Why is animal nutrition important in livestock production?

Animal nutrition includes not only the nutritional value of the feed, but also the format, frequency, and how it is delivered. Animal nutritional needs vary, depending on species as well as life stage. Water is crucial to an animal's nutrition program, both in terms of quality and quantity.

An animal's diet provides the building blocks necessary for robust animal health and the related production of meat, milk, or other harvestable items, such as wool or leather. Therefore, the quality of the animal's diet directly impacts the quality and quantity of products produced. The product has a specific value in the marketplace. If the value of the product remains the same, the more money a rancher invests in feeding an animal to produce the desired product means the smaller their profit margin (or none at all). While some might assume that less money spent on feed will equal the greatest benefit to the farmer, some high-quality feed ingredients—which may be expensive may also increase the quantity and quality of the product. Thus, there is a careful balance between spending too much money on feed and exceeding the marketplace value, and spending too little on feed and sacrificing quality or yield. Animal nutritionists have to consider the optimal diet for the animal so that it maximizes animal health, product yield and quality, while taking into account the farmer's profit margin.

What is animal welfare?

Animal welfare is the physical and psychological well-being of animals. An animal that is healthy, comfortable, well-nourished, safe, able to express natural behaviors, and is not suffering from pain, fear, or stress is in a good state of welfare. Good animal welfare requires disease prevention, veterinary treatment, appropriate shelter, management, nutrition, humane handling, and humane death.

Why are antibiotics used in livestock production?

Antibiotics are used in livestock production primarily for disease treatment and disease prevention. Just like humans, at certain times in their lives animals are more susceptible to bacterial infections. As in human medicine, antibiotics are used to effectively treat those infections. In livestock production, antibiotics can also be used to prevent disease. The animal's environment and the management practices of the farmer can also reduce the bacteria an animal is

exposed to. Most livestock antibiotics are indicated for the treatment or prevention of specific diseases, rather than to simply promote weight gain. Preventing disease, however, can have the added effect of faster growth.

What types of regulations govern animal welfare?

Both federal and state governments have laws and regulations to protect animals and govern animal welfare. The federal Animal Welfare Act regulates the humane treatment of animals used in research, exhibition, transport, and by dealers; farm animals are regulated under this Act only when used in biomedical research, testing, teaching, and exhibition. Farm animals used for food and fiber or for food and fiber research are not regulated under the AWA. Although not a government regulation, the Federation of Animal Science Societies' Guide for the Care and Use of Agricultural Animals in Research and Teaching serves as a primary reference document for meeting the needs and requirements of agricultural animals used in research and teaching.

Horses receive protection under the federal Slaughter Horse Transport Program and the federal Horse Protection Act. The federal Humane Methods of Slaughter Act requires the proper treatment and humane handling of livestock at slaughter. In addition, many farmers use animal welfare voluntary third-party animal welfare audits to assure consumers that food animals are being raised under humane conditions. Many welfare assurance programs are offered and/or required by producer organizations, animal protection groups, retailers, processors, and distributors. Each program's focus and impact varies, including which aspect of animal welfare the program emphasizes.

What are the correct terms for different livestock animals?

Livestock is called by different names, depending on if the animal is young or old, castrated or intact, or has given birth. The chart on page 69 provides a general overview of animal nomenclature.

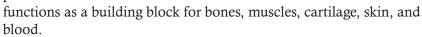
		Male			Female	
	Newborn	Young	Adult	Castrated	Young	Adult
Swine	Piglet	Boar pig	Boar	Barrow	Gilt	Sow
Cattle	Calf	Bull calf	Bull	Steer	Heifer	Cow
Sheep	Lamb	Ram lamb	Ram	Wether	Ewe lamb	Ewe
Goats	Kid	Buckling	Billy/Buck	Wether	Doeling	Nanny/Doe
Horse	Foal	Colt	Stallion	Gelding	Filly	Mare
Turkeys	Poult	Jake	Tom		Jenny	Hen
Ducks	Duckling		Drake			Duck/Hen
Chickens	Chick	Cockerel	Cock/Rooster	Capon	Pullet	Hen

What are the health benefits of eating animal products?

The U.S. Department of Agriculture and Department of Health and Human Services jointly issued the 2010 Dietary Guidelines for Americans, which notes that animal products are an important part of the Protein Foods

group and Dairy group. Foods in the Protein Foods group, such as seafood, meat,

poultry, and eggs, provide nutrients that are vital for health and maintenance of children's bodies. For example, all kids need protein to help them grow. Protein is an important part of the diet because it



Consuming foods in the Dairy group provides health benefits like building and maintaining strong, dense bones. Children should include low-fat and fat-free foods or beverages from the Dairy group in meals and snacks every day. Milk, cheese and yogurt are dairy products that provide calcium, potassium, vitamins, and protein that help the body grow and develop. People who consume dairy products have healthier bones and teeth. It is especially important for young children to consume dairy products because their bones are still developing.

Eating too much of any food can have a negative effect on your health. If you have health concerns, talk to your doctor about your dietary options.

What are animal by-products?

Animals play very important roles in our lives. They are raised for food and they provide products important to everyday life. Animal by-products are the parts of slaughtered animals that humans do not directly consume. These parts may be further processed into human and non-human foodstuffs, fats, and other material that can be sold to make commercial products such as cosmetics, paint, cleaners, polishes, glue, soap, and ink. Meat production is more efficient when all parts of the animal are used.

How can people be assured that the meat and milk they consume is safe?

Personnel from the United States Department of Agriculture's Food Safety and Inspection Service (USDA-FSIS), the Food and Drug Administration, and other government agencies at the state and federal level interact regularly with research scientists, technical experts, farmers, ranchers, and the general public to discuss and enhance food safety. They establish guidelines and standards for food processors, handlers, and others involved in food production and distribution. The United States' food supply is among the safest in the world; government and private industry together work hard to maintain this position. By practicing safe food handling and storage at home, consumers also play a significant role in ensuring the safety of the food they eat.