

MASH SCRATCH RATIOS FOR MEAT TYPE LAYERS

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"How much grain can I feed meat type layers?" This is a question hatching egg producers frequently ask. Although the trend has been toward feeding an all-mash ration, there are those who grow or can purchase locally-produced grain and who have shown a continued interest in feeding it. Because of this interest, a study was conducted at Oregon State College to compare the performance of meat-type layers fed different amounts of mash and scratch grain.

The study utilized three pens, similar in size and equipment, stocked with 45 meat strain New Hampshire pullets each. The test was conducted for four successive years and pen locations were changed annually to reduce any effect of pen location upon results. Each year one group was fed approximately 1/4 of its feed as mixed scratch grain. Another group received approximately 1/2 of its feed as mixed scratch grain and the third group was given 1/2 of its feed as barley grain scratch. The mixed scratch grain consisted of wheat, oats, barley and corn. The mash portion of the feed was a commercial twenty percent protein breeder mash.

The results of four years feeding trials were averaged and are reported in Table 1.

Table 1. Egg Production, Feed Efficiency, Mortality and Body Weight Changes 1/

	$\frac{3}{4}$ Mash $\frac{1}{4}$ Scratch	$\frac{1}{2}$ Mash $\frac{1}{2}$ Scratch	$\frac{1}{2}$ Mash $\frac{1}{2}$ Barley
Production (percent)	49.02	47.19	42.73
Mortality (percent)	11.08	12.14	12.90
Feed (per doz. eggs)	8.15	9.02	9.46
Body wt. changes (lbs.)	+ 1.22	+ 1.49	+ 1.27

1/ Four year average.

The pullets receiving the larger percent of their feed as mash had the greatest average annual egg production. The groups fed half of their feed as barley grain had the lowest average annual egg production. When the average monthly egg production was charted, (Fig. 1), it was apparent that the differences between groups were small until the birds had been in production 5 to 6 months. It is interesting to note that production decreased the most in groups receiving half of their feed as barley scratch.

The explanation is frequently given that increased body weight, caused by greater energy intake, results in decreased egg production.

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That this was not the complete explanation in these trials is indicated in that the birds receiving barley scratch and a lower intake of energy, did not increase in body weight or lay as well as birds that received an equal amount of mixed scratch grain. The depressed egg production has not been observed in egg strains fed barley grain at the Oregon Station.

The mortality appeared to be lowest in pens which were fed larger amounts of mash but the differences were small and inconsistent from year to year. It would not be logical to credit these differences to the feeding systems.

A very limited number of comparisons were made between groups as to fertility and hatchability. The only difference noted was that birds fed half of their diet as barley produced a lower percent of hatching eggs during the latter part of the production year.

Producers are interested in the amount of feed it takes to produce a dozen eggs. Pens fed the greater percent of their feed as mash required less feed per dozen eggs than either of the other groups. However, this is not the complete story, and before decisions are made, costs of feed per dozen eggs should be considered. Producers are primarily interested in the program that will return them the most labor income. Since cost figures will vary between farms and areas, it is necessary for individual producers to determine the costs as they apply to their own situation rather than accept a blanket recommendation.

Using actual feed prices as they fit this area, feed costs were computed and are reported in Table 2.

Table 2. Egg Values, Feed Costs and Returns Over Feed Cost

	3/4 Mash 1/4 Scratch	1/2 Mash 1/2 Scratch	1/2 Mash 1/2 Barley
Eggs per hen	162	156	141
Egg Values at 6¢ ea.	\$9.72	\$9.36	\$8.46
Feed per hen - lbs.	110	117	110
Feed cost - mash	\$3.59	\$2.54	\$2.54
Feed cost - scratch	\$.86	\$1.83	\$1.37
Total feed cost	\$4.45	\$4.37	\$3.91
Return over feed costs.	\$5.27	\$4.99	\$4.55

The results of these trials indicate that birds fed most of their feed in the form of breeder mash laid at a heavier rate and despite the higher cost per pound of feed would have made more income over total feed costs than either of the half mash and grain programs, regardless of the grain used. Placing a value of 6 cents per egg on the hatching eggs produced, the return over feed cost for the groups eating 3/4 mash

and 1/4 scratch grain was 28 cents and \$1.36 per hen more than the groups eating half their feed as either mixed scratch or barley respectively.

In summary, the results of four successive trials indicate that heavy meat type pullets perform at higher levels when fed only 1/4 of their feed as scratch grain as compared to groups fed 1/2 their feed either as mixed scratch grain or barley grain. Also, the birds on the larger percent mash feeding would have made the most money under the prices that prevailed during the test period.

The groups fed barley scratch performed in a comparable manner to the others for the first 5 to 6 months of lay but from that time on, their production declined more rapidly than the other rations. The reason for this decline was not determined.

More extensive work is needed to determine the most desirable program for feeding grain to meat type layers if producers desire to use the mash-scratch system of feeding.

Fig. 1

