

The Use of
Marco B-75 in Poultry Rations

(Preliminary Report)

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An increasing number of inquiries are being received by the Poultry Department at Oklahoma A. and M. College regarding the use of Marco B-75 in all types of poultry rations.

This product has been used for the past one and one-half to two years, both in experiment station feeding trials and in the regular poultry rations fed to the Poultry Department chicken and turkey flocks. The following statements can be made, based upon the data obtained during this period.

1. Marco B-75 is easily mixed into poultry rations, using the simplest mixing equipment. Because of its fluid characteristic, even at low winter temperatures, it can be used satisfactorily without the benefit of fat-heating equipment.
2. Marco B-75 has been used as a source of supplemental fat in the ration fed to hens in the Oklahoma Laying Tests during the past two years. It was fed at a level of one and one-half percent in the 1954-55 ration and at a level of five percent in the 1955-56 ration. The Laying Test results during these two years indicate that it is an excellent source of added fat for layer rations.
3. On an experimental basis with caged layers, Marco B-75 has been fed at levels of 3, 6, 12 and 18 percent of the ration. At fat levels of 3 and 6 percent, egg production and the overall condition of the layers have been excellent. Levels of 12 and 18 percent have proven to be too high, since the birds went out of production and mortality was high. This condition was brought about as a result of the extremely high fat level and was not due to any characteristic of the Marco B-75 itself. Eggs obtained from birds fed these four fat levels were stored for a period of sixty days under typical storage conditions. At the end of that time the eggs were broken out and were checked for interior quality, which included yolk color. Since Marco B-75 contains a considerable quantity of cottonseed oil, and since gossypol in the oil would have an adverse effect upon egg quality, these eggs were examined very closely for olive yolks and pink whites. The eggs from the hens fed the ration containing 18 percent of Marco B-75 showed a slight tendency toward the olive yolk condition.

There was no indication of pink whites. The eggs produced by the hens fed 3, 6 and 12 percent of fat had normal colored yolks, and there was no evidence of pink whites. It can be concluded therefore, based upon this test, that the amount of gossypol present in the Marco B-75 as the product is now being manufactured is well below a critical level. Practical rations as fed today will use no more than 6 to 8 percent of fat. The level where adverse effects were apparent was more than twice this level.

4. Marco B-75 has been used with excellent results as a fat supplement for turkey breeder rations.
5. Marco B-75 has produced excellent growth and high efficiency of feed conversion in rations for turkey poults.
6. On an experimental basis, Marco B-75 has been used in broiler rations at levels up to 15 percent with excellent results.
7. We have made no comparative studies as to the relative value of Marco B-75 as compared to tallow and greases. However, such studies have been made at the Texas Agricultural Experiment Station.