

Genotype Frequency: Ratio of number of individuals of a given phenotype to the total population.

There is inherent difference between allele frequency and genotype frequency:

Let allele frequency = f

Let Genotype frequency be represented by G

Consider diploid species (some pink flower) with alleles ' Rw '

30 flowers with RR

20 flowers with Rw

50 flowers with ww

$$f(w) = \frac{Rw + 2*(ww)}{2*RR + 2*ww + 2*Rw} \left[\frac{\text{Number of alleles}}{\text{Total alleles}} \right]$$

On the other hand, the genotype frequency is :

$$g(Rw) = \frac{Rw}{Rw + RR + ww} \left[\frac{\text{Genotype}}{\text{Total population}} \right] \quad (1)$$

Thus genotypic frequency is an indicative of richness of population in terms of a particular genotype. In our case the $g(Rw)$ is $\frac{30}{100}$