

Washington County Soil and Water

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True Armyworm Larvae Reported in Tall Fescue and Wheat

True armyworms (*Mythimna unipuncta*) have been found in grass pastures and wheat. Larvae have not been reported in corn, but this crop may become affected. The major damage to tall fescue and other grass pastures is destruction of plant foliage along with some cutting of seed heads. Heavy true armyworm infestations may defoliate and consume 100% of the grass foliage and move to feed in adjoining grass pastures before reaching maturity.

True armyworm larvae are identified by three broad, longitudinal dark stripes run the length of the body. An orange line can also be found running the length of each side of the body from head to tail. Larval can also be identified by four pairs of abdominal prolegs located in the center of the

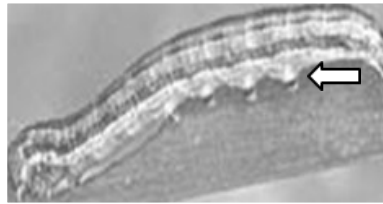


Figure 1. True armyworm can be identified by the three dark stripes and the orange stripe that run longitudinally down the body. The prolegs also have dark triangular spots, the key identifying characteristic, noted by the arrow.

larva and a single pair of anal prolegs present at the tail end of the larva. Each abdominal proleg will have a dark brown to black triangle located on the foot of the proleg. These dark triangles are good identification characters as few other larvae possess this characteristics. Larvae are almost hairless with smooth bodies. Although very small larvae are often pale green in color, they quickly change to yellowish-brown

or tan bodies with tan to brown heads mottled with darker brown patterns.

Larvae of true armyworm are often active at night or on cloudy days as they avoid light. To determine the presence of small larvae scout plant debris on the ground and for

feeding damage on lower plant foliage. Small larvae are best scouted during late afternoon, evening, and early morning hours. As larvae increase in size, they will feed during both night and day periods and move upward on host plants as they consume foliage. Larger larvae tend to remain on the upper regions of host plants.

In tall fescue seed fields and grass pastures, and in wheat fields treat when an average of 4 or more half-grown or larger worms (1/2 inch to 1 1/2

No-Till Drill Available for Rent

The Washington County SWCD has a no-till drill for rent. The drill is equipped with a grain box and a legume box for seeding. The drill has had repairs done and is ready to be

rented.

The cost of the drill is \$6.00 an acre. Call the office at 573-438-9214 for information or to reserve the drill.

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True Armyworm Larvae– cont.

inch larvae) per square foot are present during late spring and before more than 2% to 3% of seed heads are cut from stems in tall fescue seed fields.

Corn fields should be treated when 25% or more of seedlings are damaged. Control is justified after pollen shed if leaves above ear zone are being consumed by larvae. True armyworm can be a severe pest on field corn and generally cause excessive defoliation and plant mortality.

Armyworms have reported in several parts of the region ranging from 1 to 2 worms per square foot. These numbers are below treatment levels, but populations typically increase after the initial flight. Portions of southwest Missouri are experiencing 12 larvae per square foot, this level of infestation can devastate fields. Therefore, area farmers need to scout fields at least twice a week to determine infestation levels. Contact University of Missouri Extension Agronomy Specialist Sarah Kenyon for more information; 417-967-4545 or KenyonS@missouri.edu.

*Corn and Wheat charts available online.

Chemical Name	Trade Name	Rate of Formulated Material/Acre	Preharvest Intervals for Grazing or Hay
Malathion	Malathion (Several Products)	See Specific Labels	See Specific Labels
zeta-cypermethrin	*Mustang Max	**2.8 to 4.0 fl oz/acre	0 days
carbaryl	Sevin 4F	1 to 1 1/2 quarts/acre	14 days
spinosad	Success	3 to 6 fl oz./acre	0 days
spinosad	Tracer 4SC	1.0 to 3.0 fl oz/acre	0 days
lambda cyhalothrin + chlorantranil iprole	Voliam xpress	5.0 to 8.0 fl oz	0 days

**Note, FMC recommends a minimum rate of 3 oz/acre for true armyworm control using Mustang Max

Source: Sarah Kenyon, University of Missouri Extension Agronomy Specialist

Information chart source: Dr. Wayne Bailey, MU Field and Forage Crop Entomologist

Storing Hay The Proper Way

Hay season is upon us and if you are a master planner you were able to get some or all of your hay up in between the rains. Now that you have put up good quality hay it is in your best interest to store it properly to keep the high quality. A study conducted by the University of Tennessee measured the percent hay loss of different storage methods. Hay was put up in June and weighed. It was then weighed again in January before feeding. Obviously the best storage method is in a barn but other alternatives come close. Don't let the weather steal away valuable nutrients for your livestock. Take the time to store your hay properly. The chart summarizes the results.

Submitted by Kendra Graham, Livestock Specialist, St. Francois Extension

Type of Storage	Percentage (%) Hay Loss
On ground, no cover	37%
On tires, no cover	29%
On ground, covered	29%
On tires, covered	8%
Net wrap on ground	19%
In barn	6%

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Emerald ash borer found in St. Louis

The emerald ash borer has officially arrived in the city of St. Louis.

Officials with the USDA's Animal and Plant Health Inspection Service (APHIS) recently confirmed the identification of an emerald ash borer (EAB) found in northern St. Louis, said Hank Stelzer, state forester for University of Missouri Extension.

Early this month, a crew pruning trees along power lines on Emerson Avenue in the Walnut Park East neighborhood noticed a number of sickly ash trees, including at least one with D-shaped holes in the bark characteristic of EAB infestation. The crew alerted foresters for the utility company Ameren, who in turn contacted the Missouri Department of Conservation (MDC). As they removed the suspect tree, Ameren and MDC foresters found an adult borer, which they sent to APHIS for identification.

"It was a great example of people who work with trees having been trained about invasive pests and knowing what to look for and who to contact," said Rob Lawrence, forest entomologist for MDC.

"With last year's find in west St. Charles County and now this detection within the city limits, homeowners need to seriously consider their options," said Stelzer.

The emerald ash borer is a highly destructive insect pest whose larvae burrow into ash trees, eventually killing them. The small, metallic-green beetle has destroyed tens of millions of ash trees in 25 states, with the most serious devastation concentrated in Michigan and surrounding states. EAB's first known infesta-

tion of the St. Louis area was discovered last year in trees at an industrial park in St. Charles County.

The first thing homeowners should do is accurately identify trees on their property. "EAB only attacks ash trees, not other species like oaks and hickories," Stelzer says.

It's possible to protect healthy ash trees with ongoing pesticide treatments, he says, but this is a costly and time-consuming commitment that should be limited to what homeowners consider "high-value" trees.

Only begin pesticide treatment if there is an infestation within 15 miles of your property, he adds.

In the meantime, homeowners can decide which trees are worth the investment.

"Trees that are important to the landscape, such as those providing shade on the west side of a home, or perhaps a tree planted in someone's honor, are good candidates for treatment," he says.

Trees need to be in good condition to benefit from treatment. Ash trees in poor condition for any reason or that aren't integral to the landscape aren't good candidates, Stelzer says. He recommends interspersing replacement trees among these ash trees before

they die.

Ironically, ash trees were a species of choice to replace American elms lost to Dutch elm disease. There's a lesson in that, Stelzer says.

"If you are planting several replacement trees, take a tip from investment brokers and diversify your landscape portfolio."

MU Extension, in partnership with MDC, the Missouri Department of Agriculture and APHIS, hosts the Tree Pests website at treepests.missouri.edu. Here homeowners can learn to identify ash trees, track the latest EAB developments and learn about treatment options.

Also available on the site is a downloadable four-page guide from MDC, "*Emerald Ash Borer Management Guide for Missouri Homeowners*."

"We celebrated Arbor Day last month and this week is EAB Awareness Week," Stelzer says. "So this latest EAB find is a timely reminder that trees play an integral part in our yards and communities." <http://extension.missouri.edu/>



An emerald ash borer.



Ash tree in St. Louis shows tunnels made by emerald ash borer larvae.

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Media contact: Curt Wohleber, Writer University of Missouri Extension 573-882-5409

Photo Credits: David Cappaert, Michigan State University; and Ameren

Story Source: Hank Stelzer, 573-882-4444

NRCS Celebrating 80 Years of Helping People Help the Land

Eighty years ago the United States suffered from suffocating dust storms caused by drought and inadequate measures to protect the land. The natural disaster led to the creation of the Natural Resources Conservation Service (NRCS), a USDA agency that helps people help the land by providing financial assistance and free technical assistance to land users.

The worst of the storms occurred on April 14, 1935, when an ominous wall of blowing sand and dust swept across the Great Plains. This day is known as Black Sunday. During that massive storm, people were forced to crawl on their hands and knees in search of shelter, literally unable to see their hands in front of their faces. Cars stalled and stopped in the choking dust. Many thought the end of the world had come.

In response to Black Sunday, and the damage caused by dust storms, Congress passed the law on April 27, 1935, that created NRCS.

“Since that time, our commitment to soil science and soil health has helped farmers and ranchers put in place conservation practices that protect and improve natural resources,” Missouri State Conservationist J.R. Flores said. “Healthy soils are the foundation of agriculture. In the face of mounting challenges such as a growing global population, climate change and extreme weather events, soil health is critical to our future.”

NRCS serves all 114 Missouri counties. Across the Show-Me State, nearly 400 NRCS employees work out of more than 100 offices with another 400 employees of local soil and water conservation districts and state agencies also working out of Missouri NRCS offices.

To get more information about NRCS and its programs, visit a local NRCS office or the Missouri NRCS website at <http://www.mo.nrcs.usda.gov>. There is a link on the site to assist in locating local offices. Local offices also are listed in telephone directories under “U.S. Government, Department of Agriculture.”

Source: United States Department of Agriculture and NRCS

Dinner Meeting Had Good Crowd, Despite Weather

The Washington County Soil and Water Conservation District hosted an informational dinner meeting on April 9 at the Washington County Library. There was a good turnout of landowners in the area that came to the meeting, despite the tornado and bad weather that came through the town and surrounding area the day before. The dinner was catered by Cyndi Merx, landowners enjoyed roast beef, mashed potatoes, green beans, rolls and dessert. After the dinner guest speakers included, Jeff Dierking, Missouri Department of Conservation, Private Lands Conservationist; Renee Cook, Natural Resource Conservation Services, District Conservationist; and Colleen Meredith, Program Director of the Soil and Water Conservation Program. Jeff spoke about the department, cost share practices that are available, and the different specialist that work within the department. Renee spoke about NRCS programs and the technical assistance that is available to landowners in Washington County. Colleen spoke about how the soil and water districts were formed, the tax that allows soil and water districts to provide cost share opportunities to landowner’s and the cost share programs that are available to landowner’s. If you have any questions about state cost share funds, how they work or to see if you qualify for state cost share you can call the office at 573-438-9214.

RainScaping Guide: Rainwater Harvesting

Rain Barrels

Rain barrels are a small version of an above-ground cistern. They can range in size from 50 to 200 gallons, in contrast to cisterns that range in size from 100 to 1500 gallons or more. Rain barrels decrease rainwater runoff by collecting and storing rainwater from the roof. In addition, rain barrels provide, at no additional cost, chlorine-free water for use in watering plants and other water needs in the landscape.

A rain barrel is a barrel fitted with an upper (overflow) spigot and a lower spigot (for use in watering vegetation, etc.). The top is fitted with a screen or filter to keep debris and insects out of the barrel. It is a simple design that is inexpensive to construct. Rain barrels should be placed under a gutter downspout, with the downspout directed into the top of the rain barrel. It is helpful to elevate the rain barrel off the ground since the output for watering is gravity flow. The overflow spigot at the top of the rain barrel should have a hose connected that is directed into a rain garden or other landscape planting. More than one rain barrel can be used at each gutter downspout by connecting them together with the overflow spigot, or consider a larger above- or below-ground cistern for harvesting a higher volume of rainfall.

There are many models to choose from, or you can build your own. To build your own rain barrel download the River des Peres Watershed Coalition's *Rain Barrel Building Instructions and Installation Guide* or purchase an already-constructed rain barrel by downloading an *order form*.

Cisterns

A cistern is a water storage tank installed either underground or above ground (size varies from 100 gallons to 1500 gallons or more). Water is captured and stored from gutter downspouts diverted into the cisterns, making it available for later use. The most common use is for watering the surrounding landscape. A household shallow well pump can be installed to pump and distribute this stored water from the tank to a hose bib for watering, or may be connected directly to drip irrigation equipment, etc. This cost-free source of water contains less minerals and chemicals and aids in healthier plant growth.

Cisterns help to reduce the peak flow of rainwater that could otherwise contribute to flash flooding, erosion and pollutants by not allowing the rainwater to flow over lawn and impervious surfaces. For each inch of rainfall, 0.62 gallons of rainwater can be collected per square foot of roof area. The Greater St Louis region has an average annual rainfall of 38.75 inches, therefore it doesn't take long to fill a 500 gallon cistern. The size of the cistern is determined more by the anticipated water usage than by the potential quantity of water to be collected.

The overflow can be directed into a rain garden, a bioswale or other landscape plantings.

Source: <http://www.missouribotanicalgarden.org/sustainability-conservation/sustainable-living/at-home/rainscaping-guide/rainwater-harvesting.aspx>

Missouri Botanical Garden Website

Washington County SWCD

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*****If you or someone you know would like to be added or taken off of the mailing list, please call the office at 573-438-9214,**

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The Washington County SWCD does not endorse or recommend any Vendors/Contractors advertised in this newsletter. All interested Vendors/Contractors are eligible to place an Ad in our newsletter.

Upcoming Events

Washington County SWCD Board Meetings: Board Meetings are held the third Monday of every month at 4:00p.m., all meetings are held at the office, notice will be given if meeting dates are changed

- Office closed Friday July 3 in observance of Independence Day
- Washington County fair August 5-8
- Office closed Monday September 7 in observance of Labor Day

Tiffany will have a display at the fair. Stop by the booth and ask her how our office can help you!