



Practical Biosecurity Programs
Standard Biosecurity Protocol (SBP)
SBP 25

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Using Vaccines in Biosecurity

- 1. Purpose:** Using a vaccination program to prevent disease from establishing on your farm
- 2. Responsibility:** Farm Manager/Owner
- 3. Frequency:** On-going
- 4. Biosecurity Protocols**
 - 4.1** Vaccination programs are designed to protect livestock/poultry/mink from disease pathogens that are prevalent in the region
 - 4.2** Vaccines are used to prevent specific pathogens from establishing on a farm site and protect the animal from that disease
 - 4.3** Contact your farm veterinarian for the appropriate vaccination program for your livestock/poultry/mink and your area. Your veterinarian will direct you on the dosage, vaccination type (water, injection, spray, etc.)
 - 4.4** Vaccines are used to help the animal produce its' own defense or immunity against disease organisms. These vaccines mimic what happens when the animal is exposed to disease and the animal builds antibodies against the organism
 - 4.5** With a protective level of antibodies, the animal remembers the organism when the organism is brought onto the farm site and when challenged, the animal is ready to fight off the invader



Picture 25.1



Picture 25.2

Vaillancourt, 2003

- 4.6 The animal will not develop the disease and will not be infective or a carrier so the whole animal population in the barn or farm site is protected
- 4.7 Vaccines can be attenuated viruses or bacteria, killed (inactivated) viruses or bacteria or parts of them
- 4.8 The antigen in the attenuated vaccines is an organism, bacterium or parasite which has been developed to stimulate production of the appropriate antibodies without causing the disease



Picture 25.3, Cerano, 2004



Picture 25.4, Pfizer

- 4.9 Live vaccines which provide a low dose of the organism are a powerful stimulus to the immune system and provide long term protection. With live virus vaccines, care must be taken in handling and administering the vaccine and after the vaccination as the animal builds immunity and sheds the virus. This can be problematic on farm sites where more than one age group or barn of similar livestock/poultry/mink are kept
- 4.10 Strict biosecurity measures in isolating the vaccinated animals are to be practiced. Some replacement poultry flocks (layers & breeders) due to their vaccination program are shedding one type of virus or another during most of their rearing period
- 4.11 Due to this, rearing replacement poultry should be done on a different site isolated from other poultry
- 4.12 Animals should be monitored to ensure that the vaccination has been effective
- 4.13 Some diseases or other stressors can be treated using medications (antibiotics, etc.) and like vaccines, should be under your farm veterinarian direction
- 4.14 Follow your farm veterinarian directions for proper dose and the length of period that your livestock/poultry/mink need medicated
- 4.15 Blood samples can be drawn from the livestock/poultry after the immune response period is over and sent to the provincial Livestock Pathology Laboratory to check vaccine titer levels. The report from the laboratory will indicate the vaccines antibody titer levels



Picture 25.5
Vaillancourt, 2003



Picture 25.6



Picture 25.7
Oderkirk, 1995

5. Biosecurity Deviation Protocols

- 5.1 If upon testing, the blood samples show that the animal has not built high enough titers for protection from a disease, contact your farm veterinarian to see if re-vaccination is a possibility
- 5.2 If titers are low and revaccination is not a possibility, the livestock/poultry/mink in question are to be kept isolated from other farm animals using the strictest of biosecurity measures

6. Biosecurity Records

N/A