Contemporary Groups for New Zealand Standard Dairy Herd Testing

Under the proposed New Zealand Standard Dairy Herd Testing (NZS 8100:2007) New Zealand Animal Evaluation Limited is required to describe contemporary groups within a herd on a test day. This is necessary to satisfy a condition that certified herd testers must meet under the Standard — that all lactating cows in a contemporary group must be tested, other than cows accounted for as unfit for testing. (NZS 8100:2007 PART 1 – PROCEDURES AND PRACTICES, 1.9 Definitions, Contemporary group).

1. Summary

For a cow tested in a particular herd at a particular herd test there are eight possible contemporary groups within the herd for genetic evaluation purposes. The grouping is based on a combination of age at calving and season of calving.

Cows are assigned to the same contemporary group if they are herd tested:
- in the same herd;
- on the same test day;
- belonging to the same age group – 2 year old, 3 year old, 4 year old, or 5-7 year old;
- with the same season of calving – spring or autumn.

2. Detailed description

These four categories defining contemporary groups for the New Zealand Test Day Model for milk production traits are described in more detail below.

2.1 Herd

Herd is defined with reference to two data fields: (i) Farm location; (ii) Herd number. These data fields are described in NZS 8100:2007 PART 2 – CORE DATA REQUIREMENTS.

2.2 Date

The Herd test date data field is described in NZS 8100:2007 PART 2 – CORE DATA REQUIREMENTS. This is the first sample date when the herd test straddles more than one day.
2.3 Age group
For assigning cows to their contemporary groups within a herd on a test day, the age of the cow refers to her age at the start of her current lactation.

- The two-year-old age group includes the cows that were at least 1½ years but less than 2½ years of age at calving;
- The three-year-old age group includes the cows that were at least 2½ years but less than 3½ years of age at calving;
- The four-year-old age group includes the cows that were at least 3½ years but less than 4½ years of age at calving;
- The mature age group includes the cows that were at least 4½ years but less than 7½ years of age at calving.

2.4 Season of Calving
For assigning cows to contemporary groups, season of calving has two categories. The cows that calve in the period 1 June to 30 November are assigned to the spring-calving group. The cows that calve in the period 1 December to 31 May are assigned to the autumn-calving group.

3. Factors NOT included when defining contemporary groups
Breed is accounted for in the New Zealand Test Day Model for the dairy production traits, but is not part of contemporary group definition.

Similarly, record type (see footnote) is accounted for in the New Zealand Test Day Model for the dairy production traits, but is not part of contemporary group definition.

4. Test day records not included in genetic evaluation
The test day records for cows that calved at the start of their current lactation at an age of 7½ years or over, or calved at an age less than 1½ years, are not analysed in the New Zealand Test Day Model for milk production traits. Also, the test day records for cows that calved to start the current lactation more than 270 days prior to the test date are not analysed in the New Zealand Test Day Model. Consequently, the Standard does not require a certified herd tester to obtain test day records in these categories if testing part of a herd under NZS 8100:2007 PART 1 – PROCEDURES AND PRACTICES, 1.9 Definitions, Contemporary group.

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1 There are four classes of “record type” associated with herd test sampling procedures, which are fitted as part of the statistical model for analysing the dairy production traits. The four classes are:
- “AM+PM” class – cows milked twice-a-day and sampled twice;
- “PM only” class – cows milked twice-a-day but sampled only in the afternoon;
- “AM only” class – cows milked twice-a-day but sampled only in the morning;
- “once-a-day” class – cows milked and sampled only once-a-day.

Note that these classes are not part of contemporary group definition. For example, it is not permissible under the Standard for a certified herd tester to test only the once-a-day cows within a contemporary group on a test day without testing the twice-a-day cows that belong to the same contemporary group.