

Musk Thistle

Musk thistle, or nodding thistle, is one of the most troublesome weeds in Oklahoma. Spreading by seed, musk thistle can rapidly take over a pasture. Thistle seed will germinate whenever there is sufficient moisture, but most germinate in late summer through fall. After germinating, the plant develops from a seedling into a rosette stage. At maturity, the rosette shoots an upright bolt on which a violet or purple flower seed head forms. Often three to four feet in height at maturity and covered with spines, musk thistle will prevent livestock grazing where plants are numerous.

Musk thistle can be controlled with herbicides quite successfully when in the rosette stage of growth. Herbicides recommended to control musk thistle are 2,4-D, Weedmaster, and Grazon P+D among others. In areas where herbicide control is not feasible, biological control of musk thistle is available. Two natural enemies of the musk thistle plant are the musk thistle head weevil and the musk thistle rosette weevil. These weevils are native to Europe and have been studied extensively to ensure neither would damage economic plants.

An opportunity to collect musk thistle weevil's to release on your property will occur on May 9 in Alfalfa County near Jet, Oklahoma. Oklahoma State University Extension educators will instruct interested parties on how to collect, transport, and release the beneficial weevil. Contact person for this weevil round up is Tommy Puffinbarger, OSU County Extension Agriculture Educator, Alfalfa County, phone 580-596-3131.

Musk Thistle weevils, once established, can provide long term biological control. For more information on musk thistle control, contact Bruce Peverley or Phil Pratt, Tulsa County OSU Extension Center, 918/746-3725.

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Switchgrass - Why the Hype and is it Time to Plant it?

In a nutshell, the technology for making ethanol from switchgrass is still in the developmental stages and a market for switchgrass for fuel production is several years away. Therefore anyone deciding to plant switchgrass now should anticipate that income will be from other uses, such as grazing or hay, rather than fuel production for several more years.

Recent media attention has created a lot of interest in switchgrass and consequently a lot of questions for local county OSU extension agents. So how did all this attention come to switchgrass?

Information presented during the 2006 Oklahoma Governors Conference on Biofuels reported that US Department of Energy (US DOE) initiatives call for cellulosic ethanol production to be practical and competitive by 2012. It is estimated that switchgrass could produce 500 to 1000 gallons of ethanol per acre. In 2004 corn produced 350 gallons per acre.

According to a paper authored by Dr. Charles Taliaferro, et al of Oklahoma State University Plant and Soil Sciences Department, it was the US DOE that selected switchgrass as a model herbaceous species for development as a bioenergy feedstock. It was chosen because it is widely adapted to a large part of the contiguous United States, has a high yield potential on marginal soils, and has high tolerance to environmental stress.

In 1992 the US DOE initiated funding of a program to improve the production capacity of switchgrass and Oklahoma State University was chosen to be involved. In the resulting work, Taliaferro reported on 7 years of variety yield trials from 1994 through 2000, done at both the OSU Eastern Research Station (ERS), near Haskell, and the Chickasha OSU Research Station. Of the varieties tested, Alamo and Kanlo performed the best, averaging a little more than 7.5 tons per acre at Haskell and about 2 tons per acre less at Chickasha. At ERS the lowest yield reported was 5.8 tons per acre, in 1997. The nitrogen fertilizer rate was 70 pounds per acre and 80 pounds per acre at Chickasha and Haskell, respectively.

Planting Switchgrass

Switchgrass is a slick seed that can be sown, in April or May, with conventional planting equipment. A seed supplier in Oklahoma has indicated that Alamo variety is currently available. The seed supplier also has some Kanlo but it isn't from a pure stand. It was indicated new stands of Kanlo are coming into production and they will have pure Kanlo available next season. Currently, Alamo variety is priced at \$13.25 per pound of pure live seed (PLS). The recommended seeding rate is about 5 pounds per acre so, therefore seed cost will exceed \$65 per acre.

Establishment costs will easily exceed \$125 per acre, after adding fertilizer as recommended by a soil test, seedbed preparation and/ or herbicide application, and

seeding costs. Switchgrass is slow to establish, it generally takes 2 to 3 years after planting to reach a full stand, during which it will require very limited use and produce little income.

Haying Switchgrass

For hay production switchgrass should be harvested in the boot stage of growth or very soon after seed heads begin to appear. A good target date would be to harvest before July 10. According to information found in Southern Forages, crude protein can exceed 10% if harvested while in the boot to early-heading growth stage, or be less than 6% if harvested when fully matured. Yields in excess of 7 tons per acre, as reported by Dr. Taliaferro were from an “end-of-season” harvest. So, yields from a July harvest will be lower. The growth that occurs after a July hay harvest could be grazed after frost, as is sometimes practiced on native hay meadows.

Grazing Switchgrass

The publication, Southern Forages, Fifth edition, by Barnes, Miller, and Nelson, indicates that grazing should begin in the spring when the switchgrass reaches 12 inches in height. Early in the season it can be grazed to 4 inches in height, and later in the season a minimum stubble height of 8 inches is recommended. An intensive early stocking system commonly used for grazing stocker cattle on native range could work well on switchgrass. Southern Forages recommends stocking it heavily, using rotational stocking, and allowing a rest period of 4 to 6 weeks.

Based on yield trials at the Eastern Research Station, when fertilized with 80 pounds of nitrogen per acre, the stocking rate for the 90 days between April 15 and July 15 could be 2 stockers or 1 cow per acre. For season-long grazing, 1 stocker per acre or 2 acres per cow. These are approximate and would vary depending on the production capability of the variety, soil type, and rainfall.

Switchgrass for Ethanol

As stated earlier, the technology for making ethanol from switchgrass is still in the development phase. Currently there are too many unknowns to recommend planting switchgrass solely for the purpose of producing ethanol. But, fortunately, switchgrass has other uses if someone wants to plant it now on the speculation that the ethanol market will develop in the future.

Information provided by: Robert Woods, OSU Area Extension Agronomy Specialist, NE Oklahoma

Spring Horse Check-Up

Spring weather has horsemen across the area excited about rodeo's, play days, horse shows and pleasure riding. However, before riding too far, make sure you give Old Bay a check up.

The first check up factor is "Old Bays" feet. No foot, no horse the old timers claim. Trim your horses' feet or have him shod if needed.

Teeth are another check up point. Horses, like people have teeth problems that not only effect how they are able to chew and utilize feed, but in many cases how they respond to the bridle. I recommend you have your horses' teeth and mouth checked by an equine dentist or veterinarian and teeth floated if needed.

Spring is also a good time for internal parasite control. Deworming a horse is generally recommended, spring and fall. Check with your local veterinarian on products to use for parasite control. As you consult with your veterinarian about dewormers, also find out about preventative vaccine recommendations for your horse to prevent disease. Sleeping sickness, tetanus, rhino and west Nile are diseases or sickness issues that have preventative vaccines available.

Also, keep in mind that horses that have been used only lightly in the winter will not be in physical condition to handle hard rides or workouts. On unfit horses, build up riding or exercise time gradually to help prevent body soreness.

A spring check up makes for a happier and healthier horse. For further information, call the Tulsa County OSU Extension Office (918) 746-3725.

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