Treatment of livestock affected by fire in South Australia, successes and failures

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Treatment of livestock affected by fire in South Australia, successes and failures

1. Where is South Australia
2. Wildfires and emergencies in SA
3. PIRSA response to wildfires – Animal Welfare and assessments
4. First mistakes
5. Treatment of survivors – what works , when

Opinions expressed in this presentation are my own, based on my experience, and do not reflect official views of PIRSA or any other organisation

Where are we?

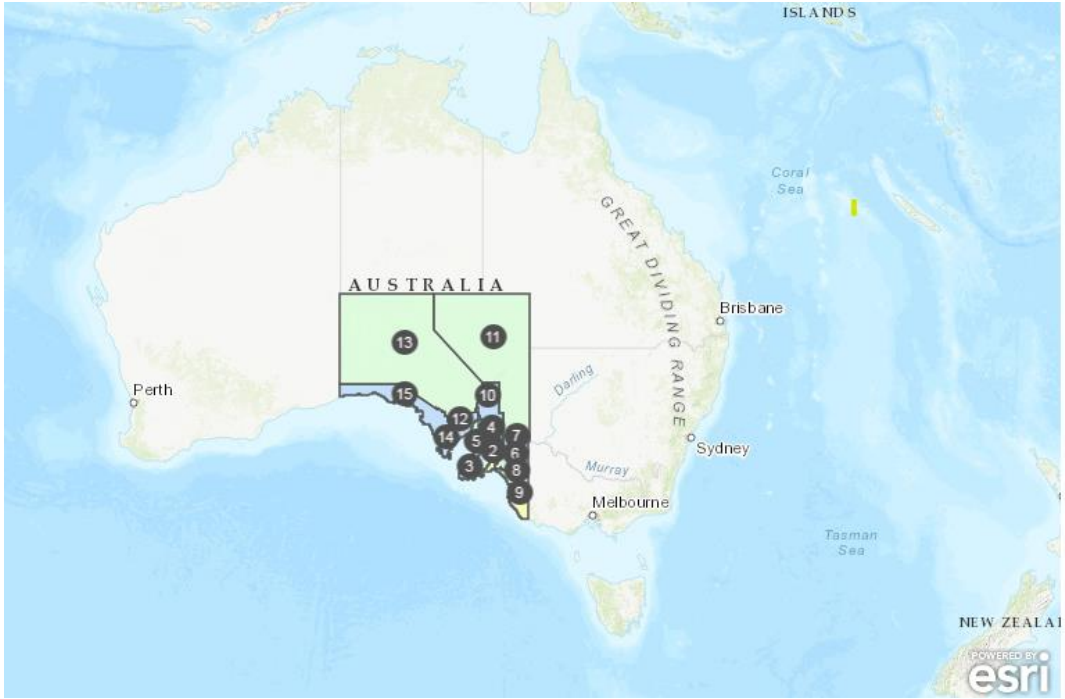
- Australia is roughly the size of North America, or central Europe

Climate

- Climate varies over the land from hot tropical in the north to cool temperate in the south
- Fires are a part of our regular experience, with the most serious being in the southern half

Climate

- South Australia is quoted as being the “driest State in the driest continent in the world”
- 80% of SA is classified as desert
- The SE corner is where most people live
- Population is 1.7M, 1.1M live in Adelaide, so rural areas are sparsely populated
- Rainfall is mainly in winter and varies greatly between areas from < 100mm to 1150mm annually
- Fires occur most summers when there is a north wind, and temperatures frequently are above 40C



Climate in South Australia

Where are we?

Climate

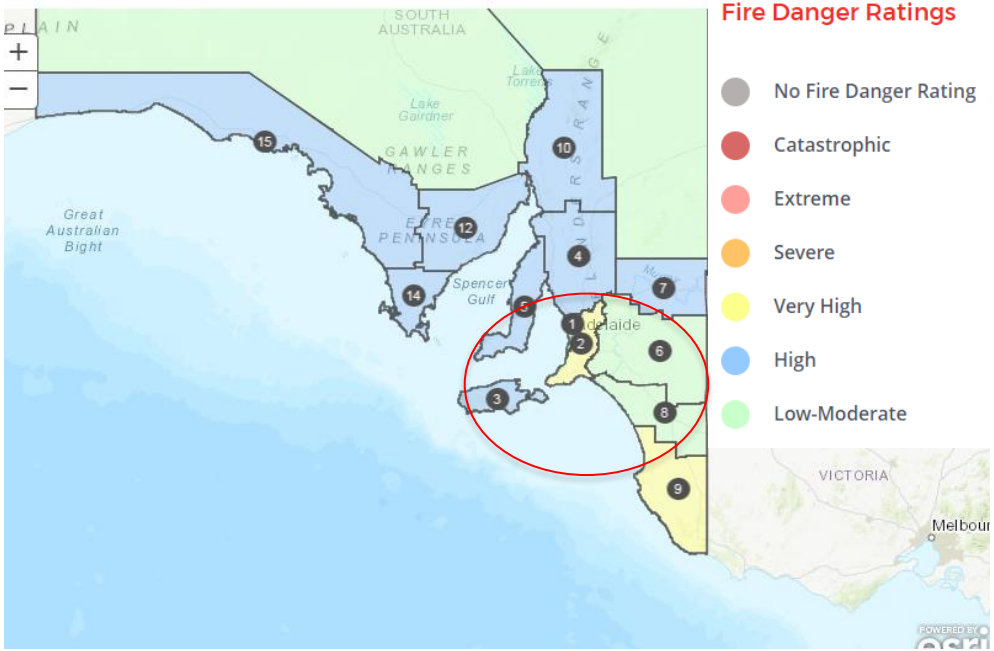
- Rainfall influences vegetation and fuel load
- Rainfall and soil types influences agriculture use and livestock stocking rates

Wildfires in South Australia

This is a map of SA “Fire ratings”
by District today, based on

- Fuel loads
- Temperature- ambient and ground
- Drying of fuel/ crops/ vegetation
- Wind speed and humidity

The circle covers my “District”- roughly 300km Radius, and a lot of the most productive grazing and agricultural land.



Wildfires and emergencies in South Australia- my role

As a District veterinarian my duties include

- Disease surveillance activities
- Some Disease management roles (eg Footrot, Johne's Disease
- Industry Liaison (Pig and poultry, dairy)
- Emergency Response (Diseases and **events**)
- Assist **Animal Welfare**

Animal Welfare

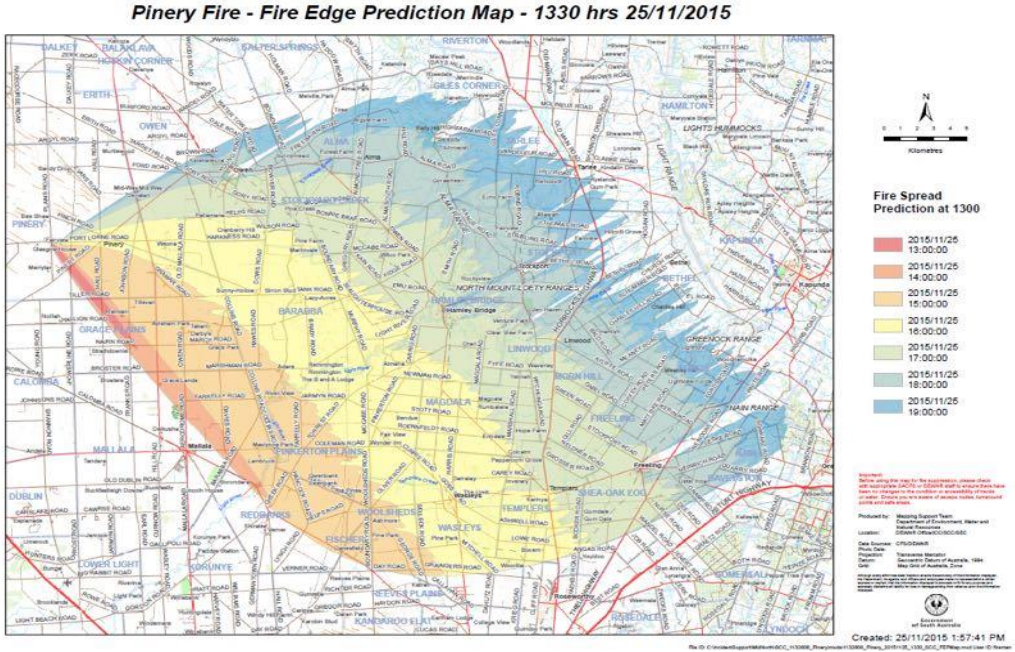
- Officially PIRSA (Primary Industries and regions SA) "assist" RSPCA (Royal Society for the Prevention of Cruelty to Animals) in Animal Welfare matters
- *But* there are 2-3 RSPCA Inspectors for all of SA, most in the cities
- *So* PIRSA has primary responsibilities for Animal Welfare in Emergency events

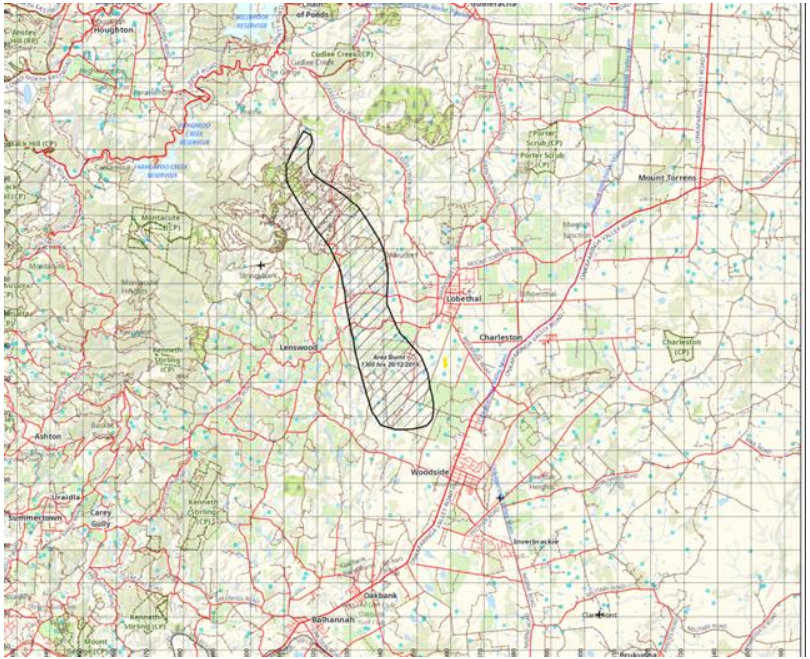
Wildfires in South Australia

When a wildfire occurs in SA:

- They generally run SE- S, then

expand in intensity and size in the afternoon, and move Easterly with the wind change





Maps courtesy of CFS

Wildfires in South Australia – PIRSA response

From these maps we can overlay property and livestock data in order to conduct immediate impact and animal welfare assessments

Most fires in SA are grass fires in open country and affect:

- crops, grasslands, light forest
- Buildings, infrastructure (eg fences, yards , roads)
- Livestock – mainly sheep, cattle, alpaca occasionally horses
- Wildlife- kangaroos, birds, (reptiles), koalas, wombats

Wildfires in South Australia – PIRSA response

Affected properties are visited as soon as possible to assist producers in managing fire affected animals

Wildfires in South Australia – PIRSA response

First step is contact owners, if possible, visit property and immediate destruction of severely injured animals, then assessment of others.

- Animals are then grouped into several groups depending on a range of factors

1. Not severely injured- move to safe location for care

2. Slightly injured – watch and treat as needed

3. Injured / burned – treat or destroy depending on a range of conditions, and severity of injuries

- There are a number of excellent State based guides for doing assessments

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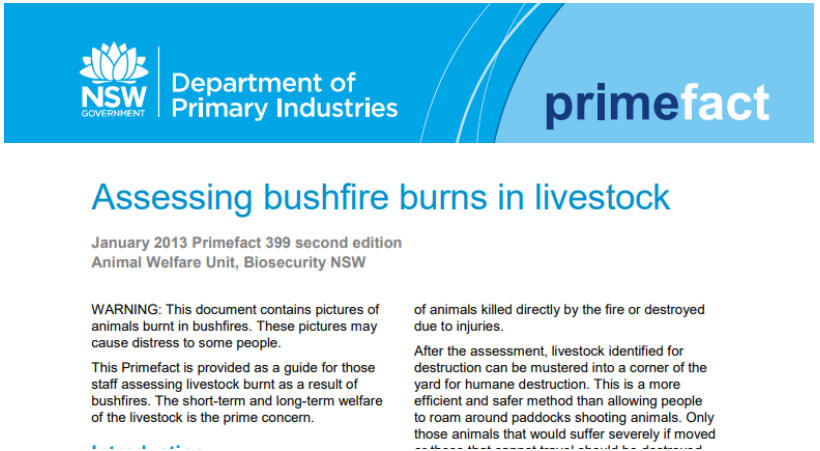


NSW GOVERNMENT Department of Primary Industries

primefact

Assessing bushfire burns in livestock

January 2013 Primefact 399 second edition
Animal Welfare Unit, Biosecurity NSW

WARNING: This document contains pictures of animals burnt in bushfires. These pictures may cause distress to some people.

This Primefact is provided as a guide for those staff assessing livestock burnt as a result of bushfires. The short-term and long-term welfare of the livestock is the prime concern.

of animals killed directly by the fire or destroyed due to injuries.

After the assessment, livestock identified for destruction can be mustered into a corner of the yard for humane destruction. This is a more efficient and safer method than allowing people to roam around paddocks shooting animals. Only those animals that would suffer severely if moved

Wildfires in South Australia – PIRSA response

10 factors that influence decisions for treatment or destruction in fire affected livestock immediately after a fire (1-10 days)

The scale of the event – large, medium, small

Resources available – (experienced) staff, vehicles, access, equipment, communications, distances involved, time

Owner / farmer resources available – yards / paddocks / feedlots, fences, sheds, water & food, shelter, agistment options, time & labour, interest and ability, finances.

Owner / producer mental health and capacity **
Value of the stock – type (species), genetics, sex, age, value, emotional value*, number involved, insurance.*, pregnant or not, nursing stock,

Ability and opportunity to examine stock – stock may be burnt in parts of the body that are difficult to see without close individual inspection.

Time of decision making – immediately after the event, within a few days, 1 week, 2 weeks

Weather and predicted weather -including cold , wet weather that often follows a week or so after fires.

Prognosis with or without treatment – treatment or inspection frequency. Long term prognosis

Other options – salvage slaughter, agistment

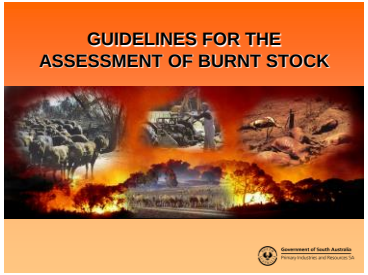
Disposal options – it may be necessary to wait for a short period until some livestock are destroyed. Badly injured animals must be destroyed immediately, but less severely damaged animals may need to be retained until suitable disposal options are available.

ASSESSMENT MATRIX FOR INDIVIDUAL ANIMALS

Note: This is a guide only and the final decision will depend on other factors as listed in the Guidelines for the Assessment of Burnt Stock.

	Immediate destruction	Salvage slaughter (often not an option)	Treatment and reassessment	Return to paddock
Unconscious	Yes			
Immobile	Yes			
Respiratory distress	Yes			
Distressed through pain	Yes			
Severe charring of limbs, muscles or facial tissue	Yes			
Hooves are lost	Yes			
Burns to >15% of body	Yes			
Severe burns to eyes, udder, anus, prepuce, lips, nostrils	Yes			
No severe respiratory distress		Yes		
Mobile with no lameness		Yes		
No burnt bare skin		Yes		
Severe burns to <10% of body			Yes*	
Superficial to moderate burns over a large area			Yes*	
Burns to teats and prepuce			Yes*	
Burns to feet only (not lower leg skin)			Yes*	
No obvious respiratory distress			Yes*	
Superficial burns only, no concurrent disease and no respiratory dysfunction				Yes

*This is only an option where follow-up daily inspections and treatment are available.



Things to avoid / mistakes

1. Failure to cull heavily enough on day 1, especially lambs

2. Rams, bulls and cows check reproductive apparatus and cull to slaughter quickly if excessive damage noted

3. Treatment on day 1 with antibiotics and analgaesics of badly burned sheep or cattle may not be effective- these animals should be culled , unless close supervision available.

4. Topical analgaesics do not work eg “Trisolfen”

Treatment of survivors – what works on Day 1

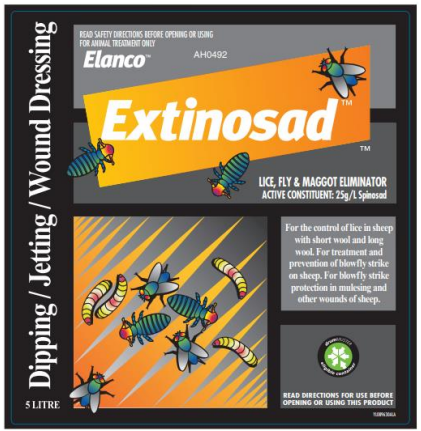
1. Deri – Sal on day 1 on faces, lips, feet, inguinal, axilla, teats etc- really seems to help, and lasts for 1- 2 days

2. Topical blow fly repellent – we use Extinosad spray

3. Leave them alone, provide good water, hay, shade

4. Check daily, may have to retreat an occasional animal

5. Reassess whole group around day 5-7



Treatment of survivors – what works, day 5-7

1. On day 5-10 treatment with Antibiotic (broad spectrum), and analgaesic works well in dramatically improving recovery

2. More Derisal on teats, burnt areas

3. Be aware that some of these uses may be “off label”, and do not use in animals that may be intended for slaughter

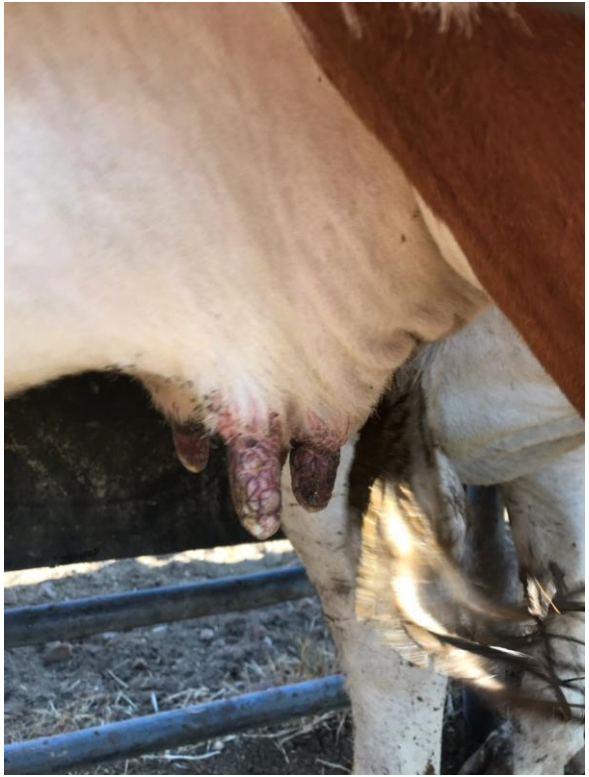
4. Provide good quality feed (hay) and water, soft ground, shelter, monitor for flies, leave them alone

Treatment of survivors – pregnant cattle

Cattle often survive very well, as they can escape, or move around to safety.

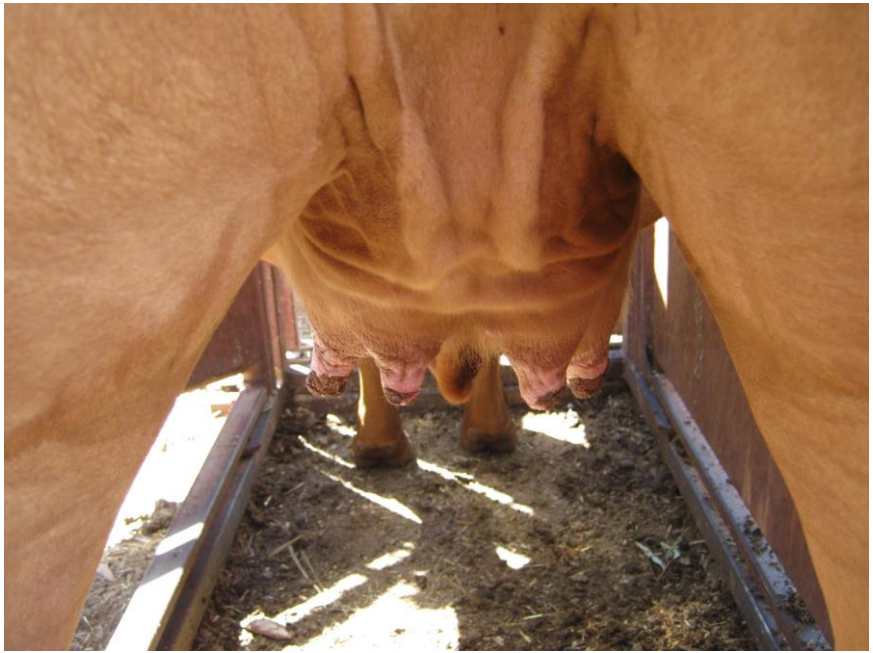
- Teat damage needs to be assessed quickly, and cattle with too much damage sent for salvage slaughter. Treat blisters with Deri Sal

- Some cattle do very well- but labour intensive.



Severely damaged teats that recovered

Individual teat examination and scoring



50% of heifers with teat injuries like this reared a calf

Some ewes about 10- 14 days post fire

Conclusion

This presentation on treatment of livestock after wildfires in South Australia has focused mainly on cattle and sheep. Horses and wildlife are generally managed differently and plenty of literature around them.

What works well

- Making the right decisions about survivors- but remember , there is always tomorrow..
- “Deri sal”, or simple ointments on day 1 – then nursing care
- Antibiotics and analgaesics work very well around day 5 -7 , not before

What does not work well

- Retaining too many lambs, delayed decisions on pregnant cattle
- Topical analgaesia, use of antibiotics and injectable analgaesics in sheep that should be culled