

Water Wise

A Newsletter Promoting Fall River Watershed Improvement Strategies
A Publication of the Kansas Alliance for Wetlands & Streams (KAWS) www.kaws.org

By Jeff Davidson
311 N Main
Eureka, KS 67045 jdavidso@ksu.edu

Issue #2 Spring - 2007

Saving Money & Time

Spring has sprung – back and forth – with some record “winter weather” for the second week of April. Hopefully, the weather will get lined out now, and we can get back to growing conditions. It will be a busy time this next month or so, and this letter contains some thoughts as you prioritize your time.

This newsletter funded by an Environmental Protection Agency Region 7 Watershed Improvement Grant

Upcoming Events

Cedar & Sericea *Breakfast Tour*

May 23 7:00 a.m. Gather in the backroom of Hamilton House Café – Hamilton, America Biscuits and Gravy is first item of business. I’ll buy, but *please call 620-583-7455* so I’ll have a count.

Tour Stop #1 Mike Rayburn cedar elimination, pasture recovery, south of Hamilton –

Tour Stop #2 Pasture of Bert Ulrich, east of Hamilton, mixed brush elimination.

Also, view old Hamilton quarry, sericea problem, cedar & mixed brush.

I plan to **conclude by 10:00 a.m.** allowing you to get to necessary field work.

Gary Kilgore – retired Extension Crops & Soils specialist will be on hand to discuss cedar, sericea and other brush problems.

Brush Management

It continues to be the biggest natural resource problem in Greenwood County. Brush, or unwanted woody plants, added to the sericea invasion is the biggest threat to the native tallgrass pastures of this county. Eastern red cedar, has been a continual problem, but the last few years has elevated to *severe* status. Where prescribed burning is not done on a regular basis, cedar is running rampant. Our brief *brush & breakfast* tour will highlight the two species I consider our worst problems.

Brush control should involve a plan.

Before you begin “cleaning up” a major brush problem, determine the goals of your brush elimination operation, disposal of the cut brush, and prevention of re-infestation. A grazing management plan should always accompany a brush management plan. Generally, the goals of removing brush are:

- Restore desired plant community
- Improve forage accessibility, quality and grazeable acres
- Enhance wildlife habitat
- Protect soils, control erosion, reduce sedimentation, improve water quality and enhance stream flow.

Sericea “Hunting” Season

Sericea lespedeza remains on everyone’s hit list, as well it should. It is by far our worst invader, and one that is best kept in check by not letting it get started. June to July is “**open season**” for this tenacious invader. June is the time to treat it with Remedy - or the Remedy based Pasturegard. Use 1 1/2 pints of Remedy per acre and apply with at least 20 gallons of water. Coverage is important with this plant. As June approaches, make some time to get into your pastures and look for this plant. Even if you don’t have it. Make that **especially** if you don’t have it. “Keeping up” with this one means to search and destroy the first plant on your place. After treatments in June, look again in early September. It’s likely you missed a plant or two, and as the native grass begins to brown off, sericea will be easiest to see. It should bloom sometime in September, and at bloom time, Escort at the rate of 1/2 ounce per acre will do a good job on it. You have two “hunting seasons” of opportunity at controlling this plant. Don’t miss either one of them.

Blackberry Brush

I’ve recently had several questions about blackberry control. It is not the easiest brush problem to control. It’s affect on grass production may not be as dramatic as cedars or sericea, but it survives fire pretty well, and can be tenacious, even when chemicals are applied. Several herbicides

can be used on it including 2,4-D mixed with Clarity or Remedy, or the Grazon herbicide. However, another one to try is Escort at 1/2 ounce per acre. Apply when blackberry is in late flower, or just after petals have fallen. Blackberries flower in early spring, so watch closely.

Feeding Site Clean-Up

You’ve likely read or heard that feeding sites, be it bale rings or just where you have continually fed hay, are excellent breeding grounds for stable flies. These sites include the accumulation of manure and wasted feed during the winter months. By spring, these winter feeding sites “hatch” stable flies. Ideal stable fly breeding habitats include moisture, bacteria (upon which the larvae feed), mild temperatures, and an abundance of larval substrate (wasted hay and manure). A site such as this is also exactly what we want to avoid from a water quality standpoint. The fluids or water flowing through or from these sites into drainage areas and on into streams can carry excessive phosphorus as well as bacteria.

We have had good populations of stable flies bothering our pasture cattle in recent years. Stable flies mainly feed on animals’ legs. Foot stomping and tail switching are sure signs. Other natural instincts include standing in water, lying with legs tucked beneath them and bunching at the pasture corners. The effect of stable flies on cattle weight gain can be significant. Nebraska research has recorded as much as a half pound per day reduction in gain due to stable flies.

The number of stable flies emerging from residues at winter feeding sites can be as high as 364 per square foot. While the area

varies, the residue around an 8 foot bale ring can reach as much as 2800 square feet that has sufficient hay and manure to become a breeding ground. This size of site can result in over 1 million stable flies being produced.

It is normally recommended to move bale feeders during the winter to avoid build-up of residue. However, you still should inspect those feeding sites to see if some additional clean-up is warranted this spring. Fly production peaks in May and early June. Cleaning and disposing of waste before **April 15** will greatly reduce the amount of flies produced. One option would be to pile and compost the material - but fly breeding areas could still be on the outside of the pile. Spreading the manure and hay wastage so that it will dry out is key to reducing fly populations. I'm hoping that this cold weather gives us an extra week or so to get this done before fly hatch. I've got some of this to clean up myself.

Clean up of winter feeding sites is relatively simple, and not that big a chore. Your rewards will be fewer stable flies resulting in improved cattle gains - and a better quality water flowing downstream from your winter feeding areas.

Don't Guess, Soil Test

While we have planted some corn, there are still many acres of crops to be planted during the next six weeks or so. This is a year when paying extra attention to soil fertility can pay big dividends in terms of applying **ONLY** what you need, giving you the most efficient use of your fertilizer dollar spent.

One of the major concerns of water quality is a high load of nutrients. Nutrients can come from several sources, but commercial

fertilizer is one of the culprits. Fertilizer that moves with run-off rain water into streams, ponds or lakes causes excessive algae and other water-weed growth. Plant growth in water is a case where some is good, but too much is a major problem.

Streamside buffer strips absorb and filter most of the fertilizer nutrients that can leave a crop field during times of excess rain. But reducing the amount of nutrients that go into a stream begins with proper, economical fertilizer applications. Proper fertilizer application is not only important to crop fields, but also the lawns of our local communities. In fact, the average in-town homeowner lawn receives higher levels of fertilizer nutrients per acre than the average crop field. Our local soils have a slow permeability rate. They simply don't take water very fast. A good, hard rain means that water is going to run off. A rain on a recently fertilized lawn can move nutrients into the storm drains, and right straight to the river. It's something to think about, and something that can be managed to minimize the problem.

A soil test will tell you the amount of nutrients that are in your soil currently, and from the test, recommendations are made as to the amount of each nutrient that should be applied. This simple test, and adhering to the recommendations, will prevent the over-application of fertilizer, whether on a grain sorghum field or a fescue lawn.

A soil test begins with a soil sample. The sample should be collected from several locations in the lawn or field. The use of a soil probe is recommended, especially for lawns. The samples should be taken to about a four inch depth, combined together and brought to the County Extension Office in the courthouse. The actual test will be

done at Kansas State University, with the recommendations made right here in our office. The test will cost about eight dollars, and you could easily save that much in fertilizer expense, for each acre of your field. Plus, you'll be doing something "water-wise" as well. Don't guess, soil test, and apply the correct amount of fertilizer for your lawn, your crop, and our water.

Hay Meadow Management – 2007

This just might be the year when a little shot of fertilizer applied to your native hay meadow could bring big returns. I know fertilizer is expensive – but so is hay - and considering the dry summer last year, a little "shot in the arm" for that grass could make a big difference.

There are a few rules when fertilizing native hay meadows.

- Apply no more than 30 lb of actual nitrogen per acre
- Apply no more than 10 lb of phosphorus per acre.
- DO NOT apply fertilizer until the first week of May – even the second week of May is O K.

If you apply the fertilizer prior to May, you will stimulate cool season grasses and annual weeds. Wait till May, after the native grass has begun growth.

Harvested tonnage can be increased by .6 ton easily – and some years yields can be doubled by this amount of fertilizer. Additionally, the protein percentage of the hay will be increased by 1%. Harvest in early July for best quality forage, and maintaining a vigorous stand of grass.

Pasture Cattle Checklist

As we turn out the cattle this spring, there are a few things we should remember this grazing season. Keep the following questions in the back of your mind as the grazing season progresses – observe your pasture and the cattle grazing habits – and make changes if you see problems.

- ✓ Do you have areas either under or overgrazed?
- ✓ Do cattle have free access to streams?
- ✓ Do you have bare streambanks?
- ✓ Do you have eroded livestock trails?
- ✓ Will you or have you enhanced livestock distribution by removal of undesirable woody plant species along upland drainages?
- ✓ Will you rotate salt and mineral sites?

Watershed Based Management

Credit to Paul Ingle, Watershed Hydrologist, Flint Hills RC&D

Water quality concerns have spawned the concept of *watershed based management*. This management style attempts to bring the "whole" of the watershed into balance – which is – the ultimate goal of the Fall River WRAPS project. Each landowner can only look at his/her small portion of the total watershed, but that is of course, the place to start. Most of this watershed is native grass pasture – and the first management tool to consider is stocking rate. Stocking rates are generally based on averages, financial pressures, or a best guess. In fact, I get a number of questions always asking what the average stocking rate is. Almost never do I get asked – what should the stocking rate of THIS pasture be? Each pasture has its own unique carrying capacity. The stocking rate

should be determined by range site, livestock type, amount of unproductive areas, season of use, and vegetative condition of the pasture. Range sites include the soil type, depth and the topography. Livestock type can be cow/calf considering cow size and age of calf, and different weights of stocker cattle. Season of use refers to the amount of time and which portion of the season the livestock will be grazing. Almost all pastures have unproductive areas – the brushy corner, the rough rocky hilltop where grass is very short, or a few disturbed acres (oil field scars, etc.). Subtract these acres when calculating the number of cattle to turn in. Vegetative condition refers to the general vigor of the desired species. If your pasture needs to improve in it's basic health, reducing the stocking rate in terms of numbers of cattle or number of grazing days will be required. Another concept that works well is a rotation system – moving cattle to allow a “rest” period for the grass. Call me if you'd like to review the stocking rate of a particular pasture, or implement a rotation plan.

The second management tool to consider is alternative watering of livestock – as compared to letting them water at the creek. There is research indicating that providing off-stream water can reduce loitering of livestock in the riparian area from 50-70 percent. The alternative could be a fenced pond, solar pumped well or from creek, or spring development. Water placement is also important, if options are available. Try to avoid putting water in the south end of a pasture, as cattle naturally graze into the wind, causing them to “overgraze” the south end of most pastures.

Third, consider placement of salt, mineral, and fly control devices away from streams, preferably in an area where increased grazing pressure is desired.

Ultimately, a cattleman is in the business of growing forage. Observe the forage supply in each of your pastures carefully each season and monitor production. Doing the “little” things I've mentioned here should help you get the most from your forage base.

Land Stewardship and Profitability

Stewardship can be defined as an individual's responsibility to manage their resources with regard to others. Maintaining natural resources and a successful agricultural operation requires management that ensures future generations have a healthy and diverse landscape. Each livestock operation functions differently, but sound stewardship of natural resources is a common goal for all producers.

Sustainable and profitable production comes from understanding how farming and ranching practices affect the environment. For agriculture to remain productive, it must protect the diverse ecosystems in which it operates. Producers must consider the natural features of their land, such as wetlands, trees and native range when managing their operations. Enhancing farm habitat and conserving biodiversity will help maintain a healthy environment capable of supporting sustainable food production. Ultimately, maintaining a healthy environment is in the interest of society as a whole. The opportunity to pass the land to future generations in a productive, sustainable manner is what all producers strive to do.

Water Wise

A Newsletter promoting Fall River Watershed Improvement Strategies
A Publication of the Kansas alliance for Wetlands & Streams (KAWS) www.kaws.org



Jeff Davidson
311 N Main
Eureka, KS 67045

