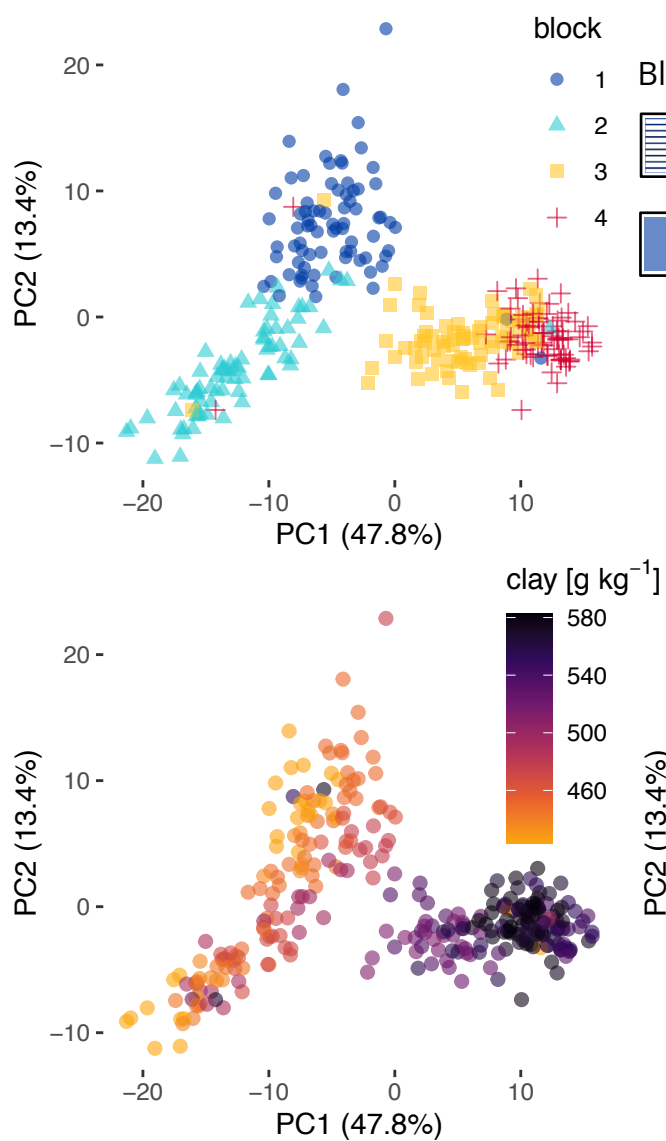
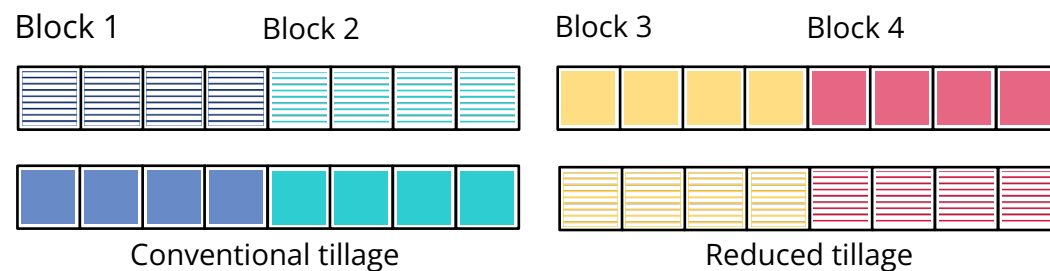


Explorative analysis and clustering for transfer (PCA space of preprocessed spectra)

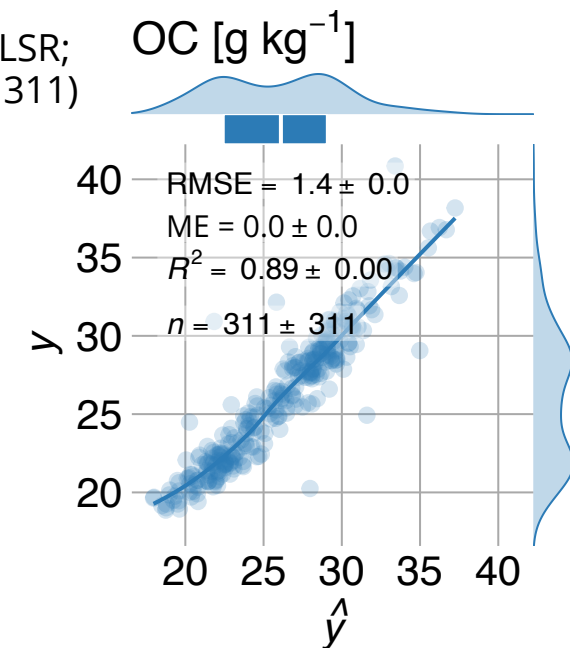


Experimental design



Cross-validated mid-IR modeling results for organic carbon (OC) contents

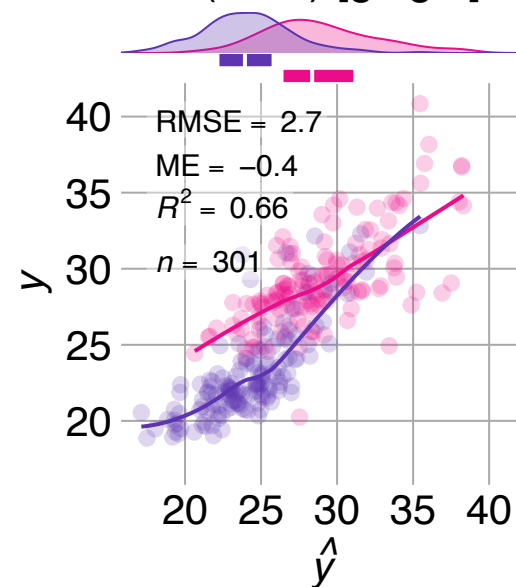
purely local modeling (PLSR;
calibration samples: n = 311)



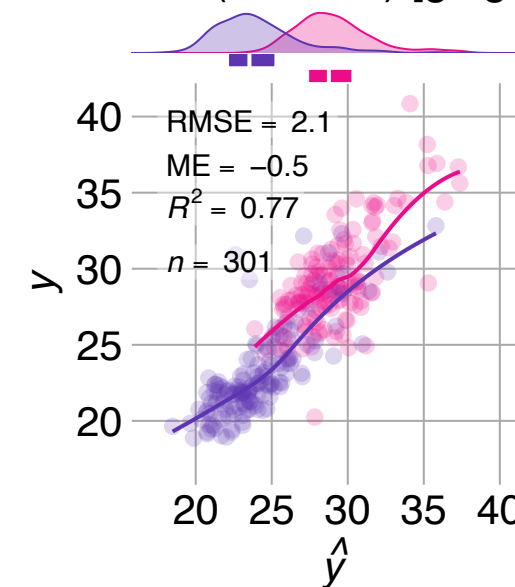
calibration sampling
from year 2002

transfer learning (SSL +
adaptation samples: n = 10)

OC (MBL) [g kg⁻¹]



OC (rs-local) [g kg⁻¹]



Data-driven
transfer with
rs-local
needs only 3%
of local samples
with analytical
OC values at only
1.5 times the error
(RMSE) of a
locally-only
calibration