

REPORTS FROM INDUSTRY SURVEILLANCE AND DISEASE CONTROL PROGRAMMES: NEW ZEALAND DAIRY ENZOOTIC BOVINE LEUKOSIS (EBL) CONTROL SCHEME

The annual period prevalence of EBL in the New Zealand dairy herd has now remained at zero for four consecutive years, with more than 50 percent of the national herd screened annually (Table 1). DairyNZ has continued to fund the ongoing monitoring program run by Livestock Improvement Corporation (LIC).

Once again no EBL cases were identified in the national dairy herd during 2010–2011. However, in the course of milk screening every year a few animals in a small

Prior to 2006 reference sera were collected from a range of EBL ELISA-positive animals from EBL-infected herds. This panel of samples was used to validate the PCR test at the end of 2010. Test sensitivity of the EBL PCR was shown to be at least 72 percent for the reference sera. In contrast, blood samples from animals with negative or suspicious ELISA results from herds without confirmed EBL or epidemiological evidence of EBL, gave negative PCR results.

TABLE 1: SUMMARY OF EBL STATUS AND POINT PREVALENCES, APRIL 2007–2011

NZ DAIRY HERD EBL STATUS	APRIL 2011		PERCENTAGE OF HERD IN NORTH OR SOUTH ISLAND	APRIL 2010	APRIL 2009	APRIL 2008	APRIL 2007
	N	PERCENTAGE OF NATIONAL HERD					
EBL-positive herds*	0	0.00%		0.00%	0.00%	0.00%	0.00%
Annual period prevalence	0	0.00%		0.00%	0.00%	0.00%	< 0.02%
EBL-suspect herds†	0	0.00%		0.01%	0.00%	0.00%	0.00%
Provisionally EBL-negative‡	0	0.00%		0.00%	0.00%	0.00%	0.02%
EBL-negative§ (year 1&2)	0	0.00%		0.02%	0.00%	0.02%	0.06%
EBL-free herds ⁵	11 028	100.00%		99.98%	99.99%	99.98%	99.90%
Total NZ dairy herds	11 028	100%		11 029	11 128	11 323	11 516
Herds tested during season**	5 853	53.00%		52%	55%	64%	49.00%
South Island	542	n/a	21.00%	97%	99%	65%	
North Island	5 664	n/a	67.00%	39.00%	43%	62%	

* EBL diagnosed by milk or serum ELISA, and negative herd retest at 60+ days post-cull not yet completed.

† Herds under additional investigation after screening until confirmation testing complete, plus herds with purchased or leased animals from positive herds.

‡ Negative whole-herd test at 60+ days post-cull.

§ Negative annual screen tests enable herds to progress.

** Testing negative for three seasons after provisionally negative status.

proportion of the herds show suspicious results that require further confirmation testing using serum samples. In the majority of cases the negative results of the confirmatory ELISA tests have been clear-cut and confirmed by repeat screening of the whole herd, but in two herds suspect animals (based on milk ELISA) were identified on repeated whole-herd milk-screening events over the last two years. As no laboratory in New Zealand provided molecular diagnostics for EBL, a PCR testing facility was set up at LIC.

All samples with suspicious screening results (but negative confirmatory ELISA) collected over the last two seasons showed no sign of EBL virus on PCR. This work clearly supports the conclusion that EBL has been eliminated from the New Zealand dairy industry, with no new incursions detected in four years despite intense annual herd screening. The EBL control scheme has thus achieved its goal of eradicating EBL from the national dairy herd.

During the 2011–12 dairy season, the EBL scheme monitoring activity will be reassessed and possibly scaled back.

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