

ENLIGHT FREQUENTLY ASKED QUESTIONS

Enlight™ is a new online, comprehensive management tool designed to help dairy producers who own Holstein cattle more efficiently manage herd genetics. The result of collaboration between Holstein Association USA and Zoetis, Enlight will provide dairy producers with a comprehensive view of herd-level and individual animal genetic performance. The following are frequently asked questions regarding the program and corresponding answers.



ACCESS AND ENROLLMENT

Q: How do I sign up for Enlight?

A: Enrollment in Enlight is tied to a Holstein Association USA account. Producers should take one of the following steps to enroll:

- If currently genotyping through Zoetis, your Zoetis representative can help complete the enrollment consent form required to establish access to Enlight.
- If currently genotyping through Holstein Association USA, an Association customer service team member or your regional representative can provide access.
- If you don't have an active Holstein membership but test through Zoetis, your Zoetis representative can help complete the enrollment consent form and Association membership application required to establish access to Enlight.
- If you don't have an active Holstein membership and do not test through Zoetis, contact Holstein Association USA customer service or Zoetis customer service for more information.

Q: How do I link my Holstein Association USA account with another account so I can view it on Enlight? How do I view other herds in Enlight?

A: During the enrollment process, you will have the opportunity to link multiple Holstein Association USA accounts to your Enlight login, provided you have permission to view these accounts. All affiliated accounts established during enrollment will be visible the first time you log in, and you may view them separately or as a group. At this time Enlight does not support users viewing multiple nonaffiliated herds under one login.

Q: I have Holsteins, but they aren't registered and I'm not a Holstein Association member. Can I still benefit from using Enlight?

A: All owners of Holstein dairy cattle who use genomic testing can benefit from using Enlight. In fact, Enlight provides access to convenient options for obtaining official animal identification, breed benchmarks and reporting formats previously only available to Holstein Association members.

Q: What Internet browsers are supported by Enlight?

A: Enlight™ can be accessed using a variety of Internet browsers. Most current versions of Mozilla Firefox, Google Chrome, Microsoft Internet Explorer and iOS Safari work well. Enlight uses responsive design, which means that content automatically adjusts to the size of the screen to offer an enhanced user experience on desktops, laptops and tablets. Some older versions of common browsers (e.g., Internet Explorer 8) may experience difficulty in viewing graphics and interacting with data. In most cases, users can update to current versions of their browsers for free by downloading from their respective websites.

Q: Once a herd owner signs the Enlight customer consent form, how long will it be before their data is part of Enlight?

A: Producers will receive an email with login details once the consent form has been processed. Approximately 48 to 72 hours after receiving that email, the producer's herd data will be available in Enlight for review and analysis.

Q: What dairy breed(s) of cattle have the ability to use the Enlight collaborative database.

A: Only results from Holstein dairy cattle will be available through Enlight. All dairy producers including Holstein, Jersey and Brown Swiss who test with CLARIFIDE® will continue to receive customer reports and support services directly from Zoetis.

Q: Can my veterinarian or other consultants have access to data on Enlight?

A: Dairy producers, in time, will have the option to allow others, with their expressed permission, to view their herd's data and associated reports within Enlight. However, test results of animals that are genomically tested in the U.S. using predictions generated by USDA-CDCB are visible on the CDCB website.

USING ENLIGHT

Q: When are genetic testing results available on Enlight?

A: Results from the USDA-CDCB dairy genetic evaluation will be refreshed in Enlight the morning of the scheduled release day, typically the Tuesday of a reporting week. At this time, typically before noon Eastern Time on release date, the data referenced by the tools within Enlight will be refreshed. For previously tested animals, Enlight reflects the most recent official evaluation. For newly tested animals, the current evaluation is reflected.

Q: What animals have data available in Enlight?

A: Enlight displays data for all animals associated with a given Holstein Association USA account and user

login. This includes registered (i.e., Herd Book) and nonregistered animals (e.g., Basic ID). This also includes animals that have and have not been genomically tested.

Q: I purchased an animal that was tested by another producer. Can I see their results with my herd?

A: Enlight data reflects the most current assignment of ownership recorded in the Herd Book or Basic ID databases. When a producer completes an animal transfer through Holstein Association USA following a purchase, that change will effectively move that animal from one Enlight account to another.

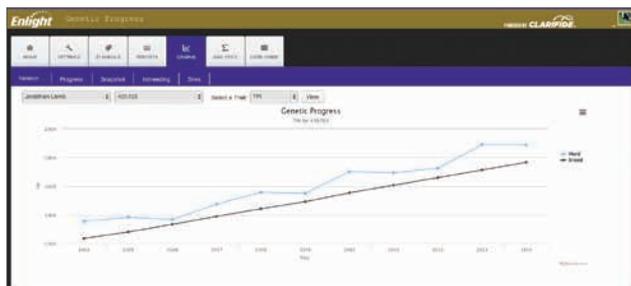
Q: How are animals grouped in Enlight? Can I create groups in Enlight? How do I change an animal's status in Enlight? How do I modify groups in Enlight?

- A:
- Animals are initially grouped by Holstein USA ownership account number, and users have the ability to view only animals owned by an account, or to view all animals as a group.
 - Managing information on groups of animals is key to making many common selection decisions. Enlight offers a variety of ways that users can manage and view information on specific groups. Available groups include:
 - Animals born within a specific year in the Scatterplots or Sires graphs
 - Young Stock or animals in production in the Reports section
 - All or just active animals in Histograms and Scatterplots
 - Using the filter icon (▼) in the Reports section to look at animals with specific values
 - Animals can be assigned to Active or Inactive state or Young Stock lists within the herd by clicking on the appropriate box in the Herd Status tab of the Settings section.

Q: What benchmarking tools are available in Enlight?

A: Enlight provides users opportunity to benchmark herds and animals against relevant averages. For herds, the Genetic Progress graphs show a herd's average genetic merit for selected traits relative to breed averages. For individual animals, the Animal Snapshot graphs show the percentile ranking of animals for selected traits relative to other animals in the herd. For individual animals, the use of breed averages are less informative because in most instances, and particularly in younger animals, the percentile ranking will be high across the majority of traits; thus not providing very discriminating information to inform decisions.

GENETIC PROGRESS



Q: Can I access and print pedigrees with Enlight?

A: Pedigrees for registered animals can be accessed in the same way at http://www.holsteinusa.com/pedigree_info/pedigrees.jsp or by contacting Holstein Association USA customer services. Certain fees may apply.

Q: What new tools will I have access to?

A: Through Enlight dairy producers will have access to a diverse suite of reporting and analysis tools designed to help them make more informed selection and breeding decisions.

Q: Will A.I. companies still be able to receive genomic information?

A: Yes. CLARIFIDE reports will continue to be provided in an Excel® format. The report functionality includes an export tab for the incorporation of genomic results into mating programs available through A.I. organizations.

Q: Will animals historically tested through the Holstein Association or Zoetis be available through Enlight?

A: Yes, no matter if tested via the Holstein Association or Zoetis, genomic results will be available within Enlight.

DATA REPORTING

Q: How can I find out what the trait abbreviations stand for?

A: There are many different production, health and type traits available in Enlight. Common abbreviations are used to differentiate the component traits. The abbreviations used and their corresponding definitions are presented in the Trait Definitions section of the User Guide.

Q: How can I print my results from Enlight?

A: There are several ways that results can be printed from Enlight. The most common method for available reports will be to click the Download links above the report

being viewed to open a .csv file of the data in available spreadsheet software. There, the user can modify the data if needed and print in the desired format. For printing graphs, the user can click on the = icon in the upper-right corner of a given graph to print or export in a variety of file formats that may be saved and/or copied into documents or presentations. See the corresponding User Guide Demo Videos for more details.

Q: What genetic conditions are reported in Enlight? Where can I find information on genetic conditions in Enlight?

A: There are a variety of genetic conditions that can be evaluated in Enlight, including haplotype-based tests reported by USDA-CDCB and official test results. The Genetic Conditions tab of the CLARIFIDE® report in the Reports section includes results for genetic conditions. Producers also can find similar data in the Genetic Conditions link in the Reports section. A drop-down menu allows the user to define the genetic condition of interest. Summary statistics show the number of animals in each carrier state and links to View Animals within each category. See the Inbreeding and Genetics Conditions demonstration video in the User Guide section for more details.

GRAPHICS

Q: How can I print graphs from Enlight?

A: There are several ways that results can be printed from Enlight. For printing graphs, click on the = icon in the upper-right corner of a given graph to print or export in a variety of file formats that may be saved and/or copied into documents or presentations. See the corresponding User Guide Demo Videos for more details.

Q: How can I look at subsets of animals in a graph?

A: In many of the Enlight graphing features users can limit the data displayed to specific groups. For some graphs, including Histograms and Scatterplots, check boxes can be used to look at all animals, only active animals or only animals that have been genomically tested. For the Scatterplot and Sires graphs, users may choose to look at animals born within a specific year. Finally, for graphs with multiple series, such as Scatterplots or Progress, users can click on the series name in the legend to hide or display subsets of data. See the Demo Videos in the User Guide section for more detailed instruction.

ANALYTICS

Q: What is a custom composite index?

A: Custom composite indexes are derived by assigning weights to specific traits based on evaluation of their relative contribution to profitability. In Enlight™, producers can create one or more indexes by assigning these weights. Statistical algorithms then are applied to combine the selected traits in accordance with the assigned weighting. Correlations between the resulting index and the underlying traits are reported to aid in evaluation of the suitability of the defined index relative to selection objectives. The resulting index can be used to rank animals for selection. Please see the Custom Composite Index video in the Demo Videos tab of the User Guide section for more details.

Q: How do I create custom composite indexes in Enlight?

A: It is generally advisable for producers to use selection criteria that facilitate genetic improvement across a range of economically relevant traits. Current traditional and genomic evaluations provide predictions for several indexes, including TPI™ and NM\$. In some instances, dairy producers may have specific selection objectives that are not met through selection using available indexes. Enlight provides producers with tools to help develop their own custom indexes for use in their herds.

ORDERING GENETIC TESTS AND SUPPLIES

Q: Will CLARIFIDE® be the only genomic test available?

A: Yes, dairy producers utilizing Enlight will have their samples analyzed by the CLARIFIDE suite of dairy offerings. All genomics results and genetic information on their herd will be visible through Enlight.

Q: What is the cost for genetic testing?

A: Information on genomic testing, including current pricing, can be found on the Zoetis and Holstein Association USA websites:

- http://www.holsteinusa.com/programs_services/genomics.html
- <https://www.zoetisus.com/products/animal-genetics/clarifide-dairy.aspx>

Q: How do I request a genetic test in Enlight?

A: More information will be provided when this functionality of the resource becomes available.

Consult your Holstein Association USA, Inc. or Zoetis representative or call customer service to learn how you can benefit from Enlight. Visit www.EnlightDairy.com today!



Holstein Association USA Customer Service
800-952-5200
holsteinusa.com



Zoetis Customer Service
877-233-3362
zoetisus.com/genetics

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