Lumpy-skin disease

a disease of socio-economic importance

Knopvelsiekte (Afrikaans)
Letlalo la goba le diso (Sotho)

– Lindsay Thomas –
For further information contact your nearest animal health technician or state/private veterinarian

or

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WHAT IS LUMPY-SKIN DISEASE (LSD)?

◊ It is a viral disease of cattle and is typically characterised by nodules or lumps on the skin.
◊ All cattle breeds in South Africa can be affected.
◊ It usually occurs during the wet summer and autumn months, when flies are in abundance.
◊ The disease occurs throughout Africa.

WHY IS LUMPY-SKIN DISEASE SO IMPORTANT?

◊ It is a notifiable disease, which means the state veterinarian must be informed because there are specific control schemes for this disease.
◊ Up to 45% of your herd can get infected and the mortality (death) rate may reach 10%.
◊ The disease causes emaciation (loss of body condition because of unwillingness to eat); temporary or permanent loss of milk production, lowered or complete loss of fertility in bulls and cows, abortion as well as permanent damage to hides (skin).
There is a loss in income because of lower production (deaths, milk and meat, abortions, lowered breeding potential, and damage to valuable hides), and the costs of drugs to treat sick animals.

WHAT TYPE OF ANIMALS CAN BE AFFECTED?

- Cattle of all ages can be infected.
- Cattle which are vaccinated annually are protected and therefore less likely to be infected.
- Cattle which have had the disease and survived cannot be infected again (also immune).
- Calves under 6 months of age are protected against the disease if their mothers were vaccinated or had the disease previously.

HOW DO CATTLE BECOME INFECTED?

- Biting flies play the most important role in spreading the virus. Infections increase during the wet summer and autumn months when there are more flies.
- Calves can be infected by drinking milk from a cow which has the disease.
The disease can also spread through the saliva of infected animals when they use the same drinking trough.

WHAT ARE THE SIGNS OF LUMPY-SKIN DISEASE IN CATTLE?

Any one or more of the following:

- Skin nodules and ulcers:
  - can vary from a few to hundreds
  - the size ranges from 0.5–5 cm
  - they occur anywhere on the skin, including the nose, udder and vulva in cows, the scrotum in bulls, as well as in the mouth (the gums)

- Legs which become swollen and develop sores

- Enlarged lymph nodes

- Pneumonia/coughing—as a result of infection of the respiratory tract (the windpipe) and lungs

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Eye infection—blindness

Lesions on nose

Ulcers in mouth

Swollen scrotum with lesions—orchitis

Nodules on vulva and around anus

Nasal discharge—thick, watery to pussy fluid from the nose

Infertile bulls—due to orchitis (infection of the testes)

Infertile cows

Mastitis—this lowers milk production

Lachrymation, infection of the eye or even blindness

Fever

Emaciation

Salivation.

**HOW CAN LSD BE DIAGNOSED?**

A basic diagnosis can be made by the presence of the typical lesions on the skin and in the mouth. In longhaired animals you should feel for the nodules on the skin, or you can wet the hair so that you can see the nodules more easily.

A definite diagnosis can only be confirmed by a veterinarian by taking samples of the skin to a laboratory where they can identify the virus (this has to be done because there are other diseases which cause similar signs in cattle and therefore require different methods of control and treatment).

If you suspect LSD in your herd, you must inform the state veterinarian so that the disease can be confirmed and he/she will help you to control the disease.
WHAT OTHER DISEASES CAN LSD BE CONFUSED WITH?

- Pseudo-lumpy-skin disease
- Demodicosis (Demodex)
- Besnoitiosis
- Oncocercariosis
- Insect bite allergies
- Bovine virus diarrhoea/mucosal disease
- Bovine malignant catarrhal fever (Snotsiekte)
- Rinderpest

Because it is clear that there are many diseases causing similar signs, it is important to obtain a definite diagnosis to ensure the best preventative and control measures for your herd.

HOW IS LSD TREATED?

There is NO TREATMENT for lumpy-skin disease.

Nonspecific treatment (antibiotics, anti-inflammatory drugs and vitamin injections) is usually directed at treating the secondary bacterial infections, inflammation and fever, and improving the appetite of the animal.

HOW CAN YOU PREVENT LUMPY-SKIN DISEASE IN YOUR HERD?

Prevention is the cheapest and best method of control of the disease. If your animals are protected, you will not suffer any production or financial losses as a result of the ill effects of the disease.

Vaccination (the best)

The attenuated Neethling strain vaccine is a product that contains a weakened LSD virus. When this vaccine is administered the animal will develop protective antibodies (made by white blood cells). These antibodies then resist the actual virus that is transmitted by biting flies or milk and saliva of infected animals. The animal is therefore protected or immune.

The Onderstepoort Veterinary Institute or the local veterinarian can supply vaccines.
All cattle should be vaccinated annually (once a year), and preferably before the summer rains to ensure good protection.

Animals that had the disease and recovered, are immune and therefore do not have to be vaccinated.

Calves which are under 6 months old and were born to cows which have been vaccinated or had the disease, do not need to be vaccinated. However, as soon as they are 6 months old, they have to be vaccinated annually.

There may be a swelling at the site where the vaccine is given, and a temporary drop in milk production, but the swelling will disappear after a few weeks with a return to normal milk production.

**It is important to read the instructions for use on the vaccine labels. If you have any questions or need assistance with vaccination, contact your state veterinarian or animal health technician for help.**

**Fly control**

It is unpractical and almost impossible to control all the flies in your herd. It is better to prevent flies from biting your animals.

Cattle should be dipped in a product that contains an insecticide. Make sure that the dip includes insecticides effective against flies. Read and follow the instructions on the labels of the products.

Fly repellents can be sprayed on cattle.

Note that fly control will not prevent all cattle from being infected by LSD. The only way to ensure that all cattle are protected is by vaccination alone.