

CHAPTER 24

MILK - COLLECTION, TRANSPORT & TREATMENT

INTRODUCTION

The collection and transport of milk may result in the rapid spread of virus over a wide area by any of the following means:

- virus spread by mechanical means, either by the vehicle itself or on the clothing or footwear of the driver
- spillage of milk from collection hoses, resulting in the release of virus into the environment of the farm
- release of large quantities of air borne virus from the vehicle storage tank during filling from the farm bulk tank

This chapter describes the appropriate precautions and rules relating to milk collections from suspect premises, confirmed infected premises, controlled areas and contact premises. It also describes treatments for inactivation of FMD virus and methods of destruction of milk on farm.

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1. LEGISLATIVE BASIS

The legislative basis for the control of milk movement is contained in Articles 7, 19, 30 (1) and (2) of the Foot and Mouth Disease Order, 1956.

2. CONTINGENCY PLANS FOR CREAMERY MANAGERS

- 2.1 Each creamery manager should have on file a contingency plan for the management of FMD.
- 2.2 This contingency plan should be available for inspection by DAF officials.
- 2.3 The contingency plan should include a copy of the 'Code of Practice for hauliers and milk purchasers' (see **Annex 1**).

3. SUSPECT INVESTIGATION ON A DAIRY FARM

- 3.1 If the farm under investigation is a dairy farm, the veterinary inspector (VI) should determine if milk collection is scheduled for that day and, if scheduled, if it has already taken place.
- 3.2 Milk collection will not be permitted until a clinical inspection of the animals on the premises has been made. The DVO SVI will inform the relevant dairy produce inspector (DPI) of the situation. Creamery management will be informed of this requirement by the DPI or VI.
- 3.3 If the investigation proceeds to sample taking (see Chapter 1, **Procedures when FMD is suspected**), collection will have to be postponed for up to 5 days, pending results. Form B will be served on the owner/person in charge of the premises prohibiting the movement of milk from the site. The volume of milk on site must be recorded.
- 3.4 Where collection has taken place prior to the arrival of the VI, contact should be established with the creamery/depot manager to determine each of the farms on the collection route.
- 3.5 An authorised officer should be sent to intercept the tanker and to advise the driver to return immediately to the depot. The creamery manager should be advised of this requirement. Arrangements will then be made for an alternative to the collection of the milk from the remainder of the farms on the collection route.
- 3.6 On the return of the tanker to the depot measures should be taken to inactivate the FMD virus in all of the milk collected by the tanker, e.g. double heat treatment or acidification.
- 3.7 The tanker should be subjected to thorough cleaning and disinfection under the supervision of Department personnel. The cleaning and disinfection should include all external surfaces of the vehicle.
- 3.8 Storage tanks and collection equipment can be disinfected using recommended disinfectants (See **Annex 1** - Code of Practice for Hauliers and Milk Processors).

- 3.9 Personal protective clothing must be capable of being disinfected against the FMD virus. If this is not possible, the overalls should be destroyed or autoclaved.
- 3.10 The senior veterinary officer at the Local Disease Control Centre (LDCC) should advise relevant DPIs of any farms under investigation on which disease may be suspected.

4. TRACING OF BULK TANKER COLLECTIONS

- 4.1 Where a suspect or infected premises is part of a bulk tanker route, it must be assumed that collection from the premises during the period of at least seven days prior to the onset of clinical signs could have resulted in the transfer of virus to all farms collected after the suspect premises.
- 4.2 The creamery/depot manager must provide the list of all farms on a tanker route as a matter of priority (see form in Appendix I of **Annex 1**).
- 4.3 All farms identified should be regarded as priority contacts and, depending on the outcome of the preliminary investigation, should be targeted for immediate investigation and possible restriction (Form D).

5. FORM A RESTRICTIONS

- 5.1 A Form A will be served when FMD is strongly suspected on a premises.
- 5.2 The signing of Form A will result in the imposition of temporary movement restrictions in an area of 8 km radius around the suspect premises for up to 48 hours (with a possible extension). These restrictions will include those on the collection of milk.
- 5.3 Any collection of milk may take place only under movement licence.
- 5.4 The DVO SVI will inform the relevant DPI of the area covered by the restrictions.
- 5.5 The veterinary inspectorate or dairy produce inspectorate will inform creamery management of the restrictions being applied.
- 5.6 During the period of restriction, creamery managers should be consulted as to the best methods of compressing tanker routes and for the control of vehicle movements.
- 5.7 Vehicle disinfection points will be established at all creameries and depots. Access to creameries/depots should be restricted to essential personnel and access points must be kept to the minimum necessary.
- 5.8 All personnel involved in the collection of milk must be provided with protective clothing and supplies of approved disinfectant for use on farms.
- 5.9 A list of registration numbers of milk collection vehicles should be made available to the Gardai and the Local Disease Control Centre (LDCC).

- 5.10 When authorisation to recommence collection is given all vehicles will be required to carry a movement licence.
- 5.11 Where creamery/depot staff fail to observe fully the conditions of collection or disinfection, the management should be advised that the movement licence will be withdrawn.

6. CONFIRMED DISEASE

- 6.1 If FMD is confirmed on a premises the area under restriction will be enlarged and restrictive measures reinforced in a minimum radius of 3 km (Protection Zone) and 10 km (Surveillance Zone).
- 6.2 Additional controls in the region will be imposed if the affected area is regionalised. This could involve the county and possibly adjacent counties. In the case of multiple outbreaks, it could involve the whole country. (See Chapter 14, **Controls following confirmation of disease.**)
- 6.3 The National Disease Control Centre (NDCC) will notify the limits of the control Zones to Milk Policy Division and the Veterinary Public Health Inspection Service as soon as these have been determined.
- 6.4 Milk Policy Division will ensure that the creameries operating within the Zones supply the information provided in Appendix 1 of **Annex 1**.
- 6.5 The collection of milk within Protection and Surveillance Zones will be subject to:
 - the use of specially adapted tanker vehicles, dedicated to collections in the control zones
 - collection procedures which have been checked and authorised by DPIs
 - movement under licence on specified routes
 - delivery to designated creameries/product plants.
- 6.6 The detailed procedures are laid down in the Code of Practice for hauliers and milk purchasers in **Annex 1**.
- 6.7 Infected premises cannot have milk collected as part of a normal collection route. Arrangements will be made for an alternative to milk collection e.g. acidification of the milk. Any milk produced between the date of probable introduction of disease onto the holding and the imposition of restrictions will have to be traced and destroyed (by high risk rendering).

7. MILK FROM ANIMALS ORIGINATING IN PROTECTION ZONES

- 7.1 Article 21 of the draft Commission proposal to amend Directive 85/511/EEC [Document COM (2002) 736 final – March 2003] requires raw milk and raw milk products produced from animals originating in Protection Zones (between the date of probable introduction of disease to the infected holding and the date of imposition of restrictions) to be traced and treated as per Appendix III of **Annex 1**.

- 7.2** Article 27 prohibits the marketing of milk and milk products derived from animals in Protection Zones unless the milk has been treated as per Appendix III of **Annex 1**, **except** if it was produced at least 21 days before the estimated date of introduction of virus to that Protection zone and was stored and transported separately since production.
- 7.3** Establishments which treat milk from animals originating in Protection Zones must comply with the following conditions:
- a) The plant is in the Protection Zone. If no suitable plant exists in the Protection Zone, then the plant may be outside the Protection Zone, providing that the milk is transported according to the following conditions:
 - the transport is officially authorised
 - the route is officially designated
 - the vehicles used are leak-proof, equipped to avoid aerosol dispersion during loading and unloading, and cleaned and disinfected prior to transport
 - the connection pipes, tires, wheel cases, the lower parts of the vehicle and any spillage of milk are cleansed and disinfected before leaving any holding and the vehicle has no other contact with holdings after the final collection of the round
 - vehicles are strictly assigned to defined geographical areas, marked accordingly and can only move to new areas after an official thorough cleaning and disinfection.
 - b) The plant is under permanent and strict official control.
 - c) The milk and milk products are clearly identified and are transported and stored separately from milk which does not meet the requirements of **point 7.2** above.
 - d) A health certificate is issued for intra-community trade.
 - e) The list of approved establishments involved is sent to the Commission and other Member States.
- 7.4** The collection and transport of milk samples is prohibited in the Protection zone except for FMD Diagnosis.

8. MILK FROM ESTABLISHMENTS IN PROTECTION ZONES

Article 27 of the draft proposal to amend 85/511/EEC prohibits the marketing of milk and milk products produced in establishments in Protection Zones, unless:

- The plant is under permanent and official strict veterinary control.
- Either the milk comes from animals inside the Protection Zone and complies with the conditions set out in **Section 7.2** above
- Or all milk comes from animals outside the Protection Zone.
- Milk from holdings outside the Zone is transported to the establishment in tankers that have been cleaned and disinfected prior to transport, and which have not called to holdings in the Protection Zone subsequently.

- The milk and milk products are clearly identified and are transported and stored separately from milk which does not meet these requirements (which may only be used within the Zone).
- A health certificate is issued for intra-community trade.
- The list of approved establishments involved is sent to the Commission and other Member States.

9. MILK FROM ANIMALS ORIGINATING IN SURVEILLANCE ZONES

9.1 Article 40 of the draft proposal to amend 85/511/EEC prohibits the marketing of milk from animals originating in the Surveillance Zone unless it has been treated, except if it was produced in the Surveillance zone and was stored and transported separately since production. Treatment must take place under the following conditions:

- a) The plant is in the Surveillance Zone. If no suitable plant exists in the Surveillance Zone, then the plant may be outside the Protection and Surveillance zones, providing that the milk is transported according to the following conditions:
 - the transport is officially authorised
 - the route is officially designated
 - the vehicles used are leak-proof, equipped to avoid aerosol dispersion during loading and unloading, and cleaned and disinfected prior to transport
 - the connection pipes, tires, wheel cases, the lower parts of the vehicle and any spillage of milk are cleansed and disinfected before leaving any holding and the vehicle has no other contact with holdings after the final collection of the round
 - vehicles are strictly assigned to defined geographical areas, marked accordingly and can only move to new areas after an official thorough cleaning and disinfection
- b) The plant is under strict veterinary control.
- c) All milk in the plant is treated as per Appendix III of **Annex 1**.
- d) The milk and milk products are clearly identified and are transported and stored separately from milk which does not meet these requirements.
- e) A health certificate is issued for intra-community trade.
- f) The list of approved establishments involved is sent to the Commission and other Member States.

9.2 Milk samples can only be collected and transported to a laboratory other than official laboratories for FMD diagnosis if under official authorisation and with measures to prevent the spread of virus.

10. MILK AND MILK PRODUCTS PRODUCED IN ESTABLISHMENTS LOCATED IN THE SURVEILLANCE ZONE

Article 40 of the draft proposal to amend 85/511/EEC prohibits the marketing of milk from animals produced in establishments located in the Surveillance Zone unless it has been treated under the following conditions:

- The plant is under strict veterinary control.
- Either milk comes from animals in the Surveillance Zone and is treated in accordance with the requirements of **Section 9** above
- Or all milk comes from animals outside the Protection and Surveillance Zones.
- Milk from animals originating outside the Protection and Surveillance Zones is transported to the establishment in tankers that have been cleaned and disinfected prior to transport, and which have not called to holdings containing susceptible species in the Protection or Surveillance Zones subsequently.
- The milk and milk products are clearly identified and are transported and stored separately from milk which does not meet these requirements (which may only be used within the Zone).
- A health certificate is issued for intra-community trade.
- The list of approved establishments involved is sent to the Commission and other Member States.

11. MILK FROM CONTROLLED REGIONS

- 11.1** Article 46 of the draft proposal to amend 85/511/EEC requires that the transport and movement of milk and milk products within the region be controlled.
- 11.2** Raw milk and raw milk products derived from susceptible species originating in the controlled region (between the date of probable introduction of disease and the date of regionalisation) must be traced and:
- either treated as per Appendix III of **Annex 1** or
 - detained until the possibility of FMD contamination is officially ruled out.
- 11.3** All raw milk and as far as possible other products produced in the region must be traced and checked for eligibility for intra-community trade (in accordance with **Sections 7-10** above). Any product which is not eligible must be marked.
- 11.4** A health certificate must be issued for all product going for intra-community trade.
- 11.5** Specific measures, in particular in relation to health marking of products from animals of susceptible species originating in the restricted zone and not intended for placing on the market outside the restricted zone may be adopted in accordance with the provisions in Article 4 of Council Directive 2002/99/EC.

12. CONTACT PREMISES (FORM D AND ARTICLE 19 RESTRICTIONS)

- 12.1 Farms identified as priority contacts of an infected premises should be regarded as infected pending the completion of a number of health inspections.
- 12.2 Animal movement from these farms will be restricted under Form D for a period of at least 21 days (for a forward trace) or 15 days (for a backward trace). In addition, an Article 19 notice should be served to prevent the movement of milk except under licence.
- 12.3 If the contact premises is a milk supplier, collection can only be effected by a tanker designated specifically for that purpose and only single collection allowed (where possible).
- 12.4 The cleaning and disinfection of vehicles used for these collections is especially important.
- 12.5 If staff resources allow, the collection of milk from restricted premises should be under the direct supervision of the DPI, VI or other DAF officer.
- 12.6 The FMD Advice Leaflet 2 (Code of Practice for Premises under Form D Restriction) should be given to the owner or farm manager of all premises under Form D restriction (see Annex 2 of Chapter 28, **Advice leaflets, posters and signs**).

13. TREATMENT OF MILK FOR INACTIVATION OF FMD VIRUS

- 13.1 Treatment of milk will be required in the following circumstances:
- Where the milk originates from a holding in a Protection or Surveillance Zone and is to be marketed outside the Zones.
 - Where the milk is produced in a controlled region (where Ireland is regionalised for FMD) and is to be marketed outside the region.
 - From any holding in the country where Third Country certification requirements necessitate.
- 13.2 A list of treatments which may be used are in Appendix III of **Annex 1**. DAF officials will recommend which treatments should be applied to ensure that trade in milk products can continue.
- 13.3 Equipment used for the heat treatment of milk must be provided with thermograph apparatus and a record of all treatments applied shall be made available for inspection by authorised officers of the Department.
- 13.4 If milk for liquid consumption has been rendered peroxidase-negative, the packaging of the milk must refer to 'high temperature pasteurised' as required under Community Directive 92/46/EC.
- 13.5 Where any creamery/depot fails to comply with the conditions established, the NDCC should be advised immediately. Such failure will possibly result in the revocation of movement licences.

14. DESTRUCTION OF MILK ON-FARM

- 14.1** Milk on infected premises or milk which cannot be subjected to heat treatment may have to be destroyed on site. (See **Annex 2** ‘Guidelines to inspectors for the supervision of the inactivation of FMD virus in milk’).
- 14.2** Milk should be disposed of in a way which conforms with the requirements of animal waste legislation (Regulation 1774/2002/EC). Milk from animals which are suspected of being affected with FMD must be treated as per Category 2 waste materials.

ANNEX 1**FMD CONTINGENCY PLAN FOR CREAMERIES****CODE OF PRACTICE FOR HAULIERS AND MILK PURCHASERS**

Section	Contents
A	Background information on Foot and Mouth Disease Definitions
B	Precautions when collecting or receiving milk from an infected area
C	Virus filters to be fitted to the air vent of milk tanker vehicles
D	Disinfection and approved disinfectants
E	Procedures for obtaining a licence to collect or move milk in a Protection Zone, Surveillance Zone or Controlled Area
Appendix I	Register of dairy herds located within Protection or Surveillance Zones and Controlled Areas
Appendix II	List of manufacturers of approved air filters or filter systems for use on milk tankers
Appendix III	List of authorized treatments for milk

If an outbreak of foot and mouth disease is suspected on a dairy farm milk collection is prohibited while the disease investigation is being carried out.

If foot and mouth disease is confirmed on a dairy farm, all milk on the premises will be treated on-farm and disposed of in accordance with instructions from the Veterinary Inspector at the premises.

This code of practice sets out procedures which must be followed by milk hauliers and dairy personnel who are involved in the collection and transport of untreated milk originating from dairy farmers in a foot and mouth disease infected area, or from other farms known to be at risk of foot and mouth disease infection.

SECTION A

1. Background information on Foot and Mouth Disease (FMD)

- FMD is a highly infectious viral disease affecting all cloven hoofed species (cattle, pigs, sheep, goats, deer etc). Humans are only rarely infected by handling a diseased animal, and infection is only temporary and mild. People do not become infected by eating meat or milk from affected animals. 'Hand foot and mouth disease' of humans is caused by a different virus.
- FMD is a notifiable disease which causes severe suffering and loss of condition in affected livestock. Mortality in young stock can be high.
- FMD is spread by movement of infected livestock, by products including milk, meat and manure from infected livestock, and by airborne virus breathed out by infected livestock.
- FMD virus may be excreted in the milk of infected cows for up to **four days** before the onset of clinical disease.
- Airborne spread of FMD virus from farm to farm can occur. This may be virus breathed out by infected animals or may be by means of windborne virus laden milk droplets released from tanker air vents when pumping is carried out. The virus may be carried from farm to farm on contaminated vehicles and clothing.
- FMD virus can survive for long periods under cool damp conditions, however the virus can be destroyed by a range of approved disinfectants and by heat treatment or alteration of pH of the milk.
- In the event of an FMD outbreak being introduced, it is controlled by the immediate slaughter of all susceptible stock on the affected premises and by restriction on the movement of livestock and their products in and around affected premises.

SECTION B

Precautions when collecting or receiving milk and milk products from an infected area

Movement of milk or milk products into, from or within, a Protection zone, Surveillance zone or Controlled Area is prohibited except in accordance with a licence issued by the local District Veterinary Office (see Section E).

Definitions: **Protection Zone** = Minimum 3 kms around infected premises

Surveillance Zone = Minimum 10 kms around infected premises

Controlled Area = The area **outside** the 10 km zone defined by the Minister in S.I. applicable to a specific case – usually an area defined by a natural boundary, river, road etc.

Where milk cannot be collected under licence it must be treated to inactivate FMD virus under Department of Agriculture supervision before disposal.

1. **Precautions to be taken by tanker drivers and dairy staff working with untreated milk from premises in an infected area**

- a) All staff must wear the following waterproof protective clothing: boots, overalls (or coat and leggings), headgear and gloves to protect the skin from disinfectant. Waterproof clothing means clothing made of rubber, plastic or similar impervious material which can be washed down and disinfected after each collection of milk. Eye protection is recommended when disinfectant solution is being sprayed.
- b) The protective clothing of drivers must be disinfected after collecting milk from each farm and on return to the depot after each run. The protective clothing of dairy staff should be disinfected at the time of removal.
- c) While affected area restrictions are in force, all staff working with untreated milk should avoid contact with susceptible livestock.

2. **Disinfection of milk collection vehicles before leaving the depot**

- a) An approved air filter must be fitted to the air vent of tanker vehicles (see Section C).
- b) The whole vehicle must be in a clean condition (free from mud and slurry).
- c) The body of tankers, steps, wheels, mudguards, splash guards and underside of the vehicle must be thoroughly sprayed with an approved disinfectant.
- d) The inside of the cab and the drivers boots and protective clothing should be clean and washed with approved disinfectant.

- e) Each milk collection vehicle must carry spray equipment and a supply of approved disinfectants. Eye protection is recommended when spraying disinfectants solutions.
- f) The milk sample pannier on the vehicle must be disinfected by the driver. The exterior of milk sample boxes must be cleaned and disinfected before being returned to the laboratory (if milk sampling is permitted - check with the LDCC).

3. Filters on tanker air vents

An approved air filter must be fitted to the air vent of positive pump tanker vehicles operating within an infected area. This is to prevent the dispersion of airborne milk droplets, which may contain high concentrations of FMD virus from infected animals, before any clinical signs are apparent. (For specifications and use of filters see Section C.)

4. Precautions to be taken by drivers of milk collection vehicles at each milk collection point

- a) On arrival at the entrance to a farm pick up point and again on leaving, clean and disinfect boots and outer protective clothing. If milk sampling is carried out, the containers and equipment must be disinfected after the samples have been collected.
- b) Before commencing milk collection, check whether the producer has reported any suspected cases of FMD – if so, do not collect the milk. Remain on the farm until the Veterinary Inspector arrives and act on his advice. In practice, if livestock suspected of being infected with FMD are present on the farm the milk collection vehicle will (in almost every case) be warned before arrival or stopped at the farm entrance. Approval to continue its journey must be obtained.
- c) Wash the outside of the milk collection hose and the coupling attachment with approved disinfectant as it is drawn out and again as it is returned to the vehicle. Ensure the blank ends are fitted before applying disinfectant to the couplings and rinse off the disinfectant with clean water.
- d) When making the milk collection, confine movements strictly to the minimum area necessary to carry out the collection. Care must be taken to avoid unnecessary spillage or contact with milk. Any milk draining or spilled milk must be disinfected.
- e) At exit and before leaving the farm premises, the steps, wheels and mudguards of the collection vehicle must be sprayed with approved disinfectant. If washing of the vehicle is necessary prior to disinfection such facilities must be provided at the exit.

5. Precautions to be taken at the milk collection vehicle depot and dairy

- a) Disinfection of all exterior surfaces must be carried out at the plant entrance.
- b) The following areas should be cleaned and disinfected at regular intervals during each day:
 - All areas where untreated milk is unloaded or transferred from one tanker to another
 - All areas where untreated milk may have been spilled
 - The exterior of equipment used in connection with handling and transfer of untreated milk
 - Floors and working surfaces of areas which are used by staff involved in the handling or transfer of untreated milk.

- c) Carry out the usual daily cleaning and sterilizing routine for the internal surfaces of milk tankers and dairy equipment.
- d) Records of disinfection must be maintained.
- e) All milk originating from an infected area must be heat treated in an approved manner before it is taken from the dairy for distribution. Used milk containers and sample bottles must be cleaned and disinfected or disposed of in a manner agreed with Department of Agriculture official. Bottles must be cleaned and disinfected or disposed of in a manner agreed with Department of Agriculture official. All testing must be carried out at a premises located within the control zone.

All spilled or wasted milk must be disinfected by use of an approved disinfectant, a suitable acid or alkali or by heating. (See Section D for details of approved disinfectants and heat treatments.)

- f) If untreated milk is to be transferred from one road tanker to another at a depot, the precautions outlined in this Section continue to apply until all the milk originating from an infected area has been heat treated by an approved method or has been disinfected by another approved method.
- g) If in doubt about any action to be taken, advice should be sought from the Department officials.

SECTION C

Virus filters to be fitted to the air vent of milk tanker vehicles

1. Filter performance specifications

Minimum particle retention 99.95% at 0.5 micron, determined by the Sodium Flame method at 12 cfm at 7.5"wg pressure drop.

2. Description of filter

The approved filters for use on the air vent of milk tanker vehicles operating in an infected area are food grade disposable cartridge filters which may be housed in a steel casing. Purchasers must check with the manufacturer that the filter is compatible with tanker vehicles to which it is to be fitted with respect to size, rate of airflow and operating pressure. In some cases, specially designed adapters may be needed.

3. Fitting of filter to tanker

Filters must be fitted at the vacuum pump air outlet (in the case of vacuum tankers) or at the manhole air vent (in the case of milk and air eliminator pump tankers). There must be sufficient space to fit the filter. The filter air outlets must open downwards when fitted, in order to avoid entry of washing water and disinfectant. Filters must be fitted, used and replaced in accordance with the manufacturer's instructions. A certificate of correct installation must be obtained from the filter supplier.

4. Removal and disposal of filters

The approved filters have a recommended service life of up to eight weeks. As there is a danger that these filters may become contaminated with FMD virus, the following procedure must be adopted when removing filters:-

Unscrew filter from tanker and immediately immerse the used filter and case in approved disinfectant for 10 minutes. Remove from the disinfectant and seal the used filter cartridge in a plastic bag and autoclave. Dispose of using a method agreed with a Department of Agriculture official. Waterproof gloves should be worn to remove and disinfect the filter. After disinfection the filter case must be rinsed in clean water and dried before refitting with a new cartridge.

5. Manufacturers of approved filters

(See Appendix II.)



SECTION D

Disinfection and approved disinfectants

1. A dirty surface must be cleaned before it can be satisfactorily disinfected. The presence of dirt or organic material (e.g. manure) may render the disinfectant useless. It is therefore most important that anything which is to be disinfected, must be soaked with approved disinfectant, then washed and cleaned and finally washed down with approved disinfectant.
2. **The approved disinfectants for use against FMD** and the dilutions at which they must be used are as follows:-
 - a) **Citric acid BP in 0.2% solution.** 20g of crystals dissolved in 10 litres of water.
 - b) **Washing soda** (Sodium carbonate) (British standard 3674 of 1963) in 4% solution. 40g of crystals dissolved in one litre of hot water (and in the same proportion for larger volumes).
 - c) **Proprietary brands** on approved list (the approved list may be found on the Department's website). Disinfectants which are approved by the Department should state on the container label that they are approved for use against Foot and Mouth disease and must be diluted as instructed on the label. Health and safety precautions recommended by the manufacturer must be followed. Ensure it is a formulation suitable for use with milking or dairy equipment.
3. The effectiveness of solutions of citric acid or washing soda is improved by the addition of a small quantity of a suitable detergent e.g. household washing up liquid (not more than 1ml per litre of solution).
4. **Never use washing soda and an acid solution to disinfect the same article, as they will neutralize each other.**
5. **Choice of disinfectant.**
 - a) Washing soda may be used on most occasions for general disinfection of floors and buildings but may corrode metal or damage painted surfaces. For these items and for personal disinfection an approved proprietary disinfectant is preferable.
 - b) Citric acid solution is suitable for the disinfection of dairy equipment. It should not be left in contact with galvanised metal for long periods, and should be rinsed off thoroughly with clean water after a few minutes of contact.
 - c) Approved proprietary disinfectants are suitable for general use, in particular for personal disinfection, vehicles and foot dips.
6. Wear eye protection and full protective clothing when mixing or spraying disinfectants. Wash off any solution that is splashed on the skin.
7. Milk and other liquids may be heat treated to inactivate FMD virus (see Appendix III).

SECTION E

Procedures for obtaining a licence to collect or move milk in a Protection Zone, Surveillance Zone or Controlled Area

The licence will be issued by the Licencing Section of the Local Disease Control Centre (LDCC) of the Department of Agriculture.

Requirements

- A certificate issued by the filter supplier stating that the filters have been correctly installed and a Quality Assurance Certificate for each filter.
- A certificate issued by the Dairy Produce Inspector stating that the vehicle driver has collected milk in compliance with the 'Code of Practice for Hauliers and Milk Purchasers'.
- A list of all suppliers' names, addresses, creamery numbers and herd numbers from which it is proposed to collect on the route/licence (day 1 + day 2).
- Confirmation that the sequence of collection on each licence will be supplied to the LDCC.

Each vehicle must have a licence which must accompany milk movement. Vehicle licences will be checked within the area and any vehicle moving milk without a licence will be impounded.

A destination must be known for the milk before the licence will be issued.

APPENDIX II

LIST OF MANUFACTURERS OF APPROVED AIR FILTERS OR FILTER SYSTEMS FOR USE ON MILK TANKERS OPERATING IN A FOOT AND MOUTH DISEASE INFECTED AREA

1. Domnick Hunter Ltd (Contact Mr R Tyler)
Durham Road
Birtley
Co Durham DH3 2SF Tel. 0044 191 410 5121

(Approved filters: Highflow Tetpor and Highflow Bio-X)

2. Foramaflow Ltd (Contact Mr D Russell-Lowe)
The Post House
Kennel Lane
Windlesham
Surrey GU20 6AA Tel. 0044 1276 473 900

(Approved filter: Foramaflow STC/3)

3. Sartorius Ltd (Contact Mr S R Ellis, Beverage Business Unit)
Longmead Business Park
Blenheim Road
Epsom
Surrey KT19 9QN Tel. 0044 1372 745 811

5 Sussex Street
Dun Laoghaire
Co. Dublin Tel: 01 284 4499 (Fax: 01 284 4599)

(Approved filter: Sartoflour LG)

4. ETA Melton Ltd (Contact M C Melton)
Unit A, Woodkirk Freight Terminal,
Quarry Lane, Dewsbury
West Yorkshire WF 12 7JG Tel. 0044 1924 422224

(Approved air filtering system: ETA Melton Vacuum System*)

- * (Closed venting system operated by drawing air from the milk tank through the diesel engine of the vehicle while the engine is running; two interception globes and an intermediate filter are included in the system.)

APPENDIX III

TREATMENT OF MILK AND MILK PRODUCTS TO ENSURE DESTRUCTION OF FMD VIRUS (AS PER ANNEX IX OF DRAFT COMMISSION PROPOSAL TO AMENDED DIRECTIVE 85/511/EEC - DOC (COM) 736 - MARCH)

NB. Precautions must be taken to avoid contact of the treated milk or milk products with any potential source of FMD virus after processing.

A. Milk for HUMAN consumption	
1.	Sterilisation at a level of at least F ₀₃
2.	Single UHT ¹ treatment
3.	Double HTST ² treatment of milk with a pH above 7
4.	Single HTST treatment of milk with a pH below 7
5.	Single HTST combined with another physical treatment (a or b)
	a) lowering the pH below 6 for at least 1 hour
	b) additional heating to 72°C or more combined with desiccation
Milk based products for HUMAN consumption	
1.	Must be made from milk which has received one of the treatments listed above or receive one of these treatments or Any other treatment which has been approved by the SCOFCAH, in particular raw milk products undergoing an extended period of ripening, including lowering of the pH below 6.

Department of Agriculture officials will advise on which treatments are most appropriate

¹ UHT = Ultra High Temperature treatment at 130°C for 2-3 seconds

² HTST = High Temperature Short Time pasteurization at 72°C for 15-17 seconds or equivalent pasteurization effect achieving a negative phosphatase

APPENDIX III (Contd)

Department of Agriculture official will advise on which treatments are most appropriate

B. Milk and milk products for ANIMAL or NON-HUMAN consumption	
1.	Sterilisation at a level of at least F ₀ 3
2.	Single UHT treatment combined with (a) or (b):
	a) lowering the pH below 6 for at least 1 hour
	b) additional heating to 72°C or more combined with desiccation
3.	Double HTST
4.	Single HTST combined with (a) or (b):
	a) lowering the pH below 6 for at least 1 hour
	b) additional heating to 72°C or more combined with desiccation
Whey to be fed to animals of susceptible species	
1.	Must be made from milk which has received one of the treatments listed above and complies with (a) <u>and</u> (b) below:
	a) was collected at least 16 hours after milk clotting
	b) which has had its pH recorded as below 6 before transport to holdings

ANNEX 2

GUIDELINES FOR INSPECTORS TO ASSIST WITH SUPERVISION OF THE FMD VIRUS INACTIVATION PROCEDURES FOR MILK ON-FARM

PREPARATION

Inspectors should obtain:

- Authorisation from Milk Policy Division to carry out the procedure. Seek permission from local LDCC/DVO and obtain a licence if entering a Protection/Surveillance/Control area.
- Waterproof protective clothing: boots, overalls (or coat and leggings), headgear and gloves to protect the skin from disinfectant.
- Sprayer with approved disinfectant at the correct concentration.
- Citric acid liquid (or crystals for larger milk volumes). Sodium hydroxide may be more convenient for milk tankers.
- pH indicator papers or a pH meter.

Advise each milk supplier to provide a bucket, hot water and stirring rod.

PROCEDURE

- Put the licence into a transparent plastic bag and put the citric acid into a plastic bag.
- Put on waterproof protective clothing before entering the zone.
- On arrival at the farm leave vehicle on the road outside the farm.
- Inform the milk supplier of the requirement to carry out milk destruction.
- At the entrance to the farm premises ensure that the protective clothing and boots of all staff and the outside of the citric acid bag are disinfected.
- Agree the volume of milk with the milk supplier and record this volume and the farmer's name and herd number (this is important as compensation is paid for milk which must be treated on-farm).
- Put citric acid into hot water and stir. Agitate milk and add acid. Repeat until the milk shows curds and confirm pH < 6.
- Instruct the milk supplier to leave the milk in the tank for 1 hour with continuous agitation, and dispose of in the slurry tank.

- Spray any milk spillage with disinfectant. Wash protective clothing and boots. At farm exit disinfect clothing, boots and the citric acid bag. (Disinfect the car wheels and mudguards if the car has entered the farm premises.)
- Do not remove protective clothing. Proceed to next milk supplier and repeat the procedure.
- Procedure for milk tanker is as above. If using sodium hydroxide confirm pH > 10; if citric acid confirm pH < 6.
- If the tanker has to be moved subsequently, to dispose of milk in a slurry tank, then a movement licence must be obtained.
- When milk destruction has been completed return to LDCC (or Local Biosecurity Centre, if established) and remove protective clothing.
- Record the name of each supplier visited, herd number, supplier number and volume of milk destroyed, and confirm pH reduction, in the sequence taken on the route.
- Retain paperwork used on the farms in a plastic bag and disinfect the outside of the bag.

ANNEX 3 REGISTER OF FARMS ON WHICH ACIDIFICATION OF MILK HAS BEEN SUPERVISED

SEQUENCE	NAME OF SUPPLIER	SUPPLIER CREAMERY NO.	SUPPLIER HERD NO.	QUANTITY OF MILK (GALLONS)

I _____ Dairy Produce Inspector, today supervised the acidification of milk to pH less than 6.0 on the above premises, in the sequence outlined.

Signed: _____ Date: _____

ANNEX 4**CERTIFICATE OF COMPLIANCE WITH MILK COLLECTION PROCEDURES ACCORDING TO THE CODE OF PRACTICE FOR HAULIERS AND MILK PURCHASERS**

I _____ Dairy Produce Inspector, hereby certify that on _____ (date) I supervised the precautions adopted for collection of milk in protection or surveillance zones or controlled areas carried out by _____ (haulier name) in _____ (vehicle registration) for _____ (creamery name) in an area outside the controlled area(s) and that the procedures were in compliance with the 'FMD Code of Practice for hauliers and milk purchasers'.

Signed: _____ Date: _____

Dairy Produce Inspector

Department of Agriculture and Food