

In Corn:

Long stem (A) is dominant While short stem (a) is recessive
Rounded seed (B) is dominant While wrinkled seed (b) is recessive
Smooth stem (C) is dominant While rough stem (c) is recessive

A heterozygous trihybrid plant with **Long stem, Rounded seed** and **Smooth stem** was test crossed.

The Results of F1 was:

410 Long stem, wrinkled seed and Smooth stem
410 short stem, Rounded seed and rough stem
50 Long stem, Rounded seed and rough stem
50 short stem, wrinkled seed and Smooth stem
40 Long stem, Rounded seed and Smooth stem
40 short stem, wrinkled seed and rough stem

Construct a chromosome map showing the relative position for these genes.



Using the previous diagram What are the predicted ratios for phenotypes result from self cross of heterozygous dihybrid corn plant having long smooth stem?

A heterozygous trihybrid plant with **Long stem, Rounded seed** and **Smooth stem** was test crossed.

The Results of F1 was:

225 Long stem, Rounded seed and Smooth stem

225 short stem, Rounded seed and Smooth stem

225 Long stem, wrinkled seed and rough stem

225 short stem, wrinkled seed and rough stem

25 Long stem, wrinkled seed and Smooth stem

25 short stem, wrinkled seed and Smooth stem

25 Long stem, Rounded seed and rough stem

25 short stem, Rounded seed and rough stem

Which of these genes are linked?.

**If so, what is the distance
between them?**