



### Candidate for the position of Assistant Professor/ Assistant Entomologist in Agroecology and sustainable pest management: Dr. Elizabeth Rowen

Assistant Professor of Entomology  
West Virginia University, Davis College

**Date:** Monday, April 1, 2024  
**Time:** 4:00 pm - 4:50 pm  
**Format:** In-Person Seminar & Virtual Access  
**Location:** Genomics Auditorium, Room 1102A  
**Zoom:** 983 6120 0167  
**Passcode:** 818719

#### **Title:**

“Dung, Bugs, and Soil Health: How conservation ag and integrated livestock-crop systems reduce pest risk and increase ecosystem services delivered by insects”

#### **Abstract:**

Soil degradation threatens food security worldwide by decreasing the productivity of agricultural soils and increasing run-off into waterways and coastal areas. Many farmers are moving towards more sustainable soil management practices including reducing tillage frequency and intensity, using cover crops, and integrating livestock and/or livestock manures into their operations. While concerns about arthropod pests may hamper the adoption of some of these practices, sustainable soil management and incorporating livestock and manure into farm ecosystems also represents an opportunity to take advantage of ecosystem services delivered by arthropods. Here I share how fertilizing with manure in PA and WV can offer some advantages for insect pest management by reducing caterpillar feeding, while occasionally providing habitat for slugs. In pasture ecosystems, fresh cow manure is an important resource for dung beetles, who deliver critical ecosystem services by aerating and burying pats. We have characterized what species are present in WV pastures, and identifying management strategies that maximize their populations. By better understanding how soil conservation and integrating livestock can affect insects, I hope farmers will be able to better take advantage of ecosystem services provided by insects and other arthropods and build soil health and productivity.