Dairy influence on beef markets
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Beef is a by-product of the dairy industry and rarely has a major influence on dairy industry production decisions. However, dairy animals contribute a significant portion of total animal slaughter and beef supply. The impact of dairy on beef markets varies over time depending on long term trends and short term market conditions in both beef and dairy markets. This article summarizes the dairy industry’s impact on beef production in the 20 years since 1996.

The dairy cow herd has been relatively stable over the last 20 years varying less than 4 percent from 9.0 to 9.3 million head. By contrast the beef cow herd has varied by over 18 percent from 29.0 to 34.5 million head over the same period. Dairy cows as a percent of all cows have averaged 22.3 percent but have been at a record high of 24 percent in 2014 and 2015 as a result of low beef cow inventories.

The nature of dairy production means that basic herd dynamics are very different for dairy compared to beef. Dairy cows are culled more quickly so dairy herd turnover rates are much faster. Dairy cow slaughter averages 30 percent of the January 1 inventory of dairy cows each year compared to less than 10 percent for beef cows. On average the number of dairy replacements held each year is about 47 percent of the cow inventory. This represents about 48 percent of the estimated dairy calf crop and is nearly all the heifers born to dairy cows. This compares to beef herds where replacements heifers are roughly 18 percent of the cow inventory. About 64 percent of replacement dairy heifers enter the herd, which implies that overall about 30 percent of the estimated dairy calf crop is used for breeding. For beef herds, an average of 10 percent of the estimated beef calf crop is used for breeding females.

The primary contribution of the dairy industry to beef production is male calves and cull cows, along with some cull heifers. Most veal slaughter is from dairy calves. Adjusting for veal slaughter, male dairy calves average about 10 percent of the total (beef + dairy) calf crop. In
2015, that percentage was a record large 12.1 percent due to a low beef calf crop compared to a stable dairy calf crop and low veal slaughter. Veal slaughter has trended down for many years but reached record low levels in recent years due to the high value of feeder cattle.

New technology provides the dairy industry other ways to adjust relative to beef markets. Sexed semen and genomic testing are being used to target some dairy cows for production of replacement heifers. Conversely, cows not used to produce replacements are, in some cases, being crossbred to beef breeds to produce a better feeder animal. Dairy feeder cattle are discounted compared to beef breeds because of differences in productivity, efficiency and yield. However, dairy animals have some advantages in feedlots. Because of the uniformity of dairy genetics, these animals are very predictable in finishing. Dairy calves are often placed on feed at very light weights and may take a year to finish. Because of the predictability, dairy cattle produce carcasses of consistent quality and, for example, typically produce Prime carcasses at two to three times the rate for beef breeds.

Although dairy cows only represent about 22 percent of all cows, they represent an average of 47 percent of total cow slaughter. In 2015, dairy cow slaughter represented a record level of 57 percent of total cow slaughter. Dairy cows typically have heavier carcass weights, though increased beef cow weights over time has closed that gap somewhat. Reported cow carcass weights are an average across both beef and dairy cow slaughter and changes in cow carcass weights are sometimes more of a reflection of changing proportions of dairy and beef cows being slaughtered than changes in cow weights.

The impact of the dairy industry on beef production is always significant and has been larger than usual recently due to low beef cattle numbers. Increased beef cattle inventories as the beef herd rebuilds will reduce this impact to more typical levels in the coming years.

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Summer time often brings a few infectious ailments to beef cows. Common problems include eye infections and foot rot. Treatment of affected cows will often involve the use of antibiotics.

On very rare occasions violative residues of pharmaceutical products have been found in carcass tissues of cull beef cows. Violations of drug residue regulations can result in expensive fines (or even worse, jail time) for the rancher and a “black-eye” for the entire beef industry. It is vital that cow calf producers have a close working relationship with a large animal veterinarian in their area. If a cow has an infection or disease that must be treated, her owner should closely follow the veterinarian's directions, and also read the label of the product used. Most of these medications will require that the producer keep the treated animal for the label-directed withdrawal time. The Oklahoma Beef Quality Assurance Manual contains the following discussion of medication withdrawal times.

"A withdrawal time may be indicated on the label of certain medications. This is the period of time that must pass between the last treatment and the time the animal will be slaughtered or
milk used for human consumption. For example, if a medication with a 14-day withdrawal period was last given on August 1, the withdrawal would be completed on August 15 and that would be the earliest the animal could be harvested for human consumption. All federally approved drugs will include the required withdrawal time for that drug on the product label or package insert. These withdrawal times can range from zero to as many as 60 days or more. It is the producer's responsibility to be aware of withdrawal times of any drugs used in their operation. Unacceptable levels of drug residues detected in edible tissues collected at harvest may result in traceback, quarantine, and potential fines or jail time. Substantial economic losses may result for the individual producer as well as negative publicity for the entire beef industry…”

Producers are responsible for residue problems and should follow these four rules:

1. If ever in doubt, rely on the veterinarian-client-patient relationship you have established with your veterinarian.
2. Use only medications approved for cattle and exactly as the label directs or as prescribed by your veterinarian.
3. Do not market animals for food until the withdrawal time listed on the label or as prescribed by the veterinarian has elapsed.
4. Keep well organized, detailed records of pharmaceutical products given to individually identified animals. Include in the record, the date of administration, route of administration, dosage given, lot or serial number of product given, person delivering the product, and label or prescription listing of withdrawal dates. Examples of Beef Quality Assurance records can be found in the Oklahoma Beef Quality Assurance Manual website at the menu item "Record Keeping Forms". Records should be kept for 3 years after sale of the animal.