

Beef Breeding Management

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According to Teagasc statistics¹ there are over 100,000 farms in Ireland producing beef calves, with approximately 64,000 of these being suckler herds². Whilst many of these farms are small and extensively operated, the sector is still the second most valuable on farm enterprise in Ireland after dairy production. Irish suckler farm profitability is under increasing economic scrutiny with recent research for CAP negotiations questioning the long term viability of the Irish suckler herd. The veterinary practitioner role in providing sound herd health advice should also take into consideration the economic implications of the herd health plans and actions.

With regard to beef breeding programmes the question needs to be asked if it makes sense for your clients to carry a stock bull for the year. There were 41,606 stock bulls active in Irish suckler herds in 2012, siring an average of 14 calves per year³. With the average number of suckler cows in Irish beef herds at 104 one must consider if stock bulls are a wise investment for the average beef farmer.

The day of the 'speak-easy' bull needs to be buried well in the past as it is incumbent on us as vets to encourage good biosecurity in all aspects of herd health and production. (At a recent public meeting a young farmer repeatedly enquired as to who regulated the herd health of the 'hire bull' in regard to the Animal Health Ireland BVD eradication programme; he was not aware that the practice was illegal but with his growing knowledge of biosecurity he did realise some of the risk implications with such practice).

When weighing up the pros and cons associated with a stock bull a number of factors need consideration. The alternative to using a stock bull is AI. Traditionally suckler farmers have been wary of using AI due to the challenges of heat detection and management in suckler herds. However, using a synchronisation programme will help overcome such objections. Analysis of recent Irish agri-economic data indicates that, in the majority of Irish suckler herds, AI breeding programmes could deliver increased profit in comparison with keeping a stock bull.

ADVANTAGES OF USING SYNC + AI VERSUS STOCK BULL

1. Selective breeding for the desired traits.
 - (a) Reduce dystocia, e.g. easy calving bulls

- (b) Select maternal traits for breeding replacement heifers
 - (c) Select for superior growth/carcass characteristics
- Vets familiar with the ICBF Eurostar rating system can advise their farmers on the most suitable type of A.I. bulls for their cows and heifers. This rating is now broken into two components: Maternal and Terminal
2. Compact calving: Tighten calving spread (Target should be a 365-day calving interval and a 12-week calving spread) by breeding groups of synchronised cows and heifers.
 3. Known fertility and disease status. Using A.I. eliminates risk of:
 - (a) Bull spreading disease to cows and heifers.
 - (b) Bull breakdown: lameness, broken legs, etc.
 - (c) Sub-fertile/infertile bull.



Table 1: Breeding cost estimates in a 20-cow Irish herd per year

	€/year	€/cow	Assumptions
STOCK BULL			
Feed, housing, health	€600	€30	
Purchase Bull	€667	€33	€3,500 purchase price €1,500 bull resale value, 3 year breeding span
Insurance	€50	€3	
Total	€1,317	€66	
SYNC & A.I.	€1,000	€50	60% in-calf rate per service = 1.6 straws per cow
Weanling advantage	(-)€500	(-)€25	€25 weanling price increase @5% mortality
Total	€500	€25	

4. Farm safety: Bulls were responsible for 59% of Irish human fatalities caused by animals from 2000 to 2010 according to a recent HSA report.
5. Cost Benefit: the estimated cost per cow for sync programmes plus AI is €25 as opposed to €66 per cow for stock bull service when all

costs and overheads are taken into account. See table 1 for further details.

BENEFIT OF USING A STOCK BULL

1. Eliminates need for heat detection Traditionally this has been the practice on most Irish Suckler farms and it eliminates the need for the farmer to detect heats and to bring the cow in for AI
2. Reduced time input for breeding programme Low labour as the bull "gets on with it" and so advantageous where there are poor handling facilities.

Breeding Synchronisation: Why should Irish Beef herds consider using more AI?

1. Fewer problems with heat detection in beef cows: Synchronisation programmes using progesterone and prostaglandin improve heat expression and detection in beef cows (Lucy et al 2001)⁵
2. Better time management: Synchronisation programmes allow better time management, particularly important for part time farmers.
3. Improved compact calving spread (9 weeks vs. 15 weeks): First service pregnancy rates of 70% are possible with synchronised AI in beef cows at pasture
4. Reduced breeding costs associated with Sync and AI: Estimated breeding costs per cow: €25/cow (Sync + AI) versus €66/cow (Stock bull)



VETERINARY TRAINING FOR THE NATIONAL VOLUNTARY CONTROL PROGRAMME FOR JOHNE'S DISEASE

4th July in the Munster Arms Hotel, Bandon
11 CVE Points Available
Special Introductory cost of €250.00

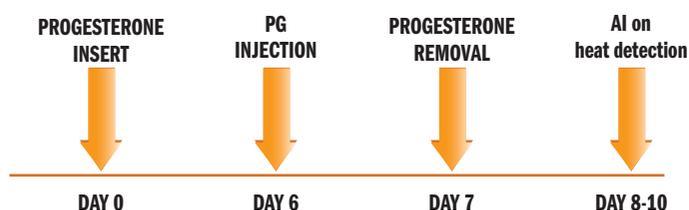
Animal Health Ireland will be holding an all-day veterinary training session on the 4th of July in the Munster Arms Hotel, Bandon. Participation in this AHI-approved programme will be essential for vets wishing to carry out veterinary on-farm risk assessments and management planning as part of the anticipated National Voluntary Control Programme for Johne's Disease. Further training events will take place in early autumn.

The course will consist of:

- Johne's Disease and the principles of infection diagnosis and control
- the provision of farm-specific advice on Johne's Disease control
- the delivery of on-farm risk assessments and management plans for Johne's Disease as part of the forthcoming AHI Johne's Control Programme

The training will be a combination of classroom work with practical on-farm risk assessment.

Booking is essential at www.animalhealthireland.ie Closing date for bookings is Tuesday 2nd of July. We are also taking expressions of interest for our training in the autumn.

PROSTAGLANDIN INJECTIONS; SUITABLE FOR MAIDEN HEIFERS**PROGESTERONE AND PROSTAGLANDIN PROGRAMME; SUITABLE FOR COWS AND HEIFERS.**

Breeding programmes using prostaglandin injections and progesterone inserts can be used to synchronise cows and heifers, making AI more manageable. In addition, the use of progesterone devices will enhance heat expression in cows that have 'silent' heats, so are of help in problem breeders (*Lucy et al 2001*)

In advising farmers on synchronisation programmes make sure they have a plan as attention to detail is essential. Cows should be more than 35 days calved. Heifers should be 14-15 months old and 65% of their mature body weight (approximately 400Kg) when served.

OTHER FACTORS THAT NEED TO BE CONSIDERED IN A BEEF FERTILITY HERD HEALTH PROGRAMME

BCS & Nutrition: Calve at 3.0 & Mate at >2.5 BCS
Infectious Diseases Control Programme (Lepto, IBR, BVD etc.) through biosecurity and vaccination

REFERENCES

- 1 Teagasc Website 2013
- 2 IFJ Industry Briefing March 2013
- 3 ICBF Data 2013
- 4 IFJ Industry Briefing March 2013
- 5 Lucy et al, Journal of Animal Science 2001. 79:982-995

Reader Questions and Answers**1. HOW LONG SHOULD PROGESTERONE DEVICE BE LEFT IN SITU?**

- a) 5 days
- b) 7 days
- c) 11 days
- d) 12 days

2. HOW MANY DAYS APART SHOULD PROSTAGLANDIN INJECTIONS BE USED TO SYNCHRONISE HEIFERS?

- a) 6
- b) 8
- c) 11
- d) 15

3. WHAT PREGNANCY RATE FROM FIRST SERVICE IS POSSIBLE TO ACHIEVE WITH SYNCHRONISATION PROGRAMME IN BEEF COWS AT PASTURE?

- a) 45%
- b) 60%
- c) 70%
- d) 85%

4. WHAT PERCENTAGE OF HUMAN FATALITIES CAUSED BY ANIMALS WERE ATTRIBUTED TO BULLS FROM 2000-2010?

- a) 30%
- b) 59%
- c) 70%
- d) 80%

1(B); 2(C); 3(C); 4(B)