

WEANING: DOES IT HAVE TO BE STRESSFUL?

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Buyers of Tennessee feeder cattle prefer that cattle be weaned and preconditioned in order to avoid the increased incidence of sickness and death loss that is likely on unweaned calves. By observation of weekly auctions, a high percentage of feeder cattle under 600 pounds are not weaned prior to coming to market. In fact most of them are weaned the day of or day before they are taken to market. In recent years, buyers have been paying a premium for preconditioned calves. Some like to say that buyers are paying full price for preconditioned calves and discounting unweaned calves that have not been preconditioned.

Weaning is a key part of the pre-conditioning process and the one part that many beef producers would like to avoid. A full pre-conditioning program includes weaning, teaching to eat from a feed trough and drink from a water tank. It also includes an acceptable health management protocol which prepares calves to withstand potential disease challenges that they will experience during the marketing and transportation process. This should help them get a better start in the buyer's stocker or feedlot environment. The pre-conditioning program should also include a feeding program which allows sufficient feed for the calves to gain 1.5 to 2.5 pounds per day. With the current higher prices for feed, producers may wish to make maximum use of high quality forages, but teaching them to eat grain is also expected by the buyer of preconditioned cattle.

Why Do We Not Wean & Precondition?

Even though preconditioning and marketing through special sales featuring those cattle has been proven to bring higher prices and increase net returns, most producers do not choose to do it. Reasons include the belief that it will reduce income, and that it will result in lower sale weight due to stress and shrink. Others believe it will increase the likelihood of sickness and/or death loss. Some producers do not have adequate facilities to restrain calves for vaccinating, tagging, etc. or sufficient fencing to hold calves that are being weaned. The Tennessee Agricultural Enhancement Program has assisted many producers to acquire such facilities and equipment. Finally, the beef cattle business is a "have it your way" kind of business, and there are many producers who just do not want to invest the time, effort and money for feed and facilities.

Why Should We Wean & Precondition?

When the weaning period is 45 to 60 days, it should result in increased sale weight. It is conservatively estimated that weaned calves will shrink 2 percent less than unweaned calves during the marketing process, i.e. weighing at the market. In addition, if marketing in a special graded or alliance sale, the calves are weighed on arrival, which should yield heavier sale weights than most weekly markets, which weigh out or at time of sale. Special sales of preconditioned cattle are usually assembled into truckload or near truckload lots. These larger

lots of cattle bring higher prices than cattle sold as singles or in smaller groups when prices are compared on the same day. Net returns should be higher for pre-conditioned calves, since the value of gain will usually exceed the cost of gain during the post weaning period. This would not be the case if the market is trending sharply lower during the weaning period or if the cost of feed/gain is exceedingly high.

From the buyer's perspective, calves should withstand the marketing and transportation process and go on feed quicker. The incidence of sickness (morbidity) and death loss should be lower. Feedlot managers and Todd Milton, feedlot nutrition consultant, report that morbidity and death loss of preconditioned cattle is about one half or less that of cattle which have not be preconditioned. In the feedlot calves which have been through a pre-conditioning program gain faster, have lower death loss, require less feed, thus lower feed cost, have reduced sickness and treatment costs. They also have fewer days on feed, lower interest and yardage costs and as a result of all of these factors have a lower cost of gain. Buyers will pay more for cattle expected to have lower cost of gain. When morbidity is reduced, feedlot performance is better, carcasses are higher valued and cattle are more profitable. Preconditioning programs do not eliminate sickness and or death loss, but reduce the incidence. Data from the Tennessee Beef Evaluation program in which cattle from individual producers are sent to Iowa feedlots for finishing, indicate that cattle that have to be treated for sickness after arrival gain about one half pound less per day, grade about 10 percent fewer Choice and earn \$50 to \$70 less per head.

Weaning Methods

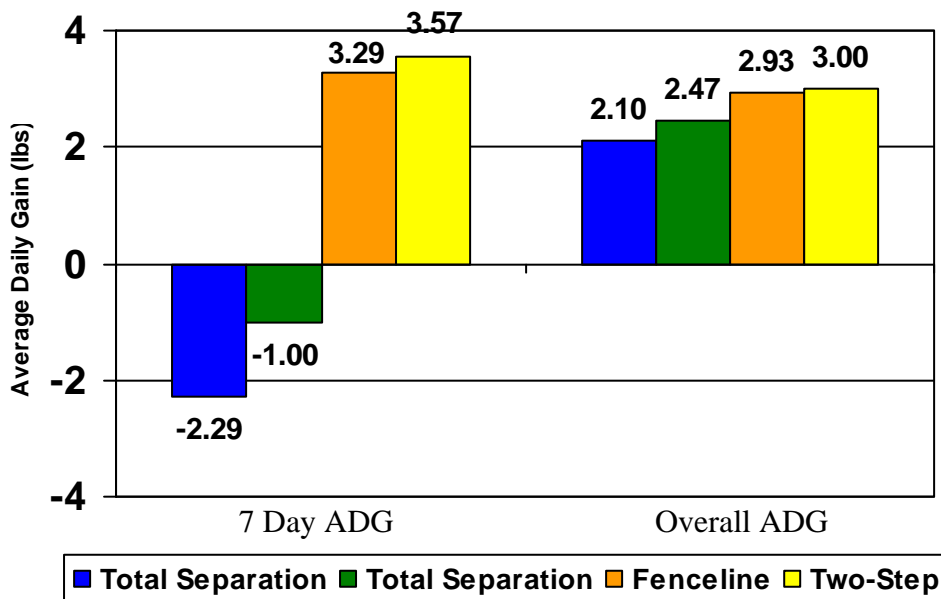
Given that in most all cases pre-conditioning pays, getting calves weaned in the least stressful method possible enhances the likelihood of continued weight gains during the process. There are several weaning methods which can be used. These include total separation in a secure pen or barn; placing a dry cow in the pen with the calves; feeding cows and calves in a pen, then removing the cows; and weaning on the signs of the Zodiac. Fenceline weaning has been used for many years and involves having the calves and cows on opposite sides of a good fence. It allows them to touch noses, but not nurse. University of Missouri has fenceline weaned 4,500 calves over 20 years using the fenceline method. They have had 4 sick calves and no respiratory disease in the calves. The calves gained at least 1.5 pounds per day for the first 60 days. A final method of weaning used on a large scale only in recent years is sometimes called the two step method. It involves applying a plastic anti-nursing device to the calf and turning it back onto grass with it's dam for about 7 days. After which the device is removed and the calf is separated from it's dam. Research by Haley et. al. (2005) using the two step method had the following behavioral results. The calves called 85% less, walked 80% less, spent 25% more time eating and gained 30% more than calves that were totally separated. Research at the Plateau Research and Education Center by Campistol and Kattesh (2010) found that calves that wore the anti nursing device for 7 days and then totally separated from their dam gained significantly more than similar calves that were left in a fenceline arrangement once the devices were removed. Subsequent research by Campistol and Kattesh (2010) examining supplemental feeding prior to weaning found that calves receiving supplemental feeding 7 days before weaning then totally separated from their dams gained significantly more than those calves left in a fenceline arrangement, as well as those that received no supplemental feed. It was stated that the age of calves could very well influence the willingness and ability of calves to go quickly on dry feed

ration following weaning. Older calves may nearly wean themselves and would be expected begin eating and gain more rapidly than younger calves.

Several weaning demonstrations have been conducted across Tennessee in the past five years. During an initial demonstration at the Bob Tilley farm in Roane County, calves which had worn the anti-nursing device for 7 days called only 12 times per hour after 24 hours, compared to 45 calls per hour for fenceline weaned calves. A demonstration at the Raymond Cooper farm in Canon County found that cows called substantially less once calves were taken from them and anti-nursing devices were removed. One of the more successful demonstrations was conducted by Calvin Bryant, Lawrence County Extension Agent on the Gamble Farm. The demonstration compared total separation, fenceline weaning and the two step method. The calves were fed a soy hull creep ration for two weeks prior to the start of the demonstration. At weaning, they were hand fed a 13% high fiber feed at 8 to 10 pounds per day, ½ half in the morning and ½ half in the evening. Part of the totally separated calves were dehorned at weaning and part were not. While not a recommended practice at weaning, it did have the expected reduced gains compared to the other methods. The results of the demonstration are found in the following table and graph. The fence line method and two step method gained nearly the same over the first 7 days and the entire 58 days. The totally separated but not dehorned calves lost 7 pounds or a pound per day over the first 7 days, while those dehorned and totally separated lost 16 pounds in the first 7 days. After 58 days the fence line and two step calves had gained 2.93 and 3.0 pounds per day, while the totally separated calves gained 2.47 (not dehorned) and 2.1 (dehorned).

Groups	Initial Weight 10/8/05	Weight at 7 days	Gain	Weight at 58 days	Overall Gain
Fenceline	581	604	+23	751	170
Two-step	545	570	+25	719	174
Total separation not de-horned	575	568	-7	718	143
Total separation & dehorned at weaning	629	613	-16	751	122

Average Daily Gain Comparison among Groups



Weaning can be the most stressful part of pre-conditioning program. Use of lower stress methods such as fence line or the two step method can greatly reduce the behavioral stress and often results in greater gains than total separation. Feeding calves prior to weaning results in them adjusting to feed and gaining more than calves that have not been accustomed to feed prior to weaning. In cases where the two step method and or supplemental feeding prior to weaning are employed, total separation at weaning results in greater weight gains than if calves are left in close proximity to their dams.

References

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