

Webinar summary: Facial Eczema – Part 1

This webinar explores the challenges of facial eczema (FE) in dairy cows, focusing on its causes, impacts, and strategies for prevention and management. Key areas covered include the role of environmental conditions, copper and zinc, liver health, and pre-season preparation.

In this webinar:

1. Overview of facial eczema

- Caused by the ingestion of *Pithomyces chartarum* spores, which are oxidised in the liver, leading to toxin build-up and liver damage.
- Symptoms include reduced appetite, milk production decline, and photosensitivity.
- Costs to NZ farmers exceed \$100 million annually in milk loss and animal health expenses.

2. Ideal conditions for facial eczema

- Warm (21–27°C), humid (100% humidity) environments favour fungal growth and spore release.
- Grazing on low-residual pastures increases spore ingestion risk.

3. Role of copper and zinc

- Zinc reduces spore toxin effects by blocking its oxidative potential, protecting liver function.
- Excess copper can exacerbate oxidative stress, making spore toxins more damaging. Supplementation with strongly bound copper chelates is advised.

4. Liver health and function

- The liver plays a crucial role in detoxifying sporidesmin toxins.
- Damage from FE impairs glucose production, reduces appetite, and weakens the immune and reproductive systems.

5. Monitoring and prevention

- Use weather and spore count data to assess risk levels.
- Start zinc supplementation early (from December) to build up liver reserves.
- Exclude non-chelated copper from the diet during high-risk periods.

6. Supplementation strategies

- Recommended zinc doses include:
 - Zinc sulphate (water): 7–10g/cow/day
 - Zinc oxide (feed): 4–6g/cow/day
- Liver tonics like seaweed and methyl-donors such as Betaine support liver health and repair.
- Trace minerals like selenium, iodine, cobalt, and chromium improve liver resilience and overall cow condition.

7. Key indicators for FE impact

- Changes in milk composition (protein and fat levels) and cow behaviour (lethargy, grazing patterns).
- Liver enzyme levels such as GGT and GDH can indicate liver health status.

For more detailed information, watch the webinar or download the slide deck.