

HERD HEALTH



A sound herd health program is a must in today's competitive beef production program. The first rule to good herd health is a sound preventive veterinary medical program. Use a veterinarian to determine an adequate vaccination and therapeutic program and perform diagnostic procedures, including autopsies and proper submission of samples to diagnostic laboratories. The veterinarian should also train the producer to properly perform procedures that do not require the services of a veterinarian.

Cattle producers should be equipped with the proper facilities to handle and restrain cattle for treatment. Proper working chutes and headgates can save a producer much time and labor as well as prevent injury to the cattle.

The Beginning Herd

Disease problems will be held at a minimum if a herd is maintained as a closed herd. A beginning herd usually cannot be started in this fashion. Purchase animals from a single source, if possible. Obtain a history of the herd health before purchasing, including the vaccination program and past diseases.

Purchasing virgin breeding stock and bringing them to the farm at least one month prior to breeding time is best. The new animals should be isolated from other cattle on the farm and routine tests conducted to identify any incubating disease. Purchase breeding cattle only after a thorough physical examination by a veterinarian including specific tests for brucellosis, tuberculosis, leptospirosis and any other diseases known to be prevalent in the area that may be tested by serological methods. Bulls should have a thorough check for breeding soundness.

Herd Health Program

The proper health program varies from herd to herd and particularly from region to region in Arkansas. A single program will not fit all herds throughout the state. Some herds may have very few health problems and, therefore, a minimal program will suffice. Others may need a very extensive herd health plan. A disease may be prevalent in one herd or area and be absent in another. The herd health program should be tailored to fit the individual herd.

Suggested Herd Health Practices

Breeding Herd (Cows, Bulls, Replacement Heifers)

- Fertility test bulls prior to the breeding season.
- Vaccinate for leptospirosis.
- Vaccinate for IBR, BVD, PI₃ and *Campylobacter fetus* (vibriosis), prior to beginning of breeding season and while females are open (not pregnant) if recommended by your veterinarian.
- Treat for internal parasites on a routine basis. Timely administration of dewormers will result in better control of internal parasites.
- Practice good external parasite control procedures; treat for flies and lice – follow recommendations on products available.
- Examine all females for pregnancy after the conclusion of the breeding season and cull open cows.
- Isolate all new additions to the herd.

Calving Time

- Observe cows closely at calving time.
- Remember, the pasture is probably the best calving area.
- Keep animals due to calve soon in an area where handling facilities are available.
- Have your veterinarian instruct you on how to handle maternity cases, what equipment and medication is needed and when you should seek professional help.
- First-calf heifers usually are going to have more trouble calving than older animals and will need closer observation and more assistance.

Calves

- Dip the navel cords on all newborn calves with a disinfectant such as iodine.

- Make sure calves nurse and get colostrum (cow's first milk) within two hours of birth. Keep some colostrum frozen for emergencies and have some form of an esophageal feeder available for use on weak calves.
- Identify calves soon after birth.
- Castrate and dehorn calves at an early age. It is easier and fewer problems occur when done early. (Use caustic dehorning material – paste or liquid.)
- Vaccinate all calves with Blackleg 7-way, IBR-BVD-PI₃ and leptospirosis at approximately 90 days of age.
- Brucellosis – Vaccinate all replacement heifers between 4-12 months of age against brucellosis or as recommended.
- Treat for internal parasites on a routine basis.



FIGURE 26. A method of deworming.

- Eye problems – **First obtain a diagnosis** and then follow the veterinarian's advice as to treatment and possible preventive measures. Good fly control and close observation, so that proper treatment may be given early, are two things that will greatly reduce losses.

Other Herd Health Practices

- Provide good basic nutrition.
- Provide adequate salt and a balanced mineral supplement.
- Supply vitamins A and D through the feed.
- Keep feet trimmed and corns removed from animals, especially bulls. Get this work done before breeding season.

- When administering injections, be sure to follow Arkansas Beef Quality Assurance guidelines.

Treatment of Stocker Calves

Death loss can be the difference between profit and loss in a stocker or backgrounding operation. Respiratory infection is a major problem in newly purchased feeder calves. Isolate new calves from other cattle on the farm and follow these procedures to minimize loss.

For calves that have been bought:

- Rest for 12 to 24 hours after arrival on the farm.
- Provide nutritious, easily digested feed, adequate bedding and clean, fresh water. Provide windbreaks to protect from cold, wet weather. Avoid close confinement in poorly ventilated structures.
- After 12 to 24 hours, administer vaccines if the cattle appear to have recovered from the stress of shipping.
- Castrate bull calves.
- If calves are not bought but come from your own herd, start here:
- Vaccination recommendations:
 IBR-BVD-PI₃
 Leptospirosis
 Blackleg 7-way
 Growth implants (e.g., Ralgro; Synovex-C, -S or -H; or Compudose)



FIGURE 27. Vaccinating cattle using the "tenting" method.

- Optional vaccinations:
BRSV
Pinkeye
E. coli
Haemophilus somnus
Pasteurella haemolytica
- Treat for internal and external parasites as indicated. Most calves should be treated for worm infection, and some may need treatment for infestation of lice.
- Closely observe cattle for the first month.
- Visibly sick cattle should be isolated and treated. Hospital pens should be maintained separate and at a distance from cattle on pasture.
- Provide (free choice) trace mineral salt and a balanced mineral.
- Provide easy access to clean water.

Common Diseases

Diseases that affect reproduction are prevalent throughout the state. The effects may be abortion, sterility, weak calves and poor breeding records. Infectious diseases in this category most common to Arkansas beef producers are brucellosis, leptospirosis and vibriosis (*Campylobacter fetus*).

Brucellosis is also known as Bang's Disease. State-federal programs identify reactor cattle at markets, herd quarantine and testing – all are part of an effort to eradicate and control this disease in Arkansas. Currently, Arkansas is a Brucellosis-Free state. All producers should vaccinate heifer calves between 4 and 12 months of age. No treatment is available for brucellosis-infected cattle.

Leptospirosis is known to exist in all parts of the state. It is spread from a carrier animal through infected urine and contamination of feed and water supplies with urine from infected animals. Abortion outbreaks can occur 10 to 14 days after exposure to the organism. Blood tests can identify carrier animals, but it is difficult to pinpoint the individual strain that causes leptospirosis. There are vaccines that are specific against five strains known to cause infection in cattle, and vaccination is recommended.

***Campylobacter fetus* (vibriosis)** is a venereal infection transmitted between animals during natural breeding. The disease produces a temporary sterility with few abortions, extended breeding seasons and poor conception rate. Vaccination is recommended in known infected areas.

Other diseases causing reproductive problems are IBR, anaplasmosis, nitrate toxicity, molds, nutritional deficiencies and others.

Other infectious diseases of importance in Arkansas are:

Anaplasmosis is a protozoan disease that affects the red cells and produces severe anemia. It is most prevalent in the southern half and rice-producing areas of Arkansas. The disease is spread by bloodsucking vectors or contaminated instruments. The disease is controlled by identification of reactors, antibiotics, vaccination and good husbandry practices.

Blackleg is an acute infectious disease of cattle present in all parts of Arkansas. The disease produces a gas gangrene in the muscle tissues. Death losses can be prevented by proper vaccination. A vaccine containing Blackleg 7-way should be used on all calves at 2 to 3 months of age. Repeat the vaccination at 6 to 8 months of age. In some areas of the state, vaccinating all adult cattle annually is necessary to prevent death due to blackleg.

The **respiratory disease complex** can be caused by a combination of IBR, BVD, PI₃, *Pasteurella* and a stress factor. Various combinations of vaccines may be used with varying results.

Pinkeye is a troublesome disease throughout the summer caused by a bacteria in combination with external irritants. For prevention or treatment, follow advice of a veterinarian.

Several **forage-related problems** plague Arkansas beef producers – grass tetany, nitrate poisoning, fescue toxicosis, prussic acid, ergotism, pulmonary emphysema, acorn poisoning and many plant poisonings.

Miscellaneous disease conditions of importance are cancer eye, warts, bloat and footrot.

Internal parasites such as roundworms (nematodes), tapeworms and flukes and, to a lesser degree, lungworms all invade Arkansas beef cattle. All herds should have a surveillance program to identify status of the herd and arrange a treatment schedule for cattle in the herd.

External parasites – Horn fly, ticks, grubs, face fly – all are problems.



FIGURE 28. Dust bag for insect control.

Plan a proper treatment program with the proper timing. Contact your county Extension office and a veterinarian for more information.

Cattle Vaccinations

Vaccination programs will vary with the location of the farm and the type of production.

Programs should be planned by the producer in consultation with a veterinarian.

Unnecessary use of modified live vaccines can introduce organisms into a herd. Vaccines are not a substitute for good management and prevention programs which include selective purchases, isolation and testing prior to the movement of new animals into the herd.

Vaccine	
Brucellosis	Calfhood (4-12 months)
IBR	Before Breeding
BVD-PI ₃	Before Breeding
BRSV	Before Breeding
Vibriosis	Before Breeding
Leptospirosis	Before Breeding
Blackleg 7-Way	Before Breeding
Anthrax	Optional as Directed
Anaplasmosis	Optional as Directed

Vaccine		
BR	Recommended	Annual (Killed or Intranasal)
BVD	Recommended	Annual
PI ₃	Recommended	Annual
BRSV	Recommended	Annual
Leptospirosis (5-Way)	Recommended	Annual (every 3 to 6 months in some areas)
Vibriosis	Optional	Annual (30-60 days before breeding)
Trichomoniasis	Optional	Annual (30-60 days before breeding)
Pinkeye	Optional	As Needed
Anthrax	Optional	Annual
Blackleg 7-Way	Optional	Annual

TABLE 22. Vaccination Schedule: Calves*

Vaccine		
Blackleg 7-Way	Recommended	Preweaning
IBR-BVD-PI ₃	Recommended	Preweaning
Leptospirosis	Recommended	Preweaning
Brucellosis	Recommended	Heifers (4-12 months)
BRSV	Optional	As Needed
<i>Pasteurella</i>	Optional	Preweaning
<i>Haemophilus somnus</i>	Optional	Preweaning
Pinkeye	Optional	As Needed
<i>E. coli</i>	Optional	Vaccinate Cows (twice 30 days before calving)
Anthrax	Optional	As Directed
Anaplasmosis	Optional	As Directed

*Do not use modified-live products on calves that are still nursing cows.

Health Calendar and Cattle Vaccinations

For Spring-Calving Beef Herds

JANUARY

- Vaccinate yearlings for IBR-PI₃-BVD.
 - They will be free of maternal antibodies.
 - They will have recovered from weaning stress.
 - Conception will not be affected.
 - Pregnant cows won't be exposed to shed virus.
 - They will be mature enough for maximum response.
- Vaccinate yearlings for leptospirosis (5-strain).
- Weigh replacement heifers and adjust ration to reach target breeding weight.
- Assess cow body condition and adjust ration to assure good condition at calving.
- Feed magnesium oxide (MgO) to cows through mid-April to prevent grass tetany.

JANUARY- FEBRUARY-MARCH

- Calving Season
 - Heifers bred to calve January 2 to March 1.
 - Cows bred to calve February 1 to April 1.
 - Observe cattle due to calve often: know about when labor begins; be present when help is needed; know when to call for veterinary assistance.
 - See that calves get colostrum within 6 hours (preferably within 1/2 hour) after birth.
 - If calved in confinement, soak calf's navel in iodine preparation immediately.
 - If delivery assisted, inject cow with antibiotic.
 - Separate young and thin cows from mature and well-fleshed cows.
- Evaluate bulls for breeding soundness.
 - Complete physical examination.
 - Rectal examination.
 - Semen collection and evaluation.
 - Mating behavior observed, if possible.
- Vaccinate breeding herd for *Campylobacter fetus* (vibriosis), leptospirosis, IBR and BVD.

- a. After calving and 30 days before breeding.
- b. Consider multiple vaccination of bulls with increased dose as alternative to vaccinating females.

MARCH 26 - MAY 25

1. Breed heifers (have them to target weight).
2. Vaccinate calves with Blackleg 7-way.
3. Castrate and implant bull calves.
4. Remove horns from calves.

APRIL THROUGH OCTOBER

1. Constantly control flies.
 - a. Sprays, backrubbers, dusters, ear tags.
 - b. Use approved products according to label instructions.
2. Minimize Pinkeye
 - a. Clip pastures, provide shade, control flies.
 - b. Treat clinical cases immediately.
 - c. Treat all cattle to clear carrier animals.
 - d. Treat all additions to herd.
3. Consider Anaplasmosis-Antibiotic control program.

APRIL 25 - JUNE 23

Breed cows.

AUGUST

1. Pregnancy examine heifers (near August 1).
 - a. Estimate calving date by early examination.
 - b. Cull open heifers.
 - c. Sell surplus pregnant heifers.
2. Brucellosis vaccinate heifer calves.

- a. Must be done by veterinarian or official technician.
- b. 4 to 12 months of age.

3. Castrate bull calves if not done earlier.
4. Implant steer calves with growth implants.
 - a. First time at castration regardless of age.
 - b. Every 90-120 days thereafter until sold.
5. Deworm all calves.
 - a. Most Arkansas calves need deworming.
6. Vaccinate calves for leptospirosis.

SEPTEMBER

1. Pregnancy examine cows (near September 1).
2. Physical examine cows and mark for culling.
3. Vaccinate cows for leptospirosis.
4. Grub/lice treat all cattle with recommended product – follow recommendations on products available.
5. Vaccinate calves.
 - a. IBR-PI₃ (intranasal vaccine)
 - b. Blackleg 7-way

NOVEMBER

1. Wean and weigh calves.
2. Deworm and implant steer calves to be held over.
3. Select replacement heifers (50% to 75% extra).
 - a. Calculate feeding program to reach breeding weight by March 26.
 - b. Feed in groups to achieve projected gain.