

Department of Entomology  
123 West Waters Hall  
K-State Research and Extension  
Manhattan, Kansas 66506  
785-532-5891  
<http://www.entomology.ksu.edu/extension>



**May 13, 2016 No 10**

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Mosquitoes: How to Avoid Getting “Bitten” By This “Sucking” Insect  
Alfalfa Update  
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Transform approved for use in Kansas to control sugarcane aphid  
Insect Diagnostic Laboratory Report

## Mosquitoes: How to Avoid Getting “Bitten” By This “Sucking” Insect

The current wet weather and issues associated with the Zika virus have people “on edge” regarding mosquitoes (Figure 1). However, the common strategies that must be implemented to avoid mosquito bites is the same regardless of the mosquito-disease (e.g. virus) relationship. The three primary strategies that will help to avoid mosquito problems include: 1) source reduction, 2) personnel protection, and 3) insecticides.



Figure 1 – Mosquito Magnet Sign

## 1) Source Reduction

First of all, it is important to routinely eliminate or reduce all mosquito breeding sites, which will effectively decrease mosquito populations, by removing stagnant or standing water from any items or areas that may collect water. These include the following:

- Wheelbarrows, pet food or water dishes, saucers underneath flower pots, buckets, tires, toys, wading pools, birdbaths, ditches, and equipment. In addition, be sure that gutters drain properly and do not collect water.

## 2) Personnel Protection

Protect yourself from mosquito bites by delaying or avoiding being outdoors during dawn or dusk when mosquitoes are most active. Use repellents that contain the following active ingredients: DEET (Figures 2 and 3) or picaridin (Figure 4). DEET may provide up to 10 hours of protection whereas picaridin provides up to 8 hours of protection. In general, a higher percentage of active ingredient in the product results in longer residual activity or repellency. For children, do not use any more than 30% active ingredient. Furthermore, do not use any repellents on infants less than 2 months old. Clothing can be sprayed with either DEET or permethrin (pyrethroid insecticide). Afterward, always wash clothing separately. Before applying any repellent be sure to read the label carefully.



Figure 2 – DEET Repellent



Figure 3 –DEET Repellents



Figure 4 – Picaridin Repellent

### 3) Insecticides

For stationary ponds there are several products that may be used, such as, “Mosquito Dunks” (Figure 5) and/or “Mosquito Bits” (Figure 6), which contain the active ingredient, *Bacillus thuringiensis* subsp. *israelensis*. The active ingredient is a bacterium that is ingested by mosquito larvae, and subsequently kills them. The bacterium only directly kills mosquito larvae and has no effect on fish or other vertebrates. Try to avoid making area-wide applications of contact insecticides because these types of applications are generally not effective, and the applications may potentially kill many beneficial insects and pollinators (e.g. bees).



Figure 5 – Mosquito Dunks



Figure 6 – Mosquito Bits

### What Does Not Work Against Mosquitoes

The following items will not control mosquitoes:

- Mosquito repellent plants (citronella plants), bug zappers, electronic emitters, and light traps/carbon dioxide traps.

If anyone has questions or comments regarding mosquito control please contact your state extension office or Department of Entomology at Kansas State University (Manhattan, KS).

Raymond Cloyd

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## Alfalfa Update

Alfalfa continues to be problematic in NC Kansas. There seems to be many fields of good alfalfa, apparently treated in an effective manner from both an insecticide and a timing standpoint, and not affected by the freezing temperatures earlier this spring. Many of these fields have been, or are being, swathed. However, there are some fields that have had, or are having, a difficult time overcoming the combination of alfalfa weevil larval feeding, early season dry conditions, and the early spring freezing temperatures. In all fields, the early season warmth sped up alfalfa weevil development and feeding, then the cooler temperatures slowed it back down. Alfalfa weevil larvae were 1<sup>st</sup> detected in NC Kansas in early March. Small, 1<sup>st</sup> instar larvae are still being detected in some fields.



Some larvae pupated and developed into adults as long as three weeks ago, and they are still in the alfalfa fields. So, NC Kansas still has a significant number of adults. Treating for adult alfalfa weevils is rarely effective, but swathing within 7-10 days should help manage both larvae and adults without an insecticide application.



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Adult potato leafhoppers have also been noted in alfalfa fields. These usually migrate into Kansas between the 2<sup>nd</sup> and 3<sup>rd</sup> cuttings, so they are about a month early this year.



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## Wheat Update

Wheat fields sampled in NC Kansas over the last week have diminishing populations of aphids. Many fields had to be sampled relatively vigorously to find any aphids. However, lady beetles are still quite plentiful which should bode well for not allowing the aphid populations to rebound.

Scattered white heads are starting to be easily distinguished in the green wheat. If the stem pulls out easily, with some apparent feeding in the stem, this is from the wheat stem maggot.



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The number of infested stems is always negligible relative to yield loss but often causes concern because of the easily noticed white heads.

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## Corn Update

Most corn has been planted in SC and NC Kansas, although some has been struggling somewhat with the cooler temperatures, wet soils, etc. Whatever the case, please remember insecticide seed treatments do a good job of protecting the seed and germinating plants, but not forever. About 3-4 weeks of protection from the time of planting can be expected but after that, wireworms, white grubs, etc. may affect the seedlings, especially under less than ideal growing conditions.

Jeff Whitworth

Holly Schwarting

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## Transform approved for use in Kansas to control sugarcane aphid

This week, Kansas received a section 18 approval for the use of Transform (sulfoxaflor) against **sugarcane aphid** for 2016, which will give sorghum growers two effective materials to manage aphid infestations. Note, there are differences in price between these two products, which should be factored into any treatment decisions, *especially when multiple applications may be necessary*.

Recent reports have sorghum receiving insecticide treatments for relatively light populations of sugarcane in south Texas, but the aphid is beginning to slowly move north, so the potential exists for much earlier infestation of Kansas sorghum this year. There are also confirmed reports that the aphid overwintered on Johnsongrass rhizomes just north of Lubbock, TX. This is about 80 miles further north than in 2015. Reports from Texas indicate some of the cultivars rated as resistant seem to be holding up well, probably with the assistance of good natural enemy populations.

The Sorghum Checkoff has a list of 'tolerant' (= resistant) hybrids, but it does not indicate any regional adaptations for the hybrids. We have not yet ranked Kansas-adapted hybrids for resistance to sugarcane aphid, but efforts are underway to evaluate hybrids this summer. We strongly recommend that growers and extension agents contact their *local entomology specialists* for advice, as management recommendations will vary regionally.

Scout early, scout often, and know before you spray!

KSRE Field Crop Extension Team

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## Insect Diagnostic Laboratory Report

<http://entomology.k-state.edu/extension/diagnostician/recent-samples.html>

Eva Zurek

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**Sincerely,**

Raymond A. Cloyd  
Professor and Extension Specialist  
Horticultural Entomology/Integrated Pest Management  
Phone: 785-532-4750  
Fax: 785-532-6232  
e-mail: [rcloyd@ksu.edu](mailto:rcloyd@ksu.edu)

Jeff Whitworth  
Extension Specialist  
Field Crops  
phone: 785/532-5656  
e-mail: [jwhitwor@ksu.edu](mailto:jwhitwor@ksu.edu)

Holly Schwarting  
Research Associate  
Phone: (785) 532-4730  
e-mail: [holly3@ksu.edu](mailto:holly3@ksu.edu)

Brian McCornack  
Associate Professor/Extension Entomologist  
Kansas State University  
Field Crops and Mobile Technology  
Phone: 785/532-4729  
email: [mccornac@ksu.edu](mailto:mccornac@ksu.edu)

J. P. Michaud  
Integrated Pest Management - Entomology  
Agricultural Research Center - Hays, KS  
Phone: (785) 625-3425  
e-mail: [jpmi@ksu.edu](mailto:jpmi@ksu.edu)

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Sarah Zukoff  
Assistant Professor/Extension Entomologist  
Kansas State University  
Southwest Research and Extension Center  
4500 East Mary St.  
Garden City, Kansas 67846  
Phone: 620-275-9164  
Fax: 620-276-6028  
Cell: 620-290- 1111  
email: [snzukoff@ksu.edu](mailto:snzukoff@ksu.edu)

Eva Zurek  
Insect Diagnostician  
Phone: (785) 532-4710  
e-mail: [ezurek@ksu.edu](mailto:ezurek@ksu.edu)



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