



Background on the development of a nonfunded cooperative agreement between USDA's Agricultural Research Service (ARS) and the Council on Dairy Cattle Breeding (CDCB)

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- Dairy producers, dairy record providers, breed associations, artificial-insemination (AI) companies, and the Animal Improvement Programs Laboratory (AIPL), which is part of ARS-USDA in Beltsville, Maryland, have collaborated for many decades to provide the dairy industry with internationally recognized estimates of genetic merit and management tools. Trait and ancestry data are provided to AIPL by the dairy industry, and the industry has been very successful in using the estimates of genetic merit and management tools provided by AIPL to make great progress in milk production and many other important dairy traits.
- With the sequencing of the bovine genome, ARS scientists and collaborators developed the BovineSNP50K Genotyping BeadChip and genomic prediction technology to combine genotypic, phenotypic, and ancestry information to calculate more accurate estimates of genetic merit. The dairy industry rapidly adopted this new technology, which increases the rate of genetic progress.
- One of the potential concerns of including genomic information into the genetic evaluation system was that accurate evaluations could be calculated without traditional phenotypic data recorded directly for the animal and its progeny. That would allow some industry segments to reduce or discontinue phenotypic data collection and only rely on genotypic data. Over time, such a practice would result in deterioration in the quality of genetic evaluation information because of declining applicability of the data for development of the prediction equations used to estimate effects of genetic markers.
- In October 2009, CDCB formed a subcommittee known as the Dairy Data Working Group "to assure that high quality genetic evaluations for the U.S. dairy industry will be available well into the future." That working group was charged with reviewing future data needs, the best service structure for securing data and calculating and distributing genetic evaluations, and allocation of financial responsibilities. The Dairy Data Working Group had 10 members that represented breed associations, AI companies, dairy records providers, dairy records processing centers, and university research.
- Associated with the industry effort to secure the future of the genetic evaluation system, ARS recognized that the dairy industry had reached the level of maturity that would enable it to take responsibility for service components of the national genetic evaluation program. Consistent with ARS policy of helping industries to become self reliant, ARS requested the transfer of those components to the industry. The transition of data collection and genetic evaluation calculation and distribution from ARS to the dairy industry allows ARS to concentrate more on research and development while continuing a high level of scientific support for the genetic evaluation program.
- The Dairy Data Working Group subsequently developed a series of industry-based recommendations, which led to a formal draft of a new nonfunded cooperative agreement (NFCA) between ARS and CDCB.
- Under the new NFCA, the dairy industry will take over responsibility for managing the phenotypic database that has been collected for more than 50 years as well as genotypes that have been collected over the past few years. In addition, the calculation of estimates of genetic merit, management benchmarks, and the distribution of results will be handled by CDCB.
- This transition of data collection and genetic evaluation calculation and distribution from ARS to CDCB will provide sustained access to the national dairy database and ensure the availability of genetic and genomic estimates to the industry in the future. In addition, the service role of CDCB for the calculation and

distribution of evaluations will be the basis of a sustainable dairy data system that can continue to provide the U.S. dairy industry with a world-leading model for genetic evaluations and management tools.

- Another CDCB subcommittee known as the Business Plan Working Group was formed in May 2011 “to develop a business plan for industry review and adoption.” That group addressed the issues of how to fund future genetic evaluations and data flow as well as an industry governance structure. The Business Plan Working Group has six members that represent breed associations, AI companies, and dairy record providers.
- The CDCB's goal is to seek industry and public input by the end of July 2012 for the proposed business plan that was released in June 2012, address areas brought to the CDCB's attention, and implement the NFCA with ARS as well as the CDCB operational business plan on or before September 30, 2012.
- Relevant information and documents have been posted on dairy industry web sites as well as other industry outlets to provide transparency and opportunities for industry review. Every dairy producer who wishes to view the documents has an opportunity to review the NFCA and view the business plan proposed by CDCB.
- Although ARS has recommended that the development of the business plan and associated organizational structure be done in an open and transparent manner, ARS recognizes that it has no authority or responsibility in the development of the CDCB business plan.
- The CDCB business plan emerging from the effort to reach industry consensus should support service components of the national genetic evaluation program while ARS collaboration continues on research and development of genetic evaluation methodology to provide world-class genetic and management tools for U.S. dairy producers.
- The process employed by CDCB to develop the business plan and NFCA have provided for broad input from the U.S. dairy industry, and ARS recognizes the CDCB as an appropriate entity to represent the U.S. dairy industry. Therefore, ARS is ready to implement the NFCA as soon as CDCB approval is obtained.