

Genetic Improvement of Functional Traits in cattle - GIFT
Second initial workshop on Fertility and Reproduction, November 23-25, 1997 Grub, Germany

General introduction

In 1995, an initiative was taken by Hans Soelkner and Nicolas Gengler to start a co-operative effort on the area of selection for functional, non-production traits in cattle. A broader group was formed, including as well Vincent Ducrocq, Erling Strandberg, Hans Aumann and Ab Groen. This group, now the core group of the GIFT project, took the initiative for a workshop in January 21-23, 1996, Gembloux, Belgium. The aim of this workshop was to review the current state of the art in the area of breeding for functional traits in cattle. The workshop was attended by more than 40 persons from 11 EU countries, Norway, Canada, Israel and the USA. Proceedings are available as: *Groen, A.F., J. Soelkner, E. Strandberg and N. Gengler (Compilers), 1996. Proceedings International Workshop on Genetic Improvement of Functional Traits in cattle. INTERBULL bulletin no. 12, Uppsala, Sweden, 245 pp.* It was a very successful workshop, and the application for money to proceed the activities was as successful. In the course of 1996, all goals were defined, all forms were filled in, and a financial budget of 300,000 ECU was granted by the EC. January 1st, 1997, the GIFT Concerted Action was a fact, with 35 participating institutes (universities, research institutes, extension services, recording and evaluation institutes, and breeding organisations) from 18 countries.

Objectives of the GIFT Concerted Action are:

- to bring together researchers and people from the breeding organisations from member countries of the EU, and other countries with major interests in cattle production, to develop concepts for breeding of functional traits by defining breeding goals and strategies to achieve these goals;
- to enhance collaborative efforts for the further development of efficient recording systems and breeding value estimation procedures;
- to stimulate the exchange of existing knowledge about the genetic evaluation of functional traits;
- to develop recommendations for breeding programmes for functional traits.

The term functional traits is used to summarize those characteristics of an animal which increase efficiency not by higher output of products, but by reduced costs of input; main categories of traits are health, fertility, efficiency of feed utilization and milkability. Special attention for functional traits is justified, as

- ◆ functional traits influence the cost price of the product at farm level;
- ◆ functional traits influence the future marketability of the product, by playing a major role in the consumer acceptance of the product, a point of increasing interest;
- ◆ unfavorable genetic correlation will reduce functionality with single purpose selection for production only.

A Concerted Action on functional traits just now is important to support a uniform, international evaluation of these traits over breeding programmes, and to facilitate implementation of selection for functional traits. Activities planned include a series of four initial workshops on the definition, recording and genetic evaluation of traits (health, fertility

and reproduction, metabolic stress and longevity), an intermediate report workshop and a final report workshop, bilateral visits, and internet exchange of information.

The first initial workshop was on health traits and held in Uppsala (Proceedings in Interbull Bulletin no 15). This workshop is the second in the series of four initial workshops and it will concentrate on fertility and reproduction traits. Its main focus is on genetic evaluations for fertility and reproductive traits (such as calving performance) and their use and importance in breeding programmes. The effects of new reproductive techniques on genetic evaluations and breeding programmes should also be discussed.

The workshop has three main sessions, with main papers and several contributed papers:

1. **Calving ease and stillbirth in cattle breeding;**
2. **The role of fertility in cattle breeding;** and
3. **Evaluation procedures for fertility in various countries – discussion about favourable models.**

Contributions cover:

- the biological, physiological, and veterinarian interpretation of fertility failures, calving problems (dystocia) and other reproductive disorders;
- causes and effects (focussing on observable effects), from definition to recording;
- recording - thorough discussion on existing recording schemes;
- genetic evaluation - pros and cons of various breeding value prediction models;
- effects of new reproductive techniques on genetic evaluations and design of breeding programmes;
- overview of ongoing and foreseen research

The GIFT Concerted Action has been successful in its founding workshop and its application; we hope that the GIFT Concerted Action we will be as successful in its forthcoming activities. We are looking forward to a challenging period of collaboration.

Ab Groen
Erling Strandberg
Hans Aumann
Hans Soelkner
Nicolas Gengler
Vincent Ducrocq