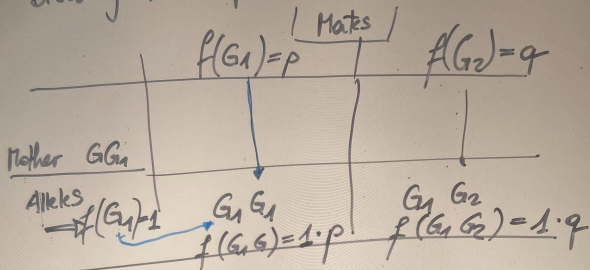


Breeding value for a G_1G_1 mother:



\Rightarrow Genotype frequencies of offspring of mother G_1G_1 :

$$\begin{aligned} f(G_1G_1) &= p \\ f(G_1G_2) &= q \\ f(G_2G_2) &= 0 \end{aligned} \quad \left| \right.$$

BV_m for mother G_1G_1 :

$$BV_m = 2 \cdot (\mu_m - \mu) \quad \text{deviation (Abweichung)}$$

μ_m is the mean genotypic value of all offspring of mother G_1G_1 :

$$\mu_m = p \cdot a + q \cdot d + 0 \cdot (-a)$$