CONSERVATION TIDBITS

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NORTH WEST ALLIANCE CONSERVATION INITIATIVE

NWACI

Healthy Soil = Healthy Plants = Healthy Pastures = Healthy Horses

Owning a horse is becoming a popular pastime in Alberta. About 300,000 horses live in Alberta and this number is on the rise. With an increase in horse populations so is the increase in demands on land used to feed and house horses. Not only are horse owners expected to look after their animals they are also expected to look after the land that their horses are housed and fed on. This all starts with maintaining a healthy pasture. A healthy pasture shows that the soil is healthy and fertile and the plants are well established. Horses can be tough on pastures as they are selective eaters and can shear off plants at ground level. Because of this horse pastures need to be monitored, maintained and properly managed.

To determine if a pasture is healthy take a walk around and look at some of the visual indicators. Things that would be looked at is lush, healthy forage, lack of bare exposed soils, no presence of invasive weed species, high biodiversity of plants and wildlife around a water body (if one exists), no hoof tracks and holes in the wet areas and manure is well decomposed.

The first step in ensuring a healthy pasture is to adjust stocking rates. Don't turn out more horses than your pasture can support and don't allow horses to graze plants to the soil level. Too many horses in one area can compact the soil, cause soil erosion and reduce plant productivity. To determine the number of horses the pasture will support depends on several variables. These variables include the quality of the forage and pasture, type of species in the pasture, number of months they will be grazing, amount of rain received, size of the horse being grazed and horse requirements (lactating horses will require more feed than a saddle horse).

Picking a specific grazing method is different for every horse owner, the best method for a productive pasture are rotational grazing and limit grazing. In **rotational grazing** the pasture is cross fenced to break the land up into smaller paddocks and rotate the horses between the paddocks throughout the year. This will give the plants in the pasture a chance to rest and re-grow. Animals should be removed when the forage is about 3-4 inches and should not be re-grazed until the plant growth is a height of 6-8 inches. When **limit grazing** is used horse owners turn their animals out on pasture for only a few hours a day. This limits the pressure put on a pasture. When limit grazing owners can also choose to supplement with hay and grain. This will reduce the amount of forage the horses will eat when they are let out on the pasture. In areas that are looking unhealthy a simple electric fence can be erected to keep the horses out of until it has had a chance to re grow. All pastures should have a sacrifice area which is an area to keep horses when they are off pasture, which will help rest the grass and prevent the horses from overeating. It is a small enclosure such as a paddock, corral or pen that usually also has shelter and water.

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Things to think about this Month:

- Controlling Canada Thistle in Pastures
- Maintaining Wildlife While Haying
- Grazing Horses on Alfalfa
- How to Prevent Soil Compaction
- Wheat Midge Woes

The North West Alliance Conservation Initiative (NWACI) is a partnership between 7 municipalities including, the county of Athabasca, M.D. of Lesser Slave River, Parkland County, Strathcona County, Sturgeon County, County of Thorhild, and Westlock County. This partnership also receives funding from the Alberta Environmentally Sustainable Agriculture (AESA) program. The focus of the partnership is to promote and encourage the implementation of practices and techniques that will reduce the impact of agriculture on the environment. For more information or a no charge on farm consultation please contact Mike at 780-939-0602 or Jennifer at 780-939-0618 or www.nwaci.com.

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Healthy Horses...

A pasture can benefit from healthy shelter belts and riparian areas. Shelterbelts (rows of tress or tall shrubs) will capture blowing soil and snow and assist with reducing soil compaction. The shelterbelts also act as shelter for the horses against wind, rain and snow. Riparian areas have a zone of vegetation alongside creeks, streams, rivers, lakes and wetlands and are very important to the ecosystem as they filter nutrients and reduce erosion. These areas should be treated with care, as they are very sensitive to tramping. The best approach is to fence off these areas and keep your horses out of the water by watering in a trough. This benefits both the riparian area and the health of the horse.

In extremely unhealthy pasture situations the last option for renewal would be a complete pasture overhaul. This requires the land to be reseeded and have the animals kept off until the new forage is established, which may take at least a year. A productive pasture will decrease your feed costs, enhance your horse's health and attitude, improve the aesthetics of your property and protect the land from damage.

Controlling Canada Thistle in Pastures

Use grazing to control Canada thistle, graze just before budding to weaken plants and prevent them from going to seed.

An average sized horse produces 31 pounds of feces and 2-3 gallons of urine a day

Grazing Horses on Alfalfa

Horses can be grazed on alfalfa pasture. Alfalfa is a legume and is higher in protein and slightly higher in energy than grass. In the spring, all grasses and legumes are lush and less mature. The less mature the stand, the higher in energy and protein. Introduce your horses to alfalfa pasture gradually just as you would introduce them to a fresh, spring grass pasture.

Maintaining Wildlife When Haying

Try to defer haying until after July 15th to minimize wildlife disturbance, injury and death. If you must hay before July 15th use a flush bar also change haying patterns to allow an escape route for wildlife.

Information from:

Beneficial Management Practices: Environmental Manual for Alberta Farmsteads.

Nutrient Management — Planning Guide

Manure and Pasture Management for Horse Owners

Alberta Agriculture and Food — www.agric.gov.ab.ca

How to Prevent Soil Compaction

Soil compaction decreases the soil structure that influences infiltration of water into the soil and the extent and severity of runoff. Water from precipitation then has a greater tendency to accumulate on the soil surface setting the stage for runoff events resulting in soil and nutrient loss.

Tips to prevent soil compaction:

- Avoid wheel traffic on soils that are too wet
- Use wide, dual tires or tracks
- Maintain minimal tractor tire inflation pressure for an acceptable tire lifespan
- Avoid heavy, oversized equipment that exceeds job requirements
- Combine or eliminate field operations to minimize number of passes on the field
- Minimize tillage on soils in the spring
- Keep openers and shovels sharp
- Adopt practices that build soil organic matter and improve structure
- Vary the depth of primary tillage operations form year to year
- Use track-type tractors or tractors with four-wheel drive or mechanical front-wheel drive instead of two-wheel drive
- Vary directions of field operations

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Wheat Midge Woes

The orange wheat blossom midge is a small orange mosquito-like insect that can cause yield and quality loss in wheat. It is anticipated that this insect is going to be of concern throughout the major wheat growing areas of the province. Many are not familiar with wheat midge as it is new to the area. With the current price of wheat only a small infestation could reduce profits by reducing yield and grade.
The wheat midge adult emerges in late June or early July and remains in the humid crop canopy. The adults live less then seven days. In the evenings the adults move to the top of the wheat canopy and lay eggs on the newly emerged wheat heads. After four to seven days the eggs hatch and larvae move from the outer surface into the head, feeding on the surface of the developing kernel. Larvae will feed for up to three weeks before crawling off the wheat head and burying themselves into the soil to overwinter waiting for next year's wheat crop.

To prevent wheat midge ensure that proper rotational practices are being used. Avoid continuous wheat cropping or short rotations. By pushing wheat rotations midge populations will build quickly over time. Natural predators to wheat midge include two species of parasitic wasps. The wasps lay eggs inside wheat midge larvae, which will destroy the larvae. The benefits of this parasitism will not be realized until the following year and the current crop will still be susceptible to damage. Moving to a later seeding date and missing the flowering period when the midge are laying eggs has reduced damage but late seeding may be problematic for maturity. By 2009 new wheat midge resistant varieties should be on the market. These varieties will need to be managed to ensure resistance remains strong in the variety.

Scouting for wheat midge is the first step in deciding what control methods should be employed. The field should be inspected on a warm, calm evening usually between 8 and 10 pm. The scouting should start in late June to early July just at the beginning of head emergence. The midge can be confused with other small flies. When scouting, ensure that you are looking at orange wheat blossom midge and not flies like lauxanids, a similar looking species. When scouting, identifying the midge is not enough, the other important thing is to determine is the level of infestation. The economic threshold for this insect is approximately one midge per ten heads. If levels are less than this, the cost of insecticide and application is more than the value lost due to the insects.

The insecticides that are registered for wheat midge are Cygon and Lorsban 4E. Cygon only controls adult midge and has a small amount of residual control. Application should be done when the adults are still active. Lorsban 4E controls both adults and eggs, this product should be sprayed a few days after the threshold has been met, ensuring that the maximum number of heads have emerged for increased protection. Using an insecticide kills beneficial parasites so producers need to weigh out the benefits of using it. Application of insecticide at advanced stages of growth is not recommended as the larvae have already entered the florets. This "revenge spraying" is a waste of money as the insect damage has been done, and in addition will reduce the number of parasites, creating a negative effect.

The orange wheat blossom midge is difficult to deal with but with diligent scouting and proactive measures their incidence and the damage they cause can be reduced.

Coming Events

- **Wednesday June 25, 2008 – Greener Pastures Walk**
- **Friday July 4, 2008 – Solar Watering System Demonstration in Parkland County**
- **Wednesday July 16, 2008 – Westlock County ASB Tour**
- **Fencing Demonstration July 17 in Athabasca and July 18 in Highridge**
- **Solar Watering Demonstration July 21 – Westlock**
- **Clubroot Management Tour July 12 – Sturgeon County**
- **Pasture Weed Control demonstration the week of July 23 – 25 – Parkland and MD 124**
- **Well Abandonment demonstration**
- **Dylan Biggs 2 day Low stress Cattle handling Clinic August 20 and 21 – Smoky Lake area**

For more information on the events please contact the NWACI

Lauxanid Fly **Orange Wheat Blossom Midge**

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