

THIRD WEEK:

MALNUTRITION

Malnutrition is a state of unhealthy condition caused by feeding farm animals on wrong kind of rations or inadequate feed and excessive feeding ration. It can also be described as improper feeding pattern, that is, imbalance of food nutrients in the diet of an animal.

When livestock are fed too low or wrongly in relation to their body requirements, malnutrition occurs. More so, when the animals fails to utilize food nutrients in a diet maybe because of ill-health even though the nutrients are highly available in the feed, “Malnutrition also sets in”.

Causes of Malnutrition in farm animals.

- a. Shortage of food
- b. Low income of the farmer to provide the feeds requirement and at the appropriate time.
- c. Quality of the feeds given to the animals
- d. Scarcity and high cost of the necessary feed items results to malnutrition.

Effects of Malnutrition on Farm Animals

- a. It leads to slow growth/stunted growth.
- b. It leads to loss of weight/emaciation.
- c. It leads to low/poor reproduction rates.
- d. It leads to high mortality rates on young animals
- e. Malnutrition also leads to physical deformities such as rickets, osteomalacia (nutritional deficiency disease often characterized by stiff joints and flexible bones).
- f. It also paves way to abortion in farm animals.

Nutritional Deficiency Diseases/Symptoms of Malnutrition

These nutritional deficient symptoms are often dependent on the nutrients lacking in the feeds rations given to the livestock. The diseases and their symptoms are as listed below;

1. Rickets and Osteomalacia
2. Ketosis
3. Milk fever (hypocalcaemia)
4. Acidosis
5. Alopecia (loss of hair)
6. Crazy and retard growth
7. Reduced resistance to infections
8. Anaemia

9. Protein malnutrition and vitamins (A, E, B1, B2) deficiency
10. Pantothenic acid deficiency

Brief details of the deficiencies-

1. Rickets:

This deficiency is often caused by lack of calcium, phosphorus or Vitamin D. It usually occurs in young animals, resulting in bone malformation, soft bones followed by swollen ends and stiff joints. This deficiency can be corrected by feeding the animals with bone meal, calcium and phosphorus.

2. Ketosis:

This nutritional deficiency usually affects high milk-producing animals and is often associated with low level glucose in the blood which leads to a rapid reduction in the level of milk-production, feed consumption, twitching of muscle and production of a particular sweetish, chloroform-like smell of acetone in the milk. This problem can be corrected by addition of molasses to the ration and by glucose injections/glucogenic feeds.

3. Hypocalcaemia (Milk fever):

This is associated with low level of calcium in the blood. It occurs immediately after calving and in high milk-producing animals. Its symptoms are general loss of condition, nervousness and loss of consciousness. The animal lies down, stares and with the head turned backwards. Milk fever is corrected by feeding the animal with feeds high in calcium, phosphorus and vitamin D. Treatment can also be achieved through intravenous injection of the affected animal with calcium borogluconate or feed rich in calcium gluconate.

4. Acidosis:

This deficiency is commonly caused by the production and injection of excess lactic acid into the blood stream of the animals thereby causing increase in pulse and respiration rates, coma and sometimes death. The animals affected by this disease can be helped by feeding them with diets high in roughages.

General prevention/corrective measures to malnutrition in farm animals-

- a. The animals must be fed with balanced diet or rations at all time
- b. Under-feeding of the animals should be avoided.
- c. A good legume/grass mixture should be provided for the grazing animals.
- d. Supplementary feeds and concentrates should be supplied when necessary to the animals.
- e. Feed the animals with bone meals, calcium and phosphorus and allow the animal to get the early morning sun to avoid rickets or osteomalacia.

- f. If it is the case of ketosis, feed the animals frequently on a balanced rations with strict maintenance of farm-hygiene.

Causes, Symptoms and Correction of Some Common Nutritional Diseases (See the table below)

Diseases	Causes	Symptoms	Correction
1. Anaemia	Iron Deficiency	Loss of appetite, emaciation and death	Iron tablets
2. Ketosis	Excessive fat metabolism under starvation or high milk production	Loss of appetite, smell of acetone, low milk yield	Feed glucose or glucogenic feeds
3. Hypocalcaemia (Milk fever)	Low blood calcium	Loss of appetite, constipation and nervousness	Feed calcium gluconate
4. Acidosis	High level of carbohydrate diets	Increased respiration rate, sunken eyes, staggering, coma and death	Feeding of buffering e.g. Sodium bicarbonate feed less carbohydrate
5. Rickets/Osteomalacia	Lack of calcium and phosphorus or poor rations. Lack of vitamin D	Stiff joints and flexible bones	Feed vitamin D, calcium and phosphorus in good quantity
6. Protein malnutrition	Low protein in the diet	Depressed appetite, low productivity and low growth rate	Increase the protein in the diet

7. Vitamin A deficiency	Low level of vitamin A in the feed	Lacrymahon conjunctivitis, nasal discharge and low egg production	Administer 2 to 4 times recommended level of vitamin A
8. Vitamin E deficiency	Low level of Vitamin E, poor mixing, oxidation of fatty acids in the diet	Backward retraction of the head known as Eucephalomania	Ferosis and seals dermatitis,
9. Pantothenic acid deficiency	Low pantothenic acid in the feed	exudative diathesis Crusty, scab-like lesions on corners of the mouth and eyes	fatty liver syndrome, slipped tension Injection of pantothenic acid and after recovery add to the feed as appropriate