



**EFEI** Eliminating  
Facial Eczema  
Impacts

# Quarterly Report #2

## Background to the EFEI Programme

The EFEI programme has a bold goal of eliminating the impact of facial eczema (FE) as a disease of livestock in NZ, which will shift our pastoral farmer's mindset from FE management to FE impact elimination. The outcome will be freedom of NZ livestock from the impact of FE, compared to the current approach which delivers partial management success in some cases, but also an unacceptable cost of FE incidence, impact on our farmer's wellbeing and continued geographic spread of the disease.

The programme is transformational, it will change from the current model of partial management of FE to an elimination of impacts approach. The programme is focused on a farm systems approach to support eliminating the impact of FE, with farmers engaged from the start, allowing tools and solutions to be rolled out as they are developed.

The EFEI Programme is made up of five inter-dependent workstreams:

- Workstream 1: Understanding the Basics
- Workstream 2: Understanding the Impacts
- Workstream 3: Discovering Tools and Solutions
- Workstream 4: Delivering Tools and Solutions (*begins in year two-three of the programme*)
- Workstream 5: Catalysing Communications and Action for Impact

The benefits for NZ from this programme will spread beyond the pastoral sector. Conservative modelling suggests that a successful uptake of the tools generated in this programme would gain an estimated cost-savings of \$38m per annum in direct impacts from FE. We estimate that by 2035, the cost-savings to NZ will be \$103m per annum.

## Summary of progress from 1 April 2024

In Quarter One, the programme focused on establishing and contracting various projects in line with the annual plan. The commissioned work aligns with the programme's objectives, with several projects now underway.

### Research

- Ongoing assessment of the feasibility of a DNA-based PCR test to differentiate toxin-producing from non-toxin-producing fungal species, with results expected by June 2024. If promising, a further six months of validation will be needed to provide farmers with greater knowledge about FE risk.
- Held preliminary discussions with a South African research group (Milk SA, FABI, University of Pretoria) to ensure complementary research efforts and maximize knowledge for managing FE.

- The first year of the "Sheep poo study" was completed in May, with data being prepared for analysis to develop a predictive FE risk model. Over 200 farmers submitted faecal samples (see figure 1), providing insight into FE distribution across New Zealand. An online GIS viewer allows farmers to see real-time FE risk data. The next study season begins in October 2024, aiming to recruit 350 farmers.

## Contracts

- Ingenum Limited has been contracted to undertake data analysis of the epidemiological study and development of a predictive model for FE risk. The project duration is 2.5 years and led by Tom Brownlie of Ingenum.
- Manaaki Whenua – Landcare Research has been contracted to investigate the environmental triggers of sporidesmin, the toxin produced by *Pseudophthomyces*. This research will provide a literature review on the environmental triggers of sporidesmin. The project duration is two years and is led by Dr Bevan Weir at Manaaki Whenua Landcare Research, Auckland.
- AgResearch Limited has been contracted to investigate biocontrol options for managing FE. The project duration is three years and is led by Dr. Mark Hurst at AgResearch Lincoln.
- AgResearch Limited has been contracted to develop a method for accurately measuring and rapidly detecting sporidesmin in multiple samples types. This project will also undertake a literature review on emerging technologies for measuring sporidesmin. This project duration is one year and led by Dr. Alastair Ross at AgResearch, Lincoln, with assistance from Dr. Wade Mace at AgResearch, Palmerston North.
- Began establishing contracts with providers to establish in relation to workstream 2 (understanding the impacts) which will establish economic impact and social impact surveys for a benchmark measure of the programme.

## Engagement and Communication

- B+LNZ hosted the Annual EFEI workshop at AgResearch Lincoln, inviting researchers, programme staff, and partners. The workshop provided programme updates, gathered feedback, and outlined plans for the next 18 months.
- B+LNZ staff briefed the Primary Production Select Committee at Parliament on the EFEI Programme, presented at the NZVA conference in Christchurch on the epidemiological

study, and had a stand at Field Days in Hamilton with information on facial eczema and the programme.

- A well-attended webinar (86 attendees) on 27 May provided an update on the development of the non-invasive test for FE tolerance in sheep, highlighting the complexity of this tool's development.



**Figure 1.** Gray Menlove and his grandchild collecting samples for the EFEI Epidemiological study.

### **Upcoming in the next quarter**

There are five priorities for the programme in the next quarter:

1. Continuing to establish contracts with providers to undertake research as outlined in the Annual Plan through to 30 September 2024 and beyond where appropriate.
2. Confirm the appointment of members to the independent science panel for the EFEI programme and investigate options for a potential briefing.

3. Collate findings from the EFEI workshop to develop the annual plan for the period from 1 October 2024 to 30 September 2025 for Programme Governance Group consideration (PGG) in September 2024.
4. Ensure ongoing contract management and monitoring with contracted providers.
5. Develop a comprehensive communications programme for the upcoming FE season which will raise awareness of FE and the EFEI programme.

## Investment to date

Table 1. Investment summary to date within the EFEI Programme

Investment period	B+LNZ contribution	MPI contribution	In-kind contribution	Total investment
18 Nov 2022 – 30 March 2024	\$ 502,221.00	\$ 282,881.27	\$ 246,745.00	\$ 1,031,848.00
1 April 2024 to 30 April 2024	\$ 34,038.37	\$22,692.24	\$45,980.00	\$ 102,710.61
<b>Total at 30 April 2024</b>	<b>\$536,260.10</b>	<b>\$305,573.51</b>	<b>\$292,725.00</b>	<b>\$1,134,558.61</b>