

FACTS ON APPLIED SIRE-EVALUATION PROCEDURES FOR DAIRY PRODUCTION TRAITS

| COUNTRY | DENMARK |
|---|---|
| Breed(s) | Danish Black and White, Danish Jersey, Danish Red, Danish Red and White |
| Traits evaluated and units of measurement | Milk, fat and protein (kg) |
| Number of lactations | 1 |
| Genetic parameters applied | h^2 :milk=0.29; fat=0.27; protein=0.30 C-effects=0.10 |
| Inclusion and extension of records | Culled cows: <46 days not included, 46-305 days included after extension In progress: Extended, but given less weight than completed records |
| Sire categories evaluated | All sires with first batch of daughters |
| Effects considered by preadjustments | Age, season, herd, days open, genetic merit of dam and mates |
| by model of evaluation | Sire |
| Base of age adjustment | Actual contemporary population mean |
| Use of genetic groups/relationship/pedigree | All pedigree information included |
| Method of evaluation used | HMC (Direct updating) |
| Expression of genetic merit | RBV |
| Genetic base, kind/definition | Rolling, average of bulls published and under test |
| Minimum requirements for official publication of sire proofs | 60% repeatability |
| Use of selection index or total merit index | Total merit index used |
| Name and address of organization responsible for sire evaluations and publishing of results | National Committee for Danish Cattle Husbandry Udkaersvej 15, DK-8200 Aarhus N Denmark |
| Key references on methodology applied | Christensen, L.G., 1984. Direct updating of breeding values. IDF/EAAP Symp. on progeny testing methods in dairy cattle, Prague. Sept. 14-16. Doc. 183, 33-47. |

Country: Denmark

Number of bulls tested, means and standard deviations of proofs by year

| | | Relative breeding values | | | | | |
|-------------------------------|-----------------|--------------------------|------|----------------|------|--------------------|------|
| Year of proof of bull | No. of bulls | Milk (M-indeks) | | Fat (F-indeks) | | Protein (P-indeks) | |
| | | \bar{x} | S.D. | \bar{x} | S.D. | \bar{x} | S.D. |
| Breed: Danish Black and White | | | | | | | |
| 1980 | 219 | | | 82.3 | 7.1 | | |
| 81 | 145 | | | 84.3 | 7.7 | | |
| 82 | 174 | | | 83.6 | 8.7 | | |
| 83 | 256 | | | 86.9 | 8.2 | | |
| 84 | 203 | | | 88.9 | 7.4 | | |
| 85 | 225 | 94.7 | 9.7 | 92.2 | 8.2 | 95.1 | 8.3 |
| 86 | 186 | 97.4 | 8.1 | 96.5 | 8.3 | 96.5 | 7.2 |
| 87 | 270 | 100.0 | 8.3 | 100.3 | 8.8 | 101.2 | 7.8 |
| Breed: Danish Jersey | | | | | | | |
| 1980 | 55 | | | 91.3 | 6.9 | | |
| 81 | 49 | | | 90.5 | 6.7 | | |
| 82 | 53 | | | 92.8 | 6.9 | | |
| 83 | 60 | | | 94.0 | 7.0 | | |
| 84 | 64 | | | 96.3 | 5.7 | | |
| 85 | 72 | 99.2 | 7.1 | 97.7 | 5.6 | 99.5 | 5.5 |
| 86 | 62 | 96.5 | 7.7 | 98.7 | 7.6 | 99.1 | 7.8 |
| 87 | 75 | 101.5 | 8.9 | 103.2 | 6.4 | 102.4 | 6.7 |
| Breed: Danish Red | | | | | | | |
| 1980 | 89 | | | 91.2 | 6.8 | | |
| 81 | 87 | | | 91.9 | 7.6 | | |
| 82 | 85 | | | 92.3 | 7.1 | | |
| 83 | 93 | | | 94.3 | 8.0 | | |
| 84 | 86 | | | 96.6 | 7.8 | | |
| 85 | 96 | 97.8 | 8.3 | 95.8 | 7.2 | 97.8 | 7.7 |
| 86 | 68 | 99.3 | 7.1 | 97.6 | 7.4 | 98.9 | 6.4 |
| 87 | 107 | 103.4 | 8.0 | 102.6 | 8.2 | 103.9 | 7.8 |

Country: Denmark

Average phenotypic levels of (adjusted) production records included in the sire evaluation procedures

| Year of calving | Traits | | |
|-------------------------------|---------|--------|------------|
| | Milk kg | Fat kg | Protein kg |
| Breed: Danish Black and White | | | |
| 1978 | 4676 | 188 | |
| 79 | 4824 | 194 | |
| 80 | 4822 | 192 | |
| 81 | 4735 | 189 | |
| 82 | 4782 | 192 | |
| 83 | 5052 | 204 | |
| 84 | 5175 | 207 | |
| 85 | 5654 | 225 | |
| 86 | 5973 | 240 | 196 |
| 87 | 6158 | 249 | 200 |
| Breed: Danish Jersey | | | |
| 1978 | 3444 | 217 | |
| 79 | 3534 | 227 | |
| 80 | 3580 | 224 | |
| 81 | 3455 | 211 | |
| 82 | 3519 | 216 | |
| 83 | 3620 | 222 | |
| 84 | 3681 | 224 | |
| 85 | 3818 | 237 | |
| 86 | 4086 | 255 | 161 |
| 87 | 4135 | 260 | 161 |
| Breed: Danish Red | | | |
| 1978 | 4642 | 194 | |
| 79 | 4820 | 202 | |
| 80 | 4791 | 199 | |
| 81 | 4675 | 194 | |
| 82 | 4769 | 198 | |
| 83 | 4972 | 207 | |
| 84 | 5120 | 212 | |
| 85 | 5409 | 224 | |
| 86 | 5760 | 238 | 200 |
| 87 | 5900 | 246 | 203 |