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DOMINION OF CANADA
DEPARTMENT OF AGRICULTURE
DOMINION EXPERIMENTAL FARMS

POULTRY DIVISION

POULTRY-KEEPING
IN
TOWN AND COUNTRY

By
F. C. ELFORD,
Dominion Poultry Husbandman

BULLETIN No. 89

Printed by Authority of
The Honourable MARTIN BURRELL, Minister of Agriculture

OTTAWA
PRINTED BY J. DE L. TACHÉ,
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
1917

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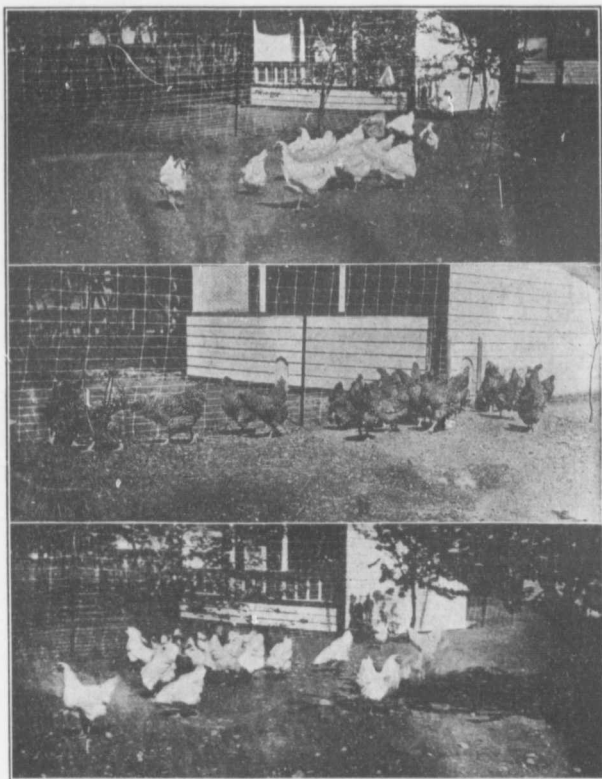
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OTTAWA, May 18, 1916.

The Honourable
The Minister of Agriculture,
Ottawa.

SIR,—I have the honour to transmit herewith, for your approval, the manuscript of Bulletin No. 89 of the Experimental Farms' regular series, entitled "Poultry-Keeping in Town and Country."

This Bulletin, prepared by the Dominion Poultry Husbandman, Mr. F. C. Elford, deals with the poultry-keeping industry in a general way. It will, in my opinion, be found to give both the farmer and the townsman much of the information so necessary to the successful carrying on of poultry-keeping operations. Unlike most industries, poultry-keeping, if it is to take its rightful place among our Dominion industries, must depend mainly upon the well-directed efforts of the small producer rather than upon the large operations of the "poultry farm," and the preparation of this bulletin at the present time, when increased incentives to production have aroused greater interest in poultry-keeping, would seem especially opportune.

As this publication is intended to replace our previous bulletins on the above subject, the editions of which are exhausted, I would recommend its wide distribution among all classes of our population likely to be interested.

I have the honour to be, sir,
Your obedient servant,

J. H. GRIDDALE,
Director, Dominion Experimental Farms.

OTTAWA, May 15, 1916.

The Director,
Dominion Experimental Farms,
Ottawa.

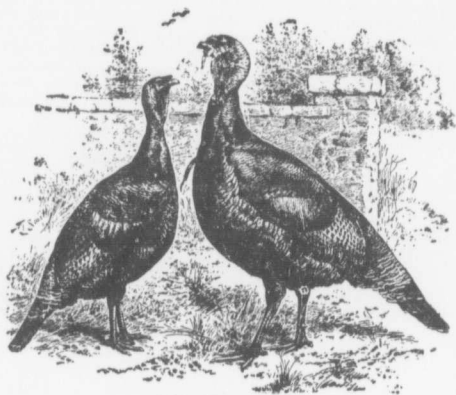
SIR,—I have the honour to transmit herewith the manuscript of a bulletin which I have prepared, entitled "Poultry-Keeping in Town and Country."

Two main purposes have actuated the writing of this bulletin. One is, of course, the advocacy of better methods; the other, and perhaps the chief end in view, is to arouse and stimulate interest in poultry-keeping among those who have not yet taken up the pursuit.

For the latter reason, the bulletin has been written in an easy, popular, and, it is hoped, attractive style. No attempt at an exhaustive treatise on poultry-keeping has been made, the aim being rather to make a rapid general survey of the whole field. Many of the main features herein taken up are treated in more detail in the various other publications issued from the Poultry Division.

I have the honour to be, sir,
Your obedient servant,

F. C. ELFORD,
Dominion Poultry Husbandman.



A Pair of Bronze Turkeys.



POULTRY-KEEPING IN TOWN AND COUNTRY.

INTRODUCTION.

Never in the history of Canada has the incentive to an increased output of poultry products been so great as at the present time. The demand was never as good, and prospects indicate that this demand will continue for some time to come. With the scarcity of meat, Canadians are eating more eggs and Great Britain needs all the eggs that we can supply. Therefore, as a business proposition, increased production of poultry products should appeal to us more than usual.



Starting Early.

Photo by Geo. B. Rothwell.

For two years Canada has been producing a small surplus, and there is good reason why the surplus for 1917 should be from five to ten times what it was in 1916. In normal times Great Britain eats a million eggs a day; she would probably eat more now if she could get them. Canadian eggs are at a premium in England; the prices paid for them have been several cents a dozen higher than that paid for eggs from some other countries.

Canada should be able to supply a great many more than she has done. Canadian eggs are good eggs, but we want more of them. We have the climate, we have the feed, and though labour for other lines of work is scarce, there is plenty of labour suitable for poultry-keeping.

Poultry-keeping is at all times a pleasant and profitable industry. Just now it might be looked upon as something more—a patriotic duty. A larger export trade is needed in this country. Poultry products, and eggs in particular, might help more in giving Canada a larger balance of trade. Poultry pays, and in spite of the high prices, eggs are a necessity. Larger flocks and increased production could be brought about without undue expense. Poultry-

keeping is one industry that can be carried on without the men who are required for heavier work or at the front. It can be made a success when there are only the older people or the younger members of the family present. Poultry thrive in every climate and under almost any condition; little expense is required to start; the returns come quickly; and every month should see some cash receipts.

To have the increased production we should have, requires the efforts of those already interested and also many who are not now helping. The farm flock always pays when given proper care. Production here might be increased materially without adding much to the expense and labour. Adopt system in the work and put the management of the poultry plant into the hands of a boy or girl.

Town and city back yards should be utilized more for poultry than has been the case. Back-yard poultry-keeping pays next best to farm poultry; in some cases as well or even better. There are many back yards and vacant lots that cannot be used for vegetable growing, upon which poultry might be profitably kept. Many a school teacher, stenographer, or book-keeper might add health and variety to his or her occupation, increase the income, and have the satisfaction of helping to keep the home fires burning by taking up this side-line.

Breeders and specialists can help by breeding from healthy stock mated to give the best fertility, shipping only selected eggs or day-old chicks, and endeavouring to place in good hands the eggs and chicks which they have for sale. Care should be taken that only normal eggs and strong chicks be shipped, and that all shipments be made so that minimum losses occur in transportation.

Those who operate custom hatcheries should take similar care, and in addition should warn shippers of eggs to the hatchery to be more careful that the eggs shipped have every reason to be fertile. Fertility can be ascertained by putting a few under a hen and testing them on the seventh or eighth day.

Every person interested can help by eliminating waste and cutting down the cost of production. Breed from bred-to-lay strains; market the eggs when new laid; distribute the sale of the table poultry over as much of the whole year as possible; cull out the weaklings, and feed intelligently. If all help, increased production will follow; greater exports and more help to the Empire in this time of need will be the result.

POULTRY SUITED TO ALL CONDITIONS.

There are few conditions under which hens cannot thrive. Poultry can be reared in any climate, and under almost any condition. Probably no class of live stock is so widely scattered and universally reared. From the warmest regions of the Tropics to the cold, bleak regions of the North, man demands eggs as one of the staple articles necessary to sustain life. In eggs the first quality is preferred; therefore the hen has been taken along, and we find poultry adapted and acclimated to all regions inhabited by civilized man. There is no country so hot or so cold but that some varieties thrive. Dry weather or wet weather will not kill the poultry crop, and neither the early frost nor the late frost leaves us without a reasonable return. In fact, in every known region where human beings exist there is a place for poultry.

SMALL OUTLAY TO START.

One of the strongest features that commend poultry-keeping to the average person is that it takes so little expenditure to begin with, and if the business is properly handled, it will pay for its own development. A sitting of eggs, a dozen day-old chicks, or a trio of breeders, will form the foundation for an enterprise that is limited only by the will, energy, and ability of the manager.

REGULAR RETURNS.

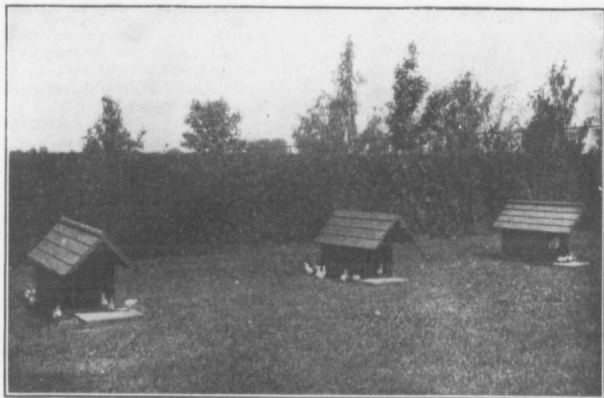
Almost every month of the year one can depend upon some return from the poultry yard. In a well-managed flock there are always a few new-laid eggs for the family, usually poultry meat of some kind, and, if the flock is large enough, there is hardly a month that there is not something to sell. In many families, especially on the farm, the money from poultry is often, for several months, the only cash that comes in.

GOOD MARKETS.

The average prices received in Canada for poultry produce have compared favourably with those paid in any other country. In most cases the Canadian price has been higher. New laid eggs are as good as cash anywhere, and prime dressed poultry commands a figure considerably over cost of production.

A SATISFACTORY CLIMATE.

At one time it was thought that the greater part of Canada had too severe a climate for the best results in poultry-keeping, and that some parts of the Dominion were out of the question entirely. This impression is being gradually dissipated, for now those best fitted to judge think the climate of Canada, instead of being unfit for poultry raising, is one of the best that can



Even the Lawn is Improved by a few Chicks.

Photo by Dr. F. T. Scurr.

be obtained. It has always been admitted that Eastern Canada and the western coast are ideal for the industry, so there is no need of discussing it. That portion of the West, however, from the Great Lakes to the mountains, and even parts of British Columbia, which are high, dry, and cold, are now considered to be just as well suited as the coast. Though most of this section is subject to extremes in climate, having hot summers and cold winters, the air is so dry that very little inconvenience is experienced by the fowl. If there is no natural shade, artificial shelters can be easily arranged to protect the birds from the summer sun. During the winter the cold has not the terrors for the poultry-keeper that it once had. This rigorous climate of ours has developed a vigorous stock that thrives in the coldest weather. The fresh-air treatment is more popular than the heated house. With this treatment that bane of poultrydom, dampness, has gone for ever. The dry atmosphere of Western Canada though cold, is better than the mild, damp climate of some other countries. The bright, sunny days make it possible to keep the hens laying even during the coldest weather.

GOOD CHEAP FEED.

Not only have we a good climate for poultry, but we are most fortunate in that we usually have the best of feed at comparatively low prices. There is no one feed better for poultry than wheat. The cheaper grades of wheat make excellent poultry feed. There is no reason why more of this wheat should not be turned into eggs and dressed poultry. The average farm, especially in the West, often wastes sufficient feed to keep a good flock of hens.

HENS AS HOMEMAKERS.

It is the egg-basket that supplies the groceries on many tables. The same basket also provides the small boots and shoes, the straw hats and pinafores, the books and the pencils. Many a prosperous farmer or business man can trace the early comforts of home life to his mother's poultry yard on his father's farm. Not only does the flock help to provide the eatables and all other things that go to make up life in the children's home, but poultry tends to make home more enjoyable because of the influence it exerts on the bread-winners themselves. There are mothers sweltering over the hot stove preparing the meal for the hungry family, and worried because of the strenuous life, who have been relieved when they were able to run out to a nice flock of pure-bred hens, in a clean house within reach of the kitchen. Few things will sweeten the temper more than to be able to leave the stove long enough to go to the hen-house and bring in nice new-laid eggs for the pudding.

See also what it does for some of those who are in business and at the shop or office all day long. They come home from work at night tired and cross and not the most amiable company for their families; but as they near home they think they must run into the hen-house just to see how those Barred Rocks are, and before they know it they have forgotten all that worried them and go into the house different men.

A flock of hens is a home-maker whenever it is given a chance. Its influence is felt both physically and morally; it ensures man against want and acts as a safety valve to the pent up feelings.

NOT A NEW BUSINESS.

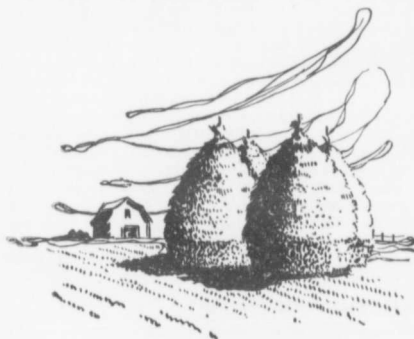
The keeping of poultry is not a new industry. Poultry has been kept for domestic purposes or otherwise for over thirty centuries. Though primarily it may have been used for fighting, there is no doubt it was used for domestic purposes several hundred years before Christ. Through the ages its usefulness has been more and more recognized, until to-day there is probably no class of live stock in which people are more interested.

IMPORTANT, THOUGH A SIDE-LINE.

Poultry has been looked upon as of minor importance. It has been considered one of the small industries, for which one required no fitness or special training. That time is passing

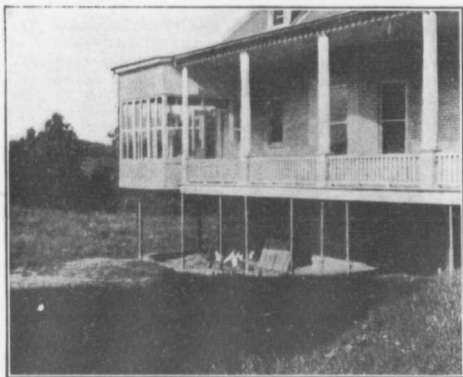
away, but yet there are some who think that any person can keep poultry; and those who wish can go into the business without any knowledge of even the general principles. Too often the general impression has been that a man may fail at everything else under the sun and still be qualified to make a success of the poultry business.

THE POULTRY BUSINESS IS ONE OF THE BIG INDUSTRIES, one that is growing and will continue to grow; it is a paying business when conducted along proper lines, but it is a business that responds best to brains and ability. It is not something that can be picked up at a moment's notice and dropped with profit when one tires of it.

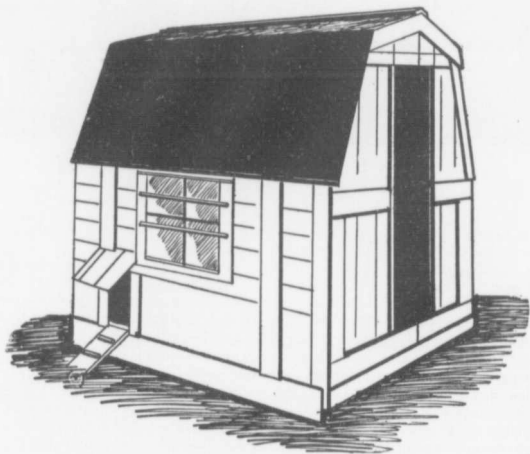


FEED IS OFTEN WASTED.

Many farmers waste enough feed to keep a flock of poultry. If a colony house is placed near stacks or stubble, etc., waste feed is turned into meat and eggs.



A Unique Backyard Plant.



A PIANO BOX HOUSE.

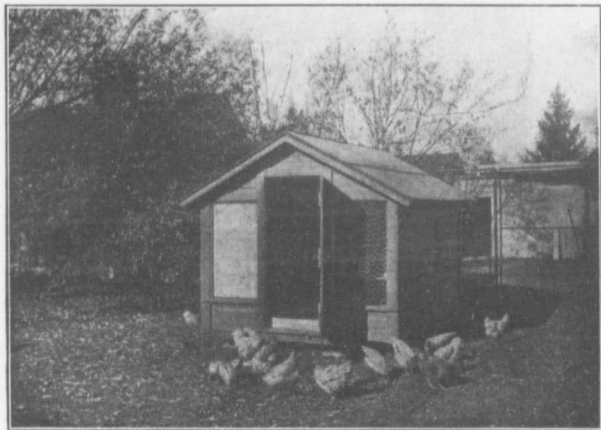
Made from 2 piano boxes, and suitable for a small flock in the backyard.

THREE CLASSES OF POULTRY KEEPERS.

Practically all those who keep poultry can be divided into three classes. The back-yard or suburban poultry-keeper, the farmer where farm poultry is kept, and the specialist or the man who operates a poultry farm. In other words, the three types of poultry plants are the Back Yard Poultry, the Farm Poultry, and the Poultry Farm. Any of these, with proper management, is more or less remunerative.

BACK-YARD POULTRY.

There seems no reason why the keeping of poultry should not be more popular in our towns and villages, and even in some sections of our cities. The objections most frequently advanced



A BACK-YARD POULTRY PLANT.

Photo by DR. F. T. SHUTT.

A movable house placed in the back yard of a village lot is a good way to turn the scraps into dollars.

are two in number: The dislike that some have to the presence of poultry, and the insanitary conditions in which a few poultrymen keep their poultry plants.

It is astonishing how even nervous people can keep a dog and pay little attention to its continual barking. How seldom they hear the tooting of the automobile or the racket which the early city deliveries make, or even the shrill whistle of the steam engine. Any or all of these may make noise enough to waken the whole town, and very little complaint is ever heard, but let a well-meaning rooster attempt a morning crow, no matter how musical it may be, and the police department is notified at once. Surely at this time, when so much is being said about the high cost of living, ordinary common sense might be used in cases of this kind.

On the other hand, there is no reason why poultry plants within the limits of the town or city should become a nuisance if ordinary precautions are taken. It might be a good plan if towns or cities would appoint a capable inspector who would see that all poultry plants were kept in a sanitary condition. There are many city families that could not only provide themselves with new-laid eggs and table poultry, but by keeping a small flock of laying hens could make use of feed that goes into the garbage can, and might in some instances almost keep the family table provided with groceries.

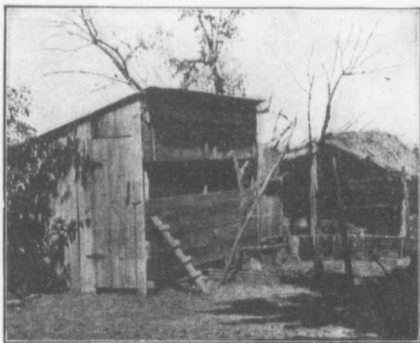
WINTER POULTRY AND SUMMER GARDEN.—It is the summer condition of the city poultry plant to which the most objections are raised, and to overcome this, many city and town families follow the practice of buying on the market, or elsewhere, well-matured pullets in October and November, feeding them heavily throughout the winter for eggs, and selling or eating them in the spring. This method is to be recommended as it provides eggs when they are high in price, turns the table scraps into new-laid eggs, and leaves the back yard for the summer garden, with a quantity of good fertilizer for growing vegetables. In most cases the birds can be sold in the spring for as much as will replace them with pullets in the fall.

THE VALUE OF TABLE SCRAPS.—A flock of twenty late-hatched pullets were purchased by a resident of Ottawa in December, and he sold them the first of the following May. Counting the value of eggs at prevailing prices during the four months, the pullets paid him a net profit of \$28.88 over the cost of feed. He bought them at meat prices, paying 12 cents a pound, or \$6 for the twenty, and received 20 cents a pound for them in the spring, or \$11.40. They were White Leghorn pullets and had grown considerably during the winter. Incidentally it was shown that the garbage from a family of three, when turned into new-laid eggs, was worth a dollar and a half per month, six dollars for the four months, January till April.

Village residents who were able to secure locations of an acre or so, have been able to supply the better part of their family's needs from a well-fed flock of poultry. When four or five acres can be had, and a cow kept, by a little management, sufficient feed can be grown for poultry, cow, and family; the fodder from the corn and grain going to the cow, while the milk, potatoes, and garden-truck go to the family and poultry as required. There is not a single class of stock or branch of farming, that can be worked into the farm or village life with more profit or pleasure.

FARM POULTRY.

Of all classes who keep and will keep poultry, the farmer is the most important. It is to the farmer that we must look for the bulk of the poultry produce grown in Canada. No farmer should be without a flock, and if he cannot attend to it himself he may safely entrust it to his boy or girl.



CHEAP FARM POULTRY HOUSE.

That would be much more satisfactory if part of the front had glass and cotton, or even cotton alone.

Poultry growing is one of the most valuable industries carried on in connection with every well-conducted farm or rural home. The money-making possibilities of poultry farms may be in doubt, but hens can be made to pay on almost any farm in Canada.

Not many years ago poultry-keeping was, and in many places is yet, a side issue, a mere incident to general farming, its responsibilities falling upon the overworked housewife or some

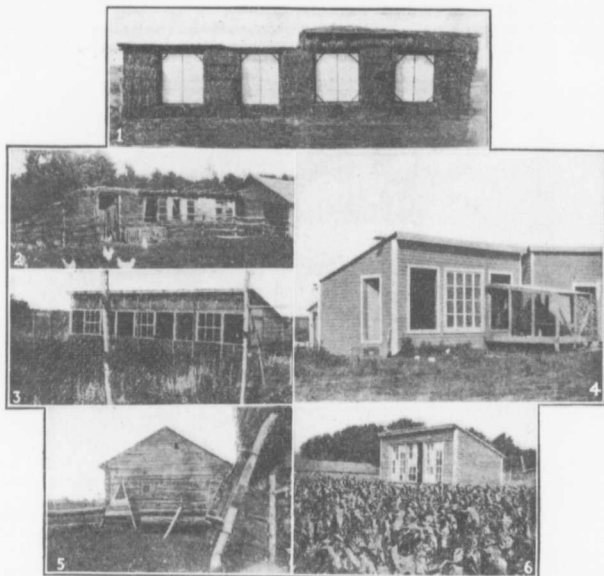


A Good Farmer's House, large enough for 100 Hens, divided into two Pens for 50 Hens and 50 Pullets.



Looking after the Hens of a Manitoba Farm Home.

of the very small children. The fowls gathered their subsistence, stole their nests, brought forth a few chickens, which lived or died according to conditions. They were compelled to roost in the trees, on the fences, or perchance in the barn, and about the only care given was to throw them a little feed occasionally. It is only recently that the business of poultry raising has developed into a distinct farm department. Now, in some parts of the country, farmers as well as villagers are awakening to the possibilities of the industry, and gradually better accommodation is being provided for poultry, and improved stock is beginning to supplant the mongrel and scrub.



TYPES OF HOUSES USED ON CANADIAN FARMS.

1. A Straw House in Alberta. 2 and 3. The Old and the New on a Saskatchewan Farm. 4. On a Farm in Northern Quebec. 5. An Ontario Farmhouse not quite up-to-date. 6. A House on an Ontario Farm where money is made from the Poultry Department—note the corn in the yard.

FARM POULTRY PAYS.—Farmers who do not think there is any money in poultry are no likely to improve the condition of the farm flock. However, if they will study the prices that are being received for high-class poultry produce, they will be convinced that there ought to be some profit in producing dressed poultry and eggs. During the past twenty years no class of farm produce has increased in price so much as poultry products. A few years ago the price of eggs was seldom known to go higher than a cent apiece on most farms. From the same farms to-day eggs are being sold at from one to five cents each. A like increase has been experienced in dressed poultry. First-quality broilers and roasters bring higher prices each year. The general appetite seems to be changing. Instead of the heavier meats dressed poultry and eggs are preferred. Neither the poultry nor the eggs are considered luxuries now, but necessities. Still, in spite of the better prices, during a part of each year new-laid eggs and prime dressed poultry are hard to get.

Under farm conditions, dressed poultry can be produced at as low a cost per pound as other meats, while the market quotations usually show that the prices of dressed poultry are any where from one and one-half to three times the price of other meats; and nowhere else can poultry products be produced as cheaply or as well as on the ordinary farm.

We have in mind many farm flocks that are making handsome returns from a very small initial outlay. One instance is where the woman of the house attends to the poultry. She keeps forty layers. Each year she raises sufficient pullets to replace the whole forty, and every summer sells or kills all her old hens. She depends upon pullets entirely for egg production. Each year she has to sell from her flock the eggs laid, the forty hens, and the surplus pullets and cockerels, and she considers it a poor year if her receipts are less than \$300.

THE SIZE OF THE FLOCK.—Just how many hens should be kept on the farm can be decided only by the farmer himself. There is, however, no doubt that the average farm flock can be



A Quebec Farm Poultry House.

considerably increased to advantage. There are few farms of from fifty to one hundred acres on which one hundred hens might not be profitably kept; and on larger farms, more in proportion to size and conditions.

REVENUE FROM ONE HUNDRED HENS.—From these one hundred hens there should be sufficient returns to pay the rent on the farm. A flock of one hundred hens should give the average farmer a gross return of about \$400, without materially increasing the cost of labour. The flock of one hundred hens should be composed of fifty pullets and fifty one-year-old hens.

ESTIMATE.—An estimate of how this might be obtained is as follows:—

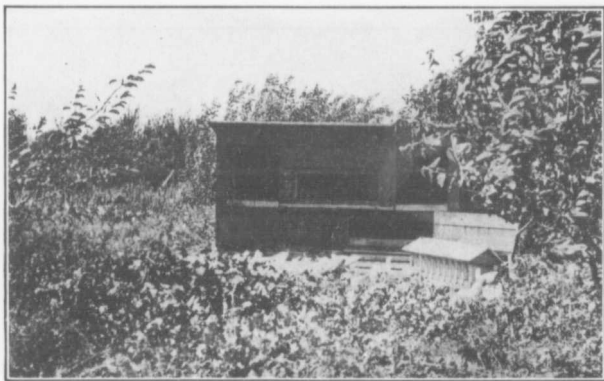
One hundred hens should lay an average of eight dozen eggs per year per hen, and still allow sufficient eggs from which to rear three hundred chickens.

Fifty pullets each year will be required to replace one-half of the flock disposed of as old hens; also some cockerels for breeding purposes. There would thus be for sale each year approximately the following at the estimated prices:—

800 dozen eggs at, say, 25 cents.....	\$ 200 00
50 old hens at 75 cents.....	37 50
10 cock birds at 75 cents.....	7 50
50 pullets fit for breeding purposes, at \$1.....	50 00
40 cockerels for breeding purposes, at \$1.....	40 00
150 chickens, broilers, roasters, etc., at 60 cents.....	90 00
	<hr/>
	\$425 00

THE HOUSING.—The housing of the farmer's poultry has not received the consideration that it should. Too often the house is anything but satisfactory. It usually lacks light, ventilation, and cleanliness. Occasionally the house given to the poultry is something that has outlived its usefulness in some other department of the farm, and was never intended for poultry. They cannot, therefore, be expected to thrive in it. A good poultry house is a profitable investment.

MOVABLE HOUSES.—The farmer who has a fairly level farm will doubtless do best by housing his hens in movable colony houses; while those who are not so situated may do better with permanent houses, or a combination of the two. (See Bulletin No. 87 on "Poultry House Construction.") To house a hundred hens would require four colony houses holding twenty-five birds each. This is a very convenient plan, in that the farmer can keep his hens and pullets separate, especially during the winter or the breeding season.



AN IDEAL RUN.

A Colony House in an orchard that has been sowed to rape. The self-feeding hopper is seen with slatted sides.

Fifty pullets can be put in two houses, and the fifty hens in the other two. They can be kept a little apart during the winter, or a movable fence can be run between the two. In the spring, when the land has dried up, the houses can be moved into the field or any place where hens can have free range.

If the old hens are killed off in the spring of the year, the houses vacated by them can be used by the growing chicks. Hovers for indoor brooders, or mother hens, can be placed in these houses until such time as the chicks are large enough to do without heat, when they can be removed and the chicks given the run of the house for the summer.

PERMANENT HOUSES.—Where farms are not level, or where, for other reasons, movable houses are not desired, a permanent house can be built. A number of plans are given in Bulletin No. 87. Any plan which suits individual conditions best should be used. It would be well to have the house divided so that the pullets could be kept separate from the hens.

Whether yards are used or not, hens should not be kept confined any longer than is absolutely necessary. Of course, it is an advantage to keep them in their own pens during the breeding season simply to keep them from mixing, but just as soon as the breeding season is over they should have all the free range that it is possible to give them.

HENS DO NOT DAMAGE CROPS.—Many farmers think that poultry on the farm is a nuisance, in that the birds get into all kinds of mischief, eating and destroying the crops, etc. This is

true only when they are not well fed, and if a flock of hens have a hopper to which to run, there is very little danger of the farm crops suffering.

Well-fed hens are more of a benefit than a detriment to such crops as roots, corn, vegetables, hay and clover. Indeed, it is very seldom that grain crops will suffer if the hens have plenty of feed in their own pens.

During one summer the writer had chickens, in age from one to six months, housed in colony houses which were placed along the headlands of a horticultural farm. The chickens had the run of the orchards, the vegetables and the berry patches. It was supposed that, though they would not hurt the orchard, they would do no good to the crop, and that they would be a positive nuisance in the berry patch; but after the season's operation the general opinion was that every crop in which they ran was benefited, and there was no more ideal place for growing chickens or yarding laying hens than in such a spot. Where hawks are troublesome the protection afforded by the growing crop is very beneficial to the poultry.



A PATCH OF SUNFLOWERS.

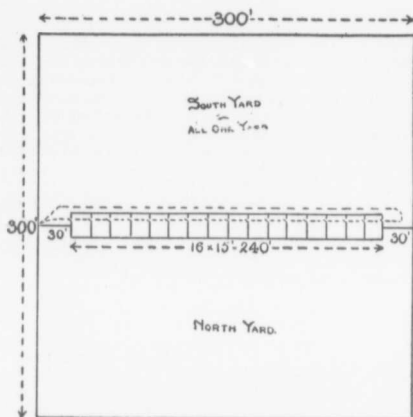
Photo by W. W. HUBBARD.

This makes an ideal run for chickens and sunflower seed is good for laying hens. The stake is seven feet high.

Even should the hens destroy some of the grain or a few of the vegetables, they will give a splendid return. They have to be fed anyway, and the more feed they are able to pick up the better results will be received. What grain is tramped by the hens will be picked by them after the harvest is over, and though in reality they may appear to spoil some of it, it may be a cheap way of feeding them after all.

THE YARD.—When a permanent house is used, place the house where two yards can be made—one yard to the south and one to the north. When it is necessary to confine the hens to their yards for many months, the double yards will be found a decided advantage. The hens can be allowed the run of one yard while the other yard is being cultivated, or while a crop is being grown. Or the pullets can have the run of one yard and the hens the run of the other during the breeding season.

CROPS SUITABLE FOR YARDS.—Grain of any sort will do to sow in the poultry yard. The poultry may be allowed into this standing grain crop during the summer. It provides shade and feed. A root crop followed by fall wheat or rye, does well. The yard is also the best possible place for the kitchen garden. Alternate the two crops—garden and chickens—it makes an ideal rotation. When the garden is being harvested it is an advantage to sow something green



DOUBLE YARDS.

A convenient arrangement for growing green feed when it is necessary to confine the flock. The south yard can be sown to rye in the fall, and will provide early green pasture in the spring. The hens can be allowed into this yard until a crop of grain is growing in the north yard. By this system a continuous crop of green feed can be supplied throughout the summer months.

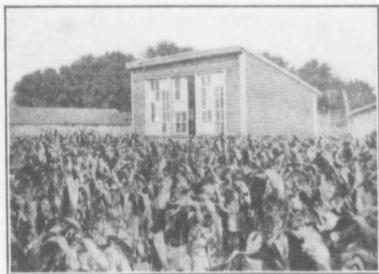


THE DOUBLE YARD.

A winter view of a breeding house showing the double yards. To the south are the individual yards for the breeding pens. To the north are two large grass yards into which the hens are allowed one pen at a time during the breeding season and all turned in together when the season is over.

between the rows or as the various vegetables are taken off. The crop thus sown will supply green feed for the poultry during the fall and following spring. Winter rye makes a good late-fall and early-spring pasture. If it is sown about the first of September it will provide considerable green feed before the winter comes. As the rye gets older it becomes too coarse for small or growing chicks, and not the best even for older birds. By this time, however, something greener or softer can be provided. Where it is impossible to cultivate or have the movable yards, a more permanent crop may be sown. If alfalfa can be grown there is no green feed upon which hens do better. Unless over-cropped or pastured too soon, alfalfa will supply an abundance of valuable feed. What is not eaten off while green can be cut and cured for hay, which can be fed to the hens during the winter.

Whether free range or yards are used, shade in the hot weather is a necessity. Shrubs and trees answer very well, but if they are not present, artificial shade should be provided. Many of the green crops will provide an abundance of shade as well as a protection from hawks. Sunflowers, corn and artichokes are often used to provide protection both from sun and hawks and are very valuable plants for this purpose as well as for feed.



CORN FOR THE POULTRY YARD.

The poultry yard will grow a good crop of corn. It sweetens the soil and makes an ideal place to run chicks.

SUNFLOWERS.—These can be planted in large clumps or in rows as is most convenient. The seed is sowed much the same as corn. It can be planted with a drill or with a hoe. The better condition the land is in and the more thorough the cultivation, both before and after, the better will the plants grow. In a few weeks the plant will provide some shade for chicks. The leaves of the sunflower can be run through a chopper, a little bran or meal mixed with them and fed to growing chicks with good results. By the time the seed ripens the moulting season is on and the grain is rich in protein. It therefore makes an excellent

addition to the feed at the time of the production of new feathers.

ARTICHOKES.—These are like alfalfa in that they are comparatively permanent in their nature. They resemble the sunflower, but with leaves and blossoms much smaller. The leaves are sometimes used as feed. The planting, however, is different. They should be planted in a place in which they may be left for several years. They are grown from tubers, much like knotty potatoes in appearance, and can be planted in the same manner as the latter.

In growing artichokes the same system of cultivation as used for corn might be followed. They provide excellent shade and scratching ground for all kinds of poultry; and in the fall the tubers make good feed, and can be stored for winter use the same as potatoes.

A good way to feed them is to turn the hogs into the patch a few weeks before the ground freezes. They will root and eat them just as long as there are tubers to be found. Let the poultry accompany the hogs and a lot of cheap feed will be provided for both. In the spring cultivate the land well and leave it alone; there will be sufficient tubers left to reseed the plot. Should the artichokes come up too thickly use the horse hoe to thin into rows and continue as with corn. This system provides a suitable shade and an abundance of cheap feed year after year.

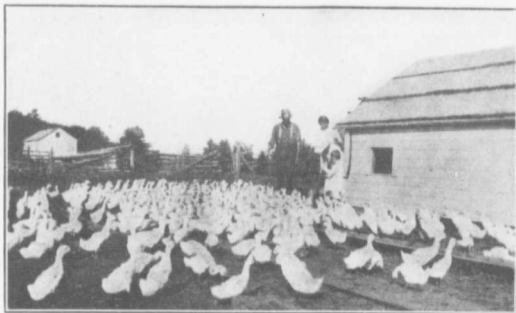
POULTRY FARMS.

POULTRY FARMS NEED NOT BE FAILURES.—Often in the past special poultry farms have not proven as satisfactory as their promoters expected. This was not the fault of the poultry but of the promoters. Too frequently those wishing to start a poultry farm have done so without knowing the business, and they were not willing to pay a sufficient price to get a capable manager. Large sums have been spent in building houses that were entirely unsatisfactory, in expensive and often needless equipment, and because the revenue did not at once make it a paying concern, the proposition was thrown up as unprofitable.



If the same intelligence were used in this as is displayed in undertaking any other business, there would be fewer cases of failure. There are a number of instances of special poultry farms in Canada that are now showing that, with good management, poultry farms can be made to pay.

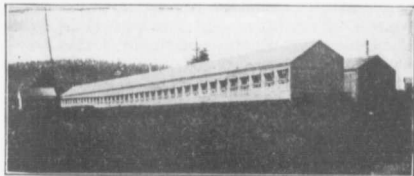
there would be fewer cases of failure. There are a number of instances of special poultry farms in Canada that are now showing that, with good management, poultry farms can be made to pay.



DUCK FARMING.

Scene on a duck plant near Ottawa.

SPECIAL EGG FARMS.—Farms producing new-laid eggs for a select market are increasing. Where the conditions and management are good these farms are paying. The location of such a farm is important. New-laid eggs are most perishable, and to get the best price must be on the consumer's table while still new-laid. Distance from market is therefore to be considered, but distance must not be considered as meaning miles only. It means time and cost of transportation, and these must be considered in relation to cost of production.



EGG FARMS.

Two types of house used on special poultry farms.

Taking all into consideration, one must decide if he can afford high-priced land near (in miles) to his market or cheaper land at some distance away. One thing is essential, and that is to be near a good shipping point. A mile over a rough country road does more damage and

costs more than several hundred miles in an express car. As a rule the farm far enough from the city to ensure cheap land but close to the station and on a railroad that offers good service to one or more markets is best. See also on this point Bulletin No. 88, "Preparing Poultry Produce for Market."

SPECIAL DUCK FARMS.—The increasing demand for green ducks for table purposes is giving incentive to special farms for the raising of these. Duck farms have apparently done well in the United States and, to a limited extent, have been tried in Canada; but there are few exclusive duck farms here as yet.



A FARM FLOCK OF GEESSE.

Geese are profitable on most farms and a cheap house is all they require.

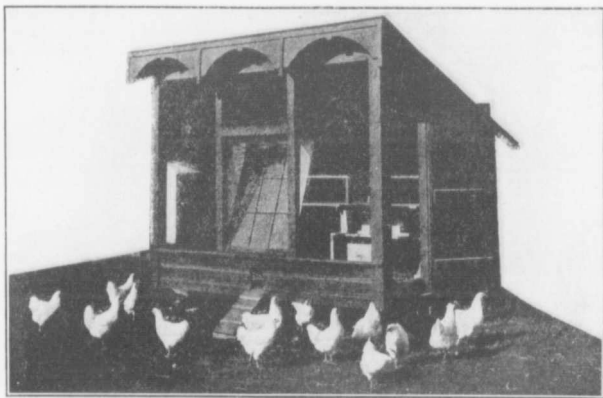
A COMBINATION GOOD.—Even on the special farm it is better to combine it with something else, such as fruit, if possible; though it is a question if such a farm should attempt to raise all the grain required. Grain crops should be grown, but more as a means of sweetening the land.

DON'T START TOO BIG.—For those who think of starting a poultry farm, it is just as well to point out that though one can work out on paper a nice profit from one hen, it does not always follow that if this is multiplied by 1,000 the figures will represent the profit from 1,000 hens. Should you have the experience and the money yourself to start a poultry farm, so much the better. If you have only one of these requisites, arrange to get the other, for one without the other is not enough. It is also a good plan to start slowly, let the business pay for its own development. To start at the bottom and work up is much better than to start at the top and work down and out.

VARIOUS PEOPLE WHO MIGHT BECOME INTERESTED.

THOSE WHO WORK INDOORS.

There are many reasons why persons in various occupations to-day might take up poultry-keeping as a side line. Those who live an indoor life poultry-keeping will get out into the open. Those who work hard at a trade or profession might find time for a flock of hens, the attention to which will prove a recreation and at the same time will serve as an experience that in after years may be the means of a pleasant livelihood. Many a man or woman is looking forward



Attractive Healthy Work.

Photo by DR. F. T. SHUTT.

to the time when they can buy a piece of land in the country and make a comfortable and independent living out of poultry, vegetables, and fruit. There are those who find it hard to make both ends meet, and in order to do so the wife may think it necessary to "take in washing." How much more pleasant it would be to have a few hens upon which to devote the extra time, and from which the table at least could be supplied.

YOUNG WOMEN.

Nowadays young women wish to be independent and earn their own living. Some of these same women who take up school teaching, stenography, etc., might be more independent, happier, and just as well off if they would turn their attention to poultry culture. Women are especially adapted to poultry raising on a small scale, where the work is not too heavy and they can do most of it themselves. As a rule, women are not afraid of a little extra trouble, and have more aptitude for the details of poultry raising than men, and if they have a good business training, so much the better.

THOSE SEEKING FOR HEALTH.

There is no more healthful occupation under the sun than that of poultry raising. This suggests another class who might study this question, those looking for health. True, the keeping of poultry is not an occupation for those who cannot work; but there are many who, if they keep on at what they are doing will reach an early grave. A change of occupation in time, might add many years to their lives. The outdoor life of the poultry-keeper ensures healthy conditions, and the study of these conditions to apply to himself leads to their application to the poultry; also the work, though exacting at times, is not heavy. There are many such men in Canada to-day who are making a comfortable living years after the doctor said they would be laid away.

THE COUNTRY MINISTER.

The country clergyman should have a flock of hens. Many a minister is not only supplementing his salary in this way, but, what is better, he is showing the people with whom he labours that he has an interest in their welfare. This can be done in other ways, but a flock of hens is one of the easiest mediums. Every country minister who will keep hens as they ought to be kept will find that it is a means of recreation as well as a source of additional revenue, but more especially as a medium through which valuable lessons may be taught, and through the hens the people and the preacher could be brought closer together.

MANAGEMENT.

MAKE SOME ONE RESPONSIBLE.

In order that the flock should receive the proper attention, it may be necessary that there be some person on the farm whose particular duty it is to look after the poultry. Usually the man of the farm considers poultry a little too small for him. He looks upon poultry keeping as a child's business or an old woman's job. And in all probability it will be better for this man to still consider it as such, for it is doubtful if a man who has trained himself along this way of thinking for a number of years will ever make a good poultryman. Under these conditions it would be better for the mother or a member of the family to take charge of the poultry plant. The woman of the house may already have plenty to do, but where things connected with the poultry plant are made convenient, the care of the flock becomes a pleasure, and the management of the poultry proves a recreation more than anything else. In such cases the mother may wish to see to the work herself. Should this not be possible, the next best thing is for one of the members of the family to take charge. There is frequently a boy or girl, probably still going to school, who has sufficient time to look after the flock of poultry. Give the management of the poultry into the hand of such a member.

SUPPLY SUFFICIENT EQUIPMENT.

It will be necessary to provide the required equipment in the way of houses and apparatus. Give the department a good start with a suitable flock of standard-bred poultry. Charge up the feed that the poultry receive from the farm, and have the manager in turn charge up to the household, the eggs and poultry consumed. Let the young manager have full charge, and advise only when advice is asked for. It would be best to have a detailed accounting each month, and a yearly balance sheet. The monthly account may give a record of the amount fed and the number of eggs and dressed poultry supplied the household, or sold. The yearly account would have to show the year's transactions, with the profit or loss.

MAKE THE MANAGER A PARTNER.

It is a good plan to give the manager some financial interest. Either make him or her a partner, or allow half of all the profit after the household is supplied. If some such partnership in the business is allowed, there is no doubt that the boy or girl will take an interest in the work and a better showing will be made at the end of the year. In fact, it will be an exception if a well-managed poultry plant will not give as good or better a return for the money invested than some other departments of the farm. Incidentally, this system is a good way to keep the boys and girls interested in the farm work, and if more farmers would adopt some such co-partnership plan there would not be the continual cry of "Why do boys leave the farm?"



Learning to Manage the Poultry Farm Early.

BEST VARIETY.

HOW TO CHOOSE A BREED.

The old question often arises. Which is the best breed? Various answers are given. It is often said that the one you like the best is the best for you. Others will say that it does not matter what breed is chosen—the whole thing is in the strain.

Both of these replies are more or less correct, but neither answers the question. The breed for which one has a preference is not for him always the best, and there is something in breed as well as strain. There are breeds entirely unsuited to farm conditions, unsuited to the local climate and to nearby markets. There is a right breed for the farmer, though it may not be the same in every case. He should, however, be able to choose intelligently by considering his locality and his markets.

HARDY BREEDS FOR COLD CLIMATES.

Where one has not given the breed question serious thought, it is well to consider what has given good results in one's own locality. The larger combed birds as a rule are not as hardy as those having small combs. Usually the small combs are best suited to cold climates and large combs to warm climates.

GIVE HOME BREEDERS THE PREFERENCE.

As a rule, the breed that is the most popular in ones own locality will be the best for him. It is never good to choose a breed just because no person in the locality has it. It would be better for everyone if there was only one breed kept, not only on each farm, but on every plant at the one shipping point.

It may be that there is no good breed in the vicinity, when it will be necessary for the person to get something different. In that case get a bird that does well in a like climate under similar conditions, and get it as near home as possible. Distance does not add to the value.

CONSIDER MARKET DEMANDS.

It is well to take into consideration the market and what its demands are. The average breeder cannot always cater to a special market, but there are few who get as much out of marketing as they might.

The volume of the poultry and egg demand, both in the summer and winter months, must be considered. If there is a good local summer demand, a different breed might be kept than where the demand is for winter eggs. The broiler and roaster trade, the breeding trade, and many other points might well be considered in the selection of the breed. For the average Canadian climate, a hardy general purpose breed that will lay a fair number of eggs throughout the year and a good proportion of these during the early winter months, and one that will give good table birds when killed, is a suitable breed.

In the milder climates of Canada and where egg production is of prime importance, the Leghorns make a good breed; but for the colder parts our American breeds seem to fill the bill best, the favourite breeds being Barred Plymouth Rocks, White Wyandottes, and Rhode Island Reds, given in the order of popularity. The Orpington is also a favourite in some sections.

PURE BREEDS AND HOW TO GET THEM.

MONGREL VERSUS PURE BREEDS.

The old saying that mongrel stock gives the best results has not proven true in experiments. The foundation stock should be pure, but there should be a continuous selection year after year, and only by this selection can the best results be obtained. No inferior stock should be used for breeding purposes. Birds of the best type and strongest constitution only should be bred. As the male has so much influence on the offspring, it is advisable for those who do no trap-nesting to purchase a cockerel each year from a good laying strain and use him rather than their own, and by doing this each year a flock of layers will be developed. In buying cockerels get them if possible from the same breeder from whom the original stock came. The changing of the strain of breeding stock every year tends only to make results uncertain.

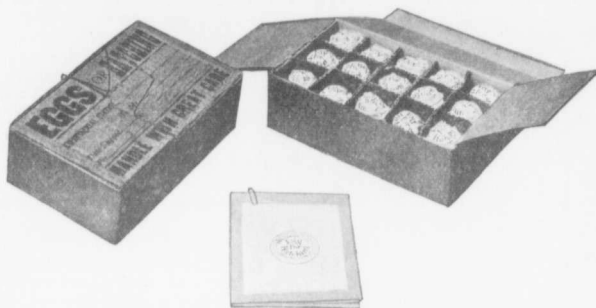
HOW TO PROCURE.

Pure-bred stock can be obtained by various methods. One can buy eggs, breeding stock, or day-old chicks. There is still another way which is very common, though not so sure, and that is to buy pure-bred males and grade up the flock already on the plant. This method is to be recommended to increase the egg yield, as already noted, but is not advised for the purpose of changing a mongrel flock into a pure breed.

EGGS FOR HATCHING.

In buying such eggs, they should be obtained from hardy stock that are known to be good winter layers and conforming to the general breed type. The practice which is often followed of sending to any place for eggs except one's own neighbourhood is wrong.

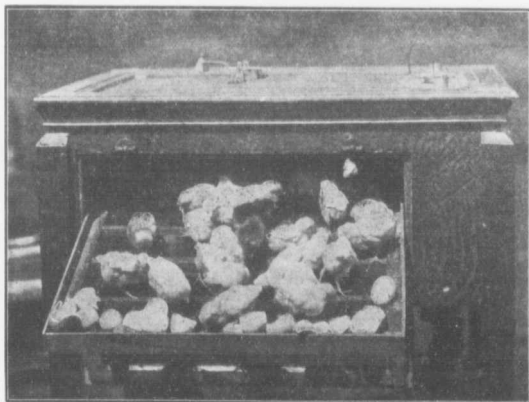
The nearer home the eggs can be purchased, other things being equal, the better. Breeders of pure-bred poultry sometimes find it difficult to deal with neighbours, in that the neighbour will bring a sitting of mongrel eggs and expect just as many pure-bred eggs in return. This is



Breeding Eggs.

not fair; the breeding eggs are worth more than market eggs, and those who are buying should be willing to pay a fair price.

Never, because they are cheap, buy eggs for breeding purposes late in the season. In a climate such as we have in Canada, chicks hatched before the middle of May give the best



Day-old Chicks Ready for Shipment.

results, though, with good care they may be hatched several weeks later, but if pullets are not well developed before winter comes they should never be used for breeding. Late-hatched chicks are seldom worth the trouble it costs to raise them.

BREEDING STOCK.

The system of buying breeding stock should be more popular than it is. One will have to pay more for a small pen than he would pay for a few sittings of eggs, but the number

of eggs received from the pen should more than make up the difference. The buying of stock enables one to see what the stock is, and there is more probability of being suited.

Breeding stock should be bought in the fall, when there is more to pick from and when prices are more reasonable. If it has to be left till spring, better stock and lower prices can be obtained if the purchase is made after the breeding season is over.

DAY-OLD CHICKS.

The day-old-chick method of procuring breeding stock is being practised to a limited extent in this country, and it appears to be growing in favour. Where hatching facilities are not at hand, the buying of day-old chicks has much to recommend it.

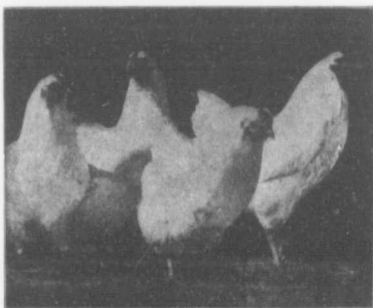
GRADING UP THE FLOCK.

The buying of a pure-bred male and mating him with the farm stock has been practised and is probably one of the most popular methods of keeping up a flock. The

system, however, when used for getting pure-bred stock is not to be recommended. At best, it is a long, slow process, and one never knows when, by such a system, his flock can be termed pure-bred. It is a good plan if one already has a pure-bred flock and for those who are not trap-nesting it is best to buy a male each year, but buy nothing but birds of the best constitution. Never be satisfied with birds lacking vigour. Always get a bird of the same breed with which one begins. A good many buy their birds intelligently, but there are a few who change their breed every year. They will take a Rock this year, then a Wyandotte, next a Red and possibly the Red will be followed by a Minorca, Buff Orpington, Langshan, or a Game. In fact, they never seem to be satisfied if they cannot get a new variety each year. This should be avoided. Better stick to the same variety, and if possible, buy from the same source each year. If any selecting is being done, one can easily lower the standard they have attained by getting a bird from a new source. In selecting a male bird, intelligent breeders will choose a



The Kind to Head the Flock.



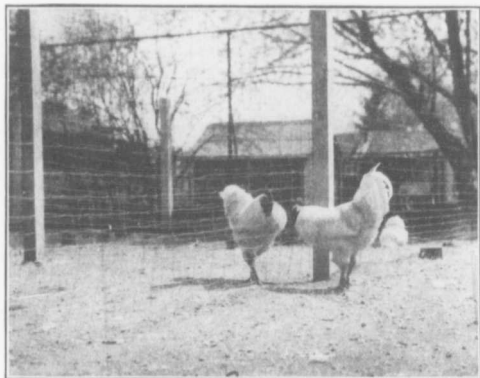
Good Foundation Stock.

bird that is strong in the points in which their hens are weak. For instance, if the breed calls for yellow legs and the flock is made up of a number of hens with dark or pale-coloured legs, it is well to get a male with pronounced yellow legs, and so on. Where the practice of buying a new male bird each year is followed, the male bird should be taken from the flock as soon as the breeding season is over, and the cockerels disposed of or separated from the flock before they become troublesome.

HOW TO SELECT THE BIRD WITH THE GOOD CONSTITUTION.

THE MALE.

To pick out the male with a strong constitution select the one that is bright as he runs with the flock, one that is alert and wide awake, and whose head is up at the slightest commotion.



Two Good Breeders, with plenty of constitution.

The head is a good index of constitution. In the vigorous bird there is a general appearance of brightness, combs and wattles vivid red with an absence of scalliness, the eye bright and well set out, the head broad between the eyes, the beak short, slightly curved and strong at the base. There should be an absence of the crow or snaky appearance.

The neck should be not too long for the breed and gracefully joined to the shoulders.

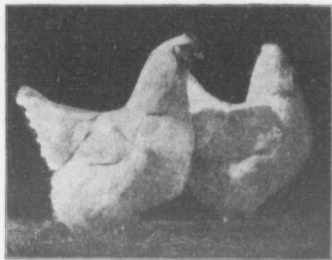
In the utility breeds for table use and egg production, the back should be broad with the width carried well back and not pinched at the base of the tail, a good oblong body with breast well developed as a result of the keel being carried well forward, and parallel to the back.

A crooked breast bone is generally an indication of weakness.

The body should be fairly deep and firm on legs strong, straight and set well apart. The latter free from coarseness of scales and with a bright, shiny, healthy appearance.

THE FEMALE.

The general characteristics that indicate vigorous constitution in the male will be present in the female. She will have that bright, alert appearance. As she is noticed in the pen



A PAIR OF WHITE WYANDOTTE HENS.

Good and thrifty and of a type likely to make high producers.

she will be busily scratching for feed, up first in the morning, and last on the roost at night. If birds of this kind are used for the breeding pens there will be no danger but that the vigour of the flock from year to year will be maintained.

SELECTION.

MARK THE PULLETS.

It will be necessary to distinguish the pullets from the hens, so that when killing the hens there will be no difficulty in telling the one from the other. A good way to do this is to leg-band the pullets each fall, using, year about, the right leg and the left leg. For instance, this fall when the pullets, previous to being put into their winter quarters, are being selected, put a band on the right leg of each pullet. It then will be known that each bird with the right leg banded is a pullet. Next fall put the band on the left leg, which will mean that all birds with the left leg banded are pullets, and those with the right leg banded are then hens. With this system it will not be necessary to use the right leg again until the following year, and during that summer the hens will be killed, thus leaving the right leg free to mark another lot of pullets. If preferred, the leg band can be used only every other year. In this case the distinguishing marks would be: the birds with a leg band and those without a leg band. This method is not quite as accurate as when the band is used each year alternately on the right and left legs. Leg bands are made of aluminum or other substance that can be fastened around the hen's leg.

TRAP-NESTING.

The amount of trap-nesting that it is possible to carry out on the poultry plant varies. As a rule the farm is not the place to use the individual trap-nest. The work of the trap-nest means that close attention must be given, and this can be done only when there is some person in connection with the plant who can give the poultry more attention than can either the mother or a boy or girl who goes to school. Should there be such a person available, then there is no better place for developing a trap-nested strain than right on the farm.



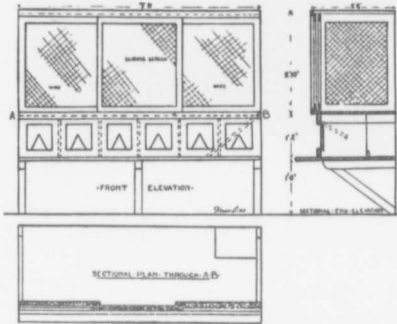
SELECTING THE EARLY PULLETS.

When the pullets are put into their laying quarters there should be a careful selection. See that none that lack in vitality or that are inferior are included. Care should also be taken that they are not unduly excited at this time.

HOW TO SELECT THE LAYERS.

Whether the trap-nest is used or not, there should be some method of selection. This can be done by taking the leg-band numbers of the early-laying pullets. These best and earliest

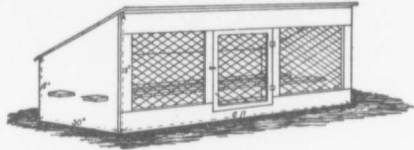
producers can be bred next year. Where several pens are used, the hens that prove to be good layers as pullets can be put into one pen, and from them all the hatching eggs taken. An assistance in picking out the early laying pullets is a home-made trap-nest that requires but two visits a day. By it, one can tell the hens that do the laying, though it is not possible to tell the eggs that are laid by the individual hens. This trap-nest can be made in sections of any size, placed high enough that it will not interfere with the hens scratching on the floor. It will be noticed in the illustration that there is a



THE FARMER'S TRAP-NEST.

This nest will tell which hens are doing the work, though not the eggs from the individual hen.

coop above the nests into which the hens ascend as they finish laying.



HATCHING AND REARING.

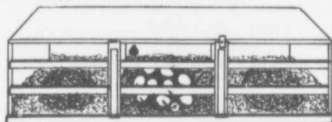
NATURAL *versus* ARTIFICIAL.

Just how the poultryman should hatch his chickens depends upon conditions. Some may be getting good results from natural incubation, they use system in setting the hens year after year, and never hatch more than 100 to 150 chicks each season. Where good results have hitherto been obtained by the natural method, it may be just as well to continue setting hens. On the other hand, where more chickens are desired, or where they are wanted earlier and more even in size, an incubator is certainly an advantage.

Artificial incubation is, no doubt, going to be more and more popular. Where poultry keeping is taken up on a large scale, artificial incubation is the only solution, and it is a question whether the average person cannot run a medium-sized incubator and hatch his chicks better than by using the hens. For instructions on running an incubator, see Exhibition Circular No. 2. For the person who confines his hatching operations to the hens, we also wish to call attention to the remarks on natural incubation in Exhibition Circular No. 1 which gives some very valuable hints on how best to look after the hens and chicks.

CUSTOM HATCHING.

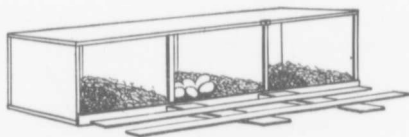
In some localities, custom hatcheries have been adopted, where, in mammoth incubators, farmers and others are able to have what chicks they require hatched for them at a slight cost. Farmers who do not want to provide incubators for themselves may thus co-operate as they do in the creamery and cheese factory, and in some cases these factories are used as the hatching centres.



CLOSED

— SITTING NEST —

OPEN

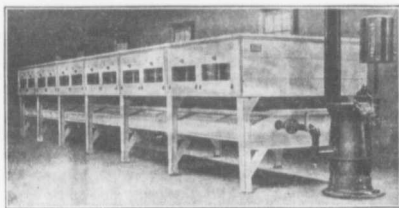


NESTS FOR SITTING HENS.

Suitable nests for use in colony houses. These nests can be placed in rows on top of one another on one side of the colony house.

THE REARING.

The care of the chicks during the summer is important, and the labour question must be taken into consideration. Details as to the care and feed of the chicks will be found in Exhibition Circular No. 12. It will be possible to keep the chicks in small colony houses or



HATCHING CHICKS ON A WHOLESALE BASIS.

A 3,500-egg incubator. The mammoth machine is being used for large poultry plants for the purpose of supplying day-old chicks and for custom hatching.

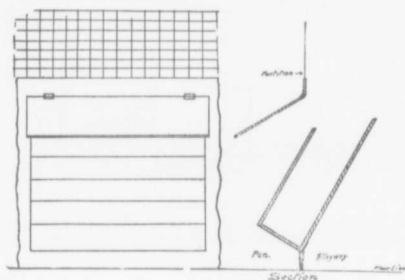
outdoor brooders for several weeks, say until the middle of June or the first of July. About this time larger colony houses might be provided. Should the movable laying houses be used on the farm, the hens at this time can be crowded a little more, as the houses are put out into the fields, or, if the marketing of the old hens is done in the spring of the year, ample accommodation will be provided in the houses so vacated. The chicks hatched can be accommodated quite easily in these houses, and plenty of room will be provided for them throughout the summer.

THE FEEDING.

The care of a farm poultry plant need not materially interfere with the other work on the farm. This is true if up-to-date methods are employed. The old system of feeding hot mash or wet mash to both old fowls and young chicks is very laborious, and such a method is not to be thought of on any poultry plant. It will be necessary to adopt to a certain extent at least the hopper system of feeding.

SUPPLY BINS AND HOPPERS.

Every poultry house should have, in addition to the hoppers, a supply bin. This supply bin may be a barrel, a box, or a bin built into the wall. Whatever form it takes is immaterial as long as it is there and grain is kept in it. Keep it covered and place it where it is handy to put the feed into, but do not let it take up too much of the scratching room required by the hens.



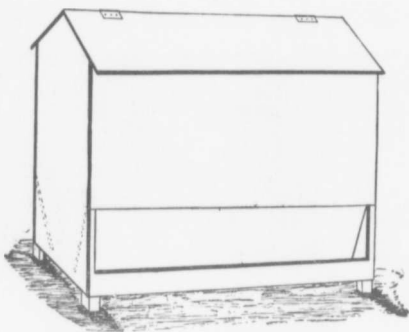
A SUPPLY BIN.

All plants should have a supply bin in each poultry house. That is, a box to hold grain so that there is always a supply of feed when the feeder goes to the poultry house. The one shown in the illustration is made to be filled from an alleyway, as shown in cross section. The bin can be made any size most convenient.

The purpose of this supply bin is to have available at all times the feed which is to be fed to the hens in the litter. Frequently when the feeder goes to feed the poultry a visit has first to be made to the barn, the granary or the stable, to get sufficient grain for that individual meal. The extra journey means more steps, and sometimes when one is in a hurry it may mean that the poultry is not fed. There is no need of either the extra steps or the loss of the meal to the poultry if a supply bin is placed in the poultry-house. Once a week or once a month, have one of the men fill it with grain. This can be done when most convenient.

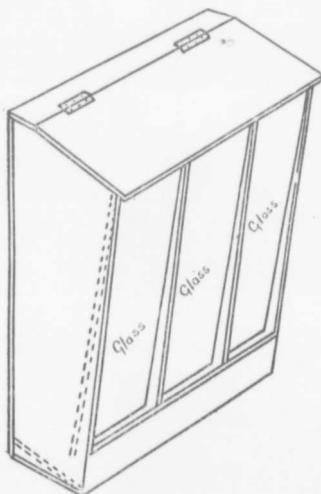
KEEP TRACK OF THE FEED.

The supply of grain is most essential when the feed-house is any distance away, and no poultry-house should be without one. In fact, no feed-house is half so handy no matter where it is. By putting into each pen a bag of the feed at a time, one is enabled to keep track of what is fed. A card for this purpose may be tacked to the wall over the feed box where the amount can be marked down. On this card the number of eggs laid can also be noted. A supply of feed of this kind should also be kept for the young chicks, where and when it is wanted, without the feeder having to hunt it up every time before the feeding can be done.



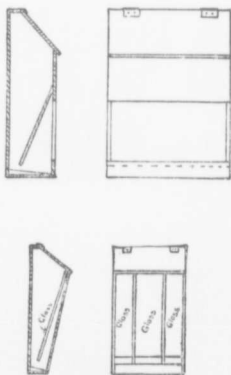
DRY MASH HOPPER, FRONT END VIEW.

The hopper which is used for dry mash during the winter and for whole grain during the summer months when the fowl are on free range. The measurements of the hopper are 3 feet high, 3 feet wide and 1 foot deep. The hopper is made of one-inch boards throughout.

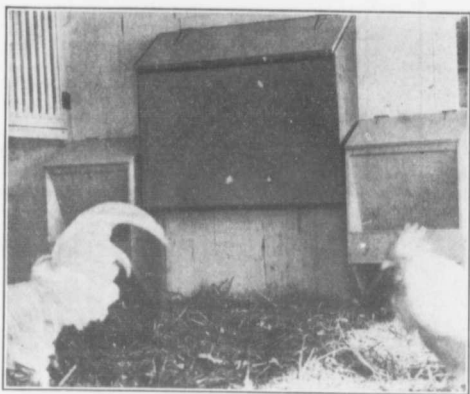


GRIT AND SHELL HOPPER.

The hopper shown is a home-made contrivance for holding grit, oyster shell, beef scrap, etc. The front is made of a pane of glass slid into grooves at each side, and the two partitions that divide one compartment from the other are cut down with a saw in order to allow the glass to go through. The lower edge of the glass is 2 inches from the front and 2 inches from the bottom of the hopper.



BRAN AND GRIT HOPPERS,
Front and end view.



FEED BIN AND HOPPERS.

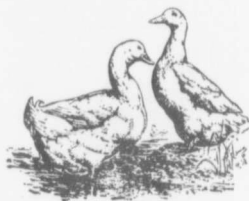
Arranged along a centre wall are shown the supply bin placed 18" above the floor, on either side of the bin is a hopper, one for dry mash and one for grit, shell and charcoal. The coop for an extra male bird is partly shown in the upper left corner.



Housing and Feeding the growing Chickens.

VARIOUS DEPARTMENTS OF POULTRY KEEPING.

There are so many breeds and varieties of chickens, turkeys, and waterfowl, that most breeders can be suited. The numerous departments into which poultry culture can be divided make it possible to provide varied employment for all who care to spend all or part of their time in poultry work. These departments include turkeys, water-fowl, geese and ducks, guineas, pigeons, and what are usually called hens, which again may be divided into a number of divisions. There is the fancy poultry and the market poultry; fancy poultry would include breeding and selling stock and eggs, judging, etc.; the market end may comprise eggs, broilers, roasters, custom hatching, the day-old-chick trade, the handling of live poultry, the crate feeding, etc. Then there is the combination of any number of these. Conditions vary so much that the departments that might suit one person might not suit another. Markets and climates differ to such an extent that not all are equally remunerative. One must take his own inclinations and individual conditions into consideration before deciding which branch will prove most satisfactory.



TURKEYS.

There is probably no class of meat that sells as high as turkey. Of recent years plump young turkeys early in the season have brought exceptionally high prices, and the Christmas turkey must be on the table at all costs. The growing of turkeys, however, requires conditions that all poultry men cannot give. They are still of a wild nature, and can be best grown on a free range. New ground and plenty of attention while young are essential. There are several breeds of turkeys, the American Bronze being the most popular.

GEESE.

Geese are much hardier and more easily raised than turkeys, but their flesh never sells for as high a price. Geese are a pasturing bird, and obtain much of their feed from the



Ducks and Geese thrive on low rough land where nothing else will grow.

grass and creeks. They are rather noisy for the village, though even there many flocks are profitably grown. Those in the business claim a goose can be grown more cheaply than any other bird. On a mixed farm, geese are very profitable, and, in addition to the flesh the feathers are highly prized. Young goose flesh is becoming more popular each season, and probably the next few years will find them selling for a higher price.

DUCKS.

Ducks are one of the quickest-maturing birds we have. They are hardy, and for green duck there is an ever-increasing demand at good prices. "Green" ducks are young ducks about 10 weeks old, just when they have completed their first coat of feathers. At this time the flesh is juicy and tender, and brings a comparatively high price. It is up to this period also that the flesh is the most economically produced, and all ducks intended for that use should be sold at this time.

There are now duck plants in Canada where thousands are reared and sold every season, and, by cultivating the soil, ducks may be grown on the same ground for several years in succession. For market ducks, water to swim in is a disadvantage. There are several varieties, but the best market duck in Canada seems to be the Pekin. To grow market ducks extensively it is best to be near a large city that will ensure a good demand for large quantities. Ducks, however, can be grown on the average farm in smaller numbers very profitably. The incubator has been used extensively in the hatching of duck eggs, and even for goose and turkey eggs it has proven successful.

The equipment necessary to grow turkeys or waterfowl may be extremely simple, the breeding fowl requiring only sufficient protection to shelter them during the winter, and movable coops for young during the rearing season.

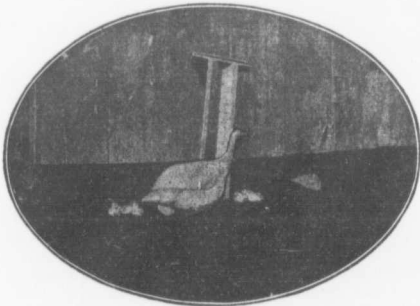


DUCKS ON THE POND.

Low places like this make admirable feeding grounds for ducks and usually supply all the feed breeding ducks require throughout the summer.

GUINEA FOWL.

Where game is getting scarce, the guinea fowl is becoming popular. There is a flavour about its meat that takes the place of game. In some of our cities this new flesh is bringing a good price. Guineas can be raised almost anywhere that other poultry thrives. They frequently

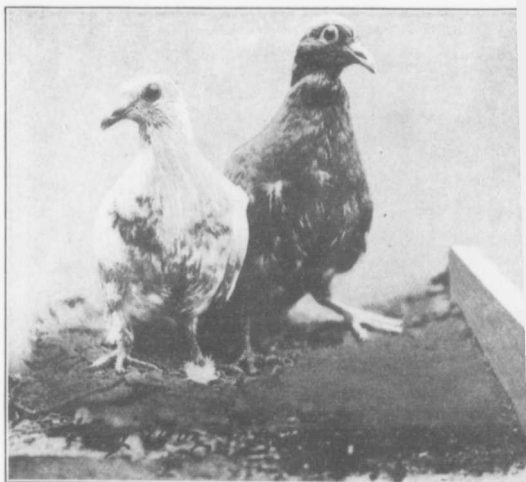


A Guinea Hen and Chicks.

are allowed to run with the hens, though sometimes they are inclined to be a little domineering. They have a peculiar cry that scares hawks and crows, and are therefore known sometimes as the watch dogs of the barn yard.

PIGEONS.

Pigeons are sometimes an appropriate addition to poultry operations. They are the only birds kept in city lots. The young pigeons are relished as a delicacy, considered very profitable.



PIGEONS FOR PROFIT.

A pair of squabs 22 days old that will soon be ready for broiling.

HENS.

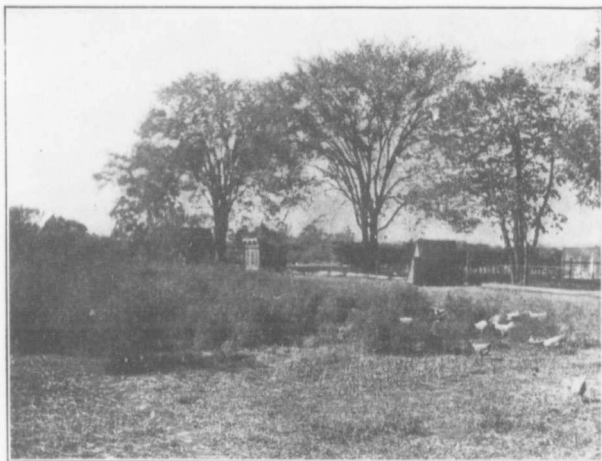
There is another word needed in poultry-keeping to designate what we so call "just hens" or "ordinary chickens". The term "fowl," according to the dictionary, means any feathered bird, and the term "poultry" to domestic or barnyard birds, with "ordinary chickens," turkeys, geese, ducks, etc. Since there is this apparent lack, we refer to this class of poultry as "hens."

Hens themselves offer various branches of study and business. There is first a division of fancy or exhibition and utility or market. By "fancy" is usually meant that which is bred for their fancy exhibition qualities. "Utility" usually refers to the utility or market side of poultry-keeping.

EXHIBITION POULTRY.—The fancy or exhibition end opens up plenty of opportunity for the thought and business ability of the best. Every person may not be suited to or exhibition birds, but for those who have the taste and ability, there is a big field of returns. This side of the question, however, will not be discussed here.

EXHIBITION VERSUS UTILITY.—Unfortunately there is too much difference between birds bred for exhibition and those bred for utility or commercial purposes. In some cases good utility or market poultry well fitted for exhibition purposes, and some breeders have what they call utility birds for sale, but, as a rule, these are birds that are not enough to sell for exhibiting and too often cannot qualify for utility. The public is not bred to see type and some colour in the utility birds and that more than feather be considered in exhibition poultry.

UTILITY POULTRY.—The vast majority of poultry-keepers will take up the utility or market end. A number of these will, as their breeding operations become more perfect, exhibit some of the best, and there is no reason why utility breeders should not exhibit their birds when the opportunity presents itself. The utility man, of course, will have pure-bred stock, and he may take prizes and also sell for breeding purposes and still not be a fancier as we generally understand the term. All market poultry should be carefully bred, and when fancy points do not detract from the value of the bird they should be encouraged; but just as soon as the breeder allows colour to dominate, when he is willing to sacrifice the constitution of the bird for the feathers, he is not a utility breeder, nor should he be considered as in the fancy class either. The breeder



COMBINE POULTRY KEEPING WITH SOMETHING ELSE.

[Photo by DR. F. T. SHUTT.]

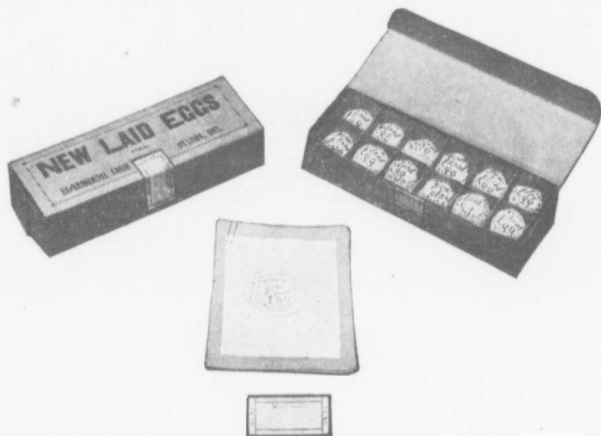
There is no better place to rear chickens than in an asparagus bed.

who breeds even for exhibition regardless of utility features is gradually finding that feathers alone are not enough. Just where utility breeding stops and fancy breeding begins may be hard to say, but the combination of the two should be more common. At present, however, it is the desire to point out these two great branches and to show that a man can take up either and have plenty of scope for his energies, or he may combine the two.

The utility branch divides itself into several parts, and the poultry-keeper may engage in as many or as few of them as his time, inclination, or conditions permit. Any one of these divisions may develop into an independent business, but it is better to start it as an adjunct to one's regular business.

Eggs.—The division of first importance is, of course, the "egg." Eggs are at the foundation of all branches. We must be able to get eggs no matter what else is required. New-laid eggs are always in demand, and under average conditions this feature should pay well. Some are so situated that they can emphasize the production of eggs. For this it is an advantage, though

not essential, to be close to a large city, so the shipments can be made promptly. There are some egg farms where no chicks are hatched at all. Pullets are bought when required to replenish the flock and all attention is confined to the production of eggs. This kind of farm gives good results when the proper conditions are present. The practice of buying pullets in the fall and keeping them through the winter only is sometimes followed. In this case the pullets are forced for egg production when eggs are high. As soon as the price drops in the spring the hens are sold to the butcher and the place closed up till the next fall. For this branch of work, the hens that will give the most eggs are chosen. No matter what the breed, the egg yield is the prime consideration. It might be added that this system, though it may pay well with suitable conditions, requires considerable experience to yield success.



Guaranteed New Laid.

TABLE POULTRY.—Every year more table poultry is being consumed, and the price for prime quality remains good. Good table poultry will always bring a good price. For this it may be necessary to adopt a different breed than that used for egg production alone. There are, however, several that might be called general-purpose breeds that lay a goodly number of eggs and make good table poultry as well. Such breeds answer well for those who want to take up a combination of the two—eggs and meat—which usually gives best all-round results and is accompanied by fewer risks.

BROILERS.—Broilers are young chickens weighing up to about two pounds each. The market for these is expanding. More people each year are willing to pay high prices for early chicks, and those who have them for sale early in the season realize good prices. This branch, however, requires more experience than either of the two mentioned above. The chicks are hatched early, before the breeding season, when eggs are dear and fertility poor; special houses are required, so that the initial expense is a little more in raising broilers than other poultry. The ordinary poultryman should not expend too much in a broiler plant until he decides there is a good prospect of success; but, for the man who can produce the stuff, the prices are comparatively good.

ROASTERS.—A roaster is a young chicken weighing from 2½ pounds upwards. Probably over 75 per cent of all chickens sold are disposed of as roasters. There is more demand for roasters than for any other class, and the prices are comparatively high. The time that roasters are usually sold by the producer is from October to Christmas, though the prices are often higher in the latter part of the winter. The roaster trade is a comparatively easy one to handle, but it could be handled much better than it is.



A Broiler Ready for the Oven.

BOILERS.—There is no reason whatever why old hens should be so little thought of as table food. Hens, if properly prepared and marketed, make fine eating. There is a right and a wrong time to sell hens, however, and though their sale is not always carried on in conjunction with the other branches of the industry, there is a good margin in the marketing of hens, if done properly.

CUSTOM-HATCHING AND DAY-OLD CHICKS.—As a commercial proposition the incubator has come to stay. There are many, however, who would not use one themselves if they could get their chicks hatched by some one else, therefore custom hatching is becoming quite a paying industry in some places. Many persons prefer to buy chicks just hatched rather than go to the trouble of getting eggs and hatching them themselves. This fact has created an industry that stands in the same relation to the poultry industry as the cheese and butter factory does to the dairy industry. At present there are those who by the use of the mammoth incubator make a business of hatching eggs for customers for which a charge of so much per tray is made. With a large demand and sufficient equipment this makes a profitable business in itself.

Custom hatching and the day-old-chick trade often go hand in hand. The breeder who has breeding stock from which he hatches chicks to sell as day-olds often uses extra space in the incubator for hatching for others and vice versa.



ESSENTIALS TO SUCCESS.

Not every person will succeed in aviculture any more than they will succeed in any other business. There are certain qualifications that should be present to assure success. Those that refer to plant, equipment, location, etc., have been dealt with already, but those personal qualifications that are required in the manager might be considered here.

WORK CONGENIAL.

It is well to have a liking for the work. This may not always be a natural inclination, for in many cases it is acquired. But if a person dislikes the work he will not be likely to make a success of it.

CAREFUL.

The manager must be careful. There is a lot of small detail about poultry keeping that, if neglected, means failure. Many persons see bright prospects ahead; they enter the business and do well for a time, but they are too careless to see to these numerous small things, and before long they are out of the business and are fond of declaring that "poultry doesn't pay."

The fault is not with the poultry any more than it is the fault of the grocery when the grocer fails. The fault is with the man who was careless enough to allow the filth and vermin to accumulate till there was no more business.

NEAT.

The poultry business demands neatness. It is rather a messy job, and if one allows the refuse to gather there will be trouble; so to be clear of this, one should be naturally tidy.

ECONOMICAL.

Economy is another essential that makes for success. Aviculture is a business of small things, and if the strictest economy is not practised, the small losses will one by one spell ruin. Economy must be the rule in buying, in feeding, in selling: in fact, in everything one does.

HONEST.

Absolute honesty is essential in a good poultryman. He may have all the other qualifications that go to make a successful manager, but if he is dishonest he is not wanted. Dishonest practices have done much to hurt the poultry business, and those who wish the best for the industry will be determined that dishonest dealings will not be countenanced and that the produce or stock will be just as represented.

BUSINESS ABILITY.

Business ability is highly necessary for reasons already given. The poultryman should have a certain amount of business ability; he should at least study the question from a business man's standpoint. This qualification, of course, includes all that has preceded. It must not be thought, however, that for a person to go into poultry at all he must be a finished business man, for that only comes with practice; but the youngest person should aim at this, and it is doubtful if there are many things that will give a young person the training in business principles that looking after a flock of poultry will. Try it on one of the boys or girls and see how it works out.

The essentials to make a good poultryman are just the same as go to make a good business man in any other line. He is made just the same way. He starts at the bottom and works up. He knows how to manage a small concern before he tries a larger.

THE START.

GIVE IT A FAIR TRIAL.

There must be a beginning. We talk about things that are essential, and the more of these qualifications we have the better. Many a successful business man, however, has started without being conscious of possessing one of them; so in the poultry business, one may have to start before he knows what qualifications he has or lacks; so it will do no harm to try, and give it a fair trial too.



ALWAYS ACCEPTABLE.

Life on many farms would not be looked upon as a drudgery if baskets of eggs could be gathered by the housewife for use in the house and sale for "pin-money."

HOW TO GET STARTED.

If one starts in the spring of the year, get eggs and set them either under hens or in an incubator. If it is too late for hatching, get a flock of day-old or partially-grown chicks or a pen of breeding stock. Should it be in the fall of the year, get hold of some well-matured pullets. Whether you buy stock or eggs, get a pure breed.

DON'T GIVE UP EVERYTHING ELSE.

Should you be following a trade, and it is necessary to earn a livelihood while taking this poultry training, don't be discouraged. There are few places where you will not be able to have sufficient spare

time to get the practice necessary with your chickens, and it is never wise to throw up your old job till you are sure you have a competence in the new. It will take some time before the poultry will give much revenue; so stick to what is paying you. It may be wise to use the poultry only as a side line, and that is where most people will keep it.

ON THE FARM.

Should you be on a farm or where there is already a poultry plant, you have an ideal chance; study bulletins and poultry papers and get all the information possible. If you can get the management of the flock, do so. If they belong to your father, make a bargain with him and take charge at once, but see that conditions are such that one might expect to be successful. Make an inventory of everything and keep accounts.



WORK ON A PLANT.

There are some who are not situated as any of the foregoing. For these, if it should be possible to get a position on a farm or poultry plant, do so. The salary while learning is not so important as the experience. The buying of the stock, equipment, and the building of the house are discussed in other bulletins that may be had on application; but a start must be made, and whether you are ready to

start now or not, get all the information you can. Study all you can; read poultry papers, and put all of the information that seems applicable into practice just as soon as possible. If a short poultry course is available to you, by all means take it; but a course of this kind will be more valuable if you have already had some practical experience.



"The man that knows how" in poultry keeping is the man that is wanted.

APPROXIMATE COST.

Though it is impossible to state what necessary equipment and stock will cost, since prices vary so much, the figures below will give some idea of what might be considered a fair estimate for starting a 100-hen plant.

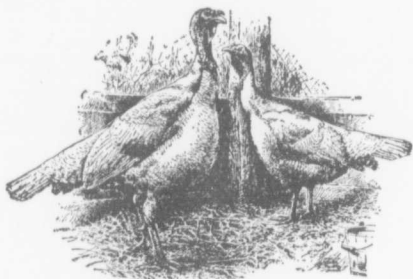
COST OF STARTING 100-HEN PLANT.

Material to erect house for 100 hens.....	\$100 to \$150 00
One incubator, 200 capacity	35 00
Two hovers (indoor type), or one brooder stove.....	20 00
One colony house for chicks.....	20 00
100 pullets, if purchased early in fall.....	100 00
600 eggs, if start in spring with incubator.....	30 00

This brings one up to the time pullets should be expected to lay, when the eggs should pay for the feed for the layers. No account is made for labour to build houses, as it is supposed they will be built in spare time. Should hired help have to be used for this, estimate the labour at about the same as cost of material.

One could leave out the cost of the incubator and eggs by purchasing day-old chicks; and if the pullets were purchased, the incubators, hovers, colony houses, eggs, and chick feed could be left until another year. It is taken for granted that a place for the incubator and a feed-room are already provided.

The returns from the sale of the cockerels and culled pullets throughout the season should more than provide feed to raise the remaining pullets to maturity and the season of production.



A Pair of White Holland Turkeys.

