

HD 50K for Angus: A New Look to Advance Genetic Selection

Educating potential customers about how to apply new genetic selection tools within their breeding strategies is one of the key challenges for the new HD 50K for Angus DNA test from Pfizer Animal Genetics, according to Dr Peter Parnell, Chief Executive Officer of Angus Australia. HD 50K for Angus is the beef industry's first and only commercially available Molecular Value Prediction (MVP™) from a High-Density panel where more than 50,000 DNA markers are genotyped for each animal.

Increased Accuracy for EBVs

Dr Parnell said the initial testing focus for HD 50K for Angus would typically be on identifying merit in potential stud sires and donor dams. Long term, testing will likely extend into increasing the accuracy of Estimated Breeding Values (EBVs) on sale bulls.

The test's potential to compress generational cycles would also be of significant value for some traits—such as feed intake—or getting a measure on a young bull for his daughters' fertility. However, this advantage would apply less for growth and carcass traits, where BREEDPLAN® measurements using scales and ultrasound already fit well into the time frame of the bull's development, assuming a sale age of 14 – 18 months.

“At this early point, the message about the arrival of the new HD 50K for Angus test is still filtering out, but we've already fielded a lot of inquiries from members interested in knowing more about it and what it might offer within their breeding programmes,” he said.

But transferring that interest into broader adoption might take time because of many breeders' general lack of understanding about the expanded DNA test. “What they do understand well is BREEDPLAN and EBVs, and Pfizer Animal Genetics is working closely with Angus Australia to incorporate the 50K genomic information into marker-assisted EBVs,” explained Dr Parnell. “That will be the quickest path to successful uptake in this country because breeders don't have to think too far beyond their current knowledge set. They simply need to understand that the test will add information that will ultimately improve the accuracy of existing EBVs.”

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Looking Ahead with HD 50K for Angus

The significant level of investment involved in using the 50K test could also be a limiting factor in early adoption, he suggested. Before breeders would pay a higher amount of money to get additional information on an animal, they would inevitably have to be convinced that the information would be of value to them.

New traits could hold another level of attraction to the 50K test over time.



Dr Peter Parnell
Angus Australia

“Selecting animals based on their susceptibility to respiratory disease, for example, could have a significant impact on productivity,” Dr Parnell said. “If genetic variation is present and particular sire lines can produce superior resistance, there may well be a price-driven incentive to explore that.”

He said one of the dangers lying ahead was that breeders seeing “flash new genomics” technology coming toward them might take their foot off the throttle, in terms of performance recording. “The reality is that we may actually need more solid performance records than we have in the past,” Dr Parnell explained. “The 50K test in no way diminishes the need for performance recording in our Angus, at least in the medium term.”

The exceptions to this might be in traits like birthweight and calving ease—if a marker panel could predict these with a degree of accuracy that meant breeders no longer had to go out and weigh calves. “If we can find markers to be at least as accurate as actually weighing the calf itself, we're onto a winner, for both labour-saving and workplace safety reasons,” he said.