

Beef on Dairy Crosses: Diversification and Income Potential

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■ Take Home Messages

- ▶ Beef on dairy crosses are displacing much of the fed cattle supply previously attributable to Holstein steers.
- ▶ Beef on dairy programs represent a significant opportunity for dairies to increase income.
- ▶ The longer feeding period of beef on dairy crosses compared with that of native beef animals creates unique challenges in terms of liver abscess rates and exposure to feed costs.
- ▶ Beef on dairy programs are positioned to collect and transmit data up and down the value chain that should ultimately drive genetic improvement and create sustainable economic advantages for value chain participants.

■ Introduction

In the U.S., Holsteins have historically accounted for 17 to 22% of fed beef production. Not all slaughter plants harvested Holsteins, but all three major beef packers were involved in the harvesting of fed Holsteins. Packer contracts were offered at a defined future basis relative to beef cattle. The selling discount ranged from \$6 to \$10/hundredweight (100 lbs; cwt) dressed which is approximately an \$8 to \$10/cwt discount live. When Tyson decided to stop slaughtering fed Holsteins the market for day-old Holstein bull calves collapsed. The basis between fed beef cattle and fed Holsteins widened to \$15 to \$25/cwt discount live depending on geographical location. Tyson's decision incentivised U.S. dairies to look for alternative breeding strategies to increase the value of the day-old bull calf.

■ Perspectives

Feedlot Perspectives

Crossbreeding beef on dairy results in greater average daily gain, improved feed conversion, improved quality grade, and improved carcass cutability compared with pure dairy animals. The basis from fed beef to fed beef on dairy varies from par to a \$3/cwt discount. Beef on dairy is an opportunity to establish a consistent supply of feeder cattle that hold an advantage over the straight dairy animal in terms of feeder value. Within dairy breeds, Holsteins have the challenge of packer reluctance to harvest resulting in an extreme fed basis that limits feeder value. Straight Jerseys have little to no value as feeder animals. The average daily gain in a straight Jersey male is very low, dress is poor, and feed conversion is high. Clearly beef on dairy results in a more valuable feeder compared to straight dairy. However, it does have challenges compared with a native beef animal. Typically, placement weight is lighter than for native beef cattle, and average daily gains are lower resulting in greater days on feed. Long-fed cattle have challenges with liver abscesses that can create justification for a negative basis from the packer. Packer perspectives are discussed below but maintaining a par-to-positive fed basis is what feedlots will need to maintain a successful beef on dairy fed program. A wide fed basis has a significant impact on \$/head profitability. Feed cost is the greatest expense at the feedlot, and in long-fed cattle small changes in feed conversion have a big impact on the \$/head profitability. Feedlots are interested in procuring feeders that have been genetically

selected for improved feed conversion. Long term success of beef on dairy programs from the feedlot perspective will be a function of purchase price, daily gain, feed conversion, and fed basis relative to that of a native beef animal.

Dairy Perspectives

Use of sexed semen within the dairy industry allows dairies to have an increased supply of replacement heifers out of top dams. Beef crossbred males provide greater value to dairies compared with purebred dairy males. The threshold for a sire to be used on a dairy is that conception rate is high, calving ease is high, and gestation length is low. These simple requirements from the dairy standpoint provide opportunities to use the best genetics on the beef side.

Packer Perspectives

To meet the phenotypic requirements for Certified Angus Beef (CAB), beef on dairy cattle must be black hided. Packers are looking for beef that can be marketed as CAB. Beef on dairy cattle typically marble well, producing beef that is 75-80% AAA (Choice) or better. Crossing beef with dairy results in improved dress and carcass cutability compared with straight dairy. Beef on dairy animals have better muscle conformation compared to straight dairy, and the muscle-to-bone ratio is comparable to native beef animals. So, the cross is highly advantageous over straight dairy. Packers continue to quantify carcass cutability and the shape of the carcass relative to native beef cattle to determine what (if any) fed basis to apply. As days on high concentrate ration increase, so does the incidence of liver abscesses. This is one of the greatest negatives for beef on dairy compared with native beef programs. The incidence of liver abscesses between straight Holstein and beef on dairy cattle is comparable, but the gain advantage could decrease days on feed for the beef on dairy animals, thus lowering their risk for developing liver abscesses. Beef on dairy management results in lower greenhouse gas emissions and a smaller carbon footprint. There is a conflict because the management practices that result in positive impacts on emissions and carbon footprint also contribute to greater liver abscess incidence. The industry has yet to determine the value of lowering emissions and reducing its carbon footprint.

Genetics Company Perspectives

There are approximately 10 million dairy cows in the U.S. and 1 million in Canada. If 30% of matings are beef on dairy, with three straws of semen required per live birth, then there is opportunity to use 9-10 million doses of beef semen. There are huge opportunities to generate true progeny differences and isolate outlier sires in order to optimize feeder performance.

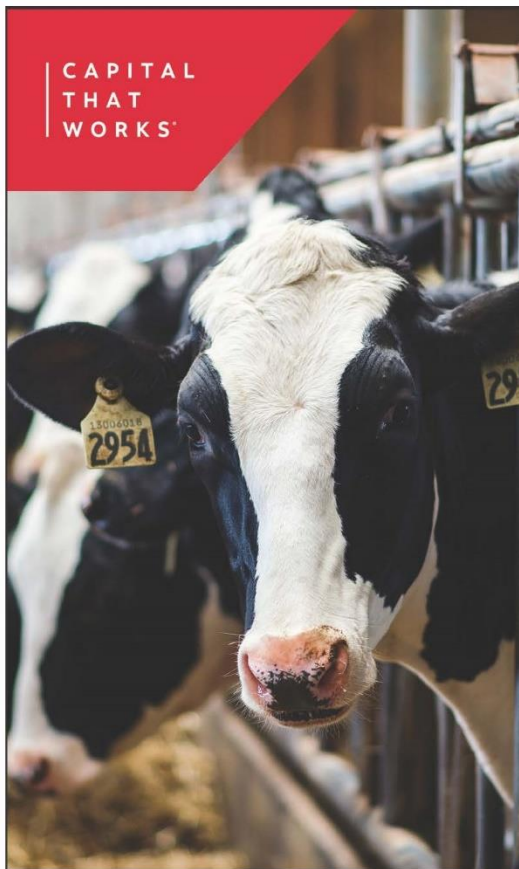
▪ Advantage to Beef on Dairy System

In native beef cattle production systems, rarely are health outcomes, performance through all management phases, and carcass data linked to sire. In the beef on dairy system the data can all be linked. True progeny differences can be determined with enough progeny per sire to overcome inherent variation due to management.

▪ Opportunity

The opportunity exists to create three to four million beef on dairy feeders annually as part of a true (and consistent) supply chain. Opportunities also exist to collect, transmit, and use data collected by the various participants and segments of the value chain to drive and measure continued genetic improvement of the beef on dairy population.





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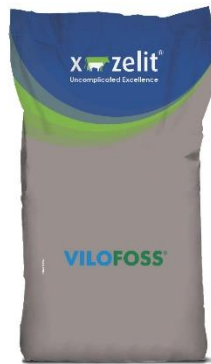
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