

LIVESTOCK

Health Management and Disease Prevention



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SECTIONS

Section 1: Health Management and Disease Prevention

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INTRODUCTION

Farmers can manage risk by employing strategies that optimize animal health and protect them from disease outbreaks. Developing a comprehensive health program will help minimize expenses and increase productivity. This section will discuss several considerations when developing a herd health management plan.

How To Get Started

Comprehensive health management plans include determining vaccination programs, parasite management plans, on farm biosecurity practices, humane euthanasia considerations, zoonotic disease prevention, and consideration for various regulations. Each of these items will contribute to the overall health and safety of animals.



SECTION 1

Health Management & Disease Prevention

Providing adequate space is essential for animal health, growth, and production. Each species will have different space requirements depending on life or production stage. The following table can be used as a guide for providing the appropriate minimum space.



Primary Considerations

Vaccination Program

Vaccines are an essential part of a good health management plan. The American Veterinary Medical Association (AVMA) advocates for safe, effective, and scientifically based vaccines for animals and considers vaccines part of the animal's health history. Individual species require different vaccines, and with your veterinarian, you can utilize a medically based approach to vaccination based on the preventative health needs of your herd or flock.

Parasite Management Plan

Parasites can affect all animal species, both internally and externally. Infestations can impact the overall health and performance of animals and increase the risk of disease and mortality. Utilizing proper management and treatment options together is the most effective way to minimize parasite risk. Environmental management strategies minimize animal exposure to parasites in conjunction with anthelmintic (medications used to destroy parasites) treatments.

Management Strategies

- Utilizing rotational grazing
- Grazing younger animals before older ones
- Allowing pastures to rest
- Avoid overcrowding animals
- Stocking animals at appropriate densities
- Culling animals that are genetically predisposed to parasite susceptibility

Treatment Options

- Breaking the lifecycle and avoiding reinfestation
- Anthelmintic administration should be based on the targeted parasite load, parasite susceptibility to treatment, and the potential impact that removing or decreasing the parasite load will have on the animal and the environment
- Conducting a fecal egg count with your veterinarian to evaluate the parasite load prior to treatment

Biosecurity

Biosecurity is the implementation of management practices used to reduce the risk of disease transmission on your farm and to other farms. Some basic practices that all livestock owners should implement are:

- Washing hands before and after handling animals
- Having dedicated footwear that are only worn while caring for and working with animals on your farm
- Wearing clean clothing that has not been exposed to animals on other premises or places where other animal owners may gather (i.e., farm supply store, feed mill, etc.)
- Identifying and isolating sick or new animals
- Caring for sick or new animals after caring for healthy animals in your main herd or flock

- Using separate tools and equipment such as feeders, buckets, and water tanks for isolated animals and not sharing those items with healthy animals
- Cleaning and disinfecting equipment and tools (water tanks, buckets, brushes, chutes, sorting boards, sorting sticks, etc.) regularly
- Regularly cleaning and disinfecting animal housing areas
- Properly storing feed to avoid cross-contamination
- Employing practices to control rodents and other wildlife
- Isolate animals that have traveled off the farm for any reason (exhibition, veterinary visits, ect.)

Euthanasia

Euthanasia is a humane death that occurs without pain or distress. Even with the best efforts, at times, euthanasia may need to be considered. Producers must consider animal welfare, economics, and public health when making decisions regarding an ill, injured, or disadvantaged animal. The veterinarian you have a Veterinary Client Patient Relationship (VCPR) with can assist in making the appropriate decision. Four categories may be considered when deciding how to proceed with a sick, injured, or disadvantaged animal:

- **Treatment**—if appropriate medical treatment is available, it may be a viable option
- **Slaughter**—It may be a viable option if the animal is suitable for transport and human consumption
- **Sell**—This option may be available for an injured or disadvantaged animal that still has the capacity to perform in a different production environment
- **Destruction**—Humane euthanasia and an approved method of carcass disposal may be the best option for various animal welfare, economic, or public health reasons

Zoonotic Disease

Zoonotic diseases are infections that can spread between people and animals. Viruses, bacteria, parasites, and fungi can cause infections. Diseases can range from mild to severe; severe diseases may result in death in both animals and humans. Some examples of zoonotic diseases are (Note: this is not a comprehensive list of zoonotic diseases):

Virus	Bacteria	Parasites	Fungi
Highly Pathogenic Avian Influenza	Brucellosis	Cryptosporidiosis	Ringworm (<i>Trichophyton verrucosum</i> , <i>Trichophyton mentagrophytes</i>)
Swine Influenza	Tuberculosis	Giardiasis	Swine Influenza
	Salmonella		
	Campylobacter		
	E. Coli		
	Q Fever		

Good biosecurity practices both on and off the farm are important to reduce the risk of zoonotic disease transmission.

Regulations

The Michigan Department of Agriculture and Rural Development (MDARD) regulates agriculture in the state. Animal owners should be aware of and consider various regulations as they acquire, sell, and transport livestock.

- **Animal ID & Movement regulations**

Regulations for transporting animals vary by species. If animals are imported from another state, a Certificate of Veterinary Inspection must be issued before they are transported into or out of the state. There may also be other regulations for displaying or exhibiting animals. Certain species must have official animal identification. Owners must establish a premises identification number (PIN) to obtain official identification. Visit the MDARD website to determine what identification is required for your species. To register your premises or to request your existing PIN, call MDARD's Atlanta Field Office at 888-565-8626.

- **Bodies of Dead Animals Act (BODA)**

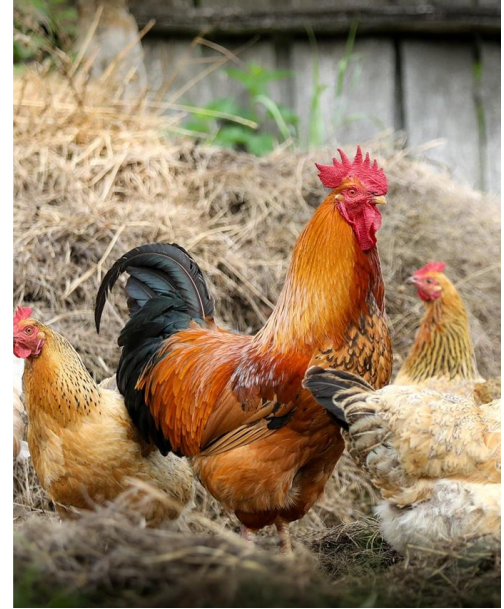
There are guidelines for adequately disposing of dead animals to protect human, animal, and environmental health. The BODA information applies to animals that are not intended for human food.

- **Generally Accepted Agricultural Management Practices (GAAMPs)**

GAAMPs are guidelines for farm management that help promote a positive image of Michigan agriculture. Farms that follow GAAMPs are afforded a certain level of protection if a nuisance complaint is filed against them.

Process for Getting Started

Developing a relationship with a veterinarian is integral to veterinary oversight of animal health and proper drug usage in livestock operations. Establishing a VCPR is the basis for a working relationship between animal owners and veterinarians. The agreement means that the veterinarian has assumed the responsibility of having you as a client, knows your livestock and on-farm management practices, and provides care and treatment for your animals. According to the AVMA, a VCPR exists when the following requirements are met:



- The veterinarian has assumed responsibility for making clinical judgments regarding the patient's health, and the client has agreed to follow the veterinarian's instructions.
- The veterinarian has sufficient knowledge of the patient to initiate at least a general or preliminary diagnosis of the patient's medical condition and care. This means that the veterinarian is personally acquainted with the patient's keeping and care by virtue of a timely examination of the patient or medically appropriate and timely visits by the veterinarian to the operation where the patient is managed.
- The veterinarian is readily available for follow-up evaluation or has arranged for veterinary emergency coverage and continuing care and treatment.
- The veterinarian provides oversight of treatment, compliance, and outcome.
- Patient records are maintained.

The veterinarian can help you create a vaccination schedule and parasite management program, identify biosecurity practices, communicate state and federal regulations and assist in any treatments that may be required.

To learn more about VCPRs, visit <https://www.avma.org/resources-tools/pet-owners/petcare/veterinarian-client-patient-relationship-vcpr>.



HEALTH MANAGEMENT & DISEASE PREVENTION

COMMON QUESTIONS

01

Do I have to vaccinate my animals?

Each species has a recommended vaccination schedule. Michigan State University Extension encourages all producers to work with their veterinarian to determine what vaccination programs are appropriate for their operation.

02

Where can I source vaccination and anti-parasitic products?

Many vaccinations and anti-parasitic products can be purchased from your veterinarian, through an online animal health company, or at local farm stores. All products should be properly labeled and stored in order to maintain effectiveness. If using a product for an animal or use not listed on the label, you must consult with your veterinarian before use.

03

How strict does my biosecurity have to be?

Producers should always follow good management practices. Each farm will have its own risks that must be assessed to determine how strict the biosecurity practices should be. For example, if you are planning on having customers and vendors, such as feed deliveries, coming on to your farm regularly, it is important to enhance your biosecurity measures.

04

How do I choose a veterinarian to establish a VCPR with?

Choosing a veterinarian is like choosing a doctor; you must feel comfortable with them and develop a relationship with them. Building trust is essential. Learning about the veterinarians in your area and getting recommendations from other producers can help you select a veterinarian to work with.

05

How do I learn about state and federal regulations?

To learn about state and federal regulations, visit either the Michigan Department of Agriculture and Rural Development or United States Department of Agriculture websites.

Necessary resources and Partners – Please see Livestock Resources and Partners Appendix at the end of this chapter.