Animal Health Update

Arsenic – how is it a risk to me?
by District Veterinarian Tim Biffin

Background
Historically within Australia, industrial and agricultural use of arsenic presented significant and unacceptable risks to human and animal health. Subsequent government regulation, restricting the uses of arsenic has reduced these risks.

Today within the Riverina, old animal arsenic dip products and dip sites present the greatest risks to producers and their stock.

Arsenic is a naturally occurring element that is widely distributed in the environment. It presents in two forms: organic and inorganic. The organic form as the name suggests can be present in animal and plant material while the inorganic form has the potential to be present in soil/rocks, water, chemicals etc.

Traditionally, toxicity is associated with the inorganic form and can range from acute disease of gastrointestinal illness and death to more chronic disease causing skin changes and cancer.

In many developing nations, arsenic presents as a major risk to human populations through long term exposure via contaminated drinking water and food products. Fortunately this is not the case in Australia.

Where might arsenic be on my farm?

Arsenic containing chemicals, such as the once very common “Cooper’s Animal Dip”, is a real danger to curious livestock and children. They are potent and toxic, requiring only small quantities for serious adverse effects, including death.

Soil at the run-off sites from old livestock dips often contains high levels of arsenic. This is because arsenic forms very strong bonds with soil particles and then persists as a residue. Grazing of these areas is a risk, as livestock will consume variable amounts of soil in their diet, exposing themselves to arsenic residues.

The treatment of wood with copper chrome arsenate (CCA) was another common commercial use of inorganic arsenic on farm. Within the Riverina, a significant number of fence posts, livestock yards and vineyard trestles remain that have been treated with CCA. These are only reported to be of concern to human or animal health when burnt.

So what do I do?

Any potential sources of old arsenic on your farm, that you are concerned about, should be securely contained and isolated from all people and animals until permanent disposal can be arranged. Your local Environmental Protection Authority (EPA) Officer should be
contacted for advice surrounding lawful disposal of these products.

The burning of CCA treated wood should not be performed as it is dangerous and illegal; it is akin to burning old chemical drums. It is likely that the arsenic contaminated ash will cause residues in the environment on your farm.

In the unlikely event that you suspect any of your livestock have been exposed to arsenic, contact your district veterinarian or other veterinary advisor.

Emergency Animal Disease (EAD) Quiz
by District Veterinarian Gabe Morrice

A producer has called because she is worried about her cattle.

Three cows (on their third or fourth calf) are having trouble rising and walking.

They are staggery and are acting nervously, are easily startled and losing condition.

One has recently become aggressive.

Two of their calves are also losing condition with low milk production suspected as the cause.

What could the cause be?

a) Grass tetany
b) Lead poisoning
c) Bovine spongiform encephalopathy (mad cow disease)
d) Milk fever

The answer to the quiz can be found at the end of this newsletter.

Pregnancy Toxemia
by District Veterinarian Kristy Stone

Pregnancy toxaemia is a metabolic disease of sheep seen in the last 2-4 weeks of gestation and occasionally during early lactation. This syndrome occurs when a ewe has a shortage of glucose due to the increased energy demands created by the rapidly growing foetus. It is most typical in twin-bearing ewes however single-bearing ewes on a declining plane of nutrition can also suffer from the disease. Other predisposing factors for pregnancy toxaemia include:

- poor pasture availability
- weather (cold weather increases energy demand)
- stress (mustering, yarding, handling)
- other disease (any disease that results in reduced feed intake eg internal parasites, footrot, foot abscess, hypocalcaemia)
- age (older ewes more at risk than younger ewes)

Signs of pregnancy toxemia include:

- lethargy
- separation from the herd
- nervous signs, incoordination, tremors, blindness
- drowsiness & comatose
- convulsions
- recumbency
- death within 3-4 days
Prevention

It is much easier to prevent pregnancy toxaemia than it is to treat it. For the year ahead, it is important to develop a plan to manage those at-risk ewes especially should late pregnancy and lambing coincide with a late break in the season resulting in cold weather and limited pasture growth. Prevention measures include:

• Gradually increasing the level of nutrition over the last 6 weeks of gestation with high energy, concentrate feed such as oats or lupins.
• Providing good quality roughage.
• Scanning ewes to identify the twin bearing ewes which are at highest risk.
• Reducing stress in late pregnancy.
• Avoiding prolonged periods without feed.
• Treating or preventing other existing disease (eg drenching).
• Selection of lambing paddock (topography, shelter etc).

Q fever

Q fever has traditionally spread via exposure from farm animals to humans. However, recent cases have highlighted the risk of exposure from foetal fluids of dogs and cats to humans. A small number of cases have also been reported from exposure to wildlife (kangaroos, wallabies). The most common route of exposure is via inhalation of materials – dust, and aerosolisation of birthing fluids.

Birth products contain the highest concentrations of Q fever organisms so any assisted deliveries of calves, lambs, kids, kittens or puppies are a high risk activity. Ingestion is another exposure route as such, mouth to mouth resuscitation of newborn animals is not recommended.

The most common presentation of Q fever infection in people is an acute “flu-like” illness with fever, fatigue, headaches, and chills generally. This can last for 1-4 weeks in those affected. This syndrome occurs in about 40% of people exposed to Q fever. However for an unlucky few a Q fever infection can result in a chronic fatigue syndrome (approx 20% of cases) or other more severe complications in 1-2% of human cases.

In contrast the disease in animals is typically unnoticed. It is believed that about 15% of sheep and goat flocks and 30% of cattle herds will show evidence of exposure to Q fever worldwide.

In our area, we do not actually ‘see’ clinical Q fever in our farm animals eg it is not something that is causing production issues but it may still be there at a low level and therefore is a risk to us as humans.

If you suspect you may have Q fever it is important you advise your doctor so that the relevant test(s) can be conducted. Q fever testing and vaccination are a recommended prevention for all at risk human groups.

Zoonoses and Q-fever

by District Veterinarian Rahul Shankar

Zoonoses

A zoonoses is a disease that can be transmitted from animals to humans. Approximately 75% of new human diseases are zoonotic. It is important that people who handle or treat animals are aware of the risk of zoonotic diseases.

There are several zoonoses of concern to livestock producers. The more commonly encountered zoonoses include: Q-fever, scabby mouth, leptospirosis, anthrax and brucellosis (Brucella suis). Of those, Q-fever has reported the most number of cases in 2015.
Vaccination with Q fever can only be given once.

Generally this immunity is considered to last for at least five years. There have been very few cases where vaccinated people have contracted Q fever if after immunity may have decreased. But if you suspect Q fever, then get your doctor to check, even if you have been vaccinated in the past.

**At risk populations**

People who have close contact with large numbers of animals such as farmers, abattoir workers, shearsers, knackery workers and veterinarians are at a higher risk of contracting a zoonotic disease.

Members of the wider community are also at risk from those zoonoses that can be transmitted by family pets. Some people are more susceptible to contracting a zoonotic disease due to their immune status, examples of which include persons who are on immunosuppressive treatment, and pregnant women.

**Minimising the risk**

Contact with zoonotic disease agents is preventable by taking a number of precautions including:

- practising good personal hygiene (eg handwashing)
- providing prompt and effective first aid treatment to cuts and scratches
- using personal protective equipment eg overalls, gloves, boots, goggles, aprons
- cleaning and disinfecting work spaces and equipment
- vaccinating pets and livestock
- worming pets
- controlling rodents
- isolating and treating sick animals
- obtaining an accurate veterinary diagnosis when animals are ill

**What to do if you suspect a zoonoses?**

All people who come into contact with any species of animal should be aware of the risks of transmission of disease from both ill and clinically normal animals to humans.

**Reminding your medical practitioner, if you are ill, of any contact you have had with animals will prompt them to consider possible zoonoses.**

**Goat depot and NLIS requirements by District Veterinarian Gabe Morrice**

Do you collect and sell feral goats? The definition of a goat depot in the GICA manual is:

**Goat depot - a property that is used to aggregate (feral) goats prior to sale and/or slaughter. It meets the conditions agreed to by Industry and Government to operate NLIS tag free for goats destined for slaughter; is fully LPA accredited; has agreed to participate in an annual LPA audit; has a goat depot NLIS database account; and has a letter from a goat meat processor indicating that the depot is, or will be, a supplier of goats on a commercial basis.**

If you are doing this on your property, then:

a) you have to obtain LPA accreditation
b) you have to obtain a letter from a goat meat processor indicating that the depot is or will be a supplier of goats on a commercial basis
d) you have to open a goat depot NLIS account to record all movements on and off the goat depot
Once approved by DPI, a registered goat depot operator can receive untagged goats and send untagged goats to an abattoir (as long as you are within the correct timeframe of seven days between these movements).

Do you have other livestock on the property? If yes, you have to apply for a goat depot PIC which will be used for upload only feral goats. If not, you can use your existing PIC.

**Answer to the EAD Quiz**

If you answered c): BSE or mad cow disease, you are correct!

BSE is a chronic fatal nervous disease of cattle caused by feeding feeds such as meat meal.

Other clinical signs include: changes in behaviour and neurological signs; excessive licking of the nose and flanks; poor coordination (circling, staggering and falling); muscle tremors; abnormal posture (abnormal ear position and abnormal head carriage); difficulty in rising (downer); paralysis; excitability; increased or decreased sensitivity to sound, pain, heat, cold or touch.

It is implicated in causing a fatal nervous disease in humans that have eaten meat from affected cattle (known as variant Creutzfeldt-Jacob disease, v-CJD). It has never occurred in Australia, but if we were to get BSE, it would have a dramatic impact on our export markets.

To prevent this, we have a number of programs in place. This includes:

- **Surveillance**: funds allocated by the Commonwealth government help us with rule-outs of BSE in cases that match the clinical signs (any cattle over 30 months old and less than nine years old are eligible). Owners receive an incentive payment for the brain.

- **Ruminant feed ban**: No ruminant is allowed access to any feed that is derived from material, tissue or blood of any animal. Audits of feeds are undertaken to ensure that ruminants are not being fed banned products that could cause the disease.

**What can you do to help prevent this disease?**

- Be aware
- Have a farm biosecurity plan (specifically to prevent BSE, you could include that no banned ruminant feeds be fed to cattle or sheep and that their access to areas of risk, such as sheds, feed storage areas, or gardens, be prevented.)
- Call a vet if you see unusual disease signs in your livestock. We are here to protect our shared industry, and don’t mind “false alarms” one bit!

**Upcoming Events**

Graham Centre Sheep Forum  
Friday 8 July 2016  
9.00am – 1.30pm (8.30am for 9.00am start)  
Charles Sturt University Convention Centre  
Wagga Wagga

**Presentations from:**

Mark Harvey-Sutton (Sheepmeat Council of Australia)  
Rob Woodgate (CSU)  
Lucinda Watt (CSU)  
Shawn McGrath (Fred Morley Centre, CSU)  
Susan Robertson (CSU)  
Tim Westblade (Lockhart)  
Janelle Jenkins (Riverina Local Land Services)

$25.00 per person  
Pre-pay at www.trybooking.com/LLRC

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