⊠ In practice measurements of total genotypic ⑨
values V are not feasible. Using the genetic
model that relates phenotypic observations to
genotypic values and environmental effect, we get

$$Y = V + E$$

for animal i, observation j of
a certain phenotypic trait can
be modelled as

$$y_{ij} = V_i + e_{ij} \quad ; \text{ Using the decomposition of } v_i$$

$$= \mu + BV_i + D_i + I_i + e_{ij}$$

$$= \mu + u_i + d_i + s_i + e_{ij}$$

□ For selecting best animals as parents only breeding
values are relevant, because BV quantify the value
of single alleles that are passed from parents to offspring.

$$\Rightarrow y_{ij} = \mu + u_i + e^{*}_{ij} \quad \text{where } e^{*} = d_i + i_{ij} + e_{ij}$$