Genetic Selection Guide

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AgSource's groundbreaking Genetic Selection Guide provides producers with the power to maximize the genetics in the herd while enhancing the herd of the future.

The Genetic Selection Guide provides:

- Both genotypic and phenotypic information for replacement decisions
- Tools for managing your herd's breeding program
- Information for assisting in genomic testing decisions
- A tool to manage your replacement selection process

Information about cows is separated from heifer information, resulting in two separate reports. In addition a third report on expected progeny (expected offspring from cows bred and confirmed pregnant) is available to review calves that are due to be born in the upcoming nine months. Producers choosing any of these three reports have the choice of receiving them as paper reports or accessing the information via the website. The Genetic Selection Guides for Cows and Heifers are updated after each USDA sire run, which occurs three times a year. Producers can choose to receive information on cows, heifers, or both, based on information needs. Due to the fact that the Progeny Genetic Selection Guide is based on breeding records and pregnancy confirmations reported on test day, this report will be available as part of the regular test day reports.

Heifer Genetic Selection Guide

All three Genetic Selection Guides divide animals into quartiles based on their Net Merit$ (NM$). The Heifer Genetic Selection Guide example shown in figure 1 shows in Block A that the highest 25% of Estimated NM$ animals average 405 NM$ while the lowest 25% are averaging 61 NM$.

Individual heifer information is displayed in Block C. The estimated NM$ value is highlighted according to the quartile the heifer is part off. The Genetic Selection Guide is powerful because it contains both genotypic and phenotypic information on individual animals in a herd. NM$ is the most widely accepted measure of a cow or heifer's genotypic ability to produce milk over a lifetime. The phenotypic characteristics measured on the Heifer Genetic Selection Guide are provided for the dam. Information includes milk, fat and protein production compared to the rest of the herd along with average Linear Score based on SCC, reproductive performance based on her average days open and her Transition Cow Index® if the herd is on a TCI option.

Cow Genetic Selection Guide

Similar to the Heifer Genetic Selection Guide, the herd is broken up into four quartiles. Quartile averages for NM$ are listed in Block A of the report. Block C provides information on the individual cows. As shown in the sample Cow Genetic Selection Guide in Figure 2, NM$ values are highlighted according to the quartile the cow is part of. In addition to the NM$ value, if the cow's genetic information is based on genomic data, either a "G1", "G2" or "G3" genomic indicator will be listed next to the NM$ value. To make the decision process more complete, each cow record includes milk, fat and protein production compared to the rest of the herd along with average Linear Score based on SCC, reproductive performance based on her average days open and her Transition Cow Index® if the herd is on a TCI option. If dam production information was available, then milk, fat and protein production compared to the rest of the herd for the dam will be listed as well.

We Measure It … You Manage It

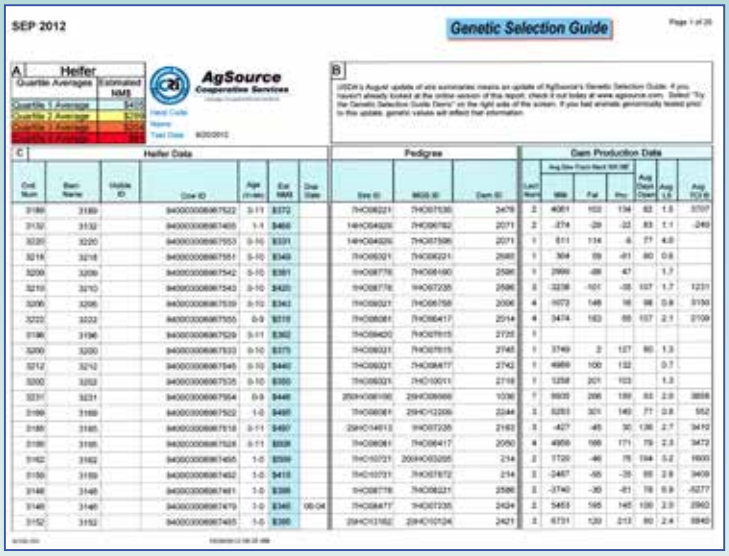

Figure 1) Example Heifer Genetic Selection Guide

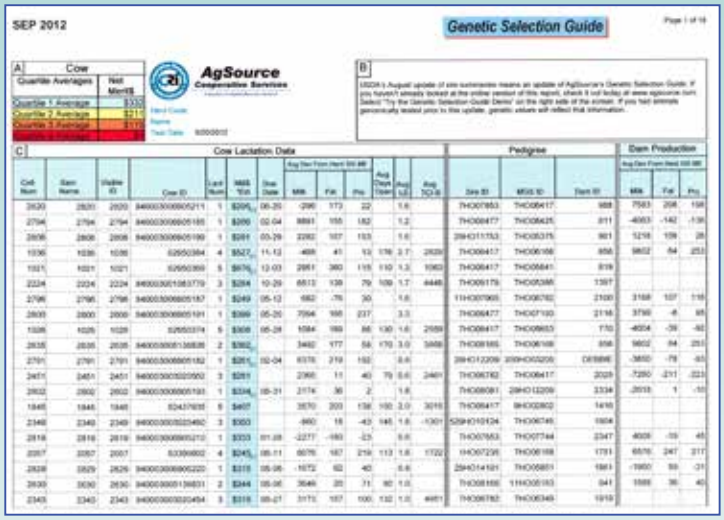

Figure 2) Example Cow Genetic Selection Guide

Progeny Genetic Selection Guide

The Progeny Genetic Selection Guide is the newest addition to the Genetic Selection Guide line-up of reports. The new Progeny Genetic Selection Guide offers producers a new planning tool that will provide them with genetic information about future progeny before the calf is actually born. The report includes up to nine months worth of progeny, including an estimation of where progeny will genetically rank based on their expected NM$ value. Having information available prior to birth will allow producers to make projections about how many calves to keep, which calves to keep, and which calves could be genomically tested. Knowing ahead of time which calves to keep will reduce expenses and provide opportunities for genomic testing and optimize genetic progress.

Although the overall concept of the Progeny Genetic Selection Guide is similar to the Cow and Heifer report, the process for establishing quartiles is different. NM$ Quartiles in this report are based on NM$ deviation from either a monthly, 3 month, or 9 month average. The use of month, versus 3 month or 9 months is based on the number of progeny listed on the report.

Using the example Progeny Genetic Selection Guide report in figure 3, Block A shows the number of progeny due by month and average NM$ value used to calculate the NM$ deviation. Block C displays the progeny sorted by "Date Due". Cows due within the next 40 days are highlighted in a teal color. NM$ values are shown for the dam, sire and calf. Similar to the Cow and Heifer report, the estimated NM$ value for each calf will be highlighted indicating the quartile she is part of. Supporting information, such as pedigree and dam production data, is listed for each of the progeny if available.

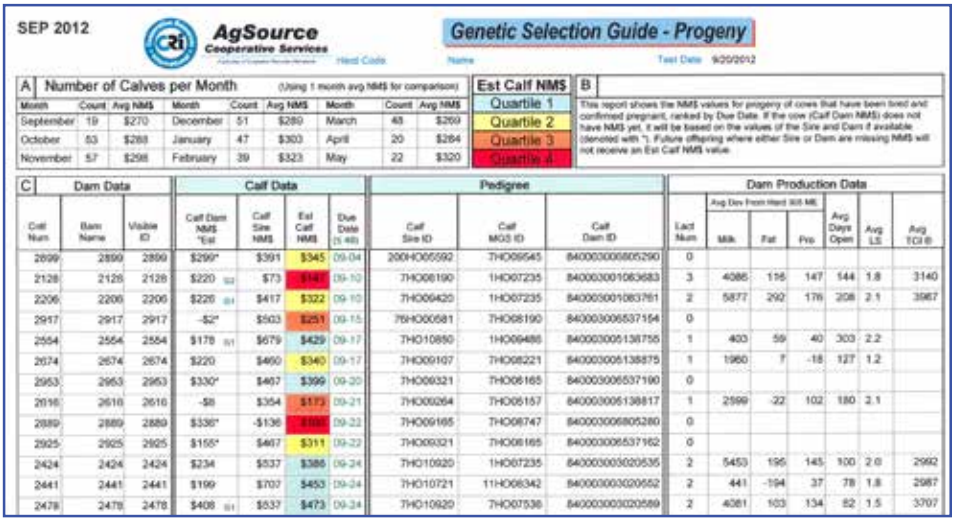

Figure 3) Sample Progeny Genetic Selection Guide

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