

CHAPTER 31

ANIMAL BREEDING

INTRODUCTION

The animal breeding sector includes all semen, ova and embryos of susceptible species. The potential for the rapid and diverse spread of FMD through animal breeding operations services is significant. Artificial insemination (AI) activities have been deemed high-risk, due to the level of direct person/animal contact and multiple farm to farm movements by AI service providers. This chapter provides a description of the animal breeding operations in Ireland, the particular measures to be taken on suspicion and confirmation of disease in an animal breeding centre, and details the controls on national activities imposed during 2001.

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1. ANIMAL BREEDING OPERATIONS IN IRELAND

1.1 The animal breeding service providers include:

Bovine

Approved bovine semen collection centres
Field Service Licence Holders
Licensed Semen Distribution Network
Approved Embryo Collection / Production Teams

Ovine

Approved AI system
Approved Embryo Collection and Transfer Teams

Porcine

Approved AI System

1.2 The animal breeding sector is supervised/controlled by:

- Animal Breeding Section (Veterinary), 4 East, Agriculture House
- Livestock Breeding Division (Administrative), Farnham St, Cavan.

1.3 The following databases (ACCESS) are maintained by Livestock Breeding Division, Cavan:

- AI technicians employed/contracted to AI (Cattle) Field Service Licencees
- AI Sales Personnel employed/contracted to AI (Cattle) Field Service Licencees
- DIY AI operators licensed by the Department
- Importers of bovine, ovine and porcine semen.

1.4 Number of approved/licensed establishments:

TYPE OF ESTABLISHMENT	NUMBER
Bovine semen collection/field services	10
Bovine semen distribution/sales	6
Bovine ova/embryo collection/production (S.I. No. 122 of 1996)	6
Porcine semen collection (S.I. No. 242 of 1993)	4
Ovine semen collection (S.I. No. 12 of 1996)	1

The names and addresses of the establishments are listed in **Annex I** below.

2. SUSPECT FMD IN AN ANIMAL BREEDING CENTRE

- 2.1 In Ireland, a suspicion of FMD may occur in animals of susceptible species present in a semen collection centre. Animals are not normally present at the premises of teams approved for ova or embryo collection (only ova or embryos will be present). Exceptionally animals may be brought to these premises, but this is normally precluded because of the rules relating to TB and Brucellosis.
- 2.2 The detailed measures to be taken on a suspect holding are set out in Chapter 1, **Procedures when FMD is suspected**.
- 2.3 All AI technicians, semen distributors and clients holding stocks of semen or embryos must be contacted immediately and ordered to cease their breeding activities (at least until the outcome of the investigation is known).
- 2.4 A Local Epidemiology Team will be established (see Chapter 18, **Epidemiology**) to investigate the possible source and spread of the disease. This team will collaborate with the VI in charge of the animal breeding centre to determine the estimated date of introduction of FMD into the affected holding.
- 2.5 All movements of AI technicians, semen distributors etc. who have operated from the centre between the estimated date of introduction of disease and the date that movement restrictions were imposed will have to be traced. The centre manager will be requested to produce these lists.
- 2.6 The distribution of any semen, ova or embryos collected from the suspect animals during the previous 21 days must also be traced. The centre manager will be asked to provide this information.
- 2.7 A census of all stocks of semen, ova and embryos on the holding will have to be recorded. The centre manager will be requested to produce a list of all semen, ova and embryos present which have been:
- imported
 - bought in/transferred from other animal breeding centres
 - collected at the centre.

The lists should include the date of collection and the date of import/purchase.

3. ANIMAL BREEDING CENTRES AFFECTED BY FORM A RESTRICTIONS

If a Form A is served following a suspicion of FMD at a centre, or a centre is located close to another suspect holding, temporary restrictions on the movement of *inter alia* semen, ova and embryos within a radius of 8 km of the suspect holding will apply for a minimum of 48 hours (or until such time as the results of samples taken on the suspect holding have ruled out FMD).

4. MOVEMENTS OF SERVICE PROVIDERS TO/FROM SUSPECT/INFECTED HOLDINGS

- 4.1 If it is found that an AI technician has been on a suspect/infected farm or that illegal DIY AI by another farmer has taken place, the movements of these personnel must be traced. This will be carried out by the Local Epidemiology Team (with the assistance of the Animal Breeding Section and/or the VI in charge of an animal breeding centre if necessary).
- 4.2 As an AI technician may visit several holdings each day, the biosecurity procedures followed by individual technicians will be risk assessed. At a minimum the first three premises visited by the technician after the visit to the suspect/infected holding will be prioritised for urgent tracing.
- 4.3 The NDCC (Suspect/Trace Section) will liaise with the Animal Breeding Section and Livestock Breeding Division to ensure that suspect holdings are not visited by service providers.



5. CONFIRMED FMD IN AN ANIMAL BREEDING CENTRE

- 5.1 When FMD is confirmed on an animal breeding centre, a Form B will be served, restricting the movement of animals, people, vehicles and equipment to and from the centre (see Chapter 14, **Controls following confirmation of disease**).
- 5.2 The SVI, Animal Breeding Section will immediately notify all service providers to activate their respective contingency plans.
- 5.3 The measures laid down in Article 5 of Council Directive 85/511/EEC apply:
- susceptible species must be valued, sampled and slaughtered (see Chapters 19, **Valuation** and 20, **Slaughter**)
 - carcasses and waste must be destroyed (see Chapter 21, **Disposal of carcasses**)

- semen, ova and embryos which have been collected on the holding between the date of probable introduction of disease and the date of restriction of the holding must be traced and destroyed (by high risk rendering); holdings which have already used these products must be treated as high risk contacts (see Chapter 18, **Epidemiology**)
- buildings, surroundings and vehicles must be cleaned and disinfected
- movement of non-susceptible species may only occur under permit
- movement of personnel may only occur under permit
- vehicles may only enter/exit under permit
- disinfection points must be put at the entry/exit to the holding and the animal houses
- an epidemiological enquiry must be carried out by the Local Epidemiology Team in collaboration with the Centre vet and the VI with responsibility for the centre.

6. ANIMAL BREEDING ACTIVITIES IN PROTECTION AND SURVEILLANCE ZONES

- 6.1** Under Article 9 of Council Directive 85/511/EEC, AI activities are prohibited in the **Protection Zone** for the first 15 days (except DIY AI on the farmer's own premises).
- 6.2** Itinerant breeding is also prohibited in the **Protection and Surveillance** zones (this is illegal in Ireland anyway).
- 6.3** Under Article 23 of the draft Commission proposal to amend Directive 85/511/EEC [Document COM (2002) 736 final], AI activities and itinerant breeding (except DIY AI on the farmer's own premises) are prohibited in the **Protection Zone** until the clinical and serological survey have been completed (see Zone Clearance Protocol in Chapter 17, **Creation of control zones, census and surveillance**).
- 6.4** Under Articles 28 and 42 of the draft Commission proposal to amend Directive 85/511/EEC [Document COM (2002) 736 - March 2003], semen, ova and embryos derived from susceptible species originating in the **Protection and Surveillance Zones** may not be placed on the market, except:
- semen, ova and embryos collected and stored at least 14 days before the estimated date of infection
 - frozen semen collected after the date of infection, which is stored separately:
 - either until after the Protection Zone is lifted and all animals at the collection centre have been clinically examined (and in the case of sheep or goats have been serologically tested) with negative results
 - or until all susceptible species at the collection centre have been clinically examined with negative results, and absence of infection has been confirmed by laboratory examination of the donor animal(s) during the 30 days before and after collection of the semen plus 5% of semen (minimum 5 straws) have received a virus isolation test in an approved laboratory with negative results.
- 6.5** There are currently no restrictions on animal breeding activities required in the Surveillance Zones in the draft Commission proposal. However Article 43 of the proposal allows Member States to take additional measures deemed necessary and proportionate to contain the spread of disease (taking account of particular epidemiological, animal husbandry, commercial and social conditions in the affected area).

7. REGIONALISATION

- 7.1 Where Ireland is regionalised due to an outbreak of FMD, measures taken by the EU Commission are likely to prohibit the intra-Community trade in semen, ova or embryos from Ireland unless the products have:
- been collected from susceptible species that originated from outside the **controlled region** or
 - been obtained before a specified date (the presumed earliest possible date of introduction of disease to the country).
- 7.2 The controlled region will depend on the disease situation at the time, but may be the affected county(s), the affected county(s) plus neighbouring counties or even the entire country.

8. NATIONAL CONTROLS ON ANIMAL BREEDING SERVICES DURING AN FMD OUTBREAK

- 8.1 AI is a high-risk activity in the context of an outbreak of FMD. It is likely that a national ban on animal breeding activities will be introduced when an outbreak of FMD has been declared.
- 8.2 The timing and the conditions under which any ban or resumption of activities occurs will be determined by the NDCC and the FMD Expert Advisory Group.
- 8.3 Operations may be allowed to continue under tightly controlled conditions – including licensing and protocols/Codes of Practice.
- 8.4 AI centre veterinarians will be required to train AI technicians in biosecurity procedures, as part of the FMD Contingency Plan for the centre.
- 8.5 Examples of licences, protocols, Codes of Practice and legislation introduced during FMD in 2001 are archived on the FMD shared drive:
- S:\Animal Health\Foot and Mouth\Animal Breeding
- 8.6 The archived documents are listed in **Annex 2** below.

ANNEX 1

LIST OF SEMEN, OVA AND EMBRYO ESTABLISHMENTS

LICENSED SEMEN DISTRIBUTION NETWORK		APPROVED EMBRYO TEAMS
LICENSED AI ORGANISATIONS & APPROVED SEMEN COLLECTION CENTRES	LICENSED SEMEN DISTRIBUTION COMPANIES	APPROVED OVA / EMBRYO COLLECTION/ PRODUCTION TEAMS
<p>NORTH EASTERN CATTLE BREEDING SOCIETY LTD Ballyhaise Co Cavan Tel: 049 433 8152 Fax: 049 433 8442</p> <p style="text-align: right;">IR.B3</p>	<p>ABS PROGEN IRELAND Main Street, Buttevant, Co Cork Tel: 022 23976 Fax: 022 23999 Website: www.absglobal.com E-mail: absprogen@hotmail.com</p> <p style="text-align: right;">SDL 002</p>	<p>PREMIER EMBRYOS LTD. Bandon Co Cork Tel: 023 44542 Fax: 023 41886 E-mail: riverviewws@hotmail.com</p> <p style="text-align: right;">IR ECT 101</p>
<p>GOLDEN VALE CATTLE BREEDING SOCIETY LTD Clarecastle Co Clare Tel: 065 682 8220 Tel: s lynch 063 81501 Fax: 065 6828832 E-mail: slynch@goldenvale.com</p> <p style="text-align: right;">IR.B6</p>	<p>GENEXCEL IRELAND LTD Tullymurrihy Ballynascarthy Co Cork Tel: 023 39407 Fax: 023 39407 E-mail: genexcel@iol.ie Website: www.genexcelirl.com</p> <p style="text-align: right;">SDL 011</p>	<p>CHAMPION EMBRYOS LTD. Deerpark Ballyfin Portlaois Co Laois Tel: 0502 55234 Fax: 0502 55419 E-mail: championembryos@oceanfree.net</p> <p style="text-align: right;">IR ECT 102</p>
<p>DAIRYGOLD CATTLE BREEDING Society Ltd Ballyvorisheen Mallow Co Cork Tel: 022 21585 Fax: 022 31592 E-mail: ai@dairygold.ie E-mail: dcorridan@dairygold.ie</p> <p style="text-align: right;">E-mail: IR.B1</p>	<p>INTERNATIONAL LIVESTOCK GENETICS The Laurels, Lehenaghmore, Togher Co Cork Tel: 021 4317530 Fax: 021 4321284 Mobile: 086 2594301 E-mail: ilg@tinet.ie</p> <p style="text-align: right;">SDL 003</p>	<p>BOVI GENETICS Tuckmill Lane Castlewarden Straffen Co. Kildare Tel: 045 877091 Fax: 045 877097 Mobile: 086 2541950</p> <p style="text-align: right;">IR ECT 103</p>
<p>SOUTH WESTERN SERVICES CO-OP SOCIETY LTD Shinagh House Bandon Co Cork Tel: 023 29100 Fax: 023 42196 E-mail: shinagh@sws.ie Website: www.sws.ie</p> <p style="text-align: right;">IR.B8</p>	<p>SEMEX IRELAND LTD Lisfehill Ballinhassig Co Cork Tel: 021 488 8349 Fax: 021 488 8376 Mobile: 086 2527463</p> <p style="text-align: right;">SDL 005</p>	<p>GENEXCEL LIMITED Animal Breeding Services Tullymurrihy, Ballinascarthy, Co Cork. Tel: 023 39407</p> <p style="text-align: right;">IR ECT 105</p>

LICENSED SEMEN DISTRIBUTION NETWORK		APPROVED EMBRYO TEAMS
LICENSED AI ORGANISATIONS & APPROVED SEMEN COLLECTION CENTRES	LICENSED SEMEN DISTRIBUTION COMPANIES	APPROVED OVA / EMBRYO COLLECTION/ PRODUCTION TEAMS
<p>CASTLEISLAND CATTLE BREEDING Society Ltd Castleisland Co Kerry Tel: 066 714 1396 Fax: 066 714 1144 E-mail: michael.oconnor@kerry.ie IR.B7</p>	<p>NEW ZEALAND CATTLE (IRL) LTD The Island, Kiskeam, Mallow Co Cork Tel: 029 76600 Fax: 029 76060 Mobile: 087 420082 E-mail: peterd@iol.ie SDL 008</p>	<p>MR LAURENCE DUNNE MVB MRCVS Ballyorney, Enniskerry Co Wicklow Tel: 01 286 7146 Fax: 01 276 5874 Mobile: 086 2582405 IR ECT 106</p>
<p>BOVA GENETICS LTD Ballyart Brittas Co Limerick Tel 061 351 233 Fax: 061 352 094 Email: bovagen@indigo.ie IR.B9</p>		<p>BOVA GENETICS LTD Ballyart Brittas Co. Limerick Tel: 061 35123 Fax: 061 352094 E-mail: bovagen@indigo.ie IR ECT 108</p>
<p>PROGRESSIVE GENETICS Kilcorney Enfield Co. Meath Tel: 01 450 2142 Fax: 01 450 3074 E-mail: info@progressivegenetics.ie Website: www.progressivegenetics.ie E-mail: beivers@progressivegenetics.ie IR. B5</p>		
<p>NORTH WESTERN CATTLE BREEDING SOCIETY LTD Doonally House Sligo Tel: 071 45314 Fax: 071 43288 E-mail: info@nwcbs.ie Website: www.nwcbs.ie IR.B3</p>	<p>SEMEN WORLD Coolroe, Burncourt Cahir Co Tipperary Tel: 052 67251 Fax: 052 67447 Mobile: 086 8340976 E-mail: srkelly@eircom.net SDL 006</p> <p>FUTURE ANIMAL BREEDING & WELFARE LTD, Tierworker, Kells, Co. Meath. Tel: 049 9666851 SDL 015</p>	

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<p>Eurogene AI Services(Ireland) Ltd Kilcoran Cahir Co Tipperary Tel: 052 42940 Fax: 052 42940 E-mail: info@eurogeneaiservices.com E-mail: folke@gofree.indig.ie E-mail: folke@eircom.net Website: www.eurogeneaiservices.com IR.B10</p>		
<p>South Eastern Cattle Breeding Society Ltd Dovea, Thurles Co Tipperary Tel: 0504 24277 Fax: 0504 22768 E-mail: info@dovea-genetics.ie IR.B2</p>		
PORCINE SEMEN COLLECTION CENTRES	OVINE SEMEN COLLECTION CENTRES	
<p>DAM SIRE PIG GENETICS, Killynure Redhills Co Cavan Tel: 047 55286</p>	<p>ORIEL BREEDING SERVICES Augherlane Ballybay Co. Monaghan</p>	
<p>HERMITAGE PEDIGREE PIGS LTD Sion Road Kilkenny</p>		
<p>HERMITAGE PEDIGREE PIGS LTD Freneystown Clifden Co Kilkenny Tel: 056 26367</p>		

ANNEX 2

LIST OF ARCHIVED DOCUMENTS USED IN 2001

The following documents are archived on the FMD shared drive at:
S:\Animal Health\Foot and Mouth\Animal Breeding

Licences

Movement licence for bovine semen
Licence for bovine AI technicians to operate
Licence for AI sales personnel to operate

Protocols

Biosecurity protocol for AI technicians
Biosecurity protocol for AI sales personnel
Protocol for monitoring of AI technicians
Protocol for monitoring of DIY AI operators
Protocol for monitoring of semen distributors

Codes of practice

Code of Practice for bovine ova/embryo collection/production teams
Code of Practice for ovine AI (own flock)
Code of Practice for ovine fresh embryo transfer (own flock)

Report forms

AI Technician Report Form
Weekly Report Form
Semen Distribution Inspection Form

Legislation

S.I. No 144 of 2001 [Diseases of Animals Act, 1966 (Foot-and-Mouth Disease) (Restriction on Artificial Insemination) Order, 2001 as amended by S.I. No. 161 and S.I. No. 324 of 2001]
S.I. No 381 of 2001 [Diseases of Animals Act, 1966 (Foot and Mouth Disease) (Control on Artificial Insemination in Sheep) Order, 2001]