

Resource Brief: Cattle Care During Market Disruptions Due to the COVID-19 Pandemic April 2020

In response to questions received from our direct members and affiliate members, the National Cattlemen's Beef Association (NCBA) has created this resource brief to provide targeted information on cattle care and management during the recent disruptions to the beef cattle supply chain resulting from the COVID-19 pandemic. During the COVID-19 pandemic there has been a slow down in cattle processing, in part, due to the COVID-19 disease impact on the labor force in processing plants, and in part, due to the extreme disruption that COVID-19 has caused for food-service beef demand. Four major packer/processor groups account for about 85 percent of beef sales in the United States and each of these groups are experiencing temporary plant closures due to COVID-19. As an unsubsidized commodity, the beef cattle industry relies on competitive markets for our livelihood. The beef cattle industry needs to keep the stream of commerce moving as efficiently as possible to keep store shelves stocked with beef for American consumers.

When the flow of beef cattle commerce is disrupted by processing plant closures, beef cattle feeding operations are left with fat cattle ready for market that must be held back. Slowing of the movement of cattle through the market forces stockers and backgrounders to consider keeping their cattle on grass pastures longer, and cow-calf producers must monitor the cattle markets closely to determine a schedule for selling their calves. At the same time, unlike vertically integrated commodities, the beef cattle industry has greater latitude for managing market disruptions. The feeding sector of the beef cattle industry has recently had to make modifications in rations and management for their cattle in order to hold over finished cattle as well as giving consideration for limiting input on the number of new cattle entries onto feeding operations. The beef cattle industry can work to slow the number of cattle moving through the market by holding cattle outside of the feeding sector on grass, provided good pasture conditions prevail in the United States. Any occurrence of severe drought across large regions of the United States would restrict this option for the industry. In general, the process of slowing cattle moving through the market will require more forage to be fed and more cattle to be grown to larger weights on grass.

For beef cattle feeding operations, strategies to hold cattle longer will depend on the goals of the operation and the stage of feeding for the cattle. In the past, cattle growth has been programmed in a very predictable way through changing the net energy of the ration fed to the cattle. For cattle at or near market weight, it is often best to try to sell as soon as the opportunity for sale returns because the cost of maintenance is high at this stage of growth. The maintenance requirement for energy in cattle is 77 kcal/kg of metabolic body weight. For a 1400 lb (635.6 kg) steer, the metabolic body weight is 126.6 (obtained by taking the BW in kg to the 0.75 power). It is currently not well understood if maintenance requirement calculations can be applied to a <u>fat</u> 1400 lb steer as measurements to quantify net energy for maintenance (NEm) requirements in the past for cattle were usually tailored for non-fat cows and lighter feeder calves. Restricting energy in fat steers could result in loss of fat, which is not the intent. Feeding

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a maintenance diet to fat steers would probably require limit feeding a high energy diet or feeding a higher forage diet, and looking to feed the least expensive forage, probably corn silage in most regions.

Limit feeding a high energy diet would require 24 inches of feed bunk space per 1400 lb steer and only works if all cattle have access to the feed at the time of feeding. On average, most feedlot pens only have 12 inches of feed bunk space per animal. If open pens exist in the feedlot, cattle could be spread across two pens to increase the individual feed bunk space for the use of limit feeding. When using limit feeding, it might be best to restrict to 12-13 megacalories (Mcal) of NEm. Alternatively, the only option to "slow" cattle weight gain in some feeding operations could be to transition cattle onto their previous step diets, while still aiming for 13 Mcal or more of NEm. Continue to feed ionophores as usual to help to prevent bloat and acidosis problems. If slaughter is expected within the next month, then consideration could be given for continuing to feed the current diet with some modifications for roughage inclusion and removal of supplemental protein.

The Iowa Beef Center/Beef Extension Services in conjunction with the University of Wisconsin-Madison has recently prepared a fact sheet entitled, "Considerations for Slowing Feedlot Cattle Growth due to the COVID-19 Pandemic," referenced in the resources section of this document. We strongly encourage that you review the fact sheet for more specific recommendations on ration formulations. The fact sheet states that it is unrealistic for a group of cattle on feed to achieve zero growth while waiting for markets to regain ground. It notes cattle will need to maintain a daily gain of 2.5 lb per day to maintain marbling deposition, which requires feeding a diet that is at least 50-55 Mcal of NEg/Cwt dry matter. The reference also states many feeders may also choose a more moderate approach of providing 55-58 Mcal/Cwt, with or without limiting feed intake. Specific ration recommendations will vary depending upon the type of cattle. Dairy breeds, such as Holstein steers, may be fed high energy rations for a longer time period, compared to beef breed cattle, without acquiring negative effects on their fatness. Often, it is best to transition diets to avoid sudden changes in the ration composition and the amount of ration being offered. Monitor for changes in weight gain, feces, incidence of digestive upset (acidosis or bloat) and foot health to help to evaluate the effectiveness of any new feeding program. Consultation with the feedlot veterinarian and/or nutritionist is necessary in formulating the best ration for the cattle type and stage of cattle growth in the feedlot and to ensure that nutritionally balanced rations are being fed.

Beef cattle feeding operations should also be mindful of the problems that can be seen when feeding cattle to excessive weights by holding them too long. Excessively heavy cattle do not tolerate heat well and are more susceptible to acute interstitial pneumonia and respiratory stress. Heat stress can be more problematic for black-haired cattle that are lacking shade and with a temperature humidity index (THI) of 79 or greater and no night-time cooling. Additional resources on heat stress in cattle can be found in the resources section at the end of this document. Additionally, heavy cattle may spend more time lying down and may be more susceptible to bruising, which later affects carcass quality. Excessively heavy cattle can often have space problems fitting through existing handling systems and trailer doors. These overly heavy cattle should be handled quietly and with low stress handling techniques during loading and unloading to avoid the increased risk of developing Fatigued Cattle Syndrome. For more information on Fatigued Cattle Syndrome see the resource section of this document.

Pen management and examination of the stocking rate and space density in the cattle pens are both important considerations for housing excessively heavy cattle in feedlots. Cattle housed in pens at feeding operations must be offered adequate space for comfort, socialization, and environmental management. The Beef Quality Assurance (BQA) Feedyard Assessment Guide, referenced in the resources section, provides specific information on pen management.

Finally, it may be beneficial to step back the potency of the implant program for cattle or consider skipping the terminal implant for cattle at the growth stage when they would normally receive it in order to limit the rate of gain and reduce the negative impact in quality grade if a lower energy holding ration is fed to cattle within 100 days of harvest.

The United States Department of Agriculture (USDA) is leading a federal response to assist livestock and poultry producers facing the closing of meat processing plants and seeking to find solutions to ensure the continuity of operations and return to production as quickly and safely as possible. The USDA, Animal and Plant Health Inspection Service (APHIS) is establishing a National Incident Coordination Center to provide direct support to producers whose animals cannot move to market due to COVID-19 processing plant closures. Moving forward, the APHIS Coordination Center, State Veterinarians, and other state officials will be assisting producers to identify potential alternative markets, if a producer is unable to move animals.

At the end of this document, please refer to a list of resources compiled to provide additional information on cattle care and management during the cattle market disruptions associated with the COVID-19 pandemic. We encourage cattlemen and women to reach out first to their local veterinarians and nutritionists, who are most familiar with their specific cattle operations, for questions on cattle care, nutrition, and management. Other resources are available through local extension agents, university departments of animal science, BQA publications, and scientific articles. Specific information related to COVID-19 can be found on NCBA's website at https://www.ncba.org/coronavirus.aspx.

<u>Resources</u>:

*Prior to making any changes on the feeding and management of your cattle, **contact your primary care veterinarian for the feeding operation and your nutritionist to assist you with these decisions**.

Publications

- Iowa State University Extension Beef Specialists, Iowa Beef Center, University of Wisconsin Extension Livestock Program Educators, and University of Wisconsin Department of Animal Science Faculty, "Considerations for Slowing Feedlot Cattle Growth due to COVID-19 Pandemic," April 2020, <u>https://fyi.extension.wisc.edu/wbic/2020/04/24/considerations-for-slowing-feedlotcattle-growth-due-to-the-covid-19-pandemic/</u>.
- 2. BQA Feedyard Assessment Guide, "Heat Stress Procedures," pages 18-19, 2017, https://www.bqa.org/Media/BQA/Docs/feedyard assessment 2017.pdf.
- 3. BQA Feedyard Assessment Guide, "Cattle Handling," page 16, 2017, https://www.bqa.org/Media/BQA/Docs/feedyard assessment 2017.pdf.
- 4. BQA Feedyard Assessment Guide, "Shelter and Housing," page 15, 2017, https://www.bqa.org/Media/BQA/Docs/feedyard assessment 2017.pdf.
- 5. D. A. Frese, C. D. Reinhardt, S. J. Bartle, D. N. Rethorst, et al., "Cattle Handling Technique Can Induce Fatigued Cattle Syndrome in Cattle Not Fed a Beta Adrenergic Agonist," 2018, <u>https://www.ncbi.nlm.nih.gov/pubmed/27065128</u>.
- D. U. Thomson, G. H. Loneragan, J. N. Henningson, S. Ensley, B. Bawa, "Description of a Novel Fatigue Syndrome of Finished Feedlot Cattle Following Transportation," JAVMA, July 1, 2015. Vol. 247, No. 1, pages 66-72, <u>https://doi.org/10.2460/javma.247.1.66</u>.

Webinars

- 1. Iowa State Extension and Outreach, Iowa Beef Center, "Holding or Slowing Cattle for Uncertain Market Timing," April 29, 2020 at 7 pm CT with a recorded webinar session available online after the presentation date.
 - Nutrition strategies overview Dan Loy, Iowa Beef Center Director
 - Health concerns with heavy cattle in feedlots Dan Thomson, ISU Animal Science Department Chair
 - Nutritionist information Dave Rueber, Innovative Ag Services, Manchester; Dustin Puhrmann, United Farmers Cooperative, Paulina

http://www.iowabeefcenter.org/news/FeedlotConsiderationsWebinars0420.html

- 2. NCBA Cattlemen's College Webinar Series, "Health Issues in Mid-Late Fed Cattle," May 5, 2020 at 7 pm CT with a recording available online after the presentation date.
 - With summer just around the corner, producers who feed cattle need to be aware of common health issues that could arise jeopardizing their herd. Join Dan Thomson, MS, PhD, DVM Iowa State University; Myriah Johnson, PhD. Noble Research Institute; and Milt Thomas, PhD. Colorado State University as they update producers on the latest in Fatigued Cattle Syndrome, Mid-Day Morbidity in High-Performing Cattle, and Cattle Congestive Heart Failure.

https://www.ncba.org/cattlemenswebinarseries.aspx

Academic Contacts by State

- 1. Beef Cattle Extension Specialists See Appendix A
- 2. University Animal Science Departments with Beef Cattle Specialization See Appendix B

Appendix A:

Beef Cattle Extension Specialists

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Appendix B:

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