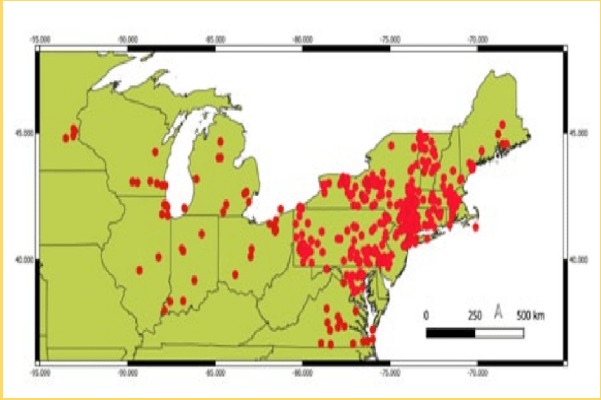
LCCMR 2024-097, Mitigating the spread of invasive jumping worms (JW)

2024-2027 Vera Krischik and Carrie Deans, Department of Entomology UMN, krisc001@umn.edu

Project Summary: Jumping worms are an invasive, exotic that poses a threat to forests by removing soil organic matter and seedlings. It is necessary to develop IPM tactics for mitigating JW.

Left: After JW destroy litter



Right: Before Confirmed JW along the Canada USA border (Reynolds and Dobson 2021).

Activity 1: Determine what pesticides, chemicals, and cultural practices to use in JW IPM programs.

Planet Turf Tea Seed Meal (TSM) 50 lb bag is a soil amendment.
TSM was previously manufactured by other companies and called Earlybird and Casteway.
TSM is used on golf courses to kill earthworms.
TSM potentially will kill JW, but research is needed to confirm this.
TSM is a natural fertilizer 3-0-1 and mulch.
TSM contains 15% saponins a detergent-like irritant to earthworms that makes them shed their mucus membrane and dehydrate.
TSM is not registered as a pesticide to kill earthworms or JW.

Activity 2: Determine non-target effects of treatments on native plants, soil decomposers, and bees.

Activity 3: Determine active ingredients in tea seed meal that kills earthworms and JW.

Work with the EPA and USDA to label tea seed meal as a pesticide so it can be used to kill JW.

Outreach: Workshops, field days, talks, website, publications, advisory group, 10 letters of support