

AIPL RESEARCH REPORT CH14 (5-99)

# **Current and planned changes in USDA-DHIA genetic evaluations (May 1999)**

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## **Cow evaluation format 105**

Fields for the economic indexes of fluid merit dollars (FM\$) and cheese merit dollars (CM\$) and the inbreeding of future progeny are now available for cow evaluations in <u>format 105</u>. Those fields were introduced in February 1999 but they were provided only for bulls.

In format 105, FM\$ can be found in columns 174-177, and CM\$ is in columns 209-212. This format change was announced in <u>What's New</u> at the AIPL web site on March 18, 1999. The FM\$ and CM\$ indexes are calculated the same for cows as they are for bulls except that productive life for Holstein bulls is adjusted for correlated type traits.

The expected inbreeding of a cow's future progeny was added to format 105 in columns 200-202. The expected inbreeding of a bull's progeny has been included in format 38 since February 1998. The average relationship of a cow or a bull to its breed is calculated from the same sample of 600 females for that breed so that expected inbreeding is defined the same regardless of gender. A test format-105 file that includes the new fields is available on request.

## Planned update of US-Interbull bull evaluation format 031

Format 031 will be expanded following the May release of USDA-DHIA genetic evaluations. Additions are the identification of the maternal grandsire and the bull's full birth date (YYYYMMDD) in place of the two-digit year. Files in the new <u>format</u> 031 will be available on May 24 with the May data to enable testing and also to provide the new information. The new format will be used for August 1999 evaluations.

### Requirement for a test day early in lactation

To prevent selection bias, a test day early in lactation is required. Historically, a test by 75 days in milk (DIM) has been required for a record to be usable for genetic evaluations, but this requirement was applied by the dairy records processing centers. Now that the Animal Improvement Programs Laboratory (AIPL) uses test-day data to calculate lactation records, the requirement for an early test day is being applied by AIPL and has been updated. Because the <u>best prediction method</u>, which is not dependent on Shook factors to adjust the first interval, is used by AIPL to calculate lactation records, the requirement for first test day has been relaxed from 75 to 90 DIM.

Test-day data were used to recalculate all lactations that started in 1997 or later. Because the test-day data stored by AIPL were found to be incomplete, the requirement for first test day was eased further to 150 DIM for calvings before September 1998. Even with this additional requirement relaxation, some lactation records that previously had been included in USDA-DHIA genetic evaluations were excluded from May 1999 evaluations, which resulted in a slight decrease in the number of daughters for some bulls.

### Foreign evaluations of bull dams from more countries included

Evaluations from Australia, Denmark, Germany, Italy, and New Zealand were used to update bull parent average along with those from Canada, France, and The Netherlands, which had contributed evaluations previously. The National Association of Animal Breeders provides the country of dam's evaluation for all artificial-insemination bulls. Based on this list, requests were sent to the countries listed above. The evaluations returned were converted using conversions from the International Bull Evaluation Service. Evaluations for 725 dams were used to update bull parent average. The largest number came from Canada.