

# Demonstrating best practice in dairy Calf-to-Beef: Tipperary beef farm update

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## Summary

- The Tipperary beef farm is a new 105 ha dairy calf-to-beef demonstration farm in Fethard, Co. Tipperary, which was established by Teagasc with Dawn Meats and Shinagh Estates Dairy farm to demonstrate the best technologies for profitable and sustainable production of beef calves from the dairy herd.
- The farm uses a range of key technologies:
  - » Closer collaboration between a dairy farmer and a beef farmer in the breeding, management and transfer of calves.
  - » Excellent pasture management to ensure animals always have high quality grass and grass silage.
  - » Minimal concentrate supplementation, with a focus on maximising animal performance from forage.
  - » Maximising animal performance at all stages of the life cycle to reduce age at slaughter.
  - » Herd health planning to minimise morbidity and use of antibiotics and anthelmintics.

## Background

The recent expansion of the national dairy herd has resulted in an increasing number of calves that are destined for beef production coming from the dairy herd annually. These calves include both dairy breed calves (male calves with a dairy dam and a dairy sire) and beef-cross calves (male and female calves with a dairy dam and a beef sire). Currently, a sustainable outlet for these calves includes live exports to mainland Europe; however, this may not be possible in the future. Building a sustainable outlet for the population of dairy breed and beef-cross calves coming from the dairy industry is essential. In addition, the slaughter of un-weaned calves will not be socially acceptable in the future. The most socially sustainable outlet for non-replacement calves from Irish dairy herds is a thriving dairy calf-to-beef industry. Teagasc has engaged with dairy and beef stakeholders to develop a new demonstration farm to highlight the key technologies that drive profitability on a dairy calf-to-beef farm.

Shinagh Estates Limited is owned by four West Cork dairy Co-Ops (Bandon, Barryroe, Lisavaird and Drinagh), and Shinagh Dairy Farm is a demonstration dairy farm operated in conjunction with Teagasc and Shinagh Estates. The dairy calf-to-beef demonstration farm in Fethard is a joint venture between Teagasc, Dawn Meats and Shinagh Estates Limited, and operates under the name “Tipperary Beef Farm Ltd.” as a standalone commercial unit that began in April 2022.

## Farm system

Dairy calf-to-beef production is exposed to significant financial risk in terms of animal performance, input prices and beef carcass prices. Nationally, performance at farm level is significantly poorer than what is achievable with best practice. Tipperary Beef Farm will demonstrate a model that can provide a competitive return on the capital and labour employed. Tipperary Beef Farm is 105 ha of relatively free-draining clay loams, and was converted from cereals to a perennial ryegrass/white clover sward in 2022. The farm will

receive approximately 125 kg N/ha per year. In 2023, the farm is stocked with 320 calves and 240 yearlings. The farm plan is to match the stocking rate on the farm with the potential of the farm to grow grass. All animals will be slaughtered when they reach adequate fat cover. The age at slaughter will determine the feed demand and the number of animals reared will be adjusted based on forage supply and demand. A key technology that the farm will demonstrate is reducing the age at slaughter. The objective is to maximise the number of animals slaughtered at the end of the second grazing season, having been fed a diet primarily based on grazed pasture and high quality grass silage.

### Animal selection

Closer collaboration between dairy and beef farmers in the management and transfer of calves will lead to significant benefits for both parties. The dairy farmer will have a secure outlet for non-replacement calves and the beef farmer will have a supply of calves that he or she has had an influence on the selection of the sires used, as well as having input into calf nutrition and health management before the calves arrive on the beef farm.

A supply contract is in operation between Tipperary Beef Farm and Shinagh Dairy Farm and other dairy farms; this contract will be published for all farmers to use. The calf purchase specification protocol from the selected source dairy farmers includes key criteria related to the genetics, health, movement and value of the calves:

Calves must be ranked in the top 40% of beef-cross animals (i.e. four or five star) based on the Commercial Beef Value (CBV). Based on the January 2022 evaluation, the threshold for a four star animal is €79.

- Calves must weigh at least 30 kg (measured using a weigh band).
- Calves have no signs of ill-health.
- All suitable calves are made available to the rearer to purchase.
- Calf PI3 intranasal vaccine to be administered by dairy farmers a minimum of five days before transport.
- Dairy farmer to allow pre-movement examinations of the calves.
- Transport of the calf to the beef farm is the responsibility of the dairy farmer.
- Calf value is calculated based on the average value of calves from that breed at mart sales corrected for age and weight.

### Reducing environmental impact

Key technologies will be demonstrated at Tipperary Beef Farm to reduce the environmental impact of beef production without reducing farm profitability:

- Use of high DBI beef genetics.
- Inclusion of white clover in swards to reduce chemical N requirements.
- All slurry applied using low emissions slurry spreading (LESS) methods.
- All chemical N applied as protected urea.
- Use of low crude protein concentrate feeds.
- Reaching target slaughter weights earlier to reduce lifetime methane emissions.
- Maintain and manage existing habitats appropriately and improve the quality of existing hedgerows.