

# The power of beef-on-dairy breeding programs

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## Abstract

In the recent years, dairy farms have dramatically improved fertility programs, while also changing to a higher percent of sex-sorted semen used within the farm. This has led to a surplus of heifer inventory, especially for a stable dairy farm. At the same time, there is an opportunity to improve the marketability of the dairy-breed calf intended for meat production through introducing terminal beef cross sires into the breeding strategy. This introduction of beef genetics improves meat yield grade and overall carcass characteristics compared to a purebred dairy calf. A dairy producer can successfully implement this strategy knowing their total need for dairy replacement heifers for herd maintenance and/or expansion. The beef-on-dairy cross can aid in market diversification for the dairy producer and reduces the historical concerns of dairy breed animals finished in the feedlot and within the meat processing industry.

## Introduction

When considering whether to implement a beef on dairy breeding strategy on a dairy farm, it's important to consider the long-term farm goals of growth and or maintenance. Consider what changes this may have regarding other reproductive efforts the farm is considering. Also, consider the intended market for the dairy-beef cross calf and at what age will they be marketed. With the average cost to raise a heifer to a 24-month-old replacement heifer being between \$1,500-\$1,700 per animal, a farm can quickly drag their balance sheet with excessive heifer inventory. Additionally, with the improvements in sexed-semen fertility, many farms can generate sufficient heifer replacements with the top-performing individuals. Leaving the remainder of the herd to be bred to beef genetics, which measurably improves the marketability of the calf compared to a pure dairy calf raised for meat production.

## Breed and breeding characteristics

There are two general populations of beef breeds to consider, the Continental breeds or the English breeds. Continental breeds such as Simmental, Limousin and Charolais are typically more heavily muscled, lower marbling with a higher red meat yield, and take slightly longer to reach maturity when compared to the English breeds such as Angus, Hereford or Shorthorn. These breed characteristics are important to consider when looking at the resulting dairy-beef cross and the intended market for these animals. One additional consideration is that these beef breeds show different gestational lengths with the Limousin averaging 6 days longer compared to the Angus breed. These gestational variations may have a dramatic impact if the farm is attempting to manage a dry cow process based on days-carried-calf of the dam. In many herds, proper planning of needed replacement heifers can be used to calculate the potential number of dairy-beef cross calves born per month, week or year. In a 1,000-cow dairy operating a 35% cull rate, 20% heifer loss, 25% pregnancy loss, 90% sex-sorted semen and

a 35% conception rate, the farm would only need 1/3 available breeding animals for dairy replacement heifers. This leaves 2/3 of available cows and/or heifers eligible for a beef breeding strategy.

## The meat packing industry

The meat processor is looking for cattle regarding quality and yield grade potential and in groups of animals that are consistent in quality and availability. The dairy industry is uniquely poised to meet the processors' needs in delivering a high quality, consistently available calf. This will require intentional effort from the dairy producer to select the proper genetics and management strategy that will deliver results to the intended market. There are concerns from the packing industry for the dairy-beef cross animal displaying dairy characteristics in regard to the yield grade compared to the purebred beef animal. Furthermore, there is little consistency among different beef-on-dairy programs in the market today. Yield grade can be calculated using the carcass weight, ribeye area, kidney, pelvic and heart fat along with rib fat to compare performance on a standardized basis.

## Summary

In summary, beef on dairy performance concerns can be remedied with the right genetics and consistent management strategies for the intended market. The primary genetic focus should be on a genetic pool that is complimentary to the existing dairy genetic base. With these considerations in mind, many dairy producers and consulting veterinarians stand to benefit from taking advantage of this market that is uniquely suited for the dairy industry.

## References

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