Changes to Evaluation System - May 2006

Bull fertility evaluation transferred to AIPL

By Melvin Kuhn, Jana Hutchison, and Duane Norman

Dairy Records Management Systems (DRMS) in Raleigh, NC, began computing predictions of bull fertility based on DHI data in February 1986. The evaluations were called estimated relative conception rate (ERCR) and were made publicly available on the DRMS web site. Evaluations were released semiannually in May and November. In May 2006, AIPL assumed responsibility for prediction of bull fertility. Initially, AIPL will implement ERCR exactly as calculated by DRMS: trait definition, procedure (model), and data sources will be the same as those used by DRMS, and the name ERCR will be maintained. Minnesota DHIA (via AgriTech Analytics) and AgSource Cooperative Services will continue to contribute their fertility data to ERCR evaluations as in the past. The same information previously provided by DRMS (ERCR, number of matings, and repeatability) will be made available in AIPL format 38.

Details on ERCR evaluations are available through the AIPL documentation page. Research will continue to determine if alternative methods or trait definitions result in improved prediction of service sire fertility. If improved methods are identified and validated, ERCR procedures will be revised as soon as implementation is feasible.

Milking speed evaluations for Brown Swiss

By George Wiggans, Laura Thornton, and Roger Neitzel

Evaluations for milking speed for Brown Swiss bulls were started in May 2006. The data are based on an owner-assigned scale of 1 (slow) to 8 (fast) and are collected with appraisal data. Data collection started in 2004. Data for test evaluations were 6,483 records for 6,017 cows in 352 herds. Scores averaged 5.8 with a standard deviation of 1.5. A heritability of 0.22 and repeatability of 0.41 were estimated. The Brown Swiss Association has requested that milking speed evaluations be reported with a mean of 100 and a standard deviation of 5. For the 109 bulls with 10 or more daughters, test evaluations ranged from 84 to 111 with an average of 38 daughters in 23 herds and an average reliability of 66%. Correlation of evaluations for milking speed with evaluations for other traits was 0.22 for milk yield, 0.53 for productive life, and -0.37 for somatic cell score. The association of faster milking speed with lower somatic cell score was contrary to results from other studies (Boettcher et al., 1998; Rupp and Boichard, 1999; Zwald et al., 2005). Part of the interest in milking speed by the Brown Swiss Association is to satisfy concerns of international customers. Availability of data for other breeds is being investigated. Possible sources are owner-assigned scores collected by AI organizations and actual milking times from electronic meters through DHI.

Rear legs/rear view evaluations for Brown Swiss and Guernseys

By George Wiggans, Laura Thornton, and Roger Neitzel

Evaluations for the trait rear legs/rear view for Brown Swiss and Guernsey were started in May 2006. Because data were available only for the last few years, the trait was not included in the multitrait evaluation of the other 15 linear traits. A second multitrait analysis of 16 traits is done with just records that have rear legs/rear view data so that information from correlated traits can contribute to the accuracy of rear legs/rear view evaluations. However, only the rear legs/rear view evaluation is retained from this analysis. No heterogeneous variance adjustment is done. This trait does not yet affect the feet-and-leg composite or net merit. Details on Brown Swiss rear legs/rear view evaluations are reported in an abstract submitted for the 2006 annual meeting of the American Dairy Science Association.
