

FACTS ON SIRE EVALUATION PROCEDURES APPLIED FOR NON-PRODUCTION TRAITS

COUNTRY: THE NETHERLANDS

Trait(s):	<u>REPRODUCTION</u> a) Calving performance <u>MILKABILITY</u> b) Milking speed c) Udder conformation <u>LOCOMOTION</u> d) Feet and legs <u>OTHER</u> e) Other body conformation traits f) Temperament
Breed(s):	Black and White, Dual Purpose (MRY)
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) h^2 : Calving difficulty=0.11; Gestation length=0.39; Birth weight=0.17 b,f) h^2 : 0.50 c-e) h^2 : 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,f) 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 BLUP 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 faxnumber 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

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Key references on methodology applied	a) Meijering, 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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