## FACTS ON SIRE EVALUATION PROCEDURES APPLIED FOR NON-PRODUCTION TRAITS

### COUNTRY: ITALY

| Genetic (reference) base | a) Average of all published bulls.  
b) Average of bulls born in 1980  
c,d) [II] Average of EBV of cows born in 1985; [III] Fixed base, average of cows born in 1983 |
|--------------------------|------------------------------------------------------------------------------------------|
| Criteria for official publication of sire proofs | a) Bulls with at least 100 calving in 20 herds  
b) Bulls with at least 5 daughters  
c,d) Bulls with at least 10 daughters in 5 herds |
| Number of evaluations/publications per year | Twice a year |
| Use in total merit index | [II] No; [III] Yes |
| Name, address and fax number of organization responsible for sire evaluation and publication | [II] ANAFI (Associazione Nazionale Allevatori Friulana Italiana) via Bergamo 292, 26100 Cremona, Italy  
Tel: 39-372-41 25 21  
Fax: 39-372-2 96 70  

[III] Associazione Nazionale Allevatori Bovini Della Razza Bruna  
Loc. Ferlina, 204  
37012 BUSSOLENGO/VR, Italy  
Tel: (045) 6701990  
Fax: (045) 7156655 |

### COUNTRY: THE NETHERLANDS

| Trait(s): | REPRODUCTION  
a) Calving performance  
MILKABILITY  
b) Milking speed  
LOCOMOTION  
c) Udder conformation  
OTHER  
d) Feet and legs  
e) Other body conformation traits  
f) Temperament |
| Breed(s): | Black and White, Dual Purpose (MR) |
| Trait definition and unit(s) of measurement | a) Scores for calving difficulty (1 to 4); gestation length in days and birth weight scored in 5 kg. classes  
b) Average speed (kg/min) of milking (sec)  
c-e) In total there are 19 conformation traits scored on a linear scale (1 to 9) or (65-99)  
f) Temperament during milking; scored (1 to 4) |
| Method of measuring and collecting data | a) Calving difficulty and birth weight scored by the farmer. Gestation length computed from insemination date and date of calving  
b-f) Observed by supervisors for daughters of sires that are appointed by AI organizations  
c-e) There are two classification standards, dairy and dual. Herds are visited every 8 months (round) by special classifiers. |
| Time period for data inclusion | a) Since 1986  
b,f) Since 1980  
c-e) Since 1981 |
| Age groups considered | a) Mostly second calvers  
b-f) Heifers |
| Genetic parameters assumed | a) h²: Calving difficulty=0.11; Gestation length=0.39; Birth weight=0.17  
b,f) h²: 0.50  
c-e) h²: 0.30 |
| Sire categories evaluated | a,b,f) AI bulls  
c-e) All bulls |
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| Environmental effects considered by pre-adjustment | a,b,d) None  
| c-e) Standardization for differences in SD of scores within standard*classifier*round  |
| by evaluation model | a) Management group, month of calving, cow's breed, sex of calf, parity*group of sires  
| b,f) Stage of lactation, milk yield  
| c-e) Classification standard*herd*classifier*round, age at classification.  |

| Base for age adjustment | a) Second parity  
| b,f) None  
| c-e) Average age at classification  |

| Use of genetic groups and/or relationship | a) Group of sire according to breed, relationship with sire and MOS  
| b,h) Unknown parents groups according to dairy/dual purpose  
| c-e) Unknown parents are grouped according to country or origin, path (4), breed and birth year. All known relationship of cows with records or sires with parent and grandparents  |

| Method of evaluation | a) ST BLUF SM  
| b-f) ST BLUP AM  |

| Expression of proof | a) PD  
| b-f) RBV, standardized with mean of base sires 100 and SD 4  |

| Genetic (reference) base | a,b,f) Fixed base, average of AI bulls in first service 1986  
| c-e) Dairy base 1990: Average of Black and White AI bulls tested in NL, with first proof in 1987; Dual base 1990: Crossbred Red and White AI bulls tested in NL and born from 1980 to 1985  |

| Criteria for official publication of sire proofs | a) Rpt ≥ 0.55  
| b,f) 15 daughters  
| c-e) Rpt ≥ 0.50 and 15 daughters in 5 herds  |

| Number of evaluations/publications per year | 2 (april, october)  |

| Use in total merit index | No  |

| Name, address and fax number of organization responsible for sire evaluation and publication | Royal Dutch Cattle Syndicate  
P.O. Box 454  
6800 AL Arnhem  
The Netherlands  
Tel: +31-85-861111  
Fax: +31-85-861520  |

Key references on methodology applied:
- Mejering, A. 1986. Dystocia in dairy cattle breeding (with special attention to sire evaluation for categorical traits). PhD thesis  
- IVO-report B-280, IVO-'Schoonoord',  
P.O. Box 501, 3500 AM Zeist, NL.
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### Environmental effects considered by pre-adjustment
- **a,b,d** None
- **c-e** Standardization for differences in SD of scores within standard*classifier*round

**by evaluation model**
- **a** Management group, month of calving, cow's breed, sex of calf, parity*group of sires
- **b,f** Stage of lactation, milk yield
- **c-e** Classification standard*herd*classifier*round, age at classification.

### Base for age adjustment
- **a** Second parity
- **b,f** None
- **c-e** Average age at classification

### Use of genetic groups and/or relationship
- **a** Group of sire according to breed, relationship with sire and MGS
- **b,f** Unknown parents groups according to dairy/dual purpose
- **c-e** Unknown parents are grouped according to country or origin, path (4), breed and birth year. All known relationship of cows with records or sires with parent and grandparents

### Method of evaluation
- **a** ST BLUF SM
- **b,f** ST BLUP AM

### Expression of proof
- **a** PD
- **b-f** RBV, standardized with mean of base sires 100 and SD 4

### Genetic (reference) base
- **a,b,d** Fixed base, average of AI bulls in first service 1986
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### Criteria for official publication of sire proofs
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### Number of evaluations/publications per year
- **2 (april, october)**

### Use in total merit index
- **No**

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- **Royal Dutch Cattle Syndicate**
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