

# Reports from industry surveillance and disease control programmes

## Enzootic bovine leucosis eradication scheme

The New Zealand dairy industry funded enzootic bovine leucosis (EBL) eradication scheme has continued to make good progress since it began in 1997. Farmers must test for and cull EBL-positive animals as a condition of supplying milk to dairy companies.

### Scheme operations

Livestock Improvement manages and operates the scheme on behalf of the dairy industry. Herd surveillance screening is undertaken using bulk milk and individual animal milk samples with ancillary blood testing in infected herds<sup>(1)(2)(3)(4)</sup>.

A capability to track individual animal movements is a key component of the EBL scheme as the bovine leukaemia virus (BLV) is generally spread between herds by the movement of infected stock. The EBL scheme uses the Livestock Improvement National Database to schedule testing, record results, trace the movement of BLV infected and suspect animals, and assign herd EBL status. All dairy animals have a unique lifetime individual identification recorded on this database so a full history of animals is available for trace back and trace forward investigations. Compliance within the dairy industry is high as farmers are very aware that the purchase of stock from infected herds will be traced and result in the assignment of an adverse EBL disease status.

### Herd EBL status and progress toward eradication

Screening of dairy herds continued during the 2002/2003 dairy season. The point prevalence of infected 'blood-positive' status herds has been reduced from a peak of 928 (6.3%) in 1998 to 64 (0.5%) in April 2003 (Figure 1). The total number of dairy herds under surveillance has declined from 14,673 in 1998 to 12,814 in April 2003.

A summary of the EBL status of all dairy herds at the end of the

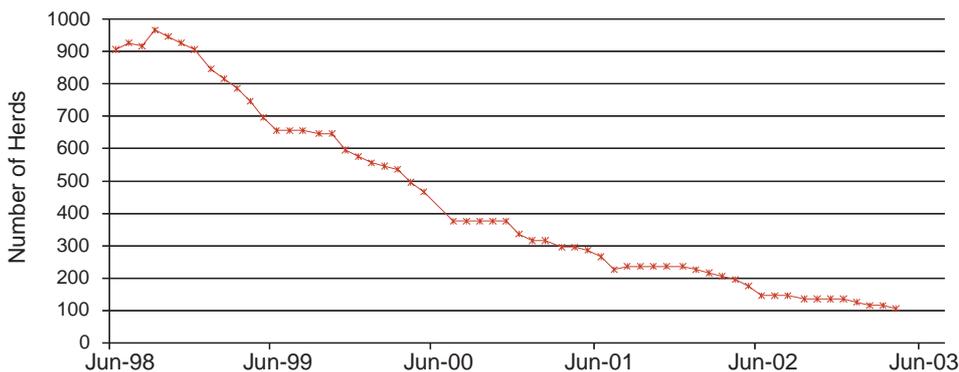


Figure 1: Point prevalence of BLV positive herds from June 1998 to April 2003

Table 1: Herd BLV status for dairy herds as at April 2003.

BLV herd status	Number of herds
EBL-free	10,722
Negative	1,773
Provisionally negative	82
Untested new locations	26
Suspect	141
Blood-positive	64
Milk test-positive	6
<b>Totals</b>	<b>12,814</b>

EBL-'free' herds have previously been tested for at least three years with a negative result. 'Negative' herds have been screened at least once with negative test results using milk samples. 'Suspect' herds contain animals that have been purchased or leased from positive or other suspect herds. 'Milk test-positive' herds have not completed the required blood testing to confirm status. 'Provisionally negative' herds are herds that were previously infected herds.

2002/2003 dairy season is shown in Table 1. There were 10,722 herds with an EBL-free status. There were also 141 suspect status herds that had purchased stock from infected or other suspect herds. With only 26 untested herds the scheme has achieved excellent surveillance of the population.

### Incidence

There were 11 confirmed positive incident herds identified from annual testing and the monitoring of animal movements during the 12-month period ending April 2003, giving a period incidence rate of 0.09%. All except two cases resulted from the introduction of animals from other previously identified positive locations. High disease incidence rates, including those resulting from the introduction of EBL from herds not under surveillance including beef herds, could threaten the scheme objectives. However, these results indicate there is not a significant risk of disease breakdown under the existing surveillance strategies and the incidence rates are well within international guidelines for eradication.

### Slower progress in large herds

Large herds are the most at risk of being EBL-positive (Figure 2). Testing and compliance has been less effective in some herds with more than 500 cows as they tend to have more frequent introduction of animals, less accurate animal identification and less commonly have milk production recording samples available for screening. Compliance strategies will focus on these large herds over the next 12 months.

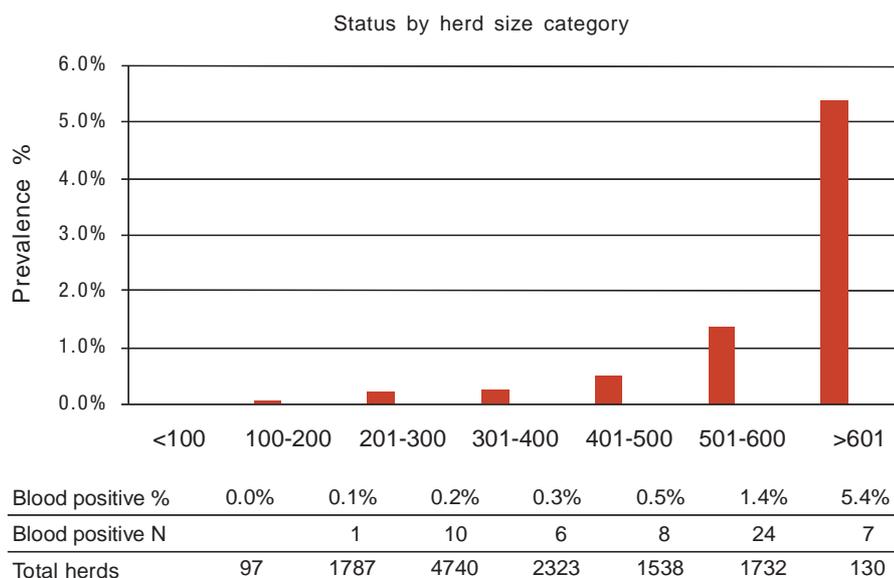


Figure 2: BLV herd prevalence by estimated herd size category (473 herds of uncertain herd size excluded)

## Summary

The EBL scheme has achieved a consistent reduction in the number of EBL-positive herds each year. The low incidence rates and the effective surveillance of dairy herds indicate that the scheme is able to meet the objectives of disease eradication. Lower compliance in some known positive herds may slow progress toward eradication but will not compromise the prospects for eradication given the continued dairy industry support.

## References

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