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White grubs bombard brome fields

K-State entomologist reports that white grubs are attacking eastern Kansas brome fields

[By Jacob Klaudt](#), K-State Research and Extension news service

MANHATTAN, Kan. – White grubs, identifiable by their ivory white bodies and brown heads, feed on the root systems of brome fields causing plant loss, said K-State entomologist, Anthony Zukoff, noting that the pests are currently showing up in some eastern Kansas fields.

“They’re developing in the soil and consuming roots,” he said. “They’re going to stop the plants from taking in moisture (and) nutrients and will just basically damage the plant if not kill it outright.”

White grubs, which curl up into a distinct C-shape when disturbed, inflict variable harm, according to Zukoff.

“There are some fields that maybe 10% of the field is dead, but in extreme cases there’s 75-80% of the field killed by below-ground white grub activity.”

Annuals and perennials comprise the two species of white grubs. The annuals have new flushes every year, but the perennials undergo a three-year life cycle over four calendar years. Zukoff said the perennials pose a bigger threat, but only during certain times.

“The very first year, if you have a big influx of beetles laying eggs in your field, you don’t know about it because the damage is small,” he said. “What we’re seeing right now is probably the second year of a very large egg laying event. At the end of this season, those larvae that are doing all the damage now will go back down into the soil profile and overwinter. Next year, they will rise again to continue eating the grown roots, but they won’t do as much damage because they’re basically finishing up their development.”

Zukoff said producers can fight against white grubs by replanting infected areas with brome later in the year.

“If you establish (brome) in the fall, once it gets to spring, the root system will be bigger and will be able to deal with that spring feeding damage,” he said.

Additionally, Zukoff proposes producers use an insecticide called Sevin (carbaryl) to combat white grubs.

“They’re going to want to make sure that they put it on with a large volume of water to get that insecticide down into the soil where the grubs will come in contact with it,” he said.

However, insecticides only show efficacy on smaller white grubs, according to Zukoff.

“If you're digging and you're finding white grubs that are nickel size or larger, any kind of insecticide application you could apply in this case won't really impact large grubs.”

When white grub infestations in brome fields become extreme, Zukoff said replanting to a different crop remains another viable solution.

“Make sure brome is dead for 2-4 weeks because what you're doing is basically starving out those larvae. When you do replant to soybean, for example, make sure you use an insecticidal seed treatment.”

Currently, white grubs are feeding in brome fields, yet Zukoff warns that they can disturb a wide variety of plants.

“They're very generalist pests. They're found in brome fields. They're found in all kinds of row crops. They're in the wild eating root systems.”

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