
EXPERIMENT 5 MIXING OF VITAMIN SUPPLEMENT IN POULTRY FEED

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5.1 INTRODUCTION

Vitamins are organic compounds though present in feed in minute quantities are necessary for various physiological functions in birds. If these are deficient (less) in diet, several disorders (diseases) characterized by generalized or specific lesions/signs may appear. In practical feeding, out of many fat or water soluble vitamins, only supplements containing vitamin A, B₂ (Riboflavin), D₃ (Cholecalciferol) and K are mixed in the practical diet. The feedstuffs used for preparation of poultry rations also contain vitamins at variable concentrations.

Objectives

After performing this experiment, you will be able to:

- discuss about different vitamin supplements used in poultry feed; and
- perform preparation of readymade vitamin mixture.

5.2 EXPERIMENT

5.2.1 Principle

Vitamins are supplemented either through premixes or through individual vitamins. Two types of vitamin premixes are available in the market. One premix supplies vitamin A, B₂ and D₃ and in some products vitamin E and K are also present. The other type of vitamin preparation contains vitamin B complex and C. A large number of pharmaceutical companies manufacture vitamin premix with different combinations. Generally, the vitamin premix containing A, B₂, D₃ and K are very common and suitable for different types of birds. The practical dose of such premixes ranges from 100 to 300 mg per kg of feed.

5.2.2 Requirements

- Commercial vitamin mixture containing vitamin A, B₂, D₃, E and K
- Commercial vitamin mixture containing vitamin B complex and C
- Complete feed for broiler

- Ground maize or rice bran or wheat bran
- Jute bag or plastic drum
- Marker pen/marketing ink
- Plastic small bag
- Plastic sheet
- Plastic tray
- Spoon or spatula
- Weighing balance

5.2.3 Procedure

(a) Preparation of vitamin premix

- 1) Using spatula or spoon take out 20 g of commercial preparation containing vitamin A, B₂, D₃ and K and 10 g of preparation containing vitamin B complex and C in a weighing balance and place in a plastic tray.
- 2) Weigh 470 g of ground maize or rice bran or starch powder or wheat bran as carrier.
- 3) Mix them thoroughly in a plastic tray or plastic sheet.
- 4) Pack them in a plastic bag and mark it properly as “vitamin premix” using a marker pen and store in a dry place and in plastic drum.

(b) Mixing of vitamin premix in broiler feed

- 1) For preparing one quintal (100 kg) of broiler feed, open one packet containing 500 g of vitamin premix.
- 2) Add it with 99.5 kg of complete feed and mix it thoroughly on the plastic sheet.
- 3) Pack the mixed feed in a jute bag or plastic drum with proper marking type of feed and its name with quantity and date of preparation.

Note: Generally, the vitamin premix containing A, B₂, D₃ (known as critical vitamins) and K is very common and suitable for different types of birds. A preparation containing vitamin A, B₂, D₃, E and K can be given in the diets of chicks and layers @ 0.02% i.e. 20 g per quintal of feed. The other type of vitamin premix contains vitamin B complex and C. A preparation of vitamin B complex and C or vitamin A, B₂, D₃, E and K can be given in the diets of chicks and layers @ 0.01% i.e. 10 g per quintal of feed. Keep the level of vitamin premix at the rate of 0.5% i.e. 500 g vitamin premix per quintal feed of broiler, egg type chick, grower and layer.

5.2.4 Results

Give your opinion on the vitamin premix prepared by you and how it can be improved?

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5.3 PRECAUTIONS

- The vitamin supplement should be collected from reputed firm.
- It should not contain more amount of moisture.
- It should be stored in dry place.
- It should be stored separately.
- Always prepare fresh vitamin premix.
- Mixing of vitamin mixture should be done on the plastic sheet otherwise the premix will contain dust from the floor.