

THE MATURE COW

WHEN TO KEEP HER,
WHEN TO LET HER GO

The ideal maternal female is capable of becoming pregnant, giving birth unassisted, providing ample milk for the calf until weaning, and then readily going back into her cycles, all while maintaining a good body condition on pasture.

Scrotal Size, Gestation Length, Birth Weights, Milk and Mature Cow Weight Estimate Breeding Values (EBVs) are all considerations when choosing appropriate females for your herd. The age of the female may also be a consideration and can be dependent on the production system undertaken.

A 'Days to Calving' EBV estimates the interval between calves, which has been shown to be heritable in other cattle breeds.

This EBV is not currently available for Wagyu, but is planned for development through the upcoming AWA Progeny Test Program.

Measuring cow fertility and reproductive capacity is about data collection and analysis, to calculate EBVs. While there is no currently available direct measure of fertility in maiden heifers, positive Scrotal Size EBVs are known to correlate with early maturity in females.

Research is ongoing to investigate the correlation between fertility and post-partum anoestrus – how quickly a cow cycles after calving. In addition to these measures, a cow's maternal behaviour towards her calf will contribute to how well it thrives.

Most Wagyu seedstock breeders are also commercial producers. The focus on genetic progress within the herd, will require increasingly higher performing heifers and younger cows who show improved EBVs with successive generations in a shorter time frame. For

beef production, there will be an emphasis on EBVs for improved performance in carcase traits.

Given the complexity of Wagyu breeding programs to develop the maternal cow herd, whilst maximising the production output from the steer (slaughter) progeny, many AWA members are now using the MateSel program provided by AWA. This enables optimised individual breeding solutions for each female to ensure long-term gain in all target breeding areas. Please contact the AWA Technical Service Manager to access MateSel for your herd.

Given that the realisation of carcase performance from breeding decisions can take four years after breeding, retaining older cows can have a long-term impact on the herd's production performance. Hence, making sure they are contributing positively to production early on is vital.

According to Southern Beef Technology Services (SBTS), the ideal maternal female, "will have shorter Gestation Length EBVs, while having a larger Scrotal Size EBV, while moderate Birth Weight and Mature Cow Weight EBVs are preferable for long-term breeding strategies." Selecting females with positive Milk EBVs will enable increased ability for the cowherd to provide nutrition to the calf up to weaning.

Wagyu, compared to other breeds, are known for lower birth weights, giving greater calving ease, a docile temperament and high fertility, with many cycling before 12 months of age. However, large ranges in birth weight EBVs exist and breeders need to be aware of their



joining decisions, such as high birth weight bulls over heifers. This is particularly important to manage such that high birth weight bulls are not put over heifers with high birthweight EBVs themselves.

Anecdotally with maturity, Wagyu cows are good mothers and can remain productive – producing calves typically until at least 12 years of age. EBVs for traits such as gestation length and birth weight are indicative of calving ease.

“The advantage of an older cow that has had calves before is that she is proven in terms of fertility and raising her calf – you know she can breed,” says Catriona Millen, Technical Officer, SBTS.

“The trade-off is that if the herd is making genetic progress, an older cow will likely be of lower genetic merit than the younger females.”

The EBVs of a young cow or heifer, may not have the same accuracy as an older female but are still worth considering for continuous improvement strategies for the herd.

SBTS colleague, Boyd Gudex says that the situation can be different for non-registered herds, such as commercial purebred herds that do not have access to EBVs for their cows. In these herds, the majority of the genetic improvement is going to be driven by bull choice(s), thus the proven performance of older cows can outweigh the cost of introducing heifers.

Environmental factors including nutrition, will play a role in the success of a mum raising a calf to weaning. Where grass is plentiful and nutritious, her ability to maintain her own body condition and provide adequate milk for the calf should be achievable compared to a cow that needs to graze greater distances on poorer pasture. The timing of calving in terms of available pasture may also be a factor – spring calving when pasture is at its peak, may give both cow and calf better conditions but there will still be variation between the different regions. A cow with good body condition is also more likely to cycle and become pregnant. In general weaning occurs around 6-9 months, but may occur earlier should feed be inadequate for the mother and calf needs. With all breeds, there will be a peak period of fertility and milk within the cow’s lifespan, but it is likely to decrease with age.

“The advantage of an older cow that has had calves before is that she is proven in terms of fertility and raising her calf – you know she can breed... The trade-off is that if the herd is making genetic progress, an older cow will likely be of lower genetic merit than the younger females.

Catriona explained that there are relationships between the maternal traits and other traits; ignoring these relationships can have unintended consequences. A case in point is the dairy industry, where historically selection for increased milk production was done without monitoring fertility. This led to a dramatic decline in fertility. With the dairy industry now considering both traits in animal selection, they have managed to improve fertility without negatively impacting upon milk production.

“This example shows the consequences of selecting for a single trait without considering the effect on another, equally important trait,” she said. “We recommend that Wagyu producers consider all of the maternal trait EBVs that are of relevance to their production system whilst they are also optimising production for carcase or growth traits.”

EBVs can be used to highlight which females in the herd are not contributing to genetic improvement and therefore which can be culled sooner, rather than culling progeny that are under-performing. By culling the progeny, the problem is still within the herd through the parents.

“The best indication of how long to keep an older cow is based on how she is contributing to genetic improvement plus her body condition and ability to raise a calf,” said Boyd.

“If a calf is not thriving as well as its’ cohorts; the cow’s ability to forage is reduced because she is losing teeth and her genetic merit is sitting in the lower levels of your analysis, it may be time to move her on. There may be exceptions to the assessment of the cow, for example if she has a good temperament and a calming influence on the herd and would make a good auntie for the younger cows, it may be worth keeping the cow for a little longer.”

MORE INFORMATION

Contact the Australian Wagyu Association for further information or if you wish to republish any part of this article

✉ Communications@wagyu.org.au or ☎ +61 2 8880 7700