

Predicting profitability

Carlow farmer Shane Cranny is using the Commercial Beef Value (CBV) tool to predict animal performance

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Farming in Ullard Beg, three kilometres outside of Myshall, Co Carlow, Shane Cranny runs an autumn calf-to-beef enterprise. Shane buys predominantly Friesian bull calves and some heifers in October/November. These are reared and finished on the farm.

“To ensure regular cashflow, we slaughter Friesian bulls out of the shed in April/May, at 18 to 20 months. Friesian steers go to the factory as they become fit between July and October as 20 to 23 month olds. Early maturing heifers are slaughtered off grass in June/July 2024, at 19 to 20 months,” says Shane.

“The system work for me as calves are reared in the late autumn/winter period and they are ready to maximise use of grass when turned outdoors in early spring,” he adds. “There is also no need for additional animal housing and slurry storage for a second winter, as all animals are slaughtered before they require housing in the second year.”

Having already slaughtered bulls and some steers this year to date, we took a look at how they performed based on their Commercial Beef Value (CBV). The Commercial Beef Value tool was launched by the Irish Cattle Breeding Federation in late 2021. The tool gives an insight into an animal's genetic merit for beef production based on its parentage.

The CBV takes into account five key beef production traits, including: carcass weight, carcass conformation, carcass fat, docility and feed intake. When used as a selection tool for identifying high-merit animals at purchasing, it assists the buyer to pinpoint faster-growing, better-shaped, more feed efficient, and more docile animals.

One of the keys to profitable dairy calf-to-beef farming is starting with the right calf. This applies to any calf-to-beef system, be it a Holstein



Shane Cranny and Gordon Peppard on Shane's farm near Myshall, Co Carlow.

Friesian steer system, a bull system, or a late-maturing steer or heifer system. There can be massive variation in the beef merit of calves even within breeds.

Teagasc research has shown that calves bred from higher genetic-merit beef bulls have higher carcass weights, better conformation and are more likely to meet factory specifications than calves bred from lower-genetic beef bulls.

However, discovering which calf is likely to exhibit good beefing qualities over their lifetime can be difficult when you are purchasing them at three to four weeks of age.

If healthy, calves can look very similar at this stage.

Commercial Beef Value (CBV) makes it easier for farmers to know how a month-old calf will perform over its lifetime, and decide a realistic value.

The CBV is a value that ICBF is now generating for all animals that are likely to be finished as beef cattle. In order for this value to be generated, the sire must be recorded when the calf is registered. If you buy calves without knowing the sire, you are in the dark as to their genetic potential. The CBV value is available through the profile section of the ICBF Herd-plus account and on mart boards – where animals are genotyped.

Table 1 is an example of a Commercial Beef Value profile. To see how the star rating of the animals is carried through to slaughter, we analysed how Shane's bulls and steers slaughtered earlier this year had performed.

There were a number of animals at each star rating, from two-star to five-star, on Shane's farm, so the average values for each star rating have been used to compile the table.

Herd analysis

How did the five-star CBV animals perform versus the two-star animals?

There were few one-star animals on the farm, so we compared the five-star animals versus two-star animals at slaughter.

Average carcass weight

As can be seen from Table 2, the five star animals had an average carcass weight 14kg heavier than the two-star animals. Using a round figure beef price of €5/kg, this is equivalent to €70 extra carcass value.

Average carcass conformation and fat

The five-star animals graded better for both conformation and fat and,



Continued
on p22



Continued from p20

on average, had scores that were two grades and one grade higher respectively, for both conformation and fat.

Average carcass value

With the increased conformation and fat grades, a higher price per kilo was achieved by the five-star animals. Coupled with a higher carcass weight, this resulted in the average carcass value of the five-star animals being €237 higher than the two-star animals.

Average age at slaughter

One of the most striking differences is the average age at slaughter. The five-star animals were finished and slaughtered off-farm a full four months sooner than the two-star animals. This has multiple benefits in terms of reduced feed required, be it grass, silage or concentrates. Green house gas emissions are lower and value gained per day is higher; leading to higher profitability.

What are the advantages for a dairy farmer?

The advantages for a beef producer are very apparent from the figures, but what is in it for the dairy farmer?

- Dairy farmers have full control over whether they produce average or above average-quality calves. The biggest influence on this will be the type of beef bulls/AI that they use on their dairy cows. If they choose high Dairy Beef Index bulls that are also good for carcass traits, they have a much better chance of producing higher CBV calves.
- The CBV system will reward dairy farmers for producing calves with good carcass traits. There are lots of AI beef bulls that are now available to the dairy farmer.
- Where the dairy farmer uses sexed semen to produce their own dairy replacements, they can then use good beef bulls on the remainder of their herd. This will reduce the number of low-CBV, low-value bull and heifer calves.
- If the dairy farmer is finishing their own beef cattle, they will want high-CBV calves, similar to any other beef farmer.
- Dairy farmers that are selling young dairy-bred calves will benefit by having higher CBV calves, as they will be quicker and easier to sell.



Gordon Peppard and Shane Cranny discuss finishing ration.



Conclusion

Dairy-bred calves with higher Commercial Beef Values are of much more benefit and are potentially more profitable for beef producers than lower CBV-rated calves. Dairy farmers are still in a position to achieve their short gestation and easy calving targets, while also producing higher value CBV calves – provided they pick the correct sire, be it bull or AI.

Table 1

Commercial Beef Value								
Breed Type ^	Value € ^	Star Ranking (Across Breed) ^	Star Ranking (Within Breed Type) ^	Carcass Weight (kg) ^	Carcass Conformation (1-15 scale) ^	Carcass Fat (1-15 scale) ^	Feed Intake (kg DM/day) ^	Docility (1-5 scale) ^
Dairy x Beef	110	★★★★	★★★★★	8.1	0.29	0.07	0.39	0.12
Dairy x Beef	102	★★★★	★★★★★	6.2	0.18	0.01	0.29	0.08
Dairy x Beef	90	★★★★	★★★★★	4.3	-0.18	-0.23	0.23	0.12
Dairy x Beef	87	★★★★	★★★★★	4.4	0.14	0.12	0.32	0.10
Dairy x Beef	81	★★★★	★★★★★	0.8	0.19	-0.08	0.11	0
Dairy x Beef	80	★★★★	★★★★★	-0.3	0.19	0.00	0.06	0.08
Dairy x Beef	76	★★★	★★★★★	2.1	0.13	0.11	0.22	0
Dairy x Beef	67	★★	★★★★★	-1.3	0.21	0.06	0.11	0
Dairy x Dairy	65	★★	★★★★★	3.9	-0.65	-0.38	0.32	0
Dairy x Dairy	62	★★	★★★★★	3.2	-0.55	-0.10	0.34	0.11

Table 2

Commercial Beef Value – star rating	Average carcass weight	Average carcass conformation	Average carcass fat	Average carcass value	Average age at slaughter (months)
5*	323 kg	O-/O=	3=	€1640	19.5
2*	309 kg	P+	3-	€1403	23.5
Difference (5* v 2*)	+14kg	+2 grades	+1 grade	+€237	-4 months