



Tolerance the goal

AgResearch animal production scientist Dr Tricia Johnson and RamGuard testing service head Neville Amyes presented a workshop to about 100 sheep breeders at the Beef + Lamb New Zealand Genetics sheep breeder forum in Napier. They encouraged breeders to be proactive about introducing facial eczema tolerance into their flocks because the disease has expanded its geographical area.

Facial eczema affects sheep and cattle and is the result of ingesting sporidesmin produced from the fungus *Pithomyces chartarum*. The spores cause liver damage that directly affects production and can go on to cause photosensitivity. Spore production increases within leafy pastures in warm and humid environments. Farmers can measure pasture spores and there is also testing that picks up levels of GGT produced by the liver – a specific

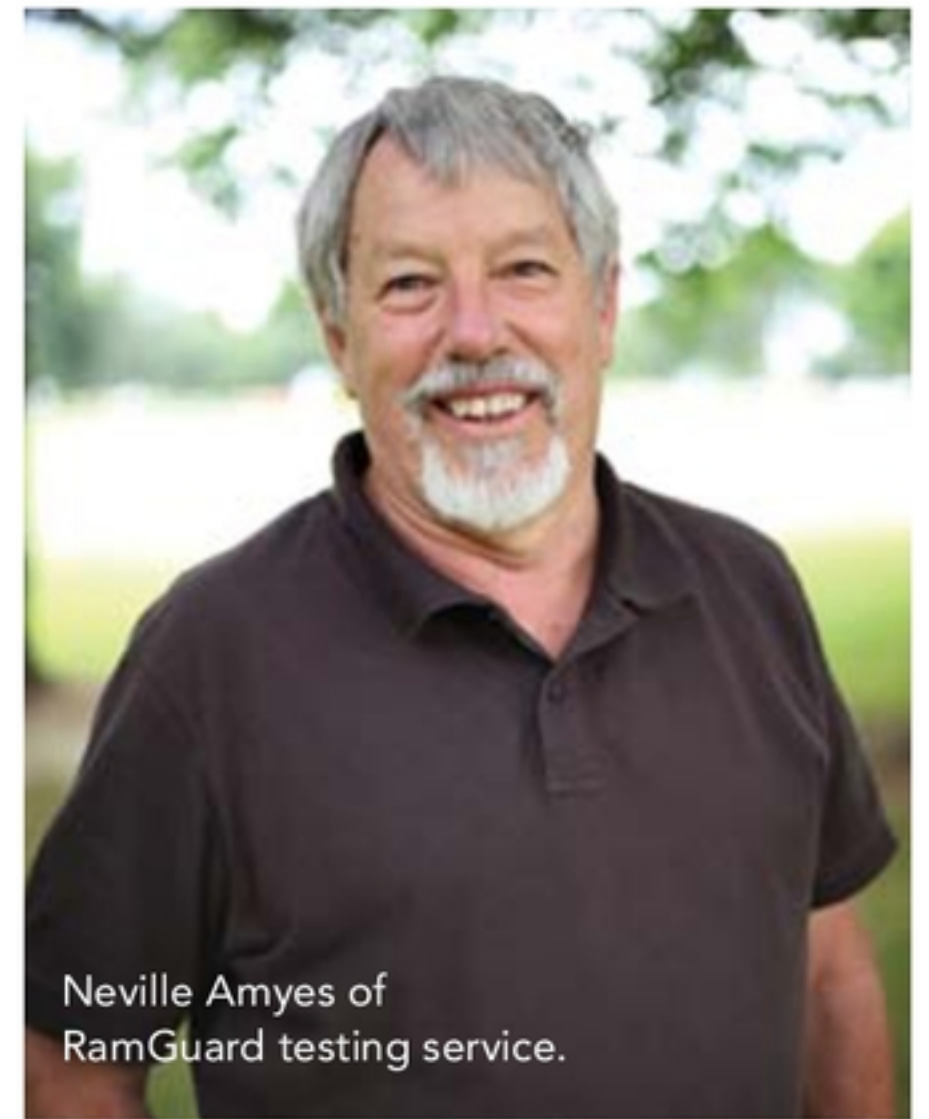
enzyme that indicates liver damage.

Johnson said the geographical areas where facial eczema affects livestock is expanding and more farmers are faced with production losses because of sub-clinical effects such as decreased growth and-or lambing percentages.

The forum presentation concentrated on the role genetics and genomic technology could play in predicting which animals were likely to be more facial eczema tolerant.

“Tolerance to facial eczema in sheep is highly heritable and genetic improvement can be achieved using SIL breeding values,” Johnson said.

But it can take many years to breed animals that have a high tolerance for the spores and it’s not cheap to do because of the testing involved. That test is called RamGuard and involves animals



Neville Amyes of RamGuard testing service.

being subjected to low levels of the facial eczema-causing spores before having their GGT levels tested. In this way, breeders can select individual animals that show the greatest tolerance and make faster genetic progress.

Johnson said the effort needs to be ongoing. It’s not a case of using rams one season – facial eczema needs to be added as a trait to the breeding programme and, ideally, it should be accompanied by RamGuard testing to verify progress is being made.

Three tips

Three points were recommended to help commercial farmers who want to introduce or strengthen facial eczema tolerance in their flocks:

- Search for rams based on SIL estimated breeding values or facial eczema sub-index
- Buy from ram breeders who are either RamGuard testing or genotyping, and
- Ask the breeder what level of RamGuard testing the flock is exposed to.



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