

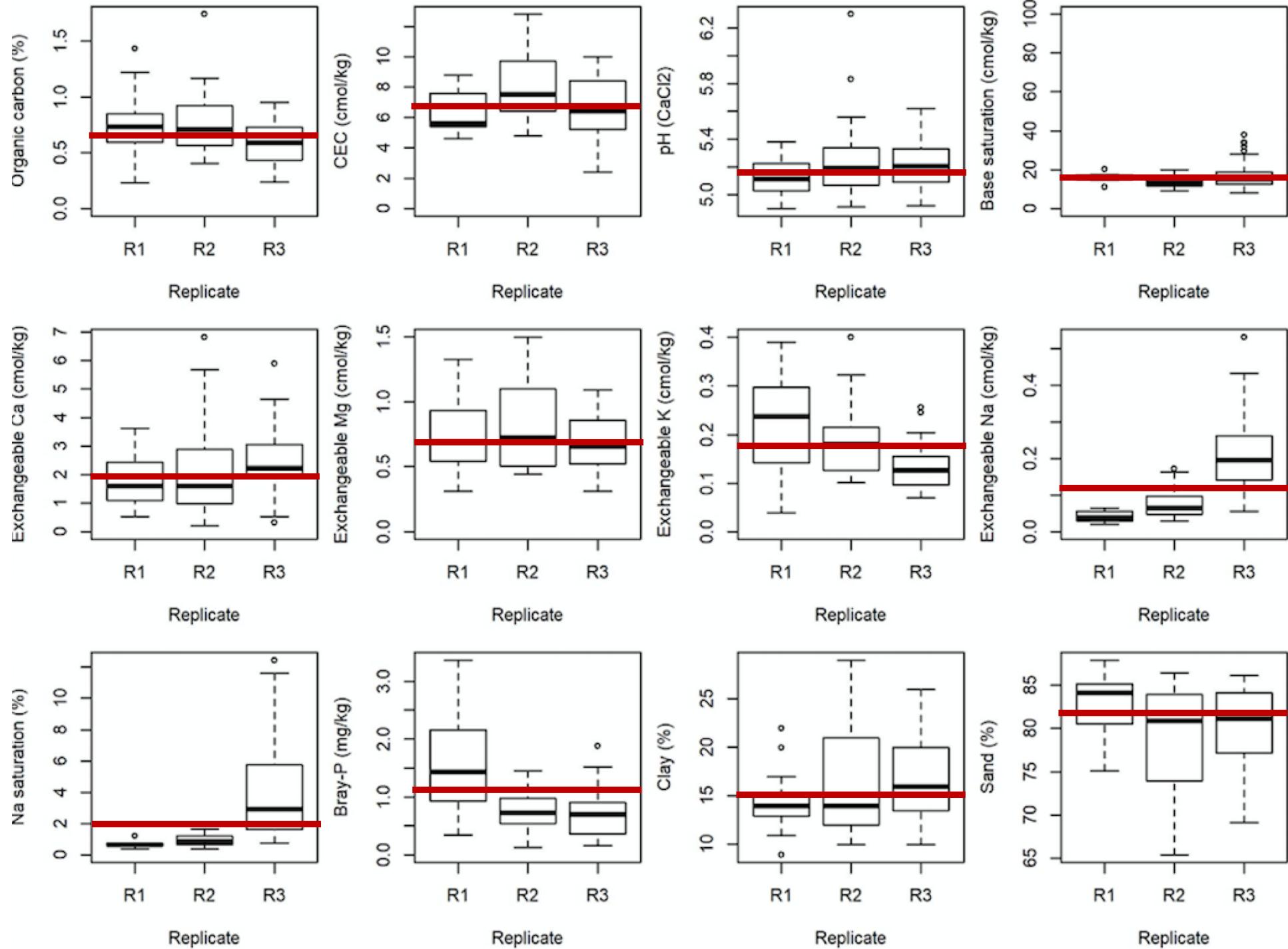
Soil Analyses

BASELINE DATA 2017

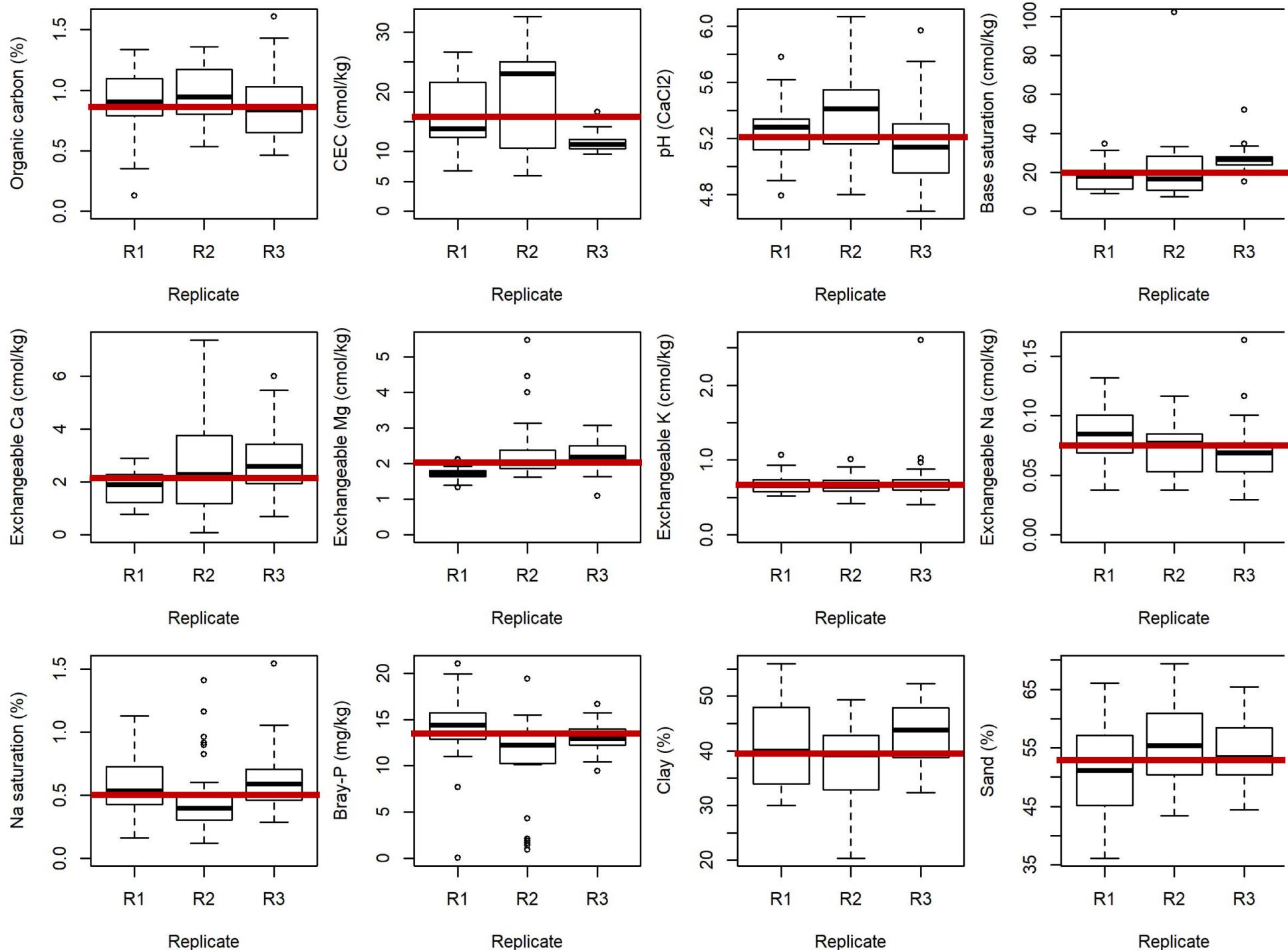
with the help of Ruben Kretzschmar

Within-station differences between **replications**

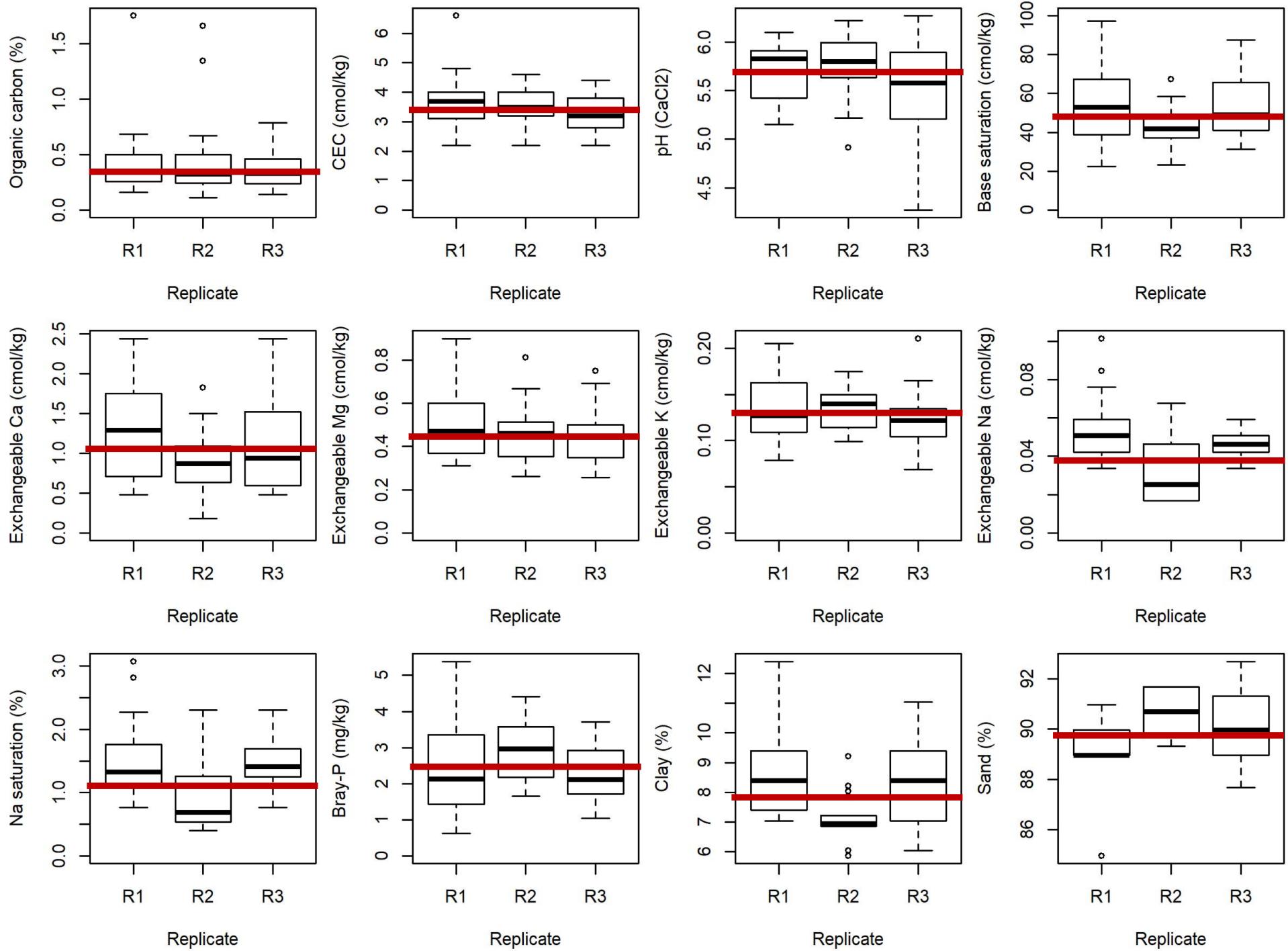
Masasi – Few differences between replications



Morogoro – Few differences between replications



Chambezi – Few differences between replications



OVERALL CONCLUSIONS

For most parameters, within each station, soils are fairly homogenous.

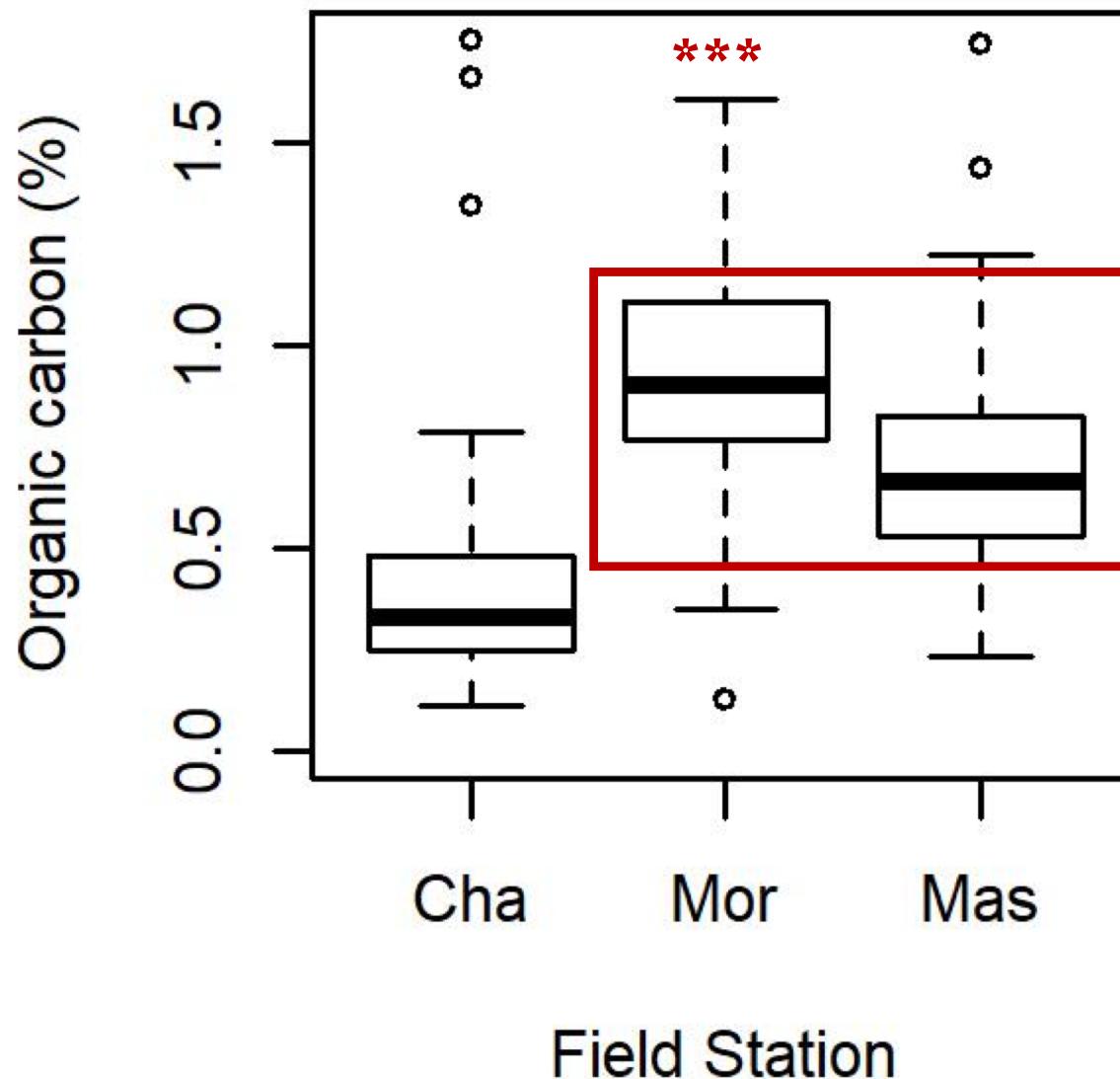
Differences are mostly limited to those between top and sub-soils which is normal and as expected

All stations are therefore suitable for trials and differences over time due to treatments will not be confounded by pre-existing differences.

For the few plots that did show some slight differences, we can account for them in the analyses based in these baseline data.

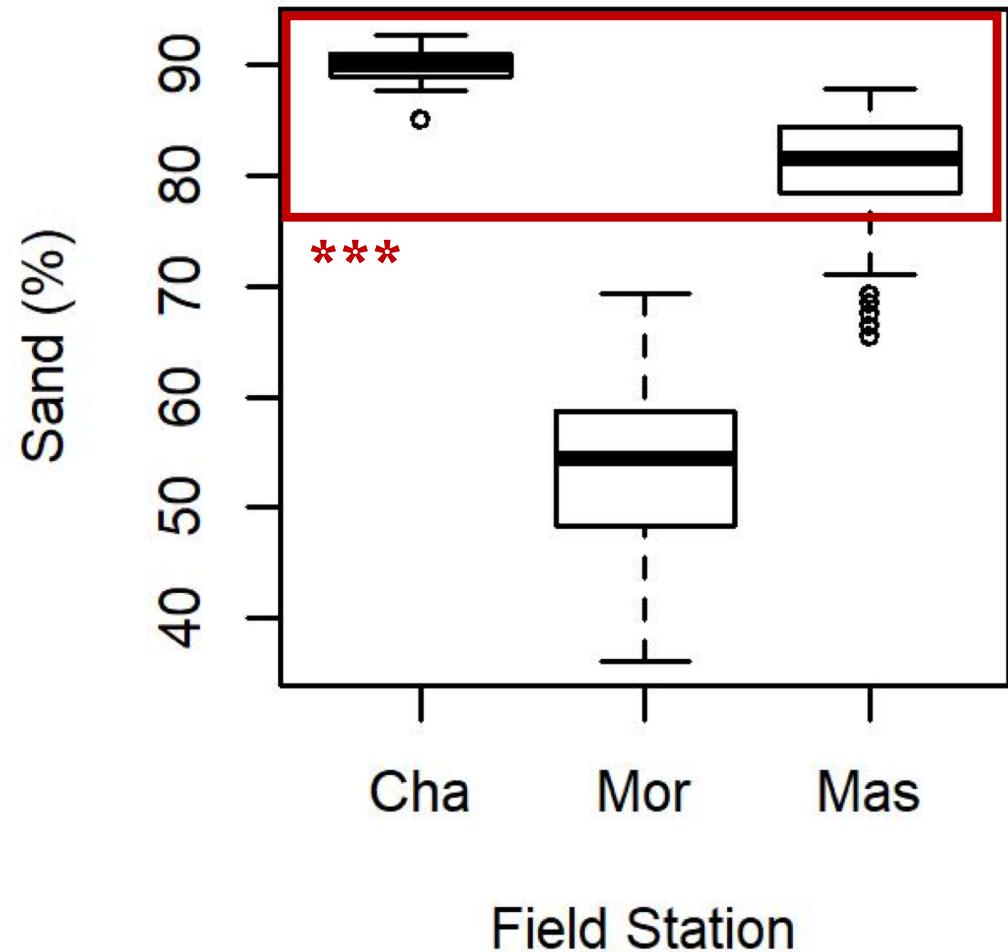
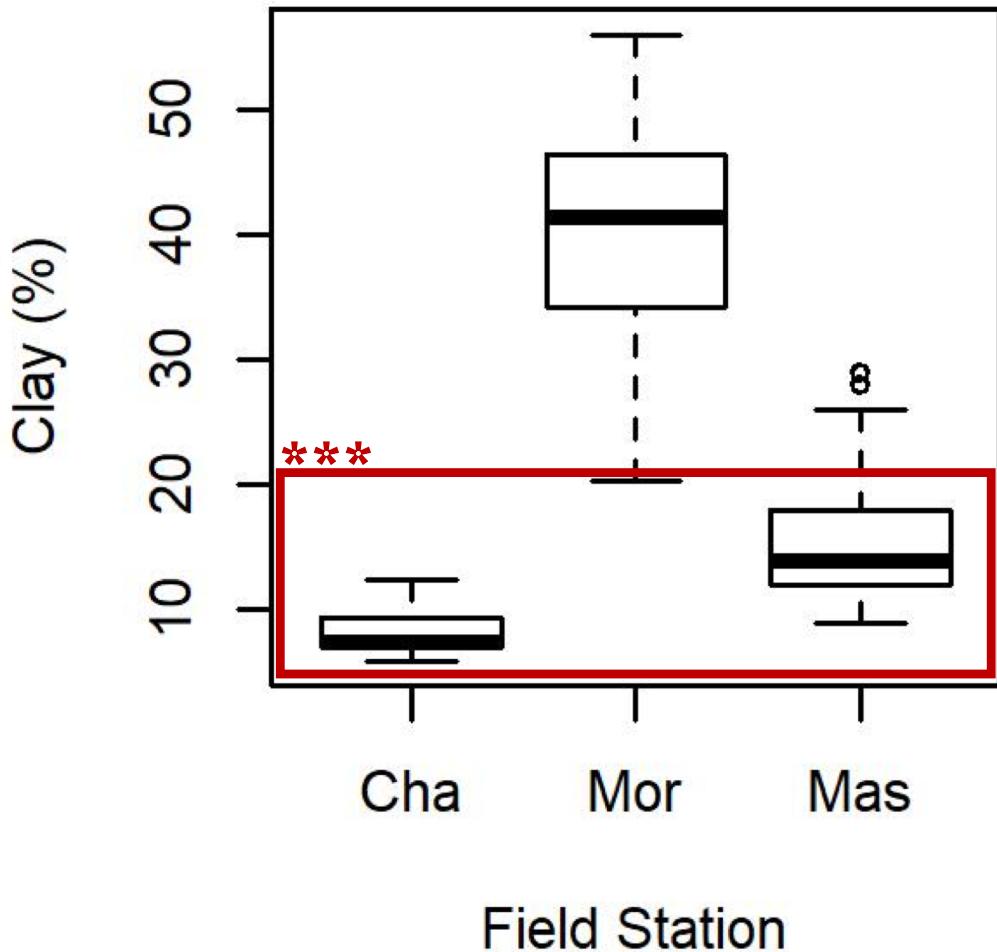
Between-station differences:
Organic Matter
Sand & Clay
Phosphorous

Organic matter levels



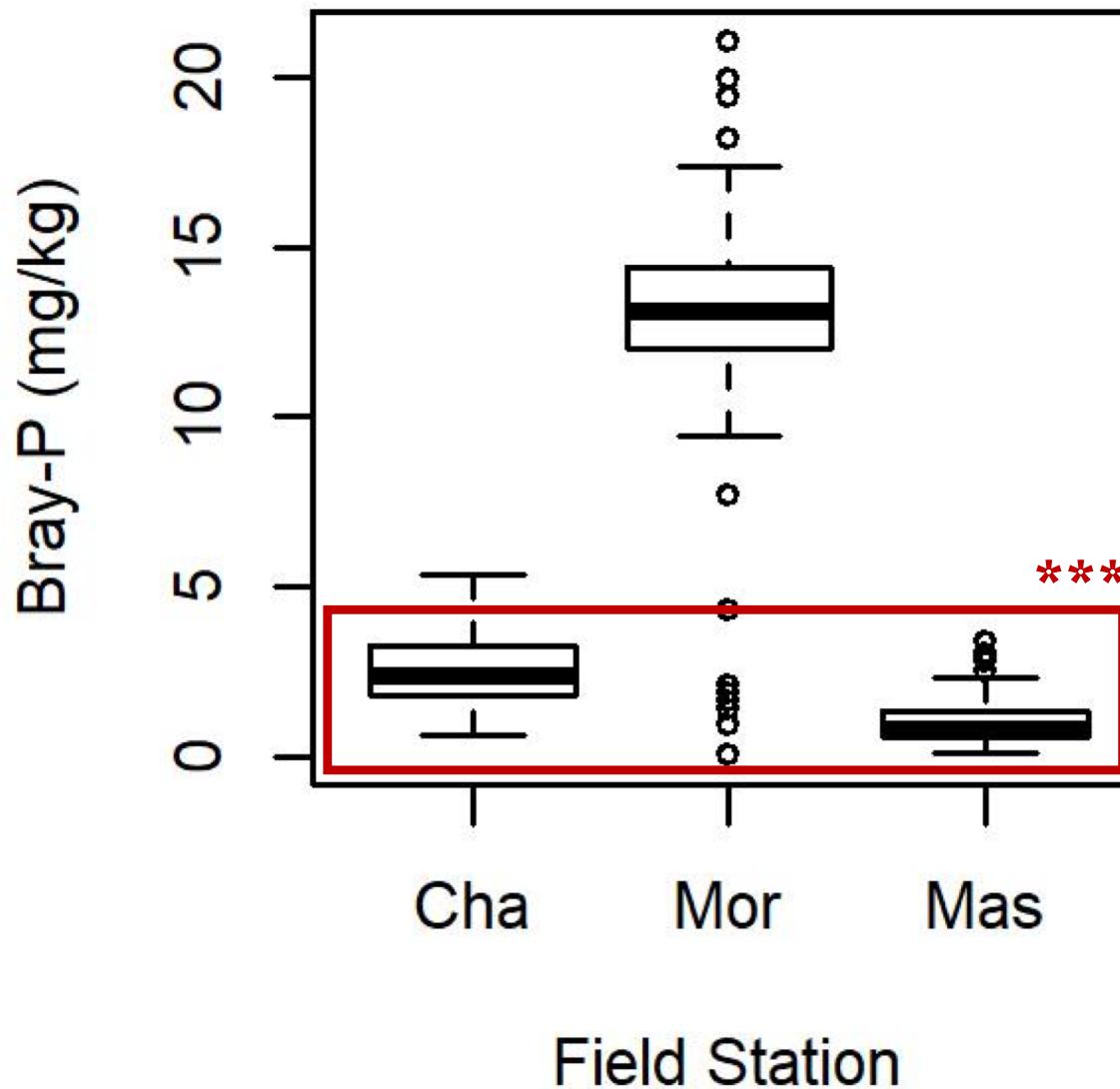
- Although Morogoro somewhat higher in organic matter content, all soils are rather low to poor regarding soil organic matter

Clay and sand levels



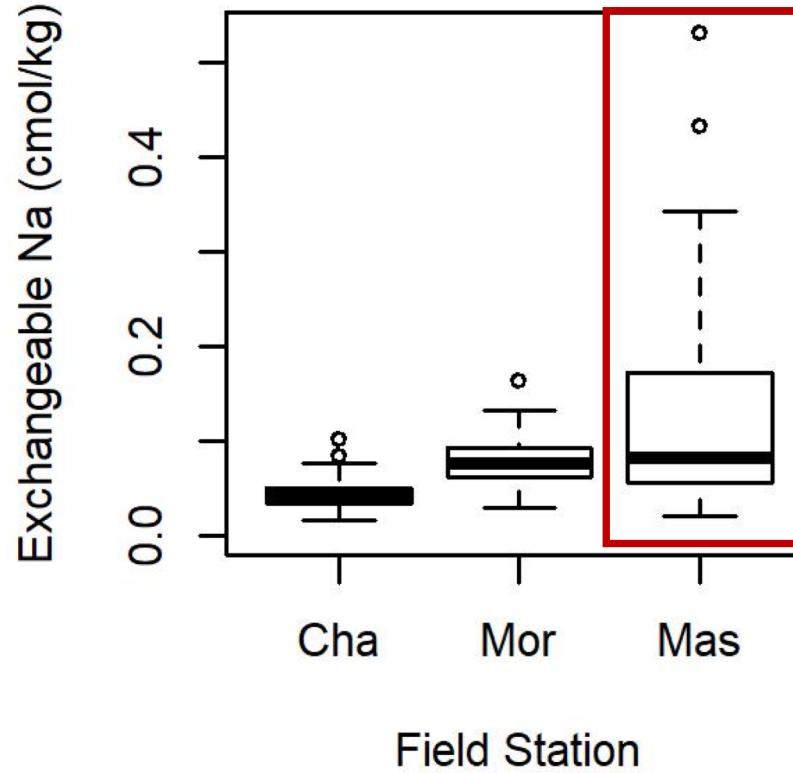
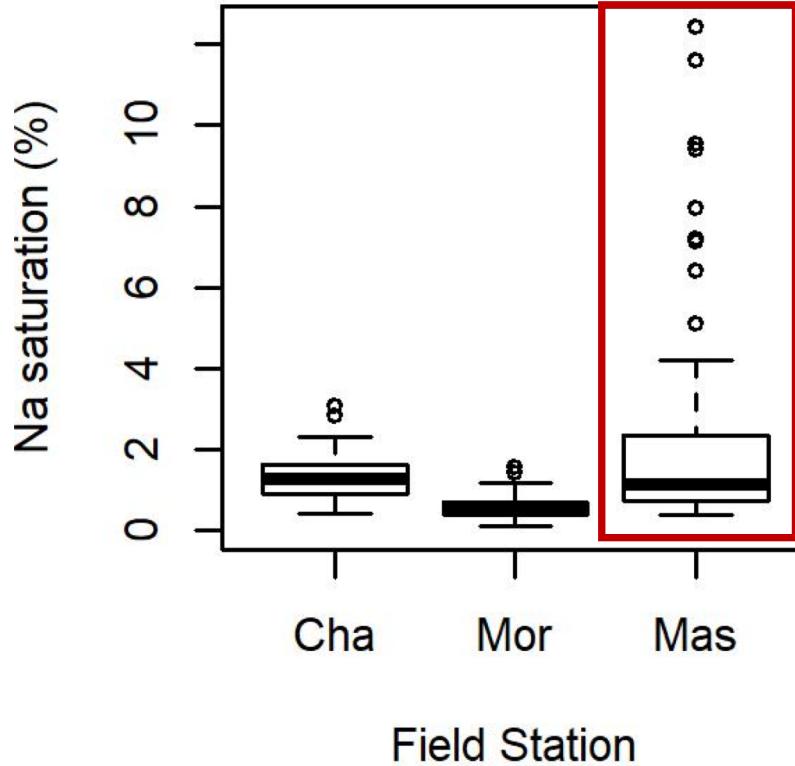
- Chambezi and Masasi very high sand and low clay content
- Opposite to other stations: Morogoro high in clay and low in sand content

Phosphorous levels

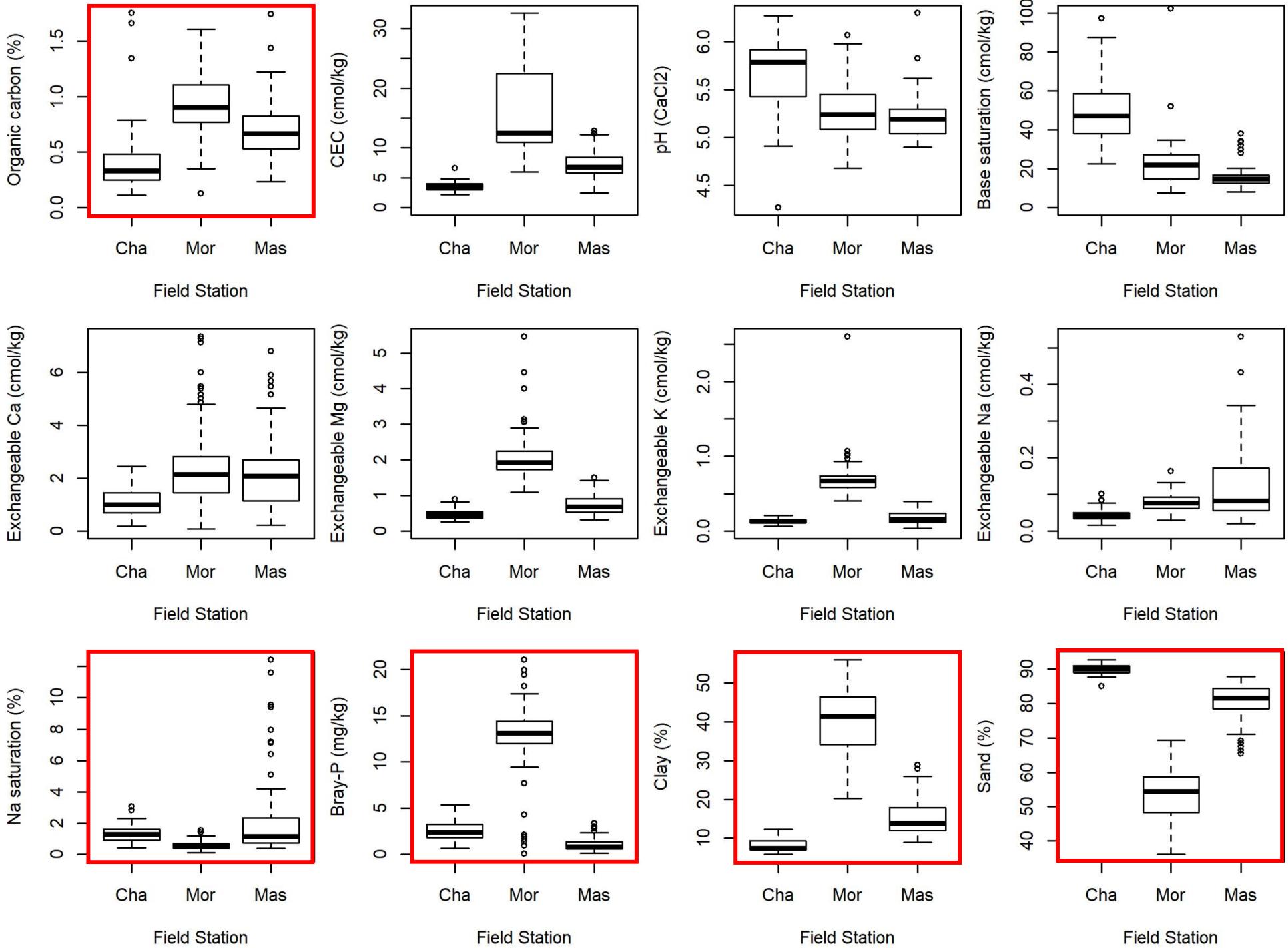


- Chambezi and Masasi very poor Phosphorous levels – growth limiting
- Morogoro significantly higher

Salt levels



- Some plots in Masasi have elevated but not yet problematic salt levels
- All other stations and plots are fine



OVERALL CONCLUSIONS

All soils poor in organic matter content

Masasi and Chambezi soils, in addition, are very poor in phosphorous content (in part owed to the very sandy soils)

pH values are fine

Plant growth at all stations likely limited due to poor organic matter and lack of phosphorous

Consequently, all stations will benefit from anything organic and manure added to soil since both a growth-limiting

Quality control samples to be included in future soil analyses