

The Value of Reporting Disease Data to Meat Processing Companies and Farmers

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AsureQuality Ltd
Hastings New Zealand
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Warning!

Content contains explicit adult scenes, coarse language, and disturbing violence. Viewer discretion is advised

The publisher wishes to thank the MINTRAC ladies for their contribution



Last year

**41.59 million
carcasses**

**7.53 million
diseases reported**

Presentation contents

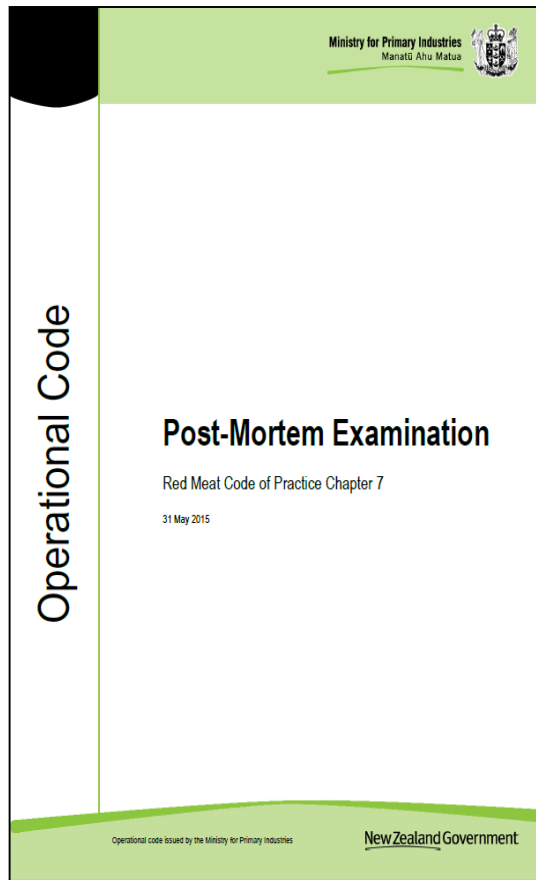
- Recording diseases and effects
- Recording methods
- Information examples
 - Liver fluke (sheep and cattle)
 - Ovis (sheep)
 - Facial eczema (sheep, cattle, deer)
 - Mange (pigs)
 - Johne's disease (deer)
 - Enzootic pneumonia (lambs)

AsureQuality

- State-owned Enterprise
- completely self-funding company
- supply independent assurance services in 40 countries via audit, inspection, laboratory testing and training to the:
 - Farming sector
 - Meat industry
 - Food industry
 - Horticulture and arable sectors
 - Disease diagnostics
 - Biosecurity



Why is disease data collected?



3.5 The Provision of Disease and Defect Information

- (1) The results of PM examination must be recorded by species and submitted to MPI. The details must include:
 - a) type of disease and defect
 - b) prevalence of each disease and defect;
 - c) number of carcasses condemned and
 - d) volume of kill to which the information relates.
- (2) The information must be supplied in the manner required by the Director-General e.g. date, species, premises.

What disease data is collected for MPI?

Sheep, lambs, goats, cattle, pigs, calves, deer, horses, alpaca, ostriches, ferals

Arthritis, Pleurisy, Faecal eczema, Neoplasia, Contamination, Septicaemia, Abscesses, Condemnations, Wounds/Bruises, Emaciation, Melanosis, Peritonitis, Scar tissue, Icterus, Oedema, White Muscle Disease, Injection-site lesions, Grass seeds, Notifiable diseases



Cattle

Xanthosis
C. bovis
Tuberculosis
Actinoform



Sheep/Goats

C. Ovis
CLA
Sarcocysts



Pigs

Skin lesions
Tuberculosis



Calves

Pneumonia
Navel ill



Deer

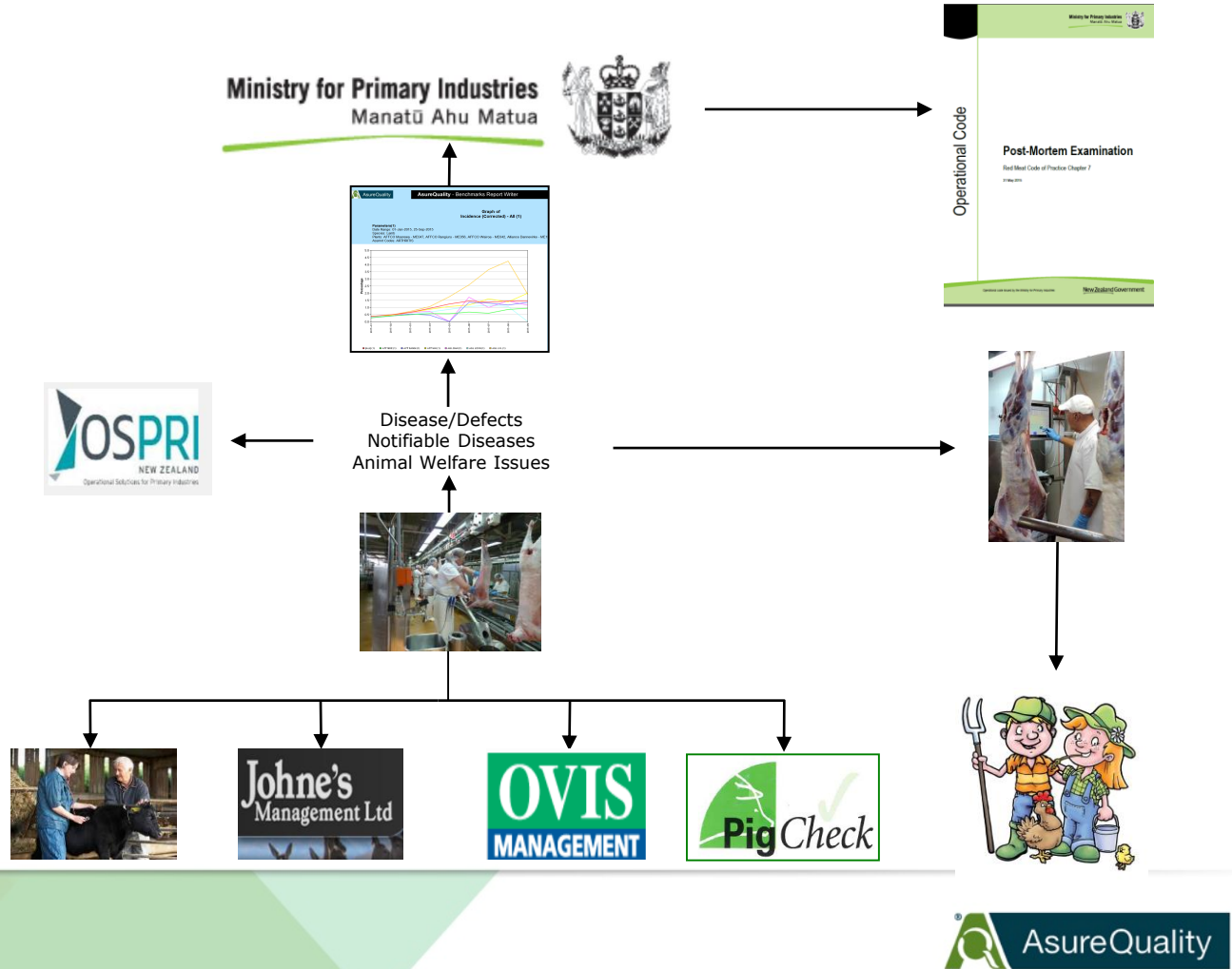
Arthritis
Bruises
Orchitis



Feral

Farmed
Putrefaction
Frozen
No viscera
Imperfect bleeding

Disease and Defect Reporting





Farm Assurance Programme



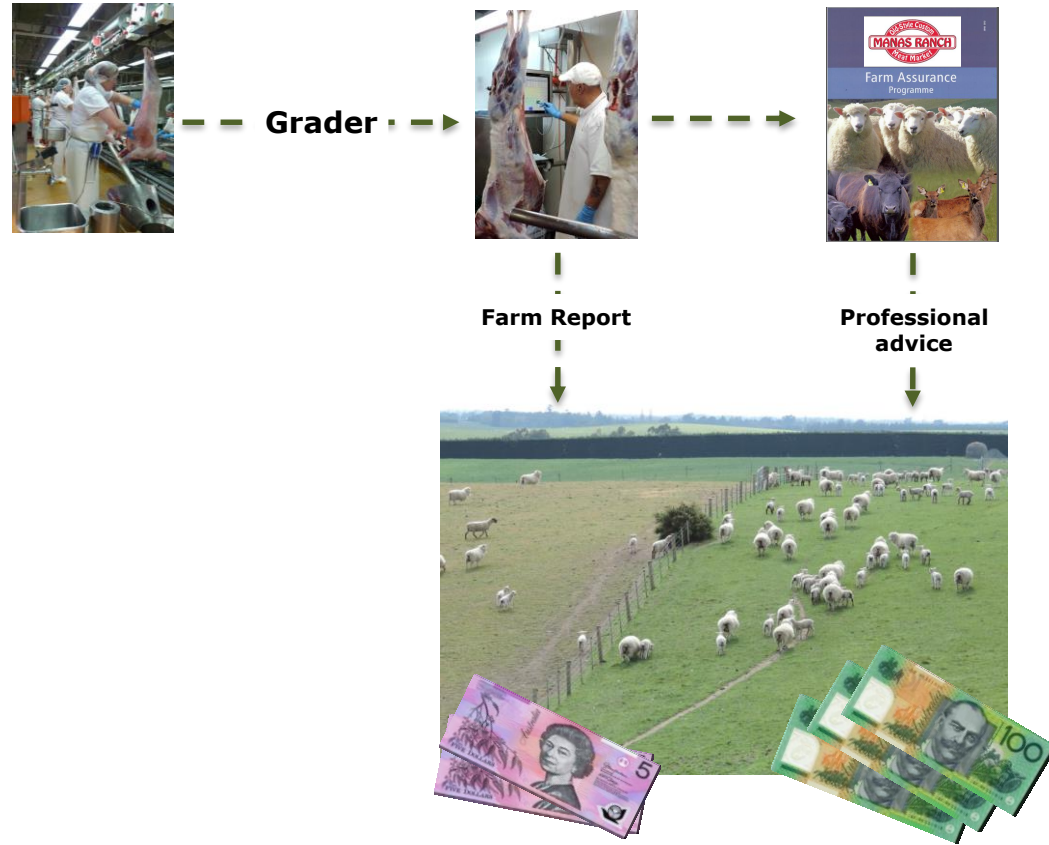
2.1.3 Animal Health

Requirements

- A preventive health plan must be prepared and reviewed annually by the producer in consultation with their veterinary practitioner.
- Signs of ill health or injury shall result in timely, appropriate, preventative or remedial action.
- Medication shall only be used in accordance with registration conditions and manufacturer's instructions or professional advice.
- All reasonable steps shall be taken to prevent, or identify and manage the risk of fly strike in sheep. Affected sheep shall receive appropriate treatment at the earliest opportunity.

Reporting

.....the benefits



AsureQuality Ltd Disease and Defect Indicator Tickets



How is
disease data
collected?

1. Ticketing

<p>WB</p> <p>C3500</p> <p>Wounds & Bruises Bruises, cuts, dog bites Carcass only</p>	<p>PYO</p> <p>C3500</p> <p>Pyogenic lesions Abscesses Carcass only</p>	<p>NP</p> <p>C3500</p> <p>Neoplasms (cancer) Cancer that has spread from viscera to carcass or in carcass. Carcass only</p>	<p>FAE</p> <p>C3500</p> <p>Faecal Contamination Contents of stomach or intestines Carcass only</p>	<p>CONTAM</p> <p>C3500</p> <p>Other Contamination Wool, hair, dust, grease, dirt Carcass only</p>
<p>EMAC</p> <p>C3500</p> <p>Emaciation Advanced poorness with no fat Carcass and viscera combined, also used with condemned ticket</p>	<p>SAR</p> <p>C3500</p> <p>Sarcocysts Cysts in skeletal muscles and diaphragm. Carcass only</p>	<p>SAL</p> <p>C3500</p> <p>Septicaemia Evidence of systemic involvement Carcass/viscera combined, also used with condemned ticket</p>	<p>ART</p> <p>C3500</p> <p>Arthritis Inflammation of any joint Carcass only</p>	<p>ISL</p> <p>C3500</p> <p>Injection Site Lesion Any type of animal remedy applied by injection with results in a scar Carcass only</p>
<p>FEX</p> <p>C3500</p> <p>Facial eczema Jaundice associated with signs of facial eczema, e.g. cirrhotic livers, facial lesions Carcass only</p>	<p>PLU</p> <p>C3500</p> <p>Pleurisy Inflammation of pleura Carcass only</p>	<p>ANY</p> <p>C3500</p> <p>Any Used for where a ticket does not exist, but specific data needs to be saved, or defect communicated to company</p>	<p>OC</p> <p>C3500</p> <p>Other causes Any condition that does not have a ticket allocated, e.g. melanosis, jaundice, scar tissue</p>	<p>CONDEM</p> <p>C3500</p> <p>Condemned Used in conjunction with any other ticket when both carcass and viscera are condemned</p>

Manual ticketing System



A disease ticket is attached to the carcass or hook



How is
disease data
collected?

2. Electronic



Electronic Data Input

- Disease icon is tapped, computer prints ticket
- Company places ticket on the hook
- Data is retrieved at end of shift, given to AsureQuality for sending to MPI



Viscera screen used to record

- Offal yield
- Match what's going over end of table with actual recorded disease



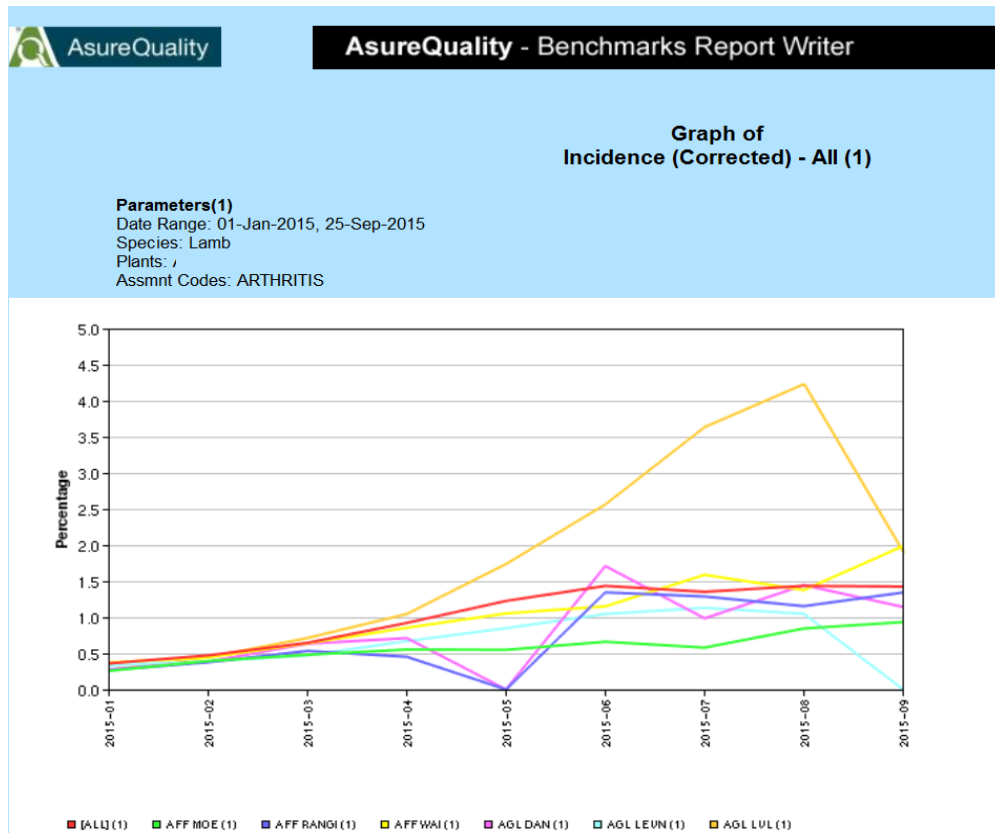
Further value

- Farmers scan cows to determine those in calf
- Result determines what cows are sent for slaughter
- Request AsureQuality to provide number of in-calf cows to gauge scan accuracy
- Also inform farmer how many for foetal blood payment - \$600 L



Data Presentation

- Each plant assessed against national average (red line)
- Trends
- Company can plan for retain rail staffing
- Buyers guided by what's actually happening



Examples of Benefits

Liver Fluke

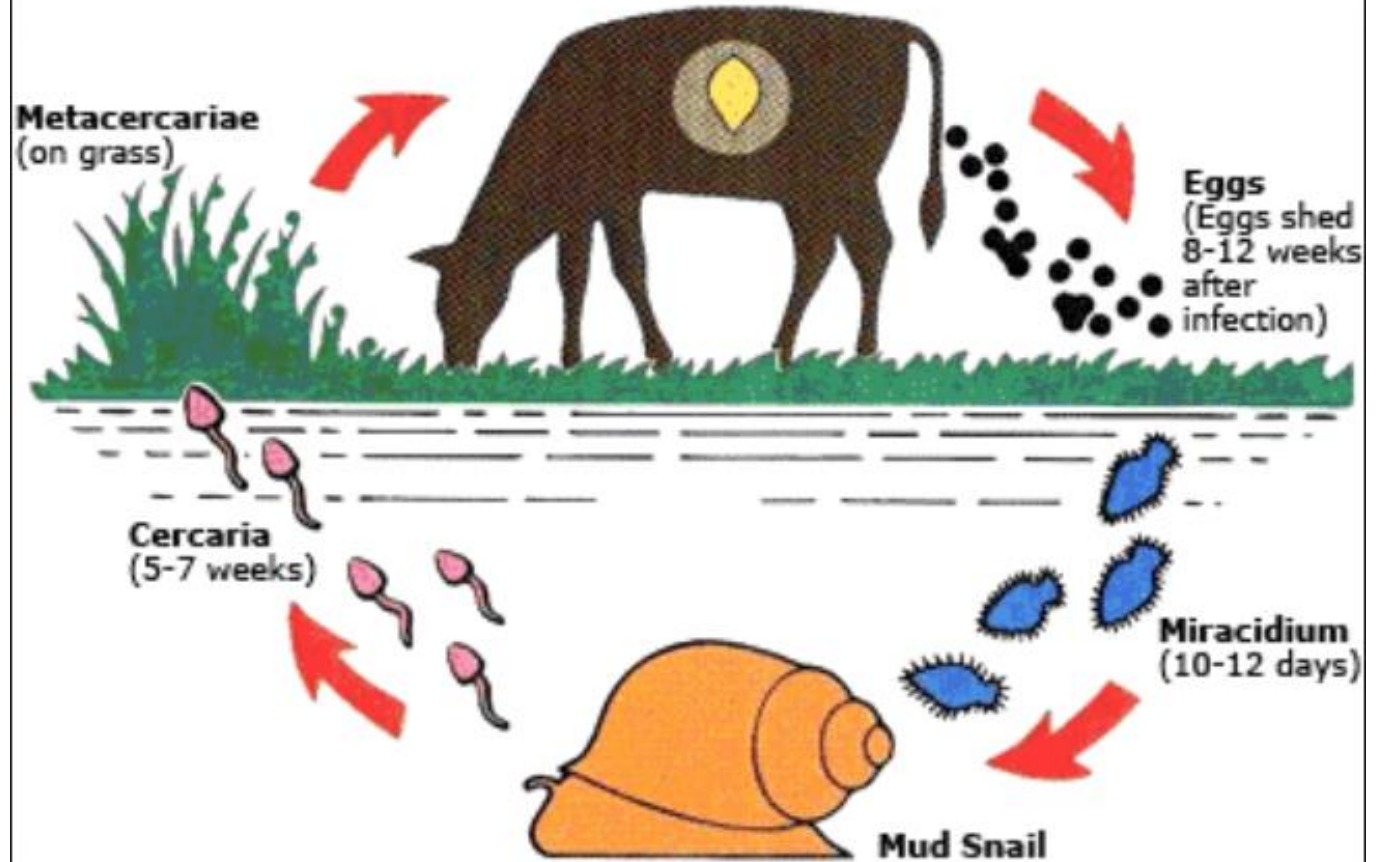


Liver Fluke

- Flat worm parasite
- Affects cattle, sheep, deer
- Swampy pasture
- Life cycle: water snails

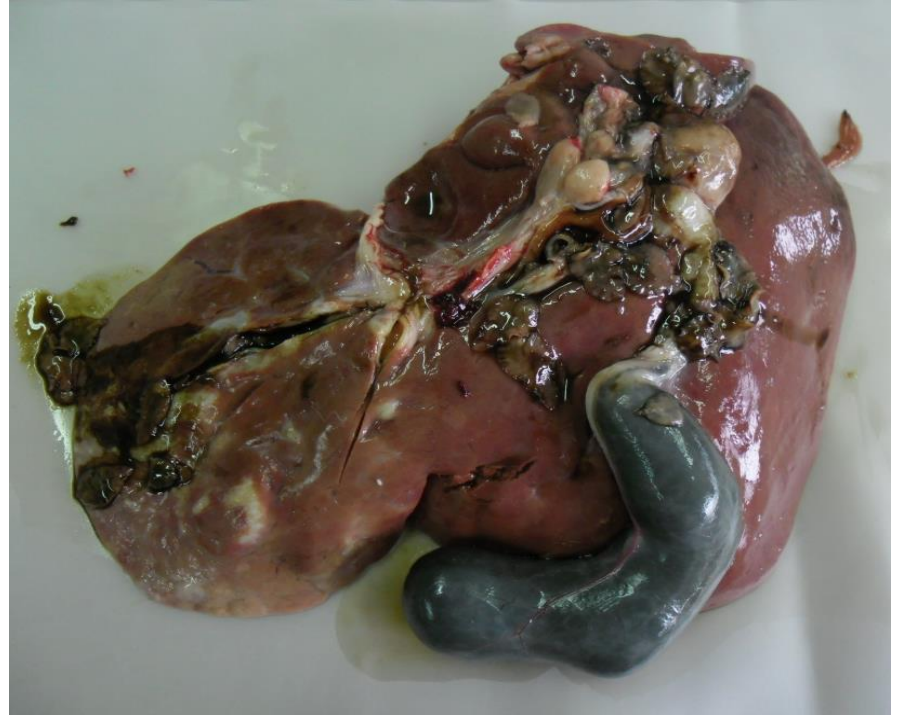
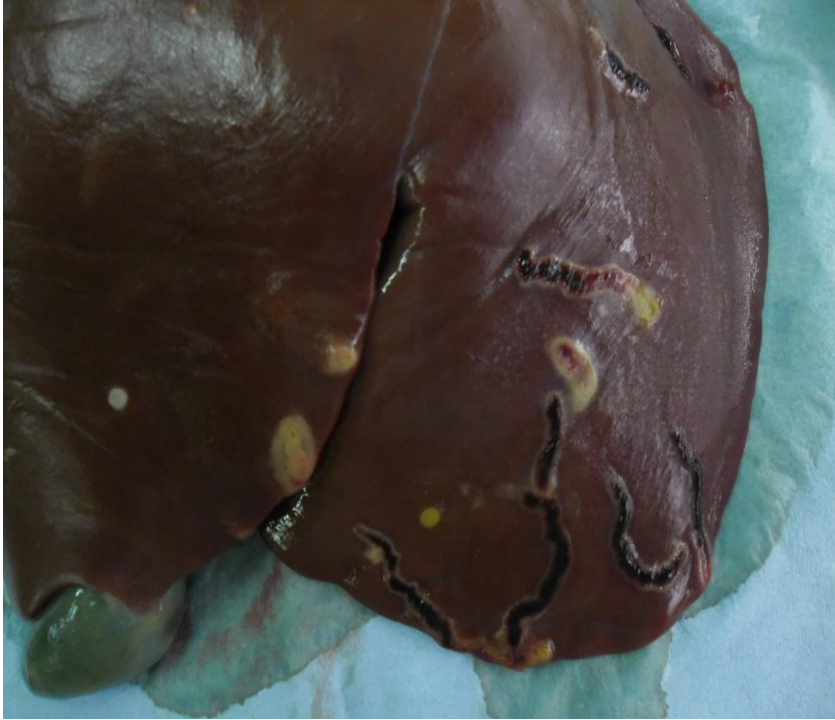


Liver Fluke Life cycle





Up to 100% liver loss from migrating larvae or flukes



Liver Fluke Effect – up to 10% stock deaths



Liver Fluke Effect

- Cost of remedies

NORMALLY FROM **\$65.00**

ARREST C 1L



Liver Fluke Effect

Poorly conditioned anaemic carcasses from liver fluke mob



Liver Fluke Report

Typical Farm Report from plant to farmer

STOCK ARRIVAL SUMMARY

Assessment	Incidence	%	Downgraded	Condemned
EXCELLENT PRESENTATION	562	100.0 %	0	0
Correct Tail Length	562	100.0 %	0	0

CARCASE HEALTH SUMMARY

Assessment	Incidence	%	Downgraded	Condemned
Pleurisy	41	7.3 %	2	0
Peritonitis	9	1.6 %	0	0
Caseous Lymphadenitis	8	1.4 %	1	0
Arthritis	13	2.3 %	12	0
Pyogenic Lesion	5	0.8 %	0	0
Hindquarter Bruise	7	1.2 %	4	0
Forequarter Bruise	1	0.1 %	1	0
Scar Tissue	5	0.8 %	0	0
Dog Bite	1	0.1 %	1	0

VISCERA HEALTH SUMMARY

Assessment	Incidence	%	Downgraded	Condemned
Viscera Caseous Lymph.	2	0.3 %	0	0
Liver Parasite	25	4.4 %	0	5
Diaphragm Pleurisy	67	11.9 %	13	0
Viscera Fluke	24	4.2 %	5	2

The good news on the bad news

“I didn’t know I had liver fluke on my farm until I got the Farm Report”

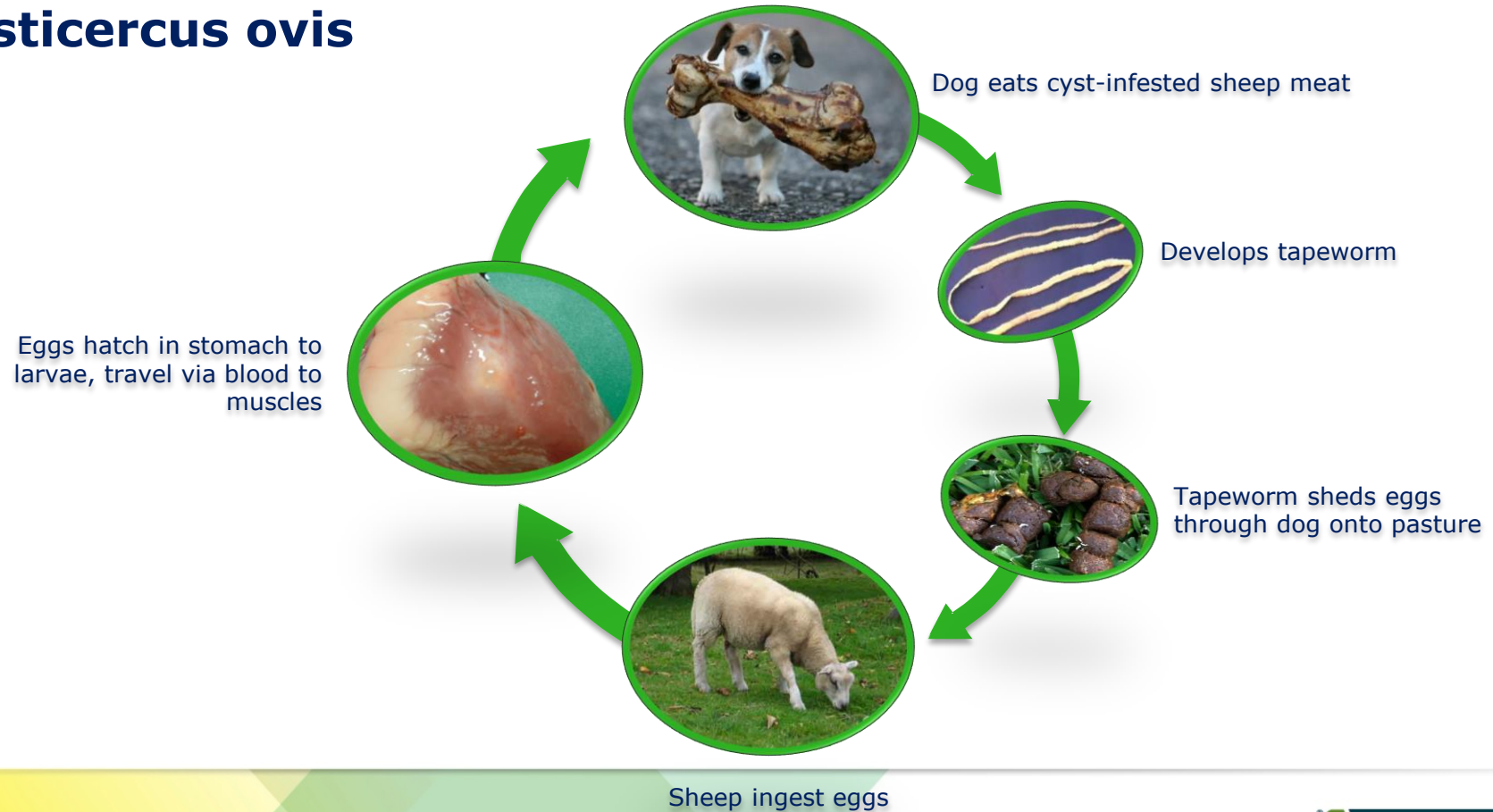
Graham Bolitho
Sheep farmer
South Canterbury



C. ovis



Cysticercus ovis



Cysticercus ovis Control

- Non profit organisation
- Promotes Ovis control
- Owned by Meat Industry
- Provides resources and educational material to farmers and dog owners



Ovis Management Control





Graph of Condemned (as % of Total Kill) - All (1)

Parameters(1)

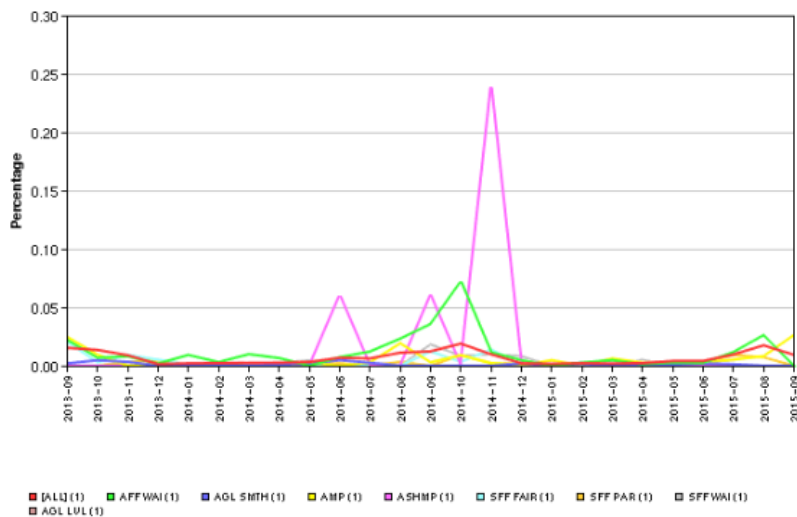
Date Range: 2-Sep-2013, 14-Sep-2015

Species: Lamb

Plants:

SFF Pareora - MEU34

Assmnt Codes: OVIS



The ovis good news/bad news

“I sent in 3 mobs of 100 lambs.

OML rang me, one mob had 80% ovis, with 6 condemned!

I traced the animals to grazing the affected mob on a neighbour’s paddock, who’d had visitors with pig dogs!

I was then able to dose my dogs and avoid using the neighbour’s paddock”



The ovis bad news

“I’m sorry John, I’ll have to offer less for these as your last lot had ovis”.



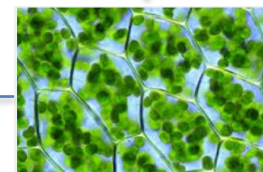
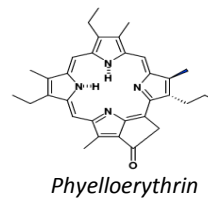
Facial eczema



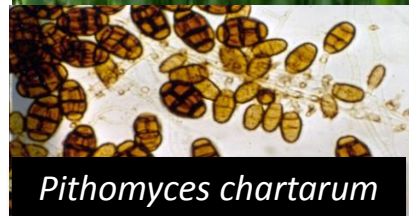
Facial eczema



Liver damage



Chlorophyll



Pithomyces chartarum



FACIAL ECZEMA



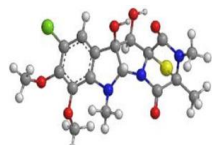
JAUNDICE



CIRRHOSIS



Pithomyces chartarum



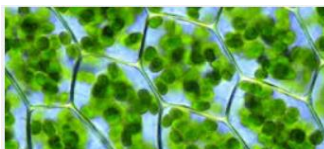
Sporidesmin



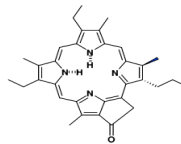
Cirrhosis



Jaundice



Chlorophyll



Phyelloerythrin



Photosensitisation

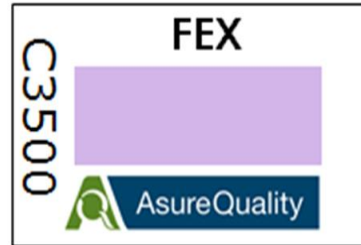


Facial eczema



Facial eczema

Our Role



Facial eczema

The sad reality



“I never knew I had eczema until I saw the liver report. Now I know to shift my stock to another paddock”.

Animal Health Report				
Defect	C	P	T	Y
Arthritis	1			
Bruising	5			4
C. Ovis				1
GIT Peritonitis	2	1		4
Kidney White Spots		1		5
Liver Cirrhosis				1
Liver Facial Eczema				78
Liver Parasites		1		8
Lympho		1		2
Offal Other Disease	1			7
Pathology Other				1
Peritonitis	3			5
Pleurisy	3	6		48
Pluck Ovis				1
Pluck Pericarditis				1
Pyogenic Lesions	2			2
Scar Tissue	2	1		
Seedy			1	
Skirt Chronic Tissue		2		20



Mange





What does Pig Check record?

- Kidney lesions
- Lepto-like lesions
- Lung abscesses
- Mange, mild, moderate, severe
- Milk spots liver (ascarids)
- Other causes – general
- Machine damage
- Melanosis
- Pericarditis
- Peritonitis
- Pleurisy, moderate/severe
- Pyogenic lesions
- Skin lesions
- Tail bite, minor/severe
- Tb-like lesions
- Arthritis, acute/chronic
- Bile on carcass
- Broken back
- Bruises, forequarter/hindquarter/scar tissue
- Contamination – other
- Contamination – viscera
- Enzootic pneumonia, insignificant, mild, severe
- Faecal carcass
- Fighting wounds
- Hair
- Head abscess
- Hernia
- Ileitis
- Hernia
- Injection-site lesions



Pig Check Data Screen

Assessment (Page 1 of 3)

Line 10: VAR

Tattoo: ◀ Carcass: 55/104 ▶ + Change Line

	10	20	30	40	50	0
PL-PNU1	0					
CONTVISC	0					
PERICARD	0					
LIVER1	0					
MANGE1	0					
PL-PNU2	0					
PLU-2	3					
LUNG PYO	0					
LIVER2	0					
MANGE2	0					
TB	0					
KID LES	0					
LEPTOLIKE	0					
LIVER3	0					
MANGE3	0					

Condemn: 0

Flag For Review: 0

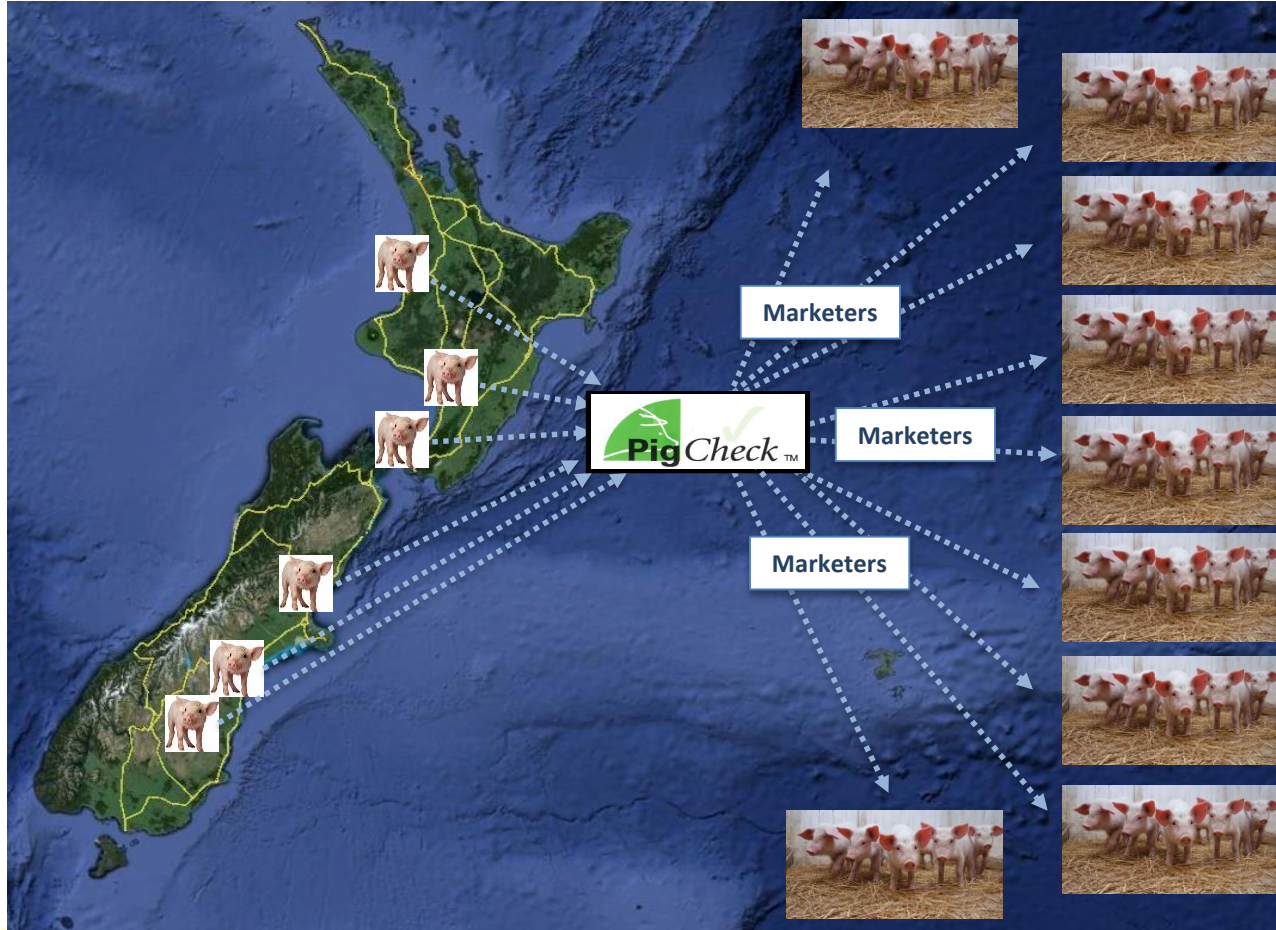
New Carcass

Print Ticket

Close Screen

Screen 2 Screen 3 Screen 4 >> Lock Screen

Critical: 4% Minor: 2% Daily Total: 527



- Inspectors input data
- Data collated centrally
- Farmers /vets log on to check their data

Mange

Sarcoptes scabiei
Demodex folliculorum



Mange

**Pig carcass downgraded
after skinning**



The good news on the bad news

“I found out my manager was not spraying for mange mites”.

**O. Ink
Pork Producer
Hastings**

Comments



Line Supplied by **OSCAR INK**
WHITTLE FARM
RD1
LEVIN

Send to Premises **ME131**

Slaughter Date: **Sep 26 2013 10:55AM**

Class: **PIG**

Associated Ear Tag: **W13**

Mob Code: **2064160**

Stock Total: **16**

Line Assessments

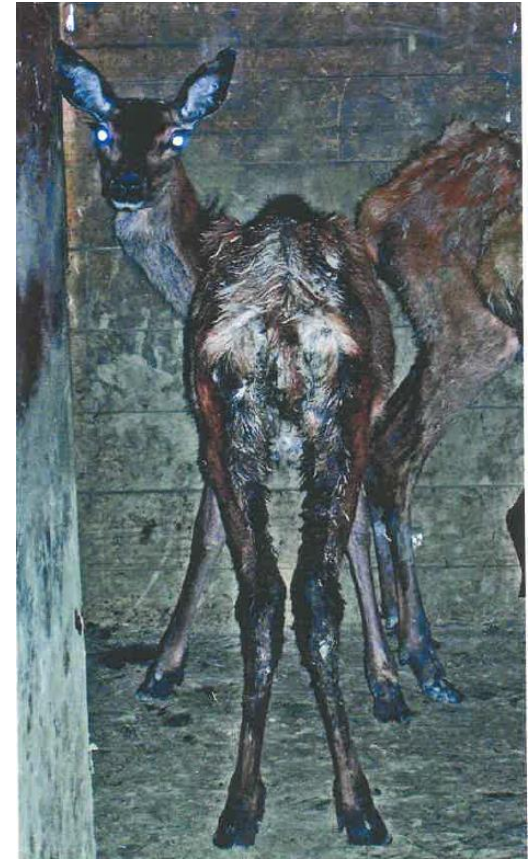
Assesment	No. Assessed	Line %	Supplier Average (6 mths)
ENZOOTIC PNU MODERATE	1	6.25	2.88
KIDNEY LESIONS	1	6.25	4.32
MILK SPOT LIVER 2	1	6.25	8.63
MANGE (2) MODERATE	3	18.75	10.79
MANGE (3) SEVERE	3	18.75	3.60
PLEURISY MOD/SEVERE	1	6.25	7.91
ENZOOTIC PNU - TOTAL MOD/SEVERE	1	6.25	6.47
ENZOOTIC PNU - AVERAGE SCORE	1	6.25	16.55

Johne's Disease

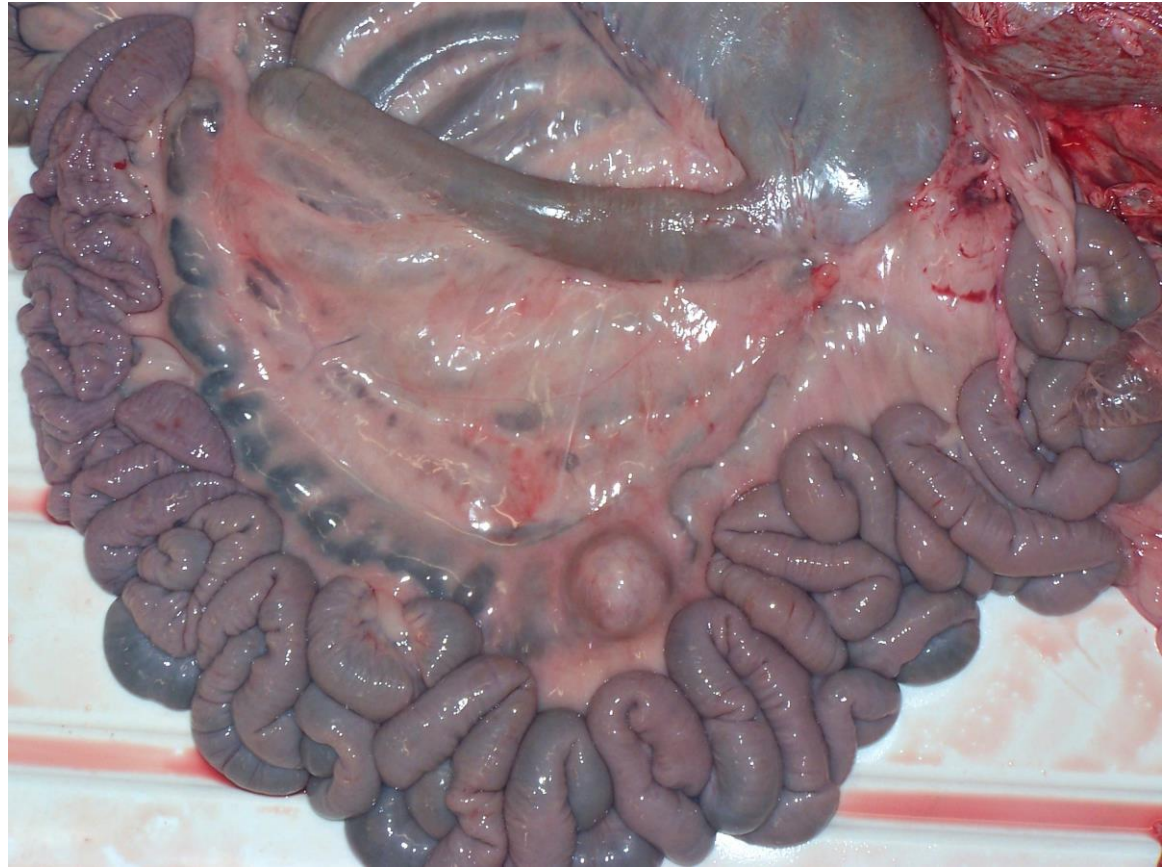


Johne's Disease Control

- Serious contagious bacterial disease
- Affects deer, sheep, cattle
- No cure
- Chronic severe diarrhoea
- Can infect all animals on farm
- Emaciation and death



Johne's Disease lesion in intestines



Johne's Disease Control



Deer herd health and productivity information



Assist farms with emerging or serious Johne's issues and direct them to their specialist vet

The goal: all deer farms using a herd health plan which includes a Johne's component

AsureQuality reporting Johne's Disease

JML "JD suspect lesion"

= any lymph node which appears abnormally increased in size that is not sampled on suspicion of TB

* record every JML "lesion" from every deer carcass inspected

Lymph node lesions to be included in each JML Database Category

CATEGORY		
1 (GM)	2 (GO)	3 (HT)
Mesenteric	Hepatic	Left bronchial
Ileocaecal	Iliac	Right bronchial
	Renal	Mediastinal
	Precurral/Subiliac	Parotid
		Prescapular/Superficial Cervical
		Medial retropharyngeal
		Lateral retropharyngeal/Atlantal
		Submaxillary/Mandibular
		Apical



Edematous lymph node: no obvious caseous or necrotic material



Caseous/necrotic lymph nodes

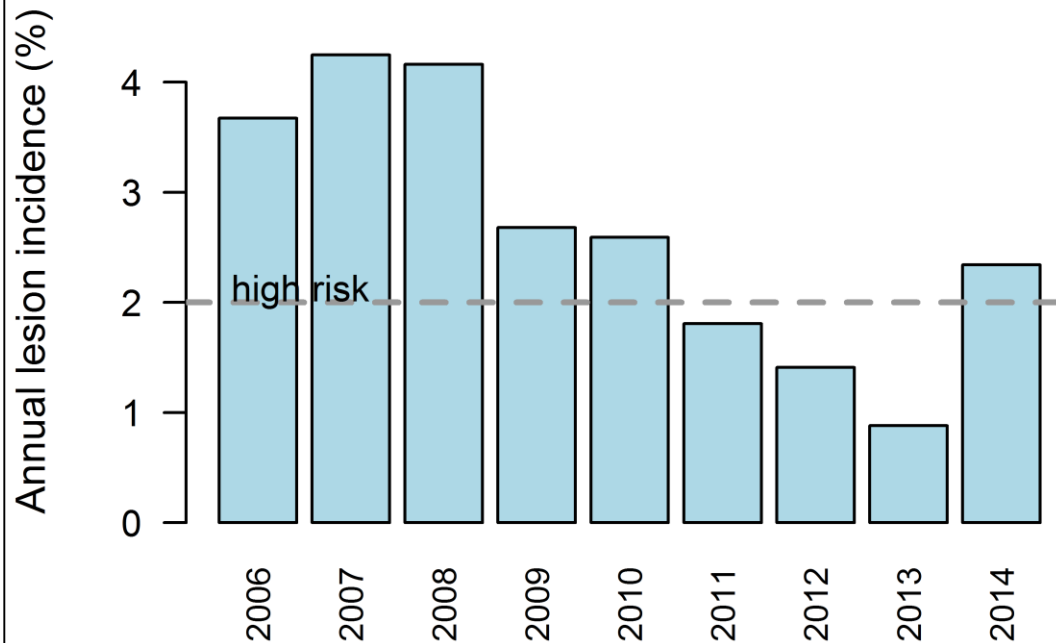


Figure: Edematous and caseous/necrotic lymph nodes. Record ALL non-sampled "JD suspect lesions" in the JML database.

Johne's Disease Reporting



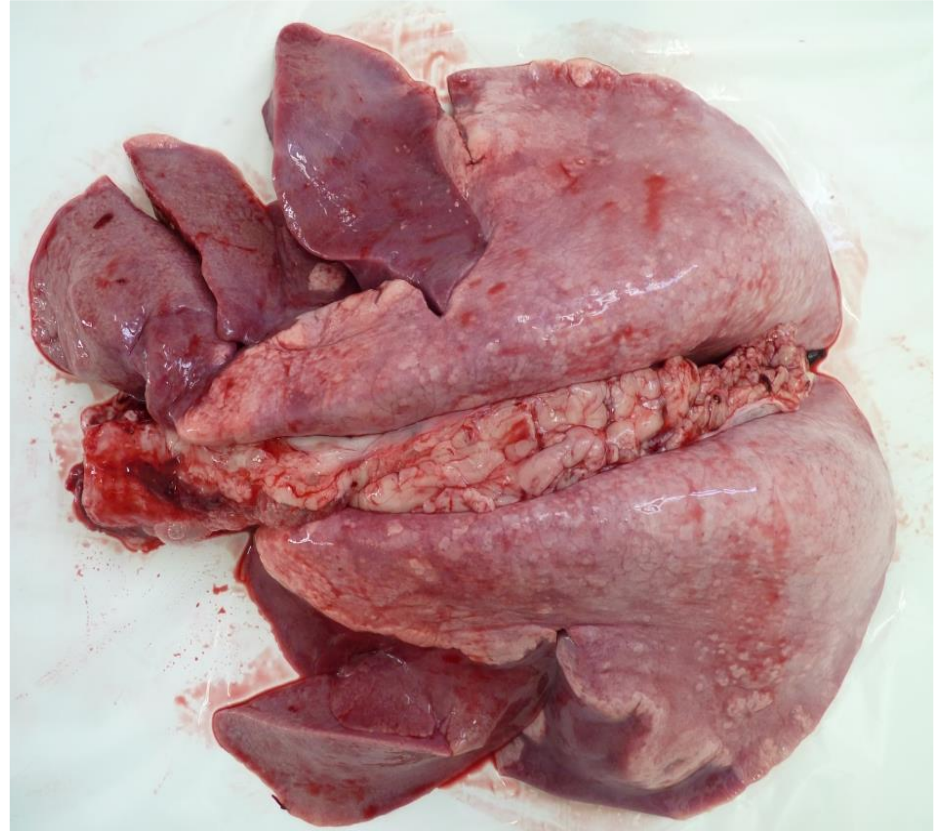
The good news on the bad news



Enzootic pneumonia

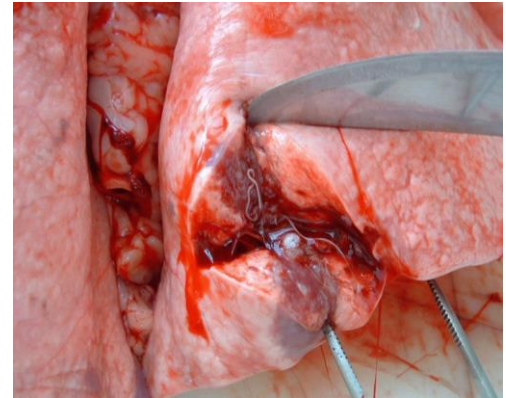
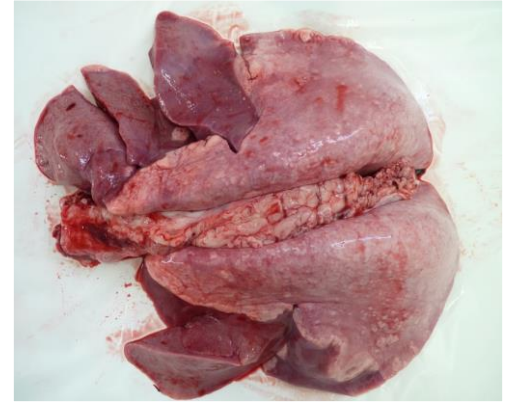
Enzootic pneumonia

- Serious contagious disease
- Inhalation of contaminated air
- Common in late summer
- Hot dry dusty conditions
- Cold air - winter



Ooops!

- Coughing caused by pneumonia or lungworms
- Farmer drenched for lungworm
- Actually, animals had pneumonia
- Crowding and dust during drenching increased incidence
- Farm report would have saved farmer \$600 plus hours of labour



Enzootic pneumonia

- Lambs don't do well
- Slow to gain weight
- Secondary infections



Enzootic pneumonia

- Loss of product by trimming
- High incidence can clog retain rail, interrupt processing



Farm Report

Enzootic pneumonia

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Final word

*“I can’t thank the company
and meat inspectors enough
for the Farm Report
..... and my wife is happy too
but she’ll never find the
money I hid!”*

Graham Bolitho
Sheep farmer
Mid Canterbury



“Oh yes I did!”



Take the Lead.

Look ahead
Find a better way
Make it happen
Be open to the new and different

Exceed Expectations.

Committed to deliver because the work we do matters
We delight our customers
With our customers we create more value

Do the Right Thing.

Stand by our work
Act when things don't seem right
Honour our heritage

Stronger Together.

Pitch in to help others
Look out for each other
Give credit for the difference people make
Value our team, appreciate individuals
Be proud of all the work we do