



Farmer reported prevalence and factors associated with Contagious Ovine Digital Dermatitis in Wales: a questionnaire of 511 sheep farmers

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Introduction

Lameness is one of the most significant causes of poor welfare in sheep. Contagious ovine digital dermatitis was first identified in the UK in 1997. It causes severe lameness and is a significant welfare concern. However, despite this there is scant evidence in to the prevalence, incidence and aetiology of CODD. Treponemes are likely to be involved in the aetiology of CODD although other organisms may be involved together with host and environmental risk factors.



Materials and Methods

Study Population: 2000 Welsh sheep farms randomly sampled from the FAWL database.

Questionnaire: Questions on infectious foot diseases, farm and management factors and the views and opinions of farmers on sheep lameness. A pictorial guide was included to assist in disease classification. All returned questionnaires were entered into a cash prize draw. One reminder was sent.

Data Analysis: The primary outcome variable was the presence of CODD on the farm. Univariable logistic regression was used to investigate associations between the following putative exposures: geographical area (county), farm size (hectares), flock size, farm land type, time of year, housing, group (e.g. ewes, lambs etc), isolation of purchased animals, foot trimming, the presence of cattle, BDD in cattle on the farm and the presence of concurrent disease – both foot and systemic disease.

Multivariable regression analysis was carried out using a backward elimination strategy.

P values < 0.05 were taken as significant.

Results and Conclusions

Farm Attributes.

Median farm size 101.2 hectares.

Median number of sheep per holding 704.

Prevalence

CODD reported on 35.0% of farms.

Median on farm prevalence 2.0% (IQR 1.0-5.0% [range 0.0-50.0])

Variable	Coefficient	Standard Error	OR	95% CI	P value
Flock Size (number of ewes)	0.3	0.1	1.4	1.2-1.7	<0.001
BDD in cattle	1.1	0.3	3.1	1.9-5.1	<0.001
Baseline (102 ewes; no BDD)	-2.0	0.3	0.1	0.1-0.2	<0.001
Hosmer-Lemeshow goodness of fit test					0.938

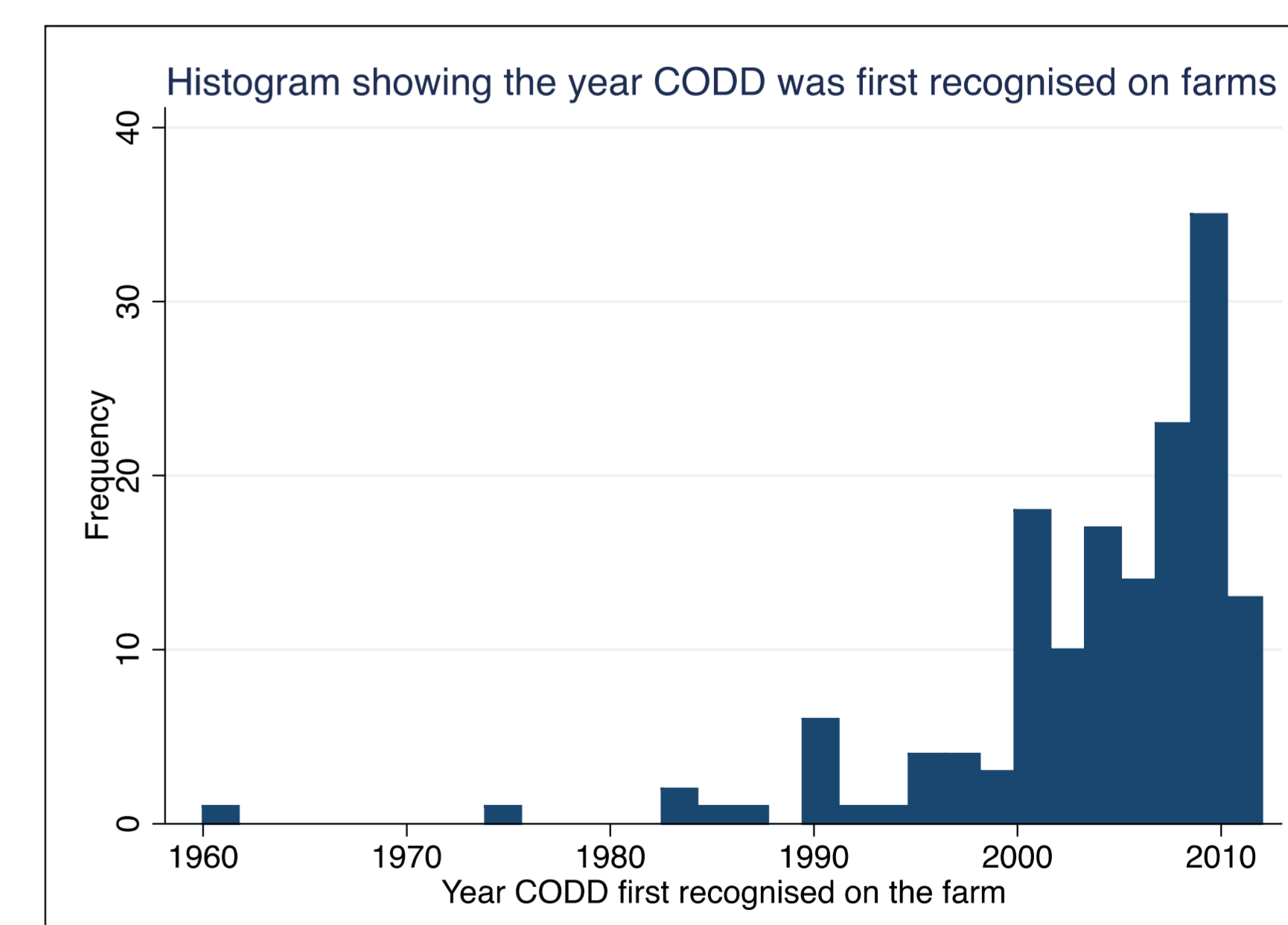


Table 1: Final Multivariable Model

Contagious Ovine Digital Dermatitis now appears to have become endemic and widespread in this study area. Risk factors associated with disease are the presence of cattle with BDD on the farm and the size of the flock. Farmers also consider adult sheep to be most at risk and there to be some seasonal variation. Other risk factors may include concurrent FR or ID, and housing. In order to devise effective treatment and control strategies for farms with multiple infections and in particular CODD, research should be directed to on farm epidemiological studies investigating specific potential risk factors for disease together with the aetiopathologic agents.

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