Dairy breeding decisions

George Ramsbottom
Teagasc Animal and Grassland Research and Innovation Programme, Oak Park

The challenging market for dairy calves cannot help but influence the decisions that dairy farmers make during the breeding season. When discussing the issue with farmers at groups, the problem is as much one of calf marketability as it is one of calf value. Being able to sell calves quickly and easily is an important consideration with compactly calved growing dairy herds.

The initial reaction of some is to talk about "going all beef and buying in the replacements". A more considered approach is needed because the breeding decisions made now will be felt for years to come. Consider the three-step approach to breeding as outlined in Figure 1.

Step one: how many heifers do you really need?

Did you know that around 35% of dairy heifer calves born fail to calve at two years of age? Around half of these never calve and the remainder calve at around three years of age. Have a look at your January 2019 co-op performance report from AHI to see how you got on last season.

Improving your heifer-rearing skills will increase the proportion of heifer calves that give birth at around 24 months of age. This in turn will reduce the number of heifers calves required on your farm and increase the proportion of your herd that can be bred to non-dairy bulls.

Step two: choose the dams of the next generation of replacements carefully

Maiden heifers should be first in line when breeding the next generation of replacement heifers. They usually have the highest EBI and can be manipulated to mostly calve in the first two weeks of the calving season. As a result, the calves born are high-EBI, early born and compactly calved. The range of suitable AI sires for replacement heifers has increased over the last number of years without compromising on EBI.

Next, select from within the dairy cow herd for cows that are early calving, high EBI and performing well. In compactly calved herds, that are not increasing in size, this means that a proportion of the mature cows can be bred to beef AI from the start of the breeding season.

Step three: choose beef AI using the dairy beef index (DBI)

The DBI is a breeding tool which aims to promote high-quality beef cattle being bred from the dairy herd with minimal consequences on the calving difficulty or gestation of the dairy cow. The DBI ranks beef bulls for use in the dairy herd, according to their genetic merit for calving and carcase performance traits:

Expressed in euro, each €1 increase in DBI can be interpreted as a €1 expected increase in profit for that bull's progeny; e.g. bull A has a DBI of €100 and bull B has DBI of €20. The progeny born to bull A are expected to generate €80 more profit compared to progeny sired by bull B.

Calving traits account for 64% of the average DBI value. The DBI selects for shorter gestation, easier calving and less calf mortality:

On the recommended bull file, lower values for all calving traits are more desirable;

If a bull's calving difficulty figure is 4%, then 4% of his calves are likely to require considerable assistance at birth. Increasing calving difficulty indicates that more calves will require considerable assistance at birth

Beef traits account for 36% of the average DBI value. The DBI selects for higher carcase weight and conformation, and more animals that meet minimum factory specifications (280 kg, O=). The DBI also recognises that some breeds are paid a premium

Figure 1: The three-step approach to dairy breeding

Step one: heifer numbers	Step two: dam selection	Step three: using the DBI
Minimise heifer losses between their birth and calving	Breed maiden heifers and the best cows to dairy AI	Use Dairy Beef Index to select beef AI bulls for the rest of the dairy herd

Hughie Egan who farms outside Ferbane in Co Offaly.

Table 1: DBI values, calving and beef values and reliabilities for similar DBI value beef AI sires listed on the current active DBI bull list

	DBI	DBI Rel	Calving value	Calving value rel	Beef value	Beef value rel
Sire A	€84	97%	€69	99%	€15	94%
Sire B	€83	72%	€49	93%	€34	50%

slaughter price and the DBI selects for reduced feed intake, as well as quieter and polled cattle.

On the recommended bull file, higher values for carcass weight and conformation are more desirable.

When using beef AI this spring:

- Choose beef bulls from the recommended bull list.
- To maximise probability, use bulls with higher DBI.
- To minimise calving difficulty, use bulls with a lower calving difficulty value.

When selecting beef AI sires using the DBI, it is important to consider what components are contributing to an individual sire's DBI value. For example, the DBI, calving and beef sub-indexes of two similar DBI beef sires listed on the 21 March 2019 bull list are presented in Table 1.

Both sires have similar DBI values (€84 and €83 respectively). However, the calving value of Sire A is €69 while that of the sire B is €49 reflecting his slightly more difficult calving figures. Sire A is more suited for use on dairy heifers while sire B will be best used on cows with a proven track record of easy calving where he will sire calves of superior beefing merit.

Teagasc is collating a list of well-proven high DBI AI beef bulls for use on dairy cows and heifers this year. Contact your local dairy advisor for further information.

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FARMER PROFILE

Hughie and Sue Egan are milking approximately 80 dairy cows in Doon, outside Ferbane, Co Offaly. They have only 17ha that they can walk cows to, so a zero grazer is used to buffer feed cows at the shoulders of the year. Along with the 80 cows, they keep approximately 25 replacement units each year, with all other calves being sold at two to three weeks old.

Calf sales made up less than 4% of total farm sales for the Egans last year, yet Hughie is adamant that "this isn't the full story. The early sale of non – replacement stock allows me to focus all my energies on my herd of cows. I don't have the facilities or labour to keep beef calves for an extended period, so it is crucial that I have a customer for these calves".

"The buyer of our calves needs to make a margin too," says Hugh. "That's just common sense, if he or she doesn't make money they won't be back to buy calves the following year."

To help ensure they have repeat customers for their surplus calves, the Egans will aim to have a calf for sale that is both healthy and has as much genetic merit for beef as possible. Sue is in charge of calf-rearing duties and does not differentiate between how calves are treated.

"Each calf, whether it be a lower-value beef calf or a higher-value replacement calf, gets exactly the same treatment from birth in terms of colostrum management, bedding, feeding, veterinary, etc," says Sue.

Jim Moyles and Hughie Egan discuss the DBI.

Beef AI

Hughie is no stranger to using Beef AI over the years. "Typically, we will purchase 100 dairy AI straws to use between cows and replacements (working out at approximately straw per animal) and then switch to beef AI once they are all used up."

Last year, a mix of Angus, Hereford, Limousin and Belgian Blue sires were used. This year, Hughie will be using the dairy beef index (DBI) to identify what beef bulls he uses. "I think the DBI is a great development for both dairy and beef farmers. I believe that by using bulls from the list and pointing these out to potential beef calf customers we will have an added advantage, when it comes to selling calves next spring. In turn, it should help them to make a profit too."

Business strategy course for farmers

The Teagasc/UCD Michael Smurfit Business School certificate in Business Strategy will be run again in 2019. The course is an exclusively business course and farmers with all enterprises have participated. The course has been run five times with over 100 graduates. The key benefits of participating are:

- The course is designed and delivered by lecturers from the Michael Smurfit Graduate Business School, Ireland's top business school and one of the world's leading business schools.
- Class size is small to ensure optimum in-class discussion and engagement between participants and lecturers.
- The course is practical - participants generate their own unique strategic plan for their business.
- Teagasc advisors mentor participants throughout the programme in producing their strategic plan.
- The course is accredited with UCD, so graduates receive a recognised qualification – Level 8 Certificate in Business Strategy (Farming).

"My dad Eamon was so impressed when he did the course that he convinced both myself and my wife Kalinda to do it together," says dairy farmer Darren Healy from County Wicklow. "It was both enjoyable and really worthwhile."

If you would like to learn more about the course please contact Mark Moore at Mark.moore@teagasc.ie or call 087 4179131

Back, from right: Frank Evans, Michael O'Gorman, John Moran, Shane Phelan and Andrew Cronin. Front: husband and wife Darren and Kalinda Healy