Growth Exploration & Initial Models

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Contents


```
library(tidyverse)
library(lme4)

# Data prepped for competition indexes
load("D:/Projects/SubalpineTopoGrowth/data/growth_long/subalpine_non_spatial.RData")
df <- subalpine_non_spatial
df <- na.omit(df)
names(df)
```

```
##  [1] "id"                "Plot"              "Spec"
##  [4] "Census"            "rgr_basal_area"    "height"
##  [7] "competition"       "dead"              "dead_census"
## [10] "elevation"         "slope"             "aspect"
## [13] "soil_moisture"     "soil_temperature"  "air_temperature"
## [16] "relative_humidity" "moisture_class"    "X"
## [19] "Y"
```

Takeaways

1. Competition has a strong negative effect on growth (estimate: -2.352e-04, t value: -9.384)
2. Competition effects are amplified in wetter sites (estimate = -3.345e-05, t = -12.410)
3. Soil moisture has small positive but significant effect on growth (Estimate = 2.507e-03, t = 1.902)
4. Elevation plays no role here, but rather facilitates other covariates. A correlation among predictors would be useful here.
5. Soil temperature is positively correlated with growth, potentially meaning longer growing season? estimate = 1.995e-02, t = 21.132.