



Pest e-alerts



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Cowpea Aphid and Alfalfa Weevil Update in Oklahoma Alfalfa

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Reports of cowpea aphids in alfalfa stands have been reported across the Southern and Southwest portions of the state. Cowpea aphid populations as low as 1-2 per plant on fall-seeded stands, under drought stress conditions can quickly thin a good stand. This tiny insect is

relatively easy to scout for in alfalfa, since its appearance is quite unique. Of the four primary aphids occurring in Oklahoma alfalfa, this species is the only aphid that is smoky-gray (nymphs) to black (adults) in color. Pea Aphid and blue alfalfa aphid are mostly green in color and spotted aphids are yellow with obvious dark spots. Generally, most cowpea aphids are wingless forms



that are always female and reproduce asexually, giving birth to live young. Winged forms do exist but are produced under stressful conditions or when food supply is shortened.

Mild, dry conditions typically favor problems with spotted alfalfa and cowpea aphid build-up. Cold weather does not necessarily deter populations of either species; therefore, these insects can remain significant throughout winter months, but cowpea aphids typically come on strong when conditions begin to warm up slightly in the late winter or early spring. The effect of feeding by this insect can be detrimental to seedling stands. Individual plants which may already be stunted from lack of moisture and poor growing conditions can quickly take on a bushy appearance, begin to turn somewhat bluer in color, and succumb to the large numbers of cowpea aphids feeding on the plants. They tend to feed in clusters on newly emerging leaves,

blooms, and stems. They can also vector several important virus diseases, including alfalfa mosaic virus. They secrete large quantities of honeydew, which can result in the formation of sooty mold on the plant, further disrupting photosynthesis. While thresholds are similar to those used for pea aphid infestations, because heavy cowpea aphid populations generally occur when alfalfa is exposed to poor growing conditions, if these conditions persist, plants will take longer to rebound from the high numbers.



Treatment considerations should be based on the number of aphids per stem. Most fall-planted alfalfa may be able to tolerate up to five aphids per stem; however if plants are heavily stressed from lack of moisture and poor root establishment, treatment may be required immediately. On established alfalfa, that has 10 inches of growth, up to 50 aphids per stem can be sustained before treatment is needed. For taller alfalfa (>19 inches in height) these infestation levels can be doubled before treatment is necessary. Unfortunately, the compounding factor this year, in addition to aphid numbers, may be the alfalfa growth and moisture situation. Most of the alfalfa around the state is 1-3 inches in height and moisture has been limited. Recent rains may start the growing process and help in some areas, while continued drought continues in others. In past years, the only consolation has been relatively high parasitoid populations attacking aphids. It remains a question this year whether these parasitoid numbers will be adequate to keep a heavy population in check, particularly in light of the ensuing alfalfa weevil larval population that will normally be on the rise

soon, especially in Southern Oklahoma. If insecticide use becomes necessary, especially in a dry year, then adequate coverage is a crucial issue. In these conditions, we recommend 3-5 gal/acre by air or 15-20 gal/acre by ground application methods. Cutting back on liquid when conditions are dry and/or windy can result in poor control. We have seen this repeatedly in previous years when conditions were similar. In relation to chemical choices, Lorsban continues to be the preferred choice for aphid control in alfalfa. Some of the pyrethroids (Proaxis, Warrior, Silencer, Baythroid) will do an effective job; however, certain chemicals within this group will not perform as well on aphids. Although it may be slightly more expensive to use Lorsban, at lower rates (1 pint/A) have shown excellent activity against this pest and these rates should be quite competitive with lower rates of any of the pyrethroids. If making applications by ground, remember to slow down to be certain that the liquid is reaching the plant surface. When dry conditions persist for a long period of time, heavy field dust can create problems with atmospheric tie-up of chemicals. Driving ground equipment quickly over, dry dusty fields can

further compound the problem. This makes coverage with adequate liquid an even bigger issue for controlling pest problems. The take home point here is slow down the first time and increase gallonage applied per acre and hopefully reduce the need for a second application.



Based on scouting reports from southern and western Oklahoma, and the Stillwater area, it appears that weevil populations are relatively low so far, 5-10/30 stems; however, cowpea aphid numbers have been observed at higher levels. Compared to 2011, where numbers were reaching in the hundreds or more per plant, even with 10% parasitism, these populations are too high and control measures should be considered. Small plants, less than 3 inches tall may already be showing signs of stunting, shriveling, and curling of leaf terminals. In addition, weevil numbers, even if appearing low, can constitute a significant threat to short alfalfa growth. Growers attempting to make one application for weevils and aphid might consider a tank mix of some type of pyrethroid in combination with Lorsban. If alfalfa weevil larvae are small and protected within plant terminals, a second application may be required before harvest. If weevil numbers remain relatively light, a second application may NOT be needed for weevil. Thorough scouting on each field will be the best means of determining the status and the decisions to be made.

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