

ENHANCING HERD GENETICS

Quality genetics are fundamental to optimizing milk production, including breed selection and other high-yielding selection factors. When choosing herd genetics, focus on high-yielding milk production, fertility, health, longevity, feed efficiency and reduced enteric methane production.



Implementation Tips



- Conduct genomic sampling on females and bulls and send in for testing with a chosen genotyping program provider.
- Work with technical advisors to interpret test results, identify desirable genomic traits and create a genetic plan to assist with herd selection and herd management decisions.
- Work with genotyping program representatives to conduct herd audits, continue to apply and adjust plans, develop on-farm testing procedures and evaluate testing strategies.

Resources

- **Factsheet:** Getting the Dairy Herd You Want Through Improved Genetic Selection, University of Wisconsin Extension (dfc-plc.info/ENHA1)
- **Webpage:** Genetic Evaluations, Lactanet (dfc-plc.info/ENHA2)
- **Webpage:** New Genetic Evaluations Coming in April 2023, Lactanet (dfc-plc.info/ENHA3)
- **Research study:** Uddin, M.E., Aguirre-Villegas, H.A., Larson, R.A., Wattiaux, M.A., 2021. Carbon footprint of milk from Holstein and Jersey cows fed low or high forage diet with alfalfa silage or corn silage as the main forage source. Journal of Cleaner Production 298, 126720. (dfc-plc.info/ENHA4)
- **Research Study:** C. I. V. Manzanilla-Pech, P. Løvendahl, D. Mansan Gordo, G. F. Difford, J. E. Pryce, F. Schenkel, S. Wegmann, F. Miglior, T. C. Chud, P. J. Moate, S. R. O. Williams, C. M. Richardson, P. Stothard, and J. Lassen., 2021 Breeding for reduced methane emission and feed-efficient Holstein cows: An international response. Journal of Dairy Science, 104-8. (dfc-plc.info/ENHA5)

Benefits

-  Reduced GHG emissions
-  Improved production efficiency

-  **Estimated return on investment**
High
-  **On-farm emission mitigation potential** +++

“Effective April 2023, Methane Efficiency will be added to the portfolio of traits evaluated by Lactanet for the Holstein breed. Lactanet is very proud to make Canada the first country worldwide to introduce genetic evaluations to help our industry reduce methane emissions from dairy herds across the country. Methane Efficiency is an important genetic selection tool that allows dairy producers to achieve an expected 20% to 30% reduction in methane emissions from their herd by 2050, without negatively affecting production levels.”

— Brian Van Doormaal, Chief Services Officer, Lactanet