

Teagasc/ABP Dairy Calf to Beef Programme

Johnstown Castle, 2016 to 2019

Following on from the short gestation versus average gestation sire evaluation, the Teagasc/ABP dairy beef programme is currently investigating the performance of progeny from specific Angus, Hereford and Limousin sires (chosen for ease of calving and short gestation).

The aim is to find the ideal bull that can achieve good calf growth rates and beef traits, while having the desirable easy calving and short gestation traits. The ultimate goal is to be able to identify desirable bulls that stock bulls could be bred from. These stock bulls could then be used on the dairy herd to benefit both the dairy and beef farmer.

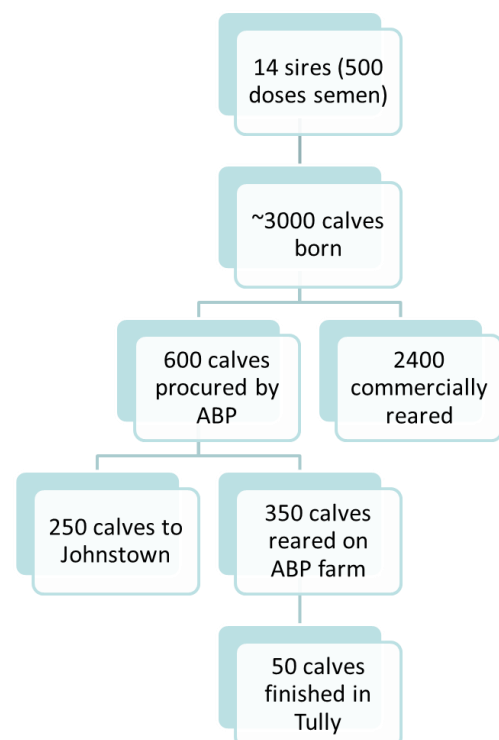


Programme Objectives:

- Identify most suitable beef bull genetics for crossing on dairy herd.
- Genetically improve main breeds supplying beef bulls to dairy herd.
- Improve the efficiency and profitability of dairy beef production.

Programme design:

Suitable sires for the programme were identified from NCBC, Eurogene AI and ICBF. These were unproven, short gestation, easy calving bulls. Semen straws were distributed through the ICBF Gene Ireland Dairy Beef Programme, whereby dairy farmers involved with the Gene Ireland Dairy programme were given the opportunity to express interest in being involved in the dairy beef programme. Farmers that were interested were sent out AI packs containing 35 straws, 5 bulls, 7 straws per bull. Year on year, the number of bulls used



in the programme, the number of dairy herds involved and the number of semen distributed has increased;

- **2015 breeding season:** 12 bulls used (six Angus, four Hereford, two Limousin)
- **2016 breeding season:** 14 bulls used (Angus, Hereford, Limousin and Shorthorn),
- **2017 breeding season:** 19 bulls used (Angus, Hereford, Limousin, Shorthorn, Saler and Belgian Blue)

For the trial, approximately 600 calves from the selected sires are bought by Teagasc/ABP at two to three weeks of age from the relevant dairy farmers and reared on ABP Blade rearer farms to 15 weeks of age under Blade Ireland calf rearing protocol.

After the rearing period, the trial calves are divided between Johnstown Castle (250 calves) and the ABP Trial farm in Clonegal, Carlow (350 calves). Of the 350 sent to the ABP Trial farm, 50 steers were finished for the final 77 days in the ICBF Performance testing unit in Tully in 2016. Here, feed intake can be measured, and the steers are finished on 8.0 kg of concentrate and *ad lib* hay. In 2017, 50 heifers and 50 steers were finished in Tully.

Finishing protocol:

Heifers are drafted for slaughter in August of their second season, and are fed 5 kg concentrate per head daily until slaughter. The aim is to finish as many heifers off grass as possible. Any heifers that are not fit prior to housing are housed and finished on *ad lib* grass silage plus 5.0 kg concentrates per head per day.

The steers are all housed for their second winter, and fed *ad lib* silage only. Steers that become fit (i.e. reach the required BCS during the indoor period) will be removed from the group and slaughtered on the same days as the heifers. The remaining steers are turned out in spring of the following year and are finished off grass in June/July having been fed 3.0 – 5.0 kg concentrate at grass for the final 60 days.



All animals are killed to a fatness level, reaching a target BCS OF 3.75, rather than on a predetermined age/slaughter date.

Parameters measured:

The programme involves animal performance measurements both on farm and in the factory.

- Growth rate and pattern;
 - Cattle weighed every three weeks. Daily gain calculated for different growth periods.
 - Skeletal and back fat measurements pre-slaughter (2016 and 2017)
 - BCS pre-slaughter.
- Carcass weight, conformation, fatness;

- KO%, kidney and channel fat, fat and conformation grading, skeletal measurements.
- Feed intake/ feed efficiency.
- Calf vigour and health.
- Meat eating quality;
 - Marbling score, dark cutters, carcass pH and temperature drops.

From these results, a Dairy Beef breeding index will be developed of the best beef sires for dairy farmers to use on their dairy herds. The aim is for these sires to be capable of producing fast growing calves with increased health traits which are efficient and produce well fleshed carcasses with good meat quality, while maintaining the short gestation and easy calving traits which are economically important for dairy farmers.

