



Sam Dunlop

Paula Dunlop

## BELGIAN BLUES CHANGE WITH THE TIMES

Caesarean births are few in North American herds

Sam Dunlop's road to becoming president of the Canadian Belgian Blue Association (CBBA) began nine years ago when he and his wife, Paula, and their two sons emigrated from Northern Ireland. The transition from the misty isle where their families raise Charolais cattle, sheep and vegetables, to the arid Canadian prairie near Southey, Sask., involved a stint of grain farming while they established their beef herd.

"We knew we wanted Belgian Blue cattle because we knew of their background and double-muscled Beltex sheep from back home," Dunlop says. They liked the idea of raising cattle that would put the feed to good use, building muscle rather than fat and bones. In Northern Ireland, the second home of Belgian Blue cattle, the breed is promoted as the "Modern Meat Machine."

They custom fed and calved out some Gelbvieh cattle for a few years while they started building their own herd with full-blood Belgian Blues. Ulster Belgian Blues, so named for the most northerly province in Ireland, came into being when they purchased their first heifers in 2006 from Tony and Ruth Hill at Wiseton, Sask.

Today the Dunlops' herd of 20 full bloods, 20 percentage bloods, and 30

commercial cows with Belgian Blue calves at foot is an eye-catcher along the highway leading to Regina. It's not unusual to see people pulled over to take a closer look, Paula says. The breed's Shorthorn ancestry is still evident with cattle ranging from solid white, red roan, blue roan and solid black cattle. The discriminating eye will also pick up on the unique conformation, with the double muscling particularly evident in the rump, loin, back and shoulders.

Double muscling doesn't mean that Belgian Blue cattle have two of every muscle. Rather, there are more strands of fibre within each muscle. The fibres are shorter and finer and the muscles grow larger than those in cattle without this trait. Researchers determined that mutations in the myostatin gene, which normally tells the cells of the embryo when to stop dividing and begin to differentiate into fibres, likely render it inactive in cattle with the double-muscle trait. The resulting fibre structure and density leave little room for connective tissue and fat within the muscle, making beef from cattle with Belgian Blue genetics naturally lean and tender.

"The key is that Belgian Blue and Belgian Blue cross calves have to be fed properly, that is, fairly aggressively,

so that they are growing fast and putting on muscle at a quick rate to finish out at a youthful age. If the environmental factors before slaughter are right, they will yield tender, juicy beef without a lot of marbling," says Matthew Heleniak, manager and cattle buyer with Norpac beef packers in Norwich, Ont. The company handles a high percentage of the Belgian Blue calves raised in Canada, buying finished calves as well as feeder calves to finish out at its own facility.

Heleniak likes calves with Belgian Blue genetics because they typically have a high dressing percentage. The beef from Belgian Blue crosses with British breeds or Simmental cattle has more marbling than straight Belgian Blue calves, which generally grade Canada A for marbling.

The flavour of the naturally lean beef is preferred over the buttery flavour of marbled beef by Europeans and ethnic groups in Ontario's large cities, he explains. Between the good demand for Belgian Blue beef and the breed's great dressing percentage, packers will pay a 15 to 20 per cent premium for finished Belgian Blue calves.

Ken Holgerson, who still runs a handful of Limousin cows along with Belgian Blues near Olds, Alta., agrees that the management of the feeding pro-

gram and quality of the feed show in the Belgian Blue meat. Belgian Blues require high-energy rations for the last 120 days on feed in order to grow properly.

From his many years of past experience working in his father-in-law's butcher shop, Holgerson readily attests to the European claim that Belgian Blue cattle are a "butcher's delight." "The dressing percentage on the Belgian Blues is phenomenal. We had steers dress out as high as 67 per cent. We would never get that from an Angus, Hereford or Charolais animal," Holgerson says. The last lot of 100 Belgian Blue and Limousin-Belgian Blue steers and heifers that he had finished out and processed at Norpac dressed out at 65 per cent across the board.

Dressing percentage is the warm carcass weight (hide, head, feet and innards removed) divided by the shrunk live weight at delivery. Cutability is another measure of carcass merit and one that Holgerson finds many producers don't understand. It is what you actually put in the deep freeze after the extra bones and fat have been removed. The bone structure visible on the outside is the same on the inside of the animal, he explains. So, even though two animals have the same live weight, there can be a significant difference in cutability. You'll end up with more usable meat — at least eight per cent more — from Belgian Blue cattle because of the fine bones and lean meat. Belgian Blue-Limousin cattle beat everything he has seen as far as cutability goes.

The 2003 to 2007 Agribition carcass competition results reveal that calves with Belgian Blue genetics, raised and finished in varying production systems on the Canadian Prairies, hold their own with other breeds noted for superior carcass quality. In 2004, Belgian Blue-cross carcasses exhibited by D. Sparks of Zealandia, Sask. topped both the steer and heifer classes.

#### **Improved genetics for calving ease**

Despite significant genetic improvements since 1978 when Belgian Blue cattle were first introduced to Canada, there remains a misconception that all Belgian Blue calves have to be delivered by caesarean. Dunlop says this idea comes from Belgium where the breed is the extreme-muscled type and the majority of purebred herds are calved by elective caesarean for management purposes.

Calving by elective caesarean may be economically feasible in Europe where cattle are raised in intensively managed systems and meat is valuable, but it doesn't cut it with beef producers in North America and other countries with vast land bases where herds are much larger and many animals never see the inside of a barn.

"In Canada and the U.S., breeders said they need height, mobility, good legs, fertility and natural calving in order to export here," Dunlop says.

To gain export markets and because of the importance of the breed to the U.K. meat industry, members of the British Blue Cattle Society (BBCS) have concentrated on improving the functionality of the breed by implementing measures such as screening semen imports to exclude extreme blood lines, mandatory pre-sale inspections to ensure desirable conformation, and developing a correlation between external pelvic measurements and calving ease. By 1999, the improvement had been significant and the BBCS began promoting what it calls the British type of Belgian Blue, or "British Blues," noted for ease of calving, a short gestation period, good structure and mobility and excellent temperament.

Expected progeny differences were introduced in 2000 and have been mandatory in all sale catalogues since late 2004, the year in which estimated breeding values were developed. In 2007, as part of the Breedplan genetic-evaluation program, a combination of estimated breeding values and economic factors was used to develop the pedigree breeding index.

As a result of the BBCS's work, Canadian beef and dairy producers now have access to a lot of information on individual sires that wasn't available even a decade ago.

Since they began raising Belgian Blue cattle, the Dunlops have had one caesarean in the full bloods. The cross-bred calves average about 85 pounds and the full-blood calves average 96 pounds. The cows winter well on alfalfa hay without grain.

Longtime CBBA member Ken Miller of Avonlea, Sask. has been using nothing but Belgian Blue sires on his mature Red Angus-Simmental cows since 1993 and says that definitely would not have been economically viable nor manageable if caesareans were an issue.

Alain and Marc Sequin of Noelville, Ont. have been crossing

Belgian Blue sires on Holsteins without problems since 1985, and on Jersey-Holstein cows for seven years. The Belgian Blue-Holstein calves weigh 80 to 105 pounds, while the Belgian Blue-Jersey-Holstein calves weigh 70 to 90 pounds. Three generations of their most prolific maternal bloodline have produced 31 Belgian Blue calves by natural birth.

Heleniak runs 90 commercial cows with Belgian Blue bulls. None have had caesareans and the only calves he has ever assisted have been breech presentations. It's important to do your homework when selecting a bull, he adds. Look for calving ease, but also consider growth along with frame size so that the calves are able to put on weight.

Holgerson says he has never had any calving problems with Limousin cows bred to Belgian Blue bulls. The calving issue is specific to purebred Belgian Blue females and pre-calving management has a lot to do with it.

The first year, he made the mistake of feeding the Belgian Blue cows too well and ended up with five caesareans. The following year, he cut back on feed during the two months leading up to calving and has never had a problem since. When purebred cows receive more feed than required, the excess nutrients go into building muscle mass, including muscles around the birth canal.

Calving difficulties are not related to the calves, he stresses. Their purebred Belgian Blue calves weigh 80 to 90 pounds and have the fine bone structure typical of the breed. The calves are born with the double-muscle trait, but the muscles aren't bulky at birth. He likens it to horned cattle — the buds are there at birth, but it takes time for the horn tissue to develop. The double-muscle trait doesn't begin to express itself until two to six weeks of age.

Holgerson's herd winters on stubble land with the poorest-quality hay fed first. After that, he alternates between hay bales and straw bales. Absolutely no grain is fed until after calving, when the cows receive either grain or top-quality alfalfa hay to boost the nutrition level for milk production and rebreeding. This way, cows aren't thin at calving, but neither do they have layer upon layer of muscle.

For more information, contact Dunlop at 306-726-2291, or any of the members listed on the CBBA website at [www.belgianblue.ca](http://www.belgianblue.ca).

— Debbie Furber 