16-Lancaster Farming, Saturday, September 14, 1968

Broiler Diet Research Shows Meat & Bone Meal **Economical And Effective**

Adding up to 10 percent meat periments to evaluate meat and and bone meal to broiler diets is bone meal in bioiler diets. The to growing batteries for the rest the remaining two experiments. careful seedbed preparation, the both economical and effective, chicks used in all four tests were of the test period. Starter feed All feeds were reduced to a uni-Recent research by Thomas D, white broiler crosses bought was provided for all chicks for form feed mix to prevent chicks Runnels, associate professor in from the same commercial the first four to five weeks. At selectively choosing ingredients. the department of animal sci- hatchery. In the first experiment this time, the chicks were weighence and agricultural biochemis- they were sexed cockerels; in ed, starter feeds removed and ets containing up to 1.3 percent homeowners should consider try at the University of Dela- the other three experiments, finishing feeds provided. These calcium and 1.0 percent phos. seeding or renovating their cool ware, shows it can be used at they were sexed, but both sexes finishing diets were similar but meat and bone meal, produced doubts about seed selection and lieved

At the present time, most commercial bioiler feeds contain; less than five percent meat and bone meal. Nutritionists recommended such low levels because they believed higher calcium levels supplied by meat and bone meal might have a depress ing effect on broiler growth and their use of feed

In a previous study by Sathe and Clymont (1964), high calcium levels tended to depress growth when small amounts of meat and bone meal were used in the total protein supplement However, this growth depressing effect of calcium was not observed when meat and bone meal was the major source of diet protein Runnels believes this suggests that other dietary sources of calcium may have been responsible for the growth depression

Runnels' study showed conclusively that the high level of calcium and phosphorus contributed by meat and bone meal has no ill effects on broilei weight gain and feed utilization if diet ereigy and essential amino acid levels-are maintained

Broiler quality remained high when meat and bone meal was used, according to Runnels Observations on live birds showed no difference in grade, perosis,[†] bleast blistels of other condi tions

Substituting fish meal, distilleis dark grains or meat and bone meat in the basic corn-sovbean diet improved broiler growth On 75 percent meat and bone meal, broilers average weight was 464 pounds in nine weeks compared to 424 pounds for a coin-soybean meal diet With three percent fish meal added weights averaged 442 pounds. on 10 percent distillers dark grains, they averaged 456 pounds

Thus, the greatest gains were observed with broilers receiving the largest percentages of meat and bone meal in their diets Runnels points out that this is particularly important since the cost of this ration was the lowest of any tested Least cost computer diets containing up to 10 percent meat and bone meal reduced the feed ingredient costs from \$1 to \$250 per ton compared to other feed costs at the same nutrient levels Approximately four billion pounds of high protein meals are produced annually from animal by-products in the United States Despite the extreme variability in raw material used for producing these meals (fat trimmings, waste fat, bone, packing-house offal, fallen animals, etc), the finished product has a reasonably uniform composition Close process control and the relatively low temperature to which the product is exposed--240-degrees F or less in most plants-helps prevent any significant loss in nutritive quality from heat damage to the essential amino acids The high protein meals are excellent sources of calcium and phosphorous as well as some of the water soluble vitamins Runnels conducted four exflock.

were used

domized at the time they were imately 2.5 percent less protein er levels of .calcium and phos. introduced into the battery com- than the startor feeds. partments or floor pens; this was done to eliminate any possible periments were prepared with a proven an economical ingredibias from the source of chicks, computer, all based on the same ent for use in broiler diets, it This precaution was in addition nutrient requirements. In the can be used effectively at higher to obtaining all chicks for each first experiment, fish meal, dis. levels than is now practiced, ac. test from the same breeder tillers dark grains and meat and cording to Runnels.

ing batteries for the first four to bone meal were used. Commerfive weeks and then transferred cial broiler feeds were used for

Chicks were thoroughly ran- acid level and contained approx- those from diets containing low- your county extension agent

bone meal were used; in the sec-Chicks were kept in the start. ond, fish meal and meat and

Runnels states that broiler di-

phorus. Good quality 50 percent Formulas for the first two ex. protein meat and bone meal was

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