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SEROLOGICAL SURVEY OF ABORTIFACIENT PATHOGENS IN ORGANIC SHEEP AND GOAT FARMS OF WESTERN GREECE

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OBJECTIVE

The aim of the study was to investigate serologically the abortions in organic small ruminants, for *Chlamydophila abortus*, *Brucella spp.*, Caprine Herpes Virus 1 (CpHV-1) and West Nile virus (WNV).

The objective was to estimate the pathogens prevalence and their potential abortifacient impact.

MATERIALS AND METHODS

Sampling

Blood sampling took place during summer of 2005 and 2006. 427 non vaccinated sheep and goats from 36 organic flocks having massive abortions during two successive reproductive periods (2004-2006) were tested. The first year, preliminary study was performed only to aborted animals, while both affected and normal animals were sampled the year after.

Serological testing

The serological methods used per pathogen were: C- ELISA (*C. abortus*), seroneutralization (CpHV-1), IFA (WNV) and both an agglutination assay and an ELISA test (*Brucella spp.*).

a.

2004-2005 (Animals having abortion)	EWES	FEMALE GOATS
C. abortus	50%	84.87%
CpHV-1		63.06%

b.

2005-2006	EWES without abortion	EWES with abortion	FEMALE GOATS without abortion	FEMALE GOATS with abortions
C. abortus	64.63%	66.67%	97.56%	93.88%
CpHV-1			82.35%	52.94%

Table 1. Percentage of seropositive animals in organic farms during 2004-2005 (a) and 2005-2006 (b).

RESULTS

Results from the first year show positive serological titres, for *C. abortus* in 50% ewes and 84.87% goats tested (Table 1). The percentage recorded for CpHV-1 was 63.06% for the goats.

At the second year 66.67% of the affected and 64.63% of the normal ewes were positive for *C. abortus* together with 93.88% of the affected and 97.56% of the normal goats. Regarding CpHV-1, 52.94% of the affected goats and 82.35% of the normal were positive.

No antibodies to WNV and *Brucella spp.* were detected.

CONCLUSIONS

Chlamydiosis and CpHV-1 infection are enzootic in small ruminants, while no WNV or brucellosis was observed. For the first time in organic farms, two pathogens' seroprevalence is higher than that reported in conventional sheep and goat farms.

However, in order to safely conclude on the main etiological factors of abortions in organic small ruminants, more parameters (infectious diseases, metabolic disorders, toxicosis and traumatic causes) should be studied.