



ON FEED

A newsletter of Dakotaland Feeds

May 22, 2009

Fly control- making it work

As we get into summer, flies have started to emerge and you may have wondered about the best methods of fly control. Will it pay off if you invest in controlling these pests?

You have undoubtedly seen cattle fighting flies out in a pasture. They are bunched in the corner, swishing tails and tossing heads or standing belly deep in some murky water. It should come as no surprise that fighting flies can take considerable energy, which means lost profits because of decreased milk production, poor feed efficiency, and reduced gain. One study estimated that for every 100 flies on a cow, weaning weight is reduced by about 17 lbs. Horn flies have a very painful bite, which results in injuries from cattle trying to rid themselves of the flies. Flies can also spread disease including pinkeye, some mastitis infections, and mycobacterial infections.

Altosid® IGR (S-methoprene) is a proven method of control of horn flies. It is most effective when fed continuously starting 30 days prior to fly season until 30 days past the first frost, which will help decrease horn fly emergence in the next season. It has been researched since the 1970s and has no documented resistance. Altosid® interrupts the life cycle of the horn fly, but it does not kill adult flies. If you already have a fly problem and begin using Altosid®, you may need to use a spray to knock back the established fly population while the Altosid® begins to take effect. One study found it took about 4 weeks for Altosid to reduce fly populations after they are established. Altosid® is approved for use in cattle and is available in free-choice loose mineral, or tubs. In addition, research has shown that Altosid® has no negative effects on dung beetle populations that help break down manure.

Cattle need to consume the Altosid® for it to be effective. This makes it very important to get a handle on mineral consumption by monitoring intake. If cattle are not consuming enough mineral, moving the feeder to a higher traffic area will help establish consumption to ensure fly control. Over-consumption can be expensive, and moving feeders to lower traffic areas can help curb consumption. An average cost of Altosid® in the pasture would be from \$0.03-0.05 per head per day. Using fly control can result in a 20 lb increase in weaning weights (Campbell et al, 1976, Cooke 1989). Altosid for 150 days (May 15-Oct 15) would be an investment of a little over \$5/hd.

ClariFly® is a feed-through product for controlling stable flies and house flies in the feedlot that prevents larvae from becoming adult flies. There is no withdrawal for ClariFly® and it may be added to pelleted or liquid feeds. Like Altosid®, ClariFly® should be fed continuously beginning 30 days prior to peak fly season until 30 days after the first frost to achieve the best control. Using Altosid is also about control and not complete eradication. If some cows are eating mineral or others aren't consuming enough, it means we may have a few flies. The point is to try to keep them below the threshold where they cost you money due to lost gain.

Fly tags containing organophosphates or pyrethroids are another option for fly control. The benefit of fly tags is that they are broader spectrum than Altosid. However, the activity likely won't last the entire fly season and flies may become resistant to the insecticides in fly tags. Alternating the type of insecticide used in the fly tags from one season to the next may help alleviate some resistance. Cost per day of effectiveness will be similar to Altosid.

In a Nutshell

- *Fighting flies costs energy and reduces gains
- *Altosid is a proven method for controlling horn flies
- *Monitor consumption of Altosid mineral for optimum effect
- *Clarify is feed-through fly control for confinement feeding
- *Parasitic wasps are effective fly control for feedlots
- *Use a proven method of control for reliable, consistent results

FLY CONTROL- MAKING IT WORK

Spraying the cattle may help control a broad spectrum of insects and provides a quick way to knock back the fly population, but is probably the most difficult and labor intensive method of fly control. Again, resistance may be an issue depending on the insecticide used. In addition, the control may not last very long. Dewormers like avermectins have some activity against horn flies along with other parasites, but control is generally short-lived. Recent research evaluated a long-acting dewormer for fly control and found about 10 weeks of fly control, but at a cost significantly higher than Altosid. At \$15 or more for a 1400 lb cow, that is \$0.21/d for fly and parasite control.

Biological control can be an effective option for feedlots. Certain wasps are parasitic and are effective at controlling flies because they lay eggs on fly pupa and prevent the pupa from maturing into a fly. These wasps are most effective if released periodically during the fly season and used in conjunction with appropriate manure management. However, if the environment for fly breeding is extremely large, the wasps can be overwhelmed by the fly population. The wasps are sterile and do not breed and are not a hazard to humans.

One product we have been asked about recently is apple cider vinegar. There is no research on it and no reasonable potential mode of action for fly control. Vinegar is acetic acid and is produced by the rumen in large quantities every day. We spend time trying to get the rumen to produce less acetic acid and more propionic acid because propionic acid yields more energy for the animal than acetic acid. Rumensin and Bovatec improve gains by decreasing acetic acid and increasing propionic acid and are also effective against coccidia, where vinegar is not.

Diatomaceous Earth (DE) has been brought up also. DE is silica and is very porous, which makes it good for filtering. It is often used in pool filters, but can also be found in cat litter, some polishers or cleaners, paints, and caulk or sealants. The proposed mode of action is that DE absorbs fats or lipids from the outermost layer of some insects and as a result the insects die from dehydration. This only occurs via direct contact. One type of DE, crystallized silica, has extremely sharp edges and poses an inhalation hazard to humans and has been studied for its association with lung diseases including cancer. There is no available research documenting the DE is effective for fly or parasite control and until there is documentation, the use of DE is not recommended.

When it comes to fly control methods, it is best to invest in a *proven* method. Successful fly control is often a combination of methods, allowing producers to maximize effectiveness and minimize costs. What you choose for fly control is dependent upon your situation, degree of infestation, and available labor. Regardless of what you choose to do, controlling the fly population will result in a positive return and more comfortable cattle.

Roxanne Knock, PhD

*** With dry early-season pasture conditions in many areas, ask us about options to help extend pasture. Options for distillers grains, range cubes, creep, corn blends, tubs or blocks are available. Early weaning looks like it will be a good option.

Things to be thinking about:

- * Use a good mineral program for breeding season- ask about Ultimate Breeder 8 or Stress Tubs
- * Get implants for calves and yearlings going to grass
- * **Get MGA supplement** if you intend to use it for synchronization
- * Use a high magnesium mineral to prevent grass tetany during early season grazing
- * Order wasps for feedlot fly control or ask about **Clarify** for feed-through fly control in the feedlot
- * Get the bulls in good body condition and give them mineral- they should be a BCS 5 or 6 at 60 d prior to breeding
- * Have a breeding soundness exam and semen test done on your bulls to help ensure high pregnancy rates
- * Talk to your veterinarian about your spring vaccination and de-worming plans