

**We continue our discussion by considering the situation with two characteristics (color and texture).**

**We will continue to use AA, Aa, and aa to denote the three genotypes associated with texture and we introduce BB, Bb, and bb to denote the three genotypes associated with color. Alleles denoted by B and b correspond to yellow and green peas respectively with B being dominant.**

**We make the following assumption. (Consider alternatives.)**

**Axiom 4: During reproduction, the selection of an allele for texture is independent of the selection of an allele for color, and each is governed by a reproduction function as determined by the definition above.**

**In this case, our set of genotypes becomes**

$$V' = \{AABB, AABb, AAbb, AaBB, AaBb, Aabb, aaBB, aaBb, aabb\}$$

**The following table summarizes the relationship between genotypes and phenotypes.**

<b>Genotypes</b>	<b>Phenotypes</b>
	<b>smooth, green</b>
	<b>smooth, yellow</b>
	<b>wrinkled, green</b>
	<b>wrinkled, yellow</b>