<table>
<thead>
<tr>
<th>FACTS ON SIRE EVALUATION PROCEDURES APPLIED FOR NON-PRODUCTION TRAITS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COUNTRY: AUSTRALIA</strong></td>
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<tr>
<td><strong>Method of evaluation</strong></td>
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</table>
| **Expression of proof** | a) Expected % difficult calvings when mated to average mature cows  
                          b,g,h) Expected % of satisfactory daughters when mated to average cows  
                          e) EBV (%)  
                          c,d,f) EBV in units of SD of proof multiplied by 2.5 |
| **Genetic (reference) base** | Fixed, average EBV of sires with proofs in 1990 |
| **Criteria for official publication of sire proofs** | a) 60 effective daughters in 15 herds  
                                          b,g,h) 25 effective daughters in 15 herd  
                                          e) 50 effective daughters in 15 herds  
                                          c,d,f) 15 effective daughters in 5 herds |
| **Number of evaluations/publications per year** | 1 |
| **Use in total merit index** | No official index at present |
| **Name, address and fax number of organization responsible for sire evaluation and publication** | Australian Dairy Herd Improvement Scheme  
First floor Malvern Road  
Glen Iris Vic 3146, Australia  
Fax: 61-3-8851526 |
| **Key references on methodology applied** | - |

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<td><strong>COUNTRY: CANADA</strong></td>
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| **Trait(s):** | REPRODUCTION  
                          a) Calving performance (direct and maternal)  
                          MILKABILITY  
                          b) Milking speed  
                          c) Udder conformation  
                          LOCOMOTION  
                          d) Feet and legs  
                          OTHER  
                          e) Other body conformation traits |
| **Breed(s):** | Holstein, Ayrshire, Brown Swiss, Guernsey, Jersey |
| **Trait definition and units of measurement** | a,b) Traits are subjectively scored from 1 to 5  
                                          c-e) There are in total 27 conformation traits, scored on a linear scale in 9 or 18 categories |
| **Method of measuring and collecting data** | a,b) Scores are assigned by herdowners during the first six months of lactation  
                                          c-e) Herds are visited in a 9 to 10-mo cycle by special classifiers (round of classification) |
| **Time period for data inclusion** | a,b) All available data  
                                          c-e) Data since 1982 |
| **Age groups considered** | a,c-e) All ages  
                            b) First lactation only |
| **Genetic parameters assumed** | a) $h^2$: direct = 0.11; maternal = 0.12  
                              b) $h^2$ = 0.21; c-e) $h^2$: 0.10 - 0.42 |
| **Sire categories evaluated** | All |
| **Environmental effects considered by pre-adjustment** | None |
| **by evaluation model** | a) Sex of calf, parity (first or later)  
                             b) Herd*year, calving season, age at calving, stage of lactation  
                             c-e) Herd*round*classifier, age at calving, stage of lactation at classification |
| **Base for age adjustment** | - |
| **Use of genetic groups and/or relationship** | Full relationship and phantom parent groups |
| **Method of evaluation** | BLUP AM |
| **Expression of proof** | a,b) ETA's (linear scale 1-9)  
                            c-e) ETA's, standardized to mean=0 and SD=5 |
| **Genetic (reference) base** | All cows |
| **Criteria for official publication of sire proofs** | 10 or more daughters with minimum of 55 % REL |
| **Number of evaluations/publications per year** | a,b) 1  
                                          c-e) 2 |
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| Name, address and fax number of organization responsible for sire evaluation and publication | a,b) Genetic Evaluation Division, Agriculture Canada Sir John Carlings Building, Ottawa, Ontario Canada K1A 0C5  
c-e) CGIL Department of Animal Breeding and Genetics University of Guelph Guelph, Ontario, Canada N1G 2W1  
Fax: 519 767 0573 |

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| Trait(s): | REPRODUCTION  
a) Female fertility  
b) Calving performance  
c) Stillbirths  
HEALTH  
d) Clinical Mastitis  
e) Somatic cell count  
MILKABILITY  
f) Milking speed  
g) Udder conformation  
LOCOMOTION  
h) Feet and legs  
OTHER  
i) Temperament  
j) Other body conformation traits |
| Breeds(s): | Danish Black and White, Danish Jersey, Danish Red, Danish Red and White |
| Trait definition and units of measurement | a) 56-day non-return rate of daughters  
b) "Birth index" The direct effect of bull, based on ease of calving and size and vitality of the calf.  
c) "Calving index" The ability of the daughters to give birth to live born calves  
d,e) Mastitis and somatic cell counts as correlated traits  
f-j) Linearly scored udder and teat (7), feet and legs (5) and other (7) conformation traits |
| Method of measuring and collecting data | a) Data collected by the AI-technicians  
b.e) Via the official milk recording system  
d) Veterinarians invoicing systems and the recording system  
e) Milk recording system  
f-j) Classification of daughter groups by classifiers |
| Time period for data inclusion | a-e) Last four years  
d,e) Since 1990  
f-j) Since 1989 |
| Age groups considered | a,c) 1st lactation  
b) All ages  
d) -10 to 180 days after calving (1st lactation)  
e) 10 to 80 days after calving (1st lactation)  
f-j) 1st and 2nd lactation cows |
| Genetic parameters assumed | a,c) $h^2 = 0.025$  
b) Heritabilities and correlations within breed and parity for the three traits  
d,e) $h^2$: mastitis= 0.04; Somatic cell count= 0.11; $r_{x} = 0.63$  
f-j) $h^2$: 0.05 - 0.75 |