Media Release

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Development of Australian Sheep Breeding Values (ASBVs) for breech attributes could fast track the production of animals with improved natural resistance to breech fly strike due to the relatively high heritability of the genetics involved.

Wool growers will soon be able to use ASBVs for breech attributes alongside those for other commercially important traits such as growth, clean fleece weight, fibre diameter and worm egg count.

The development of these Breech ASBVs (BVs) is a significant step towards breeding sheep that are better able to withstand breech flystrike without mulesing.

Although the BVs are currently in prototype format, the first of the breech ASBVs – breech wrinkle – is moderately heritable so genetic change can occur relatively quickly over successive generations.

Wool growers can help fast track their selection for this important trait by submitting breech scores of their lambs to Sheep Genetics.

Australian Wool Innovation (AWI) funded research into breeding sheep with a natural resistance to fly strike is showing that animals with lower breech wrinkle scores are better able to withstand breech fly strike.

Reducing dag is the second most important factor with an emphasis on reducing breech cover a final consideration after wrinkle and dag.

A visual breech scoring system that allows scoring of breech indicator traits for fly strike, including breech wrinkle, cover and dag, has been available for the past three years, helping breeders identify animals that are naturally more likely to withstand fly strike.

This visual breech score data is now provided to Sheep Genetics through its members and research flocks and analysed to produce BVs, which can be downloaded from the Sheep Genetics website.

The use of more accurate BVs not only allows identification of sheep with low flystrike risk, but also enable growers to benchmark their breech attributes against industry.

New England seedstock producer Andrew Burgess is undergoing trials to breed for desirable breech attributes both in his stud and commercial flocks and has been impressed with the heritability of the traits.

Andrew and his wife Carol Watson operate the Ruby Hills Merino Stud on their Walcha property, NSW. The stud began in the early 1970s and was registered in the mid-80s.

Andrew has used Estimated Breeding Values since 1992 to help improve four traits – Clean Fleece Weight, Fibre Diameter, Worm Egg Count and Staple Strength. He has since used ASBVs when introduced five years ago.

“We originally used EBVs to help with breeding more worm resistant sheep but it soon became clear they were useful in determining other traits as well,” Andrew said.

Research has indicated that breech strike correlates to the amount of wrinkle on a sheep so Andrew artificially inseminated a portion of his flock to a sire with a low breech wrinkle score.
There was a noticeable change from the one joining,. The low wrinkle sire produced lambs with a wrinkle score approximately 1 score less than the other progeny.

When it came time to replace some older sires, Andrew purchased them from studs that utilise ASBV figures. He took his usual balanced approach to selection, ensuring none of the figures were too extreme.

Although none of the studs had figures for breech values, Andrew used the figures for production traits relevant to him and visually scored the rams for wrinkle.

“We haven’t had lambs from the new sires but I am hopeful that we will see similar positive results,” Andrew said.

“We are working to breed sheep that are naturally resistant to flystrike, while still maintaining their fibre and other positive health attributes”

The breeding program at Ruby Hills is based on developing robust sheep with high fleece weights and long, bright wool measuring 17 to 17 ½ micron.

Andrew believes the evolution of the BVs will be similar to the development of the worm resistance (WEC) ASBVs, however is hopeful that it may occur at a faster pace because of their higher heritability.

“Improving the WEC involved some trial and error to start with and this will be the same but as more people submit data to MERINOSELECT the more accurate it will be.

“It’s not a difficult trait to score once you have the lambs in the cradle.”

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