

Rabies in cattle

1. How do cattle in a herd become infected with the rabies virus?

- When an infected animal (usually a dog or Jackal – they are typically the main vectors) bites one of the herd animals. By the time this happens, the dog/jackal will be showing typical clinical signs of rabies and will die within three – five days.
- A change in normal behavior and disorientation are typical early symptoms of rabies. Thus instead of avoiding large animals in herds, rabid dogs/jackals will be unafraid of wandering through a herd. Cattle are naturally inquisitive and will approach a strange behaving animal as seen with this dog in the picture below. The rabid animal will often then attack the inquisitive cow as rabid animals usually attack after being stimulated (This dog lunged at the cow seconds later). Once this has happened there may be some panic in the herd and they will scatter. As a result, not many other animals will be bitten. It is therefore rare to have more than one or two cows in a herd being infected by a single rabid intruder.



- Rabies also does not spread very efficiently. It is estimated that each rabid animal will infect only 1.2 other animals, and so even when there are multiple bite victims, not all of them will become infected. Many factors prevent the virus ultimately entering the nervous system.
- Due to the fragile nature of the virus outside the host, it is highly unlikely that the virus will be transmitted through contact with feed and water troughs from cow to cow.
- It is also unlikely that direct contact between bovines will result in rabies being transmitted from one cow to another, and one bovine biting another is virtually unheard of.

2. What precautionary measures can be taken?

- Be vigilant with respect to stray dogs and jackals on the farm.
- Limit food sources for jackal and stray dogs by managing calving, afterbirth and carcass disposal. Do not create a vulture restaurant on your farm as this will attract stray dogs/jackals and create an ideal environment for rabies virus transmission with animals fighting over the food.
- Vaccinate all dogs on farm, this is a legal requirement and is the responsibility of the owner.

- Shooting Jackal does not necessarily help the situation. It has been shown that this could in fact have a negative impact, as territorial vacuums left by culling can attract new jackal onto the farm and thus create unwanted movement.

3. What symptoms will an infected cow exhibit?

- Change in Behavior!!!!
- There are two forms – a furious form and a dumb form
- Separation from the herd
- Wind Sucking /Bellowing
- Difficulty swallowing (Appears-like a bone stuck in the throat).
- Profuse salivation
- Aggression
- Incoordination
- Seizures and death
- The dumb form is more likely to show depression and paralysis.

4. What should we do / how should we handle a cow that we suspect is infected?

- Notify the State Vet!
- Isolate and observe – usually will see rapid deteriorations over a few days .
- Warn staff to avoid contact due to possible aggression.
- Do not stick your hands down the cows throat to see if anything is “stuck” - this is a very common mistake and puts that person at risk of becoming infected.
- If handling is required wear protective clothing.

5. How to take a sample from an infected animal.

- It is not advised that any unvaccinated person attempt to take a sample!
- a. The State Vet or Private Vet should be notified and they should be responsible.
- b. The brain is the only sample recommended for rabies diagnosis and so the removal of the brain is the primary aim.
- c. If no other option is available to the farmer, then he can remove the whole head of the animal, place it in at least two leak-proof plastic bags and deliver to the State Vet. **NB Must wear protective clothing to protect eyes, mouth, hands and arms. DO NOT ATTEMPT THIS IF YOU HAVE ANY OPEN WOUNDS/CUTS/SCRATCHES on any part of your body that could possibly be exposed to blood/saliva/or any other potentially infectious material from the animal, and disinfect everything.**
- d. Transport of a potentially infected animal is subject to the road traffic laws of SA, and should be done in a controlled manner through an official.
- e. There are only two laboratories in SA that can process a rabies sample and so all dispatch should be handled by the State Vet.

6. Is a vaccination program an economically viable option?

- Only the farmer can decide whether vaccinating his whole herd is viable.

What would a herd vaccination program look like?

- Inactivated vaccines should be safe for all ages and circumstances (See manufacturer’s specifications).
- Initial vaccination at 4months, except where mothers have been previously vaccinated, in which case primary vaccination should be delayed to 9mths.
- After this a booster at a year and following that every 3yrs while the outbreak persists.

7. What precautions should staff who work with cattle take?

- Be vigilant and report presence of jackal or any other wild animals/stray dogs in the herds.
- Be vigilant for unusual behavior and other symptoms described.
- Do not handle suspect animals without protective clothing.
- Beware of possible attacks (change in behavior!)
- Isolate animals and call State Vet or Private Vet.
- Rabies Virus is very sensitive to most disinfectants and so hands, cloths and environment can be disinfected.
- Vaccinate all dogs!

8. Guidelines on disposing of infected carcasses?

- Rabies virus is fragile and dies quickly, and a carcass does not constitute a huge risk. **HOWEVER! You do not mess around with Rabies** and precautions must be taken.
- Confirm diagnosis
- DO NOT EAT THE MEAT!
- Do not feed at a vulture restaurant, as could congregate scavengers other than vultures, and there remains a small chance of infection through ingestion.
- Avoid dissecting carcass as people who slaughter carcasses are at high risk. If dissection is necessary take precautions with protective clothing and guidance to people doing the job.
- Virus is fragile and so burning will destroy.
- Bury carcass deep enough to avoid scavenging.
- Disinfected contaminated areas.

9. Should staff who work with cattle be vaccinated?

- Not as a routine - Rabies vaccine is prohibitively expensive and as a standard practice is unnecessary.
- Bovines pose little real threat to staff if basic precautions are taken.
- If staff are exposed in any way to any suspect animal they must be afforded medical treatment immediately! Timing is everything for Post Exposure Treatment, which if correctly applied is 100% effective.

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