

Planning for Disease Outbreaks

Large-scale outbreaks of disease are the quintessential disasters. Epidemics result in mass death of animals and a devastating economic impact on industries and communities. They are often not confined by political boundaries. Diseases of livestock and poultry can be costly, especially when they infect other animals or humans. The costs of disease are due to loss of production, loss of animals, human death, days of lost work, and legal actions. The livestock and poultry industries are especially threatened by transboundary (foreign animal) diseases and epizootics of indigenous diseases, some of which necessitate regulatory measures and quarantines.

Factors that contribute to the emergence of disease are the following:

- Increased movement of animals, resulting in the mixing of susceptible and infected populations (e.g., mixing of cattle from across North America at feedlots predisposing to similar factors that have led to classic swine fever outbreaks in several European countries)
- Disruption of the environment (decreased availability of wetlands associated with outbreaks of fowl cholera, Newcastle disease, and duck plague)
- Transmittal of agents to new species (equine *Morbillivirus* from bats to humans and horses, *Mycoplasma gallisepticum* from chickens to house finches)
- Changes in husbandry and management (bovine spongiform encephalopathy)

Similar to food safety issues, contagious disease in the livestock industry should be approached as part of an all-hazards emergency management cycle. Some of the all-hazards measures have been discussed under “Food Safety” and are given in Table 30-4. The following paragraphs discuss additional aspects specific to transboundary diseases.

Table 30-4 All-hazards cycle of emergency management for the livestock and poultry industries

Phase of cycle	Example of action
Mitigation	Safe construction of buildings Designation of evacuation areas for animals Support of the veterinary profession in countries where transboundary diseases exist Farm surveillance of disease Development of indemnity programs
Preparedness	Educational programs Planning by local emergency management teams Updated insurance policies
Response	Reputation management Involvement of producers to increase producer compliance
Recovery	Implementation of business continuity and indemnity plans Advertising campaigns to promote public and media confidence in wholesomeness of food supply