<table>
<thead>
<tr>
<th><strong>Trait category:</strong></th>
<th><strong>Individual trait(s):</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Workability</td>
<td>Milking speed</td>
</tr>
<tr>
<td></td>
<td>Temperament</td>
</tr>
<tr>
<td></td>
<td>Adaptability to milking</td>
</tr>
<tr>
<td></td>
<td>Overall opinion</td>
</tr>
<tr>
<td>Conformation</td>
<td>Udder</td>
</tr>
<tr>
<td></td>
<td>Locomotion</td>
</tr>
<tr>
<td></td>
<td>Other</td>
</tr>
</tbody>
</table>

Livestock Improvement  
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### NEW ZEALAND

#### Workability traits

<table>
<thead>
<tr>
<th>Milking speed</th>
<th>Temperament</th>
<th>Adaptability to milking</th>
<th>Overall opinion</th>
</tr>
</thead>
</table>

#### Breed(s)

Holstein Friesian, Jersey, Ayrshire, Milking Shorthorn

#### Trait definition and unit(s) of measuring

- **Milking speed** considers the time from putting the cups on to the time milking stops or the cups are taken off; is scored from slow (1) to fast (9) milking.
- **Temperament** in shed during milking is scored from vicious (1) to placid (9).
- **Adapting into the milking routine after calving** is scored from slowly (1) to quickly (9).
- **Farmers overall acceptance/opinion of the animal in the herd** is scored from undesirable (1) to desirable (9).

#### Method of measuring and collecting data

Scored by farmer on special information sheets

#### Time period for data inclusion

Since 1987/88 season

#### Age groups considered

Two year old animals, in selected herds. Minimum age at calving of 18 months. Age at classification between 19 and 32 months. Between 14 and 270 days after calving. Interval between date of birth and date of calving is ≥ 18 months. Interval between date of birth of daughter and date of birth of dam is ≥ 18 months.

#### Genetic parameters

- $h^2_{	ext{milking speed}} = 0.21$
- $h^2_{	ext{temperament}} = 0.14$
- $h^2_{	ext{adaptability to milking}} = 0.13$
- $h^2_{	ext{overall opinion}} = 0.13$

#### Sire categories

All bulls

#### Environmental effects pre-adjustment evaluation model

None

- **Herd x season x age**, contribution of heterosis, age at calving, within breed, contribution of genetic group, stage of lactation

#### Base for age adjustment

None

#### Use of genetic groups and/or relationships

The genetic groups are breed x country of origin x birth year x sex

#### Method (model) of genetic evaluation

ST BLUP AM

#### System validation

-

#### Expression of proof

EBV in same units as scored

#### Genetic (reference) base

1985 born cows

#### Criteria for official publication of sire proofs

REL ≥ 75% (on Breeding Worth) and born ≥ 1981

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<table>
<thead>
<tr>
<th>Workability traits continued</th>
<th>Milking speed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Temperament</td>
</tr>
<tr>
<td></td>
<td>Adaptability to milking</td>
</tr>
<tr>
<td></td>
<td>Overall opinion</td>
</tr>
<tr>
<td>Number of evaluations/publications per year</td>
<td>Two; March, June</td>
</tr>
<tr>
<td>Use in total merit index</td>
<td>No</td>
</tr>
</tbody>
</table>
**Conformation traits**

- **Udder:** udder support, front udder, rear udder, front teat placement, rear teat placement, udder overall
- **Locomotion:** legs
- **Other:** stature, capacity, rump angle, rump width

**Breed(s)**

Holstein Friesian, Jersey, Ayrshire, Milking Shorthorn

**Trait definition and unit(s) of measuring**

All traits are scored on a linear 1-9 point scale

**Method of measuring and collecting data**

Scored by Breed Association inspector

**Time period for data inclusion**

Since 1987/88 season

**Age groups considered**

Two year old animals, in selected herds. Minimum age at calving of 18 months. Age at classification between 19 and 32 months. Between 14 and 270 days after calving. Interval between date of birth and date of calving is ≥ 18 months. Interval between date or birth of daughter and date of birth of dam is ≥ 18 months

**Genetic parameters**

\[
\begin{align*}
    h^2_{\text{udder traits}} &= 0.21 \text{ to } 0.28 \\
    h^2_{\text{locomotion traits}} &= 0.07 \\
    h^2_{\text{other traits}} &= 0.22 \text{ to } 0.40
\end{align*}
\]

**Sire categories**

All bulls with inspected daughters

**Environmental effects pre-adjustment evaluation model**

No

- Herd x season x age, contribution of heterosis, age at calving, within breed, contribution of genetic group, stage of lactation

**Base for age adjustment**

No

**Use of genetic groups and/or relationships**

Genetic groups are breed x country of origin x birth year x sex

**Method (model) of genetic evaluation**

ST BLUP AM

**System validation**

-

**Expression of proof**

EBV on same scale as recorded

**Genetic (reference) base**

The genetic groups are breed x country of origin x birth year x sex

**Criteria for official publication of sire proofs**

REL ≥ 75% (on Breeding Worth) and born ≥ 1981

**Number of evaluations/publications per year**

Two: March, June

**Use in total merit index**

No

**Key reference on methodology applied**

-