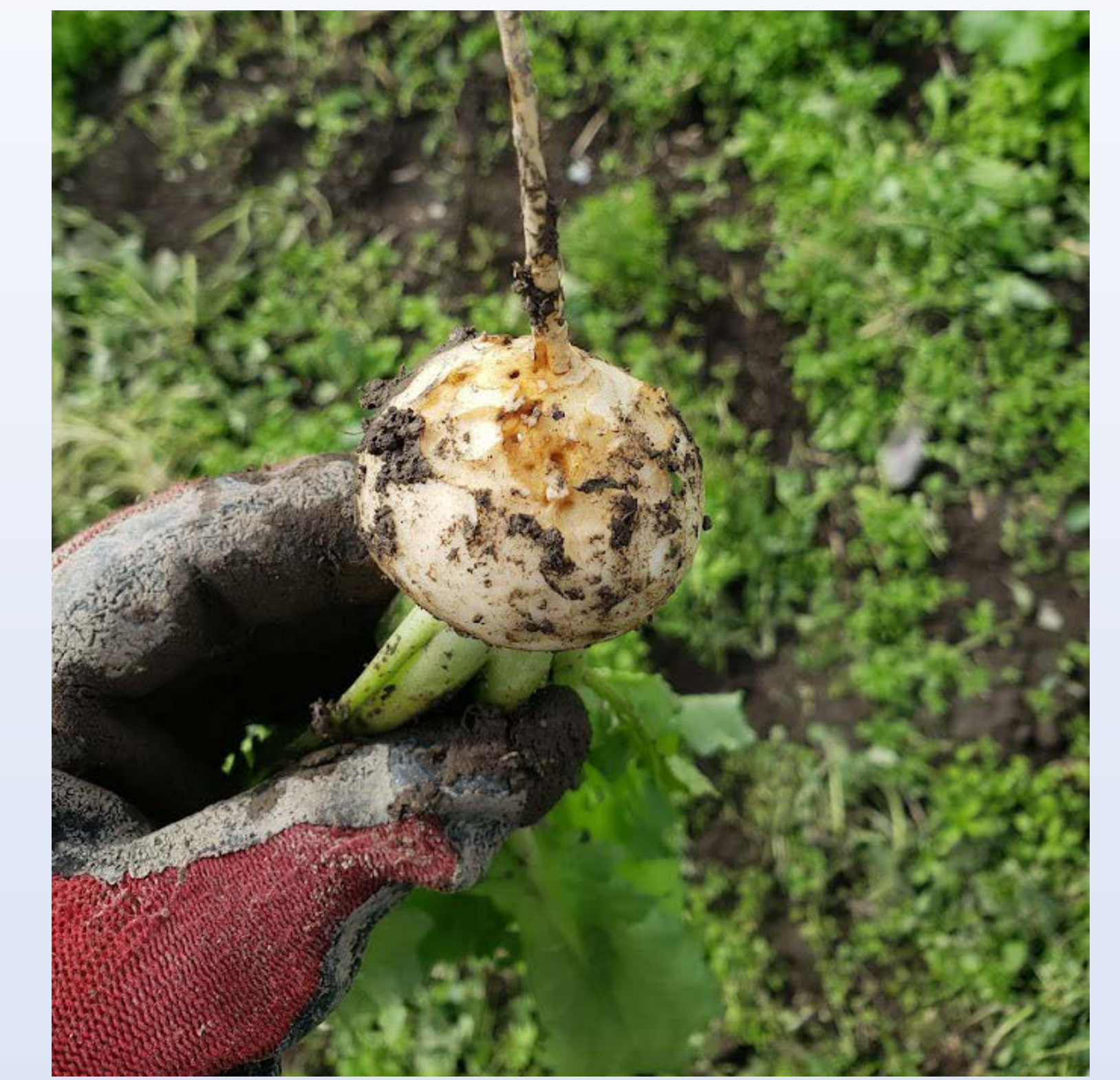




Effect of Enterra Natural Fertilizer, Spent Mushroom Compost, Defatted Seed Meal, and *Metarhizium brunneum* on Wireworm Damage in Hakurei Turnips

Chelsea Allison

Department of Sustainable Agriculture and Food Systems, Kwantlen Polytechnic University



Damaged Hakurei turnip

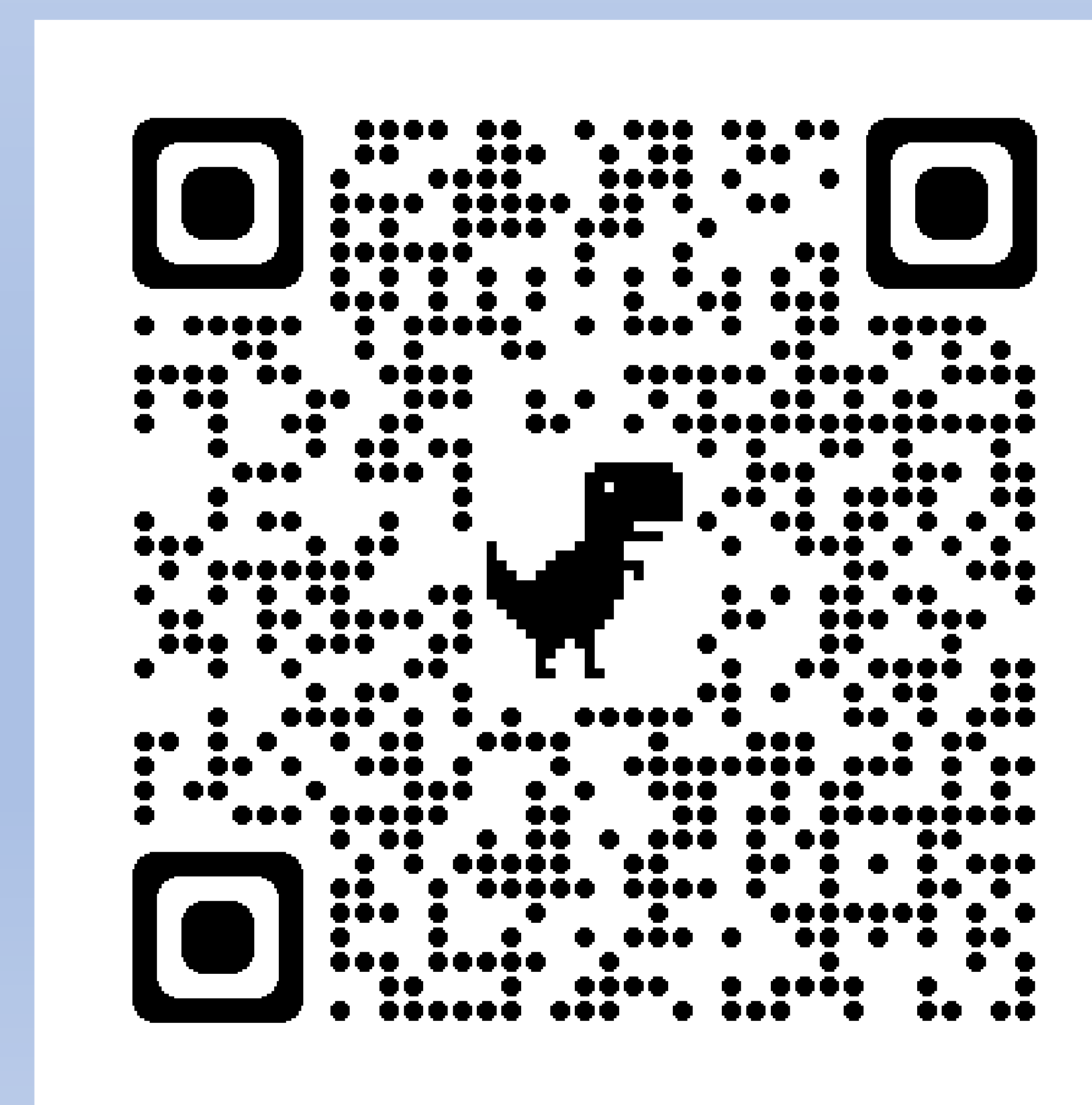
INTRODUCTION

- Wireworms are the soil-dwelling larvae of click beetles that damage a wide range of crops by feeding below ground
- Wireworms' long lifecycle (2-5 years as larvae) makes them difficult to manage
- Few management tools are available to organic growers, but some efficacy has been previously reported for each of the treatments tested in this study

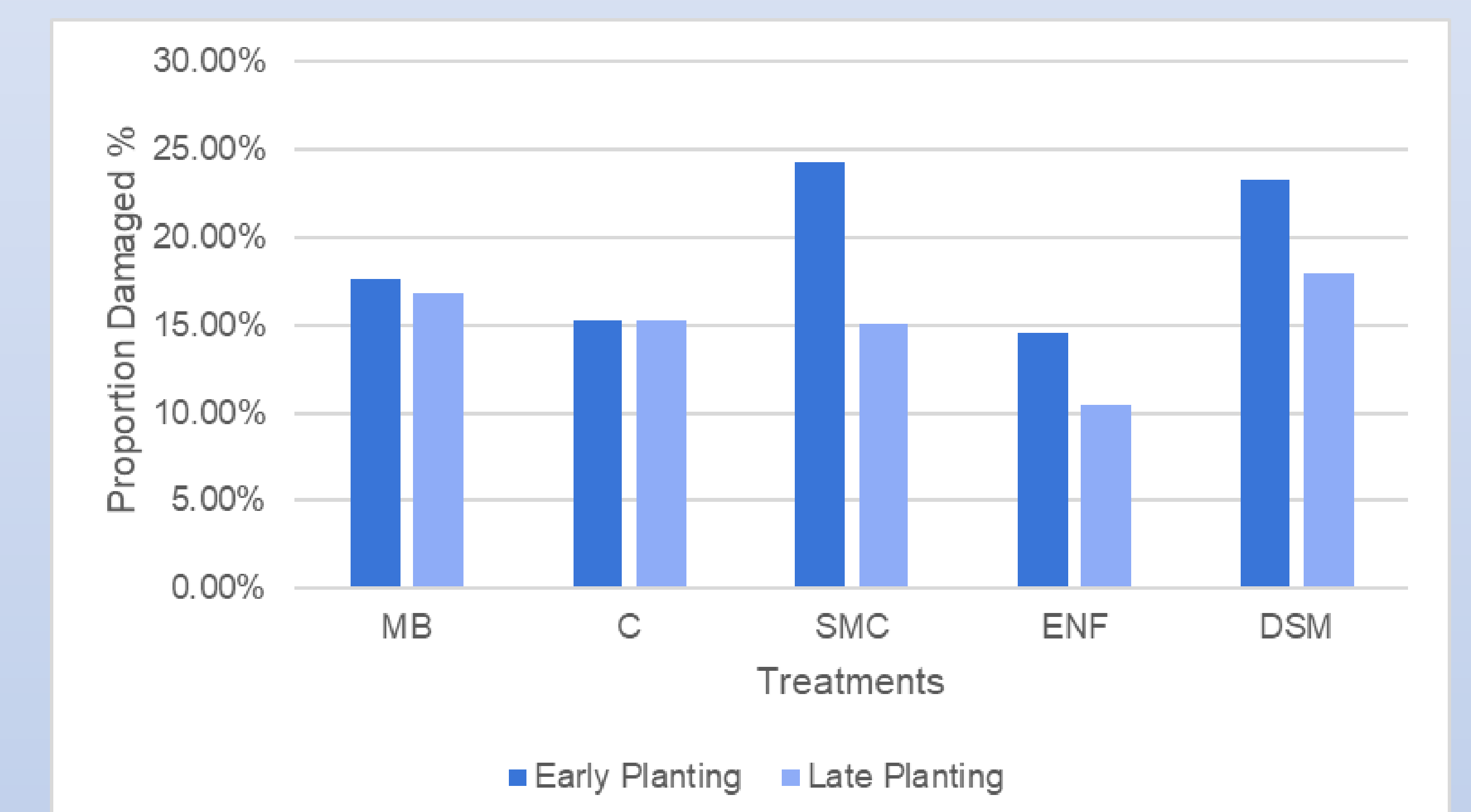
METHODS

- Randomized complete block design with 40 plots:
 - 5 treatments (Control, *M. brunneum*, black soldier fly frass, spent mushroom compost, defatted mustard seed meal)
 - 2 turnip planting dates (early and late)
 - 4 replicates
- *M. brunneum* and defatted mustard seed meal were applied two weeks before seeding turnips; black soldier fly frass and spent mushroom compost were applied at seeding
- Potato traps were set in each plot one month after second seeding
- Proportion of damaged turnips was recorded at harvest
- Potato traps were retrieved one week after harvest and feeding holes were counted

No reduction in wireworm feeding damage was seen after soil treatment with black soldier fly frass, spent mushroom compost, defatted mustard seed meal, or *Metarhizium brunneum* fungus



RESULTS



Proportion of turnips damaged, by treatment, in early and late plantings of Hakurei turnip. MB = *M. brunneum*; C = untreated control; SMC = spent mushroom compost; ENF = Enterra Natural Fertilizer (black soldier fly frass); DSM = defatted mustard seed meal

CONCLUSION

In contrast to some previous studies, none of the treatments tested in this study reduced wireworm damage to turnips.

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