Teagasc
Advisory
Newsletter

BEEF

August 2020

Castration dos and don'ts

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August signals the month where many farmers are thinking about castrating their calves before they reach six months of age. Why? Once an animal reaches six months of age a local anaesthetic must be used at castration and it must be given by a vet. If asked, many would prefer to leave bulls whole and castrate later in life; however, work in Teagasc Grange has shown that there is no advantage, as while the bulls will grow faster than the castrates, the liveweight advantage is largely lost once the bulls are castrated. Bulls also make management more difficult, in trying to ensure they are kept away from females, and because the health and safety risks of handling bulls rather than steers are significant. There are three main methods to castration:

1. **Rubber ring/banding** – this cuts off the blood supply to the testes and scrotum, which dry up and fall off (**Figure 1**).
2. **Burdizzo** – these are used to crush the spermatic cord (the tube leading from the testes to the penis) and the surrounding vessels, which leads to loss of blood supply to the testes (**Figure 2**).
3. **Surgical castration** – the scrotum is cut to reveal the testes, which are then removed. This procedure must be carried out by a vet.

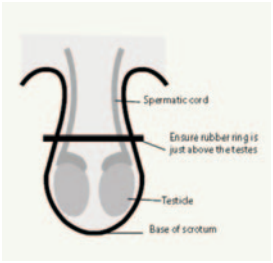

FIGURE 1: Bander/rubber ring – a specially designed elastic band is placed around the neck of the scrotum close to the testicles with a bander.

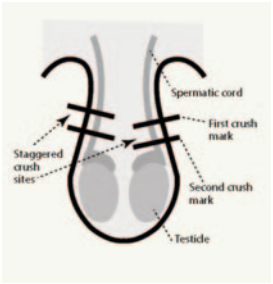

FIGURE 2: Burdizzo – each cord is crushed twice by applying the burdizzo twice for 10 seconds; the second crush should be below the first. Clamp one side then the other – do not clamp across the whole scrotum.

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In all methods there are a few common tips:

- ensure the animals are properly restrained;
- ensure both testicles have descended;
- ensure all the equipment is clean to reduce the risk of infection;
- ensure the equipment is in good working condition (the burdizzo – that the jaws are parallel and closing uniformly across their width);
- calves should be vaccinated for tetanus at least one month before castration and the booster should be given on the day of castration (bander/rubber rings);
- if over six months of age an anaesthetic must be given by a vet;
- only use rings up to eight days of age without an anaesthetic;
- use a non-steroidal anti-inflammatory at castration for quicker recovery; and,
- check calves four weeks later to ensure that the testes are not growing.

Caution – do not try to castrate animals until you have been taught by someone experienced in the proper techniques.

Catch up on all things Virtual Beef Week

Virtual Beef Week took place from July 6-10. It was a week jam packed with information, from BeefTalk every morning to Live@Grange every evening and all the social media posts in between. If you missed any of the week, all of the information is available online at: **www.teagasc.ie/virtualbeefweek**. We would like to thank everybody involved in putting the week together (there are too many to mention) and the sponsor FBD.

HEALTH & SAFETY

Moving machines bring danger

For the year to date, farm workplace deaths are above average (14 to mid July), so it is vital to give farm safety foremost attention to prevent further tragedy. August is harvest month, with a lot of machinery movement including grain trailers, bales and silage. Movement brings danger, particularly to bystanders, including children and older farmers. In August also, a lot of use is made of powered machines.

Harvest brings danger.

Always ensure that machine moving parts are guarded, particularly machines used in a stationary position, e.g., augers, or slurry vacuum tankers. Persons entangled in machine moving parts suffer horrific injuries. It is vital also to continue to implement Covid-19 prevention guidelines to eliminate this deadly virus.

Faecal sampling for BEEP–S

Faecal egg testing is one of the optional measures under the Beef Environmental Efficiency Programme –Sucklers (BEEP–S). Its aim is to achieve targeted control of liver fluke in adult suckler cows. Samples have to be submitted to an approved lab before November 1.

Collecting the sample

Contact one of the approved labs listed in **Table 1** and order a sample pack. The sample pack will contain ten 30ml screw cap plastic containers (push on caps are not allowed) and a zip lock bag. Collect ten fresh dung samples from ten different cows. Ideally, cows should be collected in a clean pen and observed. Once you see fresh faeces, using gloves collect at least a heaped teaspoon from a couple of different places in the one dung path and put into the plastic container. Label the container with the cow's tag number and repeat nine times. Complete the information sheet ensuring to include your herd number.

Put all the samples in the zip lock bag

Put all the samples in the zip lock bag, seal and put in a padded envelope. Mark the envelope "biological sample" and post. Post on the same day if possible; if not, place in a cool dry place or in a fridge and post the next day. Do not freeze or place in direct sunlight. Avoid posting on a Thursday/ Friday so the sample is not in the post over the weekend. Once tested you and the Department of Agriculture, Food and the Marine (DAFM) will be notified of the result.

Note: one set of samples will qualify you for the scheme; however, if you have a larger herd you should consider taking one sample set per 40 cows.

Table 1: Only samples from these approved labs are eligible for payment.

Company name	Contact email	Contact number
Irish Equine Centre	iec@irishequinecentre.ie	045-866 266
Animal Health Labs Ltd	info@ahli.ie	023-885 4100
Alpha Analytical Services Ltd	laboratory@alphaanalyticalservices.ie	025-39 333
FarmLab Diagnostics	info@farmlab.ie	071-963 0792
Oldcastle Labs	info@oldcastlelabs.ie	049-854 1160
Paralabs	info@paralabs.ie	087-293 1167
Agri Diagnostics Ireland Ltd	labs@agridiagnostics.ie	064-663 3922

Let's Talk Cattle & Sheep

Let's Talk Cattle & Sheep is a series of fortnightly webinars on Wednesday evenings at 6.30pm for Irish beef and sheep farmers. Join us for timely, relevant and practical advice on farm management and new developments in the world of beef and sheep farming. You can get involved in the discussion by posing your own questions to the presenters through a Q&A box on the bottom of the screen during the webinar. On Wednesday August 5, our topic will be "How to make a €500 Net Profit in Dairy Calf to Beef systems" and on August 19 we will cover "Pre-mating Vaccination in Sheep". Register online at: **www.teagasc.ie/letstalkcattlesheep**.

RESEARCH UPDATE

Breeding more sustainable beef cattle

Paul Smith, Sinéad Waters and David Kenny of Teagasc Grange and Alan Kelly (UCD) report on RumenPredict and MASTER, international research consortia aiming to link the rumen microbiome with animal performance and GHG emissions.

A microbial community residing in the rumen provides ruminant livestock with the unique ability to convert plant matter into high-quality sources of dairy and meat protein. However, members of this microbial ecosystem are responsible for an estimated 60% of Irish agriculture's greenhouse gas (GHG) emissions through the production of methane.

As a result, decreasing the volume of methane produced by the Irish livestock industry will be key to adhering to the 2030 EU targets of a 30% reduction in Irish GHGs. The potential exists to breed low methane-emitting cattle. However, the effectiveness of selecting more sustainable livestock will be dependent on an increased understanding of the microbiological mechanisms underpinning methane production.

As part of the EU-funded projects RumenPredict and MASTER, Teagasc, UCD and the Irish Cattle Breeding Federation (ICBF) are partnered in an effort to better understand the biological mechanisms associated with methane output.

Both projects aim to better understand the link between the composition of the rumen microbial ecosystem (rumen microbiome) and methane output. To achieve the objectives of both projects, GreenFeed systems, the first of their kind in Ireland, have been installed at the ICBF progeny test centre in Tully, Co. Kildare to estimate methane output from individual animals. A sample of rumen fluid is obtained from each animal to define the relationship between the composition of the rumen microbiome and methane output. Data on methane output and samples of rumen fluid have been obtained from over 320 cattle thus far.

Based on preliminary results to date, a promising relationship between methane output and the €urostar breeding index is materialising.

A subtle trend for cattle with a reduced level of methane output to rank higher on the replacement index is emerging. This association is likely to be further confirmed as more animals are added to the study. In addition, cattle at Tully are producing on average 236 grams of methane per day.

Microbial analysis is currently underway in Teagasc Grange, with a link between the composition of the rumen microbiome and methane output likely to be available by the end of 2020 or early 2021.

This work has the potential to identify animals with a greater genetic propensity to efficiently utilise feed, while minimising their impact on the environment. Furthermore, findings from these projects will provide the knowledge required for future targeted mitigation strategies to the benefit to Irish agriculture and national GHG reduction policy.

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