

Practical Relevance of Hardy-Weinberg Equilibrium

□ Missing Homozygosity (MH)
(Animals are born or later)

Animals	Locus 1	Locus 2	Locus 3	- Locus K	Locus 150000
1	1	0		1 → $G_1 G_2$	
2	1	1		1	
...	2	0		2	
...	1	2		1	
...	0	2		2	
N	1	...		1	
	0	1		1	

Encoding : For Locus G

Genotype	Code
$G_2 G_2$	0
$G_1 G_2$	1
$G_1 G_1$	2

G_1 is the "positive", favorable allele
with respect to phenotypic observation

→ No 0

Genotype freq

$$f(G_1 G_2) = 0$$

~~$$f(G_2 G_2) = 0$$~~

$$f(G_1 G_1) \neq p^2$$

$$f(G_1 G_2) \neq 2pq$$

$$f(G_2 G_2) = 0 \neq q^2$$