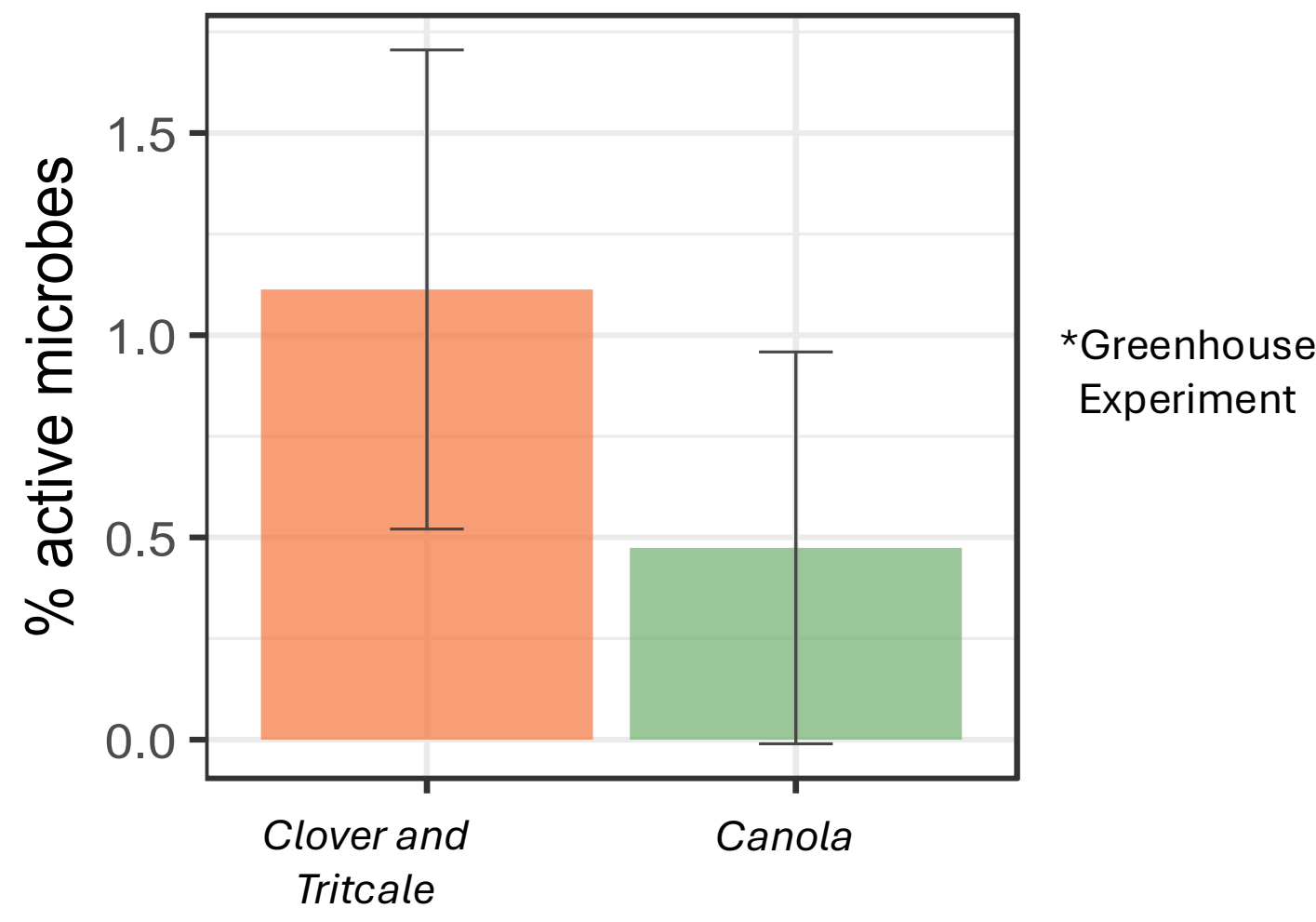


Cover Crop Cocktails

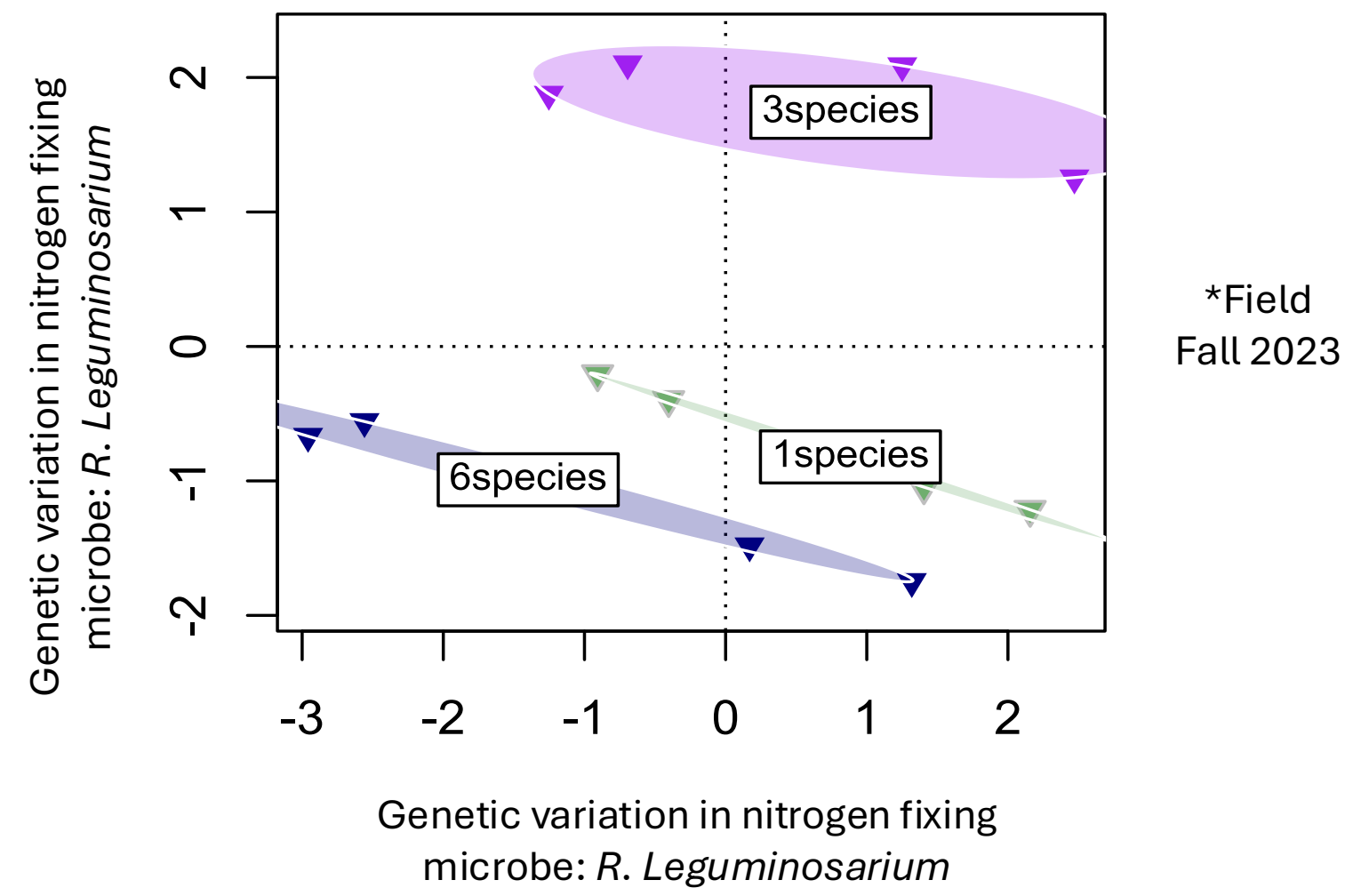
Authors: Jennifer Harris, Kara Eckert, Emma Rice
Penn State, Plant Science Department

Microbes

Soils with canola had lower microbial activity than clover or triticale



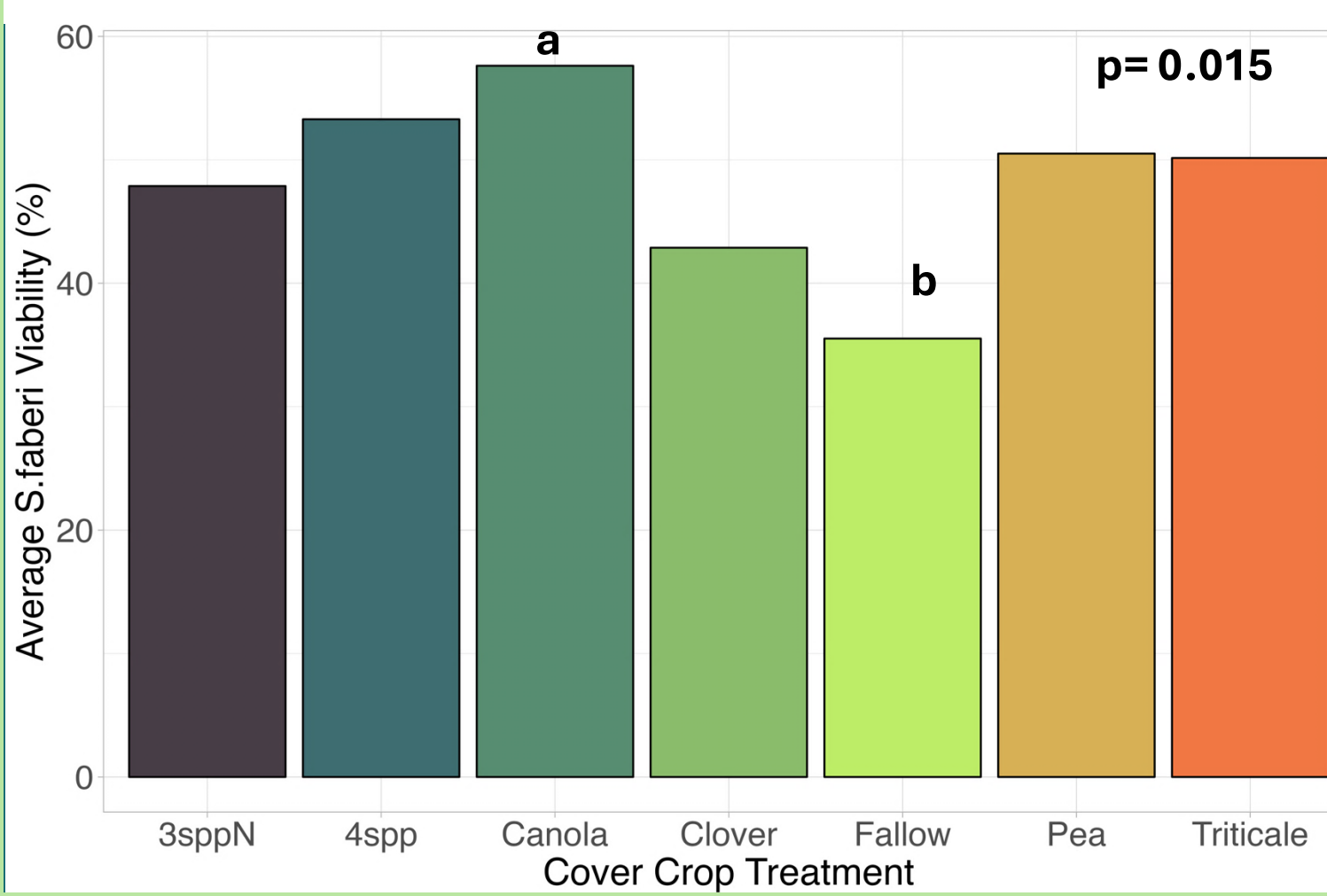
Cover crop treatment is associated with genetic variation in nitrogen fixing microbes



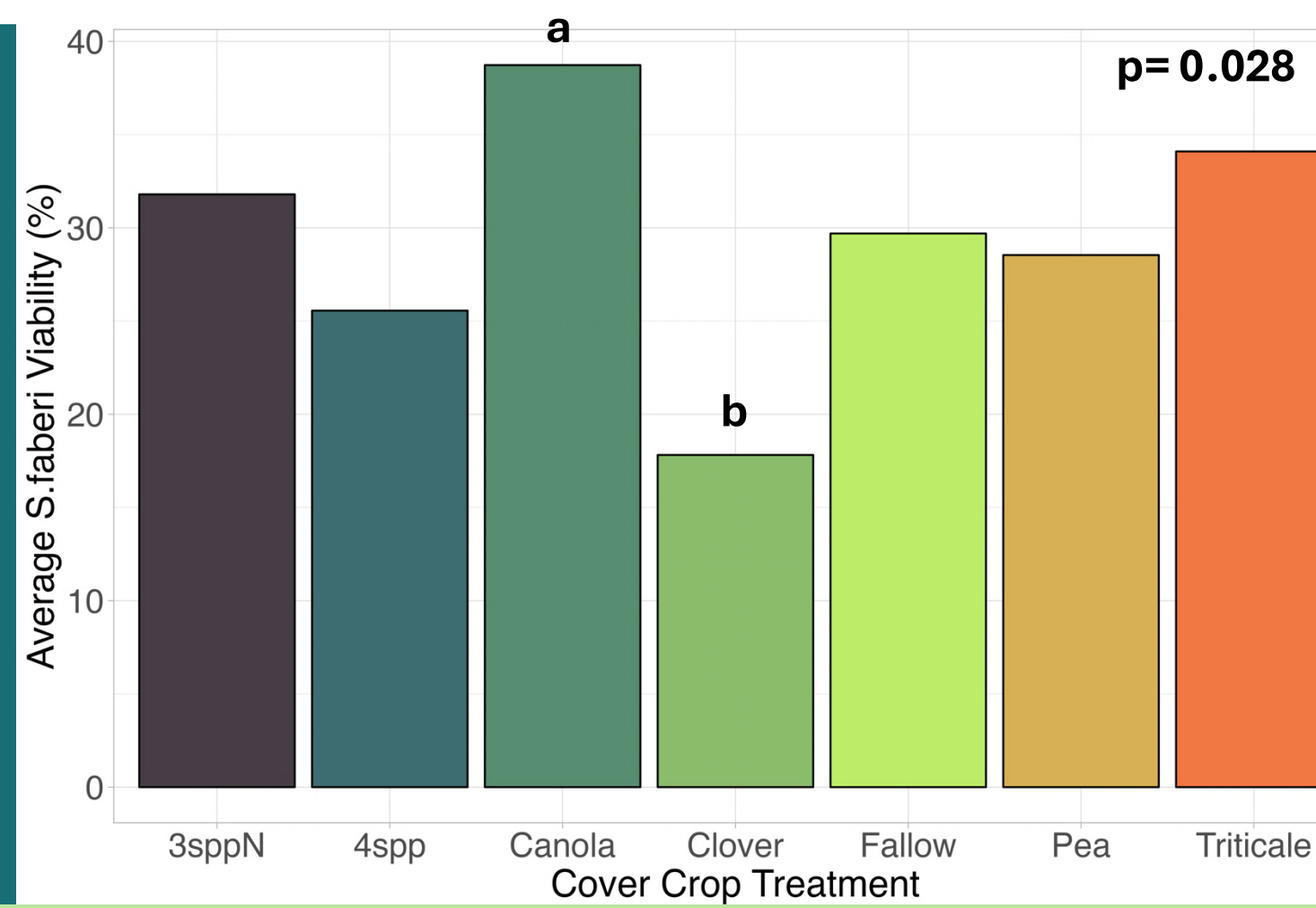
Our findings show cover crop choice effects soil microbes in multiple ways. We are still investigating which cover crops enrich which specific microbial functions.

Weeds

Giant Foxtail Seed Viability after 6 months



Giant Foxtail Seed Viability after 1 year



Giant Foxtail (*Setaria faberi*) seeds in **Canola** treatments maintained the highest viability

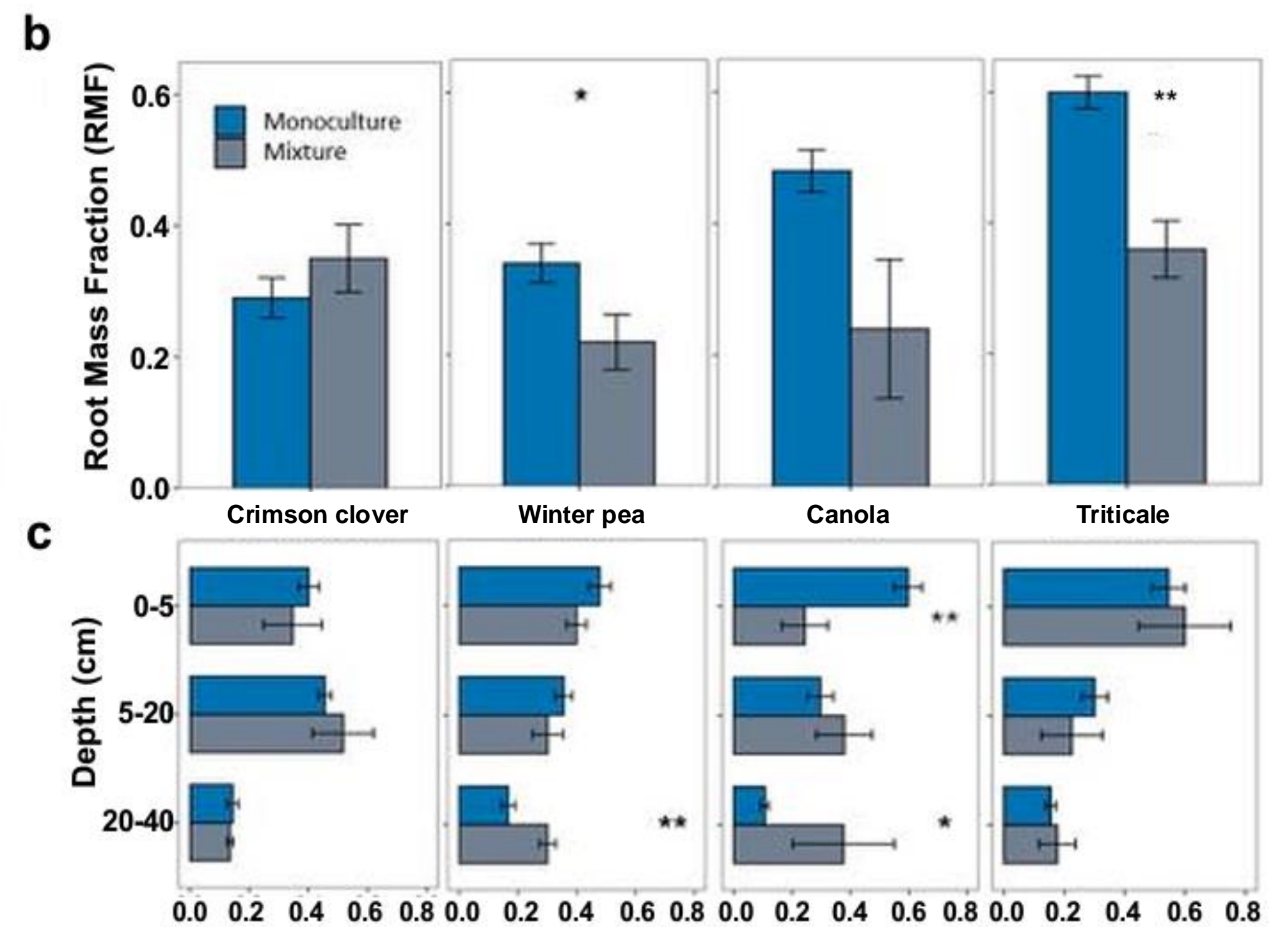
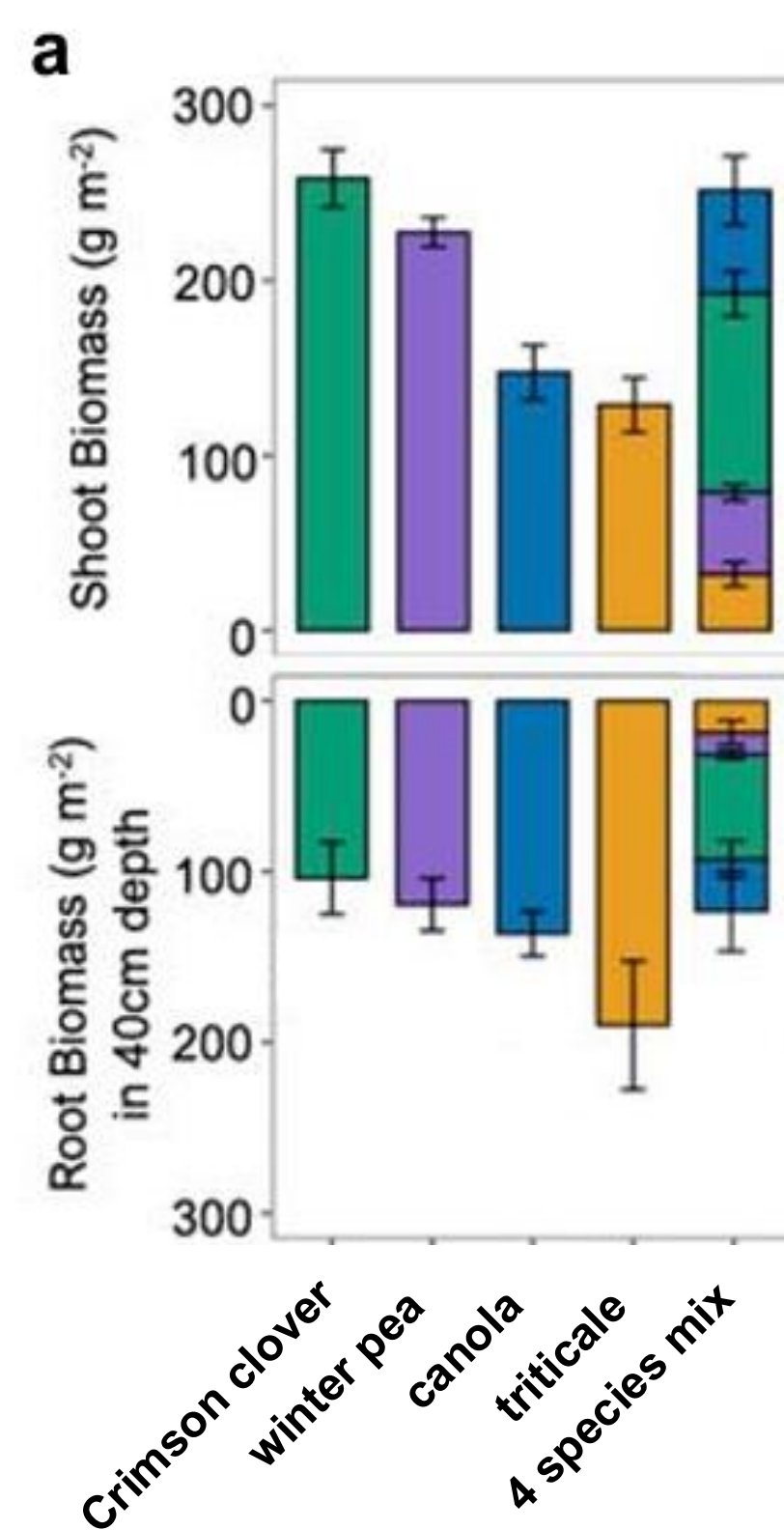
No significant effect of cover crop treatment on Powell Amaranth (*Amaranthus powellii*) seed viability

Below ground

Each cover crop species allocates biomass differently in monoculture (figure a).

Half of our cover crop species allocated more biomass to shoots when grown in a mixture compared to monoculture (figure b).

Within the root system, winter pea and canola had more roots at deeper depths in mixture (figure c).



Contact:
Emma Rice: emr5911@psu.edu
Jennifer Harris jeh6121@psu.edu
Kara Eckert kee143@psu.edu