□ Solution to Bias-Problem in Selection index was found when BLUP method was invented:

B : Best → error (prediction error variance) minimal
L : Linear → Linear combination of data
U : unbiased → expected value $E[\hat{u}] = u$
P : Prediction → Breeding values are treated as random effects, in English/American Literature, the term "prediction" is always used for random effects, whereas for fixed effects, the term "estimation" is used ⇒ BLUE

"Vorhersage"
"Schätzung"

Prediction of breeding values (Zuchtwertschätzung)

□ BLUP uses Linear Models
- Simple linear fixe effect model
- Example: In example data set: (Zielgröße)
  - > Weaning weight is the response variable (y)
  - > Herd, (Sex), Animal, Sire, dam as predictor variables (beschreibende Variable)
- $y_{ij} = \mu + herd_j + e_{ij}$

What is the effect of the herd on the response variable