

Data-driven genetic optimisation for the future of Agriculture

Science. Strategy. Success.
MateSel empowers breeding programs with data-driven insights.

MateSel is the leading genetic optimisation tool designed to enhance breeding efficiency, balance genetic diversity, and drive long-term sustainable genetic gain. Using advanced data science and industry-specific insights, MateSel helps breeders make smarter, science-backed selection and mating decisions—ensuring healthier herds, stronger crops, and more resilient aquaculture stocks.



Supporting livestock, aquaculture, and plant industries with advanced genetic solutions for breeders, producers, and researchers

MateSel is used world-wide by top breeding organisations across key food production industries including: Dairy, Beef, Pigs, Meat Sheep, Wool Sheep, Broilers, Eggs, Turkeys, Atlantic Salmon, Pacific Salmon, Rainbow Trout, Shrimp, Trees, Canola, Potatoes, Chickpeas, and Beans.

- Manage Traits**
Monitor and control multiple trait distributions in concert with selection index response.
- Manage Genetic Markers**
Manage single gene effects such as coat color, recessive conditions, and gene edits. In addition, manage genome wide issues such as increasing Mendelian segregation variance.
- Balance Gain and Diversity**
MateSel uses OCS to achieve your chosen balance of selection index response and genetic diversity, targeting sustainable genetic improvement.
- Target Multiple Markets**
Target creation of different categories of seedstock for sale according to the needs of different categories of customer.
- Manage Progeny Inbreeding**
Manage average and maximum inbreeding levels and their competition with other factors affected by mate allocation.
- Manage Logistics**
Impose a wide range of constraints on animal movement, numbers of matings, patterns of mating, and others.

Meet MateSel. Smarter breeding starts here.

You are in control. You guide MateSel to the solution that you adopt, using an interactive graphical interface. If you don't like what you see then you can "change the goalposts" and MateSel finds a solution for this new direction. In the end, you make the decisions, not the program. But MateSel does all the hard stuff. MateSel is also used in many organisations as a research tool, typically to explore different strategy options for implementing breeding programs. Options can be compared graphically on-screen to aid decisions on strategy.

General Introduction

Overview of MateSel and Key Features

MateSel

Watch the Video

Gain insight into the key features that make MateSel a leading tool for genetic optimisation. Discover how MateSel can enhance breeding outcomes and provide data-driven insights tailored to your industry.

Questions →

Data. Discovery. Decisions. MateSel empowers your breeding program with data-driven insights.

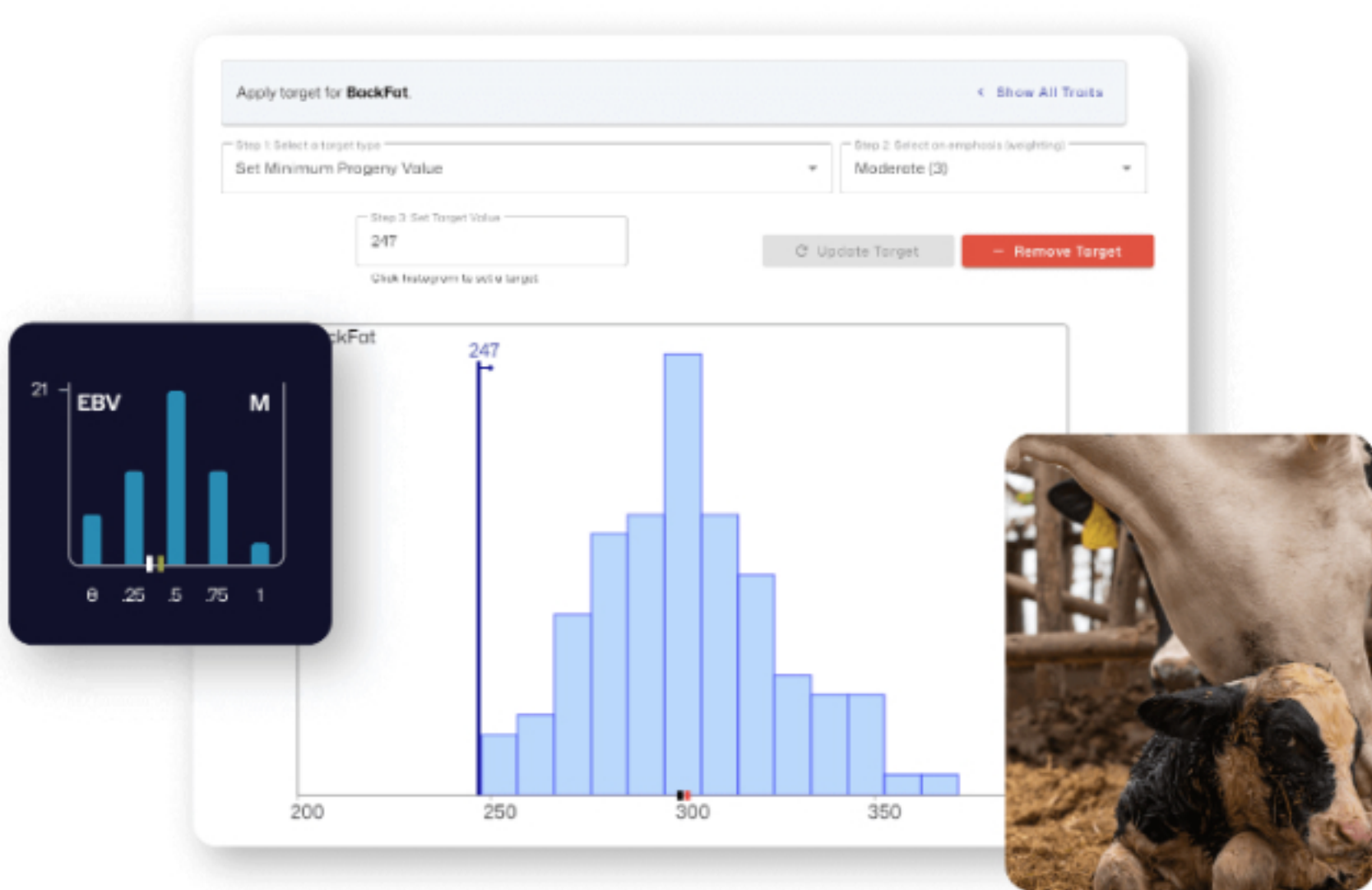
Manage Genetic Diversity

- Maintaining genetic diversity is essential for sustainable genetic progress. MateSel helps balance genetic gain with diversity, ensuring long-term adaptability and resilience in breeding programs while achieving the best possible genetic gain.
- By managing both short-term and long-term inbreeding, MateSel enables breeders to fine-tune selection strategies while safeguarding genetic variability for future generations.



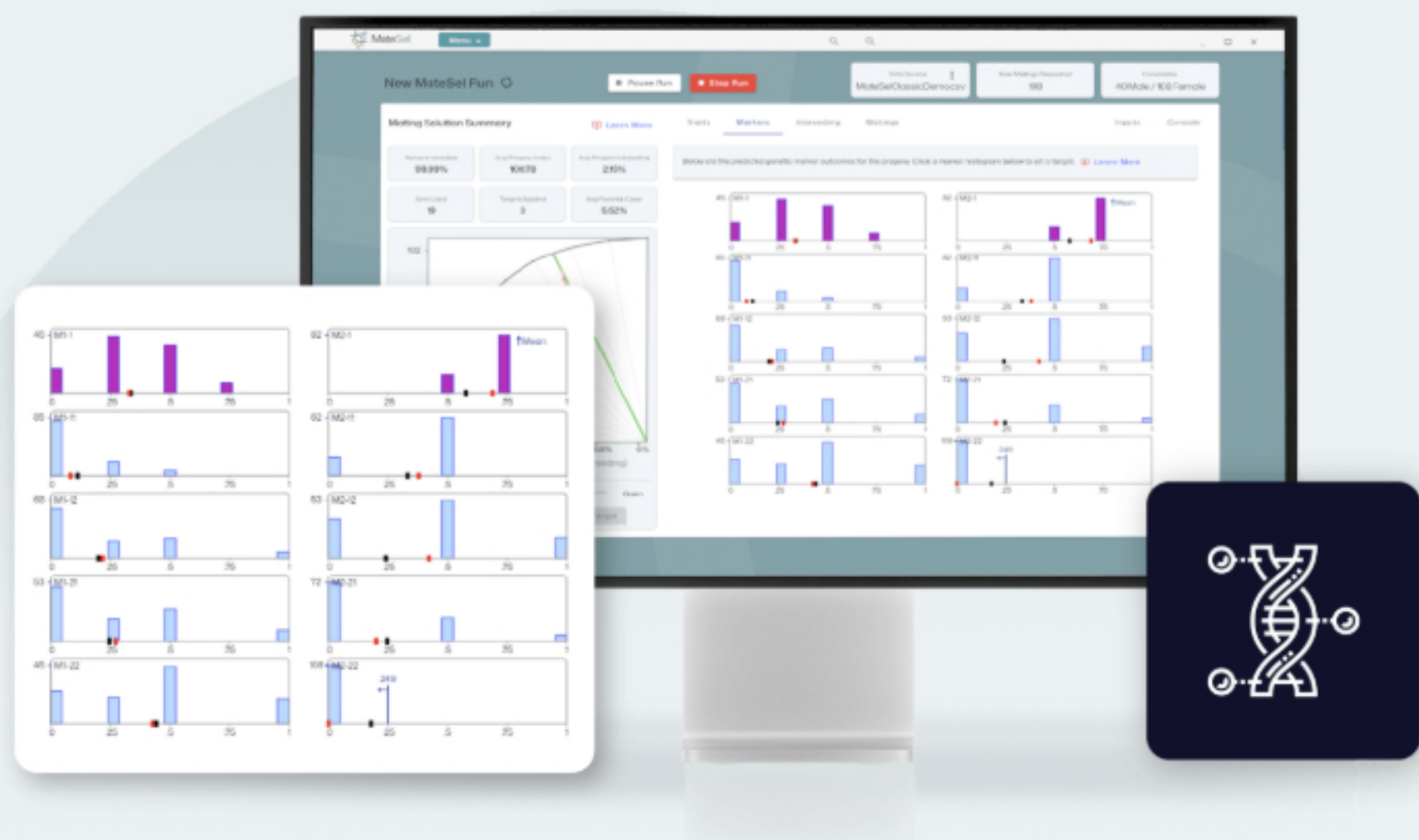
Manage Trait Outcomes

- Set precise trait targets to align with your breeding objectives and manage these according to discovered impacts on other aspects of the breeding program e.g. other traits, average selection index, diversity, and genetic markers.
- Customise selection priorities to match industry demands and production goals. Define and adjust trait emphasis to customise genetic progress while maintaining diversity.



Manage Genetic Markers

- Track and control genetic markers to make informed breeding decisions. MateSel helps you target known QTL plus other single-marker effects such as coat colour, horn status and unwanted recessive conditions.
- Manage large numbers of loci that are diagnosed as recessive lethals, with simple targeting of decreased embryo mortality. This feature can also be applied to collections of Gene Edits, to manage both short-term and long-term impacts.



Used by industry leaders worldwide



Hear from MateSel Users

MateSel is clearly the gold standard software for mating design with utility across diverse breeding scenarios - made even better by their exceptional customer support

- AquaCulture Industry

MateSel resulted in a predicted 370% improvement in economic index in the progeny, with a 37.2% reduction in population inbreeding.

- Plant Industry

Powering research at universities worldwide.

MateSel helps the next generation of scientists by providing universities with cutting-edge tools for genetic research and education. By integrating real-world breeding scenarios into learning, students gain hands-on experience in managing genetic diversity, optimising selection, and making data-driven breeding decisions.



Our users perform

18,000+

MateSel runs every year

Enhancing breeding programs in

15

countries worldwide

MateSel informs

1.0 million+

Matings every year



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