

OREGON AGRICULTURAL COLLEGE

EXTENSION SERVICE

RALPH D. HETZEL, Director.

FEEDING LAYING HENS.

By C. C. LAMB.

The general farmer is best equipped for keeping laying hens profitably. He has a wealth of natural resources at hand which he may supplement at different times of the year, and by paying attention to details, secure a profitable income from his poultry.

Laying hens require more attention in fall and winter, since these are not the natural laying seasons. It is then necessary to furnish, as nearly as possible, the same kind of food and conditions that the spring and summer provide.

Expensive houses are not necessary, but shelters should be built properly.

It is very necessary that vigorous, bred-to-lay hens be kept. Some hens won't lay a profitable number of eggs because they are not born good layers. They have to be bred to lay.

A fresh egg always contains nearly fixed proportions of the different elements that go to the making of an egg; hence it is important that a balanced ration be fed.

Feeds and feeding influence the quantity, quality, size, color (of yolk), and flavor of eggs.

Protein is a very important element in feeding for eggs. It is the most expensive part of the ration. No other element can be substituted for protein. Hens require meat in their ration for the animal protein it contains. It has been found that vegetable protein will not take the place of animal protein. A certain amount of animal protein should be supplied in some form. It may be supplied as skim milk or buttermilk, green cut bones, or commercial beef scraps.

Grain Foods. The main grain foods for feeding poultry are wheat, corn, oats, barley, and oil meal.

WHEAT with its by-products, (bran, middlings, etc.) is the most universally used grain for poultry.

CORN is as good as wheat for poultry, but should be more carefully fed in warm weather. Price should influence preference for corn or wheat. Both corn and wheat should be balanced with other foods to make a good ration.

OATS would be better than either wheat or corn if it were not for the hull or husk. On account of this, oats are not worth as much for poultry, pound for pound, as wheat or corn. Oats are not so fattening as wheat or corn. Select plump, heavy gray oats for feeding.

BARLEY. Ground barley mixed in the mash is good. Hens usually do not relish whole barley. It may be improved by rolling.

OIL MEAL. In close proximity to linseed oil mills, linseed meal can usually be purchased at prices that render it profitable to feed. It contains over 30 per cent protein and more or less oil. It makes an

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excellent addition to the mash food, particularly during the moulting period, but it should not be fed too heavily.

PEAS. Peas are high in protein and make an excellent poultry food when fed cracked or ground.

GREED FOOD. Green food of some kind is an essential part of the hen's diet every day in the year. Hens should have all the green food they care to eat. Any kind of green food that is at hand and that the hens relish is all right. Some good forms are grass, clover, vetch, alfalfa, kale, cabbage, lettuce, beets, etc.

GRIT. A supply of good, hard, sharp grit should be kept where the fowls can help themselves at any time.

SHELL. It is highly desirable that a supply of sea or oyster shells should be at hand. They help to furnish material for making the egg shell.

CHARCOAL. Charcoal should be kept in a box or hopper in a convenient place. It is a valuable bowel regulator.

SALT. Salt is an aid to digestion. It should be mixed in the mash; about $\frac{1}{2}$ pound to 100 pounds of the dry mixture.

In composition and feeding of poultry rations we shall usually have to be guided by the practical experience of poultry men and experiment stations. It is found that rations and methods that look well on paper are often impracticable.

There are several important points which should be observed in making up a ration. Foods should be selected which the fowls like. The nutritive elements should be in easily digested form and in sufficient quantity. Bulk should be about right to enable the digestive fluids to work quickly. An excess of fiber should be avoided as this indigestible matter has to be thrown off and results in wasted energy. Part of the ration should consist of whole grain, to provide muscular action and thus keep the digestive organs in a healthy condition. Part of the grains should be ground to make the nutrients more quickly available. There should be variety, including grains and green food, as well as animal and mineral matter. The breed and age of the fowls will be factors, as will also the result desired, depending on whether growth, eggs, or fattening are wanted. Price and quality also finally come in for consideration.

The laying hen has to supply her bodily needs first and will then build eggs if there is a surplus of food. Don't feed by measure: give all the hens will eat.

The method of feeding all the hens want is very important. "Activity is the life of the hen." It is important that a large part of the hen's food be supplied in a way that will furnish an incentive to exercise. Throw all the whole grains in a dry litter of straw 8 to 10 inches deep.

Feed about one-third of the grain food ground in the form of a dry or moist mash.

"Dry or Wet Mash. Dry feeding saves labor. Fowls relish the wet mash better. Wet mash (crumbly) economizes in the ration. By feeding the mash dry, it may be fed once a week in hoppers. When fed wet, it must be fed once a day. Fowls will eat wet mash more greedily than dry, and for that reason more care is required in feeding it. If given too much, the hens will gorge themselves and stand around lazily most of the day; this should be guarded against. Where skim milk is available, it is possible to cheapen the ration by feeding wet mash. Cheap by-products, such as bran and middlings, may be made to make up a large proportion of the ration by mixing them with milk. By making a mash with the milk, more milk may be fed to the fowls. It will also cheapen the ration where skim milk is inexpensive and save on higher-priced animal foods. Where heavy feeding of ground grain is desired, it should be fed wet.

"Boiling Food. It doesn't pay, usually, to boil foods. Most foods give better results when fed raw. Starchy foods, such as potatoes, are improved by boiling, but usually it is better not to boil foods. In feeding raw meat foods, there is some danger of the fowls contracting diseases. If liver or lights are fed, they should be boiled to kill any disease germs there may be.

"Cleanliness. It is important that feeding troughs and drinking vessels be kept clean. They should be scalded frequently with boiling water. Do not throw feed on dirty, filthy ground.

"Changing the Ration. Radical changes in the ration should be avoided. The feeder should first map out his system of feeding and stay by it. Remember that the food and feeding aren't everything, and when the fowls are not laying, do not conclude that it is the fault of the ration unless you have definite knowledge that it is. A sudden change to new food, even though the new food may be better than the old, will check egg production for a considerable time. If changes are to be made, it is better to make them gradually."

SAMPLE RATIIONS.

The following are suggested rations, the amounts of the foods being the estimates of what a laying hen should consume in a year. Weights are in pounds. The choice of animal food is left to the feeder in each case, 30 lbs. skim milk, 10 lbs. cut bones, and 5 lbs. beef scrap being estimated as of equal value. The same is true of green food, 15 lbs. of green alfalfa or clover being equal to 20 lbs. of green kale.

Ration	No. 1	No. 2	No. 3	No. 4	No. 5
Wheat .....	.....	60	40	30	20
Corn	60	.....	.....	10	20
Oats .....	.....	.....	10	10	10
Bran .....	.....	.....	10	10	10
Middlings .....	.....	.....	5	5	5
Linseed Meal .....	.....	.....	.....	5	5
Skim Milk, buttermilk, or	30	30	30	30	30
Cut Bones or	10	10	10	10	10
Beef Scrap	5	5	5	5	5
Vetch, Alfalfa, Clover, or	15	15	15	15	15
Kake	20	20	20	20	20

Numbers 3, 4, and 5 are to be recommended as being better rations than 1 and 2. Number 4 would be a safe ration for general use and should give a heavy egg yield.