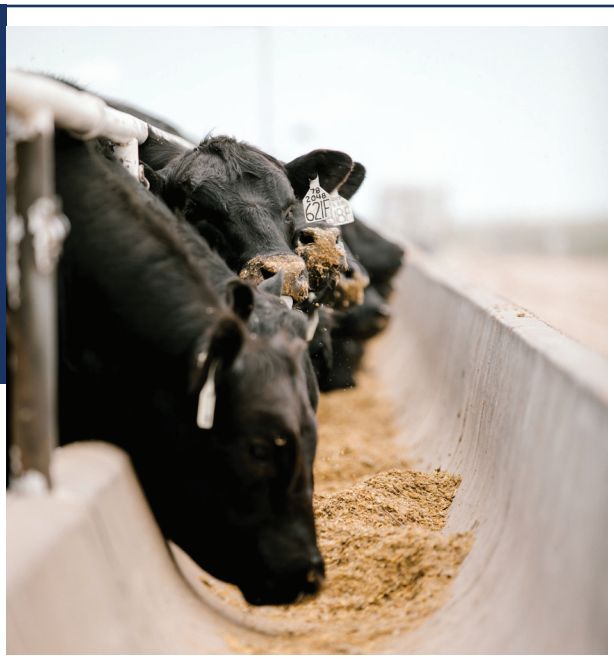
BASICS

BEEF NUTRITION

Nutrition is a very important part of raising an animal. Paying attention to cattle nutrition needs can benefit cattle producers in three ways: it can help producers properly meet animals' dietary needs, maintain and raise healthy productive animals, and achieve management goals.

Beef cattle nutrition is influenced by a variety of factors and each nutrient is processed in different ways. Understanding this can influence your herd.



NUTRITION **FACTORS:**

DIGESTIVE SYSTEM FUNCTIONS · **DIET (FEED AND RATIONS)**
ENVIRONMENT · ANIMAL AGE · **ANIMAL SEX** · ANIMAL SIZE
BODY CONDITION · **WEIGHT** · BREED TYPE · **GENETICS**

Beef cattle nutrition is not simplistic; it is influenced by a variety of biological and ecological factors. Producers can increase their knowledge about these factors by exploring sources that provide in-depth explanations about these topics.

WHY NUTRITION?

Nutrition is a very important part of raising an animal. Paying attention to cattle nutrition needs can benefit cattle producers in three ways: it can help producers properly meet animals' dietary needs, maintain and raise healthy productive animals, and achieve management goals.

NUTRIENT USE

Like all animals, cattle require a balance of nutrients for survival. An animal receives nourishment through their diet, which provides—in some form or another—a combination of six nutrients: water, carbohydrates, fats, protein, vitamins, and minerals. The bodies of healthy animals select and collect nutrients and use them to carry out basic life functions—the functions required to successfully eat, breathe, move and sleep.

Once animals have fully digested and absorbed nutrients, they can put them to use in other ways. This includes using nutrients for proper growth and maintenance, storing energy, and to transfer and provide nutrients to others.

PROCESSING NUTRIENTS

Cattle have a complex, unique and efficient digestive process. They are ruminant herbivores, which means they rely on plants for food. It also means they use four stomach compartments—the rumen, reticulum, omasum, and abomasum—to collect nutrients. The sophisticated functions of these compartments turn food into absorbable material for nourishment. A series of events, which includes regurgitation, sifting, and fermentation, must occur among the stomach compartments for ruminants to gain nourishment from the food they consume. The complexity of these processes is because ruminants have the unique ability to digest plants.

BASICS

BEEF NUTRITION

Cattle have a natural ability to break down cellulose, the building blocks that make up a plant cell wall. Cellulosic breakdown is a complex job performed by millions of microbes living inside the rumen. Microbes are crucial parts of a ruminant's digestive process. They help convert and utilize food material that other animals—humans, pigs, dogs and other monogastrics—cannot. The complexity and uniqueness of a ruminant digestive system makes them efficient at using plants for food. It also makes them important contributors in the food chain.

NUTRITION RESOURCES

Beef cattle nutrition can be complex. Common sense about animal health and care is the most useful resource, and fortunately, there are many other important resources to assist producers. These resources vary in depth, breadth and type. They include people, publications or a combination of specialized resources.

Each herd is unique and must be taken care of according to their unique needs. Successful producers pay close attention to the things that impact their herd. Geography, availability of resources, and independent herd goals are examples of things that play important roles in the unique management needs of your herd. Using educational resources can explain the specific topics that impact your farm or ranch.

YOUR **RESOURCES:**

1. ### COOPERATIVE EXTENSION

   Cooperative Extension agents provide regionally-focused outreach seminars, electronic & print publications, including newslettters & workbooks.

2. ### INDUSTRY SPECIALISTS

   These experts are trained in ruminant nutrition including consultants, nutritionists, feed suppliers.

3. ### INDUSTRY-SUPPORTED PUBLICATIONS

   Use National Research Council's Nutrient Requirements of Beef Cattle and academic textbooks.

4. ### HANDS-ON LEARNING

   There are opportunites to attend industry-sponsored seminars, short-courses and tutorials specializing in specific cattle nutrition topics, as well as general beef cattle management.

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