

# Washington County Soil and Water

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## Cost-Share Practices Available

The Washington County Soil and Water Conservation District Board of Supervisors would like to remind landowners that we are here to help them conserve their natural resources. We have cost share practices available through our office to help establish grazing systems, install spring developments, seedings practices and more. It doesn't cost the landowner anything to have our district technician come out and look at your property and see if there is anything we can do to help you.

Any practice that qualifies for cost share assistance is based on 75% of the state average cost. Once a landowner has qualified

for a practice, a contract would be signed between the WCSWCD Board and the landowner, each contract has a maintenance life, depending on what practice the landowner applies/qualifies for, of no more than 10 years. The landowner would be responsible for the upfront cost of the practice, then after the practice is checked out and certified as completed by following NRCS standards and specifications, the 75% cost share assistance, based on state average cost, will be given to the landowner. Landowners that may not be able to pay all up front cost for a practice can contact the Missouri Agriculture and Small Business Develop-

ment Authority (MASBDA), about the Bridge Loan program that is offered through their office. This program allows landowners, who have been approved by Soil and Water Conservation Districts to do cost share practices, to be eligible for a short term loan from MASBDA. Call our office if you have questions about the cost share programs that are available or if you would like to talk to our technician about coming out to your property for a field visit.

## 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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## 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.

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%

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

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## Summer 2014

### **Shade For Livestock Shows a Profit**

July and August typically bring hot temperatures that cause livestock to drop in weight gain and breeding. The question is what can you do to minimize the losses? Research has been performed for two years at Missouri's Southwest Research Center in Mt. Vernon on whether shade makes a difference in gains and pregnancy rates. The farm used portable shades on a group of spring-calving cows grazing endophyte infected and endophyte free fescue in August. Cows given shade gained 25 more pounds than their unshaded counterparts. The calves nursing the cows also outgained the unshaded calves by .16 lb/d.

When pregnancy rates were evaluated, 87.5% of the shaded cows were pregnant compared to 50% of the unshaded cows. An average of

90% of the cows were pregnant at the time the study began. The reduced pregnancy rates of the cows without shade were attributed to heat stress and the endophyte fungus combination causing the cows to "slip" calves early in the pregnancy.

The next year, the same trial was performed on 550 pound steers showing a 0.2 pound per day difference between shaded and unshaded calves. Keep in mind these numbers were averaged for both infected and

endophyte free fescue pastures. The difference increased to .35 pounds of gain per day when just comparing the endophyte infected shaded and unshaded groups.

In summary, it is best to provide your animals with shade if possible, especially if your pastures contain a large amount of endophyte-infected fescue. The study showed benefits when using portable shade that was moved throughout a rotational grazing system. Portable shades can also keep you from killing out the grass in one part of the field and spreading out your manure distribution.

*Kendra Graham*

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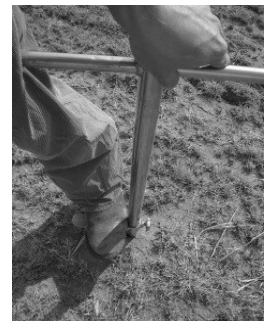


### **Have you taken a Soil Test Lately?**

Have you taken the time to take a soil test of your pastures, lawns or gardens in the last few years. Soil test cost \$15.00 per sample but \$15 is better than the high price of fertilizer if the analysis you put down isn't even what your soil needs. A soil test will tell you what nutrients are available in your soil and the recommendations to correct problems in your soil. Soil test provide a lot of

useful information such as: pH level, phosphorus, potassium, calcium, magnesium, organic matter percent and recommendations for corrective treatment. To take a soil test, select the area, take 6-12 core samples from the area, no deeper than 6 inches, place cores in a clean bucket, remove any sticks, rocks or live plant material, mix cores in bucket and break up clumps, place about

2 cups of soil in a zip locked plastic bag and submit sample for testing. If you are doing a soil test in a pasture try to keep each soil sample at 20 acres or less for an accurate test. Avoid heavily traveled areas or watering areas. Once you have the soil that you want tested, bring it to the local MU Extension Office located at 113 North Missouri Street.



# Washington County Soil and Water

## True Armyworms March into SW Missouri

COLUMBIA, Mo. – Armyworms that can strip pastures and hayfields have begun their march through Missouri’s tall fescue fields, warns University of Missouri Extension entomologist Wayne Bailey.

Farmers should scout for true armyworms now, especially in southern Missouri, Bailey said. MU Extension agriculture business specialist Stacy Hambelton reports that true armyworms populations are two to three times the economic threshold in fescue fields in the Ozark County area. Early detection makes control easier.

The worms quickly strip foliage from the leaves of fescue, wheat and occasionally corn. They don’t bother legumes such as alfalfa and clover. Fescue fields are the earliest indicator of presence. Once armyworms have stripped a field, they continue their path of destruction to the next field.

Bailey suggests that farmers scout fields several times weekly by looking at the plant canopy up close and down low. Armyworms do not like light, so he recommends scouting at dusk, dawn or on cloudy days. He also suggests careful examination of leaf litter.

By the time the worms are visible from a distance, it’s

too late. “If farmers drive by in their pickups, fescue may look beautiful,” he said. “Then, as the armyworms reach the top of the canopy, they defoliate the entire field and it is completely destroyed.”

Armyworms feed on the bottom of a plant first and move up the stem. They quickly consume more foliage as they become older and larger.

“Not every field will have them, but there’s a potential that many will,” Bailey said.

Infested fescue fields can be cut. Regrowth can be sprayed with insecticides labeled for control. Treat fields when an average of four or more half-grown or larger worms (1/2 to 1 1/2 inches) per square foot are present during late spring and before 2 to 3 percent of seed heads are cut from stems in tall fescue.

Bailey recommends foliar application of insecticide. Use enough water to penetrate the canopy of the plant.

Moths usually fly into Missouri from tropical areas, and this year’s abundant spring storms created ideal conditions for a major infestation. Each moth can lay up to 1,300 eggs that hatch into foliage-munching worms.

True armyworms got their name because they can march in a mass. They move in lines from one field to the next and destroy each as they go. While there are two or three generations of the insect each year, the first generation causes the most damage to field and forage crops. True armyworms differ from fall armyworms, which show up toward the middle of the growing season.

When small, armyworms tend to be green, but they turn a tan to grayish color as they grow, with tan stripes and one orange stripe down their sides. Four pairs of fleshy prolegs in the midsection with a black triangle on the side of the feet distinguish the true armyworm from other armyworms.

Missouri’s last major infestation was in 2010. Bailey says the worms appear about every three to four years. “We were due for an infestation,” he said.

The MU Pest Monitoring Network has monitoring reports and information on scouting and identifying true armyworms at [ipm.missouri.edu/pestmonitoring/taw](http://ipm.missouri.edu/pestmonitoring/taw).

Additional information is available at [www.extension.missouri.edu/G7115](http://www.extension.missouri.edu/G7115). -Article from the Missouri Extension website.

“Not every field will have them, but there’s a potential that many will,”

## *Agroforestry in a Nutshell*

For-ests and farms may seem like two completely different things, but agroforestry puts them together. Agroforestry offers land-owners an opportunity to diversify farm in-come, provide habitat for wildlife and prac-tice good land stew-ardship, says Tim Baker, regional horti-culture specialist for University of Missouri Extension.

“Agroforestry involves the international inte-gration of trees with other aspects of agri-culture,” Baker con-centrates on five main practices: alley crop-ping, forest farming, silvopasture, riparian buffers and wind-breaks.

“Alley cropping is the practice of plant-ing crops in between rows of trees,” Baker said. “It may seem counterproductive for a farmer to plant trees in a field, and in most cases this is not what a farmer wants or needs. However, sometimes it makes sense.” In the early years, crops are har-vested between rows of trees. Later, lumber

and/or nuts and other crops may be harvest-ed from the trees as they mature. Com-mon alley cropping plantings include wheat, corn, soy-beans, or hay planted between rows of black walnut or pecan trees, he said. Nontradition-al or value-added crops might include sunflowers or medici-nal herbs between rows of nut trees alter-nated with nursery-stock trees. Fine hardwoods like wal-nut, oak, ash, and pe-can in alley cropping systems can potential-ly provide high-value lumber or veneer logs while the landowner derives income from a companion crop plant-ed in the alleyways. Forest farming is the practice of growing high-value specialty crops under the pro-tection of a forest can-opy. “There are many shade-tolerant crops that can be grown within a forest. Some of these are quite val-uable,” Baker said.

Forest crops like ginseng, mush-rooms, and decorative ferns are sold for me-

dicinal, culinary, and or-namental uses. “Or your entire planting may be of woody species that pro-duce food, such as nut crops or elderberries,” he said. Silvopasture is the integration of live-stock and pasture under trees. “This is not sim-ply turning the livestock into the woods,” Bakers said. “It is truly a well-designed rotational graz-ing system, benefiting both trees and the live-stock.”

In a typical sil-vopasture practice, per-ennial grasses and/or grass-legume mixes are planted between rows of trees for livestock pas-ture. The trees not only provide a long-term in-vestment for nut crops or a timber harvest, but also pro-vide the animals shade in the summer and a windbreak in the winter.

Riparian forest buffers deal with areas along stream banks and other waterways. Farmers losing cropland to streams might create a buffer with trees, shrubs, grasses, and forbs to prevent erosion. “In extreme cases, it may take some engineering practices to help stabilize the stream bank,” Baker said. Wind-breaks can protect livestock and crops, and control soil

erosion. Windbreaks can help keep drifting snow away from roads or spread snow more evenly across a field, increasing spring soil moisture. A variety of infor-mation and resources on agroforestry are available from the MU Center for Agroforestry at

[www.CenterForAgroforestry.org](http://www.CenterForAgroforestry.org).



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## Are You Tired of Feeding Hay in the Summer?

Mid-summer in Missouri translates into hot and dry conditions in most years, leading to a lull in cattle forage production across the state. The landscape in Missouri shifted years ago to non-native cool season grasses for hay and pasture land. Long gone are the days when cattle were grazing on robust, green stands of grass in August. You would be hard pressed to find that scenario on a Missouri farm today, or even a producer that remembers when that was commonplace. Tall fescue now dominates Missouri as the single most utilized hay and pasture forage.

While tall fescue allows for heavy grazing without severely impacting the stand and some decent early season grazing potential, it also has its problems. Fescue, like other non-native cool season grasses requires fertilization to reach its full potential. This input is getting more costly each year as the price of fertilizer continues to increase. These cool season grasses also go through summer dormancy each year which can leave producers searching for alternative feed sources or having to feed hay from June through September, or even October in some years. This means cattle are left to intake sub-par forage during the time of year when calves are trying to gain the most weight. This system has been in place a long time, and change is always hard to swallow, but there are options that could help producers provide high quality summer forage that can drastically increase cattle gains through the summer.

Native warm season grasses which once covered the grasslands of Missouri still have a place in modern grazing systems. These native grasses experience the height of growth from June through August, when the cool season grasses like fescue and brome are dormant. Native grasses test for crude protein levels which are at or above the level of fescue in the best stage of growth. Our native grasses in Missouri also have the potential to average 4 tons of forage per acre, much higher than cool season production. Some of the most important native grasses for forage production are big bluestem, little bluestem, indian grass, switchgrass, and eastern gamagrass. "In a University of Missouri study, big bluestem hay was shown to have a higher percent and rate of dry matter digestibility than fescue hay which allowed cattle to process feed faster, allowing greater and faster forage intake leading to faster weight gains. Another study showed during the summer '94 grazing season, pregnant dairy heifers grazing eastern gamagrass at the Southwest Missouri Research Center produced 2.3 pounds per day average daily gain over a 70 day period. Managers at the Seat Demonstration Farm in Missouri compared average net income between native warm season grass and bluegrass pastures for the years 1983-85. Income was calculated as beef produced minus annual maintenance costs of the pastures. Net income per acre of native warm season grass was \$107.88 versus \$36.33 for the bluegrass. A difference of \$71.55 per acre." (Prairiesource.com)

Missouri cattle producers could increase their bottom line by integrating native warm season grass pasture and hayfields into their grazing systems. I am not suggesting a whole paradigm shift in how we raise cattle in Missouri, but by having a third of your total grazing land converted back to native grasses we could make a big step in the right direction. Native warm season grasses are actually most productive when used in rotation with cool season grass pastures. They provide a quality, cheap forage during those summer months when traditional cool season forages are at a disadvantage. On top of all of these economic reasons to include native grasses in grazing systems is the greatly improved wildlife habitat they provide over fescue pastures and hayfields. We can increase cattle production in Missouri, while greatly improving the available habitat for quail and other wildlife. This is how we will begin to reverse the declining trend with quail, by growing more and healthier cattle!

If you would be interested in seeing if native warm season grasses can have a positive impact on your farm, contact **Ryan Diener, Farm Bill Wildlife Biologist in the Union, MO NRCS office at 636-583-2303 ext 113, or on his cell phone at 636-399-8733**