

Fenceline

by Jody G. Holthaus

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Livestock-Natural Resources

As we transition into spring and before livestock producers turn cattle in to summer pastures, selecting this year's fly control program should be considered. A thought to consider, did your fly control program work last year? If it did not, now is the time to consider a different method. There are many fly control options and strategies available to Kansas livestock producers to help manage the three fly species that economically impact grazing cattle; the horn fly, face fly and stable fly.

Horn flies are small in size, approximately 3/16" in length and are usually found on the backs, sides and poll area of cattle. During a warm summer afternoon they can be found on the belly region of cattle. Horn flies, both male and female flies, acquire more than 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 upon the weather.

Economic losses associated with horn flies are estimated at more than \$1 billion dollars annually in the United States. Horn fly feeding causes irritation, blood loss, decreased grazing efficacy, reduced weight gains, and diminished milk production in mother cows. Additionally, horn flies have been implicated in the spread of summer mastitis.

Studies conducted in the U.S. and Canada have shown that horn flies can cause weight gain loss in cattle, and calf weaning weights can be negatively impacted from 4 – 15 percent. Studies conducted in Nebraska have established 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 affected by the horn fly; other studies have shown yearling weights can be reduced by as much as 18 percent. There are many insecticide control methods available to manage horn fly numbers; back-rubbers, dust bags, insecticidal ear tags and strips, pour-ons, oral larvicides, low pressure sprayers, mist blower sprayers, and individual portable methods.

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. The adult female face flies cluster around an animal's eyes, mouth and muzzle. Face flies will also feed on blood and other secretions around wounds caused by mechanical damage or other injury. Face flies are present throughout the summer but populations usually peak in late July and August. Face flies are most numerous along waterways, areas with abundant rainfall, canyon floors with trees and shaded vegetation, and on irrigated pastures.

Female face fly feeding causes damage to eye tissues, increases susceptibility to eye pathogens, and 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 essential in reducing most pinkeye problems.

Achieving adequate face fly control can be difficult because of their habit of feeding around the face and the significant time they spend off the animal. Control is maximized when the cattle receive daily insecticide applications by either dust bags, oilers, sprays, or an insecticide impregnated ear tag/strip. Ear tags/strips 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 are serious pests of feedlots and dairies and of pasture cattle. The stable fly is a blood feeder, mainly feeding on the front legs of cattle, staying on the animal long enough to complete a blood meal. Their bites are 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. The most common developing sites are in feedlots or dairy lots, usually around feed bunks, along the edges of feeding aprons, under fences, and along stacks of hay, alfalfa and straw. Grass clippings and poorly managed compost piles also may be stable fly developing sites. 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 Kansas, depending on weather conditions. While the source of early season stable flies on pastured cattle is not well understood some probably develop from larvae overwintering locally. Other early season flies may be migrants from southern locations, but evidence is lacking. Nevertheless, we do know that stable flies can move at least 10 miles or more. Stable flies cause similar weight gain losses to both pasture and confinement cattle. University of Nebraska research, recorded a reduction in average daily gain of 0.44 lbs. per head with animals which received no insecticide treatment compared to animals which received a treatment. The economic threshold of 5 flies per leg is often exceeded in our pastures.

The only adult management option available for the control of stable flies on range cattle is use of animal sprays. Sprays can be applied using a low pressure sprayer or can be applied with a mist blower sprayer. Weekly applications of these products will be required to achieve reduction in fly numbers. Sanitation or clean-up of wasted feed at winter feeding sites may reduce localized fly development.

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### **Soybean Weed Control – The Importance of Timing**

One of my favorite slides from a presentation by KSU Weed Specialist Dr. Dallas Peterson this past winter depicts a field of palmer amaranth. Now before you get concerned about my excitement over palmer amaranth (believe me, I am **not** excited about more pigweeds!), you should know that it was showing the excessive growth of palmer under good conditions in a very short time frame. Weeds went from just emerged to six plus inches in less than five days. All of a sudden products that might do a good job of control would have been less effective, ineffective, or off label! It underscored the need for an integrated weed management system that includes soil-applied residual herbicides to optimize weed control and maintain our current arsenal of control products.

The benefits of a good soil-applied residual herbicide for soybeans are many. Early season weed competition is reduced, giving us greater flexibility for postemergence treatments. From a resistance management standpoint, we add sites of action to slow the development of herbicide resistant weeds which helps reduce the weed seedbank over time. Then, there's yield!

University of Nebraska studies have shown that a nine inch weed can reduce yields as much as six percent. Allowed to grow to twelve inches, losses increase to 22 percent! According to work done by UNL Weed Specialist Steven Knezevic, soybean yields typically drop about 2% for each leaf-stage of delay past the optimum weed control time (V2 in narrow row soybeans; V1 in 30 inch rows) up until the beginning pod stage. South Dakota State University research confirms this finding, with studies showing that weeds can start stealing yield as soon as three weeks after soybeans emerge. University of Minnesota research puts some economics to those losses. Fritz Breitenbach, University of Minnesota Extension IPM Specialist notes that the penalty from a 2014 trial showed soybean yields in 30-inch rows dropped eight bushels per acre, or about 15 percent, when weed control was delayed from V1 to V3. Most of that loss occurred in the five days between V2 and V3 – a great indicator as to how tight the weed control window is and how quickly it can close!

Is a residual herbicide in your soybean weed control program? If not, research shows it's an economical choice – and one that can help avoid even bigger problems later. To determine what herbicides might be a good fit for you as well as getting the latest on K-State soybean herbicide program recommendations, check out this recent KSU Agronomy eUpdate article at:

[https://webapp.agron.ksu.edu/agr\\_social/eu\\_article.throck?article\\_id=1311](https://webapp.agron.ksu.edu/agr_social/eu_article.throck?article_id=1311) or request a copy from your local Extension Office.

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Family Life

## How to Tame Sugar Cravings

Added sugar in the diet is frowned on by nutritionists for two main reasons. First, it is linked to weight gain and cavities. Second, sugar provides “empty calories” because it lacks any nutritional contribution, and too much sugar in your diet can crowd out more healthful foods.

Sugar-sweetened beverages are by far the greatest sources of added sugar in the diet and account for more than one-third of the added sugar consumed as a nation. Other popular high-sugar foods include cookies, cakes, pastries, ice-cream, candy, and ready-to-eat cereals.

People crave sweet things for a number of reasons. “Sweet is the first taste humans prefer from birth,” says Christine Gerbstadt, MD, RD, a dietitian and American Dietetic Association (ADA) spokeswoman. Carbohydrates, especially sugar, stimulate the “feel-good” chemical dopamine in the brain.

Consumption of foods and beverages high in sugar is also linked to stress. Feelings of stress can cause poor sleep, which can affect your hormone levels and cause you to crave sugary, high-calorie foods.

Here are a few tips that may help you tame sugar cravings. Combine a sugary food you are craving with a healthful one. Dip a banana or strawberry in chocolate sauce, or mix some almonds with a few chocolate chips.

When a sugar craving hits, walk away. Do something to change the scenery and get your mind off the food you are thinking about. Get out and take a walk or get some type of exercise.

Skip artificial sweeteners. Research has shown that diet drinks and artificial sweeteners may increase your craving for sugar.

Eat regularly throughout the day. If you wait too long between meals you could set yourself up to choose sugary, fatty foods to curb hunger. Eat something every 3 to 5 hours to keep your blood sugar stable.

Slow down and focus. Often, poor food choices result from a lack of planning. Slow down, focus, and plan what you are going to eat so you are ready to make a healthful food choice, even when you are desperate.

Eat just a little of what you are craving and allow yourself to enjoy what you love. Keep a sweet treat to 150 calories or less.

Replace a candy dish with a bowl of fruit for when sugar cravings hit. If you like something sweet at the end of a meal, go for a fruit-based dessert or plain fruit. To curb a soda habit, try mixing a little fruit juice with seltzer water.

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### **National Festival of Bread to be Held in Manhattan**

Lots of baking has been taking place at the Wheat Innovation Center to select the top finalists for the 2017 National Festival of Breads! Mark your calendar for June 17, 2017 to come and enjoy the festival in Manhattan, KS at the Hilton Garden Inn.

New this year is the Enrich Your Life 5K and 1 mile Fun Run. A portion of the event proceeds will be donated to the Flint Hills Breadbasket.

Admission to the festival is free with a donation of a canned or nonperishable food item. These donations will also go to the Flint Hills Breadbasket.

The tentative schedule and link to sign up for the 5K is at <http://nationalfestivalofbreads.com/hints-and-happenings/2017/06/17festival-schedule> (<http://nationalfestivalofbreads.com/hint-and-happenings/2017/06/17festival-schedule>).

### **Defining Clean Eating**

Lots of conflicting information about eating healthy can leave anyone confused. So the American Heart Association is trying to help clear the confusion.

To start, eat lots of fruits, vegetables and whole grains. This is a common message from many healthy organizations and educators. Lean meats, low-fat and non-fat dairy, beans and legumes, nuts and seeds are also beneficial.

A healthy, clean diet can also include frozen, canned, and dried foods. Select low-sodium canned foods and fruits canned in water or 100% juice. Choose frozen and dried foods without added salt or sodium.

Some say to avoid the middle aisles of the grocery store. The truth is many foods in the middle aisles can be a part of a healthy diet.

### **Celebrity Chefs Have Poor Food Safety Habits**

Cooking shows are very popular to learn new cooking ideas and recipes. But the celebrity doesn't always use good food handling practices.

Many will lick their fingers, touch their hair or dirty clothing, and then touch food without washing their hands. In fact, not washing their hands was the most common hazard. The next problem was using the same cutting board between raw meat and vegetables to be served fresh. Not using a food thermometer to check meat doneness was also a problem. Celebrity chef's purpose is to entertain and educate about food preparation techniques and helpful kitchen hints, which should include proper food safety practices.