

Nutrition as Medicine: Enhancing Animal Health and Wellbeing

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ABSTRACT

Animal health is dependent on nutrition containing different types of ingredients. Nutrients provide energy, insulation, crucial for reproduction and physiological functions. Animals require feed in whole year so, feed should be free from seasonal effect and from any kind of contamination. Balanced diets help the animals to perform their body functions properly.

Introduction:

In latest era, discrimination of animals nutrition is extremely changed. Nutrition plays an important role in animal health. Nutritional behavior is also different on different species like cattle, buffaloes, sheep and goat etc. It plays role in preparation of feeding. Nutrition enhances high production of animals like genetics. Higher productivity can be controlled by proper nutrition in livestock. It also enhances the life period of animals. Global demand can be meet by increasing the quality of nutrients. Good nutrition is crucial for optimum fitness and sustaining optimum behavior. By increasing the quality of organic compounds, animals health could be improved. It is better to use high energy nutrients which enables animals to restrict seasonal changes. Hygiene must be required during import and export of food from one area to another [1].

Nutritional balanced diet

Nutritionally balanced diet fulfill the animal's nutritional need in whole life. Animals used plants as a source of food due to presence of chlorophyll, which convert inorganic compounds such as nitrates, minerals, salts and CO² into organic compounds. Nutrition has a substantial effect on productivity. Animals which are interrelated with agriculture or food production are required balanced diet. Animals generally required feed in the form of

- Carbohydrates
- Proteins
- Fats or lipids
- Vitamins
- Minerals
- Water [2]

Sources of animals nutrition

These are components of nutrition which are obtained from different sources

Proteins

50% dry weight of cell consist of protein. Protein can be obtained from different sources such as milk, silage, grains or beans. It helps in body muscle, hair growth, formation of scaffold layer around organs such as liver or skin [3].

Carbohydrates

It is most abundant substance used as a food. Sources of carbohydrates include both animals and plants in the form of grains, cereals, vegetables, sugar, fiber and starch (Fig. 1). It helps animals in control of blood sugar level, in fermentation or act as a source of energy [3].



Fig.1: Sources of Carbohydrate

Vitamins

Vitamins are the main source of diet. It helps animals in different body functions and kept them active and healthy. Vitamin A is considered as an essential component of animal's diet. It provides the animal the precursor carotenoids of plant. Vitamin C can also be provided through plants, which may help in hormones production. Vitamin E protect cells from attack of foreign microorganisms. Cell damage can be ceased with vitamins

K play role in blood clotting. Some vegetables, grasses, carotenoids, fruits or dietary food give vitamins to animal [3].

Minerals

Minerals are important for immune system of animal's body. Minerals are important for growth such as calcium or iron, which take part in bone growth. Some salts also maintain minerals in animal's and keep them healthy [3].

Water

It is most critical component of animals nutrition. It involves in many physiological functions of body. Water is a basic nutrient of animal's diet [3].

Role of nutrition:

Nutrition plays a vital role in keeping good health of animals. Good nutrition improves life period or quality. It helps animal to make prevention against attack of pathogens. Some nutrition such as vitamins play important role as a medicine to treat animals against disease such as rickets. It can be cured with the usage of vitamin D, calcium or phosphorus. Many diseases which are related to nutrition, are caused by malnutrition, or deficiency of minerals and vitamins. It causes effect on growth, productivity or development of animals, through improving nutrition [4].

Maintenance of hygiene

Animals can be kept healthy through providing them safe and clean environment. Disease spreading can be prevented by cleanliness. Proper hygiene helps animals to live healthy. It is the responsibility of laborers to keep the environment clean for animals health as well as for their own health. Vaccine or some medicines which helps animals to keep good health can also be given [5].

Seasonal changes

Animal nutrition is usually composed of several ingredients. It should be free from seasonal effect so that a single seasonal free feed can be used throughout the year. For example, silage can be used in whole year as animal feed. The silage should be in air tight conditions either winter or summer. The source of fats helps to provide comfort zone to animals in winter season [6].

Conclusion

Nutrition is crucial for animal health as housing, breeding and other parameters. Nutrition contains basic nutrients such as vitamins, which are crucial for bone growth, vision and reproduction. Protein helps animals to build up the muscles. Carbohydrates provides energy for different physiological purposes and fats provides insulation to animals in winter season. Nutrition work as medicines by defending different microorganisms.

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