

Goal: Find method that is able to use all available data and to predict breeding values for all animals in the population

Solution: Use BLUP

B: Best, i.e. $\underbrace{\text{var}(u - \hat{u})}_{\text{prediction error variance}}$ is minimal

L: Linear, linear function of y as a predictor \hat{u} of true breeding values u

U: unbiased, $E(\hat{u}) = E(u)$

P: Prediction (Zuchtwertschätzung)
(In English: • Prediction for random effect
• Estimation for fixed effect)