

# Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants and Extension Personnel



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## Corn Earworms in Sorghum and Soybean

Small corn earworm larvae (may be called sorghum headworms when infesting sorghum and/or soybean podworms when infesting soybeans) are very active throughout south central and north central KS, anywhere that has soybeans in the podding stage or sorghum that is between flowering and soft dough. Most of the worms we sampled were in the late 1st to 3rd instar, which is an ideal time to detect them as they are a little easier to see once they have fed for a few days, but not large enough to have caused much damage... yet. More damage will occur in the next 7-14 days, however, as these worms mature. These larvae are relatively well controlled on either crop, with a timely (now) insecticide application when they are in the top of the crop where they are vulnerable to contact by the insecticide. Please refer to the KSU Sorghum or Soybean Insect Management Guides for treatment thresholds and registered insecticides.

Sorghum: <http://www.ksre.k-state.edu/library/ENTML2/Mf742.pdf>

Soybean: <http://www.ksre.k-state.edu/library/ENTML2/Mf743.pdf>

## Volunteer wheat

With the recent rains and all the activity around the state prepping wheat fields for fall planting, please remember- the very best way to help manage insect and mite wheat pests is by destroying all volunteer wheat at least 2 weeks prior to planted wheat's germination and then plant as late as possible!!!

*Jeff Whitworth*

*Holly Davis*

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## Emerald Ash Borer: "Barking" At Our Door

The emerald ash borer (*Agrilus planipennis*), an Asian-borne insect pest that has killed over 30 million ash trees since arriving in Michigan, is now present and established in 16 states: Michigan, Illinois, Ohio, Indiana, Iowa, New York, Kentucky, Pennsylvania, Maryland, Minnesota, Tennessee, Virginia, West Virginia, Missouri,

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Connecticut, and Wisconsin. The question is: what can/will be done when the emerald ash borer is detected in Kansas? If sixteen states have been unable to “eradicate” this wood-boring beetle then what measures will be undertaken to prevent further spread throughout Kansas? Throughout our limited history, humans have only been able to “eradicate” one organism from the planet, and that is still questionable. This organism was the virus—smallpox. So, what allows us to even consider the possibility of eradicating the emerald ash borer? From a holistic and ecological perspective, the presence of emerald ash borer may simply be another addition to the existing problems that ash trees are experiencing throughout the established states. We already have an assortment of wood-boring insects that attack ash trees including the ash/lilac borer (*Podosesia syringae*) and the “Eastern ash bark beetle.” In addition, there is the phytoplasma or mycoplasma-like organism

m—ash yellows. It is likely that we will have to live with the emerald ash borer and avoid the continued planting of one plant species (=monoculture), and instead incorporate a genetic diversity (both genera and species) of plant material into our landscapes and gardens. Historically (and we should learn from the past), problems have been encountered through wide-scale use of one plant type or narrow genetic base, which has resulted in the demise of some of our most beautiful trees. For example, monoculture plantings of the American elm (*Ulmus americana*) led to these trees succumbing to attack from the Dutch elm disease fungus (*Ophiostoma ulmi*), which was introduced into trees and is vectored by the smaller European elm bark beetle (*Scolytus multistriatus*) and native elm bark beetle (*Hylurgopinus rufipes*); both beetles are native to Europe. Numerous trees were killed in the 1960’s and 1970’s, and entire neighborhoods were changed forever. What happened after that was that the elms were replaced by plantings of green ash and honeylocust trees. Ash trees have been the staple of the nursery industry for decades because they are able to survive in a wide variety of soil types and site conditions. Ash trees are also easy to propagate and are an inexpensive landscape tree. As a result, ash trees have been extensively planted within municipalities and urban environments. However, this has led to the practice of over-planting with one particular tree species. Honeylocust trees, which (again) have been extensively planted throughout the United States, are experiencing problems associated with certain diseases.

In terms of managing the emerald ash borer, depending on a number of factors, the emerald ash borer may be “controlled” with insecticides such as imidacloprid and dinotefuran applied as a soil injection, soil drench, or directly injected (micro-injection) into trees. Additionally, the insecticide emamectin benzoate (TREE-äge) has shown promise against the emerald ash borer in studies conducted in Michigan, even providing two-years of control. However, issues associated with the cost of treating trees may become prohibitive resulting in the removal of ash trees. Another consideration is that if the emerald ash borer is not able to locate sufficient quantities of ash trees for development will it switch to another plant type? Since insects possess the innate ability to adapt or evolve to changes in their environment this prospect should not be ignored.

The bottom line it not to panic and contact the appropriate agency, in this case, the Kansas Department of Agriculture (KDA), if you suspect that you have emerald ash borer. Furthermore, it is important to plant or incorporate a diverse assortment of plant material to increase genetic diversity, as opposed to switching from one monoculture to another. A mixture of plant species (again—genera and species) is much more restrictive to the natural spread of insect and disease pests because tree species vary in their susceptibility to different pest complexes. Why as a society do we continue to be “reactive” in our responses to insect pest problems as opposed to being “preventative,” which is less costly and time consuming? Think about it!

Below are some general guidelines to follow in regards to emerald ash borer:

1. Once officially detected in Kansas...DON'T PANIC!

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2. If you think you have emerald ash borer immediately contact the Kansas Department of Agriculture (KDA).
3. Get educated. There is a plethora of good information on emerald ash borer. You can start by accessing the website...[www.emeraldashborer.info](http://www.emeraldashborer.info)  
You can also contact the Department of Entomology at Kansas State University (KSU) and/or the Kansas Forest Service (KFS) for educational information.
4. Maintain plant vigor and health by proper watering, fertilizing, and mulching existing ash trees.
5. Look for D-shaped exit holes around ash trees (8 to 10 feet from the base of the tree).
6. If you think it appropriate based on the confirmed presence of emerald ash borer in your region then contact a certified arborist or pest management professional on the measures that should be taken to protect your ash trees.
7. If ash trees are exhibiting over 50% tree canopy decline then you may want to consider having the trees removed.
8. Do not store any wood from cut-down ash trees. These may act as a reservoir as beetles emerge and attack existing ash trees. Either cover the material with a plastic cover or have it chipped into small (1/4 to 1/2 inch) sections sections. For the proper disposal procedures contact the Kansas Department of Agriculture (KDA).
9. There are insecticides that can be used to protect trees (preventatively) from emerald ash borer. Information regarding insecticide treatments may be found in the following publication:

Insecticide Options for Protecting Ash Trees from Emerald Ash Borer. 2009. North Central IPM Center Bulletin. 12 pp ([www.emeraldashborer.info](http://www.emeraldashborer.info))

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Raymond Cloyd

## West Nile Virus Comments

Newspaper stories and TV news reports sometimes over dramatize events. A case in point are the current “alarming alerts” regarding West Nile Virus (WNV). If people wish to view toned down rational and factual information regarding WNV, access the Centers for Disease Control and Prevention (CDC) website:

[www.cdc.gov/westnile/](http://www.cdc.gov/westnile/)

Then click on the updated Fact Sheet. The first sentence reads: “West Nile virus (WNV) is a **potentially** serious illness.” That is, **80%** of individuals who (after the fact) test positive for WNV showed no symptoms of WNV ---- they are unaware that they had contracted WNV. Up to **20%** of people infected with WNV displayed only mild symptoms ranging from as little as several days to several weeks.

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This is not to dispute the serious/life threatening aspect of WNV. By the CDC's estimate, 1 person in 150 infected with WNV will develop severe illness. "The severe symptoms can include high fever, headache, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, vision loss, numbness and paralysis. These symptoms may last several weeks, and neurological effects may be permanent." While not stated, it should be added that, "In extreme cases, death can occur".

CDC states that since 1999, more than 30,000 people were reported with WNV, and over **1,200** have died. While this may give people pause to think/worry about WNV, little thought is given to the automatic daily activity of slipping behind the wheel of a motor vehicle. From 1999 through 2011, reported fatalities involving motor vehicles total **518,245**.

In addition to the aforementioned CDC website, Kansas State University Extension Publication MF2571, Mosquitoes and West Nile Virus, is electronically available and can be accessed by visiting the Kansas State University Department of Entomology's webpage at [www.ksu.edu/entomology](http://www.ksu.edu/entomology). Click on Extension, then publications, then Human Health Pests and lastly MF2571.

While Kansas has benefited from the recent rains, it is certain that mosquito populations will rise given an increased number of breeding sites. People are aware that mosquitoes are the vectors of the WNV. There are many different mosquito species. Yet only certain species are considered primary carriers of WNV. It is important to note that not every "buzzing mosquito" is infected with the WNV. Upon becoming an adult, a female mosquito only acquires the virus by taking a blood meal from an infected bird (of which at least 127 native species are known to harbor the virus). There is no practical and precise method of determining whether an individual mosquito harbors WNV. In fact, analysis is done on "pools" of mosquitoes. For instance, if a pool consisting of several hundred mosquitoes tests positive, it may be that only a single mosquito is responsible for that pool's "positive" reading.

Bear in mind that most mosquitoes may never encounter human subjects. Thus the likelihood of being bitten by a WNV-carrying mosquito is even more remote. And recall, as was stated earlier, that even if bitten and infected, 80% of individuals may show no symptoms of having contracted WNV, and 20% display mild symptoms.

If people have concerns with regard to WNV, certain precautions can be implemented to further minimize the risks contracting. Exclude mosquitoes from entering homes by inspecting and maintaining screens, windows and doors. Locate and seal any other portals of entry. Reduce mosquito activities around homes by diligently locating and eliminating standing water which potentially might serve as mosquito breeding sites (the proverbial discarded tires, buckets, barrels, flower pots). Frequently change water in wading pools, pet water dishes and bird baths thus "short circuiting" the mosquito life cycle by eliminating any eggs, larvae and/or pupae.

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Personal protection measures include possibly remaining indoors at dusk and dawn (times of peak mosquito activity). If venturing out (especially during evening hours) wear protective clothing including shoes AND socks, long pants and a long-sleeved shirt. Consider applying a mosquito repellent to areas of exposed skin.

## Those pesky?/beneficial? Purslane Sawflies

When last seen, purslane sawfly larvae had “thinned out” a portion of a purslane planting (KIN #20 --- Figure 1). As was indicated, purslane sawfly damage is insidious ---- an awareness of their presence only after the cumulative feeding of several generations (cited as the first 3 generations).



**Figure 1**

Although purslane sawflies were reported as having the capability of providing complete control/elimination of purslane, based on the regrowth observed in less than a week’s time (Figure 2), I had my doubts.



Figure 2

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Apparently the purslane sawflies read the hype that their fourth generation would be responsible for complete defoliation (Figure 3 – August 28).



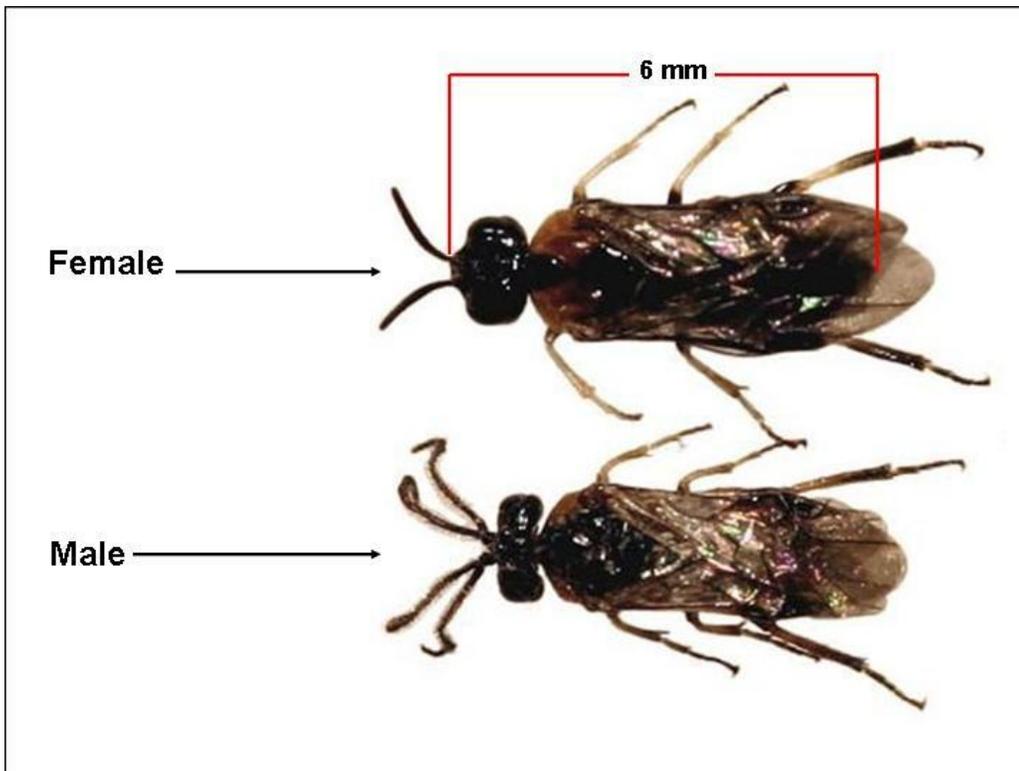
Figure 3

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Will I “play with/plant purslane next year? Probably, maybe in the same location and also a different location. I can’t say that cheapening-it-out with purslane hasn’t been interesting. One never knows what one will encounter ---- in this case, purslane sawflies (Figure 4).



**Figure 4**

Bob Bauernfeind

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**Sincerely,**

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