

## LIVESTOCK

# Feed Handling and Storage



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## SECTIONS

### Section 1: Livestock Feed Handling and Storage

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## INTRODUCTION

Proper nutrition is important when raising any species of livestock. There are a number of considerations to make regarding feed including proper feed product selection, storage to maintain nutritional value, and overall feed costs. All of these factors impact animal health, growth, reproduction, and overall productivity.

Whether you are producing eggs, milk, meat, or fiber, proper nutrition is necessary for the animal's well-being. A balanced diet that provides the necessary nutrients like protein, vitamins, minerals, energy, and water is important to help the animals maintain their health and optimize feed efficiency. Feed costs will be one of the highest costs to the producer.

## How To Get Started

Producers should research what type of digestive system the species has (ruminant/monogastric/hind gut fermentors), the nutritional requirements for the species, the life stage, and production type of the animal they are raising. Understanding basic nutrition is essential—what is the purpose of protein, carbohydrates, fiber, fats, vitamins, and minerals that are in animal feed. Additionally, being aware of any specie specific feed ingredient toxicities and poisonous plants is important.



## SECTION 1

# Feed Handling and Storage

## Primary Considerations

### Regulations and Animal Safety

Not all feeds are created equal; feed formulation, quality, and price may differ between within the same species. It is important to follow the feed label directions when feeding livestock. This is especially important when using medicated feeds. All medicated feeds will state “MEDICATED” on the feed tag. For example, feeds that contain certain medications that are used for ruminants may be deadly if fed to swine or horses. Also, sheep are sensitive to copper and should not be given feeds or mineral mixes that are formulated for other livestock especially those formulated for poultry and swine as these are often very high in copper.

## Feed Handling and Storage

It is important to store feed properly to prevent spoilage and keep your animals healthy. Most feeds are stored dry; feeds should be kept dry to prevent mold and spoilage as these can be detrimental to both feed quality and animal health.

**Store feed in a dry, covered area and up off the ground** — Keep feed away from moisture and direct sunlight as both can potentially affect the quality of the feeds. Feed (including hay) can draw moisture from the ground, including concrete, and should be stored inside on pallets or shelves.

Pests, such as mice, rats, raccoons, or other wildlife can contaminate feed. Storing feed in areas where potential contamination cannot occur is important. Open feed should be stored in sealable containers to limit pest access.

**Label feed storage containers** — Labeling storage containers is especially important if the feed is removed from the original labeled bag and you have different species and/or ages of livestock.

**Keep feed fresh** — Some minerals tend to lose their potency after a certain amount of time.

**Clean up spilled feed immediately** — Spilled feeds can attract rodents and other pests that can cause diseases in livestock.



**Consider storage times** —The storage time of feed depends on many things including the type of feed, how it was harvested and handled, and other factors. For example, after forages are harvested the vitamins degrade rapidly and animals that are fed dry hay should have vitamins added to the mineral mix.



**Pasture grazing** – Animals can be grazed on pasture to meet their nutrient requirements. Not all pastures will meet the requirements of all animals; especially those that are growing or lactating. Producers should become familiar with body condition scoring (BCS) to make sure that animals maintain adequate body condition while on pasture. The quality of the feed in the pasture will depend on what plant species are in the pasture as well as their stage of maturity.

Quality can also be influenced by soil type, fertility, and the amount of moisture it receives. Animals may need supplementation if the pasture does not meet their nutrition needs.

**Water** —Supplying fresh, clean water is essential for all species. Water tanks or troughs should be kept clean and should be available at all times, and located within acceptable walking distance for the species.

## Process for Getting Started

Research the requirements of the species that you are raising. Evaluate the available feed sources in your area. Are there complete feeds available, or will you need to work with a local mill to mix grain? Supplementation of vitamins and minerals may need to be provided, such as loose minerals, to meet the nutritional requirements of your livestock. These supplements will have an ingredient tag with them to inform you of what nutrients are provided.



Dietary supplements may assist in preventing metabolic deficiencies, but must be managed to avoid causing toxicities. Additionally, if you have ruminants (cattle, sheep, and goats), you will need to provide forages, such as hay. The type of forage is species dependent, such as long-stem for cattle, sheep and goats, or alfalfa pellets/cubes for horses. Hay and pasture can be tested to provide a nutrient breakdown to aid you in best selecting the quality and forage mix that suits your needs.



## FEED HANDLING AND STORAGE

# COMMON QUESTIONS

01

### How many animals can I graze per acre?

The number of animals that can be grazed on an acre of pasture will depend on many factors and can vary from year to year. Forage species, soil type, soil fertility, the amount of moisture available, and the time of year influence the number of animals that can be grazed per acre of pasture. This number will also be influenced by the type of grazing you are doing. If a pasture is continuously grazed it will support fewer livestock than if it is rotationally grazed. Rotational grazing allows livestock to be rotated between multiple pastures and allowed to graze for a period of time before being moved to another area to graze allowing at least 3 weeks for the first area to recover.

02

## Can grazing animals meet their nutritional needs?

A good pasture can meet the nutritional needs of many species of livestock. Lactating livestock may require added energy in addition to the pasture. Body Condition Scores (BCS) should be monitored to make sure animals nutritional needs are being met. See resource section for species specific BSC scoring.

03

## What is better to feed, a commercially available feed that can be purchased at a farm store or one that is mixed at a feed mill?

Both types of feeds can be used. If you are only feeding a few animals it may be more convenient to just purchase a bag of feed as needed from the farm store as a minimum batch size from the mill may not be as fresh as it should be by the time you get to the end of the batch.



04

### Should I feed table scraps to my livestock?

Typically, human food scraps should only be used as treats in small amounts to not upset the digestive systems of the livestock. Diet changes can cause digestive upset if large amounts are given too rapidly.

05

### What besides grain should I feed my animals?

Fiber is a very important part of the diet of ruminants. This can be given to them in the form of pasture or hay. Alfalfa pellets do not typically meet the long stem forage requirement of ruminants. All classes of livestock should also be given the appropriate vitamins and minerals that they require. Clean water should be accessible at all times.

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