

ADVICE NOTE 10

Artificial Breeding Techniques – including embryo collection and transfer

Welfare of Animals Involved

- 1) At all stages of these procedures the welfare of the animals should be paramount. Welfare safeguards must never be sacrificed to economic pressures such as animal selection or speed of operation.
- 2) Every effort should be made to control pain, distress and discomfort in donors and recipients. For example collection and transfer of embryos must be carried out either under epidural or general anaesthesia. (The mare may constitute an exception). With one exception (in cattle) anaesthesia can be performed only by a veterinarian. Epidural anaesthesia in cattle is permitted by a person with a certificate of competence recognised by MAFF (now DEFRA) under the Veterinary Surgery (Epidural Anaesthesia) Order 1992 working in an embryo transfer team approved under the 1995 Regulations.
- 3) Selection of the type and number of embryos to be implanted and the selection of the recipient should be such as to minimise the risk of dystokia and the need for caesarian section.
- 4) Animals with high genetic potential should not be exploited through repeated use of invasive techniques, such as follicular aspiration of oocytes to the extent that welfare is compromised.
- 5) Disease control measures and aseptic precautions must be applied at all stages.

The Veterinarians Involved

- 6) Veterinarians must be sure that there are sound and acceptable reasons for the invasive technique being used in the specific circumstances proposed by the client or another veterinarian. Acceptable reasons include disease control programmes, breed improvement and conservation schemes. Other purposes must be fully justifiable by the veterinarian. Veterinary controls must be real and not nominal. The highest standards of competence and veterinary care are essential for animals being used in all breeding programmes.
- 7) Veterinarians should make themselves aware of all legal and ethical implications before they undertake any advanced breeding technology, either at the request of their client or another veterinarian.
- 8) Careful and close liaison between veterinarians involved in an operation are essential in order to protect the welfare of the animals and to safeguard ethical standards. All arrangements, particularly on timing and division of responsibilities between individual veterinarians should be made well in advance of the operation.

9) The following particular items in the Guide should be taken into account:

- a) Sale and supply of veterinary medicinal products;
- b) Prescribing of veterinary medicinal products;
- c) Fees;
- d) Advertising;
- e) Canvassing and touting;
- f) Speaking and writing about other members of the profession; and,
- g) Supersession.

Bovine Embryo Transfer and Collection

10) MAFF (now DEFRA) have produced the following guidance for bovine embryo transfer based on these principles and the Bovine Embryo (Collection, Production and Transfer) Regulations 1995. The same principles apply to other species and other techniques used in advanced breeding technology.

11) *“Veterinary surgeons involved in bovine embryo transfer must:-*

- a) be familiar with the regulations;*
- b) be a member of a collection team approved under the Bovine Embryo (Collection, Production and Transfer) Regulations 1995 in order to collect, other than for immediate use, or process a bovine embryo;*
- c) be a member of a production team approved under the Bovine Embryo (Collection, Production and Transfer) Regulations 1995 in order to produce bovine embryos;*
- d) use either a general or an epidural anaesthetic before collecting or transferring any bovine embryo per vaginam;*
- e) examine the recipient within the 30 days preceding the transfer of a bovine embryo and satisfy himself that there is no reason of which he knows existing at the time of his examination which would cause him to believe that the animal would not be able to carry to term a normal calf from the breed and type of embryo being transferred and to calve naturally;*

12) *Veterinary surgeons acting as team leaders must take responsibility for technicians within their teams.*

13) *Veterinary surgeons acting as team leaders are expected to:-*

- a) have gained sufficient experience and attained a high level of competence in the techniques of embryo transfer;*
- b) ensure that all members of their teams are familiar with and comply with the Embryo Transfer Regulations;*
- c) examine or arrange for another veterinary surgeon to examine recipients within the 30 days preceding the transfer of a bovine embryo by a member of their team and be satisfied that there is no reason known to exist at the time of the examination which would cause him/her or the nominated veterinary surgeon to believe that the animal would not be able to carry to term a normal calf from the breed and type of embryo being transferred and to calve naturally;*

d)liaise with the practitioners responsible for the animals on any premises on which they are carrying out ET to ensure that veterinary care will be available for any animal that needs it.

14) *Veterinary surgeons in practice, by agreement with the team leader, may be asked to:-*

a)assist veterinary team leaders in the preparation of donors and recipients;

b)provide certification prior to technicians carrying out transfer that the proposed recipient is suitable to receive the embryo and that there is no reason of which he knows existing at the time of his examination which would cause him to believe that the animal would not be able to carry to term a normal calf from the breed and type of embryo being transferred and to calve naturally;

c)provide veterinary support for technicians operating on their clients' farms.”

15)The terms “direction”, “supervision”, “direct and continuous personal supervision” are explained at paragraph 2, page 30 of the Guide.

Equine Embryo Transfer and Collection

16)The Veterinary Surgeons Act 1966 allows for Ministers to make orders known as exemption orders specifying minor treatments, tests or operations which can be carried out by non-veterinary surgeons even though they amount to the practise of veterinary surgery. These exemption orders usually require approved training.

17) For the avoidance of doubt, there is no statutory Exemption Order governing equine embryo transfer and collection, and therefore the procedure can only be carried out by a veterinary surgeon.

18) The British Equine Veterinary Association (BEVA) has issued a Position Statement on Equine Embryo Transfer which explores the practical, ethical and welfare issues. Veterinary surgeons undertaking this work should make themselves familiar with the BEVA document which has been attached at the end of this Advice Note.

September 2009