

TECHNOTE

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Sign on for herd testing

Information gained from herd testing enables farmers to benchmark animal performance within herd, within region, and nationally. Farmers in New Zealand currently have the choice of two herd testing service providers (CRV AmBreed and LIC), and are able to choose the frequency of testing.

Herd testing involves the collection of individual milk samples from all lactating animals in the herd. A full herd test provides information on milk volumes, milk fat and protein yields, and individual cow somatic cell counts (ICSCC).

Herd testing provides an overall picture of the production of the herd, and enables the subclinical mastitis status to be monitored. More specifically, herd test information identifies:

- cows with high ICSCC, for withholding milk from the vat, for drying off or culling
- cows with low production, for drying off or culling
- high producing cows for breeding

Herd recording also provides an opportunity to keep long term records of clinical cases and treatments.

Typically NZ herds are tested three to four times per lactation, and approximately 70% of dairy cows are herd tested in NZ (see Table). The proportion of herds that use herd testing varies among regions, with the highest participation in Bay of Plenty and Taranaki.

Over the past 15 years, the proportion of herds that herd test has steadily declined, from about 85% of herds in the mid 1990's to 70-75% of herds in more recent years (see Figure). At the same time the average ICSCC has shown a steady increase. Although not necessarily a "cause and effect" relationship, in years when more herds herd test, the average SCC has been lower.

Technote 4.5 describes recording of details required for clinical cases.

Technote 12 describes ways to interpret ICSCC and options for dealing with high ICSCC cows.

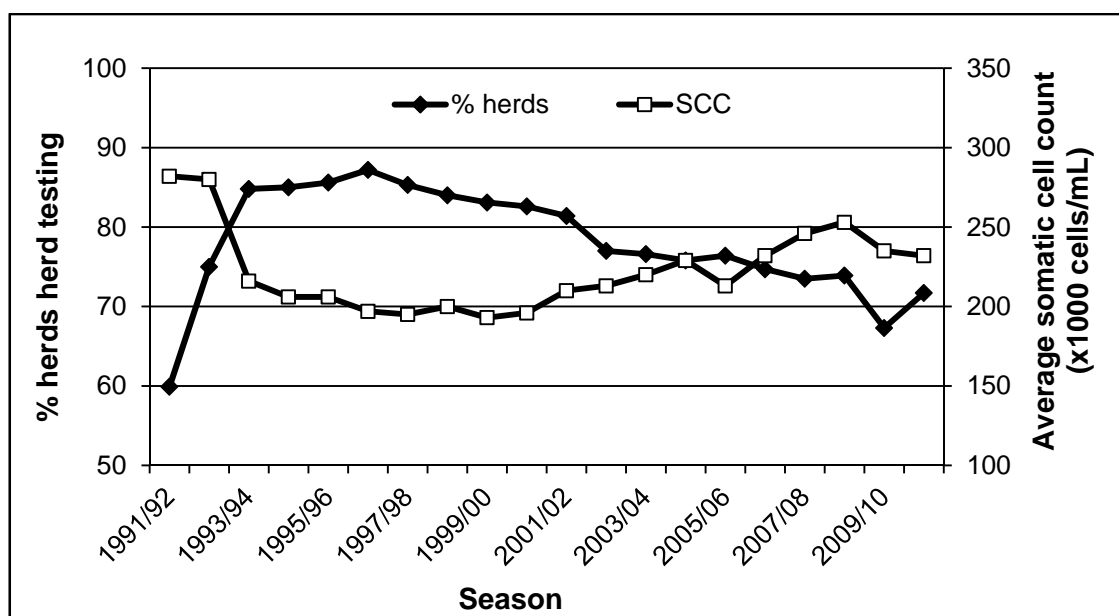
All cows and herds are uniquely identified in the national database. Herd testing results and pedigree data can be requested from the herd testing provider when purchasing cows.

National herd testing statistics are available annually in the New Zealand Dairy Statistics, published jointly by LIC and DairyNZ.

Proportion of NZ dairy herds using herd testing (2010/11), derived from New Zealand Dairy Herd Statistics (DairyNZ, 2011).

District	Total no. herds	% of herds herd testing	Average no. of cows per herd
Northland / Auckland	1376	70.6	272
Waikato	4109	66.9	437
Bay of Plenty / East Coast	609	85.6	424
Manawatu / Wairarapa	1109	73.1	461
Taranaki	1744	81.4	279
South Island	2788	67.8	560
New Zealand	11735	71.7	386

Proportion of herds that herd test, and national arithmetic average individual cow somatic cell count.



Herd testing connection to the national database

CRV AmBreed and LIC are certified herd testers. The Dairy Industry (Herd Testing and New Zealand Dairy Core Database) Regulations 2001 require that herd testers be certified and must submit herd testing data to the New Zealand Dairy Core Database.

Collection of milk volumes by a certified herd tester without the corresponding somatic cell count is not permitted by the Regulations. All the ICSCC data are accessed for the purpose of producing New Zealand Dairy Statistics (DairyNZ 2011) and for producing the NZAEL Somatic Cell Breeding Values for dairy sires.

In NZ, all ICSCC data are used to provide Somatic Cell Breeding Values for dairy sires.

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Herd testing involves the collection and analysis of milk samples from all lactating cows in the herd. Herd testing also requires collection of data such as cow ID, calving dates and dry off dates, and uploading to the herd test provider database.

Herd testing

This provides:

- Measures of milk, protein and fat yield for each cow for each test day and the whole lactation
- Indexes for Production Worth (PW) and Breeding Worth (BW)
- Measures of ICSCC.

Standard reports of all these parameters are available from herd test providers. More recently, web-based reporting systems have been developed to allow farmers and advisors to customise herd reports for their requirements.

Farmers can choose the number, timing and type of herd test purchased to suit their needs and their budget. Typically most NZ herds have 3 to 4 tests per lactation, rather than monthly tests, as in some countries. The more herd tests per lactation, the more accurate the individual cow assessment.

Herd recording

Herd records support herd testing, and add value to the dairy herd, by providing evidence of the cows' genetic merit and productive performance, relative to other herds.

Herd records also provide information on the udder health status of the herd during a single lactation, and across consecutive lactations.

The overall level of mastitis in a herd can only be fully assessed if records of both clinical cases and subclinical cases (ICSCC) are available. Herd recording systems provide opportunities to record all clinical mastitis cases and treatment details electronically.

Mastitis Focus Report

Mastitis Focus brings together records of subclinical mastitis from herd test records (ICSCC), and clinical mastitis case records into one single report. The report helps to identify key mastitis management areas where improvements can be made.

A Mastitis Focus Report is more accurate and informative when:

- Herd testing occurs more frequently (i.e. 4 or more tests per lactation), and over consecutive seasons.
- Data relating to clinical and dry cow treatment records are uploaded regularly to the herd test provider.

Acknowledgements

DairyNZ and NMAC (NZ National Mastitis Advisory Committee) acknowledge the huge contribution of Dairy Australia's Countdown Downunder as the original source material from which SmartSAMM Technotes are derived, being updated and adapted for NZ dairy farming in 2011.

These SmartSAMM adapted resources are made available to NZ dairy farmers and advisors through a Memorandum of Understanding between Dairy Australia and DairyNZ.

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Key papers

DairyNZ and LIC. *New Zealand Dairy Statistics 2010/11*. 2011. Accessed May 2012 at http://www.dairynz.co.nz/page/pageid/2145866853/Dairy_Industry#688