

*Contents*

Foot and mouth disease in Greece: virus type Asia 1

99

**FOOT AND MOUTH DISEASE IN GREECE  
Virus type Asia 1**

*(Date of last previously reported outbreak:* September 1996).

EMERGENCY REPORT

*Text of an e-mail received on 12 July 2000 from Dr Vasilios Stylos, Head, Animal Health Directorate, Ministry of Agriculture, Athens:*

**Report date:** 12 July 2000.

**Date of clinical suspicion:** 10 July 2000.

**Date of laboratory confirmation:** 11 July 2000.

**Outbreaks:**

Location	No. of outbreaks
Evros Delta, Prefecture of Evros, North-Eastern Greece, on the border with Turkey	2 herds

**1. Background**

- On 6 July 2000, veterinary officers from the Local Veterinary Station of Ferres, Prefecture of Evros, visited several bovine herds in what later became the FMD affected area, including one of the herds actually infected, for the purpose of administering Rev-1 vaccine within the framework of the brucellosis control programme. On this occasion, they neither observed any signs of FMD nor heard any complaints or alarming reports from the farmers.
- In addition, within the framework of the ongoing "EVROS" programme, the results of clinical inspections and serological monitoring for FMD in the entire Prefecture of Evros had been consistently negative until the last round of inspections (late June). Detailed, relevant and recent results of the active surveillance for FMD in the context of the "EVROS" programme are being processed.

The two considerations mentioned above, taken in conjunction with clinical and serological evidence in the FMD outbreaks, allow an estimation of the probable date of incursion.

**2. Suspicion**

On 10 July, a farmer from the delta of the Evros river, Prefecture of Evros, applied to the Local Veterinary Station for an animal movement permit.

Within the framework of the "EVROS" programme, all movements of animals within and from the Prefecture of Evros are subject to a permit issued by the local official veterinary service after the animals have been clinically examined and serologically tested with negative results.

Upon inspection, suspicion of FMD was raised on the basis of mild clinical signs, i.e salivation, fever, inflammation of the gums and vesicles in the bucal cavity, in 4 or 5 of the 50 bovines present in the herd.

Samples (blood/epithelium) were collected on the spot, the alarm was raised and standard measures on suspicion were initiated.

On 10 July at 2.10 p.m., the National Crisis Centre (NCC) in Athens was notified.

By 6 p.m. a team from the NCC was on the spot. The suspicion was confirmed on clinical grounds, and the herd was provisionally designated as FMD outbreak No. 00/01 pending the results of laboratory tests.

At 8 p.m. samples were collected by the FMD Institute in Athens, and the first set of ELISA plates was laid for FMD antibody (liquid-phase blocking ELISA) and antigen detection of types A<sub>22</sub>, O<sub>1</sub>, C and Asia 1.

### **3. Confirmation**

On 11 July, throughout the morning, an epidemiological survey was carried out in the vicinity of the suspect herd, leading to identification of a second bovine herd with clinical signs compatible with FMD situated approximately 1,000 m to the north of outbreak No. 00/01.

The second herd was provisionally designated as outbreak No. 00/02. Samples were collected and dispatched to the FMD Institute in Athens and standing arrangements for killing and destruction of infected animals were activated.

*Note:* In the light of retrospective investigations and taking into account the rate of propagation within the infected herds, the clinical picture and age of lesions, it is considered that, chronologically, the first herd infected was actually outbreak No. 00/02, while the subsequently identified herd was in fact outbreak No. 00/01.

On 11 July at 4.45 p.m., the FMD Institute reported:

- a) negative serology for all types of FMD virus (FMDV);
- b) negative antigen detection for FMDV types A and O;
- c) inconclusive antigen detection for FMDV type C (it should be noted that FMDV type Asia 1 has been known to give partial cross-reactions with type C);
- d) positive antigen detection for FMDV type Asia 1 (after repeating the tests, at 10 p.m. the FMD Institute reported definite positive antigen detection for FMDV type Asia 1).

### **4. Description of the situation in the field**

#### **4.1. The infected area**

A total of 17 sick animals were detected in two free-grazing beef herds comprising a total of 177 animals.

Both herds were kept on common pasture with another 22 bovine herds, comprising a total of 1,388 animals, 1 flock of 250 sheep and 1 herd of 30 pigs. All bovines and sheep were individually identified by ear tags. All these animals were considered to have been in contact with the two infected herds and were duly destroyed on 12 July.

#### **4.2. The protection and surveillance zones**

The "protection zone", including the infected area, is designated by the following coordinates:

- from 40° 42' 30'' N to 40° 48' N, and
- from 26° 18' 30'' E to 26° 26' E.

The susceptible livestock population inside the protection zone, minus the infected zone, is as follows: 17 bovine herds comprising 1,900 animals, and 9 goat flocks comprising 1,265 animals.

The "surveillance zone" is designated by the following coordinates:

- from 40° 42' 30'' N to 40° 50' N, and
- from 26° 18' E to 26° 30' E.

The susceptible livestock population inside the surveillance zone is as follows: 31 bovine herds comprising 2,611 animals, 1 sheep flock comprising 150 animals, and 2 goat flocks comprising 650 animals.

In all cases natural barriers were used (Evros river to the east, the sea to the south, the railway to the north and west) and, considering that the actual locations of outbreaks are on the border, the size of the zones exceeds the minimum requirements, namely a 3- and 10-km radius, respectively.

#### ***4.3. Epidemiological considerations***

The means of transmission are still under investigation but the most likely scenarios, in order of likelihood, are:

- a) indirect cross-boundary contact via mechanical carriers or fomites,
- b) direct cross-boundary contact via wild animals (boars),
- c) cross-boundary air-borne spreading of FMD virus,
- d) direct cross-boundary contact via accidental crossing of the Evros river by an infected animal,
- e) criminal act, or act of negligence.

These scenarios are currently being investigated, in cooperation with the competent authorities.

#### ***5. Control and safeguard measures***

Greece is applying a stamping-out/non-vaccination policy aimed at eradicating the disease.

Standard control and safeguard measures are laid down in Council Directive No. 85/511/EEC, as amended by Directive 93/423/EC, and they have been promptly implemented.

In addition to these minimum measures, the Greek Authorities have taken additional steps to prevent the spread of the disease, such as the following:

- On 10 July, a general ban was imposed on the dispatching of live susceptible animals, products of animal origin and feed from the the entire Prefecture of Evros. The ban will remain in place until the situation has been clarified.
- A retrospective investigation of consignments of products of animal origin dispatched from Evros during the previous 15 days has given negative results. The investigation excluded consignments of heat-treated meat products exported to the Balkans, since these products present no risk of transmitting FMD virus.
- A general standstill on animal movements and slaughter in the entire Prefecture of Evros has been imposed until the situation has been clarified.
- Lay persons and vehicle movements inside the Evros Delta have been drastically reduced and stringently controlled with the active involvement of the police, the army and border guards.

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