

Recap : 2023-05-15

□ Mixed models because

$$\text{cov}(y_4, y_5) = 0$$

because
animals 4 and 5
are unrelated

$$\text{cov}(y_4, y_6) \neq 0$$

because 4 and 6
are half-sibs

□ To be able to integrate a given covariance structure due to ancestral relationship in the data, we have to use mixed linear effect models, where the effect responsible for the covariance structure is a random effect with suitable variance-covariance matrix (D)

□ Model : $y = Xb + Zu + e$

matrix (D) X is fixed, Z is random effects, u is random effects, e is random residuals.