

INTERBULL-meeting
Aarhus, Denmark, Aug. 19-20, 1993

INTERBULL-PROJECTS 1992/93

1. Survey on sire evaluation procedures
 - Production traits in 28 countries
Bulletin No. 5
 - Non-production and growth traits in 19 countries
Bulletin No. 6
2. COPA/EC project on joint ranking of Black and White bulls in Europe
3. NBC project on joint ranking of Nordic bulls
4. Feasibility study on global ranking of Guernsey bulls (Cooperation with World Guernsey Cattle Federation)
5. Feasibility study on global ranking of Ayrshire bulls (Cooperation with World Ayrshire Federation)
6. Research on measures of connectedness between populations

List of publications 1992/93

- Banos, G. 1993. A theoretical comparison between direct and indirect conversions of dairy bull evaluations. *J. Anim. Breed. Genet.* 110, 57.
- Banos, G. 1993. Objectives and first results from the INTERBULL office. *Proc. Europ. Conf. of Black & White Breed Society.* Rome, Italy, June 8, 1993
- Banos, G. & Philipsson, J. 1992. Proceedings of INTERBULL Seminar, Neustift, Austria, June 7-8, 1992. INTERBULL Bulletin no. 7. Uppsala.
- Banos, G. & Philipsson, J. 1992. The truth about comparing direct and indirect conversions. 2 pp. INTERBULL report. Uppsala.
- Banos, G. & Philipsson J. 1993. International evaluation of dairy bulls with a linear model. *Husdjurskonferensen 27-28 januari, Uppsala.* SLU Info Rapport. Allmänt 181, N:21.
- Banos, G. & Philipsson, J. 1993. Current activities of the INTERBULL centre with regard to international sire comparisons. *Guernsey World.*
- Philipsson, J. Banos, G. & Sigurdsson, H. 1992. Red and White Breed Potential. 10 pp. 7th World Ayrshire Conf., Sept.26-Oct.2, 1992, Jönköping, Sweden.
- Philipsson, J. & Banos, G. 1993. Common European breeding values of bulls. *Forum on European ranking of bulls Eernewoude, the Netherlands, June 2, 1993.* 2 pp.
- Sigurdsson, A., Banos, G. & Philipsson, J., 1992. Sire evaluation procedures for dairy production traits practised in various countries 1992. INTERBULL Bulletin no. 5. Uppsala.
- Sigurdsson, A., Banos, G. & Philipsson, J. 1992. Sire evaluation procedures for non-production and growth traits practised in various countries 1992. INTERBULL Bulletin no. 6. Uppsala.

Survey of Present Selection Index Applications in Dairy Cattle

INTERBULL survey 1992

28 countries for production traits

19 countries for beef and non-production

Survey of sire evaluations in 19 countries for growth and non-production traits

Trait category	No. of countries
Growth	10
Conformation	17
Ease of milking	14
Temperament	8
Calving/stillbirth	13
Female fertility	7
Health	5

Genetic evaluation methods applied for production traits

	No. of countries	
	1988	1992
Contemporary comparison	5	3
BLUP sire model	14	7
sire/mat.grand sire model	4	3
animal model, single trait	4	13
animal model, multiple trait	-	2
No. of countries surveyed	27	28

Traits considered in countries reporting use of total merit index (TMI) for bulls

Country	Production	Growth/ beef char.	Confor- mation	Ease of milking
Canada	x		x	
Denmark	x	x	x	x
Finland	x	x	x	x
France	x	x	x	x
Germany	x		x	x
Italy	x		x	
New Zealand	x		x	x
Norway	x	x	x	x
Slovenia	x	x	x	x
Sweden	x	x	x	
U.K.	x		x	
U.S.A.	x		x	

Traits considered in countries reporting use of total merit index (TMI) for bulls

Country	Tempera- ment	Health	Fertility	Calving/ stillbirth
Canada				
Denmark	x	x	x	x
Finland	x	x	x	x
France				
Germany				
Italy				
New Zealand				
Norway	x	x	x	x
Slovenia			x	x
Sweden	x	x	x	x
U.K.				
U.S.A.				

COPA/INTERBULL JOINT PROJECT

BLACK-AND-WHITE BULLS / PRODUCTION TRAITS

DEU - FRA - ITA - NLD - USA

ALP: 48865 Rec 46445 Bulls

FSP: 45773 Rec 45494 Bulls

LINEAR MODEL - BULL RELATIONSHIPS

ASSUME GENETIC CORRELATION = 1

CONCLUDING REMARKS

- * EC BULL RANKING POSSIBLE**
- * BIASED NATIONAL PROOFS BASED ON IMPORTED SEMEN SHOULD BE EXCLUDED**
- * LINEAR MODEL IMPROVEMENT OVER CONVERSIONS**
- * VALIDATION OF GENETIC TREND ESTIMATION IN EACH PARTICIPATING COUNTRY**

FUTURE

- * ROUTINE IMPLEMENTATION OF EC EVALUATION
CAN BE INITIATED SOON**

- * CHECKS OF RESULT CONSISTENCY:**
 - COMMON YOUNG BULL OR SIB CORRELATION
(INTERBULL)**

 - VALIDATION OF GENETIC TREND ESTIMATION
(INDIVIDUAL COUNTRIES)**

- * NON-PRODUCTION TRAITS**

RESEARCH ON DATA CONNECTEDNESS

- * BLACK-AND-WHITE BULL POPULATIONS

DNK - FIN - SWE / CAN - USA - DEU - NLD

- * HIGH CONNECTEDNESS AMONG BULLS DUE TO A^{-1}

99% BULLS CONNECTED

- * HIGH CONNECTEDNESS AMONG GENETIC GROUPS

ACROSS EVALUATION COUNTRY

- * EQUALLY HIGH CONNECTEDNESS IN FSP AND ALP