

Niman Ranch's mission is to produce the finest tasting meat in the world by adhering to a strict code of traditional husbandry principles. We have registered the following claims with the USDA:

- All Natural
- No Antibiotics Ever
- No Added Hormones Ever
- All Vegetarian Feeds
- Humanely Raised on Environmentally Sustainable Ranches
- Raised according to Humane Farm Animal Care Standards

1.) Source Verification

A representative of Niman Ranch will have a personal relationship with every supplier of cattle to the Niman Ranch beef program and our protocols must be followed from birth to plate.

All cattle must have full traceability. A Niman Ranch representative must pre-approve all cattle in the program and, if practical, visit the ranch or farm where the cattle were born.

All ranchers must sign producer affidavits confirming that their program meets all requirements of this protocol, and the Niman Ranch producer affidavit must be signed prior to or at the time the cattle are contracted for or purchased.

Breeding

Niman Ranch will select cattle based on their ability to produce the finest-tasting beef possible. To be eligible for the program, cattle must be selected by Niman Ranch-approved personnel, and must be Angus or Angus cross breeds that exhibit at least 51% black hide, no neck humps that exceed 2 inches, and no dairy characteristics.

All cattle, and the mothers of the cattle, must have been born, raised, and have spent their entire lives in the continental United States.

2.) Husbandry

Our overriding objective is for cattle to be treated humanely, with dignity and respect. Whenever appropriate, they will be allowed to express their natural behavior.

Family Ownership

Priority will be given to cattle that come from ranches where the primary occupation of the owner(s) of the business is agriculture, and where the ranch is managed, leased or owned and operated by the family.



Pasture

Cattle that have been raised on pasture fertilized with human sewage waste are not eligible for the program. Organic fertilizers spread on pastures and / or crop land is acceptable. Cattle on abused or over grazed pastures will not be allowed. Runoff will not be allowed to pollute any ponds or streams.

Neglected health problems will not be allowed in the cowherd. Cuts and necrotic prolapses are to be tended to immediately. They are not allowed to become necrotic. Bad eyes and lump jaws are to be removed immediately. There is a need to look for broken tails.

During castration, either by banding or by knife, the calves are to be watched for at least a 24-hour period.

At the home ranch, the cows will be given a body scoring.

Cattle that are severely injured, non-ambulatory, or affected by a debilitating disease that has poor prognosis for recovery or has not responded to therapy will be humanely euthanized immediately.

Feed & Supplements

Cattle will be fed an all-natural, vegetarian diet of the highest quality feeds. Cattle will never receive feeds or supplements containing any fish, animal or meat by-products (including feather meal), fecal material, or garbage.

Only vitamins, minerals, and supplements listed on Schedule B may be fed to Niman Ranch cattle or cattle raised for the Niman Ranch program.

Growth Promotants

Cattle will never be given any added synthetic or natural form of growth hormone implants. Beta agonists are also not allowed to be fed (zilmax, optiflex, etc.)

Antibiotics

Cattle entering the Niman Ranch program must never be administered or fed any kind of antibiotics. This includes antibiotics used to treat or control disease. When an animal is sick, it will be treated with the appropriate medications as per veterinary direction, including antibiotics if their use is necessary to return the animal to health. Mass treatment of cattle with antibiotics is not allowed. Under no circumstances are antibiotics to be used for any purpose other than treating an individual sick animal. Ionophores are considered antibiotics, and will not be fed to Niman Ranch cattle. Any animal that is treated with antibiotics of any kind is to be tagged and removed from the Niman Ranch program.

Preventative Animal Health Recommendations

Vaccine program recommendations are listed on Schedule C must be utilized for cattle raised for the Niman Ranch program. Specific animal health topics such as integrated external parasite management, pinkeye prevention, and castration pain mitigation is addressed in Schedule D.

Body Scoring

We will body score the cow herd when auditing a cow calf operation for Niman Ranch. The scoring system is based on a 1 through 9 scale, with a score of 1 or 2 being unacceptable.



BCS 1 = Emaciated

No palpable fat is detectable over the spinous processes, transverse processes, ribs, or hooks. The tailhead and ribs appear very prominent.



BCS 3 = Thin

Individual ribs including foreribs are easily identified but are not quite as sharp to the touch. Some fat can be felt along the spine and over the tailhead. Some tissue cover is present over the ribs toward the top of the back.



BCS 5 = Moderate

Overall appearance is generally good. Fat cover over ribs feels spongy. Palpable fat cover is present on either side of the tailhead.



BCS 2 = Poor

Animal is still somewhat emaciated but the tailhead and ribs are less prominent. Individual spinous processes are still sharp to the touch. Some tissue cover is present over the ribs toward the top of the back.



BCS 4 = Borderline

Individual ribs may not be visually obvious. Individual spinous processes can be felt when palpated but feel rounded rather than sharp. Some fat cover is present over the ribs, transverse processes, and hooks.



BCS 6 = High moderate

A high degree of palpable fat exists over the ribs and around the tailhead. Firm pressure is needed to feel the spinous processes.





BCS 7 = Good

Considerable fat cover is present with a fleshy overall appearance. Fat cover over the ribs and around the tailhead is very spongy. Fat "pones" or "rounds" may be starting to form along the tailhead.



BCS 9 = Extremely fat

The overall appearance is blocky with extremely wasty and patchy fat cover. The tailhead and hooks are buried in fatty tissue with fat pones protruding. Bone structure is no longer visible and barely palpable. Large fatty deposits may even impair animal mobility.



Figure 3. Body condition scores and descriptions for beef cattle.

BCS 8 = Fat

The animal is very fleshy and appears overconditioned. Palpation of the spinous processes is near impossible. Large fat deposits are present over the ribs and around the tailhead. Fat pones around the tailhead are abvious.



References

- DeRouen, S.M., D.E. Franke, D.G. Morrison, W.E. Wyatt, D.F. Coombs, T.W. White, P.E. Humes, and B.B. Greene. 1994. Prepartum body condition and weight influences on reproductive performance of first-calf beef cows. J. Anim. Sci. 72:1119-1125.
- Herd, D.B., and L.R. Sprott. 1986. Body condition, nutrition and reproduction of beef cows. Texas A&M Univ. Ext. Bull. 1526.
- Morrison, D.G., J.C. Spitzer, and J.L. Perkins. Influence of prepartum body condition score change on reproduction in multiparous beef cows calving in moderate body condition. 1999. J. Anim. Sci. 77:1048-1054.
- National Research Council. 2000. Nutrient Requirements of Beef Cattle. 7th Revised Edition, 1996: Update 2000. National Academy Press. Washington, D.C.
- Tennant, C.J., J.C. Spitzer, W.C. Bridges, Jr., and J.H. Hampton. 2002. Weight necessary to change body condition scores in Angus cows. J. Anim. Sci. 2002. 80:2031–2035.

The information given here is for educational purposes only. References to commercial products, trade names, or suppliers are made with the understanding that no endorsement is implied and that no discrimination against other products or suppliers is intended.

> Copyright 2008 by Mississippi State University. All rights reserved. This publication may be copied and distributed without alteration for nonprofil educational purposes provided that credit is given to the Mississippi State University Extension Service.



By Jane A. Parish, Associate Extension/Research Professor, and Justin D. Rhinehart, Assistant Extension Professor, Animal and Dairy Sciences

Discrimination based upon race, color, religion, sex, national origin, age, disability, or veteran's status is a violation of federal and state law and MSU policy and will not be tolerated. Discrimination based upon sexual orientation or group affiliation is a violation of MSU policy and will not be tolerated.

Publication 2508

Extension Service of Mississippi State University, cooperating with U.S. Department of Agriculture. Published in furtherance of Acts of Congress, May 8 and June 30, 1914. MELISSA J. MIXON, Interim Director (POD-07-08)



3.) Finishing Lot Protocol

All cattle will be finished in a Niman Ranch partner's approved finishing lot.

Feed & Supplements

Cattle will be fed an all-natural, vegetarian diet of the highest quality feeds. They will never be fed animal or meat by-products including feather meal, poultry litter, or aquatic by-products. Only feed and feedstuffs listed on Schedule A and vitamins, minerals, and supplements listed on Schedule B may be fed to Niman Ranch cattle.

All rations and ration changes must be approved before use.

Finishing Lot Husbandry

Feeding facilities and pens will be maintained to ensure the health and safety of our cattle. Pens and shelters will be designed to take into account the natural behavior of the animals and so as not to bring on unnecessary stress or to risk injury or the health of the animals.

Whenever possible, cattle will be housed with their natural social group (animals that were born and raised together).

Any disrepair – broken chutes, gates, pens, exposed nails, etc. will be fixed immediately.

Cattle Handling & Loading facilities:

- Non slip flooring (can be dirt). Less than 2% falls under the NCBA guideline
- Prod score not over 10%
- When cattle leave squeeze chute, should be walking or trotting (75%) (NCBA)

Cattle will be kept in pens with adequate room to behave naturally; i.e., move freely, exercise, and with sufficient space for each to lie down in a full lateral position simultaneously. At a minimum, there will be between 150 to 300 square feet per head depending on season and geographical location. There also must be at least 1 foot of bunk space per head provided regardless of the animal's age or degree of finish.

During wet months bedding will be provided when appropriate to keep cattle comfortable.

When needed, shade will be provided for the cattle, and sprinklers will be available as needed for cooling and minimizing dust. The use of sprinklers will depend on the dust situation and whether or not there is natural year-round moisture from rainfall.

Cattle that exhibit open-mouth panting must be provided heat relief. Head bobbing is a precursor to open mouth panting. It should be looked out for.

Water will be provided free choice with clean, fresh water constantly available. Troughs will be cleaned regularly. At the troughs, there will be slabs of concrete or packed earth for the cattle to stand on, and cattle will have sufficient room to drink so that they will not need to continually compete for space at the trough.

Persons moving animals must handle them in a way that avoids undue stress. All necessary steps must be taken to ensure that animals are not injured or caused to suffer during loading, unloading, processing, sorting, or transport.



Prods – Electric prods should not be carried around. They can, if necessary, be used for 3 things:

- 1. An animal won't go into the squeeze chute.
- 2. Animal is down in the squeeze chute.
- 3. Animal is down at a truck stop.

Cattle will be monitored at least once daily to check for sickness, injury, or distress and to acclimatize them to being around people.

Cattle will have access to a high-quality, balanced ration delivered fresh twice daily at 10 to 14-hour intervals through a Total Mixed Ration (TMR) delivery system. Cattle that are fed through a self-feeder will have the same quality feed available to them at all times. Distiller Grains must not be above 40% of the ration. Optimum ration is 12 to 20%.

All cattle will be processed in a timely manner (within 5 days) after their arrival at the finishing lot to avoid the spread of disease, boost the immune system, and ensure the overall health of the cattle. Vaccination boosters will be administered with every effort to avoid undue stress, and will be administered only in the area in front of the shoulder. At all times, humane handling will be practiced.

In the event an animal suffers accidental injury, it shall receive individual treatment designed to minimize pain and suffering. Injured animals will be housed and transported separately from uninjured cattle. If the injury is serious enough to require it, the animal will be euthanized on the ranch by a trained person.

Every necessary step will be taken to ensure that Niman Ranch approved finishing lots have no negative impact on the environment. Manure and runoff must adhere to local EPA and federal restrictions.

Manure will be managed as a beneficial resource and Niman Ranch finishing lots will work with local farmers to ensure the maximum beneficial use of manure for fertilizing nearby farms.

Cattle Mud Score

A mud scoring system will be used for cattle in a feedlot situation. It will not be used during the dry months of the year – June thru September.

Estimate a mud score for all of the animals in each of 5 pens. The estimate is an average of the animals.

- 1= Clean animals with some mud on feet and ankles.
- 2= Mud on the legs above the knees. Sides and belly clean.
- 3= Belly of the animals has mud cakes on them. Sides are clean.
- 4= Belly and sides of body have mud cakes on them.

The first 3 are acceptable, # 4 is not acceptable

Source Verification and Individual Animal Identification System

All cattle entering a Niman Ranch approved feedlot will wear an individual tag that will stay with them until slaughter. These tags will enable the feed lot manager to identify each individual animal. At the time of tagging these animals, all related information must be documented, including color, sex, a code tracking it back to its source ranch and genetics, information on any vaccinations, and all other individual information that came from the ranch when they arrived.



4.) Processing Facility

Niman Ranch personnel may be present to assist in the handling and data collection of cattle at the processing facility and be a "familiar face" at that facility.

The slaughterhouse must be designed for low-stress movement of cattle and be approved by Niman Ranch for humane handling and processing of cattle.

Plant must adhere to AMI guidelines and include an annual 3rd party Animal Welfare audit.

Cattle should not be able to see other cattle being dismembered.

Whenever appropriate because of travel times, cattle will be delivered to the slaughterhouse the evening before and be allowed to rest. Free choice water will be provided.

Niman Ranch cattle will be segregated at the facility.

The slaughter plant will be USDA inspected and meet all government regulation for the slaughter of cattle for human consumption. After slaughter, carcasses will be handled according to the facility's USDA HAACP plan for Niman Ranch cattle.

Non-ambulatory animals will not be dragged.

Handling of the animals will be done with the utmost care in loading and unloading, as well as moving the cattle.

Definitions

Animal by-products

Includes any mammalian, aquatic or avian tissue, fat, blood, brain, bone, spinal column, feathers, offal, hide, hooves, horns, tallow and/or any other part not listed that is derived from the body parts of another creature.

Therapeutic antibiotics

Antibiotics used to treat illnesses in animals.

Sub-therapeutic antibiotics

Antibiotics that are administered through supplements, feed or water used to increase health, rate of growth, feed efficiency and/or to offset poor husbandry.

Ionophores

lonophores are listed as antibiotics with the FDA and we honor that listing. Therefore, ionophores would be considered a sub therapeutic antibiotic.

Bad Eye

Advanced cancer has invaded tissue around the eye.

Notice

Niman Ranch reserves the right to modify these protocols at any time to protect the quality of its beef and its cattle. Niman Ranch strongly recommends an aggressive health program that includes vaccinating against clostridial and respiratory diseases, controlling internal and external parasites and a well balanced vitamin and mineral program that enhances the immune system.



Schedule A

Feeds and feedstuffs permitted in backgrounding and finishing beef for Niman Ranch. For any other feed or feedstuff, contact Niman Ranch personnel for approval.

Alfalfa hay Alfalfa meal Alfalfa silage Almond hulls Almond hull meal Barley grain Barley hay Beet pulp Brewers grains Canola meal Carrots Citrus pulp Corn distillers Corn grain Corn gluten Corn ground high moisture Corn ground earlage Corn silage Corn stalks Distiller's grains Enzymes Flax seed Flax seed meal Grain Grain meals Grain oils Grape pumice Grass native/improved

Grass hays Grass silage Hominy feed Kelp dried Kochia Lactose Legumes Legume hays Legume silage Linseed meal Meadow hay Milo grain Molasses beet Molasses cane Molasses/whey Non-protein nitrogens naturally occurring from grains Oat hay Oat grain Oat silage Orchard grass hay Pasture-native grass range Pasture-improved grass range Pasture-irrigated permanent Peas Potatoes (whole only) Rice bran **Rice hulls**

Rice mill run Rye grass hay Rye grass pellets Rye grass silage Rye grain Safflower meal Sorghum grain Sorghum silage Soybean hulls Soybean meal Soybeans Sudan grass Sudan grass hay Sudan grass silage Sunflower seed meal Teff hay Teff grain Triticale silage Vegetable by-product Vegetable oil Vegetable proteins Wheat hay Wheat grain Wheat mill run Wheat middlings Wheat straw Wealage



Schedule B

Vitamins, minerals, essential elements, and supplements permitted in backgrounding and finishing beef for Niman Ranch.

For any other vitamins, minerals or essential elements, contact Niman Ranch personnel for approval.

Aspirin BHT Biotin Calcium carbonate Calcium chloride Calcium phosphate Calcium sulfate Chelated forms of: (Zinc) (Manganese) (Copper) (Selenium) (Cobalt) Chlorine Choline chloride Cobalt carbonate Cobalt sulfate Copper oxide Copper chloride Copper sulfate Dextrose Dolomitic limestone Enzymes Flavorings (Natural & Artificial) Florine Folic acid Iodine (EDDI) Iodine (potassium iodate) Iron carbonate Iron oxide Iron (ferrous sulfate) Lactobacillus Lactose Limestone I-Lysine Magnesium carbonate Magnesium sulfate Magnesium oxide Manganous oxide Manganese sulfate Mendadione Mineral oil Molybdenum Niacin Phosphorus (Mono-Dical) Phosphorus (Dicalcium) Potassium sulphate Selenium (Sodium Selenite) Sodium Chloride (Salt) Sulfur Thiamin Vitamins A, B, D3, and E Yeast (live active) Yeast culture Zinc sulphate Zinc oxide Zinc methionine (ZinPro) ZinPro 4-Plex.



Schedule C

Niman Ranch recommends a vaccination and prevention program designed to work with your cattle and ranch management program. Please consult your veterinarian when selecting the vaccines that best fit your program and qualifies for ours.

Always read and follow vaccine label directions.

Always use proper injection techniques and administer all injections in front of the shoulder or neck area. Whenever possible, use sub Q labeled products.

Always provide adequate nutrition which includes a vitamin and mineral program that enhances the immune system. Animals should always have access to fresh water and quality forage.

Include vaccinations or management practices that are unique to your operation and/ or are of value to ours. A well planned preventive health program should work to eliminate animal stress. This can also be accomplished by handling livestock quietly and humanely.

Off label drug use must be done with vet approval.

Vaccines recommendations for Niman Ranch beef

Calf Hood Vaccinations: Calves should be vaccinated on cows at two to four months of age. Clostridial 8-way IBR, PI3, BVD, BRSV viral vaccine IBR and PI3 should be chemically altered modified live or modified live with veterinarian's approval (Niman Ranch requests that a kill vaccine not be used). BVD and BRSV can be killed or MODIFIED LIVE.

Pre-Weaning Vaccinations: We recommend that calves be vaccinated two to four weeks prior to weaning and boostered at weaning. The other option would be to vaccinate at weaning and booster according to the vaccine label instructions.

Vaccinate with the above mentioned vaccines.

It is prohibited to wean calves the same day they are shipped.

Preconditioning: Cattle need to be pre-conditioned If cattle are preconditioned, they will have been weaned 30 to 45 days prior to shipping, have received all calf hood and weaning vaccines and have been administered a parasiticide for the control of internal and external parasites. They have been provided a nutritional base that meets the above criteria.

Yearling Program: Cattle should have received all of the calf hood and weaning vaccinations, parasite control and annual boosters of those vaccines.

Other Approved Vaccinations: Pasteurella Haemolytica and/or Multocida, Haemophilus Somnus, Interanasal Respiratory, Pinkeye, scour prevention and all reproductive vaccines Fusogard (Fusobacterium Necrophorum Bacterin) for the vaccination of healthy cattle six months of age or older as an aid in the reduction of clinical signs of footrot and the number and size of liver abscesses caused by Fusobacterium Necrophorum Tetnas.

If there are other health issues unique to your area, please let us know so we may discuss appropriate and permitted treatments.

Some coccidiostats are approved for use - corrid and deccox.



Schedule D

Producers Guide to Managing Pain Associated with Castration

A.J. Tarpoff, DVM, MS

Castration is a common husbandry practice for cattle producers. Castration has multiple benefits. The most important benefit is reducing aggression, resulting in fewer injuries to the animals and care takers. The practice also increases meat quality and consistency. Castration procedures are typically performed surgically with a knife or with a constricting band.

Research has indicated that castration is a painful procedure regardless of the age of the animal it is performed. However surgical risks and objective measurements of pain are increased the older the bull calf gets. So it is recommended that cattle should be castrated at the earliest age practical to decrease complication risks and levels of pain.

Use of medication to lower pain following castration helps decrease stress and increases animal comfort thus improving overall welfare. Use of pain mitigating techniques has been shown to decrease measurable signs of pain, increase feed intake, and decrease the amount of time taken to "mother up" after working the cattle. There are two main types of products that are used for pain control in cattle. The two classes are anesthetics and anti-inflammatory drugs. There are currently no medications in the US labelled for pain mitigation. When using pain mitigating medication, federal and state laws require producers to work with their local veterinarian under an agreement called a valid veterinary-client-patient relationship (VCPR).

Anesthetics

Local anesthetics such as Lidocaine can be used. These products when used correctly, completely block the intended area similar to what a dentist uses before doing a painful procedure. Lidocaine must be injected locally into the testicular cord, testicle or scrotum before the procedure is done (~5cc per cord, directly into testicle, or 10cc Subcutaneous "ring" injection around the base of the scrotum). This product starts working rapidly (2-5 minutes) after injection and typically last up to a couple of hours.

It is recognized that the use of local anesthetics does increase the handling time of animals undergoing a castration procedure.

Anti-inflammatories

These products are typically referred to as nonsteroidal anti-inflammatory drugs (NSAIDS). They work systemically to inhibit and block inflammatory processes that lead to discomfort. There is only one NSAID product approved for use for pain in cattle Banamine Transdermal (flunixin meglumine). The labeled use is for pain associated with footrot, so usage for reasons other than footrot needs veterinary approval. This product requires pour on administration. There is also a Banamine (flunixin meglumine) injectable. This product can only be used intravenously (IV) in cattle. Due to this constraint and relatively short duration of this activity, it is seldom used. Recent research has shown that oral dosing of Meloxicam gives several day duration of activity from a single dose. Meloxicam has cattle approved formulations in many countries, however it is not labelled for use in cattle in the U.S. Under direction of a veterinarian, off label use of this product can successfully accomplished under a regulation known as AMDUCA. An adequate meat withdrawal must be set by the prescribing veterinarian. Meloxicam is available in tablet form. A dosage of 45mg/CWT orally administered has been shown to be highly efficacious. This means three 15mg tablets are given orally per 100lbs of body weight.

Choosing one of these strategies, or a combination of both are acceptable strategies for mitigating castration pain in beef cattle. It is important to always maintain clean functional castration equipment. In order to reduce the risk of tetanus, it is recommended to vaccinate castrated bull calves with a tetanus bacterin (multivalent clostridial vaccines) prior to or a time of castration. When knife castrating, it is important to keep those animals in a clean environment post castration.



Managing Pinkeye in the Cow Herd

A.J. Tarpoff, DVM, MS

Pinkeye (Infectious Bovine Keratoconjunctivitis) can be a costly disease for cattle producers during the summer and early fall in Kansas. Understanding the cause, signs, treatment, and prevention of this disease can go a long way in reducing pain and discomfort for the cattle and the pocket book.

Cause

Pinkeye is a multifactorial disease that is often caused by bacteria, Moraxella bovis. Factors that can contribute to the disease are as follows:

- UV radiation from the sun
- Dust
- Grass awns, scratches on the eye from grazing tall grass
- Face flies
- Flies feed on discharge from the eye. They can spread the bacteria rapidly from animal to animal.
- Stress
- Concurrent disease (IBR, BVD)

These factors can cause physical irritation to the surface of the eye initiating the disease, or inhibit the body's natural defense mechanisms.

Signs

Excessive tearing, blinking, and squinting are all early signs of pinkeye. The excess tears often drain down the face collecting dirt and grime. This can be seen from a distance. As the disease progresses the eye becomes extremely red, the clear part of the eye becomes white and cloudy. The clear cornea can form an ulcer and even rupture in severe cases.

Treatment

Injectable long acting oxytetracycline products are often used with good effect. There are other veterinary prescription options as well. It is always important to work with your local veterinarian and have a valid Veterinary Client Patient Relationship (VCPR). If pinkeye is becoming an issue on a premise, the veterinarian has the tools and expertise to help in face of an outbreak. Samples may be sent to the diagnostic lab to determine the best course of treatment. To help with the healing process, it is recommended that a patch be glued over the eye. An eye patch does two things to promote healing. First, it takes away the irritant of the sun's UV radiation. Eliminating this irritant will increase cattle comfort during the healing process. Second, the patch can help decreasing the speed of the disease by physically blocking flies from feeding on the tears of the affected eye.

Prevention

Prevention starts with ensuring optimal herd health. Quality forage along with Vitamin and trace mineral supplementation supports a strong immune system. The immune system can be hindered during times of stress from shipping, weaning, weather, and changes in feed. This is why a solid vaccine program against respiratory pathogens such as IBR and BVD is important. These viruses can contribute to the severity of pinkeye outbreaks. There are pinkeye vaccines available on the market. But inherently they have some downfalls. There are many different subtypes of the Moraxella bovis bacteria. Many of which can be isolated from just one infected animal. Although the vaccines have several strains, unfortunately they are not cross protective. This means if a different strain of the bug infects the animal, disease will still occur. The pinkeye vaccine still has its place in a herd health plan, but disease may still occur. If these vaccines are to be used, it is important to administer at least 4 weeks prior to pinkeye season (some products require 2 doses) to ensure adequate response. Other ways to prevent the disease is to manage the environment and vectors of the disease. This can include mowing tall stands of grass and weed in pasture. This reduces the scratching potential while grazing. Fly control is also very important Strategies may include fly tags, pour-on products, dust bags, etc. Providing simple shade structures can decrease the irritation of the sun during the middle of the day. Also isolating infected animals may decrease the spread to other animals. Using these strategies will help prevent pinkeye severity on the operation.



Fly Management

A.J. Tarpoff, DVM, MS

External parasites during the summer months can be a heavy burden on cattle and producers alike. Painful bites and risk of disease transmission is common among many of these nuisance pests. In cattle, several fly species can often be a culprit as well as ticks. Controlling these pests takes properly timed management. This article will discuss the insects, their management and control options.

The culprits

It is estimated that horn flies alone may account for up to a billion dollars of damage and loss to the cattle industry each year. The horn fly is a blood feeding insect that inflicts a painful bite. Economic impact can be seen with as little as 200 flies per animal. This can be visualized by horn flies covering the withers and going about half way down the side. Infested animals are often seen switching their flanks, moving constantly, flicking tails, and even standing in water in attempts to escape the painful bites. All of these actions decrease grazing behavior and expend vital energy, increasing the stress on cattle. The economic impact hits producers in decreased average daily gain, and reduced weaning weight of calves. Horn flies spend the vast majority of their lives on the cattle themselves (usually on the backs and withers of cattle). The flies only leave the animal to lay eggs on fresh manure patties.

Face flies feed on the protein rich secretions from the eye and nose. Face flies are the primary vector for spreading the bacteria that causes the disease known as Pinkeye. Pinkeye in cattle is also a major economic concern to producers. It has been estimated that pinkeye accounts for 150 million dollars in losses per year through decreased production and treatment costs. Although multiple factors play a role in pinkeye, face flies are generally apart of the spread of the disease. As with horn flies, face flies lay eggs on fresh manure patties. One main difference between the behavior of these two pests, is the face fly can travel several miles between animals, and spend less time on the animals themselves.

Other blood feeding insects such as the stable fly, horse fly and multiple species of ticks also commonly effect grazing cattle during the summer months. On top of painful bites and blood loss from heavy infestations, these pests can either be a mechanical or, in the case of ticks, a biologic vector of anaplasmosis. This disease infects cattle's red blood cells and can cause death in mature cattle that have not been exposed to this pathogen before.

Management

It is important to understand that combating these external parasites during the summer months takes a multimodal approach. There is a vast array of products on the market to help control these pests. Each product is designed to work in a specific way, against certain targets, for a specified amount of time. Expectations of a product to last from turn out to grass until the first frost, or to eliminate 100% of the pests is unrealistic and close to impossible. Producers should develop an integrated management plan to combat these pests.

Pasture management is vital to control external parasites such as flies and ticks. Brush and weed control in a pasture helps eliminate resting areas for ticks. Strategies such as burning and herbicide use can be vital to manage the risk. After a prescribed fire, cattle spend most of their time in the fresh lush growth where tick numbers would be very low. However, areas untouched by the fire may still harbor large numbers of ticks such as woody draws and waterways where brush, shrubs and ground litter are prevalent.

Stable flies tend to be more of a confinement or barnyard issue, but have increased occurrence in pasture settings. Typically, this is due to winter feeding sites and build-up of hay residue and manure. This mixture provides an ideal location for stable flies to flourish. Rolling out hay during the winter feeding months greatly reduces the number of stable fly larvae that survive the winter. Hay feeders tend to leave a large amount of residue on the ground into the spring. Cleaning feeding areas prior to late spring will reduce the habitat for stable fly larvae to develop.



Cattle Insecticides

There are a multitude of animal health products to help specifically control targeted external parasites in grazing cattle. They can include insecticide impregnated ear tags, pour-ons, sprays, oilers or dusters, injectable, and feed through products. Usually a combination of these products are utilized to provide coverage during the summer months. As with any animal health product, it is extremely important to read and follow all label directions of use. It is also important to note that most of these products have a slaughter withdrawal time, so documentation of treatment dates is crucial. Common classes of insecticides include pyrethroids and organophosphates. Continued use of one class of product will promote resistance in the area fly population. So using one chemical class each season and rotating classes on a seasonal basis is critical to maintain the usefulness of these products. Timing is a critical component of insecticide use. Each of these products have an expected duration of efficacy. Producers often utilize these products early in the spring but the products start to lose potency and efficacy in the late summer months when we need them the most. It is often recommended to hold off treatment until fly levels on cattle hit the critical point (100-200 flies per animal). If additional treatment is indicated later in the season after a product has already been used, alternate the insecticide class when changing control methods. Work with your local veterinarian who understands your individual management strategies to tailor fit a plan.

Tags

Fly tags are excellent tools. To get the most benefit from them, wait until the middle of May or even June to put them in to ensure the tags still have effect later into the season when they are most needed. Many available tags may have effective duration of 12-15 weeks. It is recommended to only tag cattle once per season. It is also important to remove these tags at the end of the season. Leaving the tags in will expose these parasites to a sub-therapeutic level of the active chemical that greatly increases the likelihood of resistance development.

Pour-ons

These ready to use formulations are administered to the topline of cattle. They are dosed according to body weight. Common products have label claims against flies, lice and even ticks. These products have similar chemical classes to fly tag products. Reapplication of these products may be necessary. These products last for varying amounts of time. Use the economic threshold of ~200 flies per animal as an indication for retreatment.

Dust bags/cattle rubs

We often rely on cattle to self-apply the products used on dusters or rubs in the pasture setting. To increase the effectiveness, fencing off and controlling entry points of commonly used areas can ensure application to the animals of the herd. These areas can be watering or mineral source areas. Read the label instructions carefully these products may require specific carriers to work properly. Recharging these sites with the proper product mixture in the recommended intervals will also have to be done during the season.

Sprays

Some products available come as a concentrate to be mixed with water before applying to cattle. These products can be useful for individual animals or groups of animals. Options for administration can range from high pressure high volume spraying in a handling facility to low pressure low volume hand held sprayers in the field.

Larvicide or Insect Growth Regulators (IGR)

These products are fed to cattle and are commonly included in certain mineral products. The products pass through the animal and have efficacy in the manure. They work by either destroying developing larvae or disrupting the normal development process. The process reduces the amount of new fly activity in a given area. However, flies do have the ability to travel over distances from neighboring operations, so overall elimination with these products is not practical.

Endectocides

Endectocides are the class of products whose main use is control of internal parasites (dewormers). The most common class are the Macrocyclic Lactones. Common ingredients in this class include the ivermectins. These products come in injectable and pour-on formulations. Even though their main action is against internal parasitism, their residual activity does provide coverage against external parasites for a period of time. Reliance and reapplication of these products during the grazing season is not recommended for fly control due to resistance issues with internal parasites. These products are often administered at the beginning of the grazing season and the activity against external parasites can be seen early in the season.

External parasites are annoying to livestock costly to animal performance. Timely management and appropriate use of insecticides will help minimize their impact.



20 "NOs or NEVERs"

of Niman Ranch's Backgrounding & Finishing Program

- 1. No implants or synthetic growth promotants
- 2. No antibiotics of any kind. Sick animals are to be treated and removed from the program
- 3. No ionophores
- 4. No untraceable cattle allowed into the program
- 5. No animal or meat by-products
- 6. No Vitamin D2
- 7. No animal tallow, fats, or blood or bone products
- 8. No put-together or more than one iron, one owner cattle unless approved by Niman Ranch personnel.
- 9. No cattle with eared or continental breeding
- 10. No cattle born or raised outside of the United States
- 11. No cattle will be purchased through an order buyer/ trader without a prior personal interview of the ranch on which the cattle have been raised, and all required Niman documents signed
- 12. No fed fecal material, garbage, processed food waste or pastures that have been grown with human sewage sludge
- 13. No Phosmet based pour on products. No Del-Phos Emulsified Liquid, GX-118, Imidian
- 14. 50 WP, Lintox HD, and Prolate are prohibited.
- 15. No beta agonists (zilmax, optiflex)
- 16. No weaning prior to 3 months, unless the health of the cow or calf is in jeopardy
- 17. No wattling (brisket mutilation for identification)
- 18. No ear mutilation (removal of major portions of the ear for identification)
- 19. No weaning on the trucks of calves
- 20. No use of urea



Producer's Signature

CATTLE SUPPLIER AFFIDAVIT

Niman Ranch Beef Cattle Operations 1765 West 121st Ave, Suite 400 Fax: (410) 341-8031 · Phone (208) 789-3928 Email: cattleranchers@nimanranch.com www.nimanranch.com

As a supplier of quality feeder cattle to the Niman Ranch beef program, I agree by signing this affidavit that the following management protocols outlined below have been adhered to:

- All animals have been treated humanely, with dignity and respect.
- All cattle and their mothers have been born and raised only in the continental United States.
- Cattle are Angus or Angus cross breeds that exhibit at least 51% black hide, no neck humps that exceed 2 inches, and no dairy characteristics.
- Cattle have been managed using sustainable agriculture practices that improve environmental health and economic viability.
- Any cattle receiving treatment with therapeutic antibiotics have been removed from the Niman Ranch program.

Cattle supplied to Niman Ranch are PROHIBITED FROM EVER receiving the following:

- Antibiotics of any kind (all cattle given antibiotics must be tagged as having received them and will not be accepted into the Niman Ranch program)
- Ionophores (examples, but not limited to: Bovatec and Rumensin)
- Growth hormones, supplemental hormones and steroids.
- Feeds or supplements containing any fish, avian, animal or meat by-products such as fish meal, feather meal, and poultry litter. This includes all vitamins, minerals, proteins, and milk replacers.

Ranch Name

• Garbage, fecal material, processed food waste or raised on pastures that have been grown with human sewage waste.

i loadool o olgilatalo						
Producers Name Printed Address			# of Cows	Breed(s) of Cattle		
			Types of Marketing (check ones that apply)			
City	State	Zip	- O Calves Sol O Yearlings	d Off Cows	O Calves Preconditioned O Finish	
Phone Number			Number of head covered by this affidavit:			
E-mail Address			Calving Period:			
			First born call	f:		
Today's Date			Last born calf:			
			Do you have the ability to give individual birth dates?			
			All cattle covered by this affidavit will be 30 months of age or younger at the time of shipping to the feedlot. Please check the box and initial for verification.			

Niman Ranch reserves the right to modify these protocols at any time to protect the quality of the product being produced. Niman Ranch strongly recommends an aggressive health program that includes vaccinating against clostridial and respiratory diseases, controlling internal and external parasites and a well balanced vitamin and mineral program that enhances the immune system.

Birth Certification and Country of Origin Documentation							
Birth Date(s) of Cattle Covered by this Affidavit	Months		Year				
Does this affidavit cover all the cattle you will ship to us this year?							
Location(s) Born and Dates at each Location:							
(1) Address / City / St	tate	(2) Address / City / State					
(1) Dates		(2) Dates					
Location(s) Weaned and Dates at each Location:							
(1) Address / City / St	tate	(2) Address / City / State					
(1) Dates		(2) Dates					
Location(s) From Weaning to Marketing and Dates at each Location:							
(1) Address	(2) Ad	ddress	(3) Address				
(1) City and State	(2) City and State		(3) City and State				
(1) Dates	(2) Dates		(3) Dates				
Brand(s):		Location(s):					
Identifying Marks:		Ear Tags:					
Additional Information:							

OFFICE USE ONLY

Lot #: # of Head Shipped: Sex of Animal: Purchase Weight: Date of Purchase: Method of Purchase: Date Delivered to Feedlot: Individual ID Start #: Individual ID End #: