

## Practicals 11: Linear models

Data are available in separate Excel files

1. Number of seedlings per square meter was monitored at 24 grasslands, which were mown once (mown1), mown twice (mown2) or grazed (variable treatment). In addition, biomass production was measured together with mean annual temperature of each grassland. Which of the grassland parameters have significant effect on seedling density?
2. Transpiration of plants was recorded together with air humidity, temperature, wind speed and it weather (sunny vs. cloudy). On which of these variables does the transpiration rate depend?
3. Effect of watering and fertilizer application on plant growth (measured by biomass production) was tested in full-factorial manipulative experiment. Perform two-way analysis of variance and test also the interaction between the two treatments.
4. Effect of physical exercise and diet on body mass was studied in 21 people. In addition to the studied variables, body height, hair colour and sex was also recorded as presumed important covariates. What does the body mass depend on? Perform a statistical analysis including a variation partitioning to describe the predictor effects in detail.