Variance-Covariance Structure ... (end of lecture)

- Given : Example Data Set on WWG
- Goal : Specify Mixed Linear Effect Model for the given data set.

(Data set is only used for explanatory purposes, for real analyses, we need larger datasets!)

- MLEM : $y = X\beta + Zu + e$

vector of observations, trait, response variable
⇒ Example WWG

① $y = \begin{bmatrix} 4.5 \\ 2.9 \\ 3.9 \\ 3.5 \end{bmatrix}$ is known from the data set.

② vector $\beta$ corresponds to the vector of fixed effects. ⇒ Example : herd as fixed effect. In the data set there are two herds, hence the vector $\beta$ is of length 2

$\beta = \begin{bmatrix} \beta_{\text{Herd1}} \\ \end{bmatrix}$ → "average" influence of herd 1 on