

was draughty. I found it very risky to have any openings in more than one side of the hen house. It matters not how many holes are made in one side, but holes in opposite sides or ends, or through the roof, will cause a draught which should be avoided.

I found the only satisfactory way to apply top and bottom ventilation together is to use the hole which the fowls pass through as a bottom ventilator, and have another hole about the same size directly above it at the ceiling of the poultry house, these holes have sliding sashes or boards over same which can be opened and closed when desirable. In summer I have these holes open all the time, and the birds cannot possibly sit in a draught, because I have the perches at the opposite side of the hen house to where the holes are. I trust, Mr. Editor, my experience may be of some benefit to others. I paid dearly for what I have learned in ventilation.

TWO INTERESTING EXPERIMENTS IN FEEDING.

MR. W. P. Brooks, in the Massachusetts Station Report, states the results of two feeding experiments. In the second experiment, the results from feeding dried meat meal rather upset our own opinions and returns.

Two experiments, each consisting of two trials, were made with light Brahma and barred Plymouth Rock hens. In the first experiment the value for egg production of animal and vegetable food as the chief source of protein and fat was compared. Two trials were made with two lots of hens. "Both lots had pure water, artificial grit, and ground oyster shells always before them, and all other conditions were made as nearly as possible alike." The two lots were kept in houses exactly alike in construction, each with nesting and laying room 10 by 12 ft., and scratching shed 8 by 10 ft. in size. In the first trial lasting from December 9, 1894, to Feb. 12th, 1895, one lot of hens was fed soja bean meal as a source of protein and fat, with cut alfalfa, oats and middlings in addition; and the other lot was fed meat meal, with boiled potatoes, ground clover, wheat, wheat middlings, and cut bone in addition. The nutritive ratio was kept substantially the same for each lot.

In the second trial lasting from January 1st to October 1st, 1895, one lot was fed linseed meal and cotton-seed meal as a source of protein and fat, with wheat, oats, bran, and middlings in addition; and the other lot was fed meat meal with wheat, oats, wheat meal, bran, and linseed meal

in addition. The nutritive ratio was kept substantially the same for each lot.

The results are briefly summarized in the following table:

Vegetable vs. Animal Food for Hens.

Food.	Duration of experiment. Days.	Daily cost per fowl. Cents.	Number of eggs.	Water free food eaten per egg. Pounds.	Cost per egg Cents.
Vegetable food, first trial . .	64	0.21	11	23.830	0.3410
Vegetable food, second trial	153	.29	400	.917	.0150
Animal food, first trial . . .	64	.24	77	3.554	.0550
Animal food, second trial . .	153	.33	622	.773	.0115

"In the above estimate of cost no charge is made for labor and no allowance for the droppings."

The young pullets used in the first trial were molting during the second trial, which in the author's opinion accounts for the small egg production.

"The results are decisive against the vegetable food and in favor of the animal in so far as effect upon egg production is concerned. The fowls receiving animal food were, moreover, in much better condition at the close of these experiments than the others."

The second experiment was made under the same general conditions as the first, and included 2 trials. The value for egg production of dried "animal" or "flesh" meals was compared with cut fresh bone. Some other feeds were given in addition, but the nutritive ratio was kept substantially the same. The results are summarized in the following table:

Flesh meal vs. cut fresh bone for hens.

Food.	Duration of experiment. Days.	Daily cost per fowl. Cents.	Number of eggs.	Water-free food eaten per egg. Pounds.	Cost per egg Cents.
Dried meat meal, first trial . .	64	0.266	185	1.185	1.70
Dried meat meal, second trial	153	.280	417	1.051	1.52
Cut fresh bone, first trial . .	64	.248	163	1.154	1.70
Cut fresh bone, second trial .	153	.300	444	.978	1.43

"These results are rather indecisive, as in one experiment the meat meal and in the other the cut fresh bone gave the better results, as measured by egg production. The condition of the fowls receiving the meat meal has, however, been uniformly better than in the other lots."

The author remarks that it is difficult to feed cut bone so that it is evenly distributed.

"Some hens almost invariably secure more than their