

ON THE RANCH

Fourteenth Annual
**Nebraska
Grazing
Conference**
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Kearney, Nebraska

This year's
conference includes a
live cattle handling
demo by
The Horse Whisperer
consultant, Curt Pate.

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When Should You Cut Prairie Hay?

Prairie hay is mostly warm-season grasses like the bluestems and grammas, indiagrass, switchgrass, lovegrass, or prairie sandreed. There might be some wheatgrass or junegrass or other cool-season species present. One factor to consider when timing harvest of prairie hay is stand persistence. Producer experience and University research both show that prairie hay stands decline rapidly if they are often harvested twice a year. Another factor is hay quality. Prairie hay cut in late June or early July might have over 10 percent protein and 65 percent TDN. As grass increases in maturity, grasses develop seedheads and stems, and forage quality will decline. If you wait until August to cut, protein might drop down as low as 5 percent and TDN as low as 45 percent.

Other practical considerations might be your difficulty harvesting all your prairie hay at once and your potential need for both high quality hay for young stock and average quality hay for dry cows. This means that most operations should have at least two different

prairie hay stack yards. In one stack yard have prairie that was harvested in late June or early July for high quality. In another stack yard or in a different area of the same stack yard, stack hay harvested in early August for high yield. For management next year, the area that was cut early this year should be cut in early August next year and the hay harvested in August this year should be cut in late June, early July next year.



Source: Bruce Anderson, Extension Forage Specialist, University of Nebraska-Lincoln



Reducing Fly Numbers on Pastured Cattle

As late spring approaches, livestock producers should evaluate and select pasture fly control options available for their specific management system. There are three fly species in Nebraska which could economically impact pastured livestock; the horn fly, face fly and stable fly.

Horn Flies

Horn flies are about 3/16" in length and are normally found on the backs, sides, and poll areas of cattle. During the warm part of the day horn flies can be seen on the belly of cattle. The horn fly feeds on blood with both male and female flies acquiring 20 to 30 blood meals per day.

After mating the female fly will leave the animal to deposit eggs in fresh cattle manure. Eggs hatch within one week, and larvae feed and mature in the manure, pupating in the soil beneath the manure pat. Newly emerged horn flies can travel several miles searching for a host. The entire life cycle can be completed in 10 to 20 days depending on the weather.

Economic losses associated with horn flies are estimated at more than \$800 million annually in the United States. Horn fly feeding causes irritation, blood loss, decreased grazing efficiency, reduced weight gains and a decline in milk production. Furthermore, horn flies have been implicated in the spread of mastitis.

Many studies have been conducted in the U.S. and Canada to assess the economic effects of horn flies on cow and calf weaning weights. Nebraska studies have demonstrated calf weaning weights were 10 - 20 pounds higher when horn flies were controlled on mother cows. The economic injury level (EIL) for horn flies is 200 flies per animal. Yearling cattle can also be impacted by the horn fly; other studies have indicated yearling weight can be reduced by as much as 18 percent.

Horn Fly Control

There are many chemical application methods available to reduce horn fly numbers; backrubbers, dust bags, insecticidal ear tags, pour-ons, oral larvicides, and sprays.

Insecticide ear tags are a convenient method of horn fly control. Because many horn fly populations in Nebraska are resistant to pyrethroid insecticides it is important to rotate insecticide classes yearly for ear tags and seasonally for other application methods. To achieve maximum performance from insecticide ear tags, two tags per animal are required. Delaying ear tagging until June 1st will provide the greatest degree of control.

Backrubbers and dust bags are an effective way to reduce horn fly numbers, if cattle are forced to use them.

Sprays and pour-ons will provide 7-21 days of control and will need to be repeated throughout the fly season for effective control.

Oral larvicides prevent fly larvae from developing into adults. An important factor when using an oral larvicide is insuring daily consumption. A complicating issue when using an oral larvicide is horn fly immigration from neighboring untreated herds which can mask the effectiveness of an oral larvicide.



Face Flies

Face fly adults closely resemble house flies except they are slightly larger and darker than the house fly. The face fly is a non-biting fly that feeds on animal secretions, nectar and dung liquids. Adult female face flies typically cluster around animal's eyes, mouth and muzzle, causing extreme annoyance. They are also facultative blood feeders; gathering around wounds caused by mechanical damage or other injury.

Face flies are present in the field throughout the summer with populations usually peaking in late July and August.

Face flies are most numerous along waterways, areas with abundant rainfall, canyons where the canyon floors have trees and shaded vegetation, and on irrigated pastures.

Feeding of the female face fly around the eyes causes eye tissue damage, which creates susceptible tissue for eye pathogens. In addition to annoyance, female face flies vector *Moraxella bovis*, the causal agent of pinkeye or infectious bovine keratoconjunctivitis. Pinkeye is a highly contagious inflammation of the cornea and conjunctiva of cattle. If coupled with the infectious bovine rhinotracheitis (IBR) virus, *M. bovis* can cause a much more severe inflammatory condition.

Controlling face flies is a key to reducing most pinkeye problems.

Face Fly Control

Attaining adequate face fly control can be difficult because of where the flies feed and the significant time they spend away from the animal. The best methods of reducing face fly numbers is using a treatment where the animals are forced to contact an insecticide on a daily basis such as a dust bag, oiler, spray or an insecticide impregnated ear tag. Ear tags should be applied at the label recommended rate. Both cows and calves must be treated if control is to be achieved.

Pinkeye vaccines are available and should be considered if face flies and pinkeye have been a recurring problem. Currently, commercial and autogenous pinkeye vaccines are available; please check with your local veterinarian about the use of these products in your area.

Stable Flies

Stable flies are blood-feeding flies, mainly feeding on the front legs of cattle, staying on the animal long enough to complete a blood meal. Their bite is very painful; cattle will often react by stomping their legs, bunching at pasture corners, or stand in water to avoid being bitten.

The female stable fly deposits eggs in spoiled or fermenting organic matter mixed with animal manure, soil and moisture. Winter hay feeding sites where hay rings are used can often be a source for larval development through the summer if the proper moisture is present. The life cycle of the stable fly can take 14-24 days in Nebraska, depending on weather conditions.



Historically, stable flies have been pests of feedlots and dairies but they are also serious pests of pasture cattle. The effect of the stable flies on weight gain performance is similar to that of livestock in a confined operation. Research conducted at the University of Nebraska, West Central Research and Extension Center utilizing yearling steers, recorded a reduction in average daily gain of 0.44 lbs. per head with animals which did not receive an insecticide treatment compared to animals which received a treatment. The economic threshold of 5 flies per leg is easily exceeded in Nebraska pastures.

Stable Fly Control

Adult stable fly control on pastured cattle can be extremely difficult based on the significant amount of time the fly is away from the animal.

Currently, animal sprays are the only adult management option available. Sprays can be applied with a low pressure sprayer or by a mist blower sprayer. Weekly applications will be required to achieve a reduction in fly numbers.

Sanitation or clean-up of wasted feed at winter feeding sites may reduce localized fly development. If sanitation is not an option these sites may be treated with a larvicide (Neporex®). However, application of either procedure may not totally reduce the economic impact of stable fly feeding.

Additional Resources

Designing an effective fly control program will depend on efficacy, cost, convenience, and herd health management practices.

For current Nebraska control recommendations go to UNL Livestock Fly Control Product Recommendations page at <http://entomology.unl.edu/livestock/2013flyrecs.shtml>. To learn more view the recorded webinar Fly Control for Cattle on Range and Pasture at <http://beef.unl.edu/flycontrolwebinar>.

When applying any insecticide control products please read and follow the label instructions.
Source: Dave Boxler, UNL Extension Educator, UNL West Central Research and Extension Center