







(a) calculating interaction coefficients from plant growth



$$\alpha_{\text{sat, ser, live}} = \frac{M_{\text{sat, ser, ser}} - M_{\text{sat, 0, sterile}}}{\Delta N_{\text{ser}} \cdot M_{\text{sat, 0, sterile}}}$$

$$\alpha_{\text{ser, ser, live}} = \frac{M_{\text{ser, ser, ser}} - M_{\text{ser, 0, sterile}}}{\Delta N_{\text{ser}} \cdot M_{\text{ser, 0, sterile}}}$$

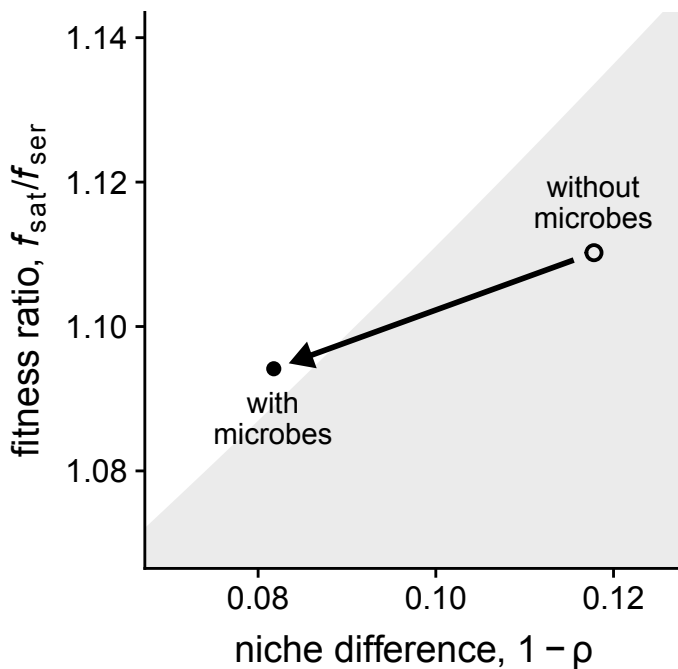



$$\alpha_{\text{sat, ser, sterile}} = \frac{M_{\text{sat, ser, sterile}} - M_{\text{sat, 0, sterile}}}{\Delta N_{\text{ser}} \cdot M_{\text{sat, 0, sterile}}}$$

$$\alpha_{\text{ser, ser, sterile}} = \frac{M_{\text{ser, ser, sterile}} - M_{\text{ser, 0, sterile}}}{\Delta N_{\text{ser}} \cdot M_{\text{ser, 0, sterile}}}$$

(b) observed (total) effects



(c) soil conditioning effects

