

What's new in dairy beef systems?



A Teagasc team recently met with a group of Wexford farmers to discuss the latest developments, writes **Pearse Kelly**, Head of Drystock in dairy beef production



Background

The farmers

Paddy O'Brien farms in Campile, Co Wexford, running a dairy calf to beef system. He buys 110 dairy bull calves each year, mostly Friesian plus a few Angus. He was finishing half as bulls, but has moved recently to finishing nearly all of them as bullocks.

Philip Murphy also farms near Campile, finishing Hereford and Angus bull calves bought from dairy herds in a 24 month steer system. He buys 100 calves every year – mainly Hereford and Angus bulls and finishes them as steers. He previously bought Friesians and finished them as bulls. He also has 75 suckler cows and tillage.

Harry Murphy from Ferns Co Wexford aims to finish at least 350 dairy bred calves each year with most being Friesian males. He finishes a mixture of bulls and bullocks and has also reared a number of autumn-born Friesian bull calves in the past.

Pat Rowe farms near Campile. He buys 135 Friesian bull calves each year and finishes them at 17 to 20 months of age with a large proportion of their diet coming from zero grazed grass fed indoors.

The researcher

Ellen Fitzpatrick is from New Ross Co Wexford and is a research technologist based in Teagasc Johnstown Castle Research Centre just outside Wexford town. Her trial work includes research on how early and late-maturing beef heifer calves perform on different grass-clover mixtures and multi-species swards.

The advisor

Jack Murphy is a drystock advisor based at Teagasc Johnstown Castle.



Harry Murphy, Paddy O'Brien, Jack Murphy, Ellen Fitzpatrick, Pat Rowe, Philip Murphy.

Ellen Fitzpatrick opened the discussion by explaining that the trials in Johnstown Castle were focusing on heifer beef production from the dairy herd because all the recent trial work on dairy calf-to-beef systems in Teagasc Grange has been around steer beef production systems. “Also it has been a long time since we looked at what can be achieved from calves sired by continental breeds,” she said “Half the heifer calves in this new trial are bred from Limousin and Belgian Blue AI bulls and these will be compared to heifer calves bred from Angus and Hereford sires.”

When asked why nearly all of the farmers were buying only male calves, there was a common response from the group. Philip Murphy said: “The convenience of having all of the same type of stock puts me off buying a mixture of bulls and heifers.”

Paddy O'Brien said he did not like buying heifers. “If you have them there is always the risk that some of them could end up going in calf if they are running with male stock.” Pat Rowe said he prefers only males because “they come into a much heavier carcass weight, with Angus and Hereford heifers often finishing at very light weights.”

Harry Murphy was the only one of

the four who buys heifers, but said that is often not by choice: “If I am buying a bunch of calves from a dairy farm and there are a small number of heifers in the group, I don't like refusing to buy them with the rest of the calves.”

Ellen agreed that early maturing beef heifers from dairy cows often do finish at low carcass weights. “Some of the first Angus and Hereford heifers bought for the previous trials were purchased because of their breed with little investigation into their genetics,” she said.

Better genetics for carcass weight

“These finished at 19 months of age and were 243 to 250 Kg carcass weights. The early maturing heifer calves bought last year that will be finished in 2024 were bought based on having better genetics for carcass weight. We expect carcass weights increased by 15 to 20 Kg as a result.”

An important component in ensuring that calf-to-beef systems are profitable is maximising the amount of grass in the lifetime diet of the finished animal.

Ellen explained that this is one of the big advantages of the heifer finishing systems over more expensive steer systems.



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Paddy O'Brien and
Ellen Fitzpatrick.

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"Most of the Angus and Hereford heifers [in the Teagasc Grange trials] were finished off grass last year with only 14% of the grass-clover treatment requiring an indoor finishing period. No meal was fed at grass to achieve this, with only the heifers that were housed getting 4 kg of meal".

The amount of meal fed to the heifers from when they were bought as reared calves (around 20 weeks of age) to slaughter was only circa 300 kg. Calves are on a grass-only diet from the middle of June until mid-September. From mid-September onwards, calves are supplemented with 1.5 kg of meal until housing in November.

Meal feeding strategies

There were different meal feeding strategies for the farmers' calves during their first grazing season. Paddy O'Brien also stopped the meal from the middle of June to September, but does offer the calves some straw at grass if required. Some years he continues to feed meal to lighter calves until they hit a certain weight and then he stops.

Pat Rowe said: "I feed a small amount of meal to calves throughout the summer as it can often be hard to get enough grass into young calves". Paddy O'Brien agreed that grass was one of the most important management practices to get right in a calf to beef system: "I am a big believer in giving calves fresh grass every day. What they don't eat I let older cattle clean up," he said.

One of the major questions that Ellen's work is trying to answer is

how well do calf-to-beef systems perform on different sward types and can we reduce the amount of nitrogen that we need to spread, even on heavily stocked farms.

Multi-species swards that have been growing in Johnstown for a number of years are being grazed in this trial along with swards that only have perennial ryegrass and also perennial ryegrass swards that have a reasonable amount of white and red clover in them.

The multi-species swards (a mixture of grass, red clover, white clover, chicory and plantain) and the clover swards get only half the nitrogen per year that the grass only swards are given (75 vs. 150 kg N/ha).

Jack Murphy pointed out from the Johnstown Castle Trial how in their first grazing season, the calves grazing multi species swards gained 0.2kg/head/day more compared to their counterparts grazing conventional grass swards, a really significant difference.

Ellen said: "The three different sward types all grew very similar amounts of herbage across the year. "Calves grazing in their first year grew significantly faster on the multi-species swards compared to the other two swards. We saw this over three different grazing seasons.

“The calves on the multi-species swards were much bigger at the end of the summer compared to all the other calves

"There was no difference between the multi-species sward and the clover sward in animal performance in their second year at grass, as yearlings. The difference in performance in the calves was so great that it was obvious when looking at the calves on the multi-species that they were much bigger calves at the end of the summer compared to all of the other calves."

Multi-species swards

All four farmers were impressed with the performance of the calves on the multi-species swards in Teagasc Johnstown Castle and could see the potential benefits of incorporating these swards into their own systems – even if it is only on a small proportion of the farm to begin with to graze young calves on.

Ellen explained that it is not fully understood yet why calves, in particular, benefit from these swards but that it is likely due to improved digestibility of the forage. Future research will focus on this.

Dairy calf-to-beef systems, including the work that is being carried out in Teagasc Johnstown Castle, will feature strongly at BEEF2024.

Ellen Fitzpatrick and other researchers, who are working in Teagasc on topics of interest to farmers who are rearing dairy-bred beef calves through to finish, will be available to speak to on the day along with DairyBeef 500 specialists and advisers.

A number of calf-to-beef demonstration farmers from the DairyBeef 500 programme will also be present to share their experiences with different finishing systems.