

Quantitative inheritance

- Most traits in rhododendron are inherited as a multifactorial/polygenetics mode of inheritance, such as: color, size, different forms, hair, fragrance, scent..
- Example: we look at **Red** flower color.
- How is red inherited?
- To clarify the mode of inheritance we looked at offsprings from different crosses.

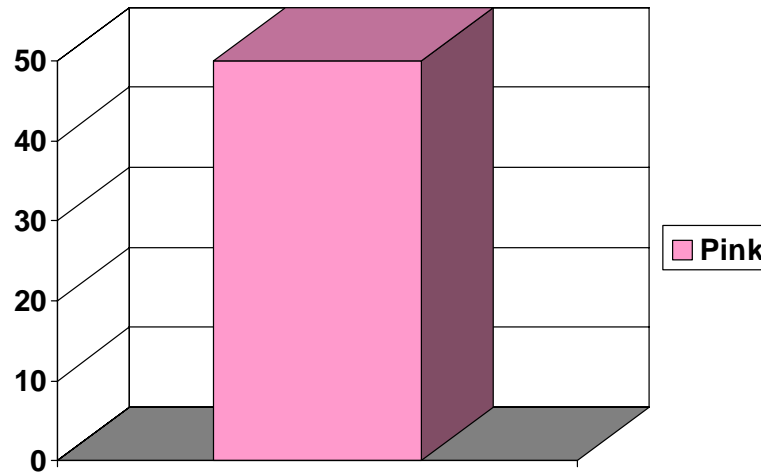
What we observe:

- White x white -> all offspring are white
- White x red -> all offspring are **pink**
- Red x red -> all offspring are red

- Since we got a **new** color “pink”, we have an intermediate inheritance and this could be controlled by more than 1 locus.

First cross

White-0 dosis x Red -2 dosis
100% Pink -1 dosis (F1)

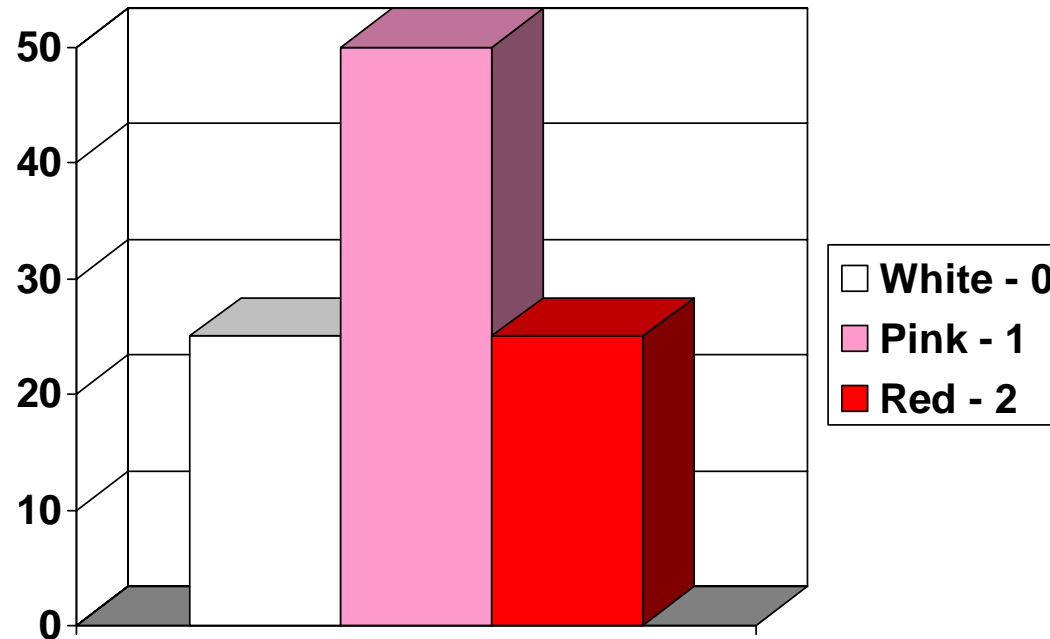


2. cross = pink x pink (F1 x F1)

If offspring distribution is

1:2:1 (3 classes)

Then 1 locus for red



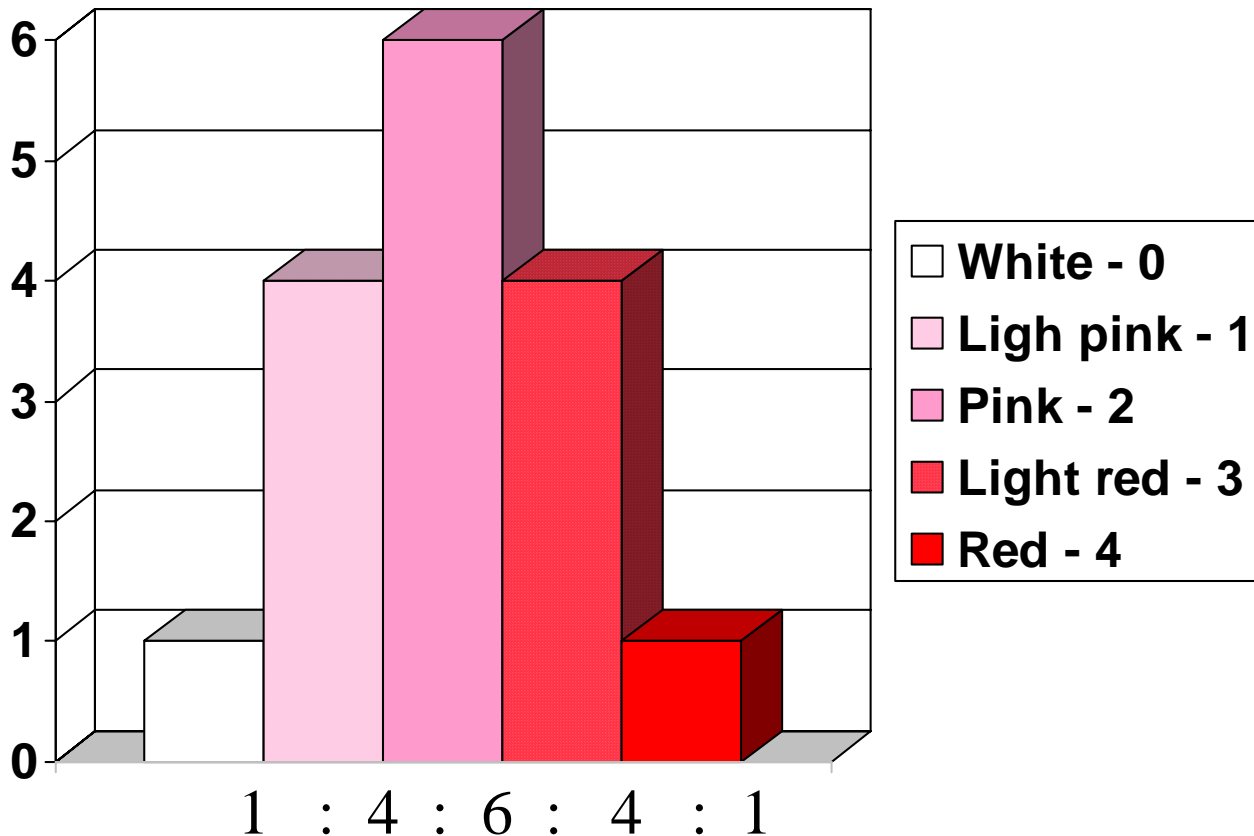
25% : 50% : 25%

2. cross = pink x pink (F1 x F1)

If offspring distribution is

1:4:6:4:1 (5 classes)

Then 2 loci for red

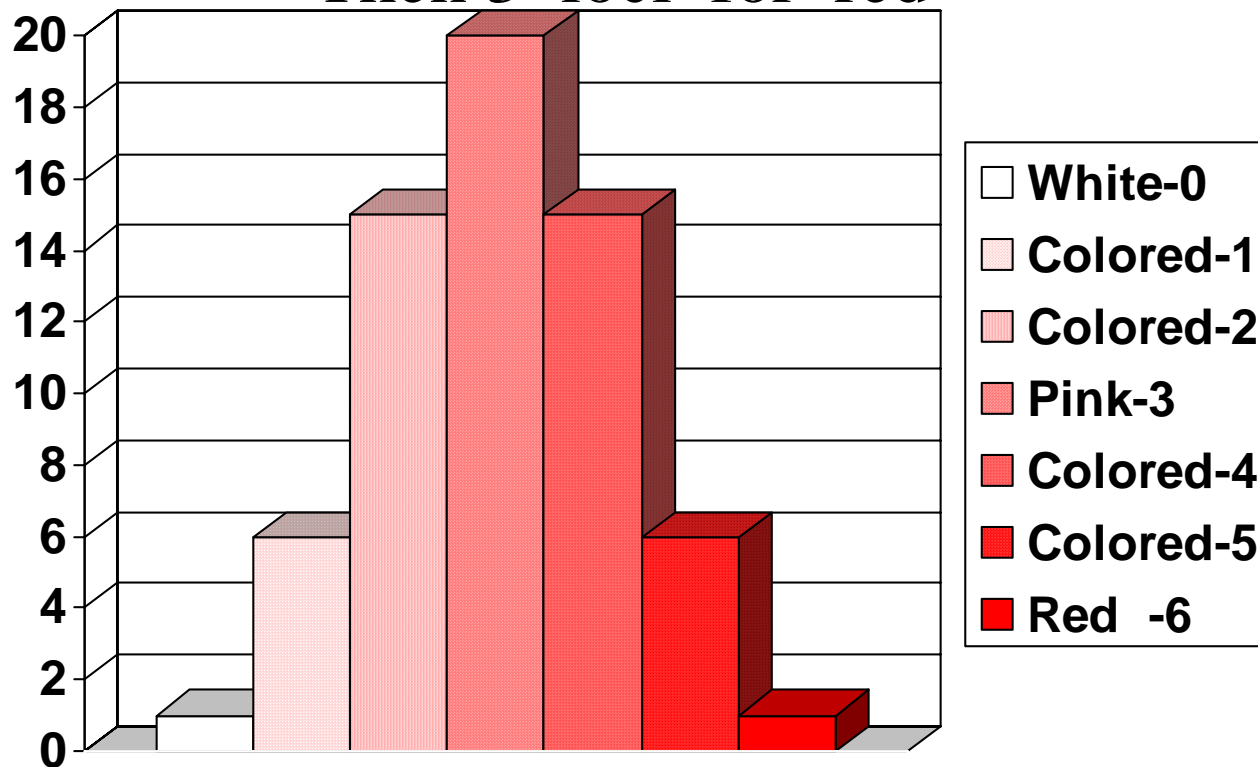


2. cross = pink x pink

If the distribution of offspring is

1:6:15:20:15:6:1 (7 classes)

Then 3 loci for red



1 : 6 : 15 : 20 : 15 : 6 : 1