**Animal Management practical**

**First stage**

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**Problem result from malnutrition in animals**

Malnutrition in animals or starvation is a common condition in many types of wildlife that ends with the death of weak and sick animals, whether small or large, and it is very common in the winter, where severe cold or snow covering the animal’s food causes a lack of energy intake, while the animal needs more energy in the winter. This separation, which causes imbalance and thus malnutrition or starvation, and the death rate from malnutrition in animals increases among birds and mammals more

 **Causes of malnutrition**

 In animals, the main causes of malnutrition in animals are:

* Reproduction

 Increasing numbers is a natural phenomenon for most types of animals and is linked to increased competition for food, and when there is a shortage of food, as in the winter, malnutrition occurs

* Mating:

Malnutrition may occur in one of the parents after mating due to reduced energy levels and fat distribution.

* Early weaning

Animals that are weaned early may have difficulty obtaining food.

* Motherhood:

 The mother may sometimes starve herself to feed her children in the event of a lack of food, and in return, the mother may refuse to feed her children, which leads to starvation, and malnutrition may occur in young children from a mother who does not feed well and has less milk production.

 **Symptoms of malnutrition in animals**

 One of the main symptoms of malnutrition in mammals

* A feeling of lethargy, apathy, unsteadiness, and lack of fear of humans
* Skin sagging, hair stiffness, dryness and roughness
* Bones are more prominent from the body due to weak muscles such as the shoulder muscles, rib cage, pelvis and spine,
*  As the animal's face looks swollen, its eyes are sunken, and its stomach is small and hollow,

What are the symptoms of malnutrition or starvation in birds?

• They are idle and unstable mobility

• The ruffled feathers and the lack of fear of man,

There are also physiological symptoms

 When hungry animals, most importantly:

• Decreased subcutaneous and abdominal fat

• In the bone marrow

• Atrophy in the muscular system, turning fatty tissue into a red gelatinous color

• Loss of weight and size of organs. Shrinkage of the digestive system with the appearance of dark green pigments from bile. Dryness of food residues and ulceration of the wall of the rumen or first stomach in ruminants

• Clearly atrophy of the chest muscles and an increased risk of infection with fungi in birds.

 **Diseases of malnutrition in animals**

 The general trend in animal production depends on fattening animals and accelerating their growth in order to increase meat production to keep pace with the increasing demand, which led to the creation of many problems related to animal nutrition, and animal nutrition in farms depends on fodder, not pasture, and when the feed is poor quality and low in nutrients. Nutrition problems arise, and overfeeding causes problems just as underfeeding does.

Among the most important diseases of malnutrition in animals:

Diseases related to calcium and phosphorous metabolism:

And interactions with vitamin D: such as rickets and occurs in young animals such as cows and sheep. Osteomalacia, osteoporosis and bone fibrosis resulting from calcium and phosphorous deficiency: occur in cattle, horses, goats and pigs.

* **Magnesium deficiency:**

It is rare, but it occurs when relying on milk to feed the young and delaying the introduction of alfalfa.

* **Salt deficiency:**

Salt means "sodium chloride" and its deficiency can be managed by adding it to food, but its deficiency may lead the animal to eat large quantities of it, causing poisoning or sometimes death.

**Goiter caused by iodine deficiency:**

It occurs as a result of iodine deficiency from the soil or eating a diet high in calcium content, and it occurs in cows, ewes and pigs.

* Manganese deficiency:

 It is a necessary component for the hatching of eggs in chickens and for the growth of the fetus and bones.

* **Anemia or anemia:**

 It results from a lack of iron and copper, especially when relying on drinking milk as a primary source of nutrition.

* **Copper deficiency:**

 One of the symptoms of copper deficiency is back swaying, especially in swayback lambs, which is a prevalent condition in some areas in Britain, Australia and the United States.

* Sulfur deficiency:

It can be overcome by adding protein containing sulfur.

* Selenium poisoning:

 It is called alkaline disease, as it was believed that the cause of selenium poisoning was caused by drinking alkaline water, but it was later found that it was caused by eating plants contaminated with selenium

* **Vitamin A deficiency:**

Its main symptoms are night blindness, miscarriage or the birth of weak fetuses, and it can be prevented by grazing in the summer on alfalfa and high-quality legumes.

* **Vitamin C deficiency:**

Vitamin C or "ascorbic acid" is often broken down in the equipment of ruminants, resulting in a deficiency.

**Treating malnutrition in animals**

One of the most important ways to treat malnutrition or starvation in animals is to fortify the feed with appropriate supports, but some important things must be taken into account, such as increasing the number of animals above the normal limit, which leads to an imbalance and an increase in the risk of transmitting diseases such as tuberculosis in cows. Food subsidies At the beginning of the winter season and continuing to provide them during it with the provision of appropriate quantities of food, there are special considerations for providing subsidies according to the type of animal as the following points are clarified:[

* **Ruminants:**

 In the case of ruminants, the animal dies if it reaches an advanced stage of malnutrition even after feeding it because it must remain in a negative state of energy balance for two weeks before introducing the new food that needs to be adapted from its digestive system and body.

 Care must be taken to provide high quality edible feed that contains easily digestible carbohydrates, bran, vitamins and minerals.