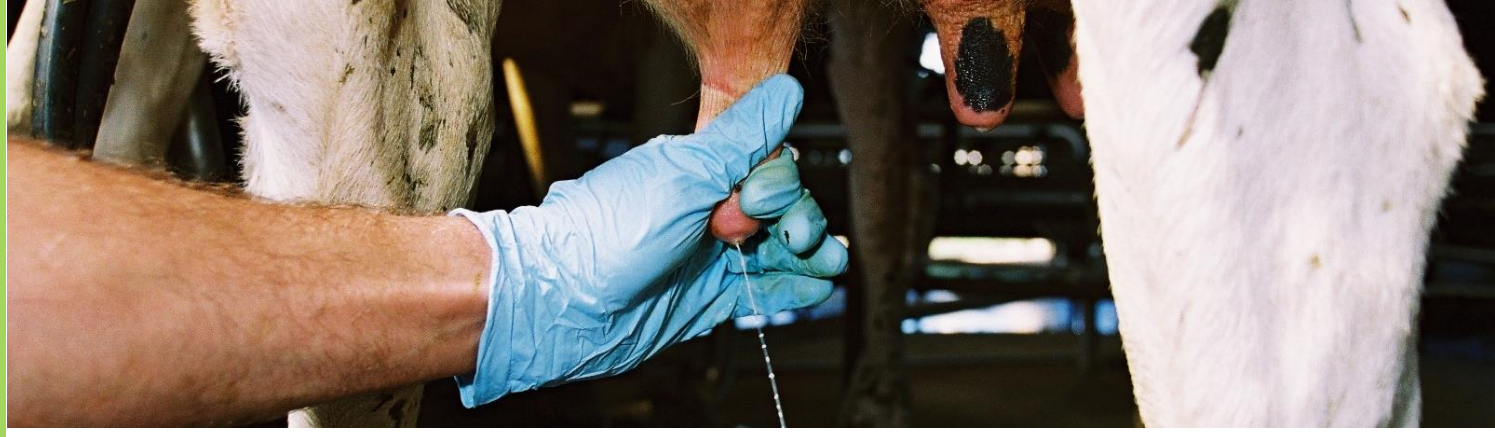

Mastitis Resistance ABV

Another tool for managing mastitis in dairy herds

Key points

- Management practices have the most impact on mastitis in dairy herds but breeding for improved mastitis resistance has long-term benefits.
- The Mastitis Resistance Australian Breeding Value (ABV), makes it easier to directly breed for improved mastitis resistance.
- It is available for all breeds, including young genomic bulls and heifers.

To breed for replacements with improved mastitis resistance select bulls from the Good Bulls Guide with a Mastitis Resistance ABV of greater than 100.

Reducing mastitis in dairy herds improves animal welfare, increases productivity and reduces costs. It also improves milk quality, and this could have financial benefits. Lowering the incidence of mastitis also reduces antibiotic treatments.

Environmental conditions and management practices play the biggest role in mastitis management but breeding to improve mastitis resistance has long-term herd health benefits. The Mastitis Resistance ABV enables farmers to select bulls whose daughters are less susceptible to mastitis than others. It also enables farmers to select heifer replacements that are less susceptible to mastitis.

Mastitis Resistance ABV

The Mastitis Resistance ABV draws upon three sets of information to provide a breeding value for selection to improve mastitis resistance: 305-day somatic cell count, udder depth and clinical mastitis records.

This combination delivers an ABV that directly targets mastitis, whereas the Cell Count ABV has been used as an indirect selection criterion for mastitis resistance.

The development of a Mastitis Resistance ABV was made possible by advances in genomic technologies and an increase in the amount and quality of herd records, available through the Ginfo program - Australia's genetic reference population.

Mastitis resistance is favourably correlated with fertility and other health traits.

Breeding for mastitis resistance

The Mastitis Resistance ABV is expressed relative to an average of 100, with higher breeding values indicating healthier cows.

To breed for improved mastitis resistance, choose bulls from the Good Bulls Guide with and a Mastitis ABV of more than 100.

Reliability

Reliability is the measure of confidence in an ABV. In young Holstein genomic bulls (with no Australian daughters) the Mastitis Resistance ABV reliability is expected to be 52%. This increases to 69% for a bull with 100 daughters.
In young Jersey genomic bulls (with no Australian daughters) the Mastitis Resistance ABV reliability is expected to be 38%. This increases to 66% for a bull with 100 daughters.

Heritability

The heritability of mastitis is low, at about 5%. This is similar to fertility. This means genetics plays a smaller role in the likelihood of a cow developing mastitis than factors such as environmental conditions and management practices.

Breeding for mastitis resistance is still possible as significant genetic variation within Holstein and Jersey breeds has enabled the identification of animals with better mastitis resistance.

Cell Count ABV

DataGene continues to publish the Cell Count ABV in addition to the Mastitis Resistance ABV.

The Cell Count ABV is useful to breed cows with lower cell counts, thereby reducing a herd's bulk milk cell count. Milk payments are penalised for farms with high bulk milk cell counts.

Acknowledgment

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Read more

Technote Mastitis Resistance ABV

More information

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