# Changes in USDA-DHIA genetic evaluations (July 1995)

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## Productive life, somatic cell score, and net merit for cows

Productive life (PL) and somatic cell score (SCS) evaluations and net merit indexes are available for the first time for cows. These measures of longevity, mastitis, and net economic value were introduced in January 1994 for bulls. As with bulls, release of net merit for cows will be phased in. Currently, only those cows with usable data for both PL and SCS will receive a net merit index. No cows younger than 3 years old will receive a net merit index. For future evaluations, parent averages may be substituted when data are missing so that percentiles and elite status can be determined from net merit.

Linear type evaluations contribute to the calcula-tion of PL evaluations for bulls but not for cows. Also, some of the best cows have short PL because they are embryo donors and are not rebred. The PL records of donor dams currently are included in PL evaluations but will be excluded if dairy records pro-cessing centers report such cows to the Animal Im-provement Programs Laboratory.

Use of donor status and type data could make PL evaluations more accurate. However, the cow's own data provide much less information than her sire's and maternal grandsire's evaluations because the estimated heritability for PL is low (8.5%).

Mean reliabilities for cows are about 30% for PL, 35% for SCS, 40% for net merit, and 45% for milk yield. Larger profits are expected from selecting cows for net merit than from selection on yield traits alone. Cows with less mastitis and longer lives are more valuable.

## Distribution limits for cow evaluations

Evaluations for yield traits are being sent for all cows with records born in the last 15 years. The previous limit was 10 years. Evaluations for cows born 16 to 20 years ago also are distributed if they have eval-uated progeny.

## Evaluations from INTERBULL

The International Bull Evaluation Service (INTER-BULL) will release international evaluations in August 1995, and these will replace current converted evaluations for European Holstein bulls. Evaluations released by European countries between August and January will not be considered official by USDA. However, INTERBULL conversion equations may be used unofficially to obtain updates provided that the European bases and models remain unchanged.

## Canadian dams of U.S. bulls

Canadian evaluations from January 1995 were ob-tained for dams of U.S. bulls and incorporated into their sons' evaluations. Canadian evaluations were used if they had at least 5% more information (based on adjusted daughter equivalents) than the U.S. eval-uations. For 273 bulls, reliabilities were improved and evaluations were adjusted (often upward) when Canadian dam data were incorporated.

Increases in reliability for well-sampled bulls were often 2% or less. Bulls with reliabilities of only 40 to 60% for milk had increases of 5 to 10% in reliability when evaluations from Canada were converted and substituted for U.S. predictions of dam merit. Previ-ously, the only information for most Canadian cows was a parent average computed from a known sire and a group solution for their unknown dams.

## Evaluations from Canada

The July 1995 bull evaluations from AgCanada were not received at USDA in time to accompany our distribution of U.S. evaluations. Canadian evaluations from January 1995 were reused. This 6-month-old information from Canada was converted and combined with U.S. information using the usual procedures implemented in 1991 (*Journal of Dairy Science* 75:2834).

In August 1995, INTERBULL evaluations will replace the Predicted Transmitting Abilities now being reported for bulls first sampled in Canada or jointly sampled. The INTERBULL results will be considered official by USDA. Canadian and U.S. bulls can be compared unofficially until the August release by applying the January 1995 conversion formulas to the new Canadian evaluations.