Herd Improvement Strategy 2019-2024

Herd Improvement Industry Strategic Steering Group (HISSIG)

The first Herd Improvement Strategy was launched in June 2014 under the auspices of the Herd Improvement Industry Strategic Steering Group (HIISSG). It led to the formation of DataGene and funding support for DairyBio. Given the significant changes in the industry and operating environment since then, the industry agreed to assess progress to date and review the strategy. This document summaries the key findings from the review and the agreed strategy for 2019-24.

Scope

The scope of this strategy includes:

- Research, development, extension and other herd improvement activities.
- Pre-competitive innovation for service delivery and tools.
- The use of animal performance and other industry data to support herd improvement and emerging opportunities around traceability, transparency and other value chain requirements.

The scope of this strategy does not include:

- Animal performance policy or advocacy issues, such as animal welfare, however herd improvement and data management may provide solutions in such areas.
- Provision of commercial services.

Operating environment

The following trends are creating challenges for herd improvement in the Australian dairy industry:

- Declining size of the national herd.
- Declining participation in herd testing.
- Less-than-ideal proportion of herd replacements bred from AI.

The following developments offer opportunities for herd improvement in the Australian dairy industry:

- Broad acceptance of BPI, HWI, TWI.
- Formation of DataGene provides an independent, collaborative infrastructure for herd improvement.
- Formation of DairyBio provides a platform for world leading research in herd improvement.

The HISSIG review identified a number of areas of higher priority by key stakeholders:

- Industry training, development and support.
- Improving services, efficiency and access to technology for herd test centers.
- Development of genomic tools, e.g. genomic mating programs, calf selection.

Herd Improvement Vision

"Dairy farmers maximise their profit through a vibrant herd improvement industry offering effective and highly valued services."

The strategic objectives supporting this vision are:

- Using an Australian **genetic evaluation** system to rank domestic and foreign sires and females to support farmers in building a herd suited to profitable Australian dairy farms.
- Farmers and service providers **understanding the link** between decisions on herd improvement and profit, and being able to make decisions through reliable, easily understood and accessible information about genetics, environment and herd management.
- A strong Australian herd improvement industry underpinning the industry strategy which has all links in the supply chain functioning well (including research, evaluation and data systems) alongside the evaluation of animals to provide for the needs of the Australian dairying environment.
- The herd improvement industry having a **collaborative** and constructive approach to adopting new technology and practical innovations.
- Industry **data** collection, management and analytics that are seamless, streamlined and cooperative – and acquire data from a wide range of sources including non-herd improvement industry participants.

Focus areas

The strategy identifies five focus areas:

1. Improved decision making from data
2. Increased farm profitability through herd improvement
3. Improved animal performance from R&D
4. Improved and diversified service offerings
5. Strengthened capabilities

Implementation

Implementation of the Herd Improvement Strategy 2019-2024 will be overseen by DataGene and its respective Standing Committees and an annual meeting of HIISSG to review progress.

The table on the following page outlines the key activities that will underpin delivery within each of the focus areas

More information

Full HISSIG strategy

Dr Matt Shaffer, DataGene, CEO
Ph 0438 761 822 E: mshaffer@datagene.com.au

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Activity	Lead	Outcome
Improved decision making from data		
Centralised data repository	DataGene	CDR/DataVat is supported, enhanced, and operates as 'single entry/multiple use' system with seamless transmission of data between on-farm systems, DataGene, and industry.
Coordinated data management	DataGene	DataGene, with industry support, acts as a single responsible data aggregator cooperating with milk processors, industry regulators, animal health sector and other industry partners to exploit efficiencies and synergies in data collection and analytics.
Herd recording innovation	Herd test centres	Herd Test centres rapidly introduce new technology and services that increase value from herd recording and associated data (e.g. pregnancy testing, novel milk composition analysis, etc.)
Decision support tools	DataGene	The use of existing tools and resources (e.g. Good Bulls Guide, HerdData, Genetic Futures Report) to make the best whole-farm decisions is increased from 2017/18 levels, and new reports, tools and resources are developed.
Access to phenotypes (Ginfo)	DataGene	The GINFO system is adequately resourced, supported and maintained to enable phenotypic data collection and build the accuracy of genomic selection in the future.
Increased farm profitability through herd improvement		
Use of Australian metrics	DataGene	A large majority of farmers and service providers recognise the value of herd improvement, its contribution to farm profitability, and have confidence in the BPI (and HWI and TWI).
Increased AI use	DataGene	The importance of artificial insemination (AI) is reflected in an increased percentage of replacement cows from AI sires across the national herd compared to 2017/18 levels and more heifers joined to AI compared to 2017/18 levels.
Innovation in evaluations	DataGene	Technological and methodological innovation maintains world best practice genomic evaluations.
Clear value proposition	DataGene	Effectively communicate the value of data-informed decisions and herd improvement (e.g. herd recording, use of breeding indices) to farmers and industry (such as veterinarians, consultants, milk processors and other industry bodies).
Improved animal performance from research and development		
Improve trait reliability	DairyBio	Improved reliability of existing traits, e.g. fertility, feed saved, calving ease, heat tolerance, etc.
Improve genomic reliability	DairyBio	Improve reliability of traits measured using genomic methods / selection such that genomic reliability is at globally comparable rates for major traits and indices.
New breeding values	DairyBio	Development of new breeding values which are of particular economic and/or sustainability importance to Australian dairy farmers, e.g. lameness, resilience, mastitis, etc.
Increasing use of genomic technology	DataGene	Increase genomic technology uptake and the on-farm benefits from this technology for farm profit improvement, including development of new tools that use genomic data.
Prediction of performance	DairyBio	Lifetime prediction of performance of individual cattle based on breeding merit, assessment of non-additive gene effects, observations of cow's performance, and novel characteristics (e.g. cow's individual response to feed and health challenges).
Improved and diversified service offerings		
Shared infrastructure and capability	DataGene	Infrastructure (e.g. CDR/DataVat) and capability is leveraged to provide software and data services across the dairy industry.
Shared efficiencies	DataGene	Efficiencies are delivered in the administrative requirements of breed societies including the recording and processing of memberships, registrations, classification, transfers and exports.
Adequate support functions	DataGene	Development, implementation and maintenance' functions for services, tools and resources are comparable or better than international peers.
Coordinated service development	DataGene	The industry efficiently and effectively coordinates development and implementation of data and software services for the benefit of dairy farmers.
Expanded collaboration	DataGene	DataGene identifies priorities for collaboration in the medium term with key stakeholders that are beneficial to the Australian dairy eg feedbase,
Strengthened capabilities		
Implement training plan	NHIA	Develop a plan for education and training relevant to the herd improvement sector, and facilitate training providers to deliver industry training plan, once developed.
Herd improvement extension	Dairy Australia	Ensure contemporary and relevant herd improvement content, focused at farm level, is integrated into industry training packages.
Communication and marketing	NHIA	Assist service providers to develop communication and marketing capabilities within their own staff to improve extension and demonstration from within the herd improvement sector.