

UNIT : THE BEEF COW – FERTILITY

INTRODUCTION

It is essential that the beef cow produces a viable calf every 365 days if she is to be profitable. Short intervals from calving to conception and high conception rates are critical and good nutrition, body condition, health, heat detection and pregnancy diagnosis as well as good records are key to achieving this.

Illustration – The Breeding Cycle – HCC Making the Most of your Suckler Cows p8

MAINTAINING A TIGHT CALVING PERIOD

Good discipline in both restricting the service period and culling cows that fail to conceive by the target date as well as very good overall management are necessary in order to provide a tight calving period which should ensure :

- Reduced labour at calving
- Simpler cow and calf management
- Increased weaning weights
- More even batches of calves for sale
- Reduced costs and greater returns » more profit

INCREASING CONCEPTION RATES

In a herd of 100 cows, 60% conception in each heat or oestrus would ensure only 3 barren cows in a 12 week service period (but 16 barren cows if the service period were tightened to 6 weeks – highlighting one possible drawback of trying to achieve very tight calving). 50% and 40% conception would result in 6 and 14 empty cows respectively over the same 12 week service period, highlighting the value of good conception.

REDUCING THE INTERVAL BETWEEN CALVING AND CONCEPTION

Cows that give birth early in the herd's calving period conceive most easily and successfully as they have more time to recover between calving and the start of the breeding period. A tight calving pattern will mean that more cows calve in the early part of the calving period and should get back in calf more quickly and easily as well as rearing calves that should be heavier at weaning because they are older.

REASONS FOR POOR FERTILITY

- Poor cow, heifer (or bull) condition at bulling – cows and heifers need to be in the correct condition at service and should be fed accordingly
 - Spring calving – Body Condition Score 2.5-3
 - Autumn calving – Body Condition Score 3
- Difficult calving – incorrect cow condition at calving, a long gestation or a difficult calving sire can make it difficult for a cow to recover in time for the service period
- Diseases in cows, heifers or bull
- Poor heat detection

HEAT DETECTION

- Restless
- Mounting other cows or standing to be mounted
- Scuffed tail head and pin bones and/or mud on flanks
- Mucus from vulva

IMPROVING COW FERTILITY

- Detect the real cause of the problem
 - Barren
 - Abortion
 - Still birth
- Improved feeding after calving
 - Energy – to get the cow back into better condition
 - Micro-nutrients e.g. copper, iodine, selenium – blood test if necessary
- Breeding – although not highly heritable, age at first calving, calving interval and long herd life can all be traits of the Estimated Breeding Value (EBV) of the sire or dam that are indicative of high fertility – hybrid vigour in cross-bred cows can also play a role
- Avoiding difficult calvings
 - Cow condition at calving

- Choice of sire
- Herd health – draw up a herd health plan and investigate all abortions and still births to detect problems such as Bovine Viral Diarrhoea (BVD), Leptospirosis, Salmonella etc
- Heat detection and synchronisation
- Keep an eye on the bull

BULL OR ARTIFICIAL INSEMINATION (AI) ?

Natural service is most commonly used in beef herds but AI offers several advantages :

- Access to top quality bulls without high cost
- Easy availability of more than one breed e.g. different breed for production of replacement heifers or for easier calving in heifers
- No cost or danger of keeping a bull
- Consistently high semen quality
- High biosecurity incl. sexually transmitted disease
- Opportunity to synchronise heat and insemination

BUT

- Heat detection can be a challenge (unless cows are synchronised)
- Extra labour and handling – esp when cows are out at grass
- Success depends on the competence of the inseminator

KEY PERFORMANCE TARGETS

Cows and heifers calving	>94% of cows and heifers bulled
Cows calving in weeks 1-3 (of calving period)	65% of cows and heifers calved
Cows calving in weeks 4-6	25%
Cows calving in weeks 7-9	7%

SUMMARY

- MAINTAIN A TIGHT CALVING PERIOD – good discipline in restricting the service period and culling cows that fail to conceive by the target date as well as very good overall management
- INCREASE CONCEPTION RATES
- REDUCE THE INTERVAL BETWEEN CALVING AND CONCEPTION – a tight calving pattern will mean that more cows calve in the early part of the calving period and should get back in calf more quickly and easily as well as rearing calves that should be heavier at weaning because they are older
- IDENTIFY REASONS FOR POOR FERTILITY – poor cow, heifer (or bull) condition at bulling, difficult calving, diseases in cows, heifers or bull and poor heat detection
- IMPROVE HEAT DETECTION
- IMPROVE COW FERTILITY – detect the real cause of the problem, improve feeding after calving
- HERD HEALTH – draw up a herd health plan and investigate all abortions and still births to detect problems such as Bovine Viral Diarrhoea (BVD), Leptospirosis, Salmonella etc
- SET KEY PERFORMANCE TARGETS

INFORMATION SOURCES

EBLEX (2006) Beef Action for Profit 18 – Better Returns from Planned Weaning

EBLEX (2007) Beef Action for Profit – 19 – Better Returns from AI

HCC (2007) Making the Most of your Suckler Cows

HCC (2008) Profitable Beef Breeding