

Trial Shows that High-energy Poultry Mashers Give Better Returns than Cheaper Mixtures

COST of poultry mash per ton is a misleading assessment of its value. True economic efficiency is best measured in terms of actual performance, that is, the cost of food to produce a dozen eggs. This cost is the primary measurement adopted for interpreting results in a feeding trial at the Department of Agriculture's Poultry Demonstration Plant designed to assess the value of high-energy laying mashers. Information from this trial is given here by J. Edmondson, Poultry Experimentalist, Department of Agriculture, Upper Hutt, and results are compared with those of similar trials conducted a year earlier.

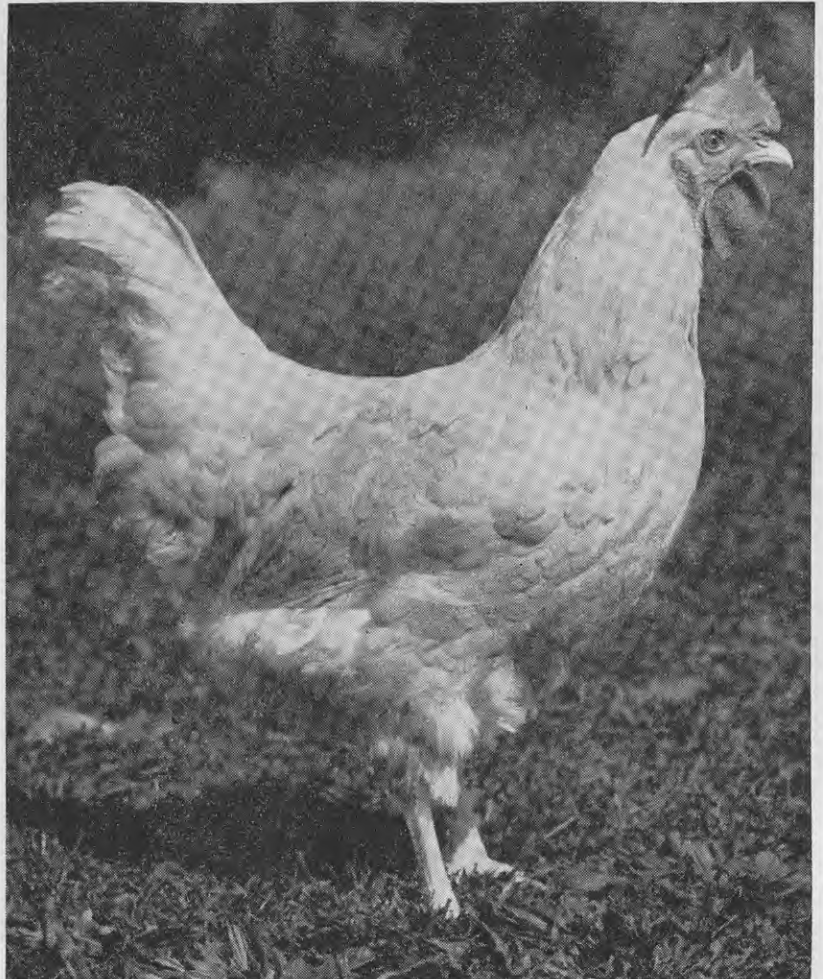
FEEDING trial results reported in the June 1958 issue of the "Journal" demonstrated that replacement of low-energy food such as bran and pollard by high-energy grains such as wheat or maize resulted in a more economically efficient mash. Though the cost per ton was increased, the amount of food and cost of food required to produce a dozen eggs were significantly less.

Where a ration is correctly balanced for vitamins, minerals, and protein the amount of food required by a laying flock will depend on the number of calories in each pound of food. The more calories there are the less food will be needed to meet the energy requirements of the layer.

It has been a common practice to recommend a level of protein in the diet as a percentage of the diet. Where this is applied birds on a high-energy mash will, because they eat less food, receive correspondingly less protein. The conclusion, therefore, would be that with a mash of higher energy value a higher level of protein would be needed to ensure an adequate supply to the laying bird.

The test referred to above indicated that 17 per cent of crude protein in the diet resulted in a rather more economically efficient diet than a ration containing 15 per cent of protein, which is the level more commonly recommended. The difference was not very significant but was sufficient to warrant a further test.

A feeding trial was therefore begun in mid February 1958 with the following objectives:



A White Leghorn x Australorp pullet typical of the 240 used for the feeding experiment described in this article.

1. To compare rations of the higher-energy type varying only in protein levels (17 per cent and 15 per cent respectively).

2. To compare the mashers referred to in 1, which are mixed at the Poultry Demonstration Plant, with a purchased standard layers' mash No. 1. According to information available this mash would be regarded as a low-energy mash containing about 40 per cent of pollard and bran combined. The normal practice of fortifying this mash with vitamins A and D₃ and dehydrated lucerne meal was adopted.

Method

The trial was begun in mid February, when the pullets were at the point of lay, and continued for 40 weeks. A daily record of egg production was kept and food consumption was measured once every 4 weeks.

White Leghorn x Australorp pullets bred from the farm flock were used. They had been hatched at the same time and reared intensively from day old. They were divided at random into two flocks of 40 each and housed intensively in similar pens throughout