E8 Multiple Regressions

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Predictor variables

- soil moisture
- SOM
- soil pH
- non-M.v. understory biomass
- litter biomass
- understory light availability
- number of trees
- tree basal area
- M.v. biomass

Note1: Soil measurements from the same depth are highly correlated, so I only used predictor variables from the soil depth that corresponded to the response variable soil depth.

Note2: There were missing values in the second year for understory light availability, so I just have both years filled with 2012 values so that I can scale and center the predictors.

Predictor variable correlations

- soil moisture and SOM (0-5cm: 0.68, 5-15cm: 0.64)
- number of trees and non-M.v. understory biomass (-0.55)
- number of trees and understory light (-0.61)
- tree basal area and non-M.v. understory biomass (0.46)
- NOT correlated: number of trees and tree basal area (0.07)

Model formulation

Change in nitrification (Inv-Ref) ~ predictors + (1|year)

Regression estimates

Nitrif. (inv−ref) 0−5cm

−0.4   0.0

- M.v. biomass
- tree basal area
- number of trees
- understory light
- litter biomass
- non−M.v. biomass
- soil pH
- soil OM
- soil moisture

Nitrif. (inv−ref) 5−15cm

−0.10   0.05   0.20

- M.v. biomass
- tree basal area
- number of trees
- understory light
- litter biomass
- non−M.v. biomass
- soil pH
- soil OM
- soil moisture

Minz. (inv−ref) 0−5cm

−0.4   0.0

- M.v. biomass
- tree basal area
- number of trees
- understory light
- litter biomass
- non−M.v. biomass
- soil pH
- soil OM
- soil moisture

Minz. (inv−ref) 5−15cm

−0.2   0.0   0.2

- M.v. biomass
- tree basal area
- number of trees
- understory light
- litter biomass
- non−M.v. biomass
- soil pH
- soil OM
- soil moisture

NO3 (inv−ref) 0−5cm

NO3 (inv−ref) 5−15cm

Ammonif. (inv−ref) 0−5cm

Ammonif. (inv−ref) 5−15cn