

➤ **LIPIDS**

Are found in both pH and animals tissues and includes fats and an no of cloudy related/associated compounds such as phospholipids and glycolipids which play important role in the physiological processes of an animal they are insoluble such as ethery, bergen and chloroform. Because fats calories a high population of carbon and hydrogen, they supply are times as much health and energy per e.g. as do carbohydrate. fats are not specifically required in the diet except as a source of essential fatty acids that free ranging animals receive a sufficient amount under normal circumstances.

Dietry fats are however important during the absorption process of fat soluble vitamins (A, B, E, K) and important energy reserve during certain stressful period of their lifecycle.

➤ **PROTEINS**

Are high molecular weigh, large colloidal moles comprises of amino. They are the building blocks of every cells. Their important in the due is to supply amino acids. Numerous amino acids are required by simple stomach animals and are termed essential amino acids. Ruminant animals don't require specific amino acids in their diet.

➤ **VITAMINS**

They are organic compounds required animals in minute quantities. They are divided int fat soluble vitamins A, D, E, K and water soluble vitamins (B complex and Ascorbic acids).

Although most animals have similar vitamin requirement. The required level in their diet can vary considerably.

NB: In wildlife literature, food is usually referred to as substance eaten by animals under natural conditions. Feeds is however reserved exactly to processed substances e.g. he peleted diet consisting of a mixture of feed.

➤ **INORGANIC CONSTITUENTS**

Various minerals are required by animal for growth or other physiological needs. These mineral are divided into 2.

1. Macro elements which are Ca, P, K, N, Sulphur, Mg
2. Trace elements are Fe, Mn, Cu, I, Molybdebum, Zn, Boron, Chlorine

Wild animal obtain thus required through food, water and ingestion of soils or grots (small stress)

In addition to a required minimum level the ratio of intake of various elements is also important e.g. Ca and P generally occur in the diet in a ratio of 2:1 and 1:2.

15 trace elements have been identified, which are required in small amount by animals.

They are termed ETES. If absent from the diet metabolic disturbance will occur. Some ETE and other NETE has toxic effect if ingested in large amount/quantity. Some example of importance of minimal to all animals are,

Calcium for egg production in pleasant and water fall and Ca and P for another growth in their several researches have shown that their pleasant select grits containing high level of calcium and distribution of pleasant pop has been found to related to soil level and soil calcium

Reduced egg hatchability has been linked to calcium deficiencies in pink tail hen. Nutrient requirement for another growth in white tailed deer have also been investigated; they formed that calcium and phosphorus deficiency ratios limited anthers growth, but felt that phosphorus was the most heavy to be limiting another growth under natural conditions.

➤ **BODY COMPOSITION**

In knowledge of process because of wildlife species can be important for several reasons.

- i. Fat content can be used as a general indicator of animal conditions.
- ii. Body composition of prey species are important to investigate wildlife food chains in order to determine amount of energy
- iii. Protein available in higher trophic level
- iv. Game species are often used for human consumption, this, a knowledge of their body composition is important in evaluating of contribution of limiting to human nutrition.

Animal tissues are of water, protein, fat, mineral and CHO. Water content is higher in new born animal, approximately 80% but decreased to 45 – 60% in mature animals depending upon the fat content, CHO content of animals is very low less than 1%.

Mineral content of animal varies between 2 – 5% depending upon skeletal size and protein content is usually between 15 – 20%. The fat content of variability influences the relative percentage of other chemical

constituents because the higher the fat content the lower the relative percentage of the other substances. For this reason, body compositions are sometimes presented on a fat-free basis. Fat serves several important function.

It is primarily the mechanism of energy storage. This is important for most compounds species allowing them to survive/avoid successful period such as winter when food available nutritive quality are low. Bird depends on fat deposit for migration to avoid harsh condition. Hibernations depends on fat supplies to allow dormancy, during the unfavourable seasons. Considerable weight loss has been observed hibernating animals.

Brown fat a specialized fat deposit is important to both hibernators and other species requiring known-showing thermogenesis. Other species such as deer utilizes fat as an insulator and to supply energy during winter.

Deer ca loss 30% to their body weight during winter, the role of fat levels to individual species and community relationships remain one of the most fascinating research area in wildlife nutrition and energetic.