“Should BEEF be in your DAIRY operation?”

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With the US beef cow herd at the lowest level in over 70 years, and resulting feeder and fed cattle prices are all-time record highs, dairy producers may be looking at options to add revenue to the operation by retaining and finishing their dairy steer calves. Profits in the beef finishing business have been very good in the last year, but that isn't always the case. This paper will give an overview of finishing dairy beef and identify several factors to consider before determining to add feeding dairy beef to the current dairy operation. Much of the dairy beef research is focused on post-weaning through finishing.

**Impact on cash flow and budget**

Deciding to retain your dairy steers will have both an immediate and long-term impact on your cash flow and budget. First, the income from the sale of bull calves will be delayed for 14-18 months before those calves are sold. Second, dairy beef, in particular Holsteins eat a lot of feed having an immediate impact on the feed needs of the operation. In comparison to beef cattle, dairy beef tend to have an increase water intake and resulting urine output which requires adequate bedding. Finally, dairy beef tend to have a higher incidence of bullers, bloat, feet and leg problems, and a higher death loss than beef cattle. All this needs to be accounted for in the budgeting process.

The University of Wisconsin has a very good budget worksheet that includes estimated budgets for calf raisers and several different dairy beef finishing systems. They update this regularly, so download their updated budgets from: [http://fyi.uwex.edu/wbic/dairybeef/](http://fyi.uwex.edu/wbic/dairybeef/)

Be sure to modify these based on your actual production data if you have it.

Dr. Steven Rust from Michigan State University shared information on finishing dairy beef to a group in eastern Iowa in 2013. He suggested dairy beef, again mostly Holstein beef, would have an average daily gain of roughly 3.30 pounds per day with a feed conversion of about 6.6 lbs. of dry matter per pound of gain. Two other sources of actual closeout data to use for benchmarks come from DeKalb Feeds and Elanco Animal Health Benchmark from AgSpan. Both of these companies divide their closeouts based on starting in-weights of less than, or more than 500 pounds. Both of these would suggest that ADG is closer to 2.6-2.8 and feed conversion is closer to 6.5 to 7.5 pounds of dry matter feed per pound of gain. Death rate ranged from 2% to over 5%.

Holsteins and other dairy beef tend to respond to implants similarly to beef breeds. On average implanted steers can expect a 10-25% increase in ADG and a 7-15% improvement in feed conversion depending on the specific implant type used. Using beta agonists may be even more beneficial in dairy beef due to the improvement in carcass weight and muscle. Optaflexx tends to show more benefit to cattle marketed on a live weight basis, while Zilmax benefits those sold on a carcass basis because of the greater increase in carcass weight and the reduction in yield grade 4 cattle.

**Impact on feed supply**

A second major factor dairy operations need to consider before finishing steer calves is the impact this decision will have on the feed supply. Holstein steers have about an 8-12% higher maintenance energy requirement than beef steers, requiring about that same level of increased feed. Looking back at the closeout data, average daily feed intakes of 18-25 pounds of dry matter can be expected. However, feed intake can be modified based on the type of feeding system used.

A simplistic look at finishing dairy beef can be broken down into three basic systems. The first is commonly referred to as the High Plains system, where lightweight calves are fed a high concentrate diet throughout the feeding time. Because calves are started light and pushed hard they are marketed in the 1300-1500 pound range. This system has the most predictable performance with the least health issues and problems. Low levels of roughage reduce the amount of rumen problems and maintain steady intakes.

The second common feeding system is a two-phase system using a high roughage diet followed by a high concentrate diet. This is common among many of the farmer-feeders in the upper Midwest. This system can utilize grazing as well as high roughage diets, but also
results in much heavier finished weights, and longer feeding times therefore delayed income during the startup period. This system tends to be more profitable when forage prices are very low in comparison to grains.

With both of these systems, roughage is a key component in the diet for many reasons. In addition to its nutrient value, roughage also promotes cud-chewing and saliva production with aids in rumen pH and health. Without adequate roughage in the diet cattle will consume more bedding or chew on boards and fence posts.

The third type of dairy beef system is a self-feeder, or steer stuffer. Cattle are often times backgrounded or grown on a high roughage system, then started on a self-feeder for the final finishing period. While this system saves the time of daily feed delivery, it requires more time and stockmanship to observe the cattle for potential health issues. One of the frequent comments of this system is the high rate of “stall out”, probably due to increased or persistent acidosis issues. Most beef specialists will recommend daily feed delivery rather than self-feeders, but if you choose this system consider using it for shorter time periods and marketing cattle at lighter weights to reduce the time on a self-feeder.

Impact on labor
A third major consideration before feeding your steers is the impact it will have on your labor demands. Few dairy producers have excess labor available, unless they are bringing home a child into the operation. In addition to the time for daily feeding, bedding and cleaning, remember that dairy beef have some unique tendencies. Increased health issues, simple boredom, and moving and handling are a few. Maybe it is the fact that they are easily bored or just inquisitive, but we often joke that Holstein steers have suicidal tendencies – if they can get themselves in a weird, bad situation, they will. And that means more of your time to fix their damages and keep them healthy.

Adequate facilities
A fourth consideration is facilities for finishing dairy beef. Beyond simply space available on your operation, remember that dairy beef are less cold tolerant than beef breeds so some protection from the winter cold and winds is a must.

Market Access
Finally, what market opportunities are available in your area? Currently we have only a few packers who regularly harvest dairy beef. Typically dairy beef receive a $10-15 discount to fed beef cattle, although that has narrowed to $6-10 recently. There are also few opportunities for risk management specifically for dairy beef. The basic biology of dairy beef also impacts marketing opportunities. Dairy beef tend to have lighter muscling and smaller, more elongated ribeyes, lower dressing percentage due to a higher bone to muscle ratio, more internal fat and less external fat. The use of beta agonists may help reduce some of this biological challenge by increasing muscle size. The other major tool we see dairy producers moving toward is the use of sexed beef semen on low producing cows to specifically produce a dairy/beef crossbred to move into the traditional commodity beef market.

In summary, retaining ownership and finishing out dairy steers can be a profitable enterprise to add to an existing dairy operation, but serious thought and budgeting is needed before making that decision. In addition to the University of Wisconsin budgets, additional resources can also be found on the ISU Ag Decision Maker page and the Iowa Beef Center website.

References:
Wisconsin Beef Information Center, http://fyi.uwex.edu/wbic/dairybeef/