Biosecurity for Small Scale Livestock Production

Biosecurity is the protection of people, animals and the environment from infectious disease, pests, and other biological threats. It refers to the proactive measures taken to exclude threats from farms that are disease free, and preventing spread of pathogens to other herds or flocks if/when a disease does occur. The ultimate goal of a good biosecurity plan is to implement easily attainable protocols that reduce problems to inexpensive and manageable occasions. The key components of any biosecurity plan are:

1. **Fences:** Good fences keep livestock in and wildlife out. Inspect boundary fences regularly and repair as needed. Stray stock may spread disease and feral animals introduce new pathogens to your farm.

2. **Housing, Equipment and Yard Maintenance:**
   a. Pens should be completely emptied, cleaned and disinfected at least annually.
   b. All equipment that comes into direct contact with livestock or poultry should be cleaned and disinfected periodically, including feeders and waterers.
   c. If sharing equipment with other farms, be sure to disinfect the equipment before using on your farm. Use your best judgement and weigh the risks carefully.
   d. Prevent pests and rodents by:
      i. keeping area around pens free of debris
      ii. cutting the grass short around pens and enclosures
      iii. keeping feed in tightly closed containers and clean up spilled feed
      iv. using traps and bait as necessary
   e. Standing water should be drained.

For organic production, a robust biosecurity program can prevent the need for antibiotics and parasiticides, and can reduce the potential of GMO contamination or loss of certification.

3. **Introducing New Stock:**
   a. Don't bring new stock to your property if they appear unhealthy.
   b. Avoid purchasing stock from markets and auctions.
   c. Obtain a health certificate if possible.
   d. Birds, eggs, and livestock should be sourced from farms with a solid herd or flock health program.

4. **Quarantine:**
   a. Have a quarantine area available for animals new to the farm and for sick or injured animals.
   b. The area should be a separate area or building to prevent bird-to-bird or animal-to-animal contact.
   c. Three weeks will allow time for a proper assessment of health, condition, and recuperation from transport or illness.
   d. Observe animals or birds for any abnormal behaviour, and signs/symptoms of disease. Presence of unusual behaviour or symptoms calls for veterinary inspection or tests.

5. **Water and Feed:**
   a. At least annually, water should be tested at source to ensure its suitability for livestock production.
   b. Design and position water bowls, troughs and waterers to prevent fecal contamination.
   c. Feed or feed ingredients should be purchased from sources that will verify its safe origin.
   d. Keep feed pest-free and dry, cover feed bins and feed systems to reduce the chance of contamination.

6. **Herd or Flock Health:**
    a. Contact your herd health veterinarian when livestock appear sick, mortalities are high or production drops off without apparent reason. Low numbers of mortality should be examined by a vet if the cause of death is unknown.
    b. Mortality should be disposed of in a timely manner to prevent contamination of the farm environment, reduce risk of spreading disease to other livestock and humans, and prevent attraction of pests.
    c. When animals are stressed from parasites, weather extremes, etc., natural treatments may be less effective. Monitor carefully and resort to other options as necessary. As well, remember that sick animals benefit from remedial care.
    d. Vaccinate as required (keeping the necessary records).
    e. Pay attention to parasites. Faecal egg counts are useful in determining if treatment is necessary.
    f. Keep records of treatments and veterinary care.

7. **Work Flow:**
    a. Farm owners and workers should have separate clothing and footwear for working around various animal species. These should be kept at the barn entrance.
    b. Use hand sanitizer or wash with soap and warm water before entering and after leaving livestock areas.
    c. Work with the youngest and most susceptible animals first.

8. **Manure:**
    a. Manure should be removed from the production area regularly.
    b. Farms, even hobby farms and small stables should have a manure management plan that includes collection, storage, moving and disposing of manure to minimize chance of spreading disease.
    c. Tools and equipment used for manure handling should not be used for feed or bedding.

9. **Visitors/WWOOFers/Contractors:**
    a. Discourage unannounced visitors.
    b. All visitors must follow biosecurity protocol.
    c. Designate a parking area for visitors.
    d. Visitors should be accompanied by farm staff.
    e. A visitor log is recommended.
    f. Post 'Biosecurity' and 'No Entry without Permission' signs on entrance doors.
    g. Keep extra footwear and outerwear (coveralls, smocks, etc.) available for visitors.

Biosecurity is not limited to large scale farms. Regardless of size or production philosophy, all farms, even hobby farms, have a responsibility to prevent an outbreak or spread of animal (or plant) disease or pests. Stay on top of industry association news and be aware of local conditions or issues as they arise. If there is a serious disease outbreak, you don't want to be the last to know!

There are National Biosecurity Standards for most livestock commodities. These guidelines are a good place to start when developing a biosecurity plan for your farm.
http://www.inspection.gc.ca/animals/terrestrial-animals/biosecurity/eng/1299868055616/1320534707863

References: The *NS Poultry Emergency Response Committee, 2006*
Biosecurity for Organic Livestock Producers http//www.dpi.nsw.gov.au/factsheets

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