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# Cowpea aphid: a new pest in Iowa alfalfa?

## **Abstract**

Iowa producers may have a new pest to contend with in alfalfa. On July 29, Joel DeJong, ISU field specialist-crops, and I visited an alfalfa field near LeMars that had large populations of “black” aphids as reported by Peter Westra and Todd Russ (LeMars Agri-Center, LeMars, Woodbury County). The field was suffering from drought stress and small populations of aphids were fairly easy to find. Hal Tucker (Tucker Consulting, Storm Lake) also has reported finding alfalfa fields with black aphids covering entire plants in northwestern Iowa.

## **Keywords**

Entomology

## **Disciplines**

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# INTEGRATED CROP MANAGEMENT

## Cowpea aphid: a new pest in Iowa alfalfa?

Iowa producers may have a new pest to contend with in alfalfa. On July 29, Joel DeJong, ISU field specialist-crops, and I visited an alfalfa field near LeMars that had large populations of “black” aphids as reported by Peter Westra and Todd Russ (LeMars Agri-Center, LeMars, Woodbury County). The field was suffering from drought stress and small populations of aphids were fairly easy to find. Hal Tucker (Tucker Consulting, Storm Lake) also has reported finding alfalfa fields with black aphids covering entire plants in northwestern Iowa.

The exact identification has not been confirmed by an aphid expert, but I strongly suspect that these are cowpea aphids, *Aphis craccivora*, based on their physical appearance. This insect recently has become a serious pest of alfalfa in California. In Iowa, close monitoring for this insect should be undertaken next spring to determine its distribution and possible damage potential.



**Adult cowpea aphids are black and nymphs are slate gray. The white objects are shed skins.**

[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 relative 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 shepherd’s purse, lambsquarters, smartweed, and curly dock.

### Damage

Cowpea aphid has been a long-time resident of alfalfa in California as well as other states.

Although frequently present in low numbers, it has rarely, if ever, reached population levels that cause damage. In the winter of 1999 cowpea aphid was found throughout both the high and low desert, stunting the alfalfa and causing serious injury. Damage was particularly severe in the high desert where the majority of varieties grown are semidormant. 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.



**Cowpea aphids on alfalfa stem.**

[Enlarge](#) [2]

## Resistant varieties

There are no known alfalfa varieties that are resistant to cowpea aphid, but genetic variation for resistance is known and resistant cultivars can be expected in the future in California.

## 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. On dormant alfalfa, pay close attention to plants as they begin breaking dormancy. If shoots are failing to grow normally and cowpea aphid is present, control measures should be considered.

## Management decisions

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.

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[1] [http://www.ent.iastate.edu/imagegal/homoptera/aphid/cowpea/cowpea\\_aphid\\_1.html](http://www.ent.iastate.edu/imagegal/homoptera/aphid/cowpea/cowpea_aphid_1.html)

[2] [http://www.ent.iastate.edu/imagegal/homoptera/aphid/cowpea/cowpea\\_aphid\\_2.html](http://www.ent.iastate.edu/imagegal/homoptera/aphid/cowpea/cowpea_aphid_2.html)

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