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SAINSBURY'S FECPAK^{G2} PROJECT
CASE STUDIES

MAY 2014 - MARCH 2017

THE SAINSBURY'S FECPAK^{G2} PROJECT IS A SAINSBURY'S
R & D PROJECT MANAGED BY TECHION GROUP LTD

APPENDIX 9 – CASE STUDY FARMER TESTIMONIALS – NEW ZEALAND

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL NEW ZEALAND

Name: Case Study Farmer 3

Farm Type: Sheep, Beef and Crop

Region: Southland

Stock: 1,400 Ewes, 390 Hoggets,
51 Beef Cattle

Land area: 254 ha

THEIR STORY

Farmer 3 manages a total of 1,841 stock on a mixed sheep, beef and crop farm in Southland. He lambs his ewes in mid-September and his hoggets in late September with a lambing percentage of 147% and an average daily growth rate of 212.3 g/day.

FECPAK^{G2}

Prior to the Project, Farmer 3 had used a schedule based drenching program. Farmer 3 used the original FECPAK^{G1} system, but he lost interest in counting parasite eggs himself. When Farmer 3 joined the Sainsbury's FECPAK^{G2} Project he aimed to stay away from a calendar based drench schedule and to monitor animals and only treat if necessary.

RESULTS

"[I do] less drenching and growth rates are improving."

Historically, Farmer 3 would drench his lambs every 3 weeks. He is now using FECPAK^{G2} to monitor his lambs and he only drenches his lambs when they have a high egg count.

"I have not drenched ewes for 15+ years... [but] it may change as we do more testing."

Farmer 3 hasn't drenched his ewes for 15+ years but would typically drench his hoggets every 3 weeks with their last drench pre-lamb. Farmer 3 plans to proactively monitor both his ewes and hoggets and treat them if necessary. For his lambs, Farmer 3 has healthy stock and kills a lot of lambs at 20kgs. It is his aim that he will be able to finish these lambs earlier with the help of FECPAK^{G2}, by reducing their parasite burden and maximising on growth rates.

KEY FINDINGS

- Drenching less
- Growth rates improving
- Monitor all stock classes

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL NEW ZEALAND

FARMER COMMENTS

"I learnt a lot about our stock and when to drench over the years, [but] I have got a bit lazy about it so I think the new way is going to be a lot better with FECPAK^{G2} staff keeping in touch with you."

"I am pleased [Sainsbury's] have a plan for the New Zealand sheep farmer, and am looking forward to the results."

DRENCH EFFICACY

Farmer 3 also took part in the Sainsbury's DrenchSmart Project which evaluated his farm's drench resistance status.

RESULTS

Farmer 3 discovered he only had minor resistance to Benzimidazole and Levamisole drench families. He was pleased when he learnt his drench status, and can continue to use all the combination drenches effectively to manage parasite burdens in his stock. The DrenchSmart has also confirmed that the drench he was using is working effectively.

KEY FINDINGS

- Pleased with resistance status
- Knowledge of which drenches work
- Avoid drenching using ineffective products

FARMER COMMENTS

"It has been worthwhile to do the drench resistance test and being very pleased with the results which has given us renewed confidence with our drenching program."

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL NEW ZEALAND

Name: Case Study Farmer 4

Farm Type: Sheep Breeder

Region: Southland

Stock: 4,080 Ewes, 1,100 Hoggets,
6,975 Lambs

Land Area: 485 ha

THEIR STORY

Farmer 4 operates a sheep station in Southland. He manages a total of 12,155 stock over 485 ha of rolling hill country. He lambs between early September and early November, with an average lambing percentage of 125.3% and an average live weight gain of 211.4 g/day.

FECPAK^{G2}

Farmer 4 has been a member of the Sainsbury's FECPAK^{G2} Project since 2014. Over this time, he has processed a total of 69 faecal egg counts (FEC).

RESULTS

"I have spread drench intervals out with faecal egg count results from tests, saving time, drench and labour. By keeping an eye on your stock more closely you can improve animal performance."

Before using FECPAK^{G2}, Farmer 4 would drench his lambs every 28 days. If weather permitted or lamb condition was good, he would extend this interval. Since using FECPAK^{G2}, Farmer 4 continues to do the two first drenches on his lambs, however, from January onwards he monitors their FEC and has extended his drench intervals up to 8-9 weeks.

"I am keeping a closer eye on what is happening."

Farmer 4 is also paying closer attention to parasite management in his hoggets and ewes. He has been monitoring his ewes over the winter and reported that they are looking good.

His drench usage has changed since using FECPAK^{G2}, he is no longer using ineffective drenches, has reduced drenching and has spread out the frequency of drenching when FEC results are low. Farmer 4 has also used his FECPAK^{G2} unit to do drench checks and found the combination Abamectin and Levamisole is not effective on his farm.

KEY FINDINGS

- ⚡ Monitoring parasites can improve animal performance
- ⚡ Less drench used
- ⚡ Drench intervals extended
- ⚡ Performing regular drench checks is valuable

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL NEW ZEALAND

FARMER COMMENTS

"I found the FECPAK^{G2} systems support was fantastic. Help was only a phone call away."

"I have found it valuable and have learnt a lot over the last couple of years."

DRENCH EFFICACY

Farmer 4 also took part in the Sainsbury's DrenchSmart Project which evaluated his farm's drench resistance status. Farmer 4 was disappointed with his results as the project revealed drench resistance. He is now aware of the drench families to avoid and which drenches work effectively on his property.

RESULTS

The DrenchSmart revealed that combination Benzimidazole and Levamisole is not effective for strongyle parasites on his property, however it remains effective against the *Nematodirus* parasite. Farmer 4 plans to avoid using this drench in summer and autumn, when strongyle worms are prevalent, and keep it up his sleeve in spring when *Nematodirus* parasites are affecting young lambs. Farmer 4 now knows which drenches to incorporate into his parasite management program.

KEY FINDINGS

- Resistance to combination drench
- Knowledge of which drenches work
- Avoid drenching using ineffective products

FARMER COMMENTS

"I have got resistant worms on my property. I know which actives will work for us."

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL NEW ZEALAND

Name: Case Study Farmer 6

Farm Type: Sheep, Cattle and Dairy

Grazers

Region: Southland

Stock: 1,900 Ewes, 450 Hoggets, 2,800

Lambs, 34 Beef Cattle, 134 Dairy Cattle

Land Area: 240 ha

THEIR STORY

Farmer 6 manages 5,184 stock on his property and is a grazier for 134 dairy cattle in Southland. He manages these stock over 240 ha of rolling hill countryside. Farmer 6 lambs his older ewes in early September and his mixed age ewes and two-tooths in mid-September. Farmer 6 has an average lambing percentage of 162% and an average live weight gain of 213.5 g/day.

FECPAK^{G2}

Farmer 6 is a recent addition to the Sainsbury's FECPAK^{G2} Project. Within the last 5 months he has submitted 26 faecal samples. His previous drenching strategy was largely based on a calendar schedule with faecal egg counts (FEC) several times a year.

RESULTS

"FECPAK^{G2} has changed the way I think about drenching."

Before Farmer 6 used FECPAK^{G2} he would drench his lambs monthly. Now he drenches once before weaning and monitors the parasite burden of his lambs, only treating if necessary. Farmer 6 is planning to be more proactive, monitor his ewes 2-3 times a year, and test his hoggets monthly. He has already noticed he is drenching less, and spending less time and money on drench.

"I have changed drench timing. I would have traditionally drenched hoggets off crop but I didn't need to."

KEY FINDINGS

- Reduced drench costs
- Reduced drenching labour
- Changed drench timing

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL NEW ZEALAND

FARMER COMMENTS

"I have found it very good. I think the project was a great idea and is encouraging sustainable farming. It's a good practice."

"The project is good from a national point of view. Customers of higher value products like lamb are aware of environmental and animal welfare issues and can afford to make ethical choices."

DRENCH EFFICACY

Farmer 6 has recently moved to his farm and did not know his drench status. Farmer 6 carried out the Sainsbury's DrenchSmart in autumn 2016.

RESULTS

When Farmer 6 received his DrenchSmart report he was surprised that the report revealed severe drench resistance on his farm. Farmer 6 previously used a combination Benzimidazole and Levamisole drench. His DrenchSmart showed that this drench was not effective. Farmer 6 has now changed actives and is using Moxidectin, he plans to keep Abamectin up his sleeve for future use.

KEY FINDINGS

- ⚡ Discovered severe drench resistance
- ⚡ Knows which drenches to use going forward
- ⚡ No longer using ineffective products

FARMER COMMENTS

"I have changed to Moxidectin and will be doing drench checks."

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL NEW ZEALAND

Name: Case Study Farmer 7

Farm Type: Sheep and Beef

Region: Otago

Stock: 2,800 Ewes, 700 Hoggets, 4,500

Lambs, 260 Beef Cattle

Land Area: 943 ha

THEIR STORY

Farmer 7 operates a sheep and beef station in Otago. They run 8,260 stock over 943 ha. They lamb their ewes in late September and their hoggets in early October. In 2015, their lambing percentage was 139% with an average weight gain of 224.6 g/day.

FECPAK^{G2}

Farmer 7 previously used a calendar based drenching schedule with a few faecal egg counts (FEC), but found time the limitation for doing regular FEC.

RESULTS

"We are monitoring [FEC] levels and changing drench timing."

They have made significant changes to their farming practice in drench timing, drenching behaviour and animal health monitoring. Since using FECPAK^{G2}, Farmer 7 has got into the routine of monitoring both ewes and hoggets year-round, and has found that the hoggets needed drenching more often. Previously the hoggets would have been left undiagnosed and untreated.

They are also checking the effectiveness of drench actives and have performed their own day 10 drench checks using FECPAK^{G2} and found the information gained very valuable.

KEY FINDINGS

- Proactively FEC monitoring
- Monitoring hoggets more closely, treating if necessary
- Using drench checks to monitor drench effectiveness

FARMER COMMENTS

"We are going to drench when needed rather than to a set calendar date."

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL NEW ZEALAND

DRENCH EFFICACY

Farmer 7 had previously had trouble getting their FEC level high enough to perform a faecal egg count reduction test (FERCT), however they suspected some drench resistance on their farm.

RESULTS

“Drench families are doing well, slight resistance to Levamisole so will be careful using that family.”

Through carrying out the Sainsbury's DrenchSmart they learnt that they are in a good position drench wise. They will continue to use FECPAK^{G2} for drench checks to make sure their drenches are working effectively.

KEY FINDINGS

- Discovery of minor drench resistance
- Knowledge of which drenches work
- Avoid drenching using ineffective products

FARMER COMMENTS

“We were not surprised, but pleased to learn our drench status. There is so much media and it is easy to blame drench resistance for problems. Farmers can be afraid to know their status but they might be pleasantly surprised. Knowledge is power.”

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL NEW ZEALAND

Name: Case Study Farmer 8

Farm Type: Sheep, Cattle and Dairy

Grazer

Region: Southland

Stock: 5,000 Ewes, 1,500 Hoggets,
8,500 Lambs, 42 Beef Cattle, 650 Dairy

Cattle, 400 Other

Land Area: 500 ha

THEIR STORY

Farmer 8 manages 16,092 stock over 500 ha of rolling hill country in Southland. They lamb between early September and early October, with a lambing percentage of 173% and an average live weight of 145.6 g/day.

FECPAK^{G2}

Farmer 8 was a pioneer for the Sainsbury's FECPAK^{G2} Project and has processed 46 faecal egg counts (FEC) using FECPAK^{G2}. He has learnt the value of monitoring his stock's parasite burden.

RESULTS

"FECPAK^{G2} has become an important part of our management system".

Traditionally, Farmer 8 would drench his lambs approximately 5 times a year during pre-weaning, weaning and shearing. Since using FECPAK^{G2}, Farmer 8 has drawn out the intervals between drenching his lambs in January and February. However, Farmer 8 found he needed regular monitoring in March and April and to drench his lambs more often during this time.

Over the last 10 years Farmer 8 typically hasn't drenched his ewes. Farmer 8 is now monitoring his ewes and drenching them when FEC is high to avoid the ewes contaminating the pasture. Farmer 8 also plans to monitor his hoggets and drench if necessary.

"I am using less drench, more strategically and with better timing."

Farmer 8 has changed his drench usage since using FECPAK^{G2}, is keeping on top of his parasite management and has performed several drench checks. He has confirmed that some of the drenches he uses are working well.

KEY FINDINGS

- ⚡ Less drenching required for lambs in January and February
- ⚡ Regular FEC monitoring required for lambs in March and April
- ⚡ Decrease in drench use
- ⚡ More strategic drench use

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL NEW ZEALAND

FARMER COMMENTS

"I am 100% satisfied. Very pleased and impressed, [FECPAK^{G2}] has been an important part of our management system."

DRENCH EFFICACY

It had been 6 years since Farmer 8 last checked the drench resistance status on his farm. Farmer 8 was aware that not all drenches worked effectively on his farm, so he took up the opportunity to take part in the Sainsbury's DrenchSmart Project.

RESULTS

Through the Sainsbury's DrenchSmart, Farmer 8 found out that the resistance status to Benzimidazole had worsened. Farmer 8 was using a combination Benzimidazole and Levamisole to drench his sheep. Now that Farmer 8 knows his drench status, they are going to stay away from drenching with combination Benzimidazole and Levamisole, and he has changed to combination Abamectin and Levamisole.

KEY FINDINGS

- Drench resistance to Benzimidazole has worsened
- Combination Benzimidazole and Levamisole no longer effective
- Changed to a Abamectin and Levamisole drench
- Avoid drenching using ineffective products

FARMER COMMENTS

"It has been very beneficial. The Sainsbury's subsidy makes it very affordable. That makes a difference and is a motivator."

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL NEW ZEALAND

Name: Case Study Farmer 12

Farm Type: Sheep and Beef

Region: Southland

Stock: 4,500 Ewes, 1,100 Hoggets,
7,000 Lambs, 160 Beef Cattle,
80 Dairy Cattle

Land area: 565 ha

THEIR STORY

Farmer 12 manages a total of 12,840 stock over 565 ha of flat to rolling grasslands in Southland. Farmer 12 lambs in mid-September.

DRENCH EFFICACY

For Farmer 12, parasite management involved schedule based drenching and monitoring environmental conditions for deciding when to treat his stock. Farmer 12 completed his first faecal egg count reduction test through the Sainsbury's DrenchSmart program in autumn 2016.

RESULTS

"I had not done [a faecal egg count reduction test] until Sainsbury's offered it."

Before doing the Sainsbury's DrenchSmart, Farmer 12 had no hard evidence that the drench actives he was using were working. Farmer 12 was one of very few farmers involved in the Project to have the good news that the drenches he had been using were effective.

"I thought I would have more resistance, I was pleasantly surprised. It gave me a lot of confidence in the drenches that I am using."

He is going to continue using a dual combination regularly with a triple combination once a year at the end of the season. These results have given Farmer 12 peace of mind that the drenches he is using are working effectively.

KEY FINDINGS

- First faecal egg count reduction test on property
- Drenches are effective
- Insight into the importance of parasite management

SAINSBURY'S FECPAK^{G2}
PROJECT FARMER
TESTIMONIAL
NEW ZEALAND

FARMER COMMENTS

"It was a fantastic Project and got people motivated."

"The Project made us aware of good parasite management to make sure you are not going in the wrong direction."

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL NEW ZEALAND

Name: Case Study Farmer 13

Farm Type: Sheep and Cattle

Region: Southland

Stock: 1,000 Ewes, 450 Hoggets,
1,500 Lambs

Land Area: 160 ha

THEIR STORY

Farmer 13 manages a sheep and crop station in Southland. He handles 2,950 stock over 160 ha of heavy soil and clay based farmland. The topography is gentle rolling hill to flat country. Farmer 13 lambs from late August to mid-September.

DRENCH EFFICACY

Both time and cost had delayed his decision to do a faecal egg count reduction test. Farmer 13 took up the opportunity to do the Sainsbury's DrenchSmart to check the resistance status on his farm.

RESULTS

"I was surprised I have resistance to the combination drenches."

Through carrying out the DrenchSmart, Farmer 13 discovered some of the drenches he was using weren't working. Farmer 13 had recently switched to using a dual combination Benzimidazole and Levamisole drench, yet he found this drench had low efficacy on his farm. Farmer 13 now knows which drenches work effectively on his farm and he will continue to use Abamectin and dual combination Levamisole and Abamectin.

"I have learnt that I have resistance to some drenches. I should pay more attention to what my ewes are doing, i.e. to clean up the pasture in the summer months."

KEY FINDINGS

- ⚡ Discovered drench resistance to combination drench
- ⚡ Knows which drenches work
- ⚡ Using pasture management to control parasites
- ⚡ Farmer comments

"[This experience] highlights that there are other tools out there that can benefit our on-farm performance."

"[It is often] hard to pinpoint what the problems are. It is another tool to put in the toolbox."

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL NEW ZEALAND

Name: Case Study Farmer 15

Farm Type: Sheep and Beef

Region: Otago

Stock: 6,500 Ewes, 1,600 Hoggets,

7,500 Lambs, 200 Beef Cattle

Land Area: 5,000 ha

THEIR STORY

Farmer 15 manages a sheep and beef station in Otago. He manages 15,800 stock over 5,000 ha of medium to rolling hill country. Farmer 15 lambs his Terminal line in late September and his Maternal line in early October.

DRENCH EFFICACY

Farmer 15 previously used a calendar based schedule and faecal egg counts for deciding when to drench.

It had been 3 years since Farmer 15 had done a drench assessment on his property when he signed up for the Sainsbury's DrenchSmart.

RESULTS

"We are in a pretty good position moving forward as far as drench is concerned."

Through carrying out the DrenchSmart, Farmer 15 learnt that his drench status had remained stable. Farmer 15 uses a dual combination Benzimidazole and Levamisole, and a triple combination Benzimidazole, Levamisole and Abamectin when he puts his hoggets onto crop. He now has confidence that these drenches are still working effectively on his farm.

KEY FINDINGS

- Drench resistance status has remained stable
- Knows which drenches work

FARMER COMMENTS

"I know everything works."

"It's quite beneficial to know we are in a good position drench wise."

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL NEW ZEALAND

Name: Case Study Farmer 16

Farm Type: Sheep and Beef

Region: Southland

Stock: 6,000 Ewes, 2,000 Hoggets,
9,500 Lambs, 640 Beef Cattle, 350

Other

Land Area: 800 ha

THEIR STORY

Farmer 16 is the owner of a sheep and beef station in Southland. Farmer 16 manages 18,490 stock over 800 ha of rolling hill to flat country. Farmer 16 lambs his ewes in mid-September and his hoggets in mid-November. He has a lambing percentage of 126% with an average growth rate of 193.7 g/day.

DRENCH EFFICACY

It had been 8 years since Farmer 16 did a drench assessment on his property when he signed up for the Sainsbury's DrenchSmart.

Farmer 16 had been using rotational drenching with either Ivermectin or a combination Benzimidazole and Levamisole. He also used a triple Benzimidazole, Levamisole and Abamectin drench for quarantine drenching stock on to his property.

RESULTS

"I was expecting an increase in resistance. But my drench resistance status has stayed stable."

Farmer 16 was pleasantly surprised when the DrenchSmart results revealed that his resistance status had remained stable since his last assessment 8 years ago.

Farmer 16 plans to use this information to continue to avoid using drenches that don't work on his property and make sure that every drench is effective. Farmer 16 is going to rotate drenches with the aim of delaying the development of drench resistant parasites.

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL NEW ZEALAND

KEY FINDINGS

- ↗ Drench status stayed stable
- ↗ Drench rotation using effective drenches
- ↗ Knows which drenches work

FARMER COMMENTS

"We found [the Sainsbury's DrenchSmart] particularly beneficial and it has motivated us to keep a closer eye on it and monitor it more carefully. The process was very easy, and there is no reason not to do it on a regular basis."

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL NEW ZEALAND

Name: Case Study Farmer 19

Farm Type: Sheep and Beef

Region: Canterbury

Stock: 214 Ewes, 600 Hoggets, 381
Lambs,
180 Beef Cattle

Land Area: 480 ha

THEIR STORY

Farmer 19 is the owner of a sheep and beef station in Canterbury. Farmer 19 manages 1,375 stock over 480 ha of rolling to steep hill country. He lambs his light ewes, his singles, twins and triplets in mid-September, and his older ewes in early September. Farmer 19 has a lambing percentage of 144% with an average live weight gain of 224.6 g/day.

FECPAK^{G2}

Farmer 19 used a schedule, clinical signs, faecal egg counts (FEC) and live weight gain when determining when to drench his stock. Farmer 19 owned the original FECPAK^{G1} system and was an experienced user of FEC to determine when his stock needed drenching.

RESULTS

"It's given me more confidence to make decisions. It takes the gut feeling out of it and puts it into numbers."

Since joining the Sainsbury's FECPAK^{G2} Project, Farmer 19 has gained confidence in his drenching decisions. Farmer 19 has found that FEC monitoring is valuable when observing different stock classes. He is now taking a more aggressive and strategic approach to address the parasite burden of his ewes and will monitor them using FEC results into the autumn and winter. He is also going to use FECPAK^{G2} to make more informed decisions for drenching his hoggets, and he will closely monitor his lamb's parasite burden in an attempt to extend his drenching intervals up to 6 weeks.

KEY FINDINGS

- Monitoring each stock class regularly and carefully
- Making informed drenching decisions

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL NEW ZEALAND

FARMER COMMENTS

"I encourage everyone to keep going. Be more regular in the way we monitor. Be more objective with animal health programs and drive improvement and change."

"I'm impressed with the service. It has evolved hugely within the last year. The support is there, I feel privileged to be involved with a group of pioneers trying to unravel the mysteries of the unseen."

"I am confident in the new system and will be using it regularly."

DRENCH EFFICACY

Farmer 19 completed the Sainsbury's DrenchSmart in autumn 2016. He had done a DrenchSmart previously, however, he did not know if his resistance status had changed within that time.

Farmer 19 had been rotating a triple combination Benzimidazole, Levamisole and Abamectin with a dual combination Benzimidazole and Levamisole.

RESULTS

"It put hard numbers around our drench status and gives confidence around the products I need."

Through carrying out the DrenchSmart, Farmer 19 found the drenches he uses are still effective on his farm. Farmer 19 now knows that he is on the right track and is using drenches that work on his property.

KEY FINDINGS

- Drench resistance status has remained stable
- Drenches are working effectively

FARMER COMMENTS

"The reduction test underpinned what I knew and put hard numbers around our drench status."

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL NEW ZEALAND

Name: Case Study Farmer 23

Farm Type: Sheep and Beef

Region Name: Tasman

Stock: 1,900 Ewes, 600 Hoggets, 3,000

Lambs, 100 Beef Cattle

Land Area: 240 ha

THEIR STORY

Farmer 23 is a sheep and beef farmer in the Tasman region. He manages 5,600 stock over 270 ha of land ranging from irrigated river flats to hard hill country. His mixed age ewes lamb in mid-September.

DRENCH EFFICACY

Before testing his drench status, Farmer 23 would drench his stock approximately 3 times a year using a schedule based drenching program.

His typical drenching procedure would involve treating his ewes with capsules before lambing. Pre-weaning, lambs would get a broad spectrum and tapeworm drench, with another drench at weaning with a tapeworm drench. After weaning, his lambs would be drenched every 4-9 weeks.

RESULTS

"I might have to change our practice and pay more attention to parasite management."

Through carrying out the Sainsbury's DrenchSmart, Farmer 23 discovered that he has resistance to some of the drench families he had been using. Although he was not surprised, these results gave him solid evidence of his drench status.

"The results were anecdotal for what farmers and vets are finding. If we have been using those drenches for donkeys' years, you are expecting to see resistance."

Farmer 23 had been using drench rotation, mostly with a combination Benzimidazole and Levamisole drench. Since learning his drench status he has incorporated Moxidectin into his drenching schedule.

Farmer 23 has found the Project very valuable. It has changed his farming practice, the drenches he uses, and made him pay more attention to parasite management.

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL NEW ZEALAND

KEY FINDINGS

- Discovery of drench resistance
- Knowledge of which drenches work
- Rotating effective drenches
- Paying more attention to parasite management

FARMER COMMENTS

"I found it valuable. Cheap way of getting it done."

"Good opportunity to do it half price with Sainsbury's."

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL NEW ZEALAND

Name: Case Study Farmer 25

Farm Type: Sheep and Beef

Region: Otago

Stock: 4,750 Ewes, 1,200 Hoggets,

7,000 Lambs, 50 Beef Cattle,

400 Dairy Cattle

Land Area: 902 ha

THEIR STORY

Farmer 25 operates a sheep and beef farm in Otago. Farmer 25 manages 13,400 stock over 902 ha of high country, and produces approximately 7,000 lambs in late September.

FECPAK^{G2}

Before joining the Sainsbury's FECPAK^{G2} Project, Farmer 25 used a calendar based schedule and clinical signs to monitor parasite levels in his stock. Farmer 25 used few faecal egg counts (FEC) for parasite management.

RESULTS

"We were over drenching so they were performing but at a high cost."

Through using FECPAK^{G2}, Farmer 25 discovered that he was over-drenching his stock. By monitoring his stock using FECPAK^{G2}, Farmer 25 spent less money on drench, spent less time in the yards, and also decreased his drench usage.

Farmer 25 has been able to extend his drenching intervals for his lambs. From weaning, Farmer 25 previously drenched his lambs every 3 weeks. Since he has been FEC monitoring, he has extended intervals up to 6 weeks between drenches. Farmer 25 has also been doing regular FEC monitoring for his hoggets and has reduced his annual drench usage by half.

Conversely, FECPAK^{G2} revealed he needed to monitor his ewes more closely. He found he needed to drench his ewes more often, and now he monitors his ewes pre-tupping and pre-lambing.

Farmer 25 also uses FECPAK^{G2} for day 10 drench checks and this has given him confidence that his drench works.

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL NEW ZEALAND

KEY FINDINGS

- Reduced drench use and extended drench intervals for lambs
- Reduced drenching for hoggets
- Increased drenching for ewes
- Reduced costs for drench
- Reduced on-farm labour
- Performing day 10 drench checks
- Knowledge that drenches are effective

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL NEW ZEALAND

Name: Case Study Farmer 26

Farm Type: Sheep and Beef

Region: Manawatu-Wanganui

Stock: 1,981 Ewes, 572 Hoggets,

310 Beef Cattle

Land Area: 668 ha

THEIR STORY

Farmer 26 manages 2,863 stock over 668 ha in the Manawatu-Whanganui region. They lamb their Romneys on the home farm in early August and their Perendales on the hill farm in early September. Their lambing percentage is 108% with an average live weight gain of 160.3 g/day.

FECPAK^{G2}

Before becoming part of the Sainsbury's FECPAK^{G2} Project, Farmer 26 didn't use faecal egg counting (FEC) to monitor parasites, they used a schedule and clinical signs when deciding whether to treat their animals. Farmer 26 had suspicions that some types of drenches weren't performing well on their farm.

In December 2014, Farmer 26 signed up as a pilot farmer in the FECPAK^{G2} Project. Since then they have processed 46 faecal samples and have noticed dramatic improvements in animal health.

RESULTS

"[We are] not wasting money on drenches that don't work."

Using their FECPAK^{G2}, Farmer 26 has discovered they have resistance to a family of drenches. Farmer 26 conducted a series of day 10 drench checks and says *"realising the drench [we use] is not effective has gave us a valuable piece of information."* They are now using drenches that are effective and are rotating cattle on to 'hot' paddocks with a heavy worm burden to clean up the pasture. Farmer 26 performs regular FEC to monitor animal health throughout the year. They have noticed benefits in animal health and performance, and is happier with the animals' overall health status. They have saved money in drench costs as well as increased their animals' performance.

KEY FINDINGS

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL NEW ZEALAND

- Monitoring stock year round
- Regular drench checks
- Knowledge of which drenches work
- Cleaning up pasture using cattle rotational grazing
- Improving animal health and wellbeing

FARMER COMMENTS

“Animal health, including weight gain as well overall wellbeing has improved.”

“Worthwhile project, that takes the guess work out of the equation.”

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL NEW ZEALAND

Name: Case Study Farmer 27

Farm Type: Sheep and Beef

Region: Canterbury

Stock: 3,000 Ewes, 1,000 Hoggets, 500

Lambs, 320 Beef Cattle,

400 Dairy Cattle

Land Area: 700 ha

THEIR STORY

Farmer 27 operates a farm in Canterbury. He runs 5,220 stock over 700 ha of rolling hill to steep farmland. Farmer 27 lambs his hoggets and terminal mob in early September and his maternal mob in mid-September. His average lambing percentage for 2015 was 147% with an average daily live weight gain of 204 g/day.

FECPAK^{G2}

Before signing up for the Sainsbury's FECPAK^{G2} Project, Farmer 27 used both clinical signs and the occasional faecal egg count (FEC) when deciding to drench. Farmer 27 has been a member of the project since 2014 and has made some big changes to the way he manages parasites on his farm.

RESULTS

"In the past, [drenching was] based on a hunch after 4-5 weeks. Now drenching is based on facts."

Before using FECPAK^{G2}, Farmer 27 drenched his lambs monthly using hunches and some limited FEC information. Since using FECPAK^{G2}, Farmer 27 has been able to reduce drenching by half and extend his drench intervals up to 8-10 weeks. In the past, prior to lambing, Farmer 27 would give his hoggets a capsule or an oral at the end of winter feed. He would use a few FEC tests in winter to see if the hoggets and ewes needed drenching. He now uses FEC information for deciding when to treat and monitors his hoggets with monthly tests during winter.

"It gives me confidence that my drenches work."

Farmer 27 is satisfied that he is now using less drench and foresees in the future that he will use even less. He is confident that the actives he is using are effective and plans to use FECPAK^{G2} to perform routine drench checks to keep on top of his drench status.

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL NEW ZEALAND

KEY FINDINGS

- ↗ Extended drench interval
- ↗ Monitoring all stock classes
- ↗ Reduced drench use and labour
- ↗ Saving money in drench costs

FARMER COMMENTS

"The Sainsbury's FECPAK^{G2} Project is outstanding. The support and initiative has been great. A positive for the whole industry."

"The support I have gotten has been outstanding."

"The more I use it the better I get at it. Once it is all set up it is pretty good."

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL NEW ZEALAND

Name: Case Study Farmer 28

Farm Type: Sheep and Beef

Region: Southland

Stock: 12,000 Ewes, 3,200 Hoggets,
16,000 Lambs, 450 Beef Cattle

Land Area: 4,000 ha

THEIR STORY

Farmer 28 owns and manages a farm in Southland. He runs a total of 31,650 stock over 4,000 ha of easy to medium hill land. He lambs all his age groups together in late September with a lambing percentage of 132%.

FECPAK^{G2}

Before joining the Sainsbury's FECPAK^{G2} Project Farmer 28 had not used faecal egg counting before, and instead used a schedule and clinical signs to treat his stock for parasites.

RESULTS

"Using the information means drenches can be extended, saving labour and costs."

Farmer 28 has made several changes to his drench timing and behaviour since using FECPAK^{G2}. Previously, Farmer 28's drenching schedule for lambs involved drenching prior to weaning in early December, then again at weaning in the second week of January, and subsequently every 4 weeks after that. For the 2017 season, he plans to monitor the lambs throughout the season and treat accordingly.

Before Farmer 28 started using FECPAK^{G2}, he would treat his ewes according to condition score throughout the year, and at a set stocking rate prior to lambing. Farmer 28 would treat his hoggets before going on to crop pre-winter and after crop in early spring. Since using FECPAK^{G2}, he now monitors his stock throughout the season and drenches when necessary. Farmer 28 is also monitoring his ewes over the winter and drenches according to his FECPAK^{G2} test results.

KEY FINDINGS

- Regularly monitoring all stock classes
- Extended drench intervals
- Reduced drench use and labour

FARMER COMMENTS

"A very good product with prompt replies to test and good help for queries."

"The Sainsbury's FECPAK^{G2} Project was a good project with good goals. Farmer education is the key."

APPENDIX 10 – CASE STUDY FARMER TESTIMONIALS – UNITED KINGDOM

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL UNITED KINGDOM

Name: Case Study Farmer Q

Farm Type: Upland / Lowland Sheep
& Beef

Region: Carmarthenshire

Stock Units: 860 Ewes, 310 Hoggets,
1,250 Lambs, 100 Beef Cattle

Land Area: 120 ha

FECPAK^{G2}

The farm has been part of the Sainsbury's FECPAK^{G2} Project since April 2016. In their first season on the Project they processed 18 samples.

RESULTS

No FEC samples had been done on the farm previous to the Project but they were keen to join as they were concerned about wormer resistance. They have only been on the Project for a year and they haven't completed as many tests as they hoped with one of the main issues being problems with their internet coverage which took months to resolve. Another challenge they found was collecting samples from all the different groups as they farm several different parcels of land.

The biggest change so far has been with ewe drenching. The normal routine was to worm ewes 5 to 6 weeks post lambing, so when they first got the system they sampled the ewes immediately as it was coming up to that timing. FEC results showed low or medium counts, so they decided not to worm them which saved cost and labour. However, in future years testing may show this may need to be replaced by treating at pre-lambing, which would be more appropriate to avoid pasture contamination. The normal pre-topping wormer for ewes was also not done following advice. Following a scab outbreak, ewes did receive an injectable Ivermectin later in the autumn which was unfortunate, but in previous years that would have been a double autumn worming so they were glad to have avoided that.

Simple Drench Check tests were carried out to see which wormers worked on the farm and they found to their surprise that white drench (1BZ) was still effective which was a great result. Yellow drenches (2LV) however, did show signs of inefficacy and there were also question marks over the Ivermectin group (3ML) which need to be followed up again.

Cattle numbers are increasing on this farm and the aim is to develop some cleaner grazing through rotation and hope that this will help reduce future worming.

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL UNITED KINGDOM

KEY FINDINGS

- Changed strategy to when ewes are wormed – 2 doses per ewe less in first year
- Used FECPAK^{G2} to determine which wormers work on the farm

FARMER COMMENTS

“Been a useful kit and can see there is definitely room for it on the farm – just need to make more use of it.”

“Have learnt a lot about the parasite issues. Wasn't really aware of extent of resistance and its impact and also learnt that our historical control policy was not always correct.”

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL UNITED KINGDOM

Name: Case Study Farmer E

Farm type: Upland / Lowland Sheep

& Beef

Region: Ceredigion

Stock Units: 1,750 Ewes, 300 Hoggets,

4,500 Lambs (incl. stores),

350 Beef Cattle

Land area: 360 ha

THEIR STORY

The farm's main flock lamb indoors in February and the hoggets lamb from the end of March. Most home produced lambs are sold early with the supplementary creep feed on grass. An additional 2,000 store lambs are purchased. Approximately 350 store cattle are purchased each year for fattening.

FECPAK^{G2}

The farm has been part of the Sainsbury's FECPAK^{G2} Project since July 2015. Over this time the farm has processed over 30 samples.

RESULTS

Before being involved in the Project lambs were wormed on a regular basis to ensure maximum growth rates so that lambs finished in time to hit the early season's high prices. FEC monitoring has led to a big drop in how often lambs are treated. Most lambs still get a regular spring dose for *Nematodirus*, then they are treated based on FEC. This has resulted in between 6,500 and 8,000 less doses used per year, approximately. At an estimated average of £0.10 per dose, that's a financial saving of between £650 and £800 per year. Lambs performed just as well as normal which gave the farmer confidence in this new strategy.

The low burdens found in most groups of lambs on this farm is probably a reflection that there is a good balance between sheep and cattle numbers with cattle grazing helping to clean up sheep pastures. Another factor would be that creep fed lambs pick up less worms as they graze less and the improved nutrition helps them combat worms.

They were planning on doing Drench Check tests on each of the four wormers to see if resistance was present last summer but FEC didn't get high enough to enable this at the time.

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL UNITED KINGDOM

KEY FINDINGS

- Significant reduction in wormer used – **saving up to £800 per year**
- Difference between groups in their burdens
- Purchased store lambs rarely wormed after quarantine

FARMER COMMENTS

“Being part of the Project has definitely been of benefit as we have learnt about the issues we face, and I like the fact that we have reduced chemical input.”

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL UNITED KINGDOM

Name: Case Study Farmer N

Farm Type: Upland / Lowland Sheep
& Beef

Region: Carmarthenshire

Stock Units: 1,200 Ewes, 150 Hoggets,
1,750 Lambs, 300 Beef Cattle

Land Area: 280 ha

FECPAK^{G2}

The farm has been part of the Sainsbury's FECPAK^{G2} Project since July 2015. They have processed a total of 18 samples to date.

RESULTS

No FEC samples had been done on the farm previous to joining the Project but they were keen to get involved after hearing about wormer resistance in a Sainsbury's farmer meeting.

Since starting testing, what has surprised them is how low worm burdens have been during the summer period. This has resulted in a change to the timing of worming and a considerable reduction in how many lambs are wormed. They estimate that on average, close to 2 doses per lamb per year have been saved. One of the reasons that we may see lower worm burdens on this farm is a good balance between cattle and sheep numbers which would help clean up sheep worms from the pastures.

They found the system easy to use and no problem, other than a period last summer where they lost internet access for 2 months, so they haven't completed as many tests as they hoped to in the second year.

Moving on, they intend to use FECPAK^{G2} on ewes around lambing to fine tune the timing of the spring dose. They also plan to carry out a test for resistance which they haven't been able to do so far due to low lamb FEC.

KEY FINDINGS

- ▲ Surprise by general low worm burdens in lambs during summer
- ▲ Reduced dosing by average of 2 doses per lamb per year

FARMER COMMENTS

"Been a benefit to be involved although we don't use it enough at the moment."

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL UNITED KINGDOM

Name: Case Study Farmer H

Farm Type: Upland Sheep & Beef

Region: Narberth, Carmarthenshire

Stock Units: 1,000 Ewes, 380 Hoggets,
1,560 Lambs, 150 head cattle

Land Area: 184 ha

FECPAK^{G2}

This farmer has been a member of the Sainsbury's FECPAK^{G2} Project since February 2015. Over 2 years, a total of 60 samples have been processed with the majority in 2016 after more confidence was gained in the system.

RESULTS

Before taking part in the Project, they weren't doing any FEC testing, stating time, lack of accessible services and information as the main reasons why. Wormer usage wasn't particularly heavy before the Project started and they were using daily liveweight gains and clinical signs to help decide when to worm. Although wormer usage hasn't decreased overall, FEC testing has certainly helped target the dosing to when it's needed, changing the timing of treatments.

In 2016, FEC showed there was a second spike in *Nematodirus* fairly quick after the first lamb dose. This would have been missed otherwise, so the next dose was pulled forward by a few weeks.

They haven't seen much improvement in lamb performance yet, but 2016 was a challenging year for lamb performance in general. When lambs were not performing particularly well, continuous low FEC helped eliminate worms as the cause and instigated investigation in to other potential causes.

There are other examples where FEC has helped detect unknown problems. When tested, one group of lambs grazing on what was assumed clean ground as it was a new reseed planted with chicory, the FEC identified they had huge worm burdens 5 to 6 weeks after going on this particular ground. In hindsight they should have been checked earlier.

Recently a resistance test was carried out using the Project's Drench Check service. This identified that Ivermectin (3ML) wasn't fully effective and this will help in deciding which wormers to use in the future.

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL UNITED KINGDOM

KEY FINDINGS

- ⚡ Timing of doses now changed
- ⚡ Detected resistance issues
- ⚡ Identified unexpected problems

FARMER COMMENTS

“Although no major savings or obvious performance benefits yet, it has still been a positive change for the farm. Provides much better information into what is happening here and we are now confident that money spent on wormers is needed.”

“I need to test more often now that we have an idea of what is happening and will continue using the system after the Project as it has proved to be a valuable tool.”

“Using FECPAK^{G2} was a very easy and straightforward process. Got used to preparation very quickly once you into it.”

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL UNITED KINGDOM

Name: Case Study Farmer D

Farm Type: Upland Sheep & Beef

Region: Brechfa, Carmarthenshire

Stock Units: 420 Ewes, 150 Hoggets,

500 Lambs

Land Area: 100 ha

THEIR STORY

This farmer runs the traditional upland farm in partnership with their parents. They run a flock of Beulah Speckled Face ewes and Mules. They were also part of the TAG Project* with the view of using on farm recording to improve.

FECPAK^{G2}

This farmer has been a member of the Sainsbury's FECPAK^{G2} Project since February 2015. Over this time the farm has processed between 50 and 80 FEC's per year.

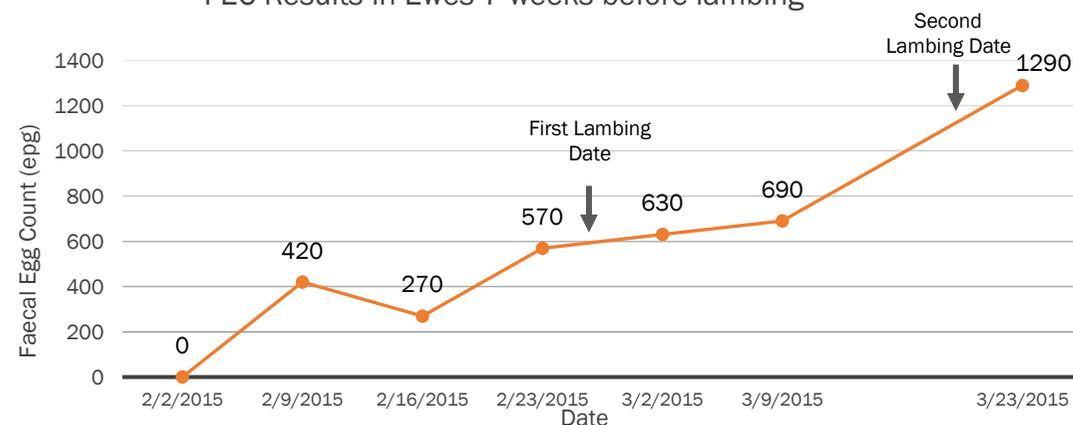
RESULTS

For lambs, there has probably not been a major reduction in dosing, especially in 2016 when parasite burdens were higher due to conditions that year favouring worms. However, there has been a big shift in the timing of wormer treatments and the historic schedule has been replaced. A good example of this occurred in 2016, FEC showed that weaning dose wasn't needed and delayed that dose to 2 weeks after weaning. In general, there is more dosing in the autumn than in the summer now which is the reverse of their historic pattern.

There has been a reduction in ewe dosing with the pre-tupping dose removed for most ewes. Part of the TAG Project* encouraged monitoring of FEC in ewes around lambing to help decide when to worm resulting in a big alteration to the spring dose timing as described below.

- Previously wormed ewes 5/6 weeks post lambing (same time as lamb first dose)
- Surprised by FEC rising around the time of lambing as housed for 2 months
– see graph

FEC Results in Ewes 7 weeks before lambing



SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL UNITED KINGDOM

- ⤴ Now changed to worm at turnout just after lambing
- ⤴ If normal regime was continued significant pasture contamination would have been missed
- ⤴ One small group not wormed as a trial. They regained their immunity and FEC dropped naturally by 6 weeks so worming then would have been a waste of time

"I thought once sheep had worms they wouldn't go until they were dosed. I have already learned a lot and testing is quite addictive when you start!"

Lamb performance has also improved over the last 3 years with average carcass weight lifting by 1 kg. This is a great result considering that 2016 was a challenging year for lamb performance. This is a lift in income of £3.60 per lamb at current prices. Although this can't all be attributed to better worm control, this farmer believes it has been an important part of what they are doing better.

KEY FINDINGS

- ⤴ Timing of doses now changed – especially ewes' spring dose
- ⤴ Changed choice of wormer
- ⤴ Helped improve carcass weights
- ⤴ Monitoring parasites now a routine task

FARMER COMMENTS

"We have definitely seen benefits of regular monitoring – we now know when wormers are actually needed."

"Identified that worms are quite a big issue on the farm – probably more than realised before. Seen quite high FEC here and some more work to be done to get on top of this."

"I have learnt a lot from being part of the Project – what resistance can do etc."

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL UNITED KINGDOM

Name: Case Study Farmer G

Farm Type: Lowland Sheep

Region: Leicestershire

Stock Units: 1,670 Ewes, 500 Hoggets,
2,500 Lambs

Land Area: 300 ha

THEIR STORY

This farmer runs the farm in Leicestershire with the help of one full time shepherd and seasonal help (e.g. lambing). The 1,600 ewes are winter housed and fed on a complete TMR system with ewes lambing inside from the 20th of March. This farm was one of the early pilot users of the FECPAK^{G2} system.

FECPAK^{G2}

This farm has been a member of the Sainsbury's FECPAK^{G2} Project since 2014. Over this time the farm has processed between 80 and 150 faecal egg counts (FEC) per year.

RESULTS

A few years before joining the Project, they started to incorporate FEC testing into the management of parasites on the farm by sending faecal samples away to a central laboratory service. The delay of 1 or 2 days in receiving results back and cumulative costs were the main reasons why only a few samples were done each year and monitoring wasn't fully utilised. The FECPAK^{G2} system has allowed them to significantly increase parasite monitoring and getting much quicker results has been positively welcomed.

Targeting treatments through incorporating FEC and growth rates has significantly reduced drench usage from what was historically used. In some years between 2-3 less doses per lamb were used, as well as an 80-90% reduction in ewe dosing. Hoggets are quarantine dosed when purchased in the autumn and will only receive a maximum of 2 doses before the next autumn, a lot less than previously and FEC has given confidence not to dose. Lungworm infections have caused problems on occasion which can't be picked up by FEC which has meant a few extra doses in some years.

Being part of the Project has helped achieve a marked improvement in flock performance (along with other changes to farm management). Ewe output has increased year on year with an impressive 33kg carcass sold per ewe tugged in 2016, up from 19kg per ewe before the Project started. Although we can't claim it's all down to better worm control, it's been a very significant part of what has changed on the farm as worms were historically a big challenge. It was previously not uncommon to suffer post weaning lamb losses due to worms.

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL UNITED KINGDOM

"We now deal with problems sooner and avoid post weaning challenges."

The shepherd now does all the sample processing and finds it a straightforward task. The process has improved a lot with the upgrades from the original prototype system.

KEY FINDINGS

- Monitoring parasites now a routine task
- Less money spent on drench
- Helped increase farm productivity
- Drench Checks are done routinely and extremely valuable

FARMER COMMENTS

"Very valuable management tool and something we wouldn't do without."

"FECPAK^{G2} provides evidence to back up management decisions rather than just relying on instinct. It forms part of the informed decision making process we are trying to adopt here and helps keep ahead of the game. There's no second guessing anymore."

"Has helped us significantly improve performance and farm output – while relying less on chemical intervention so its win - win all round."

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL UNITED KINGDOM

Name: Case Study Farmer B

Farm Type: Upland and Hill

Region: Northumberland

Stock Units: 600 Breeding Ewes,
45 Cattle

Land Area: Unknown

THEIR STORY

This farmer farms near Rochester, in Northumberland. They run 600 breeding ewes and followers as well as 45 head of beef cattle. The farm is majority upland, with some hill ground. Lambing starts with the pure breed Texel ewes at the end of February, with the rest of the ewes lambing from the start of April.

FECPAK^{G2}

This farmer previously used a schedule and clinical signs based drenching programme when treating their flock. This meant on some occasions some ewes and lambs were drenched unnecessarily or not drenched when needed. When they joined the Sainsbury's FECPAK^{G2} Project, they aimed to change their programme by regularly monitoring animals and only treat those who require it.

RESULTS

"Targeting our drenching has reduced the amount of drench we use each year."

Historically, this farm would drench all lambs twice a year with a third drench based on performance. They are now trying to regularly use FECPAK^{G2} to monitor lambs so that they are only drenched when they have a high egg count.

Some ewes have only been drenched pre-lambing, with a long acting wormer for many years, currently this practice hasn't changed. However, this farmer intends on testing the groups and avoid treating any ewes that don't need it. They have found that they could reduce the amount of drench used without seeing any decrease in performance. Although they admit that they haven't carried out as much monitoring as they should.

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL UNITED KINGDOM

KEY FINDINGS

- Some reduction in drench use
- Need to increase monitoring to see further benefit

FARMER COMMENTS

"We struggled in the start using FECPAK^{G2}, but with practice we found the system very helpful."

"I'm glad we joined the [Sainsbury's] Project, although we need to do more."

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL UNITED KINGDOM

Name: Case Study Farmer A

Farm Type: Upland Sheep

Region: Carmarthenshire

Stock Units: 570 Ewes, 250 Hoggets,
1,100 Lambs

Land Area: 81 ha

FECPAK^{G2}

The farm has been part of the Sainsbury's FECPAK^{G2} Project since 2014. Over this time the farm has processed between 22 and 30 tests per year.

RESULTS

Before being involved in the Project, worming was done based on a schedule which didn't change from year to year. Adopting regular FEC monitoring has resulted in big changes to this policy. There's been a considerable impact on wormer usage with lamb dosing reduced by 40% and ewe dosing reduced from twice a year to only dosing 80% of ewes once a year. This reduction in drench use alone is estimated to save £450 per year for this flock.

Lamb output has improved dramatically from 2014 to 2016 as highlighted in the table below. Although many changing factors have influenced this, improved worm control has certainly played its part.

	Lamb Output			
	KG/ha LW	Kg /ewe LW	£ / ewe	£ /ha
2014	391	50	£ 91.89	£ 723.65
2015	630	65	£ 103.20	£ 1,000.24
2016	703	68	£ 127.97	£ 1,008.70
2 yr Change	+312kg	+18kg	+ £36.08	+ £285.05

The change in lamb output from 2014 to 2016 means that approximately £23,000 worth of more lamb is sold from the 81 ha they farm, remembering that this is on the back of less wormer being used.

Another key finding for the farm was determining which drenches worked by carrying out post drench checks. They were able to confirm their suspicions that Moxidectin (e.g. Cydectin) was ineffective with only a 50% reduction in egg counts post treatment. At the same time, they established they can still use Levamisole (2LV) as this achieved a 100% reduction.

"We have confidence now that the wormers we are using are working."

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL UNITED KINGDOM

KEY FINDINGS

- Significant reduction in anthelmintic use
- Determined which wormers worked
- Helped increase farm productivity
- Found unexpected winter worm burdens

FARMER COMMENTS

"The kit works well and has certainly been a good and positive change to the farming enterprise."

"Needs to be used more to help get more out of it."

"We would not go back to routine worming patterns."

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL UNITED KINGDOM

Name: Case Study Farmer J

Farm Type: Upland Sheep & Beef

Region: Tregaron, Cerediigion

Stock Units: 700 Ewes, 150 Hoggets,
900 Lambs, 45 store cattle

Land Area: 136 ha

FECPAK^{G2}

This farmer has been a member of the Sainsbury's FECPAK^{G2} Project since May 2015. Over this time, they have processed around 17 FEC per year.

RESULTS

This farmer has been able to reduce reliance on wormers, especially in 2015 when lambs were only dosed twice on average versus the 3-4 doses they would have normally received. The difference between groups of lambs on the farm has also been interesting as not all lambs need to be dosed at the same time, where before all lambs on the farm would have been dosed on the same day.

Ewes were only wormed once per year and this was normally done as a pre-tupping dose in the autumn. The farmer now realised that this was the incorrect time and changed to worming at turnout from the lambing shed.

Other changes to management have seen the farmer using cross grazing with cattle where possible if high egg contamination has occurred on a field, and rotational grazing to make best use of grass. They also used post treatment drench checks to keep an eye on effectiveness and find them very useful.

DRENCH EFFICACY

This farmer also took part in the Sainsbury's Drench Check Project which evaluated the farm's drench resistance status. The results confirmed resistance to white drench (1BZ) which was no great surprise and the start of resistance to Ivermectin (3ML). Both the yellow drenches (2LV) and Moxidectin were effective at this stage. As they are now aware of resistance status they can avoid wormers that don't work while minimising use of wormers where resistance suspected / starting.

"We were fearing the worst as we knew of several others who had considerable problems. Didn't know what to expect and results in the end weren't as bad as we feared so we can work with that."

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL UNITED KINGDOM

KEY FINDINGS

- Reduced reliance on wormers
- Noted difference between groups of lambs
- Identified resistance

FARMER COMMENTS

"Been an important and useful tool for the farm. We will definitely continue to use it."

"We had very little issues with the FECPAK^{G2} and I find it an extremely easy process."

"The farming system has changed to one where there is much more reliance on grazing with creep feeding removed, so keeping track of the parasite challenge is essential for this new system."

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL UNITED KINGDOM

Name: Case Study Farmer I

Farm type: Hill Sheep & Beef - Organic

Region: Talybont, Ceredigion

Stock Units: 800 Ewes, 240 Hoggets,
800 Lambs, 25 Suckler Cows + Calves

Land Area: 300 ha

THEIR STORY

This is a hard hill farm in North Ceredigion. Of the 300ha, 50% is rough extensive grazing and rough woodland and the other 50% is improved hill ground. The flock is made up of hardy Ceredigion type Welsh Mountain sheep which are performance recorded. The farm is run on an organic system.

FECPAK^{G2}

This farmer has been a member of the Sainsbury's FECPAK^{G2} Project since February 2015. Over this time, they have processed between 25 and 40 FEC per year.

RESULTS

Being organic, the farm traditionally carried out very little worming, although not many FEC tests were done previously to prove this. Because they farm an extensive hill farm they believed that worm burdens wouldn't be a major problem in comparison to more intensive lower ground farms. Therefore, only spot treating based on clinical signs was carried out historically for lambs, but now through regular testing they have unexpectedly found very high worm burdens.

The outcome here has therefore been the opposite of what most farmers find as a lot more worming has been done following testing. Lamb performance was struggling over the years and undetected burdens may be one factor. Some improvement in lamb weights have already been recorded.

Although spending has increased with higher treatment costs and labour, the farmer hopes that this cost will be paid back over the years with improved stock performance as they start getting on top of worm burdens.

Simple Drench Check tests suggest there may be resistance issues with the white (1BZ) and yellow (2LV) drenches which need to be confirmed in the future. This is a surprise considering the low worming frequency, especially so for the yellow drench as they didn't think they used much of that in the past. However, it turns out that ewes are all blanket treated every year with Combinex which is a combined fluke treatment and wormer, with the wormer element being a 2LV wormer which they didn't realise.

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL UNITED KINGDOM

KEY FINDINGS

- Worms are more of a problem than realised
- Support and advice received through Project was very valuable
- Identified resistance concerns

FARMER COMMENTS

"Being part of the [Sainsbury's] Project has helped identify that worms are a big problem on the farm. There is still work to do on improving worm control and achieving better performance."

"The [FECPAK^{G2}] system is easy to use and we have no problems now and I like the fast turnaround of results."

"Don't use enough at moment and need to use more which will help refine treatment timing etc."

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL UNITED KINGDOM

Name: Case Study Farmer M

Farm Type: Sheep and Beef

Region: Selkirk, Scottish Borders

Stock Units: 5,200 Ewes, 1,500

Hoggets, 500 Beef Cattle

Land Area: More than 60,000 acres

THEIR STORY

This farmer manages a large estate in Scotland, carrying over 5,000 sheep and 500 head of cattle. Lambing starts with the 'in-by' ewes in mid-March with the hill and main groups following in April. They have been focussed on improving on-farm performance over the last few years by introducing various new technologies such as EID recording and rotational grazing systems.

FECPAK^{G2}

In the past, our farmer and their shepherds have used a schedule based worming programme supported by a few FECs across the season. However, samples were not carried out frequently enough to be the base of decisions. When they joined the Sainsbury's FECPAK^{G2} Project they hoped to fully use FEC for their worming programme.

RESULTS

"[We do] less drenching and have been able to improve our management of lambs that aren't doing well."

Prior to the Project, the treatment of lambs was based on the time of year. However, since the uptake of FECPAK^{G2}, lambs are only treated after a sample has been taken and a burden found, meaning not all groups are treated at all times. An example of this was at weaning when under normal circumstances all 6,000 lambs would have been dosed – last year this dropped down to around 500 that needed it. FECPAK^{G2} is also being used when there is a performance concern in a group or individual.

"I found in this last year that our pre-tupping dose could be dropped [from all groups]."

In previous years, all mature ewes were given a pre-tupping drench, this was found to be unnecessary once regular FEC was introduced into the management. All treatment of young stock is now based on FEC.

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL UNITED KINGDOM

KEY FINDINGS

- Only drench when necessary
- Monitor all stock classes

FARMER COMMENTS

"I found the system easier once I had the tablet...it's also easier the more you use it."

"I'm glad we took part in the Project and there is definitely space for the FECPAK^{G2} going forward."

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL UNITED KINGDOM

Name: Case Study Farmer L

Farm Type: Sheep, Beef and Poultry

Region: Cambo, Northumberland

Stock Units: 1,500 Ewes, 330 Hoggets,
450 Beef Cattle

Land Area: Unknown

THEIR STORY

This farm is based near Morpeth, Northumberland. It manages a total of nearly 2,000 sheep and 450 head of cattle, they are also in the process of building chicken sheds and starting to produce eggs for Sainsbury's. Lambing for all groups starts on the 18th of April with an aim to have all fat lambs away by February.

FECPAK^{G2}

In the past, this farmer has been worming his flock based on clinical signs, occasional FEC were carried out, however, the vets are 10 miles away so the process took too much time. When the farmer joined the Sainsbury's FECPAK^{G2} Project he hoped to be more consistent with his monitoring and improve his worming programme.

RESULTS

"Although I haven't used [FECPAK^{G2}] enough, we have finished the lambs quicker this year than the previous years."

In previous years, there would still be hundreds of lambs left on farm to be finished in February and on into the spring. However, in this last season where FECPAK^{G2} has been used, all lambs have been away off grass, milk, and Brassicas by the 22nd February.

"I want to give our hoggets more attention and start testing them regularly"

This farm is running an organic system, therefore, minimal treatments is always the aim. This means that the mature ewes are not routinely drenched for worms. However, FEC results have been used to alter management of grazing and contamination around high output times i.e. tupping and lambing.

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL UNITED KINGDOM

KEY FINDINGS

- Links between FEC and improved growth/finishing of lambs in 2016/2017 season
- A need to monitor all stock classes more regularly

FARMER COMMENTS

"It has been a very useful Project to be involved in, and we have seen stock performance go up, therefore increasing efficiency."

"I need to make more time to fit FEC into our management system, as I can see the benefit."

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL UNITED KINGDOM

Name: Case Study Farmer K

Farm Type: Upland Sheep

Region: Carmarthenshire, Wales

Stock Units: 1,000 Ewes, 400 Hogget's,
1,500 Lambs

Land Area: 365 ha

FECPAK^{G2}

The farm has been part of the Sainsbury's FECPAK^{G2} Project since February 2015. The farm has processed 15 samples in total.

RESULTS

Before joining the Project, no FEC testing was done at all, with dosing based on a schedule and clinical signs. The farmer wanted to change this policy after attending the Sainsbury's farmer meetings and learning about the extent of resistance. Not as many tests were carried out as they had hoped and this was partly down to unforeseen circumstances (illness and change of shepherd). However, there were some benefits to be reported.

Wormer use has reduced on the farm, partly as the result of FEC testing and partly from what they have learnt from being part of the Project. The biggest impact has been seen with ewes, instead of drenching ewes twice a year, now only 50-60% of ewes are drenched once which equates to approximately 1,400 less ewe drenches per year. The timing of the spring dose for ewes also changed with the historical pattern to dose ewes at same time as lambs first dose now changed to an at lambing turnout drench for the groups that needed it.

They started incorporating the 2 new wormers Zolvix and Startect as quarantine and mid-season drenches. Testing for wormer resistance to the other wormers has been identified as a task for next season.

KEY FINDINGS

- Reduced reliance on wormers – especially in ewes
- Changed drench choices

FARMER COMMENTS

“Not fully utilised the system yet. But a lot has already changed in terms of worm control policy just from what we have learnt as being part of the Project.”

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL UNITED KINGDOM

Name: Case Study Farmer F

Farm Type: Hill / Upland Sheep & Beef

Region: Ceredigion, Wales

Stock Units: 1,800 Ewes, 460 Hoggets,
2,800 Lambs (incl. stores),

140 Beef Cattle

Land Area: Unknown

THEIR STORY

This family farming business runs over several properties with most of the land being extensive hill grazing. The flock comprises of mainly hardy Welsh Mountain sheep. The farm also took part in HCC's WAARD Project* in 2014 and 2015.

HCC's WAARD Project*

In 2014 Hybu Cig Cymru (HCC), commissioned the WAARD project to look into wormer resistance on sheep farms in Wales. The project was funded through the Rural Development Plan for Wales 2007-13, Supply Chain Efficiencies Scheme for animal health activities. The project was managed by Techion UK Ltd, supported by Bristol University, the Welsh Regional Veterinary Centre and 5 Veterinary Practices. For full results of the WAARD project please see the HCC Website:- http://hccmpw.org.uk/farming/projects/anthelmintic_resistance_project/

FECPAK^{G2}

The farm has been part of the Sainsbury's FECPAK^{G2} project since February 2015. Over this time the farm has processed between 50 and 65 samples per year.

RESULTS

The farm became involved in the project after discovering they had multiple resistance under HCC's WAARD Project*. They had confirmed resistance to the 3 main wormer groups (1BZ, 2LV and 3ML) and evidence of the start of resistance to Moxidectin. This was a real eyeopener for the farm and prompted their interest in carrying out more monitoring to combat the issue.

Regular monitoring has resulted in a lot less usage of wormers. In 2015, it is estimated that on average 1.5 less doses per lamb were given. Although 2016 was more favourable towards worms which resulted in the need for more dosing than the previous year, this was still less worming than they would have done before the project. The choice of wormer has also obviously had to be altered increasing usage of the 2 new wormer groups in the mid-season. However, they are still on occasion using some wormers that, although they showed early signs of resistance, still had fairly good efficacy rates. They will continue to carry out a Drench Check after dosing to see what level of control is achieved.

SAINSBURY'S FECPAK^{G2} PROJECT FARMER TESTIMONIAL UNITED KINGDOM

Ewe dosing has also reduced from twice to once a year, and the timing of this dose has changed from late spring to during or before lambing and not all ewes were wormed. This showed that FEC testing helped better target the dosing to when it was needed.

The most pleasing benefit for the farm has been the difference in performance. Analysis of slaughter data has shown that on average lambs finished between 2 and 3 weeks quicker in the last 2 years than they had done previously (*Source: Dunbia and AB Sustain*). This demonstrates that multiple resistance can be managed positively.

"We have definitely seen a marked improvement in lambs, and [we are] sure it's down to better control of worms as only main thing we have changed. Similar weights but finished a lot faster."

KEY FINDINGS

- Dealing with multiple resistance, improved performance
- Reduced wormer use in lambs and ewes
- Ewe spring dose timing changed
- Used cross grazing to reduce pasture burdens

FARMER COMMENTS

"It's been well worthwhile being part of the project. The benefits have more than paid for the cost of the kit and annual sub, even if it was without Sainsbury's support."

"Very happy to use the [FECPAK^{G2}] system now and has become an easy routine task for the farm."

"Before [the Sainsbury's] Project, [we were] unaware that resistance was such an issue. We now have a much better understanding of the worm issues on farm."