

HIGH PREVALENCE OF MYIASIS BY *OESTRUS OVIS* IN THE BALEARIC ISLANDS

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Sir,

Oestrosis is a myiasis of world-wide distribution, caused by the infestation of the larvae of *Oestrus ovis* Linnaeus, 1761 (Diptera: Oestridae) into the nasal cavities of sheep and goats. The *Oestrus ovis* infestation produces severe losses in wool, meat and milk production in animals (Horak *et al.*, 1976). In 2008, we carried out the first survey of ovine oestrosis in the island of Majorca (Spain). We found the highest prevalence rates of ovine oestrosis in Spain and probably one of the highest reported in the Mediterranean region. From the 206 adult sheep (> 2 years old) examined, 87.6 % and 81.2 % (September and October, respectively) were infested with *Oestrus ovis* larvae. Our data strongly indicates that control measures should be immediately applied to protect both animals and human populations.

• Material and methods

During September and October, 2008 we examined 206 sheep (> 2 years old) heads from the island of Majorca (the largest of the Balearic archipelago), obtained from 25 free ranging flocks, from seven localities in September and 17 flocks, from nine Majorcan localities in October. Animals were examined at the city's largest slaughter house. Heads were cut in a mid-sagittal plane, and larvae were searched in the nasal cavities, turbinates, middle meatus, septum, and sinuses of the animals. Larval stages were collected and identified following the key of Zumpt (1965).

• Results and discussion

These preliminary results show a high prevalence by *O. ovis* larvae on sheep in the island of Majorca during September and October, 2008. In September, we found that 78 of the 89 animals examined were infested with *O. ovis* (87.6 %) larvae. In nine of the 17 farms surveyed this percentage reached 100 %. With a single exception, more than 50 % of the animals appeared infested in all Majorcan farms surveyed. A decrease in prevalence values have been observed in October, the same

year, when 95 of the 117 (81.2 %) animals examined were positive to the infestation. In total, 1851 larvae were collected from the 206 heads examined.

The prevalence of the disease in the island of Majorca is higher than that reported by Alcaide *et al.* (2003) for sheep of the south-western region of Spain, which is the area with the highest prevalence records of the country (Reina *et al.*, 2001; Alcaide *et al.*, 2005). The prevalence rates of oestrosis in Majorca appear also higher than those reported other European countries. In Turkey, Uslu & Dik (2006) reported less than 80 % prevalence rates in sheep in September and October. Dorchiev *et al.* (2000) reported prevalence of 45.8 % and 65 % in sheep, in September and October, respectively, in the south of France. Highest prevalence values have only been recorded in the island of Sardinia, with 89.6 % in September and 96.2 % in October (Scala *et al.*, 2001). During September and October, the larval population was mainly represented by the L1 stage, with 80 % in September and 84.1 % in October, followed by L2, with 16.5 % and 12.7 % and finally by L3, which represented the 3.6 % and 3.2 % (Table I). This indicates an active flying activity of adult *O. ovis* flies in this period, which is consistent with other studies in Spain (Gracia *et al.*, 2006).

Year	Month	Larval stages (%)			N° heads examined	% infested sheep
		L1	L2	L3		
2008	September	80	16.5	3.6	89	87.6
	October	84	12.7	3.2	117	81.2
Total					206	84

Table I. – Monthly prevalence rates of ovine Oestrosis and larval stages (L1, L2 and L3) found in sheep from Majorca (Balearic Islands).

The authorities from the Balearic government have pointed out a high number of veterinary staff that has been affected by oestrosis. Further studies should be focussed on seasonality of *O. ovis* larval stages, to determine the first instars active, diapause and exit phases (Scala *et al.*, 2002). Risk factors and human prevalence are also required to understand the epidemiology of the oestrosis in the Balearic Islands and to establish effective control measures.

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