

➤ **Introduction**

Nutrition is the study of disease by which organic and inorganic substances injected by living organisms are converted to various means for life processes such as promoting growth, replacing worn and injured tissue and the perpetuate life.

Wildlife nutrition in addition to this is concerned with the supply and quality of food in an animal's environment

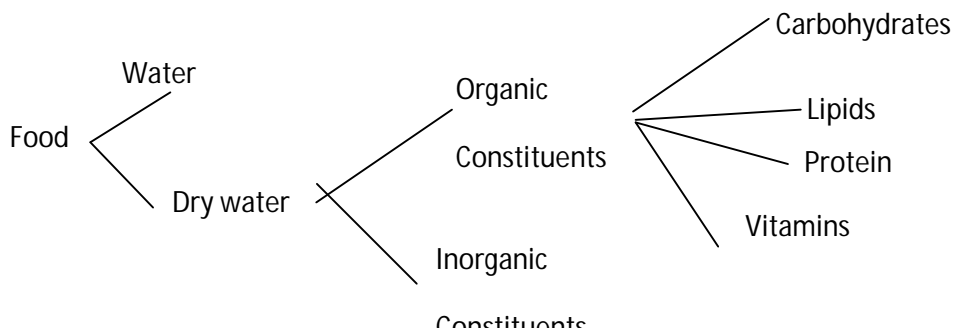
The basic requirements of all wildlife are food, water and cover. Wildlife nutrition deals mainly with the first two of these requirements. Good and adequate cover, however, is implemented not only for escape and rest but also to secure unperturbed feeding and to conserve energy during their extremes.

There are many examples in literature which distract the importance of nutrition for wildlife. In general, animals with adequate food supply give large produce young and are more resistant to many forms of mortality than those affected by malnutrition. During the failure of the mast crop in 1940, the reproduction success of Michigan red-bellied fox squirrels declined. Also, the reproductive success of white-footed mice on range providing good nutrition was higher than on poor nutrition ranges. Weight of deers were also higher on ranges providing good nutrition than on ranges providing poor nutrition.

During the last decade, wildlife managers and biologists have become increasingly aware of the fact that a knowledge of physiology and nutrition are basic areas to the understanding of wildlife ecology.

➤ **NUTRIENT CONTENT OF FOOD**

A nutrient is any food or feed constituent or a group of constituents that is normally consumed by the animal and is a source of energy or essential for the normal functioning of the animal. These can be grouped into classes according to their nutrient function or contribution. The main components of food are:



➤ **WATER**

Water is essential to all life of living organisms. It is necessary for digestion, metabolism, cooling, lubrication and other life processes. Wild vertebrates may obtain water from 3 sources

- 1) Free water e.g. Lakes, streams, deer or vegetation
- 2) Water from food consumed

3) Metabolism water which is produced during the break down of protein, carbohydrate and fats.

The dry matter of an animal or plant tissue includes everything except water.

The term carbohydrate is applied to certain nutrient compound containing only hydrogen, carbon and oxygen. Carbohydrates are the source of energy used in all cellular form. They form about $\frac{3}{4}$ of dry matter in crop and are the chief sources of energy in the food of herbivores and omnivores.

Because of the variety and abundance in nature their requirement in animal body for any surface carbohydrate in their diet. Carbohydrate are divided into sugar (glucose, lactose, Galactose, fructose) and non sugar (cellulose, hemicelluloses etc) sugars are easily digested by animal whole, digestion of non sugar is a larger process. Cellulose, one of most abundant cost can't be digested by higher animal. only bacterial and fungi and possibly some protozoa the CELLULASE necessary to breakdown of cellulose compound into simple digestible sugar. Many animal have developed symbiotic relationship with bacteria to enable them to utilize cellulose as a nutrients. Lignin, a simply propyl derivation is not a CHO but is usually discussed with CHO because of its influence on the digestibility cellulose and hemicelluloses reducing of digestibility of those compounds.