

Receiving and managing high-risk cattle in the feedyard

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Abstract

Receiving high-risk cattle into a feedyard can be very challenging. Good animal husbandry is especially important in these situations. Commonly, a history of the cattle is sketchy or non-existent. When these situations arise, the best vaccination and treatment program ever conceptualized will not be effective unless good cattle management practices are employed as well.

Key words: receiving, management, high-risk, metaphylaxis, stress, morbidity, mortality, low-stress, cattle, feedyard, feedlot

Résumé

Recevoir des bovins à haut risque dans un parc d'engraissement peut se révéler un grand défi. Un bon élevage des animaux est particulièrement important dans ces situations. Fréquemment, les antécédents des bovins sont fragmentaires ou inexistantes. Dans ce cas, le meilleur programme de vaccination et de traitement ne pourra être performant sans que de bonnes pratiques de gestion des bovins ne soient utilisées en même temps.

Introduction

According to NCBA statistics, 93% of beef cattle producers have a herd of less than 100 head. When this is taken into consideration, it is easy to understand why there are so many calves that are sold as feeder cattle without any kind of preconditioning effort. To vaccinate and wean calves, producers must have facilities where the cattle can be vaccinated, dewormed, and so on, that can hold the calves (and keep the cows out), and have a system to feed the calves during the preconditioning period. So, the issue of high-risk calves is unlikely to be eliminated. Much of this article is the author's personal preferences or opinions, developed over 50+ years of working with cattle and 25 years as a beef cattle veterinarian.

High-risk

If the term "high-risk" could be defined with a single word, that word would be "mismanaged." The classic description of high-risk would include calves weighing less than 600 lb (275 kg), with no known history of vaccination or a known history of no vaccination, commingled with calves from different farms (commonly occurs at livestock auctions and order buyer collection centers), and hauled long distances. How-

ever, it is important to remember that circumstances can turn relatively low-risk animals into higher risk if, for example, the truck hauling them breaks down in inclement weather.

History

Even though the above definition of high-risk cattle includes "no known history," this doesn't exclude the possibility of being able to learn something about the cattle. So, any historical information should be sought, even if the history is that the buyer knows for certain that these calves have never been vaccinated – it is useful information.

Preparation

When receiving high-risk cattle, it is very important to be prepared before the cattle arrive. Start by walking through the facilities in the way cattle will when they arrive. Walk through the loading chute and make sure there are no sharp edges or protruding objects that may injure cattle. Continue to the scale (if they are weighed on the ground) and then go into the receiving pen. The receiving pen should have clean, dry bedding; fresh, clean water; long-stemmed hay (preferably grass hay); and some milled ration available before the cattle arrive. Walk through the processing facility and make sure it is safe for the cattle. Make sure all noise-reducing components (rubber bumpers between contact points) are in place; replace them if they are not in place. Check the squeeze chute and make sure it is operable, lubricated, and safe. Vaccine, parasiticide, eartag, implant, disinfectant, and antibiotic inventories should be checked. Tools such as syringes, taggers, parasiticide applicators, implant guns, implant trays, hypodermic needles, and encouragement devices (flags, paddles) should also be checked to make sure they are on hand. If a hydraulic squeeze chute is used, consider moving the hydraulic pump and motor outside the building, or away from the chute, if there is no building.

Arrival

Truck. The cattle should be evaluated as they arrive. Before they are unloaded, check the truck and trailer that hauled them. Is the trailer relatively clean, or is it covered in mud, ice or snow? Are the exhaust stacks on the truck tall enough to direct the exhaust over the trailer, or are they blowing exhaust directly into the trailer? How long did it take the truck to make the trip? As the truck driver approached the loading dock, did he drive carefully, or did he jerk the cattle around when he started and stopped, or take corners too fast? Once unloaded, what does the inside of the truck look like? Is there deep manure on the floor? Is the inside of the trailer blackened with diesel exhaust? All of this infor-

mation can help to make decisions on how to manage these high-risk cattle.

Unloading. Cattle should not be allowed to be unloaded until the person in charge of receiving is ready. Make sure the truck driver understands that the cattle are to be handled quietly and not rushed off the truck, and electric prod use should be minimal (less than 10% of the calves). In general, it is not safe to enter the trailer, so this should be avoided if at all possible. As stated earlier, it is common to have very little history on high-risk cattle, so there will also be very little knowledge as to how the cattle were handled prior to arrival. Many livestock auctions have put more effort into training their crews to use low-stress handling techniques, but the fact is market owners and managers know that they have to get cattle in the ring and back out quickly and efficiently to keep the buyers' interest, so these techniques may be compromised on sale day. Consequently, it is very important that the receiving person establish trust in newly arrived cattle. Simply standing near the end of the unloading chute, far enough away to not impede unloading, but close enough that the cattle can see the receiving person and not feel threatened, can go a long way toward establishing trust and easing the stress on the cattle. As cattle are unloaded, they should be counted and observed for injuries or misfits, i.e., if the cattle are supposed to be steers, and there are bulls or heifers on the load, management should be notified. If the cattle are weighed on the ground, take care to avoid overcrowding the scale. Leave plenty of room for the cattle to move, even if this requires 2 or 3 drafts of cattle to be weighed.

Receiving Pen. As stated earlier, receiving pens should be bedded and have fresh, clean water, long-stemmed grass hay, and milled ration available before cattle are introduced to the pen. The receiving person should move the cattle quietly and slowly. Many times, cattle that come off grass operations (whether they are high-risk or not) have no experience drinking from a tank or automatic waterer. The receiving person must draw the cattle's attention to the water sources. This can be done by draining the automatic water tank and letting it refill so the cattle hear the water running or, if the water source is a traditional steel or polyethylene tank, the tank can be 2/3 to 3/4 full when the cattle arrive, and as the cattle are exploring the pen a hose can be put in the tank high enough above the water surface that the water makes a noise as it finishes filling the tank. Let the cattle rest overnight as a minimum before processing.

Cattle Observations

As cattle are observed during unloading, there are several things that can provide more insight to the risk level of the cattle:

Shrink. How much do the cattle weigh at arrival vs how much they weighed when they were purchased? If cattle shrink 6% or more, it is a sign of fluid loss at the cellular level, indicating a higher risk.

$$\% \text{ shrink} = 100 - \left[\left(\frac{\text{arrival wt}}{\text{purchase wt}} \right) \times 100 \right]$$

Gut fill. Gauntness is an indication of rumen fill. It can help to indicate how long it has been since the cattle have eaten or drank.

Backtags. Once cattle have developed trust, backtags can often be observed. The top numbers on the backtag (2 digit number, followed by 2 to 3 letters) indicates the state of the livestock auction where the animal was sold (Table 1). The letters indicate the actual livestock auction (Figure 1). Using this information, the manager or the veterinarian can determine how many different states and/or livestock auctions are represented in the group. One can also look for small bald patches on the hide, or remnants of a backtag, which may indicate that there are "trader" cattle present. Trader cattle are those purchased at 1 livestock auction and re-sold a few days later at another auction in an effort to take advantage of market fluctuations.

Table 1. States and their corresponding numerical codes.

Code	State	Code	State	Code	State	Code	State
11	ME	41	MN	58	FL	86	AZ
12	NH	42	IA	61	KY	87	UT
13	VT	43	MO	63	TN	88	NV
14	MA	45	ND	64	AL	91	WA
15	RI	46	SD	65	MS	92	OR
16	CT	47	NE	71	AR	93	CA
21	NY	48	KS	72	KA	94	PR
22	NJ	50	DE	73	OK	95	HI
23	PA	51	MD	74	TX	96	AK
31	OH	52	VA	81	MT		
32	IN	54	WV	82	ID		
33	IL	55	NC	83	WY		
34	MI	56	SC	84	CO		
35	WI	57	GA	85	NM		



Figure 1. Cattle backtag – this backtag indicates the livestock auction was in Minnesota – Code 41 (Table 1).

Eartags and brands. Eartags and brands can suggest some form of management has occurred before the cattle were sold. If a calf has a numbered eartag, along with a fly tag, it may have been relatively well-managed, as compared to the rest of the group that may have no tags at all. Brucellosis vaccination tags also indicate management. Look also for missing eartags (holes in the ear), as some producers may have removed tags before the sale to “freshen up” the cattle. In the author’s experience, branded cattle and cattle with more management-type tags present generally have lower morbidity and mortality.

Stools. Stools might have to be observed after the cattle are in the pen for several hours. Stool consistency is another indicator of hydration status and can be watched for progression over the first week after arrival. Some stools will “stack”, indicating mild dehydration that is easily corrected. Some animals will be so dehydrated that their stools will be pelleted, similar to deer or rabbit stools. These calves will pose the biggest risk, although they can respond well once they find the water. The marketing chain is stressful, so there will be loose, runny stools present in some cattle. Workers should be cautious in pulling and treating these animals, as many times they simply over-indulged when they found the water tank. But if a large percentage of cattle in a pen have loose, runny stools, the stools may be disease associated. Blood in a few individual stools is commonplace in stressed animals, but it is still wise to include a coccidiostat in the ration. Keep in mind, however, to look at the big picture – if a bright, alert, and responsive calf has a runny stool (or the opposite extreme), don’t rush to treatment – “treat the calf, not the stool.”

Processing

All supplies and tools should be on hand before the cattle arrive. Also stated earlier, the author prefers to let high-risk cattle rest overnight before processing them. In recent years, there has been some interest in delaying the administration of MLV vaccines for 14 days¹ (or more). Whenever processing is done, the importance of low-stress cattle handling cannot be overstated. Yelling and whistling should be stopped, whips should not be allowed, and electric prod use should be kept to a minimum (less than 10% of the animals). Hands, paddles, flags, and streamers should be the primary cattle motivators. Loud noises should be reduced or eliminated – don’t allow loud music to be played in the processing barn, reduce clanging metal by making sure rubber/plastic noise reducers are intact, and don’t allow workers to bang paddles on the sides of the alleyway.

Time is a major stressor. Cattle should not be loaded into the alleyway behind the squeeze chute until everyone is ready to work. The longer cattle are held in the alleyway or in the squeeze chute itself, the more stress on the animals is increased. The author has seen some facilities with double alleyways that could hold 75 animals at once. This is not necessary, nor is it good for the cattle. The author has gone so

far as to block off 1 side of a double alleyway, and then limit the number of animals that can go into the remaining side. The person who loads the alleyway with cattle should only bring 6 to 8 head at a time, wait until there are 2 to 3 head standing behind the squeeze chute, and then get 6 to 8 head more. The goal of processing is to provide an opportunity for cattle health to improve, so they can perform well. If cattle are stressed, health will be slow to improve.

Vaccine care. Vaccines should be administered according to label directions. Most vaccines are now labeled for subcutaneous administration, so a 3/4” or 5/8” needle should be used (the author prefers 16 ga). Keep in mind, even though shorter needles are used for subcutaneous injections, inserting the needle perpendicular to the skin surface will result in an intramuscular injection. Workers still need to insert the needle at a 30° angle for a subcutaneous injection. For intramuscular injections, a 1” needle should be used. If administering a MLV vaccine, no more than 100 doses should be mixed at 1 time. All vaccines should be protected from sunlight and kept cool.

Metaphylaxis. Veterinarians should take the decision to use metaphylaxis seriously. Society, which includes beef consumers, is very concerned about how antibiotics are used in agriculture. Labels on metaphylactic antibiotics include the words “...for the control of bovine respiratory disease...” or something similar. None are labeled “...for the control of cattle purchase price...” or “...for allowing the farmer time to complete corn harvest...” If metaphylaxis is used, the author will assign a post-metaphylactic interval (PMI), which is a period of time when no cattle can be pulled for treatment of respiratory disease. Depending on the antibiotic used, a PMI may last anywhere from 3 days to as much as 10 days. The concept of a PMI can be very challenging for the producer to accept, so the decision to initiate a PMI must include a commitment from the producer.

Castration and dehorning. If the cattle are truly high-risk, they should not be castrated or dehorned at initial processing. These procedures are severely stressful and should be delayed for at least a couple of weeks, when the cattle are eating well and the pull rate has decreased. When these procedures are carried out, pain management should be included.

Daily Care

The cattle should be checked at least once daily. If a PMI is in place, it is still important to check the cattle and make sure there are no other health issues (lameness, injury, pinkeye, etc.). Also, this provides an opportunity to further develop the trust relationship between the cattle and the worker checking them. Daily check periods can be used to clean the tank and let the water run, so more cattle recognize their water source, and can also be used to encourage cattle to get up and go to the bunk to eat. Once the PMI has ended and cattle can be pulled for treatment, it can be beneficial for

the worker to check the cattle immediately after the cattle are fed. Sick cattle are less likely to have an appetite, and therefore less likely to go to the feed bunk. This can help the worker to identify animals that need treatment, and since the majority of the cattle are at the bunk eating, it should be easier to move the sick animal out of the pen for treatment if the gate is at the back of the pen! Checking for sick cattle can be challenging, especially if the trust relationship has not been developed.

Checking cattle on horseback can provide its own challenges. A large percentage of cattle in the US have never been exposed to a horse, so if a horse is used to check high-risk cattle, there will likely be some challenges. Cattle may spook and knock down fences if the horse is not introduced slowly and carefully. This is another opportunity to build the trust relationship.

Continuing to provide clean, dry bedding will help cattle adjust to their new surroundings, and give them a comfortable place to rest.

Conclusions

Receiving high-risk cattle can be very challenging. Veterinarians must work with their clients to establish good animal husbandry practices so the health program will be more effective.

Reference

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