



UNDERSTANDING AND USING GENEMAX ADVANTAGE RESULTS

GeneMax® Advantage™ is a new DNA test created in collaboration between Angus Genetics Inc., Certified Angus Beef® and Zoetis for commercial Angus replacement females. Features of GeneMax Advantage include three comprehensive economic index scores, SMART Outlier Reporting to help identify females with varying levels of genetic merit for feed cost, temperament and end-product traits, and Sire Match powered by HD 50K.

GENEMAX ADVANTAGE REPORTS

GeneMax Advantage results are delivered to you by email in a variety of formats, including:

- A printable PDF report sorted by Total Advantage Score.
- A link to an online report on the Angus Genetics Inc. customer website. The report may be customized to desired levels of SMART Outliers or sorted by any field in the report. Additional Sire Match information also can be accessed.
- An exportable Excel® report from the AGI website with all of the above features, which can be used in more advanced selection and breeding decision-making and recordkeeping. A sample report is listed on the back of this sheet for reference.

TESTING STRATEGY

Customers are advised to test at least 50% more females than are needed to achieve desired cow inventory numbers for selection of the most productive replacements.

SELECTION DECISIONS

The primary advised selection strategy is to simply keep heifers with the highest GMX Total Advantage Scores to build an Angus-based cow herd and feeder/fed cattle with the highest net returns. If calves are sold at weaning, added emphasis on keeping females with the highest Cow Advantage Scores also is advised.

Secondarily, culling SMART Outliers identified as high cow cost (feed requirements relative to available resources), and/or unacceptable docility is suggested for consideration. SMART Outliers for unacceptable tenderness and lower marbling are primarily identified as candidates for corrective mating to Angus sires with superior tenderness and marbling. Outliers identified as possessing high genetic merit for marbling have greater mating flexibility to produce progeny that yield CAB premiums.

BREEDING DECISIONS

GeneMax Advantage results enable a lifetime of more informed breeding (mating) decisions for greater net returns, including:

- Use of Sire Match information to avoid inbreeding and associated depression in performance primarily related to reproductive and survival traits.
- Use of SMART Outlier information to identify females for corrective mating to achieve CAB premiums and meet consumer expectations, as well as enhance production efficiencies.
- Use of Total Cow and Feeder Advantage Scores for corrective mating to improve the Cow or Feeder or overall complex of traits.

SAMPLE REPORT

AMERICAN ANGUS ASSOCIATION The Business Breed

3201 Frederick Ave. St. Joseph, MO 64506 • Phone: 816.983.5100 • Email: angus@angus.org • Fax: 816.233.9703

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GeneMax Advantage DNA Test result(s)
No items in cart.

GMX GENEMAX Advantage

1 Export To Excel Print GMX Summary PDF format

SIRE IDENTIFICATION
- Sires for File 787220: Click here to add or edit sires for sire identification with your GMX tests. (Sire Count: 0)

Current Percents
 [+] Top 25 % for Marbling
 [-] Bottom 5 % for Docility, Tenderness or Cow Cost
 [-] Bottom 25 % for Marbling

Customize Percents
 Top [25] % for Marbling
 [-] Bottom [5] % for Docility, Tenderness or Cow Cost
 [-] Bottom [10] % for Marbling

24 record(s) found.

Tag	Reg Num	Birth Date	Recvd from Lab Date	Notes	Most Likely Sire	Sire Reg Num	Sire Identification Details	Cow Cost	Doc	Marb	Tend	Cow	Feeder	Total
9A	BIR 622753618	02/13/2013	05/20/2014				Details					80	92	96
25A	BIR 622753627	02/18/2013	05/20/2014				Details					69	93	92
22A	BIR 622753626	02/16/2013	05/20/2014				Details	[-]		[+]		49	93	92

1 Export to Excel and Print GMX Summary PDF Format – Within the secure customer section of the AGI website, select “Export to Excel” to download customized results in spreadsheet format. Click “Print GMX Summary PDF Format” to access a print-friendly PDF version of the results.

2 Tag, Reg/Assn Num, Birth Date, Recvd from Lab Date – Animal identifiers include the ranch tag number, American Angus Association (Assn) assigned commercial animal registration (Reg) number, birthdate and the date that results were received from the lab (Recvd) for internal reference and monitoring of turnaround times.

3 Notes – The notes column is used to report Sample Failed and Resubmit information to customers.

4 Most Likely Sire – The Sire Match feature reports the tag and registration number of the most likely Angus sire from the HD 50K-tested, registered and transferred Angus bull battery. Angus bulls may be tested and Sire Match may be included either before or after candidate daughters are tested with GeneMax Advantage. Commercial producers are encouraged to buy registered, transferred and HD 50K-tested Angus bulls to enable the Sire Match feature.

5 SMART Outliers – The SMART Outlier Reporting section of the report identifies animals (using a minus sign [-]) that possess genetic

merit for undesirable cow cost, docility and tenderness. The default threshold for identifying these animals is the least desirable 5% of the AGI/CAB/Zoetis commercial Angus female reference population (at present, 15,000 head). GeneMax® Advantage™ customers may customize these undesirable outlier thresholds using the dropdown options of 5%, 10%, 15% ... 50%, on the online report. Favorable [+] and unfavorable [-] genetic outliers for marbling also are identified, with the default threshold representing the top 25% and bottom 25% of the reference population. Similarly, SMART Outliers for marbling also may be customized to flag the desired sets of low [-] and high [+] animals. Generated printable PDF and exportable Excel® files reflect customized SMART Outliers.

6 GMX Advantage Scores – GeneMax Advantage scores range from 1 to 100 (higher scores are better, average score = 50) and rank females for predicted net profit for the following stages of the production life cycle:

Cow Advantage – Predicts differences in profitability from heifer development, pregnancy, calving ease, milk production, growth and cow costs, to the sale of weaned progeny.

Feeder Advantage – Predicts differences in net return of feeder calf progeny due to transmitted genetics for postweaning growth, feed efficiency, carcass weight and CAB carcass merit.

Total Advantage – Predicts differences in profitability from genetic merit across all economically relevant traits captured in the Cow and Feeder Advantage index scores.

LEARN MORE

If you have any questions or need assistance as you get started with GeneMax Advantage, contact AGI, your Zoetis Genetics representative or visit genemaxadvantage.com, genomexchange.com or angus.org/AGI.