

PREFACE

Along with the increasing international exchange of genetic material among various dairy cattle populations, there has also been an increasing need for international comparison of national genetic evaluation systems (GES) practiced in different countries. Naturally, each country's GES comprises many steps, each of which reflects special circumstances and needs prevailing in that country. In order to make the results obtained in one country's GES as transparent as possible to the dairy industry in another country, Interbull has made it one of its objectives to provide information on GES of different dairy countries and to give guidelines on how to interpret and utilize these results.

To achieve this aim Interbull has conducted several surveys and has published the results as six Interbull Bulletins (IBB) between 1986 and 2000, the last of which is IBB 24 (2000, available through www.interbull.org) comprising information on GES for production traits of dairy cattle from 31 countries. Results of IBB 24 clearly show that different countries' national GES demonstrate so much variation that it is almost impossible for any one responsible for one country's GES to have a clear and up-to-date picture of what the GES looks like in other countries. The main conclusion from this survey (IBB 24) is that understanding and interpretation of different countries' GES is extremely difficult because:

- a) The "raw data" obtained from individual animals are subjected to treatments in many stages in which the biological and statistical justification of the treatment is not so obvious to (and, in some cases, even questionable by) others;
- b) There are many differences in regard to the number, nature, model and method of such treatments that it is quite reasonable to claim that these differences are making major contributions to the apparent genotype-environment interaction through the so called genotype-model interaction.

Logical consequence of these conclusions (a and b, above) is that such differences among countries' GES, even though they may be considered justified *within* each country's GES, cause undue re-ranking of bulls *between* countries. The surveys conducted by Interbull had the goal of making national GES as transparent as possible so that the interpretation of the differences becomes possible. It was also hoped that the increased transparency would eventually lead to increased awareness of difficulties brought about by disparities of the various national GES, and this in turn would lead to a greater desire for international harmonization along the 'world's best practices' known at this stage.

The present document (IBB 28) is the result of extensive discussions between Interbull member organizations, coordinated by the Interbull Centre. For this purpose, staff from the Interbull Center (H. Jorjani) assisted by a sub-group of the Interbull Steering Committee (G. Averdunk, R. Powell and H. Wilmink) prepared a preliminary draft, which was presented to the Interbull Steering Committee and Interbull member organizations in September 2000 and thoroughly discussed in a workshop in Verden, Germany, October 2000. Based on the views expressed in Verden and the ensuing discussions a new version was prepared and was reviewed by Interbull membership and the Interbull Steering Committee meetings held in conjunction with Interbull Open Meeting in Budapest, Hungary, August 2001.

Interbull proposes that genetic evaluation centers and organizations trading genetic material internationally follow the recommendations outlined in the present document, which are believed to be based on the current world's best practices, as closely as possible. The word "should" is used in this Bulletin to indicate procedures to be followed in order to be in full compliance with recommendations. The stronger word "must" has been avoided in consideration of the cooperative spirit of this joint effort.

It is the view of Interbull that further improvements in the genetic evaluation methodology will come as a result of present and future research as well as empirical experience. However, our present recommendation would greatly facilitate correct interpretations and evaluations of the animals' breeding values beyond the domestic borders and enhance the improvement in all breeding system utilizing global genetic resources.

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