

WELCOME

**ENTREPRENEURSHIP–ANIMAL
NUTRITION**

DEPARTMENT OF ANIMAL NUTRITION

TOPIC- FACTOR'S AFFECTING THE
NUTRIENT REQUIREMENT IN
POULTRY

There Are Several Factors That Can Affect The Nutrient Requirement Of Poultry

- **Age:** Younger birds require more protein and energy than older birds. As birds mature, their nutrient requirements change.

- Genetics: Different breeds of birds have different nutrient requirements. For example, meat birds require more protein and energy than egg-laying birds.

- Sex: Male birds require more protein and energy than female birds because they have a higher muscle mass.

- Health: Sick birds may have different nutrient requirements than healthy birds. They may need more or less of certain nutrients depending on their illness.

- Environmental conditions:
Environmental factors such as temperature, humidity, and air quality can affect nutrient requirements. Birds in cold environments may require more energy to maintain body temperature, while birds in hot environments may require more water and electrolytes.

- Feed quality: The nutrient content of the feed can affect the nutrient requirements of birds. If the feed is deficient in certain nutrients, birds may need to consume more feed to meet their requirements.

- Production goals: The nutrient requirements of birds can vary depending on the production goals of the farm. For example, birds raised for meat production may have different nutrient requirements than birds raised for egg production

Nutrient Requirements of Poultry

- ENERGY
- Energy is assessed using the Metabolisable Energy (ME) System .
- Energy is first used for maintenance of normal body functions
- - Amounts above this are used for production, i.e. eggs or growth

VITAMIN

Vitamin	Function	Source
A	Growth, resistance to disease	Green veg, maize, fish liver oil, synthetic
D (in the form of D3)	Utilises Ca & P properly – vital for bone and egg shell	Sunlight, fish liver oil, synthetic
E	Deficiency affects nervous system, also for hatching eggs	Cereals, Will be destroyed by bad storage or overheating
K	Blood clotting (deficiency = haemorrhaging)	Green foods, Lucerne meal, synthetic
B group (incl. Biotin, Choline & folic Acid)	Optimum growth, metabolism of carbohydrates, feathering, hatchability, red blood cells, biotin prevents fatty liver syndrome.	Cereals, synthetic

PROTEIN

Protein is required for body development in growing birds, and a good

- proportion is also required by layers as eggs contain 13-14% protein
- Protein Quality
- - 2 most important amino acids are lysine & methionine (L&M) - Cereals (, maize) are a poor source of the correct amino acid
- Soya bean is the best vegetable protein source
- Animal protein (fishmeal) is the richest source of L&M
- Synthetic amino acids are added to feeds to improve protein quality -

THANK YOU