

INTEGRATED CROP MANAGEMENT

Cowpea aphids spread across Iowa

Last July, Joel DeJong, ISU field specialist-crops, and I visited an alfalfa field near LeMars (western Iowa) that had large populations of blackish aphids. This year, Brian Lang, ISU field specialist-crops, reports finding large populations of this dark aphid near Decorah (northeastern Iowa). I suspect that these aphids are cowpea aphids, *Aphis craccivora*, based on their color. Within 1 year, this aphid species has moved across Iowa. It has recently become a serious pest of alfalfa in California. Nothing is known about this insect's behavior and population dynamics in Iowa, other than it occurs on alfalfa, it seems to stunt alfalfa plants, and it moved quickly from counties near the Missouri River to counties near the Mississippi River in northeastern Iowa.



Cowpea aphids on alfalfa stem.

[Enlarge](#) [1]

The following information on cowpea aphids was developed by Charlie Summers and Larry Godfrey, entomologists at the University of California.

Identification

Cowpea aphid is readily distinguishable from other aphids inhabiting alfalfa because it is the only black aphid found infesting the crop. It is a relatively small aphid, and the adult is usually shiny black, whereas the nymph is slate gray. The appendages are usually whitish with blackish tips.

Hosts

Cowpea aphid has an extensive host range. In addition to alfalfa, it infests many other legumes, as well as shepherds purse, lambsquarters, smartweed, and curly dock.

Damage

Cowpea aphid has been a long-time resident of alfalfa in California. Although frequently present in low numbers, it has rarely, if ever, reached population levels that cause damage. In winter 1999, cowpea aphid was found stunting the alfalfa and causing serious injury. As temperatures warmed and the alfalfa resumed growth, plants failed to grow because of heavy

aphid populations. This aphid produces a considerable amount of honeydew upon which sooty mold grows. The honeydew also makes the alfalfa sticky, which causes problems with harvest.

Resistant varieties

There are no known alfalfa varieties that are resistant to cowpea aphid.

Biological control

This aphid is susceptible to the usual complement of aphid predators, including lady beetles, lacewings, damsel bugs, and syrphid flies.

Monitoring

Aphid infestations in a field are typically patchy, especially an early infestation. Stems on alfalfa plants in infested areas are often completely covered with aphids, whereas plants in other areas of the field may seem aphid-free. Currently, no monitoring guidelines or sampling strategies are available for cowpea aphids in alfalfa. It is suggested that, as with all monitoring, several areas in the field be observed for the presence of the aphid.

Management decisions

The University of California Pest Management Guidelines state, "No guidelines or economic threshold levels have been established for cowpea aphid in alfalfa. For the present, common sense must prevail; if alfalfa is not growing properly and cowpea aphids are present, consider taking control measures." However, Blake Sanden, a farm advisor with the University of California system states, "The current best bet is to use the blue alfalfa aphid thresholds. Reduced yields will result if aphid numbers are 10-12 per stem on new regrowth just after cutting, or more than 60 per stem when the hay is 12 inches or taller."

In Iowa, labeled insecticides (amount of active ingredient per acre) for use against aphids in alfalfa include the following: Ambush (6.4-12.8 oz), Baythroid 2E (1.6-2.8 oz), dimethoate (see label), Furadan 4F (0.5 pt), Lorsban 4E (0.5 pt), Mustang Max (2.24-4.0 oz; label states aphid control may be variable depending on species present and host plant relationships), Penncap-M (2-3 pt), Pounce 3.2EC (2-8 oz), and (Warrior 2.56-3.84 oz).

In Iowa, cutting of alfalfa would be another option for controlling cowpea aphid.

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[1] http://www.ent.iastate.edu/imagegal/homoptera/aphid/cowpea/cowpea_aphid_2.html

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