



# By the Numbers

► by **Sally Northcutt**, director of genetic research, American Angus Association

## New-generation selection tools powered by PathfinderPlus®

*Ask Angus breeders for a list of traits economically important to their operation, and reproductive efficiency will always be included near the top of their response. Yet, the mechanics of reproduction can be the most mysterious of all traits, and the suite of selection tools, the most scarce. The low heritability of the reproduction complex, along with the multifaceted reasons females may not consistently produce on an annual basis, have created challenges in characterizing these traits. PathfinderPlus, a voluntary inventory-based system, is designed to propel Angus breeders toward enhanced tools for genetic improvement in these difficult-to-measure traits.*

### Basics of PathfinderPlus

Beginning in 2012, PathfinderPlus is a voluntary system to allow Angus breeders to track reproductive fitness of the cow herd, with particular emphasis on the first-calf heifer. The primary goal of the PathfinderPlus program is to capture reproductive data and disposal codes to ultimately enhance current and create additional reproductive and longevity selection tools.

Breeders use their AAA Login account available at [www.angus.org](http://www.angus.org) to access inventory lists on heifers and cows. Through the initiation of an annual inventory list in AAA Login, breeders begin their participation in the program.

Enrollment requires that the breeder confirm heifers and cows in the inventory lists are part of the herd inventory. PathfinderPlus enrollment is not complete

until both inventory lists are reviewed, non-active females are disposed of and the female inventory is accepted. A \$3-per-cow charge is assessed at the completion of the enrollment process for any female 20 months of age or older accepted in the list. This fee includes performance reporting for the female's calf.

One helpful feature is that breeders can enroll at any time during the year. This initial enrollment establishes their anniversary date for subsequent years. Annual inventory reconciliation allows for cow disposal and reason designations.

Fig. 1 illustrates the AAA Login screen after enrollment is complete for both heifer and cow inventories, as indicated by the appearance of the PathfinderPlus logo in the system.

After initial enrollment has been

completed, the breeder can continue to submit performance measures, such as birth and weaning weights, as they traditionally have done. Tools to report weights and measures in AAA Login, spreadsheets and Angus Information Management Software (AIMS) are still in place as they have been prior to PathfinderPlus.

### PathfinderPlus benefits

Benefits of PathfinderPlus include comprehensive tracking of females in the herd for breeding, production and disposal. These records are used for heifer pregnancy expected progeny differences (HP EPDs) and future longevity selection tools.

Breeders are receiving limited HP EPDs currently unless they are already submitting heifer breeding records. The PathfinderPlus program is the ideal way to report heifer breeding records. In fact, this is the primary requirement to remain in the PathfinderPlus program.

Heifer breeding records are required each season, along with feedback on each calf for inventoried females (cows and heifers). Feedback reported on calves is simply what breeders turn in anyway — a calf record preweaning or reason for no calf weight, a disposal code for the cow or a reason why the cow didn't produce a calf.

Another convenient feature of PathfinderPlus is the availability of calf EPDs for calving ease direct, birth weight and weaning weight, once the weaning data are

**Fig. 1: AAA Login screen after enrollment in PathfinderPlus**

AMERICAN ANGUS ASSOCIATION™ — THE BUSINESS BREED															
PathfinderPlus - Heifer/Cow Inventory List															
Authorized to submit for:															
Heifer Inventory - Cow Inventory															
Item	Item Tag	Item Tag	Item Tag	Item Tag	Item Tag	Item Tag	Item Tag	Item Tag	Item Tag	Item Tag	Item Tag	Item Tag	Item Tag	Item Tag	Item Tag
AAA 1020001	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000
AAA 1020002	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000
AAA 1020003	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000
AAA 1020004	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000
AAA 1020005	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000
AAA 1020006	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000
AAA 1020007	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000
AAA 1020008	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000
AAA 1020009	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000
AAA 1020010	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000

### PathfinderPlus® highlights

- To enroll, use your AAA Login account to access the PathfinderPlus menu tab.
- Breeders can enroll at any time.
- The voluntary system is inventory-based.
- AAA Login is the site for enrollment and inventory counts.
- Females 20 months and older have an annual \$3-per-cow fee, which includes performance reporting for the cow's calf.
- Participants can access calf EPDs for calving ease direct, birth weight and weaning weight for qualifying calves prior to registration.

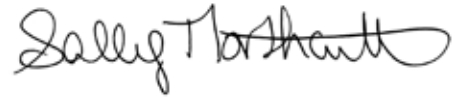
processed through the Association. These selection tools are easily viewed through a participant's AAA Login account even before calves are registered for preweaning selection and culling decisions.

Since PathfinderPlus is voluntary, the classic AHIR reporting remains in place for non-participants. In addition, the selection criteria and recognition for the classic Pathfinder animals remain unchanged.

The old saying "you can't manage what you can't measure" holds true for traits like reproduction. The Angus female has a strong reputation as a fertile, production-oriented

factory. Providing additional selection tools that aid both seedstock producers and commercial cattlemen using Angus genetics to make reliable selection decisions to improve the profitability of their operations is key. PathfinderPlus can help make genetic improvement in female traits like the Angus breed has witnessed in other economically relevant traits.

To learn more about PathfinderPlus and to enroll, go to your AAA Login account or contact the Association at 816-383-5100.



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**Editor's Note:** "By the Numbers" is a column by Association performance programs staff to share insights with Angus members about data collection and interpretation, the National Cattle Evaluation (NCE), genetic selection, and relevant technology and industry issues. If you have questions or would like to suggest a topic for a future column, contact Sally Northcutt, director of genetic research, or Bill Bowman, director of performance programs, at 816-383-5100.