

Turkey Experiments At Purdue



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Labor shortages and other difficulties have seriously interfered with our experimental work with turkeys during the past few years. Following a lapse of two years, during which no experiments were conducted, it has been possible to resume studies of the nutritional requirements of turkeys on a limited scale. Difficulties still exist. The expansion of the University housing program onto land intended for use as turkey range this season made it necessary to raise all of the turkeys in confinement. It is hoped that in the near future it will be possible to expand the experimental work with turkeys on the new farm recently acquired by the Poultry Department.

The experimental work during the past two seasons has been devoted to a completion of studies previously started on the replacement of bran and middlings in starting rations with corn and soybean oil meal, and the partial replacement of corn in a growing ration with oats and wheat. New experiments which have been started include studies of the protein requirements and vitamin requirements of turkeys and methods of feeding.

Replacement of Bran and Middlings in Starting Rations with Corn and Soybean Oil Meal

In several trials with chicks, 15 percent each of wheat bran and wheat middlings in an all-mash boiler ration rations were replaced by 25 percent of ground yellow corn and 5 percent of soybean oil meal. The corn and soybean oil meal produced just as rapid growth as the bran and middlings, with somewhat less feed required to produce a pound of gain. In two previous trials

with turkeys, the same substitution was made in an all-mash starting ration containing 23 percent total protein, with 20 percent of meat and bone scraps, 28 percent of soybean oil meal, and 5 percent of dried milk as the protein and vitamin supplements. The weights at 8 and at 12 weeks of age on the corn and soybean oil meal rations were decidedly below those on the bran and middlings ration.

In an additional trial, with Broad Breasted Bronze poult, 25 percent of ground yellow corn and 5 percent of soybean oil meal were used to replace the 15 percent each of bran and middlings in an all-mash turkey starting ration containing 25 percent total protein, in which the soybean oil meal was increased from 20 to 25 percent. At both 8 and 12 weeks of age there was a difference of about one-fourth pound for both males and females in favor of the ration with bran and middlings. The growth was quite satisfactory on the corn and soybean oil ration, the males on this ration weighing 6.8 and the females 6.5 pounds at 12 weeks of age. To this age about 0.4 pound less feed was required per pound of gain on the corn and soybean oil meal ration.

Partial Replacement of Corn with Oats and Wheat in Growing Ration

In additional trials with two lots of Broad Breasted Bronze turkeys in confinement and two lots on limited range, a 15-percent protein growing ration containing 80 percent of ground yellow corn was compared to a ration containing 25 percent of ground corn, 20 percent of whole oats, and 15 percent of ground wheat. Both rations were fed as all-mash rations from 12-28 weeks.

The results agree with those of previous trials. The birds on the ration containing oats and wheat made somewhat more rapid gains during warm weather, but those which received 80 percent corn were able to overcome this difference during cooler weather. The slight increase in the amount of feed required per pound of gain on the ration containing oats in this experiment indicates that 25 percent of oats in the ration is about the upper limit for maximum feed efficiency.



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