Anthrax Vaccination in NSW

October 2020, Primefact 401, Seventh edition

Cattle Health Coordinator, Animal Biosecurity and Welfare, NSW DPI

What is Anthrax?

Anthrax is a bacterial disease which occurs world-wide, affecting many species of domestic and wild animals, as well as humans. In grazing animals anthrax usually strikes suddenly with livestock showing few signs of illness before dying. It is a serious disease of livestock because it can kill stock across all ages and classes and because it can survive in the soil for decades.

All cases of sudden unexplained death in livestock should be reported to a Local Land Services (LLS) veterinarian so that anthrax can be ruled out.

Anthrax is prohibited matter and notifiable under the Biosecurity Act 2015 (the Act). If you believe anthrax is affecting your stock you have a legal responsibility to immediately notify an inspector authorised under the Act.

Further information on anthrax can be found in Primefact 114. More information on notifiable diseases in NSW is available in Primefact 1335.

Anthrax vaccine

The risk of anthrax infection can be managed by preventive vaccination of livestock.

On properties where anthrax has occurred in the past there is a risk of grazing animals becoming exposed to infectious anthrax spores in the ground. Spores can survive for long periods (years) in the soil, and once a paddock becomes contaminated with anthrax spores it cannot be effectively disinfected. This means that the risk will be present in the long term, but it is greatest in the three years immediately following an anthrax incident due to heavy contamination of the surface layers of soil. Environmental factors such as drought, flooding rain and soil tillage can all increase the risk of an anthrax outbreak on a property with a history of anthrax, even if the last case was decades ago.

The vaccine registered for use in Australia is the Anthrax Vaccine (Living Spore Sterne 34F2 Strain). There are conditions attached to its supply and use within NSW.

Anthrax vaccination is available to all producers in NSW. Vaccination provides effective protection against anthrax when the manufacturer’s directions are followed. Producers
should consider the risk of anthrax in their particular circumstance and are encouraged to vaccinate in high risk situations. Factors to consider include previous history of anthrax on the property or in the district, time since last anthrax incident and environmental factors.

**General biosecurity duty**

A key object of the Act promotes biosecurity as a shared responsibility between government, industry and communities. Under the Act any person (e.g. stock owner or manager, agent, veterinarian, etc) who deals with potential anthrax carriers such as grazing livestock, or other associated carriers (e.g. soil, equipment) and who knows or ought to know of the biosecurity risks associated with anthrax has a **general biosecurity duty** to take measures to prevent, eliminate or minimise the risk as far as is reasonably practicable.

Potential ways to discharge your general biosecurity duty will include:

- actions to minimise stock becoming infected e.g. vaccination of livestock for at least three years after anthrax is diagnosed on a property
- regular monitoring of animals for signs of disease, particularly during periods of heightened risk
- immediate notification of suspected disease
- isolation of a potentially infected animal, carrier or premises
- disinfection of potentially infected items
- making and maintaining records to assist in disease tracing
- appropriate disposal of potentially infected things e.g. of infected carcases.

**Accessing anthrax vaccine in NSW**

Anthrax vaccine can only be supplied to persons who have been authorised to use it. To obtain authorisation you need to complete and send in the form: [Application and Authority to use Anthrax Vaccine in NSW](#), or contact your local [Local Lands Services (LLS) office](#).

Vaccine use in sheep, cattle and pigs can be authorised by a Local lands Services Veterinarian or a Department of Primary Industries veterinary officer. Requests for vaccine use in other species must be approved by the NSW Chief Veterinary Officer. Your LLS veterinarian can assist.

**Procedure for ordering vaccine**

- Obtain a copy of the application and authority form online or from your LLS office.
- Complete all sections in the first part of the form, ensuring that the property identification code (PIC) of the property where the livestock are located is supplied, and a nominated supplier is indicated. Your LLS office or rural supplier can assist you if needed.
- Submit the form by fax or email to your LLS office. If you are requiring vaccine immediately, it is suggested you speak to your LLS Office to ensure the application has been received.
• A government veterinarian will process your application form within two working days and will return a signed copy to you and Virbac Australia. They will contact you if there are any problems with your application. If vaccine is needed urgently and you are unable to contact staff from your local LLS, please ring 1800 675 888.

• On receipt of the signed authority your nominated supplier may place an order for vaccine from Virbac Australia. The signed authority form should accompany the order.

• On receipt of an order and signed authority Virbac Australia will dispatch the vaccine to the account holder you have nominated – usually your local rural supplier or your private veterinarian.

Using the vaccine

Follow the manufacturer’s directions when using anthrax vaccine.

Use of the special vaccine gun designed for use with the anthrax vaccine is strongly recommended. Ask your rural supplier or private veterinarian for details when you are ordering your vaccine.

The strain of anthrax spore used in the vaccine is not known to cause disease in people, but care should be taken to avoid human exposure. Seek medical advice promptly if the vaccine is accidentally self-injected. Take the vaccine package label or bottle with you.

In the case where livestock deaths due to anthrax are occurring on a property, vaccine may be used at a higher dose than recommended on the label. This may only be done under the instructions of a veterinarian.

Sometimes during an anthrax incident your veterinarian may recommend treatment of at risk animals with antibiotics. Animals receiving antibiotics at the time of, or shortly after vaccination may not respond to the vaccine. If antibiotics are used seek veterinary advice about the timing of vaccination to ensure all stock are protected.

Restrictions on vaccinated livestock

There are two very important restrictions:

• Stock vaccinated with anthrax vaccine may not be moved, other than with an inspector’s permit, within 42 days of vaccination.

• There is a 42-day slaughter withholding period for stock vaccinated with an anthrax vaccine.

Movement permits

A movement permit may be issued for vaccinated stock to walk on a travelling stock reserve (TSR), or if they need to be moved to access feed or water for example. Application must be made to the nearest LLS office and if a permit is issued, the NLIS identification numbers of all vaccinated cattle are entered in the NLIS database with a status of (AV1) applied.

AV1 status indicates that cattle have been vaccinated for anthrax within the last 42 days and cannot be slaughtered for human consumption.
After 42 days the AV1 status automatically reverts to AV2 on the NLIS database. AV2 status indicates the animal has been vaccinated for anthrax in its lifetime.

If the permit is requested for sheep, they have to be identified in accordance with NLIS requirements.

**Immunity and revaccination**

Immunity takes up to 15 days to develop after vaccination. On infected properties deaths usually stop within 5 to 7 days after vaccination.

To discharge your general biosecurity duty when anthrax occurs, owners need to take extra steps for three years to prevent stock from being infected with anthrax. Options could include, electing to crop rather raise livestock for three years or electing to vaccinate all sheep and cattle annually for three years. Subsequently property owners are encouraged to continue an annual preventative vaccination program.

Vaccinate all new animals born on or introduced to the property. Don't forget to vaccinate all introduced stock (including bulls and rams) as soon as they arrive.

Any new case of anthrax will result in more spores contaminating the property and the cycle will continue. The decision not to vaccinate or to cease vaccinating on any property with a history of anthrax can have consequences that last for decades.

Anthrax most frequently occurs during hot and dry conditions. These conditions often occur at particularly busy times of the year such as harvest. These are also times where it is difficult to incinerate carcases due to fire risk. If carcases can’t be incinerated, owners must prevent predation of the carcase/s. This imposes additional material and time costs. As vaccination can be planned, it is an effective way of managing workloads.

Producers on properties with a history of anthrax are advised to discuss with their veterinarian how to manage the risk of anthrax and the role of on-going vaccination.

**More information**

For further information:

- please contact your LLS veterinarian,

**Acknowledgements**

This Primefact was adapted from the fifth edition written by Samantha Allan

PUB17/45

© State of New South Wales through Regional NSW 2020. The information contained in this publication is based on knowledge and understanding at the time of writing (October 2020). However, because of advances in knowledge, users are reminded of the need to ensure that the information upon which they rely is up to date and to check the currency of the information with the appropriate officer of the Department of Regional NSW or the user’s independent adviser.