

## **Witness the RESULTS™ of Superior Genetics**

*by Diane Schnell*

*Education and Program Support Manager, CRI*

If you have heard it once, you have heard it a dozen times: A.I. provides access to superior genetics. What does superior genetics mean to you? More milk, more components, less culling, lower Somatic Cell Score, healthier cows, more pregnant cows, cows that last longer, marketable offspring or all of the above.

Have you ever heard someone say, "I breed for type and feed for production"? Or, "it doesn't matter what bulls I use, all bulls are created equal. Semen is just another commodity"? During my career at Genex, I can remember many producers challenging the value of using the top ranked sires or asking me to prove to them that genetics really do matter in their herd!

People get too caught up in all the formulas, equations, adjustments and the animal model itself. It is sound science. Is it complicated? Yes, but the important thing is it's not necessary to understand every piece of the formula. Remember, the difficult part of sire evaluations is already sorted out by years of research done by geneticists. The United States Department of Agriculture-Animal Improvement Programs Laboratory and breed associations continually update and enhance the way evaluations are calculated so you can use the most accurate information for your breeding program. This allows you time to focus on selecting the traits that make a good A.I. sire for your cows and what numbers are meaningful to your operation.

Some people believe since they do not test or because the animals in a proof come from a state or an environment very different from their own, that sire evaluations don't apply to their herd. After all, isn't it easier to understand actual performance when you are comparing your cows to their herdmates, rather than someone else's cows? Today, Genex introduces a new tool called "RESULTS" which can help you see those differences in performance.

With DHI records, today's software programs and good data collection on the farm, we can validate genetics on a single herd level. The Genex RESULTS report will help you understand genetics and evaluate the value of using superior genetics in your herd. On an individual herd basis, the RESULTS program compares actual cow performance (breeding values) to

their sire's Predicted Transmitting Ability (PTA) for Milk, Fat, Protein, Somatic Cell Score, Daughter Pregnancy Rate and Lifetime Net Merit.

### Benefits and Features

RESULTS groups sires used in the herd into quartiles according to their genetic ranking within each category or trait. Then, the actual performance of the cows in each corresponding group is averaged. Next, the report compares the top quartile to the bottom quartile and calculates the difference. See an example of a RESULTS comparison in Table 1 (below).

	Sire	Cow		
	PTA Protein	305 Day ME		
		Milk	Fat	Protein
<b>Top 25% Protein</b>	<b>46</b>	25370	874	<b>752</b>
<b>Bottom 25% Protein</b>	<b>11</b>	24037	836	<b>709</b>
Difference between quartiles	<b>35</b>			<b>43</b>

The PTA for protein for the top bulls used in this herd average 46 pounds of protein. The actual performance of the cows sired by that group of bulls average 752 pounds of protein. The PTA for protein for the bottom quarter of bulls used in this herd average only 11 pounds and the cows 709 pounds. A difference of 43 pounds is shown in this herd. By using top protein bulls, this herd is actually gaining ground in protein production. Like in this example, well-managed cows show an even greater expression of genetics since PTAs of bulls are based upon an 'average' cow in the population.

An example of a Daughter Pregnancy Rate (DPR) report is shown in Table 2 (below). In this herd, there is a 3.95 point difference in DPR. (Remember, for every point of DPR you should see a difference of four days open.) This dairy sees an 18-day difference in days open, proving the cows sired by bulls with a high DPR actually have less days open. This is truly a cost savings at any dairy.

	Sire	Cow	
	PTA DPR	Days Open	Calving Interval
<b>Top 25% DPR</b>	<b>1.39</b>	<b>110</b>	<b>381</b>
<b>Bottom 25% DPR</b>	<b>-2.56</b>	<b>128</b>	<b>405</b>
Difference between quartiles	<b>3.95</b>	<b>-18</b>	<b>-24</b>

Genetics play a major role in a herd's measure of profitability. Milk, components, somatic cell score, days open, productive life and Lifetime Net Merit have a different impact on members' and customers' profitability. RESULTS shows the real difference in the top genetic cows versus the bottom genetic level cows. When you see the "real differences" in your herd for traits like DPR or milk production, it is rather easy to calculate your return on investment in genetics.

In addition to providing a comparison of animals with sire identification, we also can show you how animals without sire identification rank. These could be animals you have purchased, animals that have lost their parentage or are sired by a non-A.I. sire. They may even be out of bulls that are not proven yet, so there are no PTAs to use in the comparison. This group of animals is shown on a separate report that lists their performance average.

This confirms what we all have known for a long time; you usually cannot buy better replacements than you can raise yourself. Or, the cows sired by a jumper bull don't perform nearly as well as those sired by A.I. bulls in the top quartiles.

### **What data do we need?**

For a RESULTS report to be run, the first requirement is sire identification. For the most accurate report, herds should have at least 150 to 200 sire identified cows. Smaller herds may have too few cows in each quartile to give a meaningful average. In other words, if one or two extreme cows help or hurt the average, the data is not very useful. The data used to generate a report includes cows' 305-day ME records for milk, fat and protein, log somatic cell scores and breeding records.

For more information about RESULTS or to evaluate the economic advantage of using superior sires in your herd, contact your local Genex representative. RESULTS is a FREE, value-added service provided by Genex. RESULTS reports can be generated from DHI data or on farm herd management software files. Ask your local Genex representative to run a report so you can witness the RESULTS.

**Author Bio:** As Education and Program Support Manager, **Diane Schnell** leads a team of trainers responsible for everything from A.I. Training to Support Programs Training to new Employee Training. Programs such as RESULTS, RPM, Achieve, MAP and MPG are managed within Support Services as a service to both the members and customers and our marketing divisions.