

Optimising ewe performance over the lambing period

Martin Beltrame

Zoetis

Zoetis at a Glance

70+

Years of experience

We provide:

Medicines, Vaccines,
Diagnostics, Biodevices,
Genetic tests &
Precision animal health



Kristin Peck
Chief Executive
Officer



100+

Countries where Zoetis
products are sold

29

Manufacturing sites

7

Major product categories

8

Core animal species

1,600

Approximate
R&D colleagues

4,100

Approximate
field force members

14,100

Approximate colleagues
worldwide



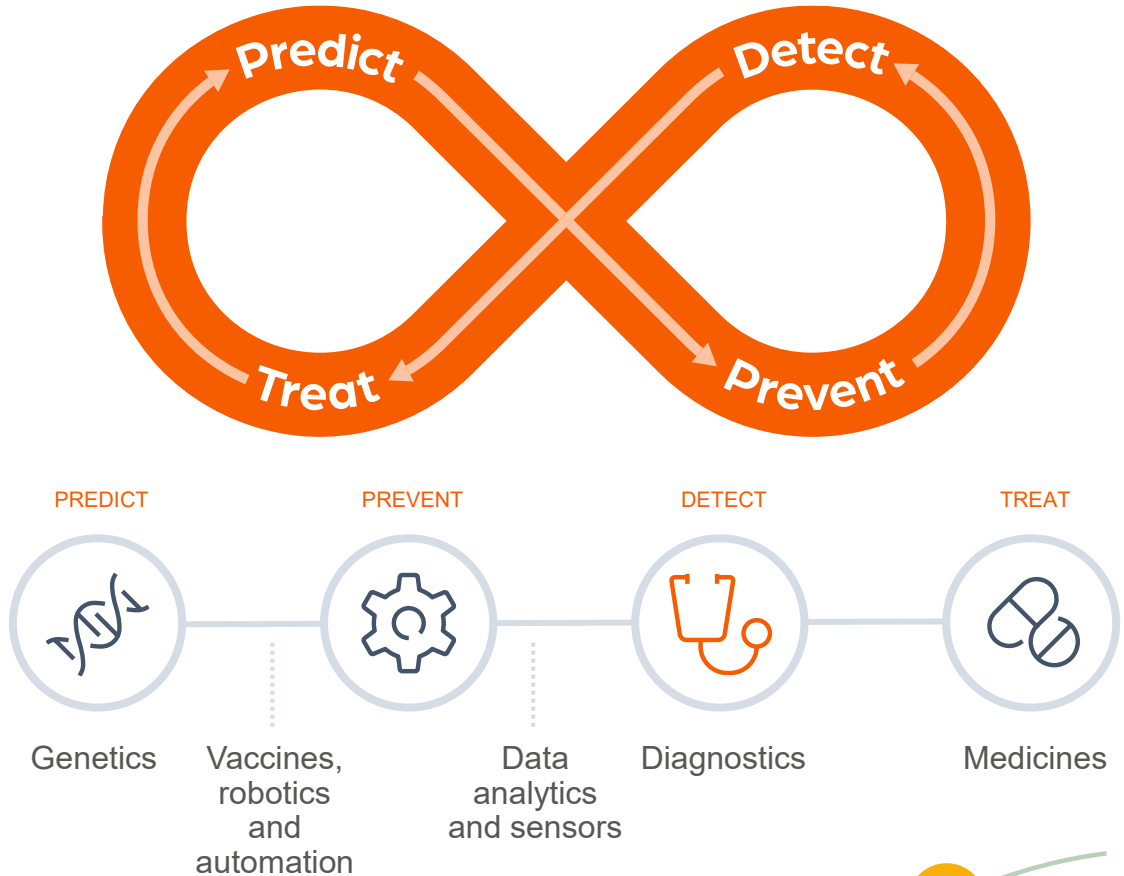
²⁵⁰ Note: Facts and figures shown are as of Dec. 31, 2023
Excludes revenue associated with Client Supply Services and Human Health, which represented 1% of total 2023 revenue.

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Innovating Across the Continuum of Care

Globally, Zoetis invested
~AUD\$950m
in Research & Development in 2023

- 14% increase from 2022



A man wearing a straw hat and a plaid shirt is looking down at a tablet device in his hands. He is standing in a grassy field with several brown cows in the background. The sky is overcast. A white curved line is visible in the top right corner of the image.

Increased AUSTRALIAN manufacturing capabilities

Recent purchase of both Jurox and the Parkville CSL
Manufacturing site

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Pre-lambing considerations

'It all starts with the ewe'

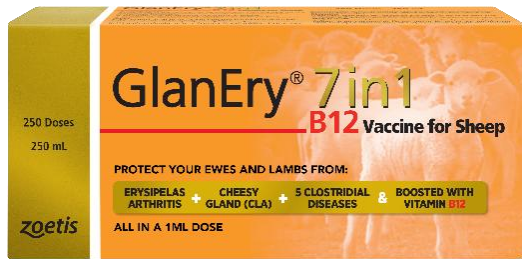


How can producers optimise pre-lambing management?

- Provide adequate nutrition
- Use a pre-lambing booster to maximise colostrum.
- Vaccinate to protect the ewe
- Manage internal parasites carefully over the pre-lambing period
- Ensure trace mineral supplementation is adequate.



The importance of good colostrum and vaccination



meatup
FORUM



GOOD
ewe
management

=

GOOD
colostrum

=

GOOD
lamb
immunity

Passive transfer of immunity

Where does colostrum come from?

Getting the best out of pre-lambing vaccination





Colostrum is the first milk.

LIQUID GOLD; KEEPING LAMBS ALIVE.

- Ewe transfers the antibodies circulating in the blood to the first milk which can then be absorbed by the lamb shortly after birth.
- Usually, the lamb needs to drink in the first 12 hours of life with most of the absorption occurring in the first 6 hours post lambing.
- This provides transient disease protection from antigens that the ewe has recently been exposed to.

Understanding why colostrum is important

- The ruminant placenta does not allow the transfer of immune cells
- Lambs are unable to develop their own antibodies until one month of age.
- The lamb is essentially borrowing the mother's immune cells until their own immune system develops



Lambs that do not receive adequate colostrum are more likely to die

- Failure of passive transfer (FPT) i.e. not enough antibodies consumed via colostrum, is associated with lamb losses
- Failure of passive transfer occurs due to the ewe not producing enough antibodies and/or lambs not drinking adequate quantities of colostrum in the right timeframe



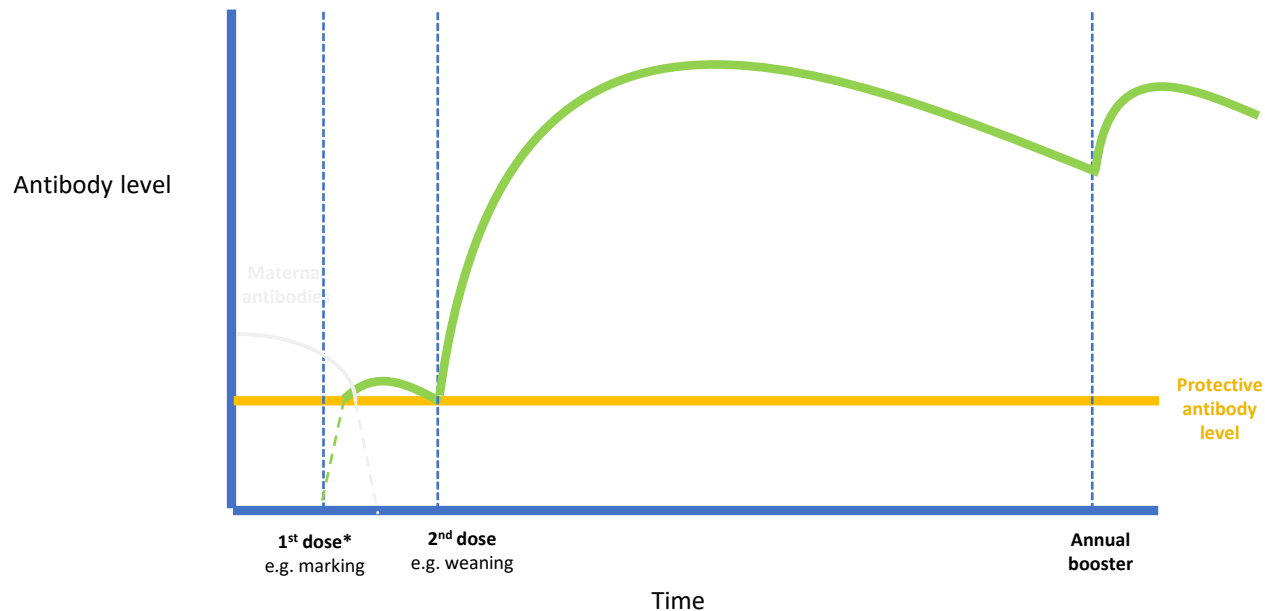
We can use vaccination to improve colostrum production in the ewe.

- In sheep colostrum production begins 2–3-weeks pre-lambing.
- Stops abruptly at time of lambing to allow development of milk
- We can use vaccination at the right time to help boost colostrum

**VACCINATION =
SUPER CHARGED COLOSTRUM
= BETTER LAMB SURVIVAL**



PRINCIPLES OF VACCINATION

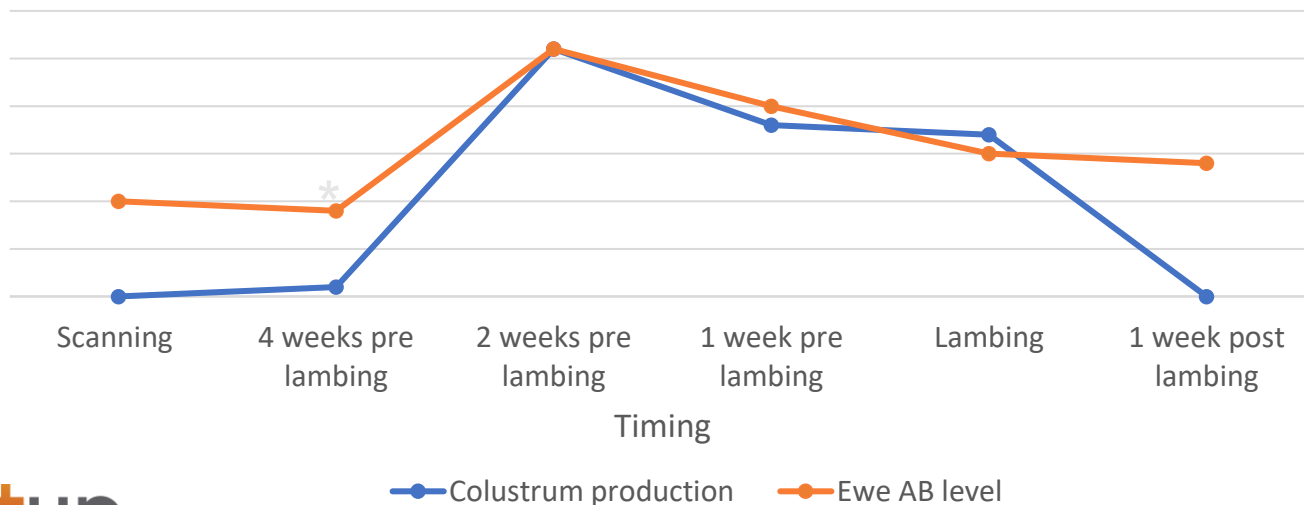


This is a schematic representation to demonstrate the principles of vaccination. Actual levels of antibody following vaccination will vary from vaccine to vaccine and animal to animal.

*the first dose of vaccine may not confer protective immunity

Producers can utilise vaccination timing to help produce super-charged colostrum

Ewe antibodies vs colostrum production pre lambing





Beef cattle and colostrum

- Principles are the same in cattle as in sheep
- Bigger focus on Leptospirosis prevention in cattle than sheep
- Colostrogenesis starts slightly earlier in cattle than in sheep

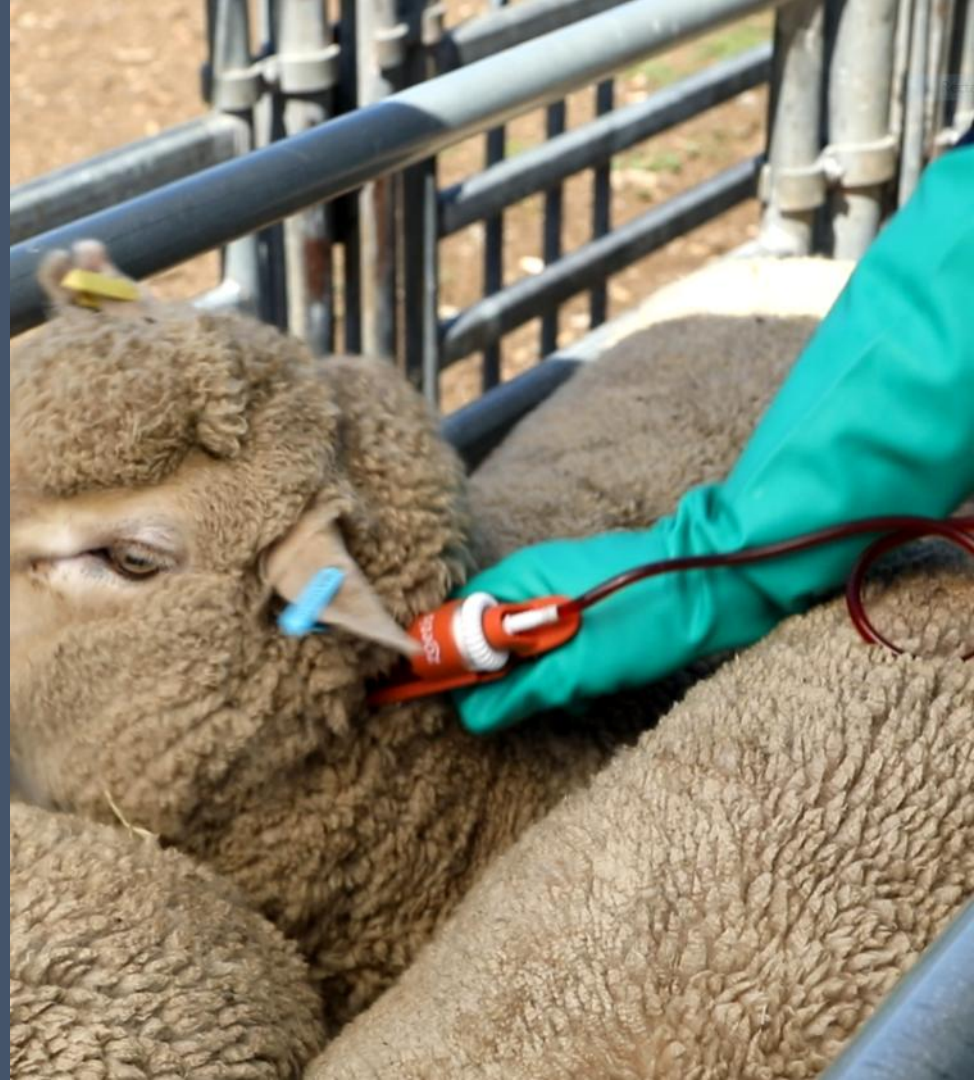


What vaccines are important pre-lambing to both protect the ewe AND protect the lamb

Clostridial diseases

CLA
(Caseous lymphadenitis or cheesy gland)

Erysipelas Arthritis



Clostridial diseases



Tetanus

- Bacterial spores abundant in the environment
- Marked lambs at high risk if unvaccinated – spores gain access through wounds
- Sudden death/stiff paralysis, signs typically post history of a



Pulpy kidney

- Bacteria in the environment and in the gut of healthy lambs
- Sudden death associated with changes in diet
- A booster vaccination is recommended prior to periods of risk

Clostridial Diseases costs the Australian sheep industry

\$32MIL
each year!

Clostridial diseases continued.



Blackleg

- Bacterial spores in the environment enter through cuts in mouth/wounds and lodge in muscles
 - Bruising → spores germinate and produce toxins → death
 - Dark red to black muscle (gangrenous myositis)
- meatup**
FORUM



Black disease

- Bacterial spores present in environment and body tissues of lambs, including liver
- Liver fluke associated due to migrating fluke allows spores to germinate, resulting in death
- Can also be associated with hydatids



Malignant oedema

- Introduction of the organism from the environment and the production of a small area of dead tissue
- Wounds, e.g. injuries, marking, fighting in rams (swelled head)

Caseous Lymphadenitis (CLA) or Cheesy Gland

- Highly contagious bacteria that is widespread in sheep and goat herds (*Corynebacterium pseudotuberculosis*)
- Spread via respiratory exhalation or from ruptured superficial abscesses
- Spread primarily at shearing/yarding
- Bacteria can survive for months in environment – contaminates yards and dips
- Often a hidden disease with abscesses affecting major internal body organs and lymph nodes – may be some coughing

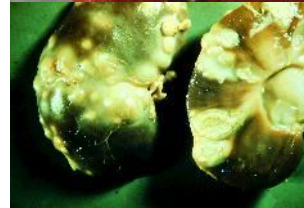
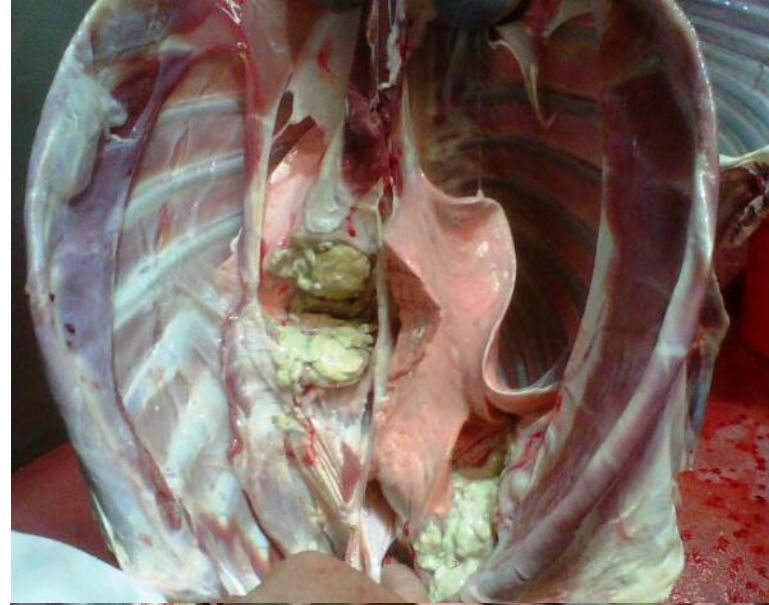


The on-farm impact of CLA

Pus filled abscess forms at the infection site causing

- Ill-thrift, lethargy and weight loss in lambs and sheep
- Meat quality issues
- Infertility & ram sterility
- Reduction in clean wool cut
- Zoonotic disease (can infect humans)

■



The economic impact of CLA

- Chronic losses on farm include reduced weight gain and reduced wool production.
- This disease accounts for **almost half** of all abattoir condemnations.

CLA infected sheep have a

4-7%

reduction in clean wool cut
in the first year of infection⁴

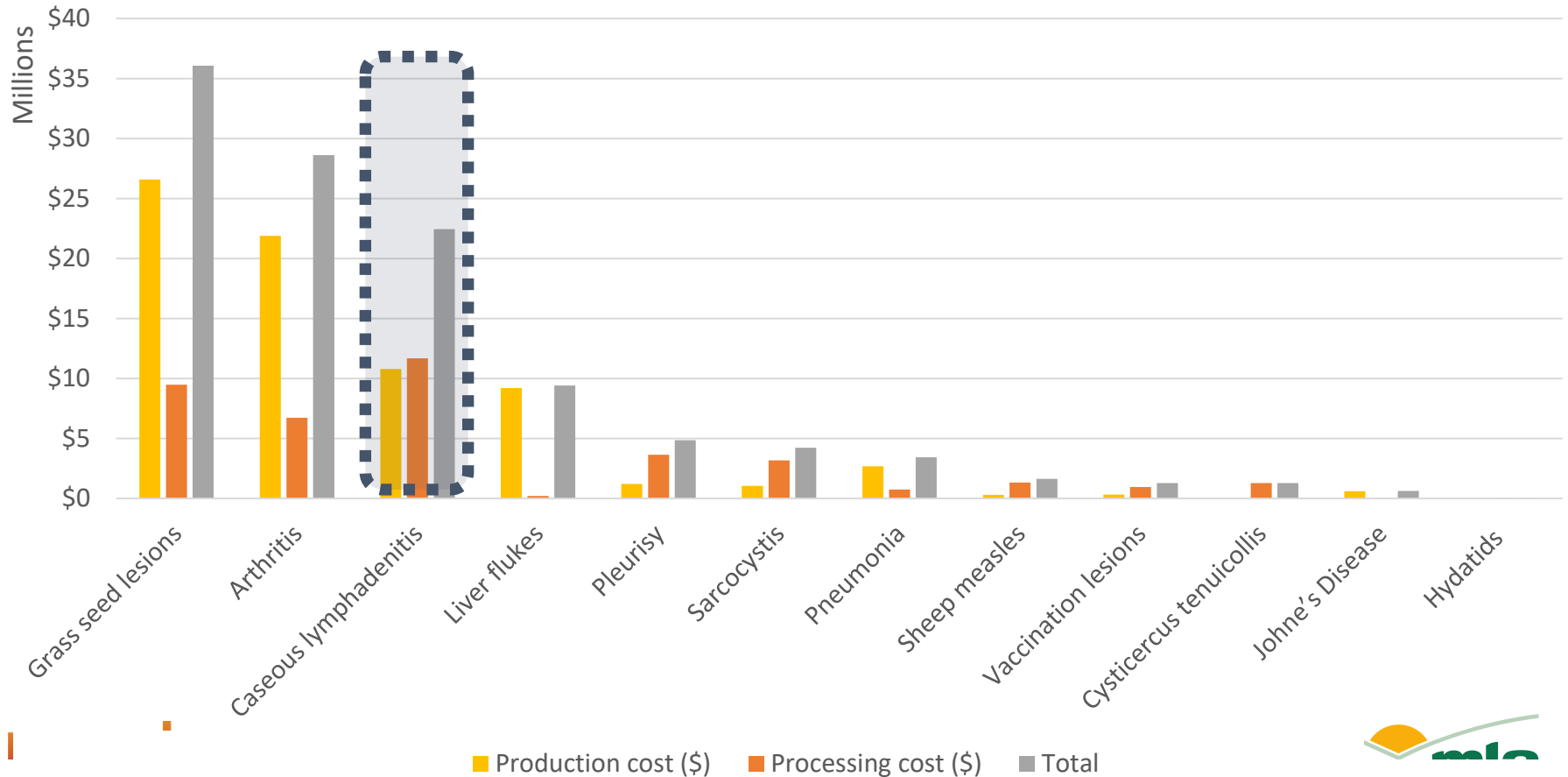
Cheesy Gland (CLA) costs the
Australian sheep industry

\$18MIL
each year¹

Almost **50%**
of 2+ year old sheep lines in
abattoirs are shown to be
infected with CLA



NSHMP Annual cost of disease

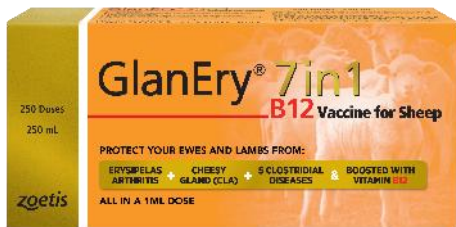


GlanEry 7in1 B12 efficacy against Cheesy Gland (CLA)

Field data:

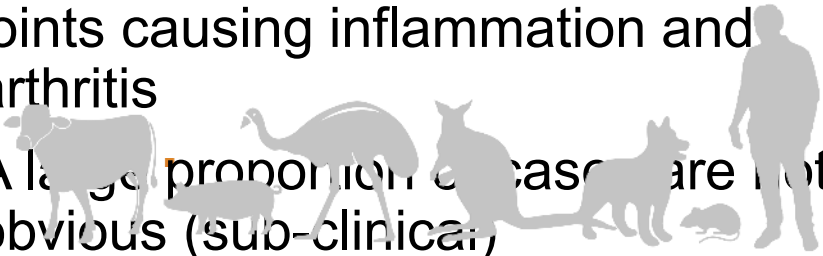
- Looking at flocks in an Australia wide study, a compliant long term vaccination program for CLA using Zoetis vaccines will bring down the prevalence of disease to around 3% vs 29% in non-vaccinated flocks
- Data also shows that non-compliant vaccination program did not significantly reduce disease prevalence

Recent CLA challenge studies showed that GlanEry 7in1 B12 vaccine is highly efficacious against CLA infection



Erysipelas Arthritis

- Soil borne bacteria that infects many species, including sheep, pigs, kangaroos, rodents, insects and birds
- Zoonotic disease (can infect humans)
- Most common cause of arthritis in lambs
- Bacterium enters via the umbilical cord or wounds, then localises in leg joints causing inflammation and arthritis
- A large proportion of cases are not obvious (sub-clinical)



Erysipelas Arthritis

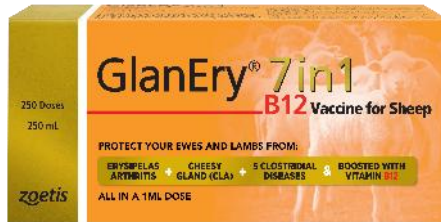
- Infection occurs in the paddock through wounds at marking, mulesing, dipping, shearing/crutching, umbilical cord and from the ewe's throat when cleaning afterbirth
 - Increased deaths and culls through ill thrift and lame lambs
 - Increased tail in the flock
 - Lambs that are unsalable or unfit to load (welfare issues)
 - C
 - C

1.4% of lambs born, die before weaning or are culled due to arthritis¹

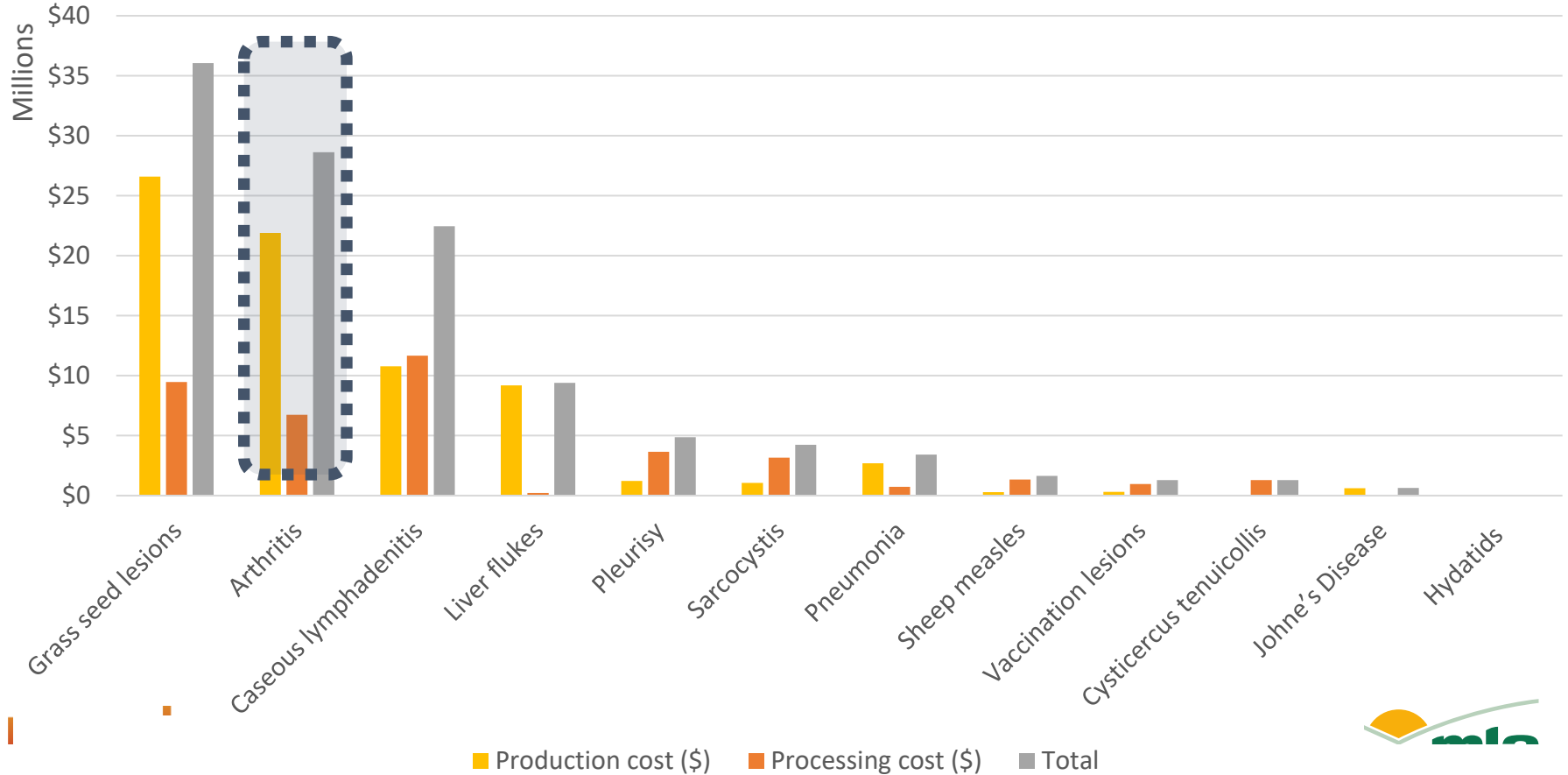


Managing erysipelas arthritis on farm requires a multifactorial approach

- Ensuring tails are docked at the correct length (3rd palpable joint)
- Good hygiene and pain relief at marking
- Avoid marking in muddy yards – ideally put lambs straight back onto the paddock post mark
- Vaccination of ewes pre-lambing will prevent erysipelas arthritis in young lambs
- Vaccination of lambs at marking and weaning will prevent erysipelas arthritis in weaner lambs



NSHMP Annual cost of disease



Effective parasite management

Don't forget about worms!



Pre-lambing ewes have a reduced ability to fight parasites



Faecal counts pre lambing

Building a picture to implement a strategy



- Good practice
- 6-8 weeks pre lambing
- Larval differentiation often pays off
- One piece of a bigger puzzle

Shorting acting or long acting (LA)?



Short acting

- ✓ Greater range of actives and combination products available
- ✓ Reduces selection for resistance
- ✓ Requires low paddock contamination

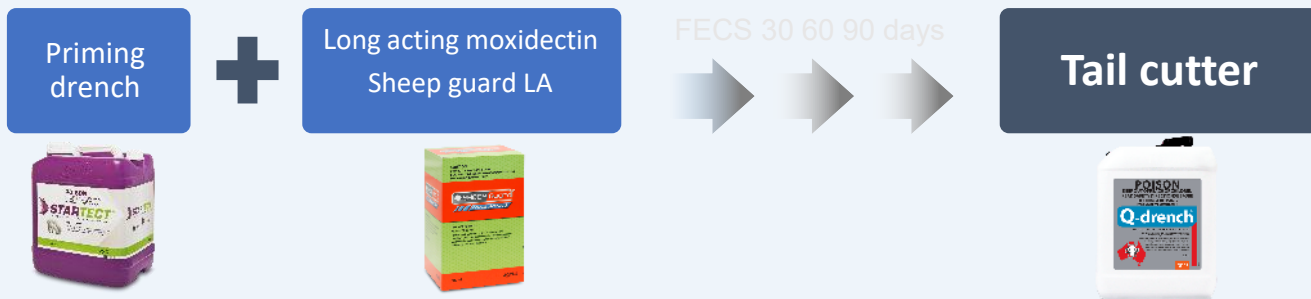
Long acting

- ✓ Limited actives and single active products only
- ✓ More heavily selects for resistant parasites
- ✓ Requires combination drench therapy
- ✓ Gives persistence which can help reduce paddock contamination for lambs

How to effectively use a LA product



- ✓ Only readily available product on the market is moxidectin
- ✓ Considerable production benefits in the face of high paddock contamination
- ✓ Primer and tail cutter should be effective short acting products



LA Moxidectin use pre-lambing



Care must be taken in the timing of moxidectin LA

- ✓ Timing (Ideally 5 weeks pre-lambing).
- ✓ Lipophilic - loves fat
- ✓ Sheep milk has a high concentration of fat
- ✓ Realistic expectation of moxidectin reducing re-infestation

Short acting drench selection



The most important drench decision you will make all year

- ✓ What works for you? Drench checks and FECRTs
- ✓ Use combination drenches
- ✓ Rotate between combination products

New active dual combination

Q-drench

Powerful 4-way combination drench

Dectomax V

Only dual active injectable drench available in Australia





Drenching Beef Females

- 1st and 2nd Calvers in Autumn herd require a drench containing a ML in Dec/Jan
- Adult cattle have strong resistance to Ostertagia
- Pre-calving drench is not a routine treatment unless indicators for treatment are present
- Injectable formulations result in higher blood levels of the active ingredient and more reliable dosing

Summary

- Nutritional management is of vital importance to ewes around lambing
- Colostrum is a key component of lamb survival.
- Sheep producers can utilize pre-lambing vaccinations to improve colostrum.
- Drench ewes prior to lambing
- Trace mineral supplementation can reduce morbidity around the lambing period.

A large, hand-drawn style orange thought bubble with a smaller tail at the bottom right.

**What questions
do you have?**

Check out MLA's new genetics hub

No jargon. No complexity. Just a clear look at how better breeding values can help you accelerate the productivity of your herd or flock

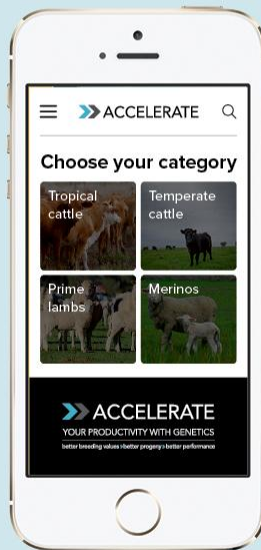
How-to videos to find sires on BREEDPLAN/ Sheep Genetics



How-to videos to get started with breeding values



How-to videos on shopping for a high-performing sire



'Can you Pick the Performer' videos



Producer case study videos



Further learning and resources

genetics.mla.com.au

What's next after today's **meatup** ? FORUM



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whole-farm performance



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experience



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people, value chain



mla.com.au/pgs

What's next after today's **meatup** [↑] ?

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EDGE WORKSHOPS

help producers gain knowledge and skills to improve their livestock enterprises.

Which one will you try first?



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EDGE



Breeding
EDGE



Nutrition
EDGE



Grazing Land
Management

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60 minutes