Biosecurity Protocols Meeting Kit

Biosecurity refers to procedures used to prevent the introduction and spread of disease-causing organisms in livestock farm sites.

HOW DISEASES ARE SPREAD IN LIVESTOCK

Direct Contact: When animals are close enough to touch. There is an immediate transfer of a disease agent to a host through open wounds, mucous membranes, or the skin. It may occur by contact with blood, saliva, nose-to-nose contact, rubbing, or biting from an infected animal.

Fomites/Indirect Contact: Transfer of disease agent is indirect by contact with an inanimate object such as equipment, vehicles, clothing and footwear.

Aerosols: Disease agent is contained in suspended particles passed in the air from one animal to another.

Ingestion: Consumption of a disease agent in contaminated feed or water or chewing contaminated objects.

Vectors: A disease agent spread by blood-feeding insects such as mosquitoes, ticks, biting midges and flies.

IMPORTANT BIOSECURITY PRACTICES

Control of human traffic: Growers should restrict the number of visitors on site to essential visitors only. Ideally from a biosecurity standpoint, there would be no visitors at all. All people moving onto and within the site should be approved and records kept. This includes all visitors such as contractors, service people, maintenance personnel, site visitors, friends, and neighbors. There should be a clear procedure in place for all entering the barn, including providing dedicated clean within-barn coveralls and footwear for both staff and visitors. Hands should

be cleaned by washing or with sanitizer. Some may require showers before entering barns. Footbaths should be kept clean and contents frequently changed. Footbaths should NOT be a substitute for dedicated in-barn footwear. Growers should also refrain from visiting other farm operations unless necessary. If it is deemed necessary, then showers and disinfecting of clothing, vehicle and any equipment is crucial.

Control of vermin, insects, and wild birds: An active vermin and wild bird procedure should be in place and can include trapping, baiting, and discouragement methods. The pest control protocol needs to be proactively managed, by monitoring activity and moving bait/trapping stations accordingly. Premises and surrounding environments need to be kept clean and tidy. Keeping vegetation from around the sheds removes vermin habitat. Feed spillage from feed deliveries or leaks need to be cleaned immediately so as not to attract wild birds or rodents. Dead chickens should be disposed in a manner that is hygienic and does not encourage the presence of rodents, insects, or predators. Growers should not have contact with wild birds such as ducks, geese, and turkeys.

Control of vehicular traffic and equipment: Minimize the risk of cross-contamination from external areas onto the site. Vehicle entry to site should be kept to a minimum. Drivers should limit movements to the essential activities such as feed delivery, stock delivery, litter delivery, or harvest. Equipment used inside the barn should not be stored outside unless there is a thorough program in place for cleaning and sanitizing the equipment before use inside the barn. Equipment and vehicles must be sanitized before use between barns in order to prevent cross-contamination between flocks or herds.

Control of animal health and mortality: Growers must inspect their animals daily and dispose of mortality in a timely and approved method. Leaving carcasses to decompose in a pile increases the risk of disease spreading via insects and rodents.

Control of barn environment: Good ventilation can reduce the growth of disease-causing microbes in the barn. Fresh air entering and leaving the barn dilutes the microbe population. Poor

ventilation can result in animals becoming stressed and can cause irritation of the respiratory system which in turn makes them more susceptible to bacterial and viral infections. Good ventilation will also prevent the buildup of toxic gases such as ammonia and carbon dioxide in the barn. Ensure the litter is adequately dry, as damp litter and warm house conditions provide ideal growth conditions for disease-causing microbes. The water supply to the barn should be clean and treated if necessary to minimize the risk of introducing organisms into the shed via the drinker system and to limit the spread of any organisms at drinker level.

CLEANING/DISINFECTION PRECAUTIONS

- **Cleaning** – removes germs, dirt and impurities from surfaces or objects. Cleaning works by using soap (or detergent) and water to physically remove germs from surfaces.
- **Sanitizing** – lowers the number of germs on surfaces or objects to a safe level, depending on the requirements. This process works by either cleaning or disinfecting surfaces or objects to lower the risk of spreading infection.
- **Disinfecting –** kills germs on surfaces or objects. Disinfecting works by using physical or chemical agents to kill germs on surfaces or objects.
- **Sterilization –** kills all forms of microbial life. Steam under pressure, dry heat and liquid chemicals are used in this process.

FINAL WORD

Biosecurity practices prevent, reduce or eliminate the introduction and spread of disease among livestock and protect humans from zoonotic diseases (animal diseases passed to humans). Diseases can easily be carried on boots or clothing contaminated by manure, saliva, and respiratory and reproductive discharges.