Update on nitrogen sensitivity reanalysis of AGCHEM P532

Richard Tian, Guido Yactayo

UMCES/CBPO

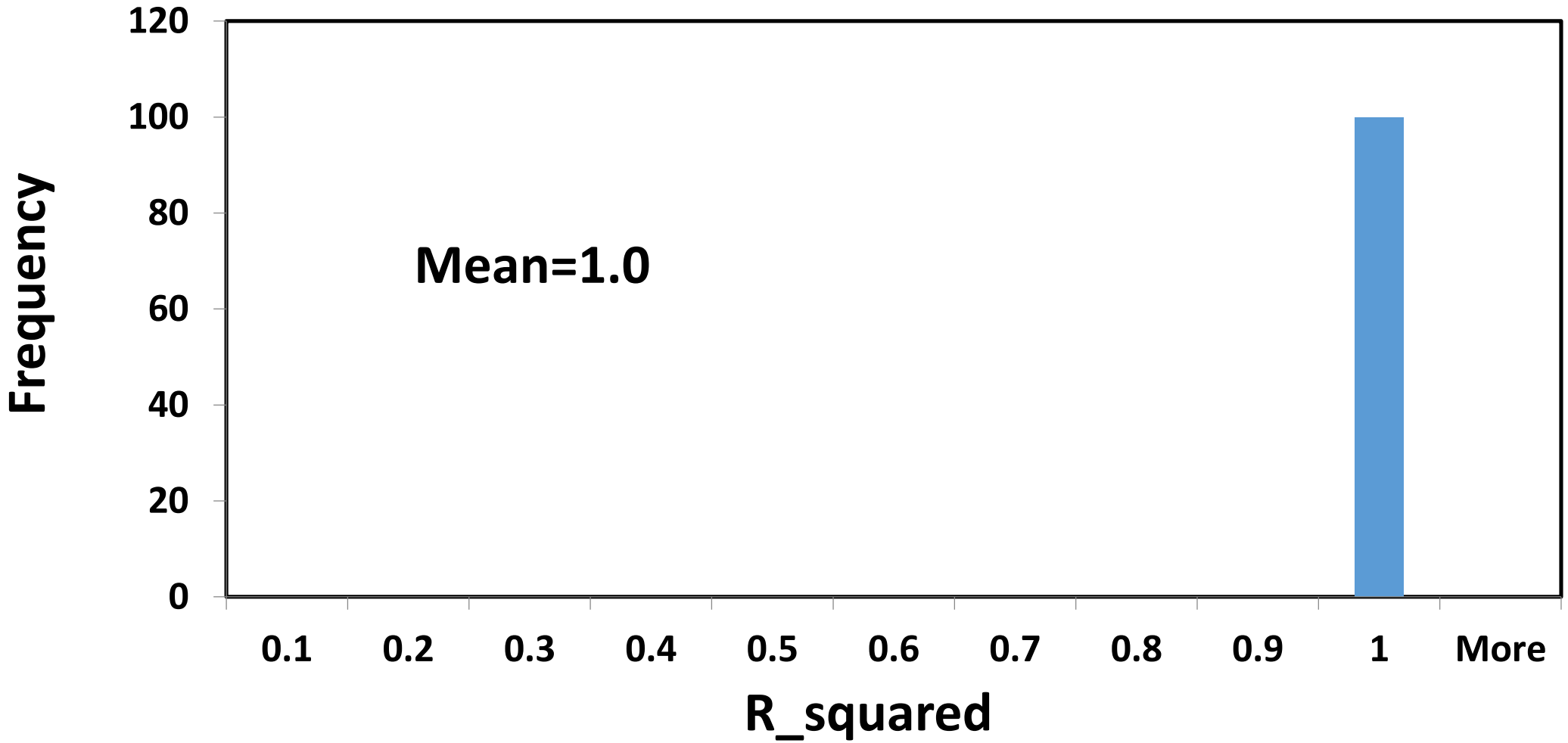
Modeling Meeting

03/26/2015

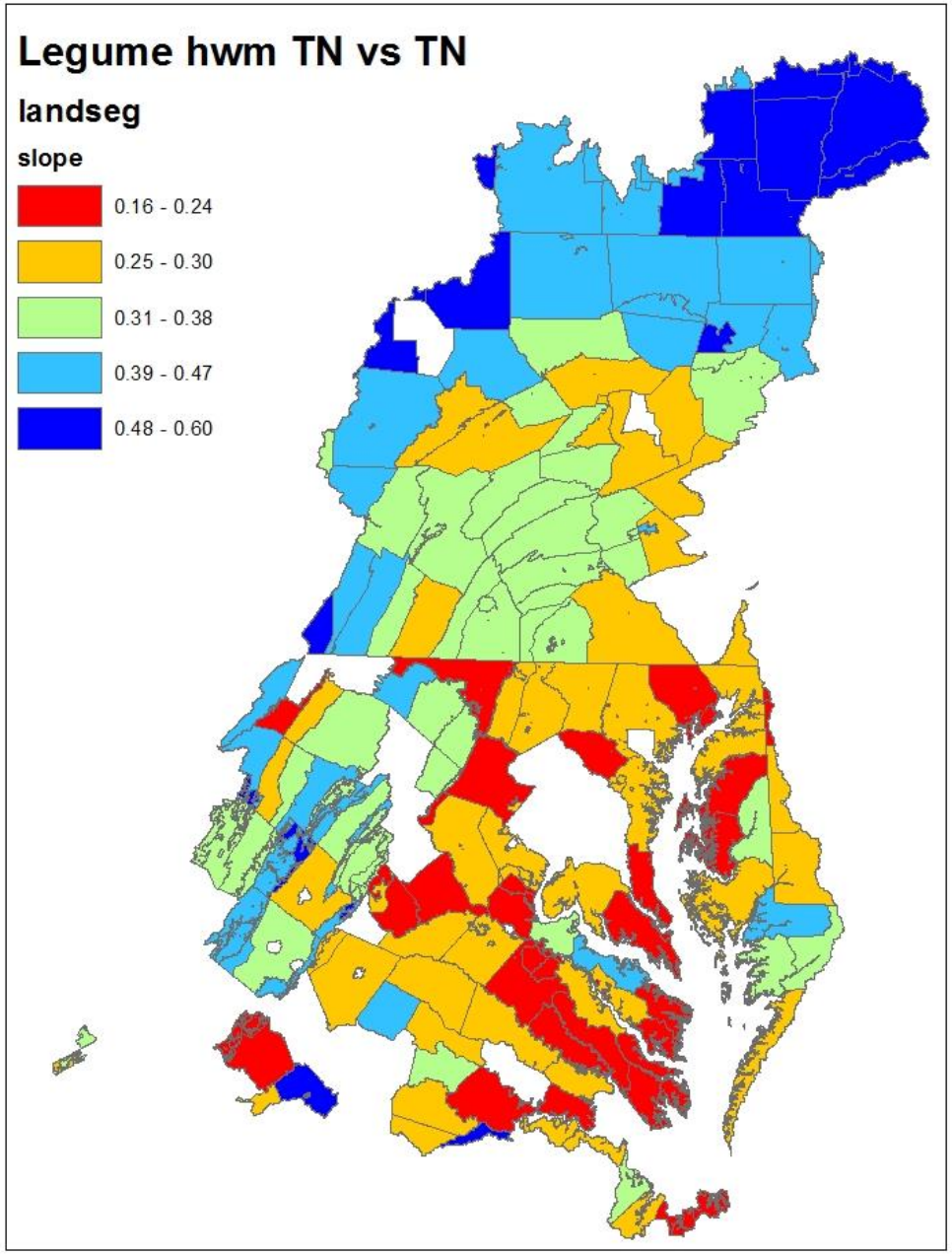
Outline

- Segments x landuses x inputs x species
- Linearity
- Spatial variations
- Prediction
- Difference from multi-variate analysis
- Legume, Uptake and Fertilizer

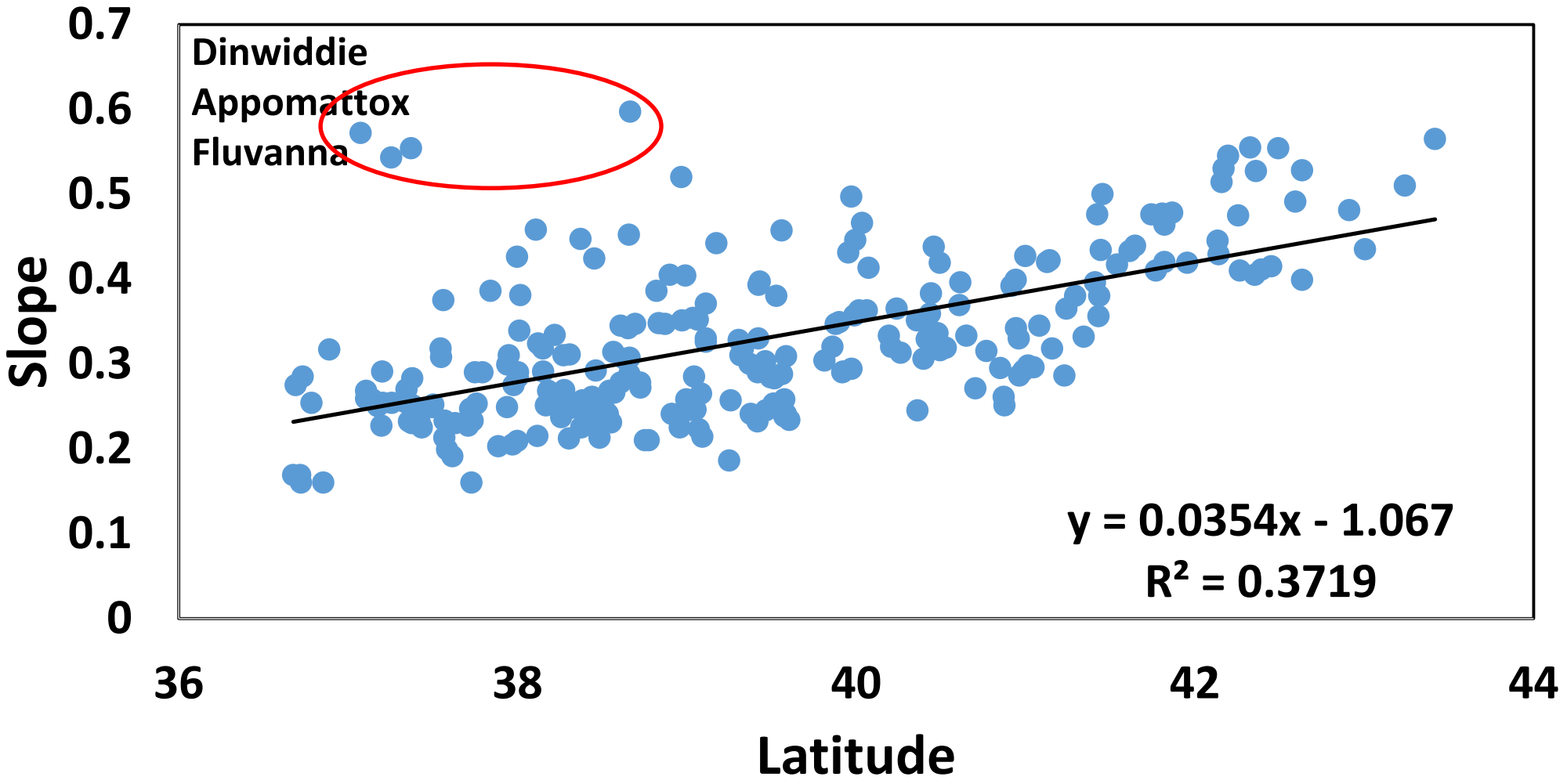
TN-TN regression R^2 legume on hwm



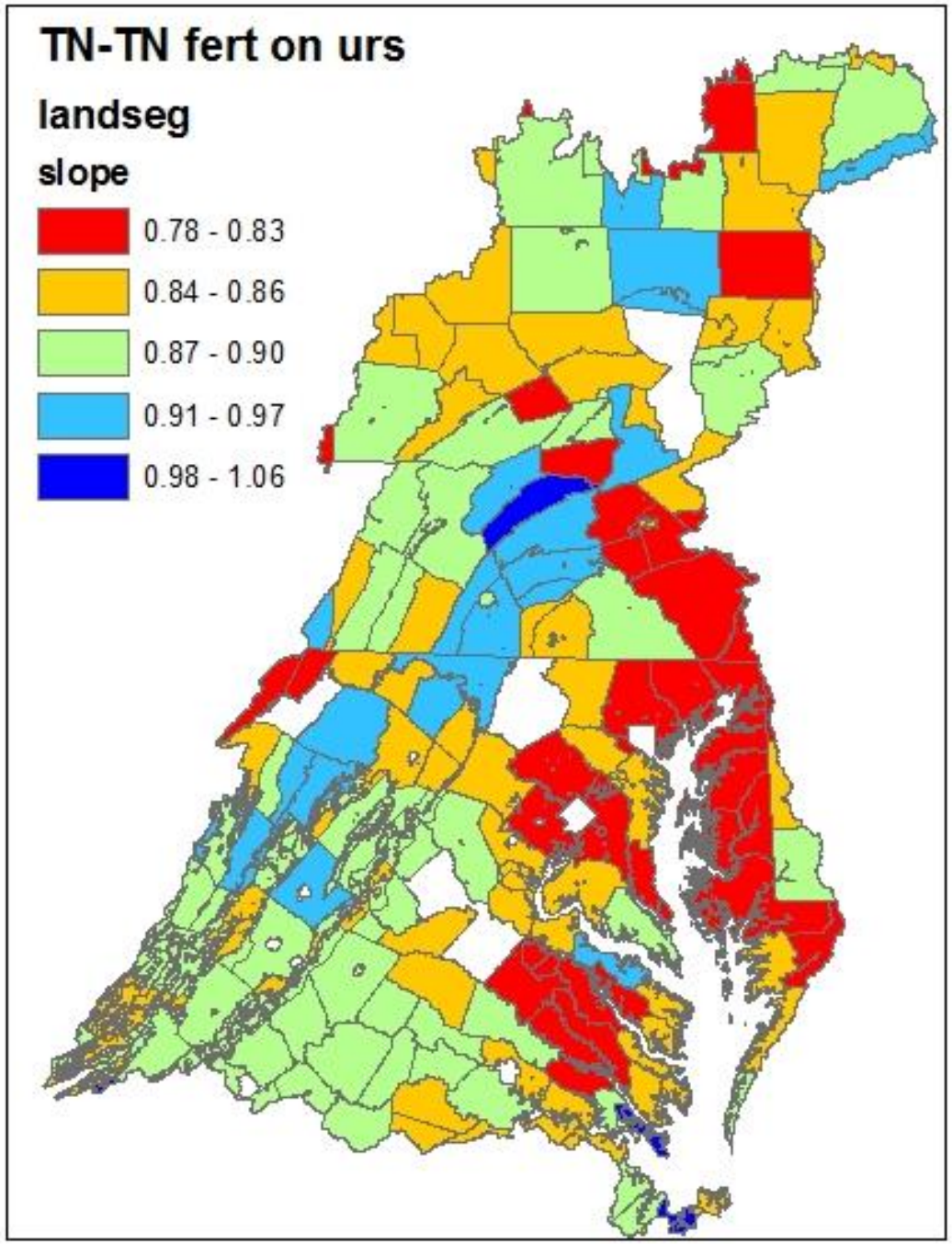
TN-TN fixation regression slope on hwm
Median = 0.31
CV = 0.29



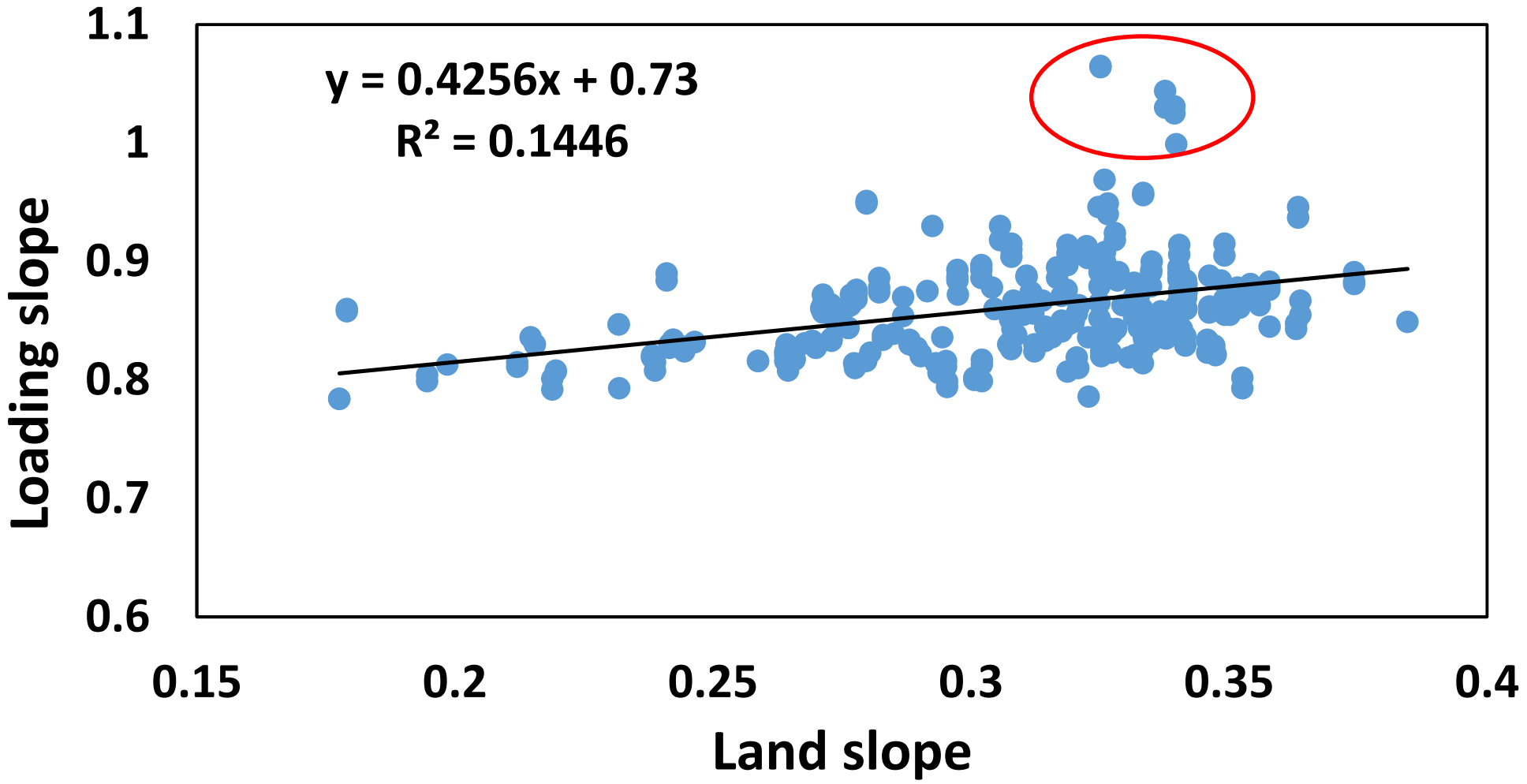
Latitude vs TN-TN slope (legume/hwm)



TN fertilizer regression slope on urs
Median = 0.86
CV = 0.05
Predictable by clay



TN fertilizer regression slope versus clay on urs



Messages

- There are differences from multi-variate analysis for some inputs and land uses, but limited.
- Give the uncertainty in multi-variate analysis, coefficients determined by the sensitivity runs are recommended
- Limited spatial variations: global mean cv=0.32
- A significant numbers of slopes can be predicted to a certain level by environmental factors
- Uptake coefficients not well determined
- More to come: crop, manure, atdep