



CHECK LIST

Mastitis

E. coli

Corona viru

Lepto

Effective disease control

by Prof Dirk Lourens, Department of Production Animal Studies,
Faculty of Veterinary Science, University of Pretoria

In South-Africa, communicable diseases are a major cause of livestock losses and it is disconcerting that so many preventable diseases still frequently result in substantial financial losses.

Biosecurity is defined as any measure that prevents or limits the spread of communicable organisms to susceptible animals, and consists of both internal and external measures. However, it comprises far more than just basic immunisation and quarantine, but also includes preventative health care and proactive biosecurity measures to keep infections out of a healthy herd.

The veterinarian is the farmer's partner in this regard and a practical biosecurity programme suited to the specific circumstances of each farm should be designed in cooperation with the veterinarian. In addition, basic knowledge of infection routes are imperative, including:

- Vertical transfer (congenital infection)
- Horizontal transfer (infection from one animal to another)
- Vector transfer (mosquitoes, flies and ticks, as well as infected needles and instruments, feed, water milking machines and people)

- The mechanical transfer of disease, without development in a vector, such as eye infections or gallsickness, which is transferred by flies.

External biosecurity

External measures comprise actions to prevent disease being brought into a herd. When animals are purchased, it is important that buyers are completely familiar with their backgrounds. Animals should only be bought from herds that are free of major diseases such as tuberculosis, brucellosis, leucosis, BVD, trichomoniasis, *Campylobacter* (vibriosis), Johne's disease, mastitis, parasites and more. Close cooperation with local veterinarians and the state veterinarian, as well as the seller's veterinarian, regarding the spectrum of tests and results is important and one should insist on health certificates. The best option is to have a closed herd, which then eliminates the risk. Newly purchased animals should also be quarantined for approximately 21 days,

before incorporating them into the existing herd. This isolation period is sufficient to monitor the animals' health, conduct further tests, immunise and dose if required. The quarantine area should be downwind and downstream from the existing herd, while feed and water troughs should not be shared with the existing herd.

Contact with animals from neighbouring farms, as well as game, dogs, cats and rodents which could be potential carriers of diseases such as neosporosis, malignant catarrhal fever and leptospirosis, can be avoided through 'n buffer zone and good fences.

Access routes to a farm should be limited. It is also preferable to enforce access control and make use of a visitor's log. Veterinarians, nutritionists, farriers and others who have direct contact with animals, should be viewed as high risk visitors and a veterinarian, in cooperation with the farmers he serves, should have a protocol in place to prevent disease transfer from one farm to another.

To avoid contamination with organic material such as manure from vehicles, all vehicles should be parked away from direct contact with animals and waste. Trucks move from one farm to another and there is no way of knowing where a truck was before it arrives on your farm and which diseases might arrive with the truck and/or its contents.

Water quality should be checked regularly, as many problems can arise due to water being contaminated with pathogens, various chemicals, too high nitrate concentrations, sulphates and various other minerals, such as fluorine. It is also possible that diseases can arrive on-farm through purchased feed, which is why strict quality control is absolutely imperative.

Some types of disease can be spread through semen and therefore it is important that semen is only bought from places known for strict quality standards and control.

Internal measures

Internal biosecurity measures refer to the management practices that have to be in place to prevent the spread of diseases that are endemic to a herd, or to limit it as far as possible. Optimum management of housing, feed, water and grouping is critical to limit environmental disease such as enteritis and pneumonia. Poor housing and/or sanitation and overcrowding are general environmental risk factors, while inadequate nutrition, weak immunity and the poor grouping of animals are classified as host risk factors.

A structured vaccination programme is an integral part of any biosecurity programme and should be set up with the help of a veterinarian and tailored to the specific circumstances on the farm. It is the most effective and cheapest way to ensure the good health of the herd, if the most important management aspects are in place.

Sick animals should be identified early and treated accordingly to hasten their recovery and limit the spread of the disease. Hospital facilities and meticulous records are critical.



Prof Dirk Lourens

Biosekuriteit beskerm

Biosekuriteit is enige maatreeël wat die oordrag van siektes van diere, mense of karkasse na mense of diere beperk of voorkom. Hoewel 'n effektiewe immunisasieprogram 'n integrale deel van enige biosekuriteitsplan uitmaak, moet ander bestuursmaatreeëls wat van toepassing is op die plaas se spesifieke omstandighede met die hulp van 'n veearts in plek gebring word en streng toegepas word om die bio-integriteit van die plaas te handhaaf. **TDM**