

Check your understanding



1 What are polyploid organisms?

Answer [Species with more than two copies of their genes.]

2 Why do mutations in polyploid organisms usually stay hidden?

Answer [The many other copies of the gene hide the mutation that has occurred in one allele.]

3 Why did we sequence some parts of the DNA instead of the entire genome of the mutant plants?

Answer [The entire genome of the polyploid wheat is rather large, so whole genome sequencing would be very expensive. Instead we sequenced only the parts of the DNA which express as proteins.]

4 Why is tetraploid wheat more suitable for genetic research than hexaploid wheat?

Answer [Tetraploid wheat has fewer alleles which means it takes fewer crossings (instances when the plants with the mutation are bred) to produce a mutant in which the change can be seen.]