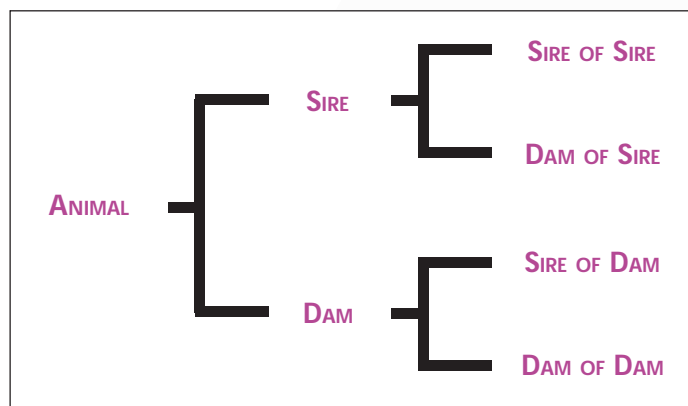


FIGURE 1. TRADITIONAL PEDIGREE



on NMS or PL. So the bull stud would want to avoid Bull B and purchase Bull C, whose Genomic NMS is clearly higher than his Traditional NMS. The same would be true for females genomically tested.

Clearly with genomic evaluations, PACE herds will benefit by sampling more genetically superior, higher reliable young sires than in the past. And producers will be able to make more rapid genetic progress, with bulls that have been pre-selected according to their genomic profile, particularly for low heritability traits like fertility, longevity and health traits.

Another way for producers to cash in on genetic progress is by using GeneFORCE sires. Accelerated Genetics is making a select few highly-valued, genomically-tested sires available. These sires have a high probability of being highly sought after proven bulls and do have a place in the market, but our PACE program is still greatly valued.

GENOMICS...ANOTHER WAY TO VIEW IT
Genetic selection is not an exact science. However genomics is providing a new,

FIGURE 2. GENOMIC PEDIGREE



powerful tool to help better predict results. Typically when we think about what traits are inherited from a dam or sire we believe it is all equal. This viewpoint is shown in Figure 1. It displays how an offspring is expected to inherit approximately 50% from each parent, 25% from each grandparent and 12.5% from each great-grandparent. This is true when you consider a large group of animals, but is it true for an individual?

No, its not true for looking at an individual, look at Figure 2. It demonstrates that for a given chromosome an individual can inherit more than what is traditionally expected from a given ancestor. The color illustration clearly shows that the sire and dam did not inherit an equal amount from their parents. Here both the sire and dam received more than 50% from their respective dams. The same is true for their offspring. Figure 2 provides the visual for an animal's genetic map and is useful when estimating the genetic potential of individuals.

GENOMICS...WHAT IT PROVIDES
The fact remains genomics are exciting and the industry is diving into the use of this genetic

selection tool. Genomic evaluations will bring many changes. This includes the following:

- Significant improvement in accuracy over Traditional PA values (35% Traditional PA versus 65% Genomic PTA).
- Younger animals can be used as parents, reducing the generation intervals and enhancing genetic gain.
- Dairy Sire Summaries will continue to be three times a year, but Genomic PTA's will be made available 6-8 times a year for both cows and bulls.
- Reduction of parentage errors because of the ability to better identify heritage.
- Another option for a sexed semen source through use of GeneFORCE sires.

Furthermore, research at the USDA and Genetic Visions will increase the reliabilities of future sire evaluations and further uncover the bovine genetic map, continuing genetic progress at an increasing rate. Remember... **'The Genomics Revolution'** was empowered by Accelerated Genetics' Innovations!

NEW WEBSITES

Accelerated Genetics is excited to introduce a new website. The website now has great features and content to help keep all producers up-to-date on the many and always changing products and services that Accelerated Genetics has to offer.

The new features on the website include a fresh new look and easy navigation to find sire data, farm products, and new technologies. Also producers can view all of Accelerated Genetics' catalogs online and search for sires using the virtual sire guides for both beef and dairy cattle.

Be sure to go to www.accelgen.com and take a look at the new features and information about Accelerated Genetics!

The Genetic Visions website has been updated with a fresh new look and easier navigation! The new website with more photos, information and news articles that will keep all producers up-to-date on the latest in research and technology! Read about the latest trends such as genomics and how genes affect animal health.

Producers are also able to go online and fill out a genetic marker testing application that is available through Genetic Visions for tests such as Freemartin (FM), BLAD, CVM, Coat Color/RF, and many other leading research tests.

Go to www.geneticvisions.net to view how genetic research is helping increase herd's genetic worth all over the world!

