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

| COUNTRY | SWITZERLAND |
|---|---|
| Breed(s) | Black and White (Holstein-Friesian) |
| Traits evaluated and units of measurement | Milk (kg), fat %, protein % |
| Number of lactations | 1 |
| Genetic parameters applied | $h^2$: milk .34, fat .31, protein .38 |
| Inclusion and extension of records | Sire identified, completed records with ≥80 days, calving age 18 to 39 months<br>Records with 80 to 269 days are extended to 305 days with multiplicative fators |
| Sire categories evaluated | All sires with ≥15 daughters in the data |
| Effects considered | |
| by preadjustments | |
| by model of evaluation | Herdclass, length of lactation, season, age group, production of dam (in classes), sire group, sire within group |
| Base of age adjustment | ≤24 months |
| Use of genetic groups/ relationships/pedigree | Local. vs. imported sires |
| Method of evaluation used | Single trait BLUP |
| Expression of genetic merit | Breeding value (kg, %) |
| Genetic base, kind/definition | Rolling base, average breeding value of **local bulls** of the latest year = 0 |
| Minimum requirements for official publication of sire proofs | 40 eff. daughters with 80-305 days for AI-bulls<br>15 eff. daughters with 80-305 days for NS-bulls |
| Use of selection index or total merit index | No |
| Name and address of organization responsible for sire evaluations and publishing of results | Fédération Suisse d'Elevage de la Race Tachetée Noire<br>Grangeneuve<br>CH-1725 Posieux FR<br>Suisse |
| Key references on methodology applied | Schneeberger: Die Nachzuchtprüfung beim Schwarzfleckvieh.<br>Weiterbildungskurs SVIAL, 11./12. Juni 1981 |

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

| COUNTRY | SWITZERLAND |
|---|---|
| Breed(s) | Braunvieh (Brown Swiss) |
| Traits evaluated and units of measurement | Milk (kg), fat %, protein % |
| Number of lactations | 1 |
| Genetic parameters applied | $h^2$: milk .30, fat .58, protein .67 |
| Inclusion and extension of records | Sire identified, completed records with $\geq$80 days, age at calving 18 to 40 months Records with 80 to 269 days are extended to 305 days with multiplicative factors |
| Sire categories evaluated | All sires with $\geq$10 daughters in the data |
| Effects considered by preadjustments | Age at calving, days open, alpine pasture |
| by model of evaluation | Herdclass-region-year-season, sire group, sire within group |
| Base of age adjustment | 31 to 32 months |
| Use of genetic groups/ relationships/pedigree | Groups according to percentage US Brown Swiss genes and year of birth |
| Method of evaluation used | Single trait BLUP |
| Expression of genetic merit | Breeding value (kg, %) |
| Genetic base, kind/definition | Rolling base, last three years of pure Swiss Braunvieh **bulls** |
| Minimum requirements for official publication of sire proofs | AI: 50 daughters<br>NS: 10 daughters |
| Use of selection index or total merit index | No |
| Name and address of organization responsible for sire evaluations and publishing of results | Herdebuchstelle für Braunvieh<br>Chamerstrasse 56<br>CH-6300 Zug<br>Schweiz |
| Key references on methodology applied | Grüter: Was sagen die Resultate der Nachzuchtprüfungen über den züchterischen Wert unserer Stiere aus? Schweizer Braunvieh 1982 (5/6): |

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

| COUNTRY | SWITZERLAND |
|---|---|
| Breed(s) | Fleckvieh (Simmental) |
| Traits evaluated and units of measurement | Milk (kg), fat %, protein % |
| Number of lactations | 1 |
| Genetic parameters applied | $h^2$: milk .25, fat and protein % .57 |
| Inclusion and extension of records | Sire identified, completed records with $\geq$88 days<br>Records with 88 to 269 days are extended to 305 days with multiplicative factors<br>calving age $\leq$40 months |
| Sire categories evaluated | All sires with $\geq$5 daughters in the data |
| Effects considered | Age at calving |
| by preadjustments | |
| by model of evaluation | Herdclass, region, month of calving, alpine pasture, breeding value of dam (in classes) sire group, sire within group |
| Base of age adjustment | 29 to 32 months |
| Use of genetic groups/ relationships/pedigree | Groups according to percentage Red Holstein gene and age of bull (young vs. old) |
| Method of evaluation used | Single trait BLUP |
| Expression of genetic merit | Breeding value (kg %) |
| Genetic base, kind/definition | Rolling base, young Simmental **bulls** |
| Minimum requirements for official publication of sire proofs | NS: 15 daughters<br>AI: 40 daughters |
| Use of selection index or total merit index | No |
| Name and adress of organization responsible for sire evaluations and publishing of results | Schweiz. Fleckviehzuchtverband<br>Rüttistrasse<br>CH-3052 Zollikofen/BE<br>Schweiz |
| Key references on methodology applied | Rüegsegger: Die neue Methode der Nachzuchtprüfung der Stiere<br>Mitteilungen Schweiz<br>Fleckviehzuchtverband, April 1982 |

Country: Switzerland App. 1

Number of AI bulls tested per year, averages and standard deviations of proofs by year

| Year of first proof | No. of bulls[1] | Breeding value Milk kg $\bar{x}$ | Milk kg S.D. | Fat % $\bar{x}$ | Fat % S.D. | Protein % $\bar{x}$ | Protein % S.D. |
|---|---|---|---|---|---|---|---|
| **Breed: Black and White (Holstein-Friesian)** | | | | | | | |
| 1981[2] | 41 | 119 | 339 | .032 | .223 | -.014 | .098 |
| 82 | 27 | 272 | 407 | .074 | .253 | -.034 | .136 |
| 83 | 24 | 57 | 352 | .092 | .210 | .011 | .116 |
| 84 | 32 | 101 | 320 | .048 | .256 | .013 | .124 |
| **Breed: Braunvieh (Brown Swiss)** | | | | | | | |
| 1981 | 79 | 242 | 408 | .073 | .246 | -.003 | .189 |
| 82 | 55 | 228 | 380 | .084 | .211 | -.012 | .166 |
| 83 | 72 | 402 | 465 | .089 | .236 | -.036 | .134 |
| 84 | 71 | 515 | 426 | .159 | .238 | -.014 | .111 |
| **Breed: Fleckvieh (Simmental)** | | | | | | | |
| 1984 | 85 | 848 | 641 | -.075 | .279 | -.040 | .169 |

1) Number of newly proven bulls per year (local and foreign)
2) NS bulls with more than 15 daughters are included in the publishing of results 1981.

Country: Switzerland

App. 2

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

| Year of proof* | Milk kg | Fat % | Protein % |
|---|---|---|---|
| **Breed: Black and White (Holstein-Friesian)** | | | |
| 1981 | 4499 | 3.68 | 3.18 |
| 82 | 4887 | 3.78 | 3.15 |
| 83 | 4708 | 3.80 | 3.18 |
| 84 | 4859 | 3.79 | 3.19 |
| **Breed: Braunvieh (Brown Swiss)** | | | |
| 1981 | 3669 | 3.94 | 3.32 |
| 82 | 3751 | 3.90 | 3.32 |
| 83 | 3907 | 3.87 | 3.32 |
| 84 | 3919 | 3.87 | 3.31 |
| **Breed: Fleckvieh (Simmental)** | | | |
| 1981 | 4221 | 3.96 | 3.32 |
| 82 | 4377 | 3.92 | 3.31 |
| 83 | 4379 | 3.95 | 3.33 |
| 84 | 4455 | 3.96 | 3.32 |

*Due to the change of the sire evaluation method in 1981 (BLUP), previous records are not available for comparison