## **Monohybrid Crosses**

Judith S. Nuño

Trait	Dominant Allele	Recessive Allele
pod shape	smooth (N)	constricted (n)
pod color	green (G)	yellow (g)
flower position	axial (A)	terminal (a)
plant height	tall (T)	short (t)

1. A plant that is heterozygous for green pods is crossed with a plant that has yellow pods. What are the probable genotypic and phenotypic ratios in the offspring of this cross?

Genotype Parents		1		ĺ	
Possible Gametes	_				
					Genotypic ratio
<u>-</u>					
					Phenotypic ratio
					Thenotypic ratio
2. Nn x NN					
Genotype Parents					Genotypic ratio
Possible Gametes					
					Phenotypic ratio
		I	I		
3. Aa x aa					
					Genotypic ratio
Genotype Parents					Genotypic ratio
Possible Gametes					
					Phenotypic ratio
		I	ı		I
		ı		ı	
4. Tt x Tt					
					Genotypic ratio
Genotype Parents	_				
Possible Gametes					Phenotypic ratio
5. 2 plants heterozygous for green pods					
Genotype Parents					
Possible Gametes					
					Genotypic ratio
<del>-</del>	+				
					Phenotypic ratio
	L				

6.	Plant heterozygous for axial flowers cross	ed with a	plant t	hat has	termi	nal flowers	
	notype Parentssible Gametes						
100					Gen	otypic ratio	
					Phe	notypic ratio	
			ı				
7.	Homozygous tall plant crossed with a short	t plant					
Ger	notype Parents						
Pos	sible Gametes					Genotypic ratio	_
						Phenotypic ratio	
		I		I	ļ		
8.	Heterozygous for smooth pods crossed wit	th a plant	with co	onstricte	ed poo	ds	
	notype Parents						
Pos	sible Gametes				_		
					G	Senotypic ratio	
					Р	henotypic ratio	
			ļ		Į		
9.	When a tall plant is crossed with a short p	lant some	of the	onffsnri	ina ar	e short. What are the genotynes	οf
0.	the parents and the offspring? What is th						01
	notype Parents		1		1		
Pos	sible Gametes				Ger	notypic ratio	
	-				-	3.	
					Pne	enotypic ratio	
10.	. ¾ of the plants produced by a cross betwee flowers. What are the genotypes of the pa			a plants	have a	axial flowers and ¼ have terminal	
Ger	notype Parents			ı			
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2 2003/2004 Genetics: Dihybrid Crosses

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