Appendix 9

THE SPANISH DIAGNOSIS EXPERIENCE DURING THE 2001 FMD EUROPEAN CRISIS

Esther Blanco, Luis.J.Romero, Zamora, M.J., Arias, M and José Manuel Sánchez-Vizcaíno

CISA-INIA, Valdeolmos, Madrid 28130, Spain

Since an outbreak of FMD was declared in United Kingdom on the 20th February 2001, until June of this year, about 28,000 samples were collected in Spain and tested in our laboratory CISA at Valdeolmos for monitoring the situation of possible animals infected of FMD virus in the country. The distribution of these sera by animal species was as follows: pig sera 15,000, bovine 8,862 and ovine 4000. The diagnostic strategy consisted of the inspection of samples by PCR (using "universal" primers selected in our lab) and 3ABC-ELISA (indirect test developed and validated previously in Valdeolmos), LPB Elisa and seroneutralization.

None of the analysed samples by PCR were positives. The clinical lesions suspects of FMD and submitted to Valdeolmos were mainly collected from sheep and all of them were negatives to FMD virus and a few cases were positives to ecthyma virus.

Serum were studied by 3ABC protein, Liquid Phase Blocking ELISA using the reactive supplied by WRL from Pirbright and Seroneutralization test using BHK21 cell cultures. None of the sera analysed by Seroneturalization test was positive. False positives were found in a higher percentage analysing sheep sera: 0,67% using LPBE and 0,2% using 3ABC-ELISA. The percentages of false positives in bovine sera were 0,51% using LPBE but only 0,07% when the 3ABC-ELISA was used. Among the pig sera the percentage of false positive were very low; 0,06% and 0,02% using LPBE or 3ABC test respectively.

Concerning the number of sera found doubtful (close or equivalent to cut-off value), using the 3ABC-ELISA those dates were 0,3% (sheep), 0,1% (pigs) and 0% (cattle). However, using LPBE these percentages were slightly higher: 2,1% (sheep), 0,3% (pigs) and 1,2 % (cattle).

Summarizing these results suggest that the 3ABC test used in CISA can be a useful tool in the diagnosis and serosurveillance of FMD since this test is easy to perform, rapid and specific, being the percentage of false positive as well as the number of doubtful sera that required further diagnostic confirmation very low.