

## MAKING FACIAL ECZEMA DISEASE TOLERANCE A REALITY

**Selecting breeding stock for facial eczema tolerance is a permanent and cost-effective way for farmers to manage this insidious disease.**

Facial eczema is a liver disease caused by a fungal toxin that affects sheep, cattle and some deer in warmer parts of New Zealand, and is estimated to cost the country up to \$100 million in lost production each year.

Although excellent products are available to effectively prevent facial eczema in animals, breeding of genetic resistance to facial eczema is seen by progressive farmers as the key to making sustained progress in tackling the problem.

Facial eczema tolerance is strongly heritable, with each ram estimated to pass on about 40 percent of the trait to his offspring. Identifying and breeding from animals that tolerate the disease gives permanent gains, adding value to flocks and reducing animal health investment.

It's an effective way of applying selection. Using AgResearch's facial eczema tolerance testing service is proving a useful way for New Zealand ram breeders to make such genetic progress.

The Ramguard service identifies animals tolerant to facial eczema and screens for sub-clinical disease, ranks animals within flocks to enable selection and advised on the farm's facial eczema-tolerance breeding plans. Testing certification is provided.

Breeders using Ramguard have on average doubled their base tolerance level of their flocks after on six years of selection, and that's meant a considerable boost in on-farm returns. Breeders involved in the selection programme for 26 years have increased tolerance in their flocks six-fold.

Ramguard believes breeders using the selection process have made enormous progress in the last two decades, and that level of progress hasn't flattened out yet.

"It's permanent, there are no ill effects on other selection traits, animal health cost have dropped, and most importantly, lambing percentages have risen considerably. Feedback from the farmers using the service to help introduce FE tolerance to the flock has been very positive."

Although traditionally a problem for the warmer North Island, facial eczema is spreading further south, and is therefore an issue that needs to be considered by all New Zealand farmers. This particularly applies to South Island stud farmers selling rams to the North Island.

When Temperatures and moisture levels are high, and soil night temperatures are over 12 to 13 deg C, the conditions are right for the sporidesmin fungus to grow. The fungus suddenly starts growing rapidly and produces vast numbers of toxic spores.

Spore counts of 80,000 to 100,000 are at the 'danger level'. Stock grazing pasture 40,000 spores per gram of grass for long periods are likely to develop facial eczema.

Getting resistance into the flock is a cost, **keeping resistance in the flock is free or very cheap.**