

The Latest Across the Plains

Timely Reminders

- ◆ Use at least two methods of fly control.
- ◆ Worm cows and bulls.
- ◆ Test bulls and make sure they have an adequate diet including mineral.
- ◆ Review your heat synchronization program and time-line.
- ◆ Put up shades.
- ◆ Make sure that waterers have enough space, recharge rate, and are cleaned weekly.
- ◆ Review your implant program with us.
- ◆ Review diets with current feed costs.
- ◆ Optaflexx® is profitable to feed to conventional feedlot cattle the last 28 days prior to slaughter.
- ◆ Keep pens scraped.
- ◆ Implant suckling calves going to pasture.

Unused Feed

Your smile is your logo, your personality is your business card, how you leave others feeling after having an experience with you becomes your trademark.

Save Money \$\$\$ Test Your Feeds

Tests are relatively inexpensive, usually costing less than \$18, for the information derived. Contact our office to set up an appointment to have us pull feed samples if we have not done so yet.

What's New in the Industry

Alltech purchased Ridley, Inc. and Hubbard Feeds.

We want to hear from you...

Do you have a question you would like one of the nutritionists to address in depth in our newsletter? Just submit your question through our website www.GPLC-Inc.com and we will get to work on it.

Calendar of Events

- **May 6 - 8** Minnesota Dairy Health Conference, Minneapolis, MN
- **May 10** Mother's Day
- **May 16** Armed Forces Day
- **May 25** Memorial Day
- **May 27 - June 5** National Cattlemen's Beef Association - Young Cattlemen's Conference, Denver, Chicago, and Washington D.C.
- **June 9 - 12** Beef Improvement Federation Symposium, Biloxi, MI
- **June 10-11** Nebraska Cattlemen's Association Midyear Meeting, Friend/York, NE
- **June 13** Kansas Cattlemen's Association Cattlemen's College, Courtyard by Marriot, Salina, KS
- **June 14** Flag Day
- **June 16 - 18** Florida Cattlemen's Convention & Allied Trade Show, Orlando, FL
- **June 18 - 27** Reno Rodeo, Reno, NV
- **June 21** Father's Day
- **June 24 - 25** Oklahoma Cattlemen's Association Summer Ranch Tour, Oklahoma City, OK
- **June 25 - July 5** Greeley Stampede, Greeley, CO
- **July 4** Independence Day
- **July 14** NCBA Summer Conference, Denver, CO



The Great Plains News Feed



Fly Control in Feedlots

By Jeremy Martin, Ph.D., Nutritionist

The time has arrived to plan for controlling summer fly populations. Adequate fly control programs are multi-faceted, systematic, and, in addition to directly enhancing cattle performance, can aid in the prevention of acute heat stress in feedlots. We recommend a combination of at least two fly control strategies used in combination from the time of the last hard freeze of the spring to the first killing frost in the fall in your local area. Before deciding which strategies are the best fit for your feedlot, you need to identify the problem species and the problem areas in the lot.

Stable flies and house flies are the most common fly species in feedyards. House flies peak in population in July and persist into the fall. While house fly populations can reach extremely high densities, they are mostly an annoyance. House flies do not suck blood, but rather feed on liquids or solids they can dissolve with saliva (Greene et al., 1998). While house flies may not be the principle enemy in terms of cattle performance, they can be a public relations concern. As fall approaches, house flies roost in buildings, vehicles, and other places that can be a concern to neighboring businesses or residences. Purely from a public relations standpoint, you need to control house flies.

Adult stable flies feed on blood by attacking the legs of cattle and piercing the skin (Greene et al., 1998). Stable flies are most abundant in spring and numbers generally decline with hot, dry weather. However, during cool summers, high populations of stable flies may persist for up to 4 months. The feeding actions of stable flies cause cattle to bunch, stomp, and can reduce performance. Research conducted over several years at the University of Nebraska (Campbell et. al., 1997; Cantagui et. al., 2001) evaluated cattle performance and economic losses as a result of stable flies using screens to prevent fly entry into protected pens while measuring fly populations in adjacent pens. Fly populations of 50 per calf resulted in ADG reduction of 13.2%, while gains were reduced up to 20% when 100 flies per animal were present (Campbell, 1977). Over seventeen years of research in this model (Cantagui et. al. 1997) reported average reduction in ADG of 8.46%. The economic loss associated with stable flies depends on the cost of cattle, ration cost, and duration of the fly season. With breakevens as high as we have today, this loss is undoubtedly substantial. In addition, high stable fly densities can contribute to heat-related cattle mortality by causing cattle to bunch during times of heat stress. Densities as low as 5 stable flies per leg can reduce performance and indicate control measures need to be in place.

Stable flies and house flies both breed in manure, so the first step in fly control is manure management. Without proper manure management, other fly control measures will produce limited results. Stable flies require a moist mixture of soil and organic matter between 4 and 12 inches deep in which to lay eggs. In a 4-year study (Skoda, et. al., 1996) of immature fly populations in feedlot pens, 62.5% of immature flies were found adjacent to feeding aprons, 24.6% around mounds, and 8.4% along pen side fences. Areas where hoof action constantly disturbs manure are poor breeding grounds for stable flies, but those areas where stagnant manure and soil mixtures collect are the problem. Another survey of 93 feedlots (Gilbertson and Campbell, 1986)


found substantial immature fly populations also existed in and around feed storage areas, along bunk lines, and in drainage areas.

Since stable flies take about 3 weeks to develop, and house flies about 2 weeks, one may conclude that scraping aprons and around mounds every 2 weeks or less should greatly reduce fly populations, if manure is removed from pens. Early spring pen maintenance should include removing manure deposits under fences and around any other obstacles to provide less breeding habitat for flies. Spring is also a good time to clean out drains, settlement ponds, lagoon edges, and any other areas where wet, stagnant combinations of manure and soil exist. Take the time to clean up your feed grounds, as well, by removing spoiled feedstuffs, reshaping areas that hold moisture, and generally removing fly habitat.

Predatory wasps whose larva feed only on fly pupae are commonly used in feedlots as a stable fly control measure, and can be very effective. *Muscidifurax zaraptor* are commonly localized in house fly pupae, but are commonly sold because they have high survivability. While they should be included in your program for house fly control, they should not be the sole species released. *Spalangia nigroaenea* larva can be found in both house and stable fly pupae and appear to be adapted well to feedlot environments in the Midwest (Greene et. al., 1998), so they should be a part of your parasitic wasp program. Parasitic wasps should be placed early in the summer, usually early June, and it is important to place 20 to 50 parasites per head on feed on a weekly basis.

Stable flies feed most actively between 10 a.m. and 4 p.m. and after feeding they seek a shaded area to roost. Windbreaks, weed patches, shaded sides of buildings or bunks, and adjacent fields often provide a roosting area for stable flies. Some of these areas are necessary, but controlling weeds, in particular, will help reduce fly pressure on cattle. Chemical treatment of cattle produces transient results, and it is difficult to effectively treat the legs of cattle where stable flies congregate. So, chemical treatment should be used mainly when other measures have failed, or to achieve an initial knock down of fly populations prior to implementing other controls. Focus on spraying early morning or late evening in areas where stable flies roost. Treating roost areas with residual sprays can be very effective in reducing fly populations. Always apply insecticides in accordance with label regulations (make sure you or your applicator are licensed) and document use.

Feed additives that control fly populations via activity in the manure are another option. Three options are on the market: Rabon™ oral larvicide, Altosid® IGR, and ClariFly®. Altosid® IGR targets horn fly development and is more appropriate for cattle on pastures than in feedlots. ClariFly® and Rabon™ oral larvicide target all manure-breeding flies, but work through separate pathways. Rabon™ is a larvicide that directly kills the larvae of all 4 fly species, while ClariFly® prevents development of flies by interrupting the life cycle. Both are effective if dosed correctly on a daily basis. In order for either to work well, feedlot operators should start feeding early in the spring, 30 days before flies appear and should be fed continuously until 30 days after a killing frost. These products should be used as part of a fly control program and are not a substitute for manure management.

We encourage feedlot operators to develop fly control programs that focus on at least two methods of control, and manure management to reduce fly habitat should always be one of those methods. We generally recommend parasitic wasps or feedthrough control measures with chemical application reserved for acute fly problems. 



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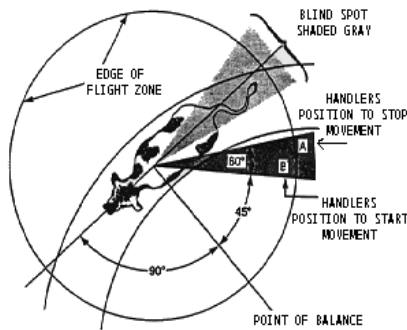


Cattle Handling and Injury Prevention

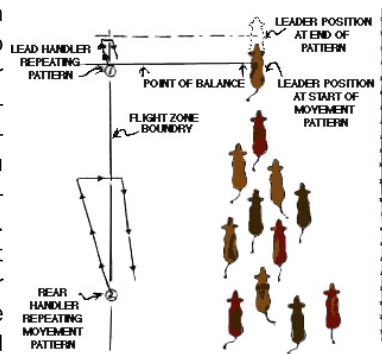
By Ki Fanning, Ph.D., PAS, Nutritionist

Cattle handling is an everyday part of beef production and can be a low stress or a high stress event for cow and cowboy. A stressful event can be dangerous to work in for the cowboy as well as the livestock. Moreover, it increases cortisol levels which will reduce the immune response resulting in vaccine failure and/or a higher morbidity rate. In addition, animals that are repeatedly handled in a fast paced, stressful way will tend to be more high-headed (nervous). High-headed cattle gain slower and do not convert as well as their calmer counterparts. They will have more bruising and injuries. It takes 20 minutes for the heartrate of severely agitated cattle to return to normal. The following article lays out recommendations for a low stress and safe working environment for cow and cowboy.

Do not try to drive cattle from behind. That is their blind spot. In order to move cattle forward you need to be at a 45 degree angle to their spine behind their point of balance (the point that they move forward or backwards when someone is in their flight zone). The diagram to the right (Temple Grandin, Dept. of Animal Science, Colorado State University) describes the point of balance and where a cowboy needs to be to move an animal forward and where he needs to be for the animal to feel comfortable enough to stop moving.



When moving a herd, walk in the direction you want them to move while retreating from their flight zone. When they quit moving, enter their flight zone, walking in the opposite direction you want them to move. When moving cattle through a gate (i.e. counting cattle), move in and out of their flight zone to increase or decrease the rate at which the cattle move. Cattle have a herd mentality so by calmly driving the alpha animal (not the most high-headed or aggressive one) where you want them, the others will follow. When driving cattle, do not yell or use high pitched sounds, including whistling and whip cracking. Cattle have much more sensitive hearing than humans. Making noise will attract attention to yourself instead of the way you want cattle to move. Sounds should be quiet and calm, including music, motors, equipment, air and hydraulic lines. Looking at an animal is also more pressure than looking down or away.



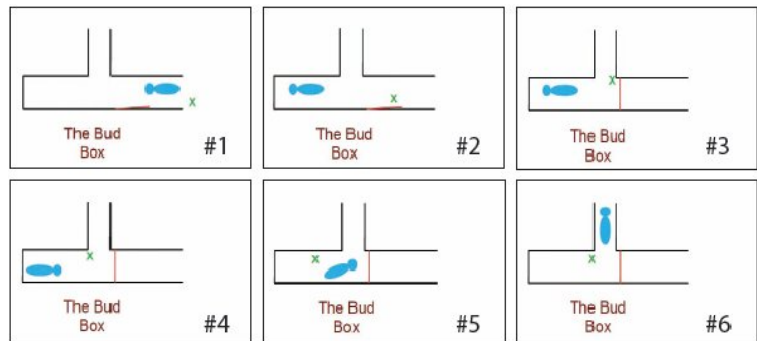
All the movements should be slow and calm. Arm waving or vigorous waving of sorting sticks should be avoided whenever possible. Flags and paddles can be used as an extension of the body/arm but should not be moved rapidly or loudly. Electric cattle prods should only

be used on stubborn cattle (approximately 1% of the cattle). ATVs are loud and are very difficult to drive at a slow enough pace to be low stress. If an ATV is used, make sure that the cows are always at walking speed; take your time. Likewise, with a horse or a dog, cows should be at a walking speed and remember not to drive cows from directly behind them due to their blind spot. Cowboys should feel free to use the stirrups of the saddle to dismount anytime being on foot is more beneficial.

Cattle themselves can cause injuries and bruising. Cattle should be dehorned within the first three months of age, along with castration and vaccination, for minimal stress. If that is not possible, they should be dehorned (not tipped) as soon as possible to prevent bruising of pen-mates. Horned cattle or cattle with the horns tipped will have twice as many bruises as polled cattle. Heifers that are cycling and bullers can fall when riding or go down when being ridden. Spaying heifers or feeding MGA will prevent cycling. Proper implant techniques (see our March/April 2010 News Feed) will reduce bullers.

Preventing injuries and bruising is very important for the health and humane treatment as well as meat quality. Concrete should have diamond impressions of 8" x 8" V grooves that are 1.5" W x 1.5" D. Brushed concrete will be worn smooth with use. Existing concrete can be grooved with a grooving machine. Woven tire tread mats are effective non-slip surfaces for cattle leaving a chute. Fencing, alleys, and chutes should have smooth surfaces, void of any protruding objects. Three inch or larger piping is recommended to reduce bruising. Vertical gates should be padded and counterweighted. Look at your existing facilities for tufts of hair or shiny surfaces, which indicate areas that need addressed.

A Bud Box is a square pen that allows the cattle to believe they are going back where they came from (which they instinctively want to do) but will lead them down a load-out alley or working alley. The cattle also instinctively want to circle around their handler, so when asking them to go down an alleyway, step to the mouth of the alleyway between the animals and the alleyway as shown. When the animals return to where they come from, they will circle the handler and head down the alleyway (see the diagram below). The Bud Box or tubs are not holding pens; cattle should be allowed to flow into the box, circle around, and then exit into the alleyway. Therefore, only allow as many cattle in the tub or Bud Box as will fit in the alleyway. Alleyways, Bud Boxes and tubs should not be solid sided. Cattle like to see their handler and are less stressed and more compliant if they do.



Lastly, use positive titles for positions to improve public relations. For example: replace pen-rider with hospital crew, care giver, or stockman. Please be safe while handling animals and do so in a manner that if someone not from rural America was watching, they would let you take care of their pet.



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