

Texas Dairy Matters

Higher Education Supporting the Industry

USE ERCR IN BULL SELECTION

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To maintain summer production, it is important to pay attention to dry matter intake, cow comfort and cooling, fly control, and available clean water. However, what are you doing in regard to reproduction?

Reproductive performance is affected primarily by environment, management, and unexplained sources of variation. To a much smaller degree, the genetics of the cow, the fertility of her mate, and the interaction of the cow and bull impact reproduction. Semen quality of AI bulls is monitored routinely by major organizations using available technology. But predicting which bull is most fertile based on laboratory results continues to be illusive.

Selecting bulls with a high Estimated Relative Conception Rate (ERCR) might increase the chance of getting heifers or cows pregnant. But what is ERCR and who calculates it? Since 1986, Dairy Records Management Systems (DRMS – Raleigh, NC) has calculated a male fertility ranking expressed as ERCR. Breeding information is used from sires identified as active that have a minimum of 300 breeding records. The ERCR value for each bull can be interpreted as the 70-day non-return rate (i.e., presence or absence of a repeat breeding within 70 days) corresponding to inseminations of a bull relative to other bulls used in the same herds.

Beginning in May of 2006, the Animal Improvement Program Laboratory (AIPL) began computing ERCR. This made the calculation available on a larger number of sires. Data is now included from three cooperating processing centers instead of just one. ERCR measures a bull's direct effect on fertility at the time of insemination. A bull's fertility changes due to environmental factors as well as genetics.

The ERCR values have a fairly small range (usually -5 to 5) because the number of live sperm per unit is equalized and infertile bulls are culled. AIPL plans to expand this research to include

all processing centers allowing more records to be used; thereby increasing the accuracy of bull fertility evaluation.

To find the ERCR rating on a particular bull, go to the AIPL website:

<http://www.aipl.arsusda.gov/eval/summary/ercr.cfm>

Holstein and Jersey bulls are listed by NAAB code, name and registration number. Click on “Registration” for the bull of interest on the online listing. You will access the bull’s complete genetic summary for all traits.

Remember, fertility is just one of several important traits in your dairy’s selection program. However, with our hot summer Texas conditions, any tool to increase the chance of getting cows bred should be considered. ERCR can be a useful trait to consider when purchasing semen; but like somatic cell score, productive life, and type, it is a secondary trait. You won’t get much benefit from using a bull with a +5% ERCR if you give up \$100 in Net Merit in the process. Remember using high ERCR bulls from any stud may increase conception rates, but using below average ERCR bulls will not.

<http://texasdairymatters.org>

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