

BIOSECURITY VACCINATION PLAN

Dr. Danie Odendaal
Director, Veterinarian Network

INCREASING ANIMAL'S OWN RESISTANCE AGAINST SPECIFIC DISEASES

Some of the general diseases that animals are exposed to, are impossible to prevent effectively just by trying to reduce exposure. In these cases it is essential to protect animals by way of vaccination, against those diseases for which an effective vaccine does in fact exist. Such an immunization plan is developed at farm level by the livestock farmer in conjunction with his herd veterinarian who monitors the diseases through the disease reporting systems.

Where animals are being taken to a show or livestock event, there must be an existing immunization plan in place and the vaccinations must have been administered as per the plan, prior to the animals going to the show.

The following is a short summary of diseases against which livestock farmers must vaccinate their animals and which are of great significance for animals having to attend a show or event.

1. Deadly bacterial diseases

These diseases can occur on any farm or premises as the organisms causing the disease, are already present in the soil. In such a case it isn't possible to prevent exposure. The most important diseases in this group are also diseases that can kill livestock quickly without there being time for effective treatment or even the existence of a treatment.

2. Diseases transmitted by flying insects

No matter how good your biosecurity measures, there are certain diseases that will spread to your farm or premises by flying insects. In most cases these are also viral diseases for which there is no treatment. The only form of protection is to vaccinate the animal.

All insect transmitted viral diseases are of importance and include lumpy skin disease, three-day sickness, bluetongue and Rift Valley fever.

The livestock farmer and his veterinarian (who monitors animal diseases in the area) can decide annually whether it is necessary to immunize all the animals or to only immunize all the replacement animals twice, followed by a booster dose when the risk increases.

3. Diseases causing reproduction losses and abortions

These usually entail latent diseases that don't affect animals other than negatively affecting re-conception (embryos dying off) or causing abortions. These diseases are usually quite intricate and therefore vaccination is but one aspect of disease prevention. In these cases animals must be tested so that carrier animals can be culled, thus decreasing the chances or level of exposure.

Examples of important diseases are brucellosis, bovine viral diarrhoea, infectious bovine rhinotracheitis and enzootic abortion. Preventative vaccination is necessary as the vaccines cannot prevent the disease if abortions are already taking place.

4. **Complex diseases**

The last group entails complex diseases which demand a combination approach (decreased exposure and increased resistance).

Diseases in this group include pneumonia and diarrhoea through vaccination, but it is also necessary to manage the factors that animals are exposed to and which suppress their immunity (e.g. dust, cold winds, poor nutrition and mixed groups). As animals are transported to shows and will come into contact with other animals there, a booster dose is necessary at least during the six months prior to them going to the show/event.

Diarrhoea among young animals is certainly one of the most difficult disease problems to control and here it is once again important to employ a combination approach to control the problem. Talk to your veterinarian about vaccinating animals against E. coli and diarrhoea causing viruses. See to it that pregnant animals receive excellent nutrition so that their colostrum can be enhanced. Also cleanse the environment in which animals calve, so that newly born young are exposed to fewer disease-causing organisms during the first week after birth.

A complete vaccination program

Complete vaccination program is ultimately the responsibility of the livestock farmer in cooperation with the herd veterinarian and is also the first step in effecting a biosecurity plan.

Where animals are shown or exhibited, the organisers should do everything in their power to prevent disease transfer. However, preventing general diseases as discussed above, can only take place if the animals are already protected by way of vaccination against general diseases.