



# **MJF COLLEGE OF VETERINARY & ANIMAL SCIENCES, CHOMU, JAIPUR (RAJ.)**

**DEPARTMENT OF ANIMAL NUTRITION**

## **NUTRITIONAL TERMS AND THEIR DEFINATION**

**DATE- 23/11/23 - 25/11/23**

**Delivered by-**

**Dr. Vijay Prakash Saini**

**Dr. Abhishek Mehta**

- ◆ **Nutrition:**

involves various chemical reactions and physiological processes, which transform foods into body tissues and activities.

- ◆ **Feed/Food:**

is the source of energy and tissue building constituents, carbohydrate, fat and protein yielding energy, water, protein and mineral matter form body tissues.

Eg. Compounded feed, Maize, Jowar, Berseem and Lucerne

- ◆ **Animal Nutrition**

Science of nourishment of animals.

- ◆ **Nutrient :**  
chemical substances found in the feed material are necessary for the maintenance, production and health of animals. The chief classes of nutrient includes 25 carbohydrate, 15 fatty acids, 20 amino acids, 15 essential minerals, 10 probably essential minerals, 20 vitamins and water or any chemical compound having specific functions in the nutritive support of animal life.
- ◆ **Nutriment:**  
Any thing that promote growth and development.
- ◆ **Nutriture:** Nutritional status of animal
- ◆ **Health:** is a state of complete physical, mental and social well being and not merely the absence of disease or infertility as defined by WHO.

- ◆ **Nutritious:** Substances that promote growth and participate in repairing tissues of the body.
- ◆ **Nutritionist :**  
A specialist in the problem of nutrition.
- ◆ **Feed:**  
Food of animals comprising of any naturally occurring ingredient or material fed to animals for the purpose of sustaining growth and development.
- ◆ **Diet:** A regulated selection of a feed ingredient or mixture of ingredient including water, which is consumed by animals on a prescribed schedule.
- ◆ **Ingredient:** Any of the feed item that a mixture is made up of.
- ◆ **Additives:** An ingredient or a combination of ingredient added to the basic feed mixture for specific purposes like to increase feed ingestion or to alter metabolism.

- ◆ **Ration:** A fixed amount of feed for one animal fed for a definite period usually for a 24 hr period.
- ◆ **Balanced ration :**  
The ration which provide an animal with the proper amount, proportion and variety of all nutrients to keep the animal in its form to perform best in respect of production and health.
- ◆ **Complete ration:**  
A single feed mixture, which has all of the dietary essentials except water for a given class of livestock.
- ◆ **Purified Diet:** A mixture of the known essential dietary nutrients in a pure form that is fed to experimental animals in nutritional studies.
- ◆ **Limiting Amino Acid:** the EAA of protein that shows the greatest percentage deficit in comparison with the amino acids contained in the another protein selected as standard.  
(A HILL MPT TV)

- ◆ **Bran:** the pericarp or seed coat of grain removed during processing.
- ◆ **Groat:** Grain from which hull has been removed.
- ◆ **Hull:** Outer covering of the beans, peas, cottonseed.
- ◆ **Husk:** Dry matter covering of grains i.e. rice husk, gram husk.
- ◆ **Stover :**  
thick solid stem and aerial parts without ears husk or head while harvesting maize, jowar commonly ear head is removed and the remaining dried portion can be classified as stovers i.e. jowar & maize stovers.
- ◆ **Hay:** is the product obtained by drying in the sun or shade, tender stemmed leafy plant material in such a way that they contains not more than 12-14% moisture.

- ◆ **Gavage** : feeding an animal by means of stomach tube.
- ◆ **Feed conversion ratio**: the amount of feed in kg or lb necessary to produced one kg or lb of weight gain.
- ◆ **Feed conversion efficiency**: the gain in weight in kg or lb produced by one kg or lb of feed. It is the reciprocal of feed conversion ratio.
- ◆ **Calorie** : A unit of energy . It is the amount of heat needed to raise the temp of 1g of water by 1°C (14.5-15.5°C)

- ◆ **NPN** : Non protein nitrogen compound. Certain substances that donot contain protein but are rich in nitrogen content e.g. urea, amino acid, amides & ammonium salts.
- ◆ **True protein**: it is a chain of amino acids bonded by peptide bonds. E.g. Albumin, globulin etc.
- ◆ **Straw** : straw is the byproduct of any cereal, millet or legume crop left over after harvesting, threshing and removal of the grains or pulses.



- ◆ **In-vitro** : literally “in glass” pertaining to biological experiments performed in test tubes or other laboratory vessels.
- ◆ **In-vivo** : with in the living organism pertaining to the laboratory testing of agents within the living organism.
- ◆ **Anatoxins** : A toxin rendered harmless by heat or chemical means but capable of stimulating the formation of antibodies.
- ◆ **Antizymotic** : an agent, which inhibits fermentation.

- ◆ **Avitaminosis** : A condition produced by a deficiency or a lack of a vitamin in the food.
- ◆ **Concentrate** : It contains little amount (<18%) of CF and more than 60% TDN.
- ◆ **Roughage** : Poor quality feeds containing less amount of (<60%) TDN or more than 35% cell wall constituents and more than 18% of CF.
- ◆ **Silo** : A semi-air tight structure designed for use in production and storage of silage.
- ◆ **Silage** : feed resulting from the storage and fermentation of wet crops under anaerobic conditions.

- ◆ **Antibiotic** : A substance produced by one microorganism that has an inhibitory effect on another microorganism.
- ◆ **Crude fat** : the portion of the feed (or any other material) that is soluble in ether; also referred as ether extract.
- ◆ **Crude protein** : Total ammonical nitrogen  $\times$  6.25, based on the fact that feed protein on the average contains 16% nitrogen; many non protein compound may be included.
- ◆ **Premix** : A uniform mixture of one or more micro-ingredients and a carrier, used in the introduction of micronutrients into a larger batch.

- ◆ **Proximate analysis** : A combination of analytical procedures used to quantify the protein, lipid, dry matter, ash, carbohydrate (NFE) content of the feed, animal tissues, or excreta.
- ◆ **UMMB**: consists of molasses (30-50 %), urea (5-10 %), a cereal bran such as rice, wheat or maize bran (15-25 %), an oil seed meal such as soybean meal, coconut meal or groundnut meal (10-20), salt (5-7 %), lime or cement (5-10 %), bone meal (5-7%) and minerals (1-2 %).

- ◆ **Probiotic** : the definition of probiotics entraps microbial cultures, microbial cells and microbial metabolites.
- ◆ Term probiotic was coined by Parker (1974) as an organism and substances which contribute to intestinal microbial balance.
- ◆ Fuller (1989) defined probiotics as live microbial feed supplements which beneficially affect the host animal by improving its intestinal microbial balance.
- ◆ Commonly used cultures are: *Aspergillus oryzae*, *Sacchromyces cerevisiae*, *Lactobacillus sp.*, *Bifidobacterium sps.*, *streptococcus sps.* *Orpinomyces sps.*

- ◆ **Prebiotics** :are non digestible feed ingredients that beneficially affect the host by selectively stimulating the growth and or activity of one or limited number of bacteria in the colon that can improve the host health. E.g galactooligosaccharide, fructooligosaccharide and lactose derivatives have been used in poultry and other non ruminants.

◆ thanks