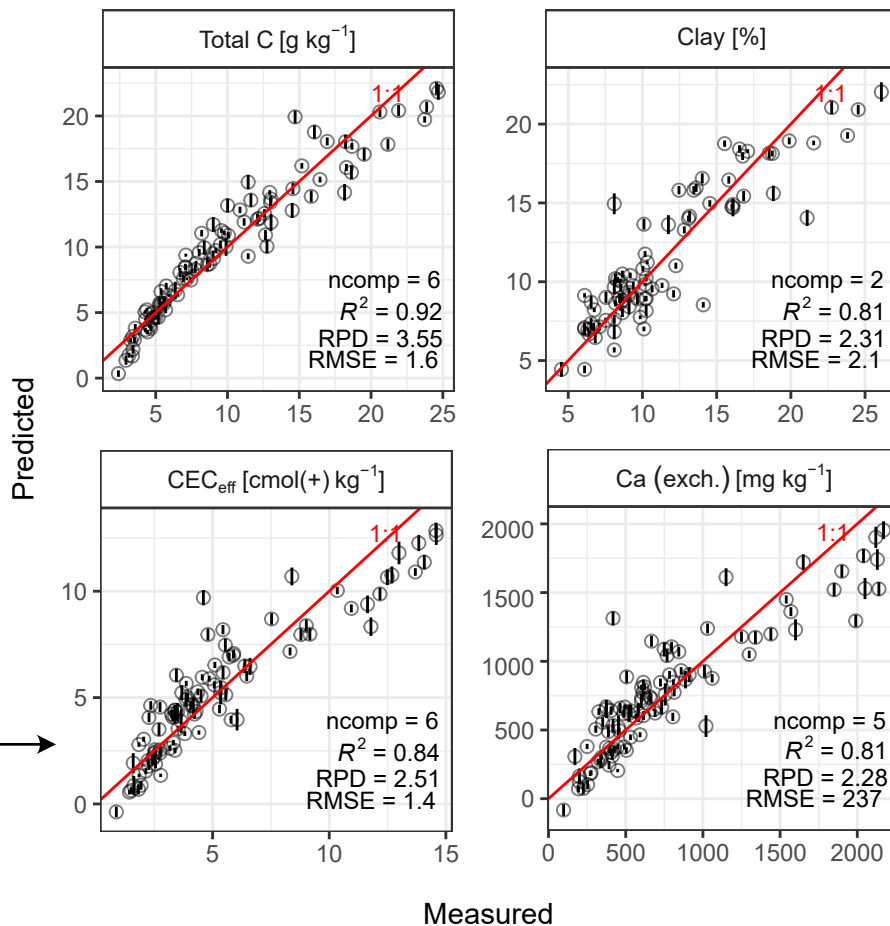
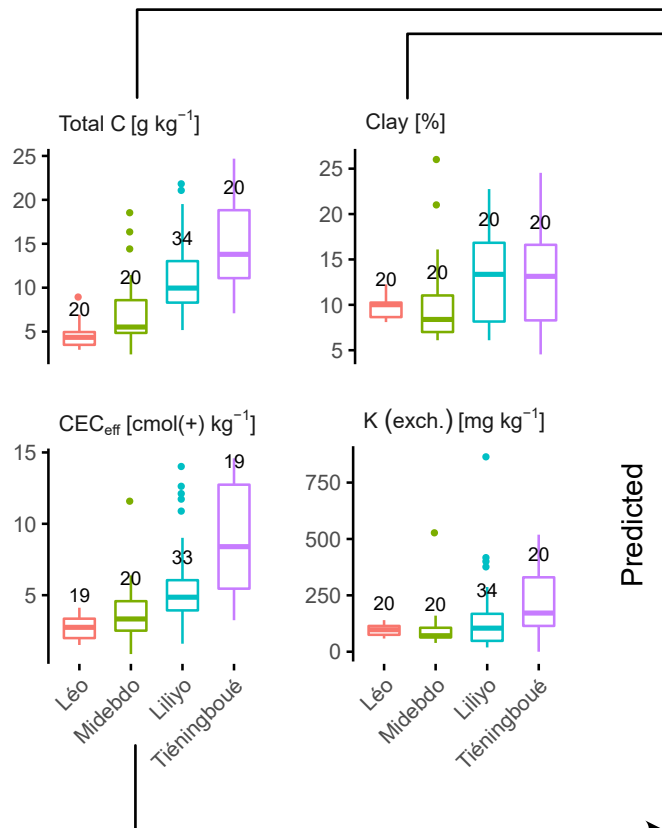


## Soil variability for selected measured properties

Mid-infrared estimates from partial least squares regressions  
- cross-validation; all samples from four regions ( $n = 94$ )



Summary: goodness of fit

$R^2 > 0.8$ : total carbon (C),  
nitrogen (N) sulfur (S);  
CEC<sub>eff</sub>; calcium (exch.)

$R^2 = 0.6-0.8$ : magnesium (exch.);  
copper (DTPA); pH (H<sub>2</sub>O),  
iron (DTPA);  
total phosphorus

$0.4 > R^2 < 0.6$ : sand, silt;  
manganese (DTPA)

$R^2 < 0.3$ : zinc (DTPA);  
potassium (exch.)

- exch. is exchangeable cations  
determined with Barium chloride  
extraction

- CEC<sub>eff</sub> is effective cation exchange  
capacity

- DTPA is  
diethylenetriaminepentaacetic acid