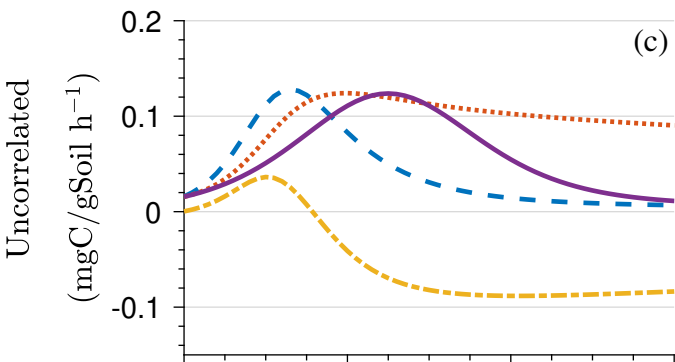
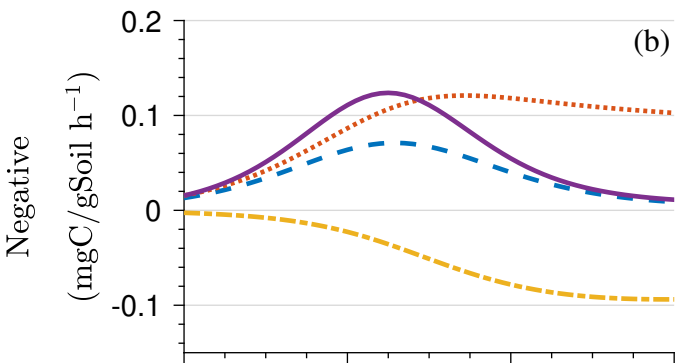
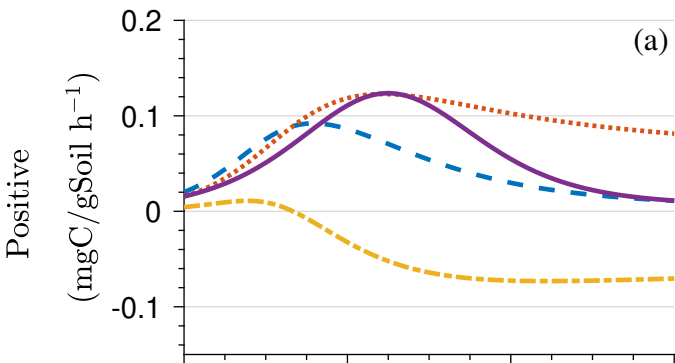
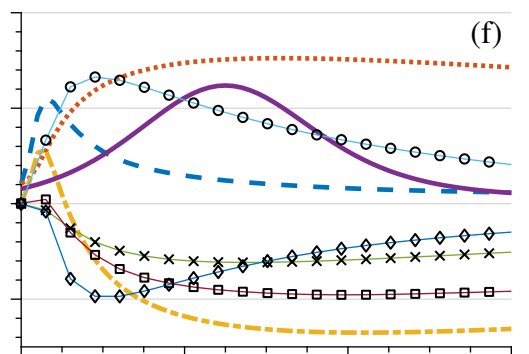
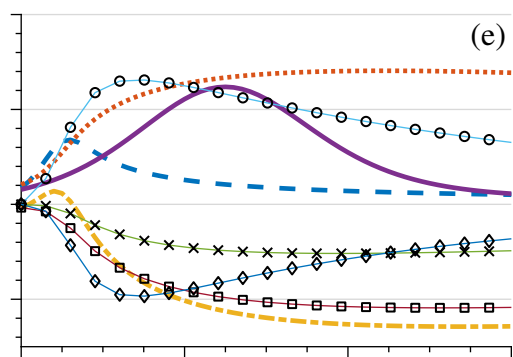
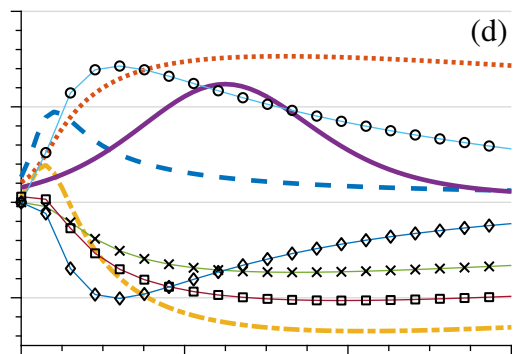


## Biophysical heterogeneity



## Full heterogeneity



Time (d)

$$\text{---} \text{---} \text{---} \bar{R}_{het}$$

$$\text{---} \text{---} \text{---} \text{MFA}$$

$$\text{---} \text{---} \text{---} \sum \text{HOT}$$

$$\text{---} \text{---} \text{---} \bar{R}_{hom}$$

$$\times \text{---} (1-Y)\bar{C}_b \overline{k'_M C'_s}$$

$$\circ \text{---} (1-Y)\bar{C}_s \overline{k'_M C'_b}$$

$$\square \text{---} (1-Y)\bar{k}_M \overline{C'_s C'_b}$$

$$\diamond \text{---} (1-Y)\overline{k'_M C'_s C'_b}$$