

BIOSECURITY

Keeping your herd safe from foreign invasion

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Being an alpaca or llama owner not only requires a financial investment, but also a commitment to the safety, health, and well being of your herd. Preventing disease is usually much less expensive than treatment!

While vaccination is an important part of herd health management, vaccines are not available for most infectious diseases that affect camelids. In addition, the overuse of antimicrobials and antibiotics for prevention of disease compromises their future use and effectiveness through increased resistance to these same drugs. Therefore, to protect your herd from infectious agents, CONTROL EXPOSURE!

Infectious Agents

Infectious agents include parasites (internal and external), viruses, and bacteria. To protect your herd from these foreign invaders, you need to understand how they may enter your herd, how they can spread through your herd, who are the animals most in danger, and what you can do for prevention.

Some infectious agents are endemic in the environment and may occur even on a well-maintained farm. These include bacteria that reside in the soil and diseases brought in by biting insects such as flies and ticks. However, often disease sneaks onto a farm carried inside new arrivals. These hosts may even appear normal upon arrival to your farm. In certain instances, they may even remain free of clinical signs while they shed their infectious cargo into the environment. By setting up a quarantine area, you can decrease herd exposure to new arrivals. This will help

protect susceptible animals from contact with possibly infected animals or infectious material shed from them.

Infectious agents are commonly spread between animals by three primary routes:

1. Direct or physical contact between animals
2. Contamination of feed and/or water - often by bodily fluids (saliva, blood, feces, urine)
3. Air movement

Quarantine

With this in mind, one may consider the ideal quarantine area as having strict isolation and segregation of new animals from residents. This would mean a completely separate paddock and shelter. If this is not possible then a solid wall should at least exist between the quarantine area and the main herd area to minimize air flow and exchange of bodily fluids. Animals being quarantined include those returning from shows, recent purchases, animals being brought in for breeding and animals returning from other breeding farms. These new arrivals should remain in quarantine for at least 3 to 4 weeks.



Some precautions should also be taken to avoid spreading infectious agents from the quarantine area to the rest of the herd. Place a foot dip with

disinfectant in front of the quarantine area. Dip your shoes as you enter and leave the area and change the disinfectant daily or sooner if it becomes too dirty. Attend to the quarantine animals last and do not return to the main herd afterwards without first changing your clothes and shoes. Wash your hands before and after handling the quarantine animals. Do not mix feed and water buckets between the quarantine pen and the other pens. Thoroughly clean the quarantine area after use with detergent (such as Tide) and then pour on or mop the area with diluted bleach (2 oz per 1 gallon water) Allow this to set for one hour before rinsing with plain water. Cleaning and disinfecting should also be done to the trailer used to transport the new arrivals.

While some of these measures may seem extreme, they absolutely should not be ignored if any of the quarantine animals is showing signs of illness such as fever or diarrhea.

Testing

In addition to quarantining new arrivals, consider testing these animals before they are introduced into the rest of the herd. This should include fecal egg counts as a minimum test. Depending on where the animals have come from and their current condition, you may also want to have your veterinarian draw blood for a general health profile (complete blood count and chemistry). Additional tests may include BVD viral testing. Even if previously tested BVD negative with a PCR test, you may want to retest with a serum neutralization test (consult your veterinarian as to the risk factors and the possible need for

retesting). Remember that the new arrival may look healthy if seen during the incubation period for an illness or if the animal is an asymptomatic carrier (carries the disease but is not showing signs of that disease - these animals can be the reservoir host for disease and/or parasites).

Susceptibility

Your animals most susceptible to the effects of infectious agents are youngsters and pregnant females. The youngsters are still developing their immune systems and they may not have the internal forces to sufficiently fight off a disease that might not affect an adult. Pregnant females may have suppressed immune systems and in addition, the fetus can be adversely affected by exposure to disease leading to abortion, still-birth, congenital defects, or a sick and weak newborn. Consider isolating animals returning from shows or stabling show animals separate from pregnant animals and young crias during the show season.



Other Measures

Other management practices that can improve the odds in the battle against disease and maintain strong herd immunity include vaccination, good nutrition, and deworming (see the article "Parasites 101" in the Cool Camelids Summer 2006 issue for more information on parasite

prevention). Herd dynamics should be set up to minimize stress by avoiding overcrowding. Barn layout should be designed to allow for good ventilation. This will help decrease the number of disease causing organisms in the air and decrease upper respiratory irritation.

Precautions

Infectious agents can also be introduced to premises on shoes or contaminated clothing. Therefore, **CHANGE YOUR CLOTHES AND SHOES** when returning home from other farms or events before you enter your barn. Also, consider limiting visitor access to the herd, especially those susceptible youngsters! You can offer visitors shoe covers or foot dips before entering the pens.

So what should you do if you suspect an animal of having an infectious disease? First and foremost, consult your veterinarian. Follow your veterinarian's suggestions for isolation and care of ill animals - have your veterinarian help customize a plan to suit your facility and herd needs. Wear gloves and wash your hands thoroughly after handling any sick animals or anything that has come in contact with the sick animals. Wash your clothes and shoes separately from the rest of your household laundry and consider using bleach.

Protect yourself!! Consult with your veterinarian to determine if this disease may be zoonotic (contagious to humans). Practice good hygiene and plenty of hand washing. Small children, the elderly, pregnant women and anyone with a compromised immune function are most vulnerable to disease and should not be around sick animals.

If you have a highly infectious disease on your premises, your veterinarian will have suggestions for cleaning and disinfecting your facilities. This will probably include re-

moval of all manure and bedding. If an infectious disease was present, you may have to remove as much as 4" of top soil from any contaminated dirt surfaces. Pens should be graded to allow water drainage so there is never accumulated standing water. All buildings, surfaces, and equipment (don't forget pitch forks, shovels and wheel barrels) should first be thoroughly cleaned (water and detergent) and then disinfected with an EPA approved product. Check the label for any dilution and contact time. Hot water does increase the effectiveness of cleaning and disinfecting! Consider also using a pressure washer: 90 - 120 psi. Finally, you may have to leave the facility vacant for at least 1-2 days (in some cases weeks) before reusing.

Remember, prevention is usually less expensive than treatment!

About the author:

Shari C. Silverman, VMD, is a graduate of the University of Pennsylvania School of Veterinary Medicine.

Good health management and a need for compassionate care for small ruminants, camelids, and horses are what prompted Dr. Shari Silverman to establish Abbey Rose Veterinary Services. Serving clients and patients throughout New Jersey and Eastern Pennsylvania, the practice provides wellness programs, educational seminars and programs, as well as emergency services 24 hours a day, 7 days a week.

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