

Figure 11.UN05




Relationship among alleles of a single gene	Description	Example
Complete dominance of one allele	Heterozygous phenotype same as that of homozygous dominant	
Incomplete dominance of either allele	Heterozygous phenotype intermediate between the two homozygous phenotypes	 $C^R C^R$ $C^R C^W$ $C^W C^W$
Codominance	Both phenotypes expressed in heterozygotes	 $I^A I^B$
Multiple alleles	In the population, some genes have more than two alleles	ABO blood group alleles I^A, I^B, i
Pleiotropy	One gene affects multiple phenotypic characters	Sickle-cell disease

Figure 11.UN06

Relationship among two or more genes	Description	Example
<p>Epistasis</p>	<p>The phenotypic expression of one gene affects the expression of another gene</p>	<p>$BbEe$ × $BbEe$</p> <p> BE bE Be be BE bE Be be </p> <p>9 : 3 : 4 </p>
<p>Polygenic inheritance</p>	<p>A single phenotypic character is affected by two or more genes</p>	<p>$AaBbCc$ × $AaBbCc$</p> <p> ABC ABc AbC Abc aBC aBc abC abc ABC ABc AbC Abc aBC aBc abC abc </p>