

FACTS ON SIRE EVALUATION PROCEDURES APPLIED FOR NON-PRODUCTION TRAITS

COUNTRY: GERMANY

Trait(s):	<u>REPRODUCTION</u> a) Fertility b) Calving performance <u>MILKABILITY</u> c) Milking speed <u>OTHER</u> d) Body Conformation e) Stayability
Breed(s):	[II] Holstein Friesian, Red and White (a,b) [III] Red Angler (a,b,c) [III] BAVARIA: Fleckvieh, Braunvieh, Gelbvieh (a,c,d) [IV] BADEN-WÜRTTEMBERG: Fleckvieh, Braunvieh, Vorderwälder, Schwarz- und Rotbunt (a,c-e)
Trait definition and unit(s) of measurement	a) AI index with combination of bull and daughter fertility (Non-return rate 56 and 90) b) [II] Stillbirth and dystocia, separated in 1st and later calving, direct (sire of calf) and indirect (sire of cow) [III] Calving problems and stillbirths c) Average milking speed (l/min) d) Linear scoring of 21 traits e) % of live daughters at the age of 60 mo
Method of measuring and collecting data	a,b) Collected by AI organizations c) During normal milk recording d) Scored by official persons e) Birth dates of all cows
Time period for data inclusion	a) [II] Since 1983 in some areas; [II,III] Since 1985; [IV] Since 1980 b) Since 1976 in some areas c) [III] Since 1970; [IV] Since 1981 d) New scoring system since 1988 e) Daughters of sires born since 1971
Age groups considered	a,b,e) All cows and heifers c,d) First lactation cows
Genetic parameters assumed	h^2 : a) 0.01 - 0.05; b) 0.05; c) 0.20 - 0.30; d) 0.10 - 0.30; e) 0.07 - 0.12
Sire categories evaluated	a,b) All AI sires c) Test bulls d) Promising AI sires e) All bulls

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Environmental effects considered by pre-adjustment	c) [II, IV] Day of lactation; [III] Test-person
by evaluation model	a) [I] AI-station*year, month, herdsize, production level of herd, age at insemination; [II] Herd*year, year*season, parity, interval from calving to service, inseminator; [III] Region*year*season* herd-level milk, technician, herd fertility level, age at first insemination, rest period; [IV] Region*year*season*herd-level, number of lactations, technician, genetic groups b) [I] Sex of calf, year, month and age of calving, region c) [IV] Herd, measuring instrument, genetic group d) Time*region*person e) Herd, first calving age group, genetic group
Base for age adjustment	-
Use of genetic groups and/or relationship	a,e) [I] Birth year of sire, no relationships; [III] No; [IV] Birth year of sire of semen b) [I] Birth year of sire within breed c) [II, III] No; [IV] Birth year of sire d) No
Method of evaluation	a,e) ST BLUP SM b) [I] ST BLUP SM [III] Daughter average c) [III] Daughter-population comparison; [III] ST BLUP SM; [IV] CC d) CC
Expression of proof	a,b,c,e) EBV d) RBV, standardized to mean=100, SD=12
Genetic (reference) base	a) [IV] Fixed, sires born 1982-1984 c) [III] Average of all bulls tested; [IV] Bulls born 1982-1984 e) Bulls born 1975-1977
Criteria for official publication of sire proofs	a) [I] 100 inseminations, 100 daughters; [III] 300 inseminations, 50 daughters; [III,IV] 200 insemination and 50 daughters inseminations b) [I] 100 calves and 100 daughters c) [III] 10 daughters in 5 herds; [III] 30 daughters; [IV] 20 (Fleckvieh), 10 (other) daughters d) [III] 30 daughters; [IV] 20 daughters e) Flechvieh: 50 daughters, Other: 30 daughters
Number of evaluations/publications per year	Two to four, depending on breed and trait
Use in total merit index	No

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Name, address and faxnumber of organization responsible for sire evaluation and publication

Coordination:

Arbeitsgemeinschaft Deutscher Rinderzüchter / ADR
Adenauerallee 174
D-5300 Bonn 1
Germany
(Different cooperatives are responsible for evaluations and publications for different breeds/traits)

Key references on methodology applied

- a) Karb, H. Der Tierzuchter, jun 1986 (Vol 38), Distl et al. 1988. Zuchtungskunde 60/4, 276-287
- c) Karras, K. "Der Tierzuchter", Nov. 1987, 39. Jahrg.
- d) Gottschalk, A. 1988 (BLT Grub) Tierbeurteilung Rinder Bewertungsplan '87
- e) Karras, K., Höschele, I. and Averdunk, G. 1985. Der Tierzuchter, march 33. Jahrgang