

Department of Farm Animal Health

Proportionality between light trap catches and biting densities of bluetongue vectors

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Introduction

Surveillance light-trap protocol data were found to be not accurate in reflecting biting midges population in the field [1,2]. This study aims at evaluating the relationship between light trap and animal-baited catches in an attempt to estimate simple conversion factors.





Preliminary results do not provide support for a reliable conversion factor between light trap and cattle-baited trapping methods

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variations in expected counts based on the outcomes of the two models

Species	Method			
	OVI LT	DA	SW	Total
C. chiopterus	35	40	1026	1101
C. obsoletus/scoticus	78	47	329	454
C. dewulfi	32	25	206	263
C. punctatus	16	15	138	169
C. sp. nr newsteadi	30	7	117	154
C. pulicaris ss	1	8	29	38
Other species	49	11	45	105
Total	241	153	1890	2284

Conclusions

Substantial variation in collection methods prevents the determination of reliable and operationally feasible conversion factors.

A practical and realistic Culicoides collection method for establishing animal biting rates should not be fraught with inconsistencies depending on factors such as insects density, which may vary from month to month.

I pluetongue virus vector? J.App.Ecol., 45, 1237-1245 iides biting midges (Diptera: Ceratopogonidae), vectors of urnal 11: 56 : 1. Carpenter, S., Szmaragd, C., et al. (2008) An assessment of Culicoides surveillanc 2. Viennet, E., Garros, C. et al. (2011) Assessment of vector/host contact: comparisor 3. Overgaard, H.J., Saebo, S., et al. (2012) Light traps fail to estimate reliable malaria

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