
EXPERIMENT 3 SAMPLING OF FEED FOR QUALITY CONTROL

Structure

- 3.1 Introduction
 - Objectives
- 3.2 Experiment
 - 3.2.1 Principle
 - 3.2.2 Requirements
 - 3.2.3 Procedure
 - 3.2.4 Observations
 - 3.2.5 Results
- 3.3 Precautions

3.1 INTRODUCTION

The economical production of eggs and meat by poultry depends primarily on proper nutrition, quantity and quality of the feed. In addition to beneficial nutrients, the feedstuffs included in compounded feeds are also known to contain wide varieties of anti-nutritional factors/toxicants which adversely affect the performance of birds. There are some factors that influence the feed quality such as (a) variations in nutrient contents - likely to be changed due to difference in variety, processing methods employed etc. and (b) presence of contaminants and adulterants such as argemone, insecticides, mycotoxins, pesticides, urea etc.

Objectives

After performing this experiment, you will be able to:

- describe the sampling method; and
- judge the feed quality.

3.2 EXPERIMENT

3.2.1 Principle

The quality of feed ingredients depends on external and internal attributes (qualities). Examination of both the attributes is very much important and this practice should be carried out at regular interval and at the time of purchase of the ingredients from the retailer or wholesaler. In order to determine the chemical composition of feed ingredients or to detect the anti-nutritional factors, sampling is very much required. The sampling will help the analyst to take out the required amount of feedstuff for proper analysis of required attributes. This is the first step in the maintenance of quality control of feed ingredients or complete feedstuffs.

3.2.2 Requirements

- Feed ingredients such as maize, wheat bran and soybean meal.
- Sampling probe (Tapered metallic scoop)

- Plastic tray
- Paper or cloth bag or polythene bag
- Stapler with pins
- Marker

3.2.3 Procedure

- 1) Examine the conditions of packaging materials such as bags of jute/paper/polythene etc. (Open bags should not be accepted as it may give chance for adulteration and weight loss).
- 2) Select at least 5-10% of the total number of bags purchased at the poultry farm/feed mill.
- 3) Draw samples of about 10 to 20 g each from 3 to 4 different places/positions of the selected bags using a tapered metallic scoop.
- 4) Mix them thoroughly in a plastic tray.
- 5) Out of this mixed lot, pack about 50 to 100 g of feed sample in plastic bags and then seal them properly by staple-pin into paper or cloth envelope or polythene bag.
- 6) Using a marker, label the envelope with sample code or number, name of the ingredient, date of sample collection and attributes for analysis.
- 7) Send the sample to a reputed and well equipped feed analytical laboratory of your area or neighbouring zones.

3.2.4 Observations

Observe and record the following:

- i) Sample size in number and weight
- ii) Name of the ingredient
- iii) Date and time of collection

3.2.5 Results

Give your opinion about the method of sampling you carried out.

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3.3 PRECAUTIONS

- Before going for practical class prepare well on the theoretical part.
- Collect the exact quantity of individual ingredient as a feed sample.
- Collect the ingredients from your nearby market or farm.
- Avoid water-contact to the collected sample.
- Ensure for proper marking and the address of the analytical laboratory.