

C-C.5 Bovine Reproduction

Credits: 10 (100 hours)

Provider: Veterinary Postgraduate Unit – Institute of Veterinary Science

RCVS Content Covered

The following outlines the modular content as set out by the RCVS.

- Normal ovarian cycle including endocrinology and pharmacological control
- Reproductive management and reproductive disease (Dairy and Beef)
- Normal parturition, dystocia and puerperal disorders
- Induction of calving
- Postpartum return to cyclical activity (Dairy and Beef)
- Reproductive problems, congenital abnormalities, acyclicity, poor pregnancy rates
- Oestrus detection, methods, problems and measurement
- Synchronisation – methods and its uses in Dairy and Beef herds
- Timing of service and Natural service versus AI
- Normal pregnancy rates (Heifer and adult cows)
- Sire selection
- Artificial Insemination:
 - Organisation of AI in the UK and the bodies involved with AI
 - Current legislation, semen collection and storage
 - AI techniques including DIY
 - Reasons for poor fertility with AI
- Embryo Transfer:
 - Code of practice and legislation relating to ET
 - Applications and methods of ET
 - Embryo preservation and micromanipulation, karyotyping and twinning
 - Methods of pregnancy diagnosis
 - Expectations for fertility, measuring fertility and accepted reproductive targets (Dairy and Beef cows)
 - Monitoring fertility and fertility control schemes (Dairy and Beef herds).
 - Use of the ELISA milk progesterone assay in monitoring reproduction
 - Detailed examination of the female reproductive tract including ultrasonography and its uses and application
 - Prenatal death and abortions
 - Selection for breeding

The bull

- Genetic selection: a knowledge of the genetic assessment of dairy and beef bulls
- Bull selection to minimise dystocia
- Reproduction: puberty and time of onset

- Normal structure and function of the genitalia
- Causes and investigation of infertility in bulls
- Breeding soundness examination, including collection and assessment of semen
- Surgical preparation of teaser bulls

Aim of the Module

The aim of this module is to enable the candidate to develop comprehensive and systematic understanding of fertility in dairy and beef herds. The candidate will be able to critically evaluate their own standards of practice and develop strategies for continuous improvement in the future.

Learning Outcomes

By the end of this module successful candidates should be able to:

1. demonstrate a systematic understanding of the management and monitoring of fertility in dairy and beef herds, and critically evaluate the role of the veterinary surgeon in planned cattle fertility management and production;
2. demonstrate an in depth knowledge of normal reproductive function and of artificial manipulation of reproduction in dairy and beef cows and bulls;
3. demonstrate a comprehensive understanding of the legislation relating to artificial manipulation of reproduction in the UK and how it relates to the health, management, and welfare of cattle and food production in the UK;
4. demonstrate the ability to systematically evaluate bovine infertility problems (individual or herd), bull pre-breeding soundness and bull proofs (genetic selection data);
5. make sound judgements in the absence of complete data and communicate their conclusions to the farm owner or manager both verbally and in the form of professional reports;
6. review and constructively criticise current literature in the subject area.

Assessment Strategy

3 x reflective case reports (1500 words each), 1 x short answer question and/or MCQ test and 1 x journal critique/journal club presentation (pass/fail)

PLEASE NOTE: It is your responsibility to ensure that you have access to sufficient appropriate cases where you were the primary decision maker to produce adequate material for the module. This may not be possible with some internship positions. You must also be aware of any limitations of your facilities that may make the accumulation of appropriate cases difficult or impossible.