

Horn fly Control

Summer time is fly time. The number one fly problem is horn flies. These small flies with V-shaped wings like to position themselves with their heads downward in the backs and shoulders of cattle. They are unique in that they spend all most all their time on cattle, leaving only long enough to lay eggs in manure. They have a rapid life cycle often completing as many as eight reproductive cycles in one summer. This presents greater opportunity for genetic recombination and is a major factor in the development of resistance to pesticides.

The economic threshold for horn flies, the level of infestation where it pays to treat for them is about 200 flies per animal. Above this level they cause decreased milk production and loss in weaning weight. A Nebraska study showed if there were 500 flies per cow, calf weaning weight was decreased by 8 percent. This kind of loss can pay for a lot of fly control. Ear tags, sprays, dust bags and back rubbers can all be effective against horn flies, but a combination of several methods may be needed to keep fly counts down all summer. Insecticide classes most commonly used to control horn flies are chlorinated hydrocarbons, organophosphates, and pyrethroids. It is a wise decision to rotate between these groups using one or two for the duration of the summer then changing to a different combination the following summer. This will help slow down the development of pesticide resistance..

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Storing Round Bales

Round bales became popular in Oklahoma during the 1970's. A key reason for their popularity was a reduced labor demand compared to small square bales. Additionally, big round bales have fewer storage requirements. Because of their shape, round bales have the ability to shed precipitation and be stored outside for a reasonable time period.

Round bales stored outside do suffer dry matter forage loss due to weathering and spoilage. Dry matter loss can vary greatly with bale density, environmental conditions, storage site and bale orientation.

A major key to reduce round bale losses is the tightness of the outer layer of the bale (the first two to six inches). If the outer two inches of the bale is spoiled, 13 percent of the dry matter is lost on a 5 foot large bale. If 6 inches of a 5 foot large bale is spoiled dry matter losses will be from 34 to 40 percent. Ideally, you need to wrap bales as tight as possible. Twines should be wound about 6 to 8 inches apart. Research shows net wrapped bales have storage losses similar to twine wrapped bales when the outer layers are the same density.

Rainfall does affect storage losses. However, storage losses are tied to three factors, precipitation, air temperature and humidity. Hot humid conditions favor microbial activity that causes spoilage and therefore dry matter loss. Ideally, round bales stored outside should be used before March.

Storage site is an important consideration in reducing bale losses. Choose a site that is well drained, not shaded and open to breezes to enhance drying. Up to 12 inches of the bottom of a bale can be lost through moisture absorption. Ground contact can result for over one half of bale losses. When practical keep bales off the ground by using low cost materials such as railroad ties, discarded pallets or used tires.

Bales should be stored in rows, buffed end to end and oriented in a north south direction. Leave at least 3 foot between rows to provide good sunlight penetration and air flow to enhance drying.

To reduce hay spoilage and extend storage life, consider covering bales with plastic or canvas tarps. Hay stored in enclosed barns suffers dry matter losses of only 2-3 percent. In open sided barns (roof only) dry matter losses will run about 10 percent in a years' time. With current production costs of hay, barn storage will often be a paying proposition especially with higher valued high quality hays.

For more information on large bale storage, contact the Tulsa County OSU Extension Center (918) 746-3725.

Ethanol as Fuel

All engines built from 1970 on use ten percent ethanol blended fuels with no problem or modification. This includes fuel injected engines.

Ethanol can loosen residues that have been deposited from previous gas fills. These can collect in the fuel filter. This problem has occurred in older cars and can easily be corrected by changing fuel filters. Since 1985 ethanol blended fuels and most non-blended fuels have had detergents added to them to keep fuel injectors clean and to prevent deposits that could clog them.

Use of an ethanol blend may cause a slight decrease in fuel mileage. Ethanol contains 97 percent of the energy that pure gasoline has. This slight reduction in energy is compensated for by an increase in combustion efficiency.

You can use ten percent ethanol blended fuels in any engine that uses regular unleaded gasoline. It can be used in any lawnmower, ATV or any gas powered engine.

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Managing Heat Stress in Cattle

July and August bring long hours of high ambient temperature and the risk of heat stress in cattle. The thermo comfort zone for cattle differs with animal type for example: calves are comfortable from a range of 45 degrees F to 80 degrees F, feedlot cattle a range of 60 degrees F to 75 degrees F. Temperatures above ninety degrees F are difficult for cattle on high energy diets.

Prolonged high temperature, above average humidity and below average winds are the conditions most conducive to heat stress in cattle. Fat cattle, new arrivals, cattle with dark hides, and cattle with illness are most susceptible to heat stress.

Short term measures to manage heat stress are:

1. Have ample water available. Allow at least 2 gallons of water per 100 pounds bodyweight and allow three inches per animal of linear tank space.
2. Work cattle early in the day, after they have had a chance to cool overnight. Avoid having animals confined over thirty minutes. If you are processing cattle, work small groups, reducing the time they spend in alley ways and small pens.
3. Provide shade. Trees are some of the best shade and relief. If you are building an artificial shade, research recommends thirty to forty square feet. Shade should also be provided in holding pens and areas when sick cattle are confined.
4. Control biting flies. Cattle tend to bunch when stable flies are biting which disrupts cooling.

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Summer Time - Chiggers

The chigger mite can be a great nuisance during the summer months. Squirrels, rabbits and rodents are vertebrate hosts for chiggers moving them from one area to the next. Chiggers will be found in vegetative areas where the hosts are most abundant. Humans are normally accidental hosts.

To reduce chigger bites and cut down on chigger infestation, follow these steps:

1. Keep weedy vegetation cut back to the perimeter of the landscape. Well kept lawns provide less habitat for chiggers.
2. Before going to potential chigger infested areas, apply an insecticide containing DEET. Products with DEET are the most effective against chiggers.
3. After returning from an outing in a chigger infested area, take a hot shower using plenty of soap as soon as possible.
4. Dogs and cats can pick up chiggers on their body and transfer them to people. Consider bathing dogs and cats or use a repellent. Flea and tick collars also work against chiggers.
5. An area with a severe chigger infestation can be treated with insecticide. These can be sprayed on turf and landscape plants. They generally provide two to three weeks of control. Pesticides are not recommended unless chiggers are confirmed in the area.

To feed, chiggers find a hair follicle on the host and inject enzymes that break down skin tissue, allowing the chigger to suck up the dissolving tissue. This causes intensive itching that can last two weeks. A chigger mite will finish feeding and drop from the host within 48 hours of initial contact.

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Heat Stress - Dogs

Dogs, more so than humans are susceptible to overheating. Dogs are designed to conserve heat. Sweat glands located on their noses and pads of their feet are inadequate for cooling on hot days. Panting and drinking water helps dogs cool off. Short nosed dog breeds like pugs or bull dogs, pups, senior dogs or dogs with weight, respiratory or heart problems are especially prone to heat related stress.

Signs of heat stress in dogs are heavy panting, glazed eyes, rapid heartbeat, lethargy, fever, dizziness, lack of coordination, profuse salivation, vomiting, deep red or purple tongue and unconsciousness. If your pet shows signs of heat stoke, gradually lower his body temperature immediately. Achieve this by moving the dog to shade or an air conditioned area. Apply ice packs or immerse the animal in cool water. Provide air flow to enhance cooling. Allow the dog to drink small amounts of water or lick ice cubes. Take the animal to the veterinarian.

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Native Hay Quality versus Native Hay Quantity

Researchers at Kansas State University compared harvesting native grass hay in early June versus early August dates. The July harvest produced about 2400 pounds of dry matter forage compared to 2800 pounds per acre in August. The July cutting tested about 7% crude protein while the August cutting tested about 3% for protein content.

As the calculations of the amount of hay and quality are combined, we learn the earlier cut hay produced about 168 pounds of crude protein per acre while the latter cut hay produced only 84 pounds of crude protein per acre. Assuming typical TDN (total digestible nitrates) values for the hays, we would expect to find about 55% TDN in the July hay and 46% TDN for the August hay. Once again, we made calculations to see how much energy (TDN) is harvested to be fed to the cows. The July hay produced about 1320 pounds of TDN per acre compared to the August hay which produced about 1288 pounds of TDN per acre. Even though the producers hauled more tonnage from the field to the storage area and back out to the cattle with the later cut hay, he provided considerably less protein and energy than he would have if he had cut the hay a month earlier. The high cost of fuel and labor suggests that hay harvesting should be done as productively as possible. If we are going to harvest and feed hay, we might as well have maximum protein and energy (the things that cows need) going along on the hay ride.