The Insecticidal Properties of Noxious Weeds

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PURPOSE: To study noxious weeds' impact on field corn, their insecticidal properties and their effects on soil nutrients. PROCEDURES: Four noxious weeds (Kochia, Common Ragweed, Lambsquarters and Russian Thistle), an insecticide (Asana XL) and a control (water) were chosen. Weed extracts were created using a 50:1 dilution, while Asana XL was utilized through standard application rates. A FIELD TEST PLOT STUDY observed the weeds' effect on the growth of field corn in its natural environment. Following harvest, the corn was analyzed for protein, starch, oil, moisture and yield. The INSECT STUDY determined the weeds' impact on black cutworm and fall armyworm mortality rates, in addition to assessing damage to the plants. A PLATE GERMINATION TEST assessed the extracts' abilities to be used as pre-emergent applicants. SOIL TESTING determined if the weed extracts impacted the Nitrogen, Potassium and Phosphorus nutrient levels. RESULTS: In the Field Test Plot Study, three of the noxious weeds exhibited the potential to out-perform the commercial insecticide, Asana XL. From the Insect Study, Asana XL garnered the highest mortality rate on insects, while control had the least effect.In the Plate Germination Test, Lambsquarters promoted the growth most successfully, while Kochia was the poorest. From Soil Testing, Russian Thistle increased the nutrient level s most effectively, while Kochia had the least effect. After observing all of my research aspects, Lambsquarters and Russian Thistle were the superior solutions. Overall, I feel that various noxious weeds illustrate tendencies which could lead to their usage as natural insecticides on field corn.

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