



MENDEL'S LAW OF INHERITANCE

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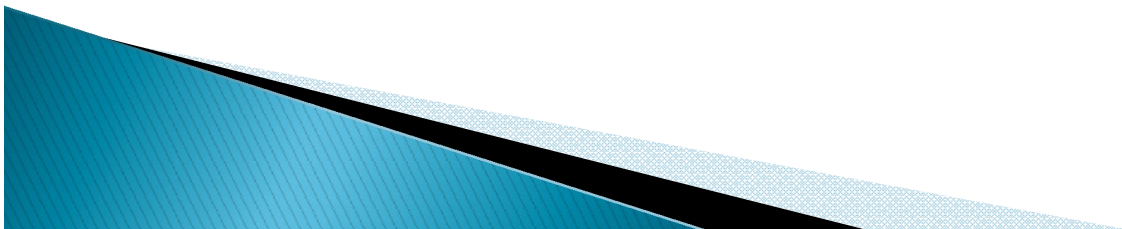


INTRODUCTION

GREGOR JOHN MENDEL was father of genetics

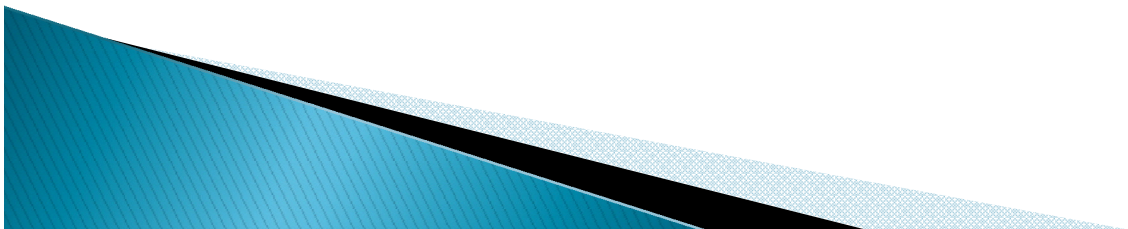


GREGOR JOHN MENDEL
(1822 – 1884)



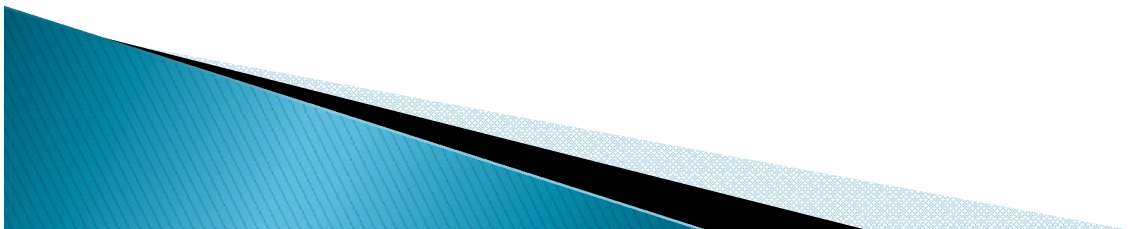
Mendel's law of Inheritance

- ▶ 1 Law of Dominance
- ▶ 2 Law of Segregation
- ▶ 3 Law of Independent Assortment



Law of Dominance –

- ▶ Define – When two homozygous individual with one or more set of contrasting character are crossed, the character that appear in F1 hybrid are dominant and those do not appear In F1 are recessive character.
- ▶ Example- Height of stem



Parents : (Pure tall) TT \times tt (Dwarf)

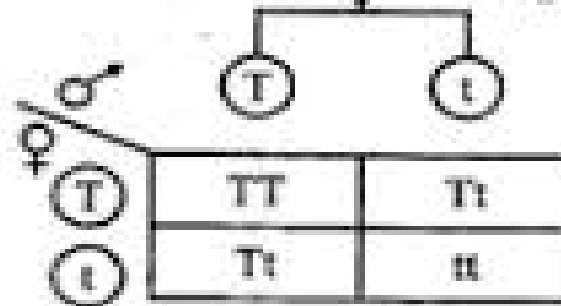
Gametes :



F_1 generation :

Tt Heterozygous tall
selfing

F_2 generation :



Phenotype ratio : 3 tall : 1 dwarf

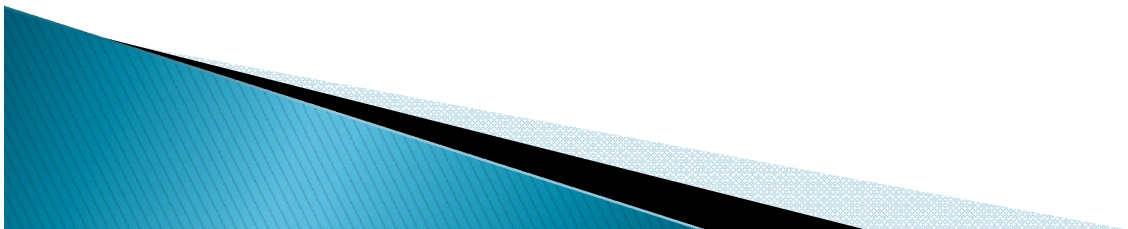
Genotype ratio : Pure tall : hybrid tall : dwarf

1 : 2 : 1

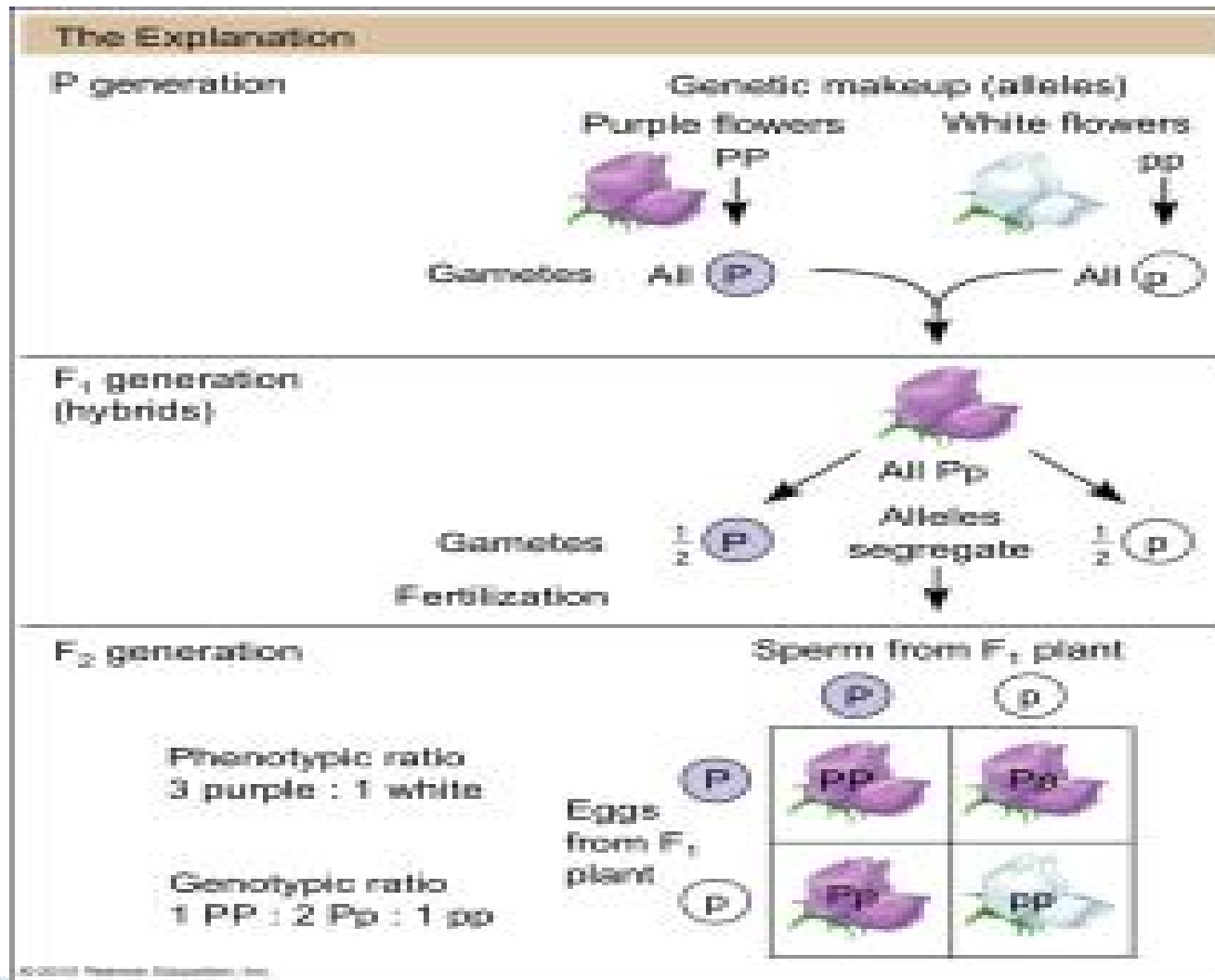
Monohybrid cross

Law of Segregation

- ▶ Define – Members of allelic pair in hybrid remain together without mixing with each other and separate or segregate during gamete formation, gamete receive only one of the two factor and are pure for a given trait. Therefore this is known as law of purity of gametes.
- ▶ Example – Colour of flower

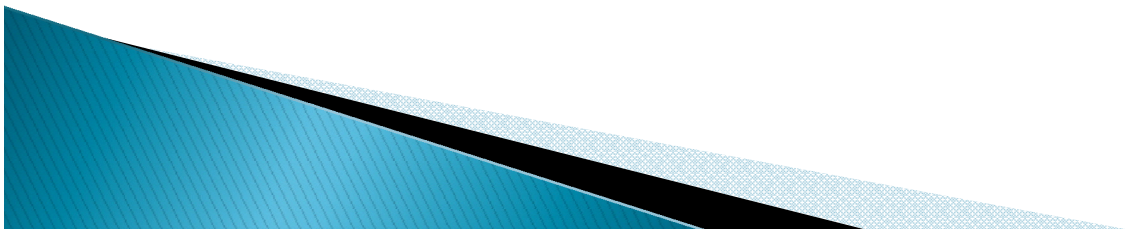


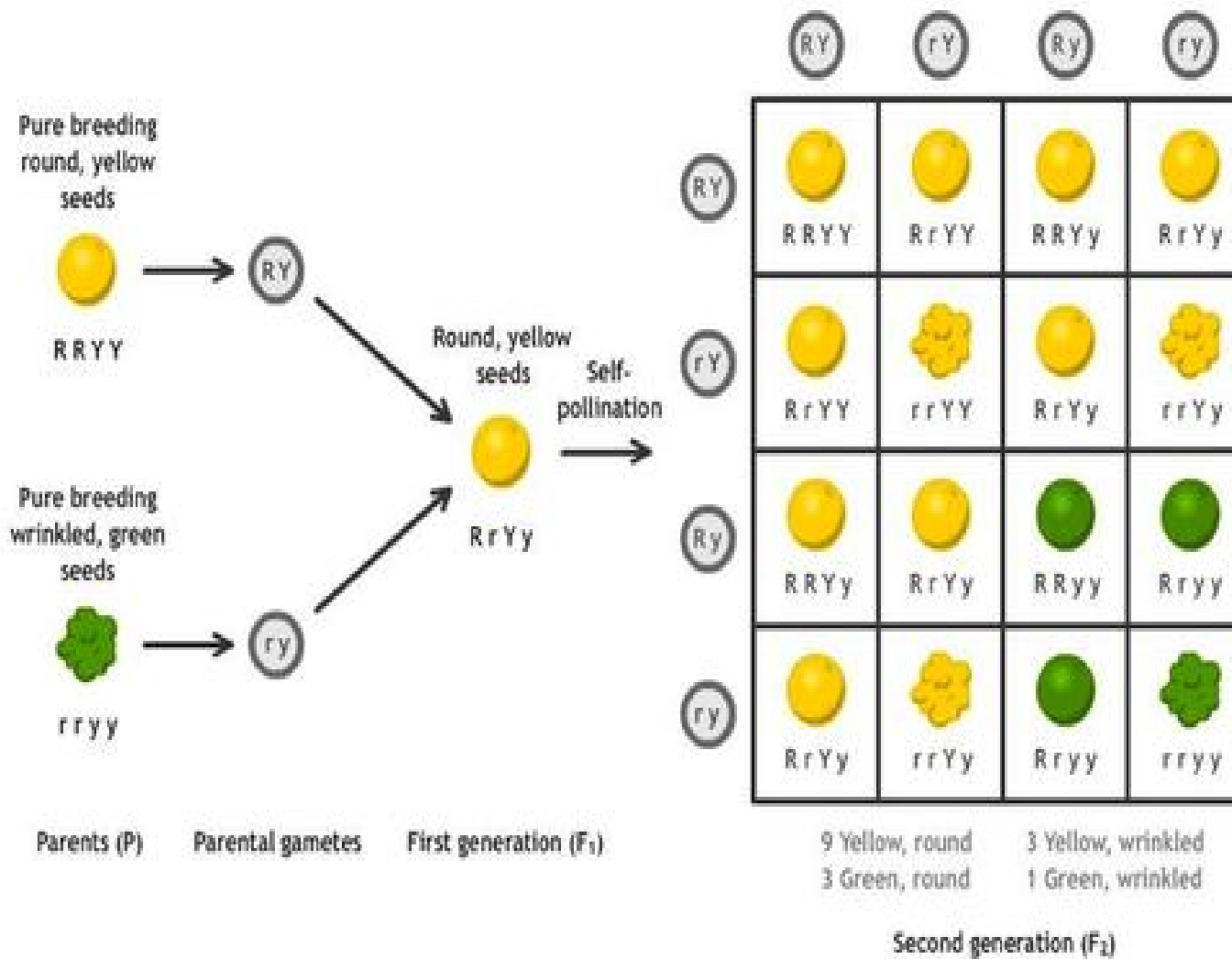
Colour of flower –



Law of Independent Assortment –

- ▶ Mendel's law of independent assortment stated that " when the gamete are formed the member of different pair of factor segregate quite independently of each other and all possible combination of two factor concerned will be formed among the progeny"
- ▶ Example – Yellow round seed and Green wrinkled seed.





THANK YOU