

Problems Encountered with Retaining Yearling Calves on Farms in the North

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The practice of shipping or retaining calves in the Northwest in recent years has reached full cycle. The practice a number of years ago of some ranchers was to ship the heavy calves (400-500# approx.) at weaning, and retain the lighter calves, winter them and sell them in July and August as long yearlings.

For a number of years the feedlot operator kept dipping into the lighter calves because of the demand. In the past two years a complete turnabout has occurred due to the economics of the cattle industry from the standpoint of price and feed. So at present we have completed a cycle and are now where we were a few years back.

Many operators at present are reducing cow numbers to make room for the yearling operation again on heavy and light calves alike, but the problems of raising, weaning, and wintering the calf is the same as it has always been. It's rather like a wedding vow between the cow-calf operator and his calves, "in sickness and in health, till sale do we part."

Of course the first consideration given in weaning or purchasing (which occurs locally) of calves is the ever present problem of respiratory diseases. These can be a problem on some ranches even before any attempts are made to wean calves and is usually due to stress conditions of trailing, trucking or weather conditions.

The two most common respiratory problems of the BRD complex encountered are PI₃-pasteurellosis complex and IBR. PI₃-pasteurellosis complex is the most common and IBR is the most costly if it becomes a problem, basically because of its failure to respond to treatment in the severe respiratory form along with its other manifestations.

The weaning process is accomplished by separating cows and calves and removing the calves to a corral or paddock with feed bunks of one type or another, away from the cows if possible. If mother is out of sight, she is out of mind as far as the calves are concerned.

Clean water should be available and easily located by the calves. It takes a few days for calves to get used to stock waterers and feed bunks. Too large a corral is as bad as one too small. These animals travel considerable miles in the first few days. One of the most important factors is feeding three to four times daily to get the calves' minds off their mothers to avoid the least possible stress condition.

All calves are observed at least twice daily for inappetence, dehydration, and reluctance to move. If

any such symptoms are observed they are removed from the herd, isolated, examined and treated until they have recovered or died. If the morbidity rate reaches 10%, herd treatment is recommended with medicated feed or water. Sulfathiazole and Cornhusker® or electrolytes in the water being the preferred method of choice.

Prevention of bovine respiratory diseases with a planned vaccination program still leaves a few things to be desired, but has made great strides in recent years. The intranasal vaccines have proven very satisfactory to date. These are given preferably ten days or two weeks prior to weaning, but can be used readily at weaning time or during an outbreak of the disease with no ill effects. If only one vaccine were available for use in prevention of respiratory diseases this author would select IBR vaccine, basically because it has proven itself in the field many times over.

The clostridium infections are a constant problem from birth to shipping time. Routine vaccination for blackleg and malignant edema control the disease quite well. Clostridium perfringen Type C infections are becoming recognized as a serious problem in some areas. It is a problem of well-doing calves on lush pasture in the late summer while still on the cow and in the weaning lot when on a good growing ration.

BVD is seldom a problem in calves except in isolated cases. Very few clinical cases are noted. During serology surveys working with problems of abortions and newborn calves, it has been noted that most dams run a titer to BVD antibodies. This natural exposure and immunity of the dam and calves may account for the lack of incidence of BVD.

Anytime an acute death occurs in good-doing animals and there is suspicion of bloat, enterotoxemia or other clostridium infection should be considered. Deaths from clostridium perfringen Type C usually follows a change in the environment, such as weather conditions. There is only one control for the problem, and that is by prevention through vaccinations. Control of the problem is usually accomplished by administration of vaccines such as Electroid 7 at two or three months of age and again at weaning. Some ranches require a booster vaccination every 90 days to prevent death losses.

External parasites such as lice and grubs cause considerable reduced weight gains if not controlled. The pour-on insecticides are used widely in the fall to control lice and grubs in calves and adult cattle. It

does a very good job, but at times a follow-up treatment with a pout or spray for lice is needed after two or three months.

Internal parasites can be a problem and is becoming a more and more serious one for ranches and lots, causing reduced weight gains. These particular groups of cattle are monitored with egg counts. If deemed necessary, they are treated with injectable or oral wormers. Some use the pellet wormers but, in this instance, the animal that needs the medication the most gets the least.

Coccidiosis is of major concern in calves kept in lots after a month or two of exposure to fecal material from contaminated waterers and feeders. An outbreak can be very explosive under these conditions and necessitates herd treatment with medicated water or feed with sulfas, elimination of concentrates from the ration, feeding a good grass hay if available, and reducing the exposure by providing more area or clean lots until immunity has developed. Individual cases are isolated and treated, usually with sulfas and supportive therapy when indicated. I have found no treatment effective to date for the so-called "nervous" form of coccidiosis when an animal is down and in convulsions.

Urinary calculi is of considerable importance in the western plains area of the United States in steer calves. To date, the true cause of the problem remains to be determined. The incidence in some groups may reach as high as 10%. Dehydration from

other causes, such as bovine respiratory diseases, weaning, etc., leads to the problem. Controls consist of delayed castration for better development of the urinary tract, providing an adequate salt intake, even force feeding it at times to increase water consumption. The use of force feeding ammonia chloride apparently in certain instances is beneficial.

Early observation and diagnosis is of great importance because the results of early treatment with antispasmodic drugs or surgical intervention is much more gratifying.

Eye infections and ulcerations are common problems due to IBR, BCD, bacterial infections, grass awns, etc. These are handled by treating with antibiotic and cortisone powders, injection earlier, or suturing the eye closed if ulcerations are present.

Ringworm is usually a common problem of the winter months and, other than unsightly, causes very little problem. If it gets severe enough, a spray of 1% Captan (plant fungicide) is used on the calves, corals, and feed bunks.

Central nervous system diseases seen are polioencephalomalacia, TEM, aberrant bacterial infections, but usually not as a herd problem. They are diagnosed as individual cases, usually on post-mortem.

In summary, the problems of wintering calves are the same in the north as anywhere else in the United States. Prevention and control of these problems are accomplished by previous histories, observations and proper diagnosis.

Panel Discussion

Dr. Paul Nicoletti
Dr. Paul Becton
Dr. Ben Plummer

Dr. Jodie Blackwell
Dr. Jack Ward
Dr. B. R. Clay

Question—You didn't say anything about supplementing calcium.

Answer—That is the secondary problem in the pathogenesis. In other words the decreased magnesium results in an impairment in calcium homeostasis, so if you can get at the primary problem you have the secondary problem licked. But in our case we have found that wheat pasture is not adequate in calcium, we definitely do supplement calcium.

Question—Reference has been made to the influence of transaconitic acid, you made no reference to that. I wondered if you could comment on that.

Answer—The subject of wheat pasture poisoning or grass tetany is something that has been worked on for many, many years and there are many angles that are being approached. Aconitic acid is one of the intermediary compounds in the tricarboxylic acid cycle. The "trans-" form is very high in some plants. It is not readily utilizable by rumen microbes. It takes

an adaptive population to handle it. So what happens, you get a build-up of aconitic acid which will act as a chelator of metal ions. That has been one of the theories relative to impaired absorption of magnesium. It can work two ways, directly as a chelating agent as transaconitic acid or it can work as a competitive inhibitor for the enzyme aconitase which is necessary for citrate to go to isocitrate. Therefore you get a build-up of citrate and citrate too can become a chelator. So you can have a two-way effect. In summary: Yes, there are some possibilities that aconitic acid may be involved and we find that the wheat plant during cold periods builds high levels of transaconitic acid. Other cool season grasses do, too.

Question—The gentleman from Wyoming got his calves weaned and without any bad winter storms. I wondered if he would care to include those in a weaning and wintering program.

Answer—If you are in an area where you have bad