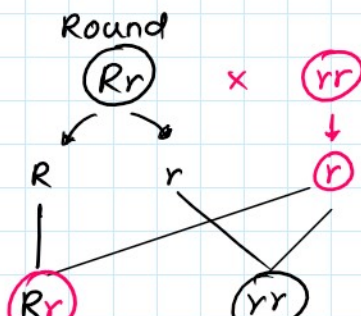
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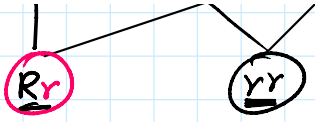
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TEST CROSS:

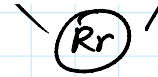
To check genotype

Always crossed with Homozygous Recessive.



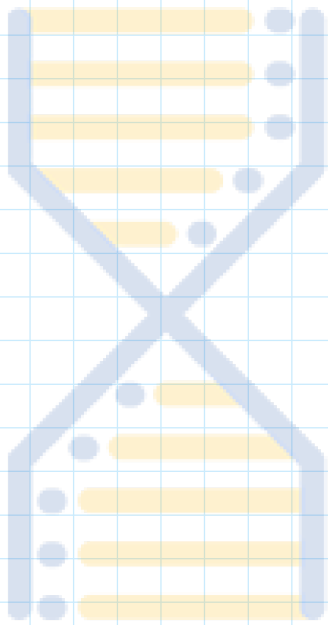


- 50% Round , 50% wrinkled
- Heterozygous



- 100% population is Round
- Homozygous

• Elements (Genes)



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