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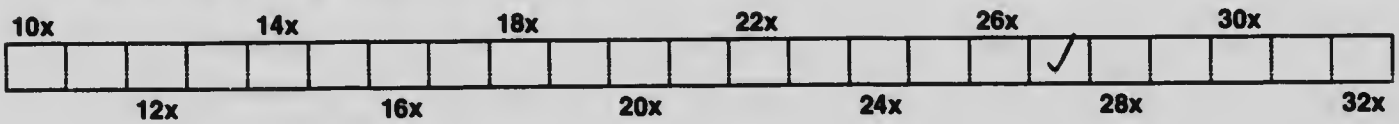


MACDONALD COLLEGE

CIRCULAR No. 3

EGG PRODUCTION IN QUEBEC.

By M. A. Jull, Manager and Lecturer, Poultry Department.

Poultry are of service to mankind in various ways. Eggs and meat are produced for food while feathers are produced for comfort and ornament. Besides producing eggs and meat poultry are adapted to utilize many waste products the value of which would otherwise be lost. This is an important matter, particularly on many farms where a certain amount of grain and other food material suitable for poultry is apt to be wasted. Where small flocks are kept in towns and cities they are fed refuse material from the kitchen and from other sources. In utilizing these waste products the cost of producing poultry products is greatly reduced.

Poultry can be raised in nearly all parts of the country and under varying conditions of climate and season. The poultry industry can be combined with other branches of farming, such as fruit-growing, dairying and general farming. The orchard of the fruit grower makes an ideal place for raising young poultry. On the dairy farm there is usually a supply of skimmilk which is one of the very best of poultry foods. Where grain or other crops are produced a certain amount of food is left upon the fields after harvesting and this is picked up by poultry.

CONSUMPTION

Larger quantities of poultry products are being consumed every year. One reason for this is that the quality of the products has been improved and they are received with greater favour and are enjoyed with more relish than formerly. Another reason is that the population of Canada has increased. The population of the towns and cities has increased more than has the population of the country districts and this has caused a great increase in the demand for poultry products.

The most important class of poultry products is the egg supply. This supply is made up almost entirely of the eggs of fowls since very few turkey, duck or goose eggs are consumed. The value of eggs produced in Canada in 1915 amounted to $30,000,000.00. The production of eggs for food is the principal branch of poultry culture and is more profitable, under average conditions, than the production of poultry meat. Therefore, good egg production is the principal object in view with the great majority of poultry keepers.

PRODUCTION

The more important factors upon which egg production depends are the stock, housing, feeding and breeding. Farmers are gradually beginning to realize the superior earning value of pure breeds as compared with mongrels. The breeds best adapted for egg production in Quebec include Plymouth Rocks, Wyandottes, Rhode Island Reds, Orpoingtons and Leghorns.

More important than breed, however, is the strain of fowls. There are good and poor strains in every variety and care should be taken to see that the best possible egg-laying strain is secured. The profitable laying age of the average hen is two years and consequently our farmers should make a practice of killing off their two year old stock every year. Along with this every consideration should be given to the proper development of the pullets during the growing season. This is most important because of its influence on winter egg production.

The usual advance in the price of eggs, particularly fresh eggs, during the fall of the year, is due largely to natural causes. The moulting of the yearling stock shuts out this source of production leaving pullets practically as the only source of fresh eggs at this time. Pullets, particularly of the heavier breeds, do not generally commence laying before they are fully matured, and if, for any reason, the majority of the pullets have been late-hatched or have not been cared for properly during the growing season a scarcity of fresh eggs is bound to result.

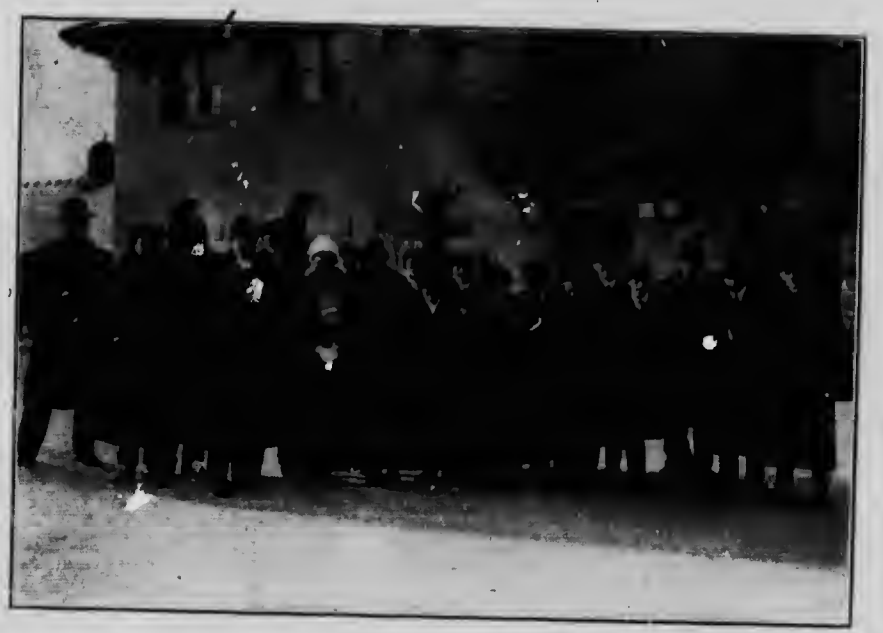
The greatest hope of increasing the fresh egg supply in the fall lies in the proper handling of the pullets during the growing season. A larger fall and winter production means larger profits to the producer and a more staple market for the consumer.

HOUSING

Fowls must be kept in comfortable houses if they are expected to lay during the colder seasons of the year. The house should be located on dry ground which is well drained. The location should be sheltered by buildings or trees and the house should face the south.

The size of the poultry house depends upon the number of fowls. From four to six square-feet floor space is required for each fowl. Twenty-five fowls in a flock require one hundred and fifty square-feet floor space and one hundred fowls in a flock require at least four hundred square-feet floor space.

In regard to shape the nearer square the house is the less it costs. It should be of good depth because a long, narrow house is much colder than a short, deep one.



Part of the class which took the Short Course in Poultry Husbandry in 1916.

Dampness in the house is fatal to egg production. It is much better to have a cold, dry house than a warm, damp one. The use of cotton curtains in place of the glass windows in the front of the house will do away with dampness to a very large extent.

If a portion of the front of the house is left open in warm weather and is covered with cotton cloth in cold weather the house will always contain plenty of fresh air. A good supply of fresh air without draughts in the house tends to keep the fowls in good health. Where a portion of the front of the house is open to admit fresh air the other three sides of the house should be well built to prevent any draught from blowing through.

The house should be of simple construction, for the fewer permanent fixtures there are in the house the better. The feeding hoppers, dusting boxes and nests should all be moveable so that the house will be easy to clean. The nests are made twelve inches wide by fifteen inches deep. They should be made so that they are dark as this tends to prevent egg eating. There should be one nest for every four or five fowls. The roosts are placed at the back of the house, eighteen inches above the floor, and are made of scantling two inches thick by four inches wide. The top corners should be rounded. A Leghorn requires about eight inches roost room; a Plymouth Rock, Rhode Island Red, Wyandotte or Orpington requires about ten inches roost room.

The lumber often used ... the construction of the poultry house is hemlock or yellow pine. The ...and the back of the house are made of a double layer of boards while the front is made of a single layer. A floor made of cement is the best and a board floor is better than an earth one. The mixture of cement for the foundation walls is made up of one part cement, three parts sand and five parts gravel. The mixture for the cement floor is made up of one part cement, two-and-one-half parts sand and five parts gravel.

The rool of the house may be made of shingles or roofing paper, the latter being the cheaper.
If you wish to get plans and specifications of poultry houses write the Poultry Department, Macdonald College, Que.

FEEDING

Laying fowl require to be fed regularly with a variety of feed. Some of the food should be fed so that the folws have to scratch for it and for this reason it is thrown in straw which should be about six inches deep on the floor of the house. When the fowls scratch in the litter for the grain they are taking exercise and this is very important as it helps to keep them in good laying condition.

The ration for the laying stock during the winter season is given below:—Scratch feed; equal parts wh t and corn morning and evening. Mash feed: 10 parts bran, 6 parts oatmeal feed or crushed oats, 5 parts cornmeal, 5 parts middlings, 3 parts beef scraps and 1 part charcoal. This is fed dry in hoppers which are kept open in the afternoon. Also fed in limited quantities moistened with sour milk three to five times a week and preferably to pullets. Another good method is to feed bruised oats in hoppers instead of the above mash mixture and the latter is fed moistened regularly, though with care. The wet mash is fed about noon. Green feed: mangels or sprouted oats and well cured alfalfa hay are given regularly. Green bone at the rate of ½ oz. per bird per day may be given while the birds are confined. Grit and oyster shell are kept before the birds always. Sour milk, when availahle, and clean water are supplied ad libitum.

The ration for the laying stock during the summer season is given below: Scratch feed: 2 parts wheat, 1 part corn and 1 part oats fed morning and evening. Dry mash as for winter feeding is kept in hoppers. Green alfalfa supplied when green food is wanting. Grit, oyster shell, water and sour milk ad libitum.

In the morning the fowls are given a mixture of equal parts corn and wheat. Enough grain is thrown in the litter to keep the fowls busy during most of the morning. In the middle of the forenoon a supply of green food should be given. This could consist of sprouted oats or mangels or if either of these cannot be obtained, feed well cured alfalfa or clover hay. At noon give the fowls a light feeding of slightly moistened mash such as is mentioned above, allowing a quantity of mash about the size of a walnut to each fowl. Be very sure not to overfeed on the moistened mash and keep the troughs sweet and clean. In the afternoon, before roosting time, give the fowls another feeding of the mixture of corn and wheat, to which a few oats may be added.

The Macdonald house is 20 by 20 feet and accomodates 100 hens. Plans and specifications of this house will be supplied free upon request.

In addition a supply of the mash is kept before the fowls at all times in self-feeding hoppers. Also, oyster shell and grit are k in hoppers where the fowls can help themselves at any time.

Clean water should be provided every day and sour skim milk should also be supplied in pans when it can be obtained.

No mention has been made of any definite amounts of grain or other foods to give. The reason for this is because it is impossible to say how much the fowls require from one day to another. They consume more one day than another and the quantity of any particular food required depends upon the method of feeding. The best feeder is one who observes the fowls very closely and is able to feed according to their daily needs.

BREEDING

Better methods of feeding, housing and general management will do much towards increasing egg production in all breeds. Some breeds will lay better than others, when handled in exactly the same manner, and certain strains of the same breed or variety will produce more eggs than other strains. We must not only breed from good strains, but we must also try to improve further the laying abilities of those strains.

A laying hen should have plenty of width and depth of body, with a long breastbone or keel. In egg production constitutional vigor is just as important as it is for meat production. Type and constitution alone, however, will not produce eggs. There are other factors of greater importance, and the ability of a hen to lay eggs depends upon her breeding.

The majority of eggs in the Province are produced in March, April, May and June; more eggs are produced at this time of the year than the market demands, and although the cost of production is low, they are worth less than at any other time. Consequently the profit on a dozen eggs laid in the spring months is lower than at any other time. What is desired is a hen that will not only lay 150 or more eggs in a year, but one that will lay well during the winter months, for winter producers are the most profitable.

The ability to lay eggs is inherited, and it requires careful and consistent selection to improve production. The heaviest yearly producers lay a good number of eggs between October and November, and these are the hens which should be selected as breeders. Spring production is of little value in determining the best producers. Heavy winter producers are the best breeders, providing they have good health and constitutional vigor.

The selection of heavy producing females may not improve the egg production of the subsequent flocks to any extent. It has been found that the male has a greater influence in transmitting the ability to lay a good number of eggs in the winter months than has the female. The hen transmits the ability to lay a normal number of eggs during the spring season, but she cannot transmit the ability to produce a large number of eggs in the winter season. This ability is transmitted by the male, and he should come from a heavy producing hen. The problem, then, is to select the heaviest winter producers and mate them with a male whose mother was known to have been a heavy winter layer. The selection of the male is very important, and it is only by using one bred from a good winter layer that best results can be secured.

Nevertheless, good care must be exercised in the selection of the female breeders, for the mere fact that a hen laid 200 eggs in one year is not on guarantee that she will be a good breeder. Her eggs may run low in fertility, or they may hatch poorly. The problem of breeding for egg production is consequently quite difficult, for one must not only get an outstanding male and breed this to females of high egg production, but those females should also produce eggs of good size and fertility.

Many farmers may not find it possible to use trap-nests to find out the number of eggs laid by each hen in the flock. For those who can, however, it would be worth while, even if trap-nesting is done only from October to the last of February.

The following general principles can be applied by every poultryman. Breeding birds should be selected on the basis of constitutional vigor and vitality. Never breed from a bird which has been sick. If a bird is slightly affected at any time, place a leg band on it so that it may be identified and kept out of the breeding flock. The best layers are usually those which are active all the time; they are the first to be at work in the morning and the last to go to roost. Nearly all heavy laying hens are late in moulting. The more closely the flock is observed, the better able one be to select the most desirable breeders.

A bulletin entitled "Farm Poultry" is available for free distribution to residents of the Province of Quebec.

In February and March 1917 the Poultry Department of Macdonald College will give a Short Course in Poultry Husbandry. This Course will be of two weeks' duration and is intended to assist in supplying the demand for practical knowledge combined with a lecture course on the more important phases of poultry culture. The course is free and is of special benefit to farmers. For announcement and particulars, write

The Principal, Macdonald College, Que.