Technical Laboratory & Field Assistant

Part Time: Up to 20hrs/ week at $15/ hour
Start Date: 10 June 2022 to 31 January 2023 (including summer)

Objective of the role: Maintenance of laboratory insect colonies and evaluation of insecticides and treated materials against arthropod pests. Conduct biochemical, molecular, and behavioural arthropod assays and field collections of insects from ENREEC and WCREEC.

Tasks to be performed:
• Maintain the insect colonies and make new ones:
  o Adapt the numbers to the experiments planned out with supervisor.
  o N.B. Once a new colony is started, do not disturb for about 8 weeks.
  o Check every couple of weeks how colonies are doing and top off with grain/flour to ensure they always have food.
  o Split in multiple jars if they are getting full.
• Receive samples and prepare testing areas (Petri dishes) or “mini bags”/ field simulations,
• Support supervisor in writing of simple reports and typing up bioassay data,
• Refill the water bowls in the insectary on days working in the lab,
• Conduct biochemical, molecular, and behavioural assays in the Anderson Lab.
  o Quantification of resistance mechanisms, e.g. P450s, carboxyl-esterases and GSTs
  o Identification of resistance mechanisms, e.g. PCR
• Conduct behavioural assays e.g. Ethovision tracking of movement/ speed of movement away or toward a stimulus.
• Conduct field experiments e.g. trap collections/ move traps, stored grain field evaluations.
• Inform supervisor when materials are running low and need re-ordering e.g. flour approx.. 2 bags left.
• Ad-hoc support with outreach/ education events etc.

Contact Information:
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Location:
Ento Hall & Plant Sciences Building, Lincoln, Nebraska

Evaluation Methods included but not limited to:
• SOP 006.01 VNVL: Rearing and culturing the larger grain borer, Prostephanus truncates and the maize weevil, Sitophilus zeamais; First Edition: Issue: 15 August 2015
• SOP 007.02 VNVL: Bioefficacy testing of ZeroFly Storage Bags using contact assay against stored product insects; Second Edition: This replaces all previous editions; Issue: 05 January 2016