

# Animal health feedback to producers.....

## Is it really worth the effort?

Dr Celia Dickason

August 2016



↓ Carcase Loss = ↑ \$\$\$ Profit



- SA Sheep Meat: (\$491 million/yr)
- Abattoir surveillance costs <0.1% of the sheep meat value



# Providing South Australian sheep producers with feedback on diseases and conditions detected at the abattoir



## Helping producers to:

- improve sheep health and welfare
- maximise farm productivity
- increase profits

## Assisting the industry with:

- reducing waste
- trade access and market opportunities
- sheep health and disease research



Confidential  
feedback  
to producers



SA flock  
disease  
information

# Example Letter



Government of South Australia

Biosecurity SA

2 February 2015

Mr Jo Bloggs  
Sheep Dog Alley



## Enhanced Abattoir Surveillance Program Results for SA12345

Abattoir  
Murray Bridge

Kill date  
30/01/2015

Lot Number  
12345

Number killed  
259

Disease	% Infected	Disease	% Infected	Disease	% Infected
Arthritis	0	Jaundice	0	Rib Fractures	0
Bladder Worm	0	Knotty Gut/Nodule Worm	0	Sheep Measles	5
Cancer	0	Liver Fluke	0	Condition	% Infected
Cheesy Gland	0	<del>Sarcocystis</del>	0	Bruising	0
Cirrhosis	0		0	Dog Bites	0
		Nephritis			
Fever/ Septicaemia	0	Pleurisy	0	Grass Seeds	0
<del>Hydatids</del>	0	Pneumonia	0	Vaccine Lesions	0



# Example Factsheet

June 2014

Contact Elise Matthews, Phone: (08) 8207 7837 Email: [elise.matthews@sa.gov.au](mailto:elise.matthews@sa.gov.au)BIOSECURITY SA  
PIRSA

## Sheep Measles (*Cysticercus ovis*)

Sheep measles is the cystic (larval) stage of a dog tapeworm. The parasite confusingly has two names with the cystic stage in sheep called *Cysticercus ovis* and the adult tapeworm stage in dogs called *Taenia ovis*.

The sheep measles cysts are usually found in the muscle of sheep, including the heart.

Abattoir meat inspectors detect oval, white/cream coloured cysts up to 12mm wide. If cysts have been present for some time they may become hard (calcified).

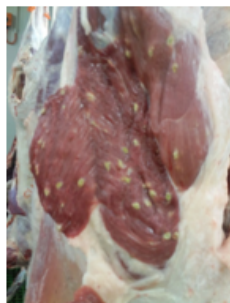
### ECONOMIC CONSEQUENCES

On Farm	At the Abattoir
The condition <b>does not</b> affect sheep health or production on farm.	<ul style="list-style-type: none"> <li><b>Condemnations</b> – if five or more cysts are found the entire carcass is condemned.</li> <li><b>Trimming</b> – cysts must be trimmed from the muscle. This results in a significant reduction in carcass/dressed weight.</li> </ul>

### HOW DO SHEEP GET SHEEP MEASLES?

Sheep measles occurs when sheep ingest tapeworm eggs from contaminated pastures. For the completion of the tapeworm's life cycle two hosts are required. Different stages of the parasite life cycle occur in each of the following hosts:

1. An 'intermediate (sheep) host' - or goat.
  - Sheep are infested when they graze pasture contaminated with dog tapeworm eggs.
  - Once ingested the eggs hatch and the larvae form cysts in the muscle.
2. A 'definitive (dog) host' (dingos and foxes are also possible definitive hosts).
  - Dogs/foxes/dingos are infested when they eat raw meat and offal containing cysts.
  - In a dog/fox/dingo the tapeworm lives in the intestines and produces eggs that are passed out in faeces, contaminating pastures.



### WHAT MIGHT BE SEEN ON FARM?

Sheep measles cause no harm to sheep so therefore no signs of ill health will be seen on farm. Cysts may be seen in muscle of home butchered sheep.

### TREATMENT

There is no treatment for sheep; control of the condition is based on breaking the sheep-dog life cycle (see below).

### PREVENTION

1. **Worm your dog/s** - worm all dogs on the property **MONTHLY** with a tapewormer containing the active ingredient **praziquantel**.
  - Worming must be monthly (not every three months) as the parasite life cycle is 35 days, worming needs to be before the parasite completes its life cycle to prevent worms laying eggs that will contaminate pastures. Worming monthly is not dangerous to your dog.
  - Worm all farm dogs and ensure all dogs coming onto the property are appropriately wormed (within the last month) - including those belonging to shearers, truckies and other contractors, friends or family who visit, retired working dogs and pets.
  - Ensure you dose according to the weight of the dog. Round the dose up, not down, to the nearest tablet or half tablet.
  - It is cheapest to purchase wormers in bulk (from rural resellers or online).
  - Every three months swap the tapewormer for an all-wormer containing **praziquantel** - this will ensure your dogs are protected against other important worms.
2. **Don't allow dogs to eat sheep or goat meat**
  - Home killing of sheep/goats should be carried out in a dog proof enclosure.
  - Raw sheep or goat meat/offal should not be fed to dogs, instead feed commercial dry dog food (or meat that has been frozen for two weeks or well cooked).
  - Prevent dogs from scavenging or roaming - when not working tie up dogs or keep in a run or kennel.
  - Clean up and dispose of dead sheep quickly and effectively (only burning or burial will stop scavenging). This will also stop other species (foxes and dingos) becoming infected.

Remember to think long term in the control of sheep measles. After initiating prevention strategies it is likely you will continue to see sheep measles on abattoir reports for some time as, once infected, cysts are present for life. Control is achieved with time and persistence.

### FOR FURTHER INFORMATION:

Contact the Enhanced Abattoir Surveillance (EAS) Program manager Dr Elise Matthews, your local veterinary practitioner, livestock consultant or local PIRSA Animal Health Officer.

**FOR ANY SIGNS OF UNUSUAL OR SERIOUS ANIMAL DISEASE,  
PLEASE CALL THE 24/7 DISEASE WATCH HOTLINE: 1800 675 888**

# Impact of conditions

- **On Farm:**

- Productivity loss (often silent)
- Cost of treatment
- Deaths
- Welfare

- **At slaughter:**

- Trimming
- Condemnation
- Penalty c/kg
- Downgrading



# Conditions monitored

## **On-farm and abattoir impact**

- **Grass Seeds**
- **Pleurisy/Pneumonia**
- **Arthritis**
- Rib fractures
- Cheesy gland; and
- Jaundice.

## **On-farm impact but little/no abattoir impact**

- Cirrhosis
- Nephritis; and
- Liver fluke.

## **Abattoir impact but little/no on-farm impact**

- **Ovis (*Sheep measles*)**
- Tenuicollis (Bladder worm)
- Sarcocystosis
- Noccos (Vaccine lesions)
- Dog bites; and
- Bruising.

## **Very low prevalence conditions in SA (or not true 'flock' conditions)**

- Knotty gut
- Hydatids
- Cancer; and
- Fever/septicaemia.



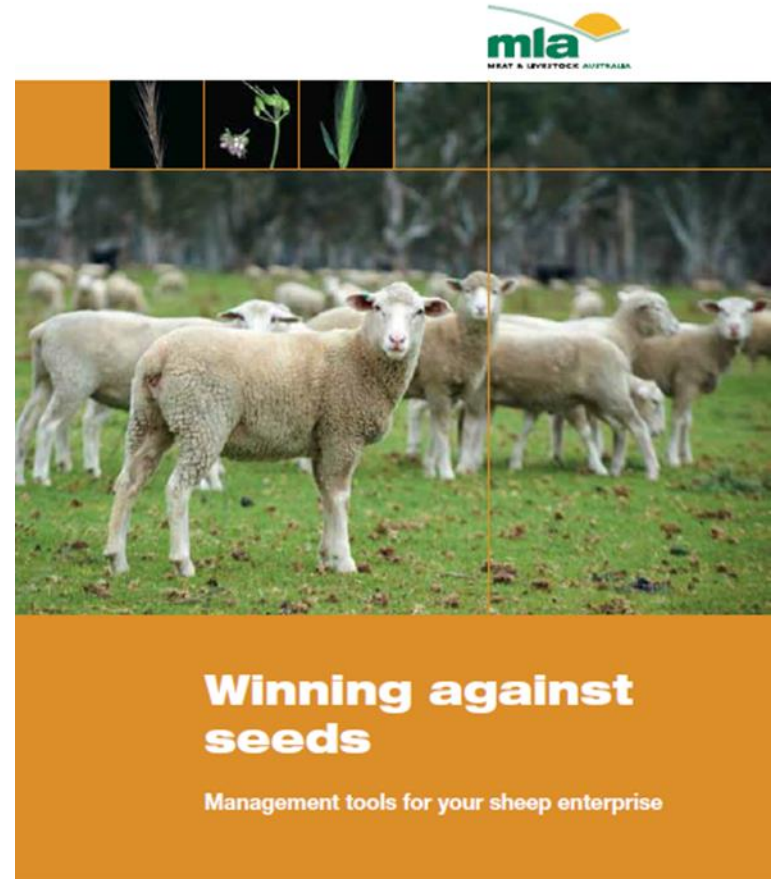


**↓ Carcase Loss = ↑ \$\$\$ Profit**





# Grass seeds



# Putting it all together...

- Yard design/animal handling/transport
  - Bruising, pneumonia/pleurisy
- Vaccinations/general husbandry – correct type/timing/technique
  - CLA, arthritis, vaccination lesions
- Marking/mulesing hygiene
  - nephritis, arthritis, jaundice
- Dogs on farm – worming, feeding/scavenging, use for handling
  - Dog bites, bruising, sheep measles, bladder worm
- Pasture/production/grazing management
  - Grass seeds, nephritis, jaundice/cirrhosis

# Snapshot of 2015

2015 surveillance at Thomas Foods International (TFI) Murray Bridge and Lobethal included:







# Program Funding

- South Australian Sheep Industry Fund
- National Sheep Industry Fund through Animal Health Australia

## Who benefits?

- Individual producers
- Processors (  trim,  downgrading)
- Industry as a whole (data for research, relationship building, health trends)



# How do we know the results are accurate?

- 2014 Ground truthing project results showed that AAOs are very good at assessing conditions seen
- AAOs also very good at estimating % affected.
  - 99% of the time within 10% (~20,000 sheep)
- All data is validated and checked for PIC accuracy before letters are sent

Producers can be  
confident of their  
results!



But....how do we know it's really helping?



.....Let's ask!





## Enhanced Abattoir Surveillance Survey 2015

If you would prefer to fill this survey in online please go to [tellus.sa.gov.au/index.php/297237](http://tellus.sa.gov.au/index.php/297237)

Please complete/return surveys by September 11<sup>th</sup>, 2015.

1. What are the first 4 characters of your PIC? (so we know what region you are from e.g. if your PIC is SA454865 write SA45 in the spaces) \_ \_ \_ \_

2. What percentage of your business is sheep? (i.e. income other than cropping, cattle etc.)

☐ 0-25%    ☐ 26-50%    ☐ 51-75%    ☐ 76%-100%

3. Which one of the following categories best describes your main sheep production focus?

☐ Wool    ☐ Meat    ☐ Mixed (Wool/Meat)

4. What is your age (the person receiving abattoir feedback)?

☐ 18-28 yrs    ☐ 29-38 yrs    ☐ 39-53 yrs    ☐ 54-68 yrs    ☐ 69 yrs or older

5. Is abattoir feedback of interest and/or value to you?

☐ Yes    ☐ No

What in particular is or is not of interest or value?

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6. Has abattoir feedback alerted you to a disease or condition you were unaware you had on your farm?

☐ Yes    ☐ No

7. Has abattoir feedback alerted you to a disease or condition you knew you had on your farm but not at such a level reported through feedback?

☐ Yes    ☐ No

8. Have abattoir feedback results prompted you to seek more information about the condition/s or disease/s detected?

☐ Yes    ☐ No

If yes, where did you go for this information?

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9. What are your top 3 sources of information on diseases in sheep? (please tick 3 boxes only)

- |   |   |
|---|---|
| <input type="checkbox"/> Internet/webinars                                    | <input type="checkbox"/> Producer group workshops               |
| <input type="checkbox"/> Private Consultants                                  | <input type="checkbox"/> Rural merchandise stores/staff         |
| <input type="checkbox"/> Livestock Agents                                     | <input type="checkbox"/> Newspapers/newsletters                 |
| <input type="checkbox"/> Veterinarians  | <input type="checkbox"/> Government (PIRSA) Animal Health Staff |
| <input type="checkbox"/> Pharmaceutical company representatives/presentations |   |
| <input type="checkbox"/> Other, please specify: _____                         |   |

10. Which 2 of the following best describes how you like to receive information on sheep diseases? (please tick 2 boxes only)

- ☐ Attend a talk or presentation (e.g. producer workshop)
- ☐ Read electronic media (e.g. email, website etc.)
- ☐ Read print media (e.g. stock journal, local paper etc.)
- ☐ Discuss one on one with an animal health professional
- ☐ Other, please specify: \_\_\_\_\_

11. Have you changed your disease management practices as a result of abattoir feedback?

☐ Yes    ☐ No

If yes, please provide an example of a change you have made:

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If you answered no to the question above, do you plan to make management practice changes as a result of abattoir feedback already received?

☐ Yes    ☐ No

If yes, please provide an example of a change you plan to make:

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PTO

## Enhanced Abattoir Surveillance Survey 2015

**12. Are the Fact Sheets you have received easy to understand?**

☐ Yes ☐ No

If no, what is not clear or could be improved upon?

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**13. Would you like additional information to be provided on the Fact Sheets?**

☐ Yes ☐ No

If yes, what additional information would you like?

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**14. How would you rate your knowledge of the following conditions/diseases?**

1 = more knowledge needed, 2 = fair understanding, 3 = well informed

	1	2	3
Arthritis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cheesy Gland (CLA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grass Seeds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pneumonia/Pleurisy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sheep Measles ( <i>C. ovis</i> )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**15. Have you received feedback to indicate the following conditions/diseases are present on your property?**

	Yes	No	Not sure
Arthritis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cheesy Gland (CLA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grass Seeds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pneumonia/Pleurisy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sheep Measles ( <i>C. ovis</i> )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**16. How often (in months) are your dogs, or other dogs used on your property, wormed with a tapewormer?**

\_\_\_\_\_ OR ☐ No dogs on property

**17. Do you feed your dogs raw sheep meat or offal (home kill)?**

☐ Yes ☐ No ☐ No dogs on property

**18. What type/s of vaccination do you currently use?**

☐ 3 in 1 ☐ 5 in 1 ☐ 6 in 1  
☐ Gudair (OJD) ☐ Eryvac (arthritis) ☐ Scabigard (Scabby mouth)  
☐ None

**19. Currently feedback is only provided when a disease or condition is detected in a line of sheep. Would you like feedback on lines with no diseases/conditions detected ("clean lines")?**

☐ Yes ☐ No

**20. We are exploring options for future electronic feedback of results. Ideally, how would you like your results provided?**

☐ Post (as currently occurs)  
☐ Email (results attached to the email)  
☐ Online (by accessing a website following an email notification). Ideally historic results would also be accessible here.

**If you ticked email or online above would you like this to be:**

☐ Instead of posted results OR ☐ In addition to posted results

**21. Have you any suggestions on ways the program can be improved?**

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**What is your full PIC number (optional)?** \_\_\_\_\_

This places you in the draw to win a free 2 year PIC renewal.

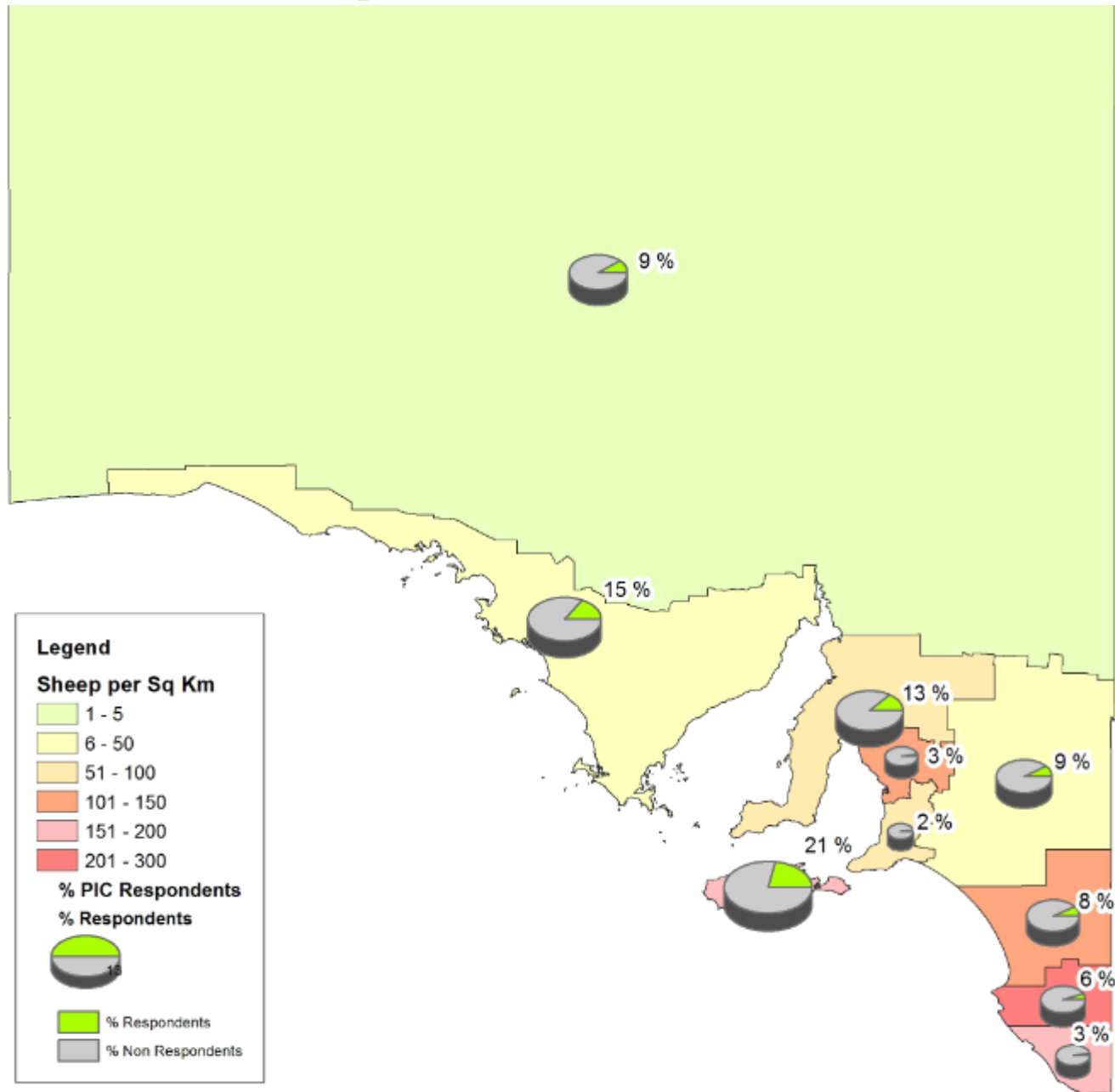
*Thank you for taking the time to fill in this survey – your input will assist in making decisions on how we can improve the program for you!*

# September 2015

- Sent to producers who had a positive report during previous 12 months
- Sent by email and post (online survey and hard copy)
- Received ~1,000 responses! Excellent rate!
- Most responses were in hardcopy (paper)
- Entry into database



# % of PIC respondents to EAS survey



## What % of your business is sheep?

### Production Type

-71% mixed production

-20% meat

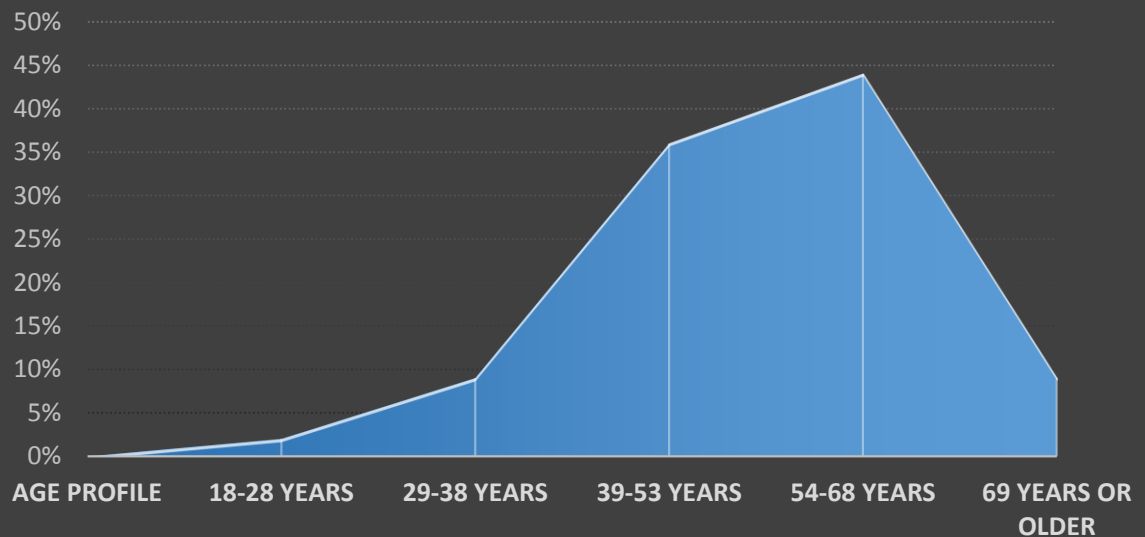


■ <25% Sheep   ■ 26-50% Sheep   ■ 51-75% Sheep   ■ >76% Sheep

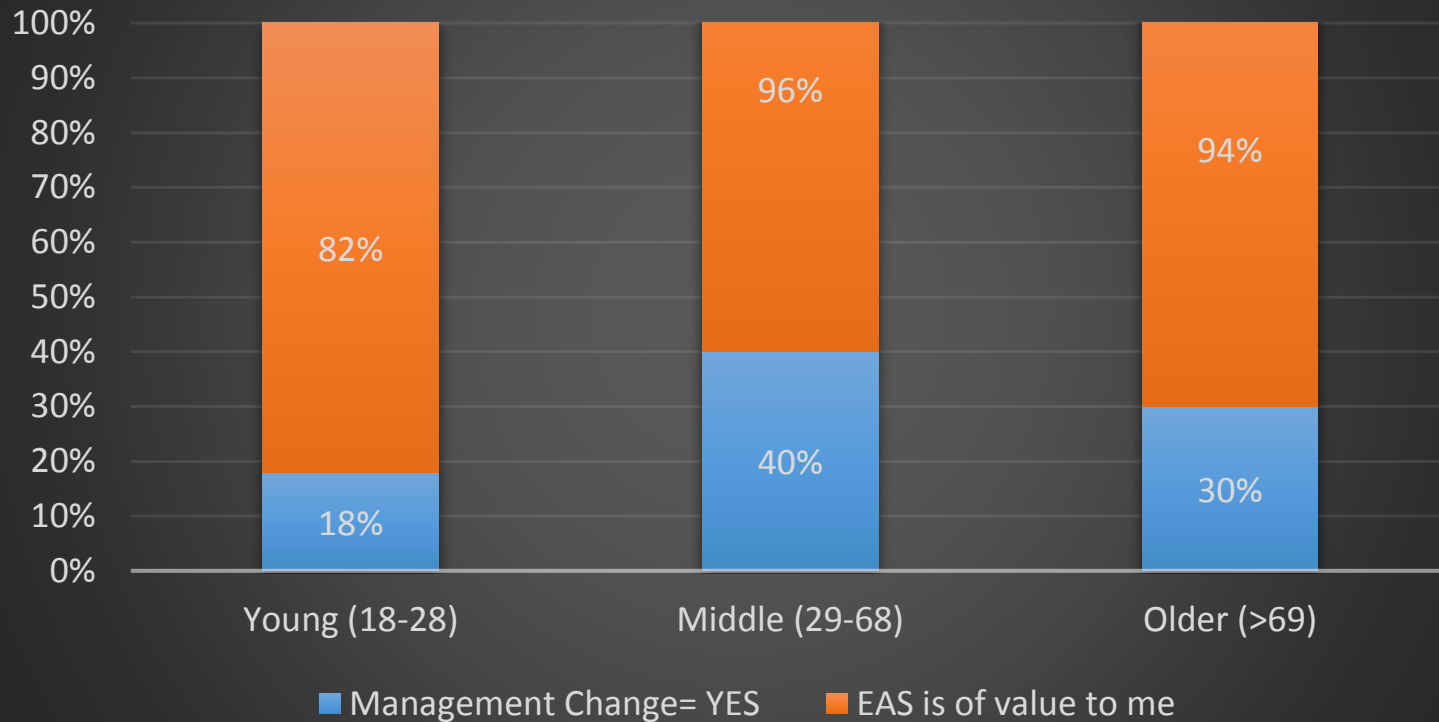
Similar  
percentages  
for different %  
sheep  
business

90% in 29-68yo  
age group

## Age Profile of Respondents



## Positive Value leads to CHANGE!



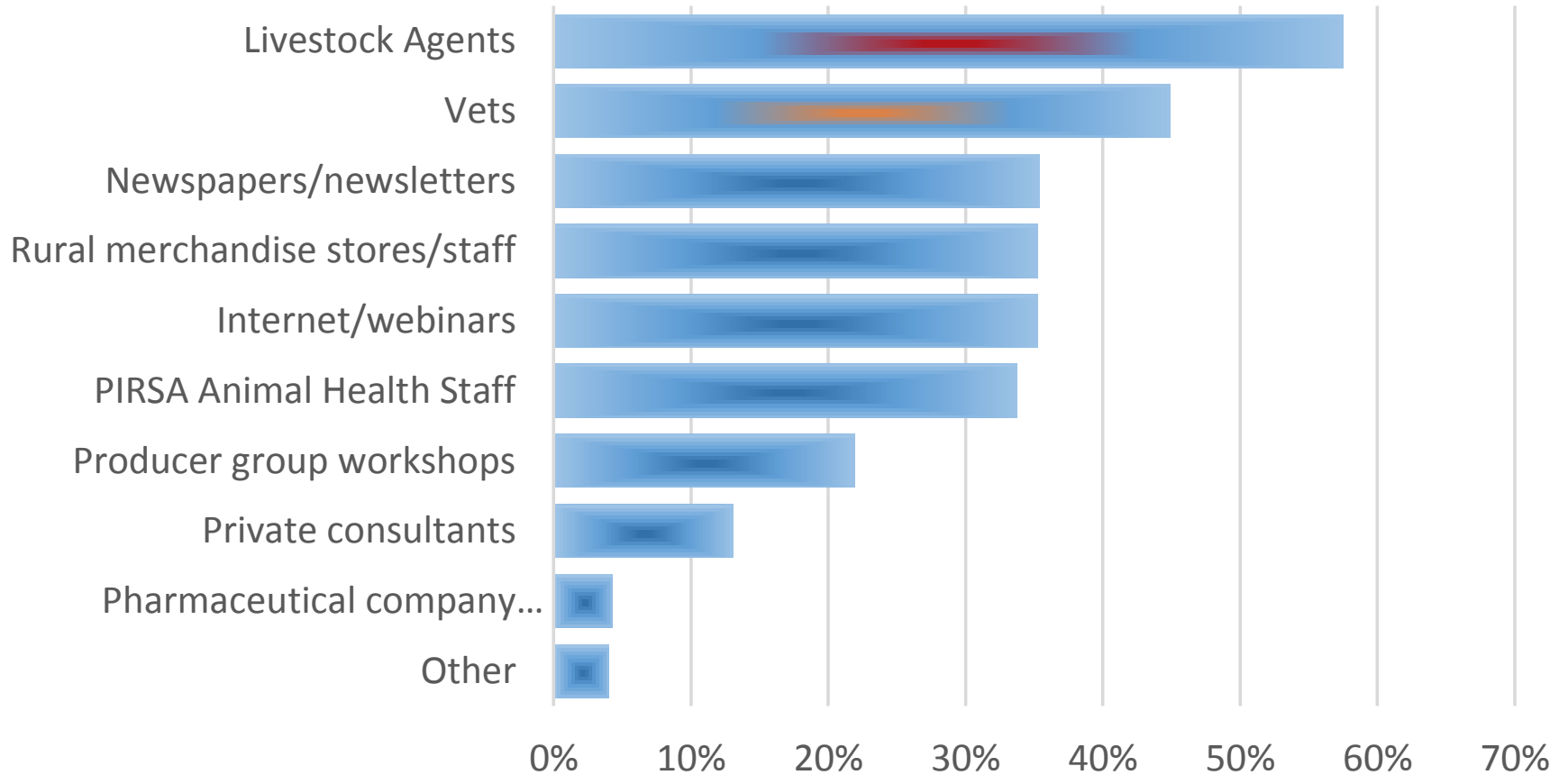
All dogs must be muzzled, increased vaccination, more pasture topping to prevent seed contamination.

arthritis. we now vaccinate for it

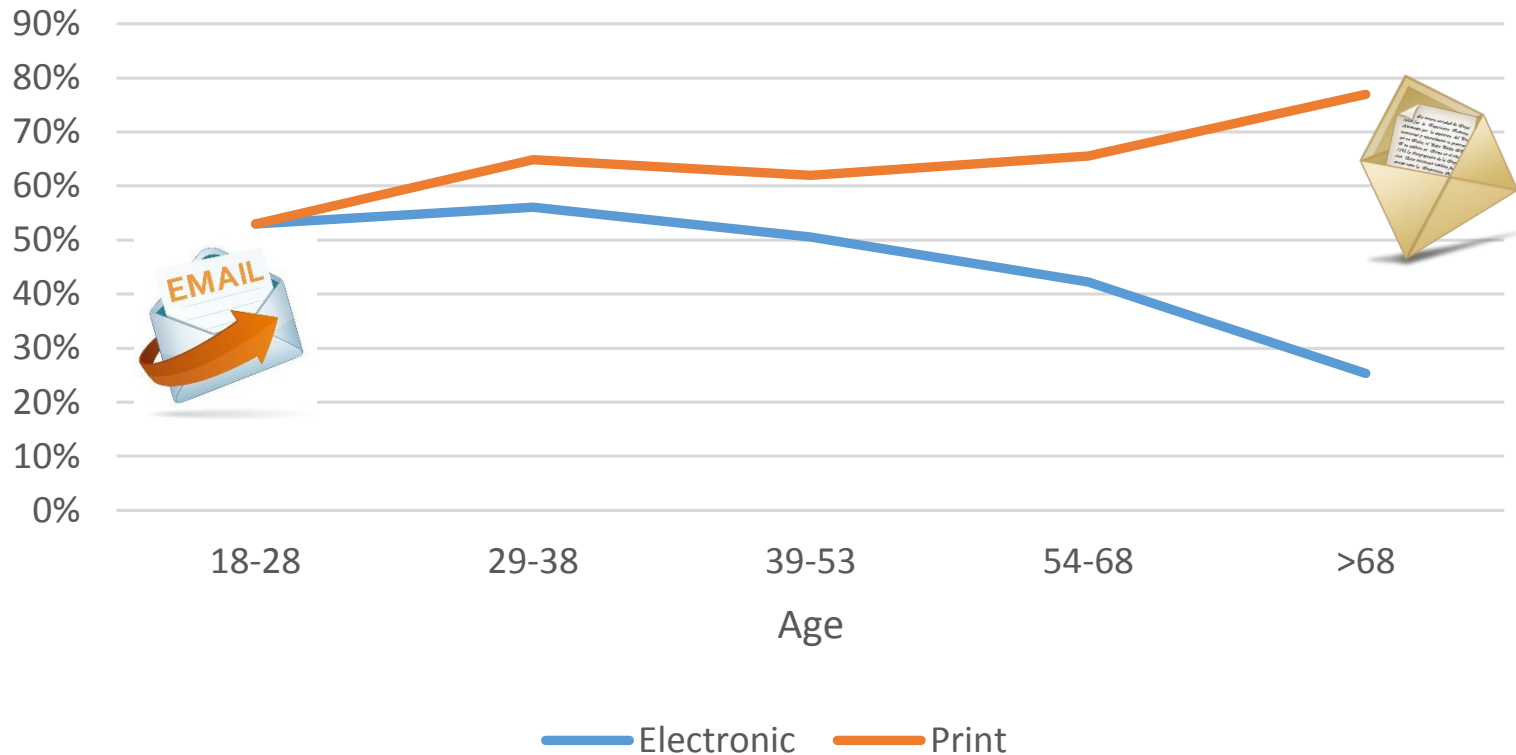
Better sheep management (paddock rotations, book keeping on when sheep are moved, vaccinated, wormed etc).



# Top 3 Sources of Information for Sheep Diseases



## What format do we use in future?



- 98% respondents found fact sheets easy to understand
- 51% want information on clean lines

# Recent Producer Survey

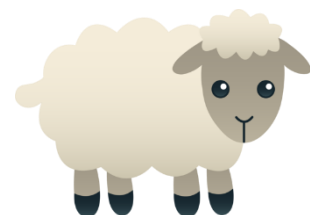
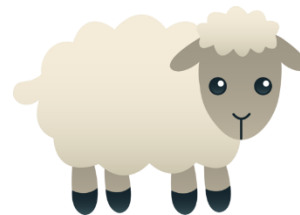
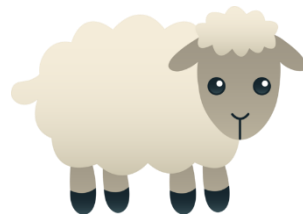
- 998 responses (44.5% response rate)
  - **96%** say that abattoir feedback IS of interest and/or value to them
  - **2/3** have been alerted to a disease or condition they were unaware that they had on farm
  - **40%** have made a management change as a result of feedback
  - A **further 25%** planning to make a change as a result of feedback already received
- 
- This is the **ONLY** way you can get feedback on these conditions

I think it's an excellent program  
and something other states should  
follow, sheep going to other  
abattoirs occasionally  
property with no di

I think the program is  
working well and has  
need our management

Fantastic tool in helping me identify  
& treat subclinical  
problems/diseases that are not  
obvious in paddock.  
Also allowed me to provide  
"feedback" to a truckie on maybe  
using muzzles

I have been very pleased to receive the EAS information  
and we choose to use TFI so that we continue to receive it.  
Please thank Thomas Foods for their co-operation



I believe the EAS should be adopted nationally.  
The info gained from the EAS by producers would improve the health of the national flock.  
I use the information from the feed back as a valuable tool in making important decisions on treatments and timing of treatments to our stock.

By using the info from the feed back sheets has increased our income from our prime lamb. We have now eliminated rejected carcasses and heavy trimming of the carcass.

Staff have become very aware of how they handle the stock and how they use dogs with stock.

Fantastic information.  
Thank you and congratulations.



# Acknowledgements

- South Australian Sheep Advisory Group
- Animal Health Australia
- National Sheep Industry
- Thomas Foods International
- MINTRAC

## Thank you

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