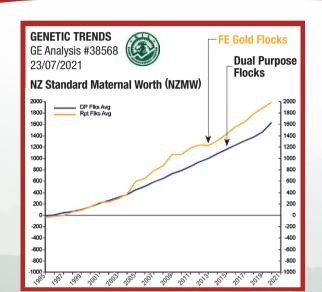
GENETICS you can trust





Don't be fleeced with substandard rams.

Not all facial eczema breeding programmes are the same!

Ask the questions.

- ✓ been testing for a minimum of 10 years
- ✓ Dosing at 0.6 (to earn the 5 star rating)
- Shown me their rameured certificate

	FAC	IAL EC	ZEMA CER	TIFICA1	TE. rai	MGUAR
	FLOCK	TESTING HIS	STORY FOR:	FEGe		
		Name	: Anyone C	Lending facial eczeme	SIL flock r	
		Flock		SIL	Years test	
		Address	: 111 ANY RD		SIL flock rating:	(on dose rate)
			R D 2		< 0.2 *	0.5 - 0.59 ****
			ANY TOWN 1111		0.2 - 0.29 **	>= 0.6 *****
					0.3 - 0.49 ***	
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	tested	rams tested	tested rams	tolerant	challenge:	
			by UNTESTED Sires	to final dose:	1	2
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	1984	57		38	0.10	-
	1985	21		16	0.10	-
5	1986 1987	62 50		46 17	0.20 0.15	0.24
3	1987	41		17	0.15	0.24
	1989	52		8	0.24	0.29
	1990	41		18	0.26	
	1991	51		36	0.30	
10 15 20 25	1992	52		23	0.35	
	1993	10	10	4	0.35	
	1994	10	4	9	0.35	
	1995 1996	12 12	0	7	0.35 0.37	
	1996	10	0	5	0.40	
	1998	10	0	4	0.42	
	1999	12	0	4	0.44	
	2000	13	0	2	0.48	-
	2001	12	0	4	0.48	-
	2002	15	0	9	0.50	-
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	2004	13	0	6	0.60	-
	2006	13	0	7	0.60	-
	2007	15	0	12	0.60	-
	2008	14	0	7	0.60	-
	2009	15	0	4	0.60	-
	2010	16	0	11	0.60	-
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50	2012	20	0	6	0.60	-
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	2015	22	0	8	0.60	-
	2016	12	0	6	0.60	-
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	2018	19	0	18	0.60	-
	2019	24	0	9	0.60	-
40	19 2	A +	0	<u> </u>	0.60	Apr 2016
	-		0	18	0.60	

www.fegold.co.nz

GENETICS you can TRUST

FE Gold: Now and then

he journey of breeding for facial eczema (FE) tolerance began in the 1970s. It was a massive undertaking for those dedicated breeders – imagine picking your top rams, submitting them to a dose of sporidesmin in order to assess tolerance and tipping most of them over.

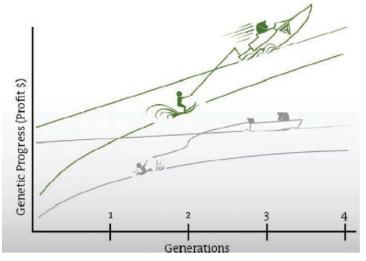
In the early days successes were few, so tolerant rams became very precious. They gradually started lifting dose rates in order to increase tolerance, continuing to knock out some great rams. We owe a huge debt to the courage these breeders showed in doing this.

Experienced breeders of FEtolerant sheep still wait for their FE test results with anxiety – hoping for a good pass rate. Years of selection have meant often only having a few reactors and very often nothing clinical.

The power of selection and high heritability has resulted in a good range of genetics, which carry the valuable genes and produce progeny with the ability to grow and produce in high FE challenge areas.

Historically, the north was considered the FE-risk area. And, whether you believe in climate change or not, things are changing. Parts of the country that had never seen a clinical animal have been hit with FE in the past few years and it is gradually being realised that nowhere is completely safe.

As FE became more of a problem, there were concerns raised by some FE breeders regarding the misrepresentation of FE genetic stock. This was happening where top FE genetics were potentially being diluted and the resulting progeny being presented for sale as FE-tolerant,



even though the flock wasn't testing. This led to a lot of confusion for the commercial farmer.

So, in 2012 a group of breeders who had made a long-term commitment to breeding FE-tolerant stock decided to band together to form a group called FE Gold.

Their mission is "to produce a brand that protects the investment sheep breeders have made developing the FE-tolerant gene pool, while providing greater clarity to the commercial farmer in regard to selecting FE-tolerant rams".

Its objectives are to:

• promote breeders of elite



KEITH ABBOTT, RAGLAN

027 463 9859 | www.waiteikaromneys.co.nz



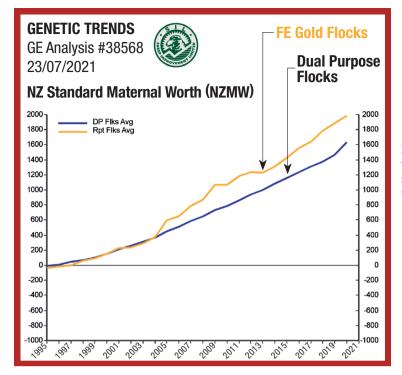


FE - tolerant rams;

- raise awareness amongst ram buyers of the value of buying from FE Gold breeders:
- establish and maintain a website containing information on FE and FE Gold breeders;
- · encourage other sheep breeders to work towards accreditation;
- produce an annual article promoting FE Gold breeders, for publication in a farming magazine;
- and to breed healthier sheep stock which will enhance the clean green reputation of New Zealand.

The FE Gold brand is applied to breeders who have achieved the highest level of FE tolerance within their flocks. FE Gold is open to all breeds who meet the criteria set out by FE Gold, which includes:

- · Testing with sporidesmin at 0.60mg/kg.
- At least 10 years of testing history.
- 10% of sale rams tested for facial eczema tolerance.



FE Gold breeders out perform the Dual Purpose National flock average. Selecting for FE tolerance and performance.

· All rams used are Ramguard tested.

The FE Gold steering committee reviews and decides on all applications. The steering committee is made up of

Perendale, Coopworth and Romney breeders.

The group's focus is on education and helping the commercial farmer understand which questions to ask in order

to make the right decisions when sourcing FE tolerant genetics.

It is so encouraging to have different breed groups working together for the good of the industry.



On farm ram auction auction 12th November

We offer a 2 year guarantee on rams *conditions apply Contact us TODAY and get access to our superior Coopworth stock

Ashgrove - located in the Kaipara District north of Dargaville on some of Northlands steepest hill country.

- High fertility
 - 160% weaning off steepest Northland hill country

If they can thrive in Northland, they'll thrive anywhere

- Great Mothers
 - Highly indexed on NZ Maternal Worth
- Worm Resistant

Selected for WormFec and Longevity

Our philosophy

- We are deeply passionate about profitable hill country farming
- We build strong and lasting relationships with our partners and clients "excellence through partnership"
- We believe superior genetics multiplies the profitability of farming families

Sheep performance is the main driver of our production with a high fertility rate weaning 160% of lambs from our Coopworth commercial and stud ewes. We breed thriving, easy care, hardy FE and worm tolerant ewes. If our sheep thrive on hard Northland hill country, they will thrive anywhere!



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FE genetics to enhance your flock



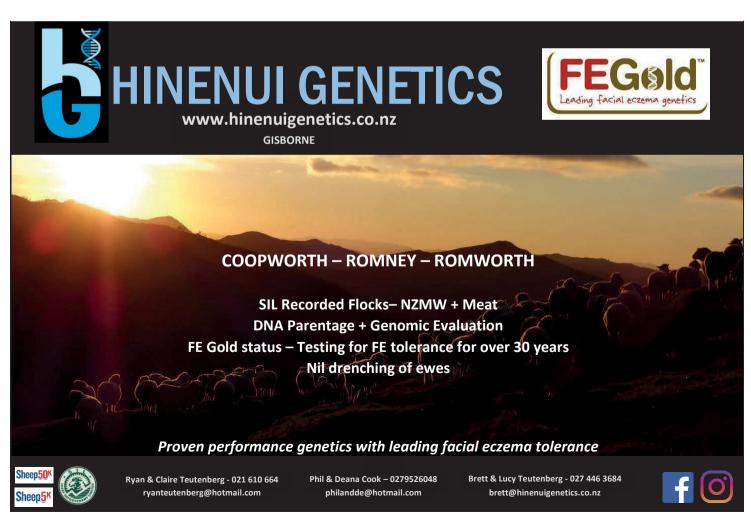
Years of testing and selection have gone into producing the top FE genetics in the country – a sound investment for your flock.

Trevor Cook, DMV

acial eczema (FE)
is much more
than a production
limiting disease. It
is an animal welfare
disease that should
not be allowed to occur in sheep.

One of the most successful breeding programmes in the world to manage a disease began in New Zealand in 1973, when a group of sheep breeders set out to select sheep that did not get FE. From this selection, rams were bred that carried the genes which enable sheep to tolerate being exposed to sporidesmin. This has resulted today in breeders being able to provide rams that not only carry these FE-protecting genes, but also the genes that support high production.

It takes many years to breed sheep that have a high level of tolerance to FE.

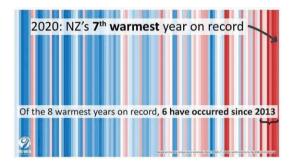


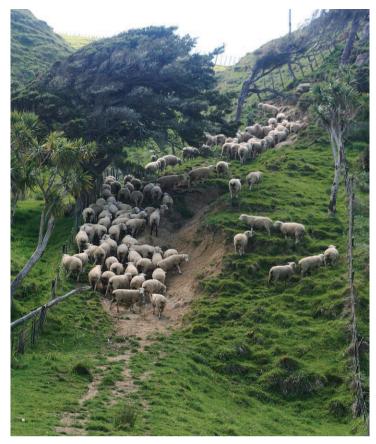
"For commercial sheep breeders to fully capture the protection that these genetics can provide, the rams must come from breeders that are certified to have engaged in an intensive and prolonged selection programme."

For commercial sheep breeders to fully capture the protection that these genetics can provide, the rams must come from breeders that are certified to have engaged in an intensive and prolonged selection programme. Such certification gives the assurance that the rams being sold carry those genes. These breeders are identified as FE Gold breeders.

While there are other ways to minimise the impacts of FE, none are totally effective and all have negative aspects to them.

To not use FE-tolerant rams in flocks that are likely to be exposed to that disease could be seen as an animal welfare transgression. Whereas to use these rams is production enhancing.





Facial Eczema tolerant genetics into a flock is an uphill climb - progress is made with each step!



With the Kaahu FE Gold flock now under our ownership, we are delighted to offer FE Gold and FE tolerant rams for sale from November 2021

Interested in FE tolerance, fertility, growth rate and meat yield **GET IN TOUCH TODAY**











Supplying Elite Romney Genetics to Ram Breeders & Commercial Farmers

———— tested at .65 since 2007 ————•

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Marchant Farms Trust

Dimmock Road, RD1, Pokeno, Maramarua **John Marchant:** Ph: (09) 232 5613 email: marchant.farms@farmside.co.nz **Greg Marchant:** Mob: 0272 815 386 email: gregm@farmside.co.nz

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Adrian & Jenny Savannah

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Bob Steed/Rhys & Helen Dackers

Kereru Station, 136 Paradise Road, RD1 Tangiteroria

Ph: (09) 4332616 • Mob: 0272 415 564

email: helsnz1@xtra.co.nz or kereru_station@xtra.co.nz

Paul Crick & Daynne Almeida

1683 Longbush Road, RD4 Masterton 5884

Mob: 0274 504 085 • email: los.pastores@outlook.com





FE levels explained



When first established in 2012, the FE Gold group set criteria for membership. The goal was to provide clarity to the commercial farmer regarding the level of tolerance a flock had achieved.

To be eligible for membership in FE Gold, a ram breeder must meet the following criteria:

- Testing with sporidesmin at 0.60mg/kg.
- At least10 years of testing history.
- 10% of sale rams tested for facial eczema (FE) tolerance.
- All rams used are Ramguard tested.

The brand has been very successful and the industry now recognises the elite status of FE Gold flocks.

More breeders are now focusing on breeding for tolerance. To acknowledge those committed to a FE breeding programme and making good progress, the FE Silver brand was created.



Would be available to breeders if these criteria were met:

- Testing with sporidesmin at 0.50mg/kg or greater and sires tested have passed.
- At least 10 years of testing history to ensure there is a good level of tolerance in the flock (exceptions will be considered).
- 10% of sale rams tested for FE tolerance
- · All rams used are Ramguard tested.
- Can only be FE Silver for five years before graduating to FE Gold or membership will be reviewed; basically there needs to be a clear commitment to graduate from FE Silver to the FE Gold standard of a 0.6mg/kg dose rate.



The FE brand

There are several other breeds working towards FE tolerance and, while they are testing at a lower level than the FE Gold required (0.6 mg/kg), these breeders are serious about achieving tolerance and are investing seriously in the process.

Provision exists for a 'Best of Breed' leading breeder in FE tolerance whose breed is not represented already amongst the membership to also be a member, as they are unable to source better FE-tolerant genetics within their breed.

Best of breed must replicate the FE Gold criteria, but at a minimum of 0.4mg/kg dose level.

The aim is to provide ram buyers with a clear picture of those breeders, of any breed, who are producing FE-tolerant stock and which breeders are at the highest testing level.



How to choose a breeder

s the incidence of facial eczema (FE) increases and it is being seen in parts of the country previously considered safe, the interest in FE-tolerant genetics is rising.

Some commercial farmers who are at the start of the journey to breed FE tolerance into their flocks may resist change of genetics as they "don't want to lose anything". While it is understandable that the type/performance/attributes of the current flock may be desirable, incorporating FE genetics will improve the flock, not the opposite.

The impact of subclinical FE guarantees that 'something' will be lost if tolerance is not part of the breeding programme.

FE-tolerant flocks are some of the most productive in the country. But, how do you

choose a breeder?

To research a breeder visit sil. co.nz, select the "tools" category, then select the "flocks focussed on health traits" option, followed by "facial eczema tolerance".

This will provide a list of breeders selecting for FE in their flocks. Look at this list and the number of stars, which indicates testing level. Five-star flocks are the top level. Also look at the number of years of testing.

As FE becomes more prevalent the number of breeders testing rams is increasing. This is a very positive step but be aware that the higher the number of years and the stars, the better.

FE Gold flocks are leading FE genetics. RamFinder and Flock Finder are two tools on the B+LNZ website to help refine the search.

Questions to ask prospective breeders include:

• How many years have you been

Sub-clinical =

- 1 Loss of ewes throughout the year
- Number of ewes pregnant
- Number of lambs on board
- LWT and BCS gain across the year
- Weight of lambs at weaning



testing? The more the better.

- What is the dose rate? The higher the better.
- Can I see your Ramguard certificate? It will show the number of rams tested, dose rate and years of testing.
- Can I see a genetic trend graph? This will provide an indication of the rate of improvement in the flock and that they are
- moving FE tolerance in the right direction
- Are all the rams offered for sale sired by tolerant and tested rams? Be aware of diluting the genetics if rams are described as tolerant but not sired by FEtested sires.

Choosing a ram

Working with a breeder who



OPEN DAY

Tuesday, 2 November 2021, on farm in Waikaretu



SALE DATE

Friday, 5 November 2021, Tuakau Saleyard

nikau coopworth

As providers of genetics ram breeders shape the future of the sheep industry – market signals dictate that breeding programs must focus on animal welfare, social and environmental impact and a genuine promotion of NZ's clean green grass fed systems. Commercial farmers are demanding disease and parasite tolerance, reduced inputs, longevity and efficiency. The sheep of the future.

FEGOId" Lending Fincial externa genetics



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Nikau Coopworth has a long term commitment to producing robust maternal genetics to future proof your flock.

- Sheep Industry Award Winner -Maternal Trait Leader for Parasite Resistance
- No drench ewe flock since 2002
- Moderate sized ewes weaning their weight in lambs
- Selected for performance under pressure in a tough environment for FE, viral pneumonia & parasites
- Focus on structure, efficiency & longevity

"As FE becomes more prevalent the number of breeders testing rams is increasing. This is a very positive step but be aware that the higher the number of years and the stars, the better."

has put in the hard yards selecting for FE genetics will ensure that basically any ram you chose will impart tolerance to his progeny. From these breeders you can confidently select a ram the way you usually would - focused on traits important to your breeding programme, visual assessment and price. FE tolerance will be part of the package.

If your breeder is in the early stages of selecting for FE, you will want to look at the DPX-Dual Purpose Plus FE index. Ask the questions and have good open conversations with your breeder about testing levels and where they are going with their programme.

Some commercial farmers will choose to go on the FE journey with their breeder, slowly breeding tolerance as the breeder incorporates it into their flock. If a faster rate of gain is needed, then choosing a breeder with an established high level of tolerance is the route to take.

Stick with a breeder

Once you have found a breeder. stick with them for the long haul. Tolerance to FE is highly heritable so improvement will be made with each cross, but it will still take a minimum of six years to have a significant amount of FE tolerance across your flock. Remember the last six-year-old intolerant ewe has to be replaced.

Genetics is the only sustainable permanent solution to this horrible disease. The sooner the genetics are incorporated into a flock, the better.

For more information visit fegold.co.nz or sil.co.nz

FE outbreaks likely to occur more often and over a greater geographical spread than historically observed

Susceptible animals have decreased production = lost income

Breeding is an important part of the FE Toolbox Improvement not immediate but can be permanent

Need to make selection of Facial Eczema Tolerant Rams a priority when buying your rams -

Overall genetic merit is important – but irrelevant if your animals can not tolerate an FE challenge



Investing in FE tolerant genetics will point your flock inthe right direction.

Raupuha Studs Where every day is an open day

How much has eczema cost you? Start your genetic progress here.

Follow the leader

RAUPUH

Perendales & Romdales are

PERENDALE 2TH RAMS TESTED 0.6

ROMDALE 2TH RAMS TESTED 0.6

Suffolk and Suftex terminal 2ths are available

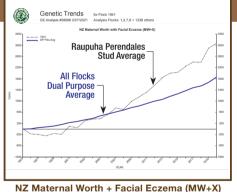
Raupuha Shorthorn bulls

ramguard

are available for sale

Please enquire for more info

PERENDALES



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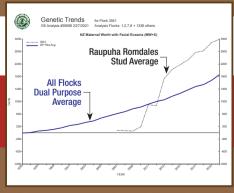
OPEN DAY Tuesday 2nd November, 1pm-3pm at SH3, Mahoenui

- ON FARM SALE -Tuesday 16th November 2021 at 12 Noon

Russell and Mavis Proffit: 2033 State Highway 3, RD, Mahoenui 3978 Cellphone: 027 355 2927

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ROMDALES



NZ Maternal Worth + Facial Eczema (MW+X)

Climate change boosting FE awareness



The prevalence of FE is increasing every year. Many areas considered safe in this 2016 map are now under threat.

or years ram breeders have relied on the Ramguard service, based at Ruakura, to test rams for tolerance to the fungus sporidesmin – the culprit behind facial eczema (FE).

The ability to grow the fungus and the method for testing rams was developed in the 1980s. The Ramguard service has been the driver behind breeding for tolerance. Growing the fungus, collecting, and processing it for use is labour and time intensive.

It is expensive stuff.

The test involves giving the ram a specific amount based on genetic history of breeding for tolerance. Naïve flocks will start at a low dose rate and raise it as tolerance is achieved. The dose rate is set at mg sporidesmin/kg of

body weight. FE Gold breeders are dosing at .6mg/kg and up. Dosing a 70kg ram is \$300, plus vet fees.

Another method for assessing tolerance is to take blood samples following a "hot" FE season.

Animals which are affected subclinically – they have not broken out with FE but have had a reaction – will have elevated liver enzymes. A rise in this enzyme, GGT levels, give a good indication of tolerance after a natural challenge. This is not a bulletproof test, but is used by some breeders to screen both ewe and ram hoggets.

In 2015, breeders, commercial farmers, industry representatives, vets and scientists got together and formed the FE Working Group. This pan sector group – sheep, beef, dairy and deer – worked tirelessly for several years

in an attempt to draw attention to the problem of FE and source funding for research.

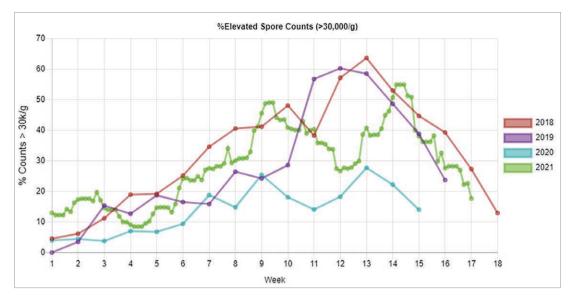
There has been no FE research in New Zealand since the closure of the Mycotoxin Department at Ruakura in the mid-80s. Ramguard testing worked and we had zinc to use as a preventative, so FE has not been viewed as a priority. This is changing.

Climate change has resulted in FE becoming evident in more of the country than ever before. The ability to use zinc as a preventative is finite, there is more awareness of the animal welfare implications of FE and commercial farmers are asking for tools to aid in selection.

Breeders have long been asking for an alternative test that's non-invasive, cheap, easy-to-do and has a fast result.

There is good news.





Gribbles complies spore count information to provide national trends

Ag Research scientist Dr Axel Hieser is heading up an FE Research programme. Supported by B+LNZ, initial results from a pilot study investigating the potential for a laboratory test to determine FE tolerance are positive, paving the way for more detailed work.

Initial results look promising, with the establishment of a cell culture method using sheep and cattle blood to demonstrate sporidesmin (the toxin that causes FE toxicity). This indicates that animals could be tested for tolerance without needing to be exposed to the toxin.

While it is still in developmental stages, the hope is for the development and production of a simple non-invasive lab test that could easily be done in large numbers, on-farm, inexpensively and quickly.

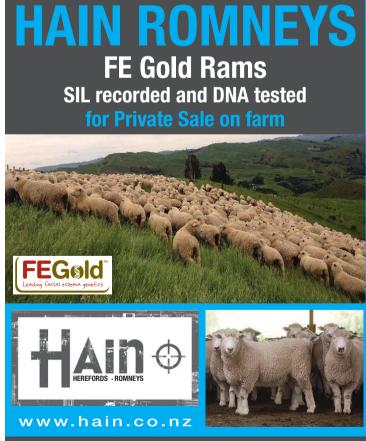
Wouldn't it be great if we could test ewes, as well as rams?

"There has been no FE research in New Zealand since the closure of the Mycotoxin Department at Ruakura in the mid-80s. Ramguard testing worked and we had zinc to use as a preventative, so FE has not been viewed as a priority. This is changing."

What if commercial farmers had a way of testing incoming ewe hoggets?

The industry has made huge progress by testing and selecting top sires. Identifying top female genetics would speed up the rate of genetic gain and will help future-proof our less tolerant flocks.

Watch this space.





Sam & Gemma Hain

Waikura Station, Private Bag 7123, Gisborne 4040 P: + 64 6 867 8097



E: sam.gemma.hain@gmail.com

FE costs and implications

hat is facial eczema? Facial eczema (FE)

is caused by the ingestion of sporidesmin, a potent mycotoxin produced by the fungus Pithomyces chartarum that grows on dead leaf litter in the late summer and early autumn.

Not all isolates of Pithomyces produce sporidesmin, however, 95% of New Zealand isolates do, versus 2% in Brazil. Aren't we the lucky country?

This fungus requires 100% humidity and temperatures in the range of 10-30degC for sporulation.

Sporidesmin primarily damages the liver, especially the bile duct cells, where it causes an obstructive jaundice, resulting in the degradation products of chlorophyll accumulating in the blood.

This accumulation of chlorophyll byproducts results in secondary photosensitivity, due to UV reactions with these byproducts and the release of histamine. This outward reaction to sporidesmin only happens on a proportion of animals and only on those animals that have light-coloured skin.

The primary damage is to the liver and it is this liver damage that gives rise to most of the production losses both short and long-term.

Spore counting and what it means

Spore-counting pastures over periods of risk can alert you to increasing spore counts. Farmers that have had problems in the past will know what areas of their farm will be affected first.

Interpretation of these spore counts would be in relation to the

time of year and weather factors.

One-off spore counts of 100,000 or more are dangerous but spore counts of 40,000 over a number of days can also be significant, especially when animals are grazing close to the ground.

What does FE cost you?

When we have seen severe outbreaks of FE, the costs have been obvious. In the early 90s,

some farmers lost a third of their ewes and had to send another third to the works.

Some other years, scanning percentages have been reduced by 20%; the first cycle conception rate was reduced and the empty rate was increased 4-6%. These are district averages, so some farmers would be affected more than others.

The simple costing on this



Zinc is a short term preventative.

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(SIL 1776)





Breed Facial Ezcema tolerance into your flock by using our high genetic merit, structrually sound ROMNEY Rams.

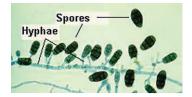
FEGOID

Leading facial eczema genetics

Contact Ken & Rebecca Haywood at Piopio 07 877 8586 Or email krhaywood@farmside.co.nz

Also available Poll Dorset and Black face rams

ram**gu**ard "



Spores from the fungus Pithomyces chartarum look like hand grenades and are just as damaging.

would be greater than:

- 2000 ewes less 20% of lambs at \$120 each = \$48,000
- 2000 ewes less 4% of lambs at \$120 each = \$9600

Of course losses will be greater than this, because we have to take into account that later-born lambs stay longer on the farm, hogget mating may need to be called off and some ewes will die over winter, for example.

Zinc Supplementation

Zinc is very effective in controlling the harmful effects of sporidesmin. Zinc acts by forming a complex with sporidesmin, eliminating its ability to form



Genetics are the long term solution

oxygen-free radicals, which are responsible for its toxicity.

In sheep, the only practicable method of applying zinc is in the form of a bolus.

The cost of this is not cheap and we see lots of farmers wrestle with this every year.

To treat 2000 ewes will cost about \$7300 applied.

Zinc is a preventative not a

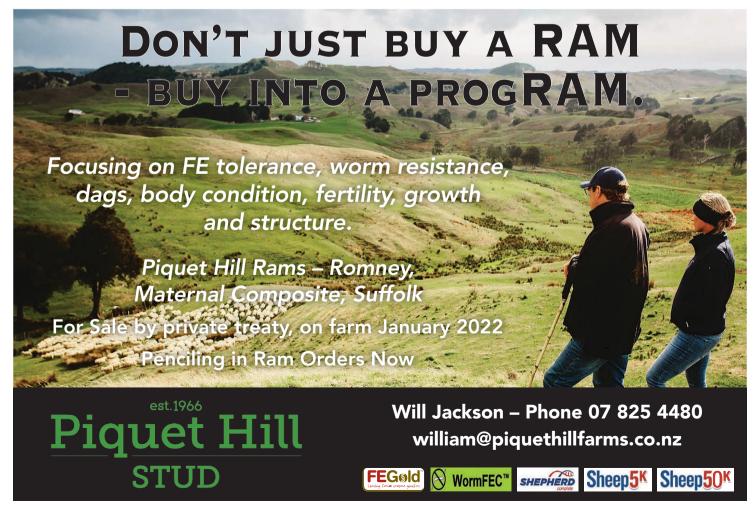
treatment. The Zinc bolus must be administered before the spore counts are high enough to do damage. The use of zinc is finite, as it is a heavy metal and on the radar for use in animal production systems.

If we lose zinc, there is not much else in the tool box to prevent FE. Genetics is the only sustainable permanent solution.

Ramguard – breeding for tolerance

This is the long-term fix. Genetic gain is rapidly achieved by incorporating genetics with a high level of tolerance.

This means buying rams from breeders that have been on this course for some time. This is a sound investment in the future of your business.



Signs of subclinical FE

Edward Dinger

very late summer when conditions are right, Pithomyces chartarum, the facial eczema (FE) causing fungus, grows in almost all the paddocks of the North Island and the north of the South Island.

Even in low numbers, the spores cause subclinical FE, which is in some ways worse than clinical, simply because farmers don't see any external signs and so have no idea that the natural immunity has been suppressed because of the mycotoxins. The result is the production of their ewes can sometimes be severely curtailed.

The ewes without a properly functioning liver are prone to ill health, cannot put on weight, do not ovulate to their genetic potential, do not grow as much wool and cannot produce as much

milk. So if you have more dry ewes than you can explain, a lambing percentage that remains static, ewes that run dry before weaning, and hoggets that don't want to grow when there is plenty of feed about, for example, it is possible that subclinical FE could be the root of your problems.

By increasing FE tolerance in your flock you naturally limit the effects of FE. And it gets better still: the tolerance for FE also gets you tolerance for a host of other bad fungi that produce toxins that can inhibit production.

The family of mycotoxins is large, and the bad news is that they all live, or seem to prefer to live on ryegrass. Amongst them is the fusarium group, which includes zearalenone, trichothecenes and others. The spores of these fungi, once eaten, are transformed in the digestive system into a toxin or toxins.

Zearalenone produces an oestrogenic effect in that it

will stop ovulation in ewes and can cause reduced lambing percentages from 5-50% and is considered the main cause of a long, drawn out tupping season.

Trichothecenes causes inflammation of the gut lining and produce scouring, poor growth and is the main cause of ill thrift in lambs. Meanwhile, you think your lambs need another drench.

Fusarium will produce zearonal, a sort of anabolic steroid in the meat and can cause rejection in overseas markets because they think a growth promotant has been used.

Endophytes (fungi that live inside the plant) produce the mycotoxin lolitrem B, the major toxin responsible for ryegrass staggers.

The long and the short of it is that these mycotoxins significantly reduce production, and you may not be aware of it.

The surprising side effect of breeding for tolerance of only one

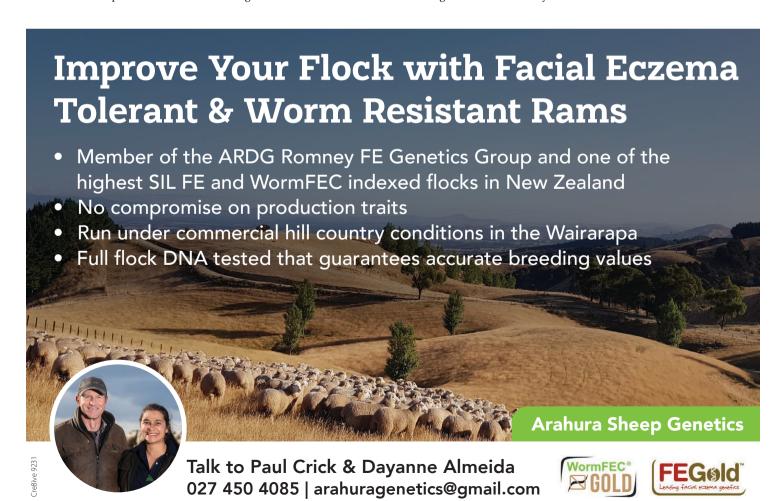
mycotoxin is that the increased resistance gives suppression to all of them. The good news I can give to you is that if you start using FE-tolerant rams, many other effects of mycotoxins will also be lower. Ryegrass staggers, fusarium and zearalenone all diminish along with the worst aspects of FE.

To top it off, because of the superior immune system in the sheep, viral pneumonia, the effects of internal parasites and other diseases will be less severe, and total production will rise sharply.

Why everyone isn't buying FEtolerant rams is totally beyond

 Edward Dinger is a well respected Coopworth breeder.
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