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Research Projects for Next Years

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RESEARCH PROJECTS FOR NEXT YEAR

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The research projects underway at the Poultry Research Unit are scheduled for several year's duration. Therefore, studies in the areas covered by this report for the most part will be continued. Some areas will be phased out, others will receive new emphasis and new projects will be started. Particular changes are noted below:

1. Activity on the selenium metabolism project will be limited largely to monitoring selenium levels of turkey feeds and the resultant carcass tissues. These data will be used in support of applications to F.D.A. for selenium incorporation into animal feeds.
2. Coturnix quail will be used for the studies on rachitogenic activity in soybean protein to determine whether the dietary of the dam is critical in the assay. Perhaps there is a carry-over from the hen to the chick that reduces the toxicity of soybean protein.
3. A study is underway to determine the effects of grower diets on subsequent performance involving low protein-low energy, low protein-high energy and high protein-high energy diets and three strains of layer-type pullets. They will be housed in the environmental unit so that the different ventilation and air conditioning effects can be further studied, as well as to compare the 14% protein layer diet with the 16% protein diet.

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4. A contract with the Agricultural Research Service in cooperation with Plant Science and Station Biochemistry will enable us to study the possible beneficial effects of molding soybeans. The soybeans will be the primary source of protein in a diet for broiler chicks. Previous work showed certain strains of molds, when incubated with sterile soybeans, to stimulate growth. The object of this work will be to determine what is responsible for this growth improvement.
5. The mercury project will be extended to consider the possible carry-over toxic effects of mercury from hens to their eggs and progeny.
6. In cooperation with Veterinary Science and with a grant from Farmer's Union G.T.A., another type of turkey growing study will be conducted. It will consider the effects of dipping the turkey hatching eggs on subsequent growth and liveability of poults grown to market age under two dietary energy regimes.

Further work is underway or will be initiated on the copper and protein levels best for turkey growth and fat composition, on the supplementation of low protein diets with amino acids for layers, on the use of synthetic and natural egg yolk pigments and on the influence of degree of irradiation on the subsequent reproductive performance of progeny.