

Beef on dairy cattle – industry benefits and opportunities

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Abstract

Growth of the beef on dairy crossbred cattle population has continually increased over the past few years in the U.S. beef industry. In general, this has been a positive shift replacing the traditional purebred dairy-fed steer model. The benefits of this crossbreeding should be balanced against issues that exist in this population. Understanding the positive and negative attributes of these cattle will help lead to long term success of those wishing to participate in this production strategy.

Key words: beef, dairy, crossbred

Introduction

Traditional purebred calf-fed dairy beef production has steadily eroded over the past few years. This reduction is not the result of reducing harvest capacity in the U.S., rather a replacement by a crossbreeding model consisting of beef genetics for the sire on a of dairy dam. Beef on dairy cattle (BXD) production has become strategic alternative for several reasons. From a processing perspective, these animals have corrected some of the issues typically associated with fed Holstein carcasses: lengthy carcass size, poor carcass muscularity, a small, non-symmetrical, ill-shaped ribeye (*m. longissimus*), and ineligibility for premium carcass grades. Though these improved characteristics are appreciated, they must be balanced against challenges this population of cattle present.

The purpose of this secession will outline these benefits and opportunities of BXD from beef processing perspective. Information shared will identify areas that should be addressed by the industry to support the population of this cattle type in the U.S. Industry-wide reversion to the traditional purebred fed dairy beef production system is unlikely, as BXD are advantageous from an economic and sustainable beef production perspective. Therefore, production practices that support improvements to this cattle type are necessary for the well-being of the beef industry.

Benefits of beef on dairy cattle

Of the advantages identified, BXD excel from a meat quality point of view. Much of this is due to the focus on ribeye marbling score, as beef sires chosen for this breeding are commonly selected with heavy emphasis on this trait. This focus, coupled with complementary marbling potential from traditional dairy genetics, has resulted in a population of cattle that possess exceptional marbling scores and grade a high percentage of USDA Choice or better. This positive carcass attribute is additionally coupled with improvements in ribeye area. This improvement is not only in the form of increased size, but as well refinement in the shape. Ribeyes of carcasses from BXD possess a more symmetrical, ovular shape compared to those of purebred dairy counterparts. Additionally, utilization of sires possessing genotypic or phenotypic Angus attributes is common. This results in the offspring being predominately black hided. Excluding the portion the BXD population that exhibit

dairy type muscling, many of these carcasses have high acceptance rates for premium boxed beef programs due to all of previously mentioned attributes.

From a traditional carcass yield perspective, beef Yield Grade and harvest dressing percentage, BXD possess many positive attributes to purebred dairy carcass. As previously mentioned, BXD carcasses possess a larger ribeye than its purebred counterpart. Though a traditional-fed Holstein steer would commonly possess a lesser fat thickness, the improvement in eye muscling of BXD has compensated for increased fattening and allows for a population with a low percentage of Yield Grade discounts. Increased carcass muscularity has additionally helped overcome one of the greater concerns from a processor perspective: poor harvest dressing percentage associated with dairy influenced animals. These attributes mentioned highlight the advantages of these animals from a fed cattle marketing perspective; however, they must be balanced against disadvantages that exist in the population.

Opportunities for improvement in beef on dairy cattle

One of the greatest issues associated with traditional fed Holstein carcasses possessing is a lower percentage of edible, red meat yield due to a lesser muscle to bone ratio. Some of this has been corrected and on average BXD carcass are more favorable from a cutability perspective than a purebred dairy contemporary; however, great diversity exists in this population. Many carcasses possess total carcass muscularity that more closely mirrors dairy counterparts. Furthermore, utilization of beef genetics for the breeding has removed an advantage Holstein steers had over a Native beef: reduced backfat thickness. Commonly, back fat thickness of BXD more closely aligns with the Native population. In addition, like a purebred dairy beef carcass, BXD possess an excess amount of kidney, pelvic and heart fat. This is disadvantageous and reduces the edible portion of the carcass. These attributes reveal opportunities to overcome from a red meat yield point of view. Correction for these is warranted and should be a focus for the long-term success of this population.

Of the issues formerly identified in a traditional purebred dairy beef production model, an elevated occurrence of liver abscessation and gut health issues was common and of great concern. This issue has not been alleviated through altering the genetics. Excess liver abscessation rates in BXD are one of the greatest issues identified from processing perspective. Elevated occurrence of severe abscessation has resulted in a high rate of liver and gut mass condemnation, as well as outside skirt (*m. diaphragm*) loss resulting from adhesion of tissues. This issue is of great importance to overcome. It results in economic losses, inhibits processing, and limits beef products, whether of whole muscle or offal, available to feed the world. This is a challenge that should be corrected for the benefit of the entire beef processing supply chain.

