

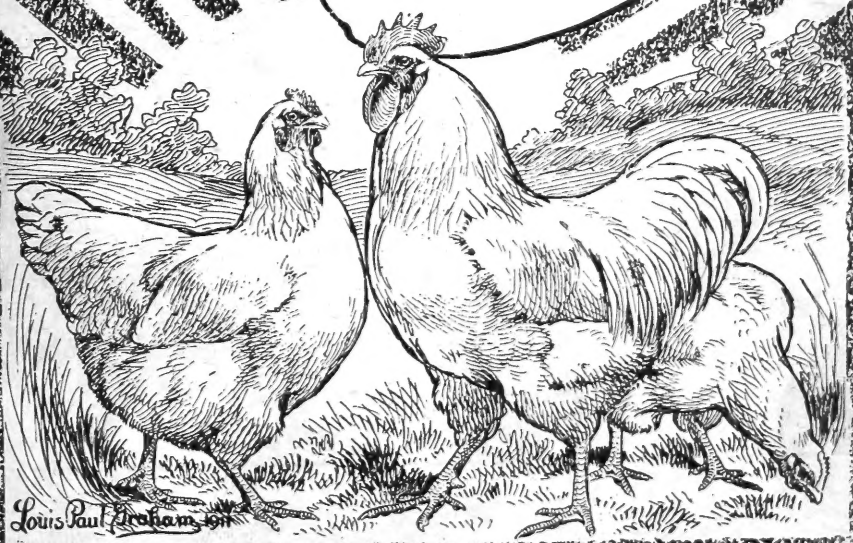
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# POULTRY SECRETS REVEALED

**FACTS  
NOT  
FANCIES**

*The  
Most  
Complete Book  
on  
Poultry Raising  
ever written*

**Price-One Dollar**



Louis Paul Graham 1911

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# POULTRY SECRETS REVEALED

BY

CHARLES F. TOWNSEND

WEEDSPORT, NEW YORK

President of the National Poultry Association, recognized as an authority on all poultry subjects

1911

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## FOREWORD.

*In this little book I shall talk to you, so far as possible, the same as I would do if you could drop into my office from time to time. I assume that you are a novice, a beginner, in poultry culture. Therefore if this book falls into the hands of an old breeder he will probably cry out that he finds very little that is new between its covers. Well, what of it? I am not writing for Experience. I am writing for Inexperience. The old breeder can shift for himself. The beginner needs help. And so, if I save one lone reader from loss—from discouragement—I shall feel that I have not labored in vain, and that captious critics, if they appear, may all go hang!*

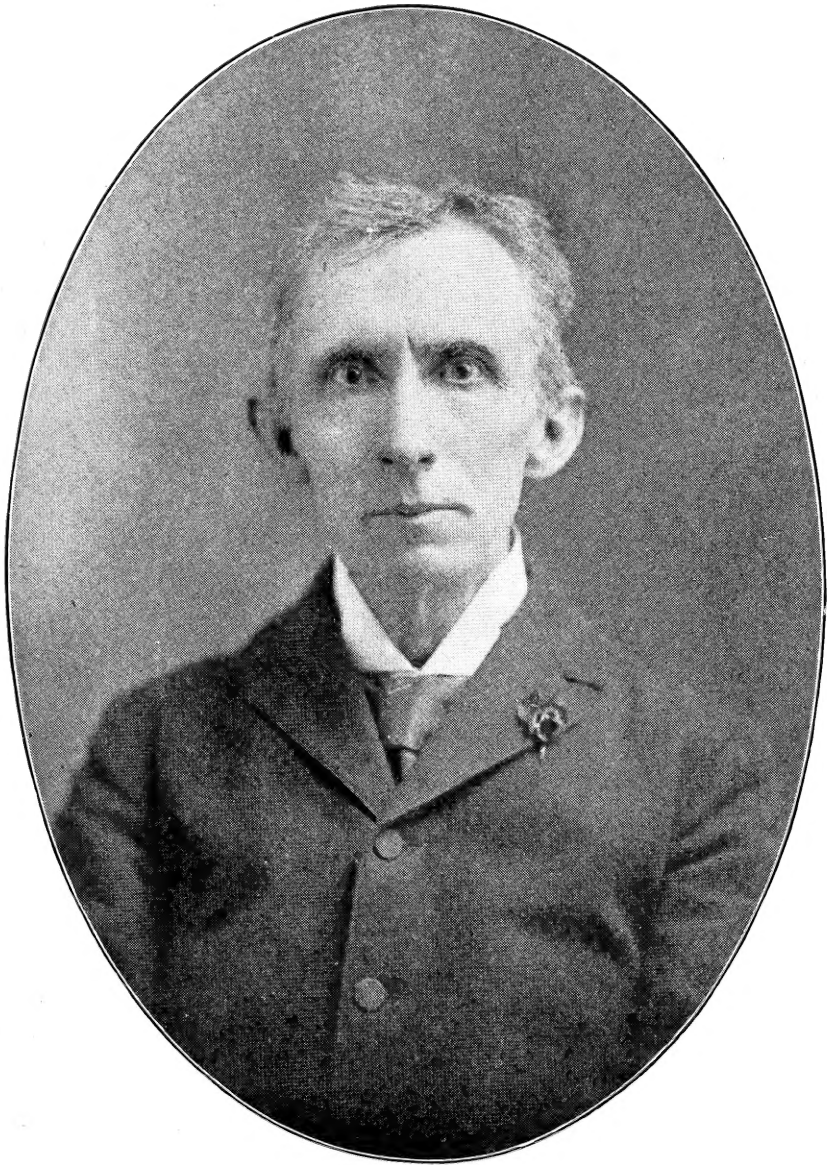
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**THE AUTHOR.**

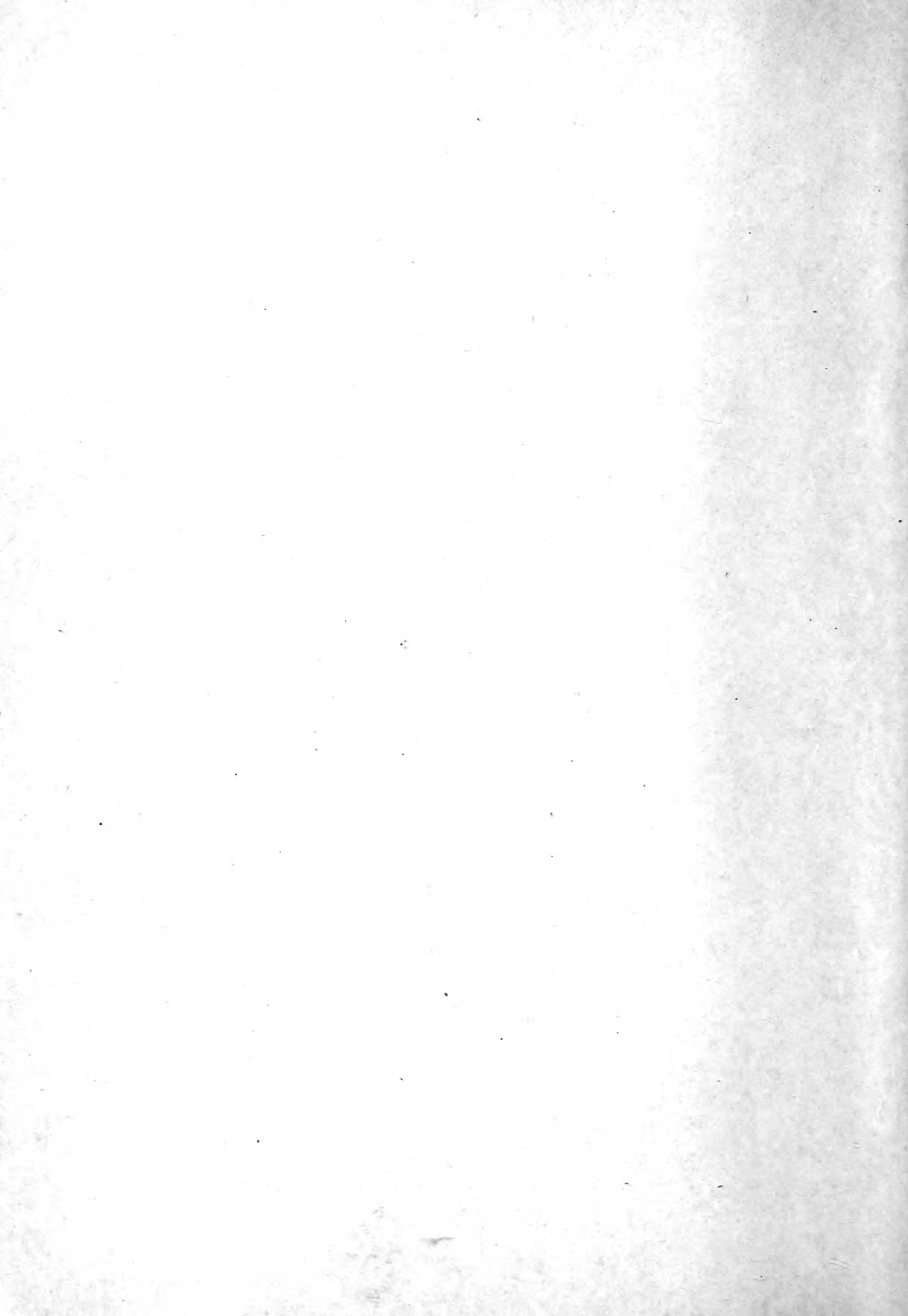
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*Yours Truly*  
*C. F. Townsend.*



# CHAPTER I

## AMERICAN POULTRY

Poultry raising is the biggest business on earth. Government statistics—incomplete as they are—prove that the poultry industry of the world surpasses every manufacturing business. Cotton is no longer king. Beef, pork and mutton are left far in the rear. Wheat was passed long ago; and even “King Corn” will be found in second place when the poultry industry is properly tabulated.

And this great industry is a profitable business, giving better returns for the money invested than any other line of legitimate trade. It has been proven over and again that the cost of producing poultry meat is no greater, pound for pound, than that of producing beef, pork or mutton. At the same time the market reports, month by month, show that the selling prices are overwhelmingly in favor of the poultryman. The live weight prices for the best grades of poultry run on the average from two to three times as much as the highest prices paid for the best grades of cattle, hogs or sheep; while in the lower grades the difference is still greater.

In addition to the handsome profits made by growing fowls for market we find that the egg trade yields still greater results. If the average yearly cost of producing a dozen eggs is placed at 12½ cents—which would probably be a reasonable estimate—and if under improved conditions and improved breeding the average pullet lays 10 dozen eggs in a year which can be marketed at prices that will level up to 25 cents per dozen, the profit in commercial eggs is self evident. And under circumstances of which any live man may take

advantage this profit may be largely increased. The demand for reliable fresh eggs is always ahead of the supply. There are many consumers who will gladly pay 50 cents per dozen on yearly contract for dependable eggs. Such customers must be sought; but once found they will stick, so long as the breeder does his part.

Eggs for hatching pay still better, since one may obtain anything from fifty cents to fifty dollars per setting for such eggs. The tide of trade in this line begins flowing in February, reaches its flood in April and slowly ebbs until the end of June. The eggs for hatching trade can be made very profitable if one has good birds and a good business head.

To be a successful poultryman—no matter what line one may follow—requires good judgment, and a capacity for hard work. You cannot learn to raise poultry by sitting at ease in your city home, even though you should “bite” at every “system” swindle or fraudulent mail order poultry “school.” These “system” hawks and “school” rats prey upon the ignorant, the lazy and the credulous, who have been misled by big promises in flaming advertisements.

The successful breeder has learned that the only school that can be depended on is the school of experience. The man who has graduated from this school is equipped for success in the poultry business and will not be misled by advertisements of systems or instructions by mail on how to make money on poultry for a two cent stamp.

As to location: your best location is where you are. The poultry business has this advantage—that there is no place in all this broad land where poultry and eggs will not yield handsomely. North, south, east and west, from Maine to California, and from the Yukon to the Gulf the poultryman is king. The cattle breeder is confined to the west and parts of the south; the pork raiser is largely limited to the



central states; the sheep herder is equally restricted; but the poultryman has the whole nation for a field. Of course one must breed in certain localities for certain markets. Thus the Boston market demands brown eggs—the browner the better. The New York market, with equal lack of reason, demands white shelled eggs. In catering to the first the so-called Mediterranean breeds would not be as profitable as the so-called American or English varieties; while for the latter “Leghorn” eggs are most in demand. With these exceptions an egg is an egg, size and quality being the only points that count. Therefore start at home.

The beginner is often puzzled to know whether it is best to start with birds, eggs or baby chicks. A very careful analysis of each shows that each has certain advantages and also certain disadvantages. If the beginner can invest say \$75 for a trio and from \$100 to \$150 for a pen, that will be the best way for him to start. He can raise his own chicks and, by careful line breeding, can in due time establish his own strain. But under no circumstances should a start be made with cheap birds. Like begets like and cheap birds beget cheap birds. In buying a trio or pen, always go to a breeder of established reputation. The reason is obvious: the man who has been in business for many years, whose stock has won the blue at the leading shows, must necessarily know his business. More than that he must necessarily be a man of honor. The lesser breeder may, and often does, have excellent stock. And if his birds are of the line royal, the experienced buyer may find it advantageous to deal with him. But in such cases the beginner takes a chance which he would not do in buying from an old time breeder.

If one cannot afford to buy first class adult birds, a very good way to start is by the purchase of a number of half grown chicks. Birds of good quality, six weeks of age and upwards, which have passed beyond the dangers of their baby days, may sometimes be purchased

at a very reasonable price. Such birds of course have not been culled and the beginner should have an experienced breeder look them over when they have reached the age of six months and select those that are fit to retain. The remainder should be marketed at once.

The most common method is to start with eggs. This is satisfactory provided certain precautions are taken. The first is to know that the eggs are from thoroughly matured stock. While some varieties mature earlier than others, yet as a rule it is unwise to breed from any bird under one year of age. Pullet eggs are usually smaller, weaker and less fertile than those laid by hens. Another precaution is against ordering eggs too early. In the mad rush for early hatched chicks, the beginner takes a long chance if he purchases eggs laid before the first of April. The big breeders, it is true, are able to get fertile eggs sometimes in February and frequently in March. Nevertheless April and May are the best hatching months. And June is better than February.

When buying eggs for hatching, the greatest danger lies in the handling they receive en route. Distance is not objectionable. In sending out eggs for hatching from our test pens we have had excellent returns all the way from Maine to California. Careful packing has had much to do with this; careful handling, over direct lines of communication, has had more. One should buy then, whenever possible, from a breeder who can ship by a single express line so that no transfer to another company will be necessary. Eggs carry best when packed in strong baskets and safely cushioned on hay or excelsior; and the buyer should insist that his eggs should be packed in that manner.

Generally speaking, the breeder should not be blamed if eggs fail to hatch. The buyer should know, and admit the fact, that in buying eggs for hatching he takes a chance. But the chance, however, is

largely in his favor. This is particularly so when buying the higher priced eggs. Some prominent breeders get as high as four or five dollars each for eggs from their best pens. And high as this price is such eggs are really the cheapest in the end; because the chances are that any bird hatched from such eggs will be immensely valuable.

It is customary to duplicate poor hatches at half price. But the buyer should learn the difference between an egg that is fertile and one that is not. Most beginners imagine that eggs which will rot during incubation are infertile; the fact is quite the contrary, for the rotten egg is almost invariably one in which the germ has started and died. This death of the germ is something for which the breeder is nowise responsible. It may be caused by rough handling, from alternate heating and chilling, from a faulty incubator, or from a faulty hen. One should not suppose that because a hen sits steadily she sits properly. A hen may stick to her job so closely that the eggs are not sufficiently aired. In such cases, and they are of frequent occurrence, the life-giving oxygen does not reach the egg in sufficient quantities and the germ dies. In using incubators faulty thermostats occasionally allow a wide variation in temperature; this is likely to prove fatal to the germ especially in the earlier stages. Therefore one should exercise common sense when making claims for infertility.

The baby chick industry has some commendable features. The buyer is saved all worry over cranky hens or cranky incubators. He can count his chickens before they are hatched; and if he could raise all that he counts, his troubles would be nil. Unfortunately these little chicks are exposed to many dangers. Packed closely for shipping they are liable to suffer from chilling, over-heating, and for want of fresh air. Any of these causes will make them susceptible to disease, particularly to the deadly white diarrhoea. But if they escape all this and are properly cared for on their arrival, there is no reason why they should not do well.

At certain times of the year, notably at the close of the hatching season, the beginner may often take advantage of bargain sales. The females purchased at such sales may not lay many eggs the following year; but if mated to a vigorous cockerel, the few eggs they do lay will be of high value.

The beginner must needs expect discouragements. But he should remember that it is only in the school of adversity that one wins the highest honors. Poultry keeping is an honorable, healthful and profitable business. Properly managed there is nothing that will yield better returns for the time and money invested.

## CHAPTER II

### THE START

Well begun is half done; and this saying holds true nowhere more than in the poultry business. A bad beginning in poultry culture usually means a bad ending. The most common fault to be avoided is that of beginning on to large a scale. Better success with a trio, than failure with a thousand; and the man who begins with a thousand birds, or even with a hundred, if a tyro, almost invariably meets with failure.

The reason why so many fail at the outset is that they begin with inflated ideas. They read the Munchausen tales told by irresponsible knaves, exploiting some fabulous "strain," and having no knowledge of the facts in the case, they fall easy victims. They read, and believe, the stories told by various "system" men describing in rosy colors how profits running from six dollars upward per hen can be made by wholly inexperienced people; they pay their hard-earned money to alleged poultry "schools" for the purpose of learning by mail, in their city homes, "how to conduct a large poultry plant"; they figure, unwisely, that if a single hen pays yearly a legitimate profit of even \$1.50, a thousand hens will pay correspondingly. All these things lead to failure. There is no royal road to success in poultry culture. The way to learn to raise poultry is to raise poultry, and by that is meant from small beginnings. Do not start with the idea of making a fortune immediately. Mr. U. R. Fishel, whose standing today financially is of the highest, started with a dozen birds. He "felt his way," treated his customers right, and grew as his business

grew. Lester Tompkins, the noted breeder of Rhode Island Reds, Sam. Noftzger, the originator of the beautiful and useful Partridge Plymouth Rocks, and in fact almost every noted breeder began growing poultry along the same lines. The wise tyro, therefore should follow their example.

One of the most common questions put to an expert is "How much capital do I need for a start." The next is "Where should I locate?" The first is answered by saying: "Whatever amount you can afford, bearing in mind the stipulation of starting small"; to illustrate: A beginner wrote me that he had \$75 to invest in birds and asked how many I could send him for the money. I told him that I would send him a trio of thorough-bred stock equal to any that he could purchase anywhere in the country. I then went on to explain that with this trio he would get started on a sure foundation, and that another year he could have a good sized flock of first class birds instead of a large flock of culls, he immediately saw a light. Had he invested his money at the outset in dollar birds, his "strain" would have been dollar birds to the end of the chapter. On the other hand, by starting with three birds of exceptional value, and by careful culling, in three years' time he had a flock of birds that placed him among the money makers.

I am writing this book for the beginner. The novice should be told the plain, blunt truth. He should have facts, not fancies. Many arrant humbugs and some downright swindlers have crept into the poultry business, and the brassy claims made by these harpies have led many people to invest beyond their means by arousing hopes impossible to realize. We shall publish facts so that the beginner may start with his eyes open.

Poultry raising is healthful and profitable. It takes one out of doors, keeps brain and body busy, and if properly managed gives better returns, dollar for dollar, than any other business.

The "back yard" breeder can make a living—and a good living from his birds. He won't make thousands of dollars yearly on a few square feet of land, as one notorious faker claimed to have done, unless, like that unsavory person, he pitches Truth overboard and, through misleading advertisements, beguiles the credulous into paying enormous prices for third-rate stock and eggs.

But there is a multitude of breeders today who are making plenty of money, and making it legitimately, in city and village. And the secret of this is to breed intensively, from first class stock of a single variety. Such breeders may not raise many birds, but they can raise good ones and get good prices; and as their expenses are low their profits will be high.

But town lot breeding is not easy work. To properly care for two hundred birds under such conditions requires more downright labor than would the care of a thousand on free range.

Birds in constant confinement must have constant attention. Green food, animal food, grit, lime, charcoal, dust baths and pure, fresh water must be supplied. Houses must be kept clean, snug and dry. Vermin must be held in check. On free range much of this labor and expense is unnecessary.

But remember: Fowls on free range never pay as much per head as they do in confinement. The reason is that free range birds are often left to hustle for themselves; and while they may be healthy and vigorous they do not make as quick growth nor lay as many eggs as restricted birds.

Under absolutely "natural" conditions no hen would lay except for reproduction. The native jungle fowl lays fewer eggs in a year than a well-bred pullet lays in a single month. The "200 egg" hen is

common in small flocks, even though she is not—and probably never will be—a commercial fact.

The town lot breeder can, and usually does, know his birds individually. Thus he can mate properly—as will be described later on—and from his small flock produce a high percentage of first class birds. Selecting some popular variety, and breeding only for the fancy, a good living can be made on a half acre.

The average farm flock is a nightmare—a jumbled mess of mongrels. A majority of farmers still think that poultry is something for the “women folks” to “fuss with” but of no real importance. This is a great mistake. It is safe to say that there is not a farm of ordinary size where general crops are grown, that, properly managed, would not pay far better with poultry than with anything else. The town breeder must buy everything for his birds. The farmer can raise everything—or an equivalent. If he has the ability he can breed both fancy and market poultry, and thus make money at both ends of the business. There are very few places where poultry and eggs fail to find a ready market at good prices; and fancy poultry is bred all the way from Maine to California.

On the farm the birds should not be cooped or penned to keep them out of the garden. No. Fence in the garden and let the birds run free. Neither should they be made feathered tramps, roosting under sheds, in barns or out-buildings. Nor should they be allowed to loaf about the kitchen door looking for table scraps. Even that alleged breeder, who pretended to have made \$3,600 in one season from 30 hens, by feeding them on table scraps, did not allow them to befoul his kitchen steps. His mythical “feeding” was done at a distance.

The farmer should adopt the extensive or colony system. Therein lies the secret of success with farm poultry. Colony houses large



enough for forty or perhaps fifty chicks can be built at trifling cost, or purchased, ready to put together, for a few dollars. I use the Buckeye colony houses because they last for years and cost less than I could build them. While allowing a good out door run they keep the little chicks warm, dry and comfortable, and when they are large enough to look out for themselves these buildings make admirable roosting houses.

With the colony system a large number of chicks may be cared for without much labor. They may be hopper fed and watered from a barrel so will need but little attention. The farmer, therefore, can raise hundreds while the town breeder raises dozens.

Commercial breeding, so called, is merely specializing. Generally this runs into "egg farms," with "broilers on the side." There are many of these great "farms" in the vicinity of New York, Philadelphia and Boston; and on the Pacific Coast, in California, there are others equally great.

These big commercial plants are money makers—sometimes. When managed on broad lines, by men who are big enough for big things, they pay well. The secret of success with twenty thousand hens is the secret of success in any other big enterprise. The ability to place, organize and conduct such an extensive business is unusual, demanding, as it does, qualities that only the few possess.

Fancy breeding, as the word suggests, is the breeding of ornamental or toy birds. There are enough buyers to make this branch of the business fairly profitable. Indeed there are bantam breeders who make a great deal of money every year. And there is a fair demand at all times for the Polish in all its varieties, together with the Frizzles, Silkies, Sultans and other "odds and ends."

The secret of success with these bizarre birds is to breed to the Standard—and advertise.

## CHAPTER III

### WHICH VARIETY?

The beginner constantly asks the question: "Which is the best breed?" And the oft repeated answer is: "There is no best breed." Naturally some breeds are better than others. No matter how beautiful a variety may be, unless it possesses practical qualities, it is only a toy of no use save to the dyed-in-the-wool fancier. The Polish, the Hamburgs, the Silkies, the Sultans, Frizzles, and Bantams are all of this class. Among them are many odd and beautiful birds but none of them are suitable for the man who goes in for meat or eggs. The "meat" breeds, including birds raised for capons, can be bred successfully only where food products are available at the lowest market prices. These varieties include such massive birds as the Cochins, Brahmas and Langshans. They are large of frame, slow in growth, and require far more food to reach a market age than do any other breeds; but where food products are cheap they can be grown successfully and will pay great profits. Where eggs, and especially white eggs are required, the Leghorn naturally holds first place. These birds grow rapidly, mature quickly, and if care is taken to secure a good laying strain, they are, under such conditions, the best fowls for the white-egg farmer.

The well deserved popularity of the American and English breeds rests upon their general utility qualities. The Plymouth Rocks, Rhode Island Reds, and Orpingtons, and to a lesser extent the Wyandottes, are really general purpose fowls. The fact that the Wyandottes, with some notable exceptions, generally lay smaller eggs than either of the other varieties, and that they run smaller in size, has

served to lessen their popularity with the practical poultryman. As broilers, however, the Wyandottes fill every requirement; and when properly bred they are very satisfactory egg producers. The beginner, however, will find that the white variety will give the best satisfaction as a layer—owing to the fact that the comparative ease of breeding to standard requirements has enabled the admirers of this variety to give more attention to utility points than has been possible with other Wyandottes.

The Rhode Island Reds, both Single and Rose Comb, are immensely popular, both with the fancier and the market poultryman. The difficulty of breeding this variety to the Standard gives the fancier an opportunity to extend himself to the limit. And it has been a fortunate thing that the Rhode Island Reds have been in the hands of practical men to such an extent that the standard tinkers have been unable to ruin this breed. The consequence is that the Reds have retained their utility qualities along with their popularity in the show room. They are docile, bear confinement well, lay large, brown eggs, mature early and are exceedingly popular as market birds. As layers, they rank high. In the tests for laying they have been among the leaders. As fancy birds they bring high prices, ranking with the Plymouth Rocks and Orpingtons. The beginner, if he takes care to buy his stock or eggs from men who are dependable, will make no mistake in taking up this breed.

The English Orpingtons are strictly first class birds. Massive in size, stately in style, these birds are among the aristocrats of the feathered world. Rapid in growth, maturing early, laying good sized, tinted eggs, and plenty of them, their popularity in England, and their growing popularity in America, is easily understood. And despite their handicap in being touted by some of the worst fakers in the business they still are winning a commanding position because of their intrinsic

merits. There are three standard varieties—the White, Buff and Black. There is no difference in the meat or egg value of either variety; although the lingering American idiocy against dark legs in chickens—though there is none in turkeys—has prevented the Blacks from having the vogue of the Whites and Buffs. This absurdity is rapidly disappearing and therefore the Black variety is growing in favor daily. It is one of the best of all varieties, especially for the town fancier.

In starting with Orpingtons, especially the White variety, one should exercise much caution. The American standard differs materially from the English. The latter, very properly, puts type above all else. An English judge will award first prize to a bird that may be bad in comb, legs and eyes, provided it is strong in type. An American judge is too apt to consider these minor points; and as a result the blue ribbon is too often awarded birds that are Orpingtons in name only. This fault must be and will be corrected; therefore the beginner with Orpingtons should buy his stock or eggs from men who breed to the English type—like William Cook and Sons, the originators of all the Orpingtons.

The Plymouth Rock is the American bird par excellence. Large, lusty, quick growing, early maturing, equally at home in pen or on range, a great layer of big eggs, unsurpassed as a market bird, this active breed is typical of American snap and go. There are many varieties of the Plymouth Rocks, each of which has its ardent admirers. The old reliable Barred variety is a business bird, wonderfully popular with the farmers of America, and equally popular in the show room. Its only objection in the eyes of the small breeder, is the fact that double mating is necessary in order to produce males and females of the same shade of color. The males naturally run light, the females dark. It is necessary therefore, as a rule, to breed

from dark birds in order to produce dark males, and from light birds, especially from a light male, in order to produce females of standard color. This prevents many small breeders, who lack the necessary room, from handling this variety; but the market breeder, who cares nothing for fancy points, finds in the Barred Rock a variety that suits him from the ground up.

The Buff, Columbian and Penciled varieties are all excellent, but none of them has achieved the popularity of the others.

The White Rocks, thanks to men like Fishel, Graves and Owen, backed by their own intrinsic good qualities, have a world-wide popularity. They are phenomenal layers, grow to a large size, and are among the most popular of all market breeds. As egg producers their remarkable freedom from broodiness places them among the leaders. Our official tests showed that four exhibition White Rocks laid 861 eggs in one year—an average of 215 each. And in three years' tests, which included a large number of birds, no "broody" was ever seen. The White Rocks breed white and stay white. Storm or sunshine has no effect on their plumage. We have had birds of this variety reach an age of four years and moult out to a snowy whiteness. The beginner will make no mistake in taking up the White Rocks.

The latest edition of the Rock family and one that is apparently destined to become the most popular of all, is the new beauty breed, the Partridge Plymouth Rocks. As is usually the case, when anything of especial merit is produced, there are several who claim to have originated this wonderful variety. But careful investigation shows that the honor clearly belongs to Samuel A. Noftzger, of North Manchester, Ind. His strain appears to be the only one containing no Partridge Wyandotte blood.

The Partridge Plymouth Rocks possess many qualities held by no other breed or variety. Our official trap nest records show that they have outlaid all others thus far tested. A pen of six birds laid the astounding number of 1,321 eggs in a single year, an average of 220 each. Their eggs are uniformly large and very even in shape and color. This fact alone makes them particularly valuable to the egg farmer because of the labor saved in sorting for the market. They are easily broken up if they become broody, a couple of days confinement usually being sufficient; while if allowed to sit, they make the best of mothers. Their plumage is remarkably beautiful, a combination in the male, of lustrous greenish black, bright red and mahogany brown; in the female the color is a beautiful blending of mahogany, soft brown and black and both male and female are produced by single matings. Therefore the amateur and professional will find that the Partridge Plymouth Rock is not only a bird of beauty but one of the greatest money makers in poultrydom.

The remaining standard American breeds—Buckeyes, Dominiques and Javas—are birds of quality. The first has been rather unjustly called a “mahogany bay” imitation of the Rhode Island Red. As the Buckeyes differ from the Reds in size, weight and color they should be judged on their own merits.

The Dominique is a grand old breed and deserves far more attention than it receives. Lighter in weight and easier to breed to color than the Barred Rocks; early maturing and exceptionally good as a layer; free from the incubus of double mating—the beginner would find this an excellent variety.

The Java, both Black and Mottled, has become thoroughly Americanized. A large, vigorous breed, sadly neglected. The foolish prejudice against dark shanks and the “booming” of new breeds is responsible for this, since the Java is an excellent variety, both for eggs and market.

The Dorkings, Minorcas and many other varieties are worth "taking up" and there is a chance for the right man to make a fortune with any of them.

Ducks, geese and turkeys occupy separate and distinct fields in poultry culture. As they differ entirely from the gallinaceous fowls it would be impossible to handle them in a book of this sort without extending it far beyond the prescribed limits. Therefore I will pass the subject for the present, merely saying that under proper conditions either of the three classes can be made to yield handsome returns for the money invested.



The Townsend Model Testing House



## CHAPTER IV

### THE POULTRY HOUSE

One of the secrets of successful poultry culture is that of proper housing. It is probable that as many failures have resulted from lack of knowledge along this line as from any other cause, as large sums of money have been wasted on expensive but improperly built houses. In trying to make the birds comfortable they have been made uncomfortable. Double walls, elaborate ventilators and heating systems have added to the cost only to the detriment of the birds.

There are but four requirements in a well built poultry house—a tight roof, a dry floor, freedom from draughts and proper openings for the air and sunshine. The house should be cool in summer and warm enough in winter so that the birds will not actually suffer from the cold. The house need not be costly, but it should be substantial. If the roof is covered with a good material, if the walls are lined with fairly heavy weight tarred paper, if the floor is built of solid concrete to keep out the vermin, and covered with plenty of clean straw for scratching, and if ventilator windows are supplied, of the style described in this book, and if the fowls are not overcrowded, there will be freedom from sickness, and the birds will be happy and contented. Under such circumstances they will do well and pay well.

The style and size of the house depends wholly upon circumstances. First let us consider the house that is used more than any other.

### The Town Lot House.

Thousands of "back yard breeders" are housing their birds improperly and wondering why their chickens don't pay. In nearly every case the houses are unsanitary, and that, alone, is enough to condemn them.

In many cases the so-called "houses" are either spaces penned off in dark and drafty barns, or else they are some freak "system" coops, made of pine sticks and muslin, and sold to the inexperienced, at outrageous prices.

The barn "house" is bad. The 3 by 6 "system" coop is worse. In the former the birds lack sunshine—which means a loss of health and vigor. In the latter—working wholly out of doors—for these "houses" are merely cheap boxes—the birds are certain to be neglected in bad weather. In driving storms of snow or rain it would take more than Spartan fortitude to care for even one of these unhappy pens.

For a few birds on a city or village lot the "No-Yard" house is probably the best. Careful tests have been made of several varieties of these houses, and we found that the Buckeye house was very satisfactory. An abundance of fresh air without drafts, easy to clean—we found it an excellent building for a dozen birds.

The Sectional Laying House, made by the same company, was also tested with good results. By changing the windows to the inside—a very easy job—we turned them into the Tanner Ventilators used in all our houses. This method of ventilation is absolutely perfect. The foul air is forced out and pure air is drawn in, while no draft is apparent in any part of the building. The buildings are thus made cool in summer and warm in winter. Moreover the houses are absolutely damp proof—a matter of great importance.

### The Secret of Dry Cement Floors.

Cement makes the best flooring. It is better than dirt because it can be kept clean and is vermin proof. It is better than wood because it is far cheaper, absorbs no filth and is permanent. But it has had the objectionable feature of being damp—and dampness is not conducive to good health. Many methods have been tried to overcome this dampness. All have been faulty in one way or another, at least, for poultry houses. After various experiments the problem has been solved. In the Townsend Model House—using a combination of the Buckeye sectional houses—the foundation walls and floors are made of cement and are absolutely damp proof. The secret of this construction is very simple, and the cost is trifling. It is accomplished by mixing six pounds of hydrated lime with each hundred pounds of cement. And this need not be used in the bottom course. Our method is to put down about two inches of five parts rough gravel and one part of Edison cement. Make this **very wet, tamp well, and follow at once** with a second course laid from a half-inch to an inch in thickness—three parts of sand or fine gravel to one of cement with the hydrated lime as stated; and dampness is unknown. The house rests on walls six inches thick and carried about a foot below the surface. The building is not only damp proof but vermin proof as well.

The beginner will hardly undertake the erection of buildings for a large commercial plant. Such buildings include laying houses, incubator and brooding houses, breeding and colony houses; and their management is utterly impossible for the tyro. Make no mistake about this. One of the secrets of successful poultry culture is based upon the common sense idea of making haste slowly. No sensible man would try to build a mansion until he had learned to cut a rafter. No sensible man would try to “manage a large poultry plant,” as one “teach-you-by-mail” concern promises, until after a long experience with more or less insane incubators and more than less hysterical hens.

Let us next consider a house that is used by tens of thousands, of which not one per cent. is used properly.

### The Farm Poultry House.

Any farmer can make money with his poultry. Every farmer should do so. And of the several reasons why they do not, the first is that the birds are improperly housed.

It may be well enough to allow the young stock to roost in the trees during the late summer months and early fall. But by October the birds should be provided with proper quarters and taught to occupy them.

The average farmer neither knows nor cares anything about the fancy. If he takes any interest in the subject—which he rarely does, not knowing that poultry might pay better than all his crops combined—but if interested at all, he merely wants birds that will give him both eggs and meat. Usually his stock is a mess of mongrels. His hens “steal their nests” and vermin steal the chicks. He matures a tenth of what he might do. These find shelter as best they can—in barns, under sheds—anywhere and everywhere, except where they should be. Hardy? Of course. The few that survive must be hardy. They are generally light in weight and their egg yield is lighter—the price paid for such “hardiness.”

The farm poultry house may be built at very little expense. A south or east side of a barn or other outbuilding makes an excellent location provided of course that the ground is high and dry. Let the house have a front slope, place the roosts at the rear, on a level, with nests at the side. Be sure that the roof is tight and have a door at the high side with one or more windows in the low front. A building 14 feet deep by 14 feet wide will accommodate about 40 birds; and any

farmer who can saw a board and drive a nail can erect such a house at a cost of less than \$40. This makes a good house at little cost wherein the birds may have proper shelter during the long winter.

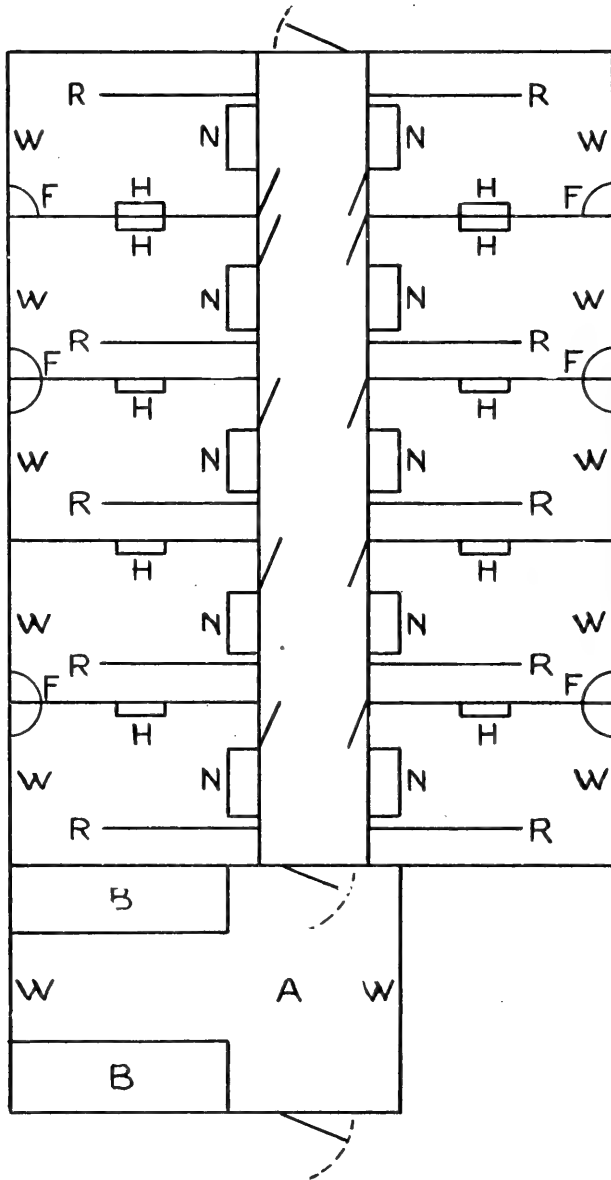
#### The Fancier's House.

The man who breeds for "points,"—who goes in for exhibition birds—should plan his house accordingly. Breeding stock requires special handling. One of the secrets in producing good show birds is to keep the breeding stock in tip top condition at all times; and a proper house is one of the first essentials.

Breeding pens that are expected to throw fancy stock are usually of small size—from six to eight females—so that less house room is needed. As the breeders must be under daily observation, to be sure that each female "nicks in" with the male; as trap nests are absolutely necessary; as the birds, in short, demand unusual attention during the breeding period, the "long" or continuous house is best if one breeds at all extensively. A yard of strong turf, with a sheltered, southern exposure, is an absolute necessity if early chicks are wanted. For the breeder who expects to get even a fair percentage of March chicks must have his birds on the turf during the winter whenever a bit of green shows. This is a breeder's secret and is well worth remembering.

#### The Townsend House.

After much study, and many consultations with our Mr. J. S. Tanner, of the Advisory Board, who is one of the best working architects in America, I have planned and built the model house described herewith. This is a new house for some of the tests which I am conducting in the interests of the National Poultry Association. In planning it I had several objects in view. Among them were the following:



Ground Plan of the Townsend Model House

Perfect sanitation, to insure good health.

Thorough ventilation, without drafts, in all weather.

An absolutely dry floor, and one easily cleaned.

A house that should be rat, bat, cat, mouse and mite proof.

Cool in summer and fairly warm in winter.

A "one man" house where a single helper could do all the work in a short time. This demanded automatic watering, feeding, ease of cleaning and rapidity in gathering eggs from scores of trap nests, making, at the same time, the necessary records.

A convenient, dry and vermin proof feed room.

This was something of a contract, but, it has been successfully carried out.

The fixtures and appliances used in any poultry house will depend upon the owner's taste—and pocketbook. The only vital necessities are sanitary fountains or other easily cleaned receptacles for water; boxes for grit, oyster shells, charcoal and beef scraps; fairly low perches; fairly dark nests, a dust bath, and dropping boards that may be cleaned easily. Given these, with plenty of scratching litter and the hen that will not be a hustling, laying, paying bird is fit only for the market.

Main house, 22 x 30. Feed room, 12 x 16. "P" is passage way. "A," pens, clear, 6 x 9. "D," trap nests. "B," bins. "W," windows. Doors as indicated. "F," feed troughs for dry mash, etc. "PR," Sanitary Perches.

This house is 22 x 30 over all, the feed room being 9 x 16. The entire building rests on 6 inch concrete walls and the floor is of concrete, two inches thick with a half inch top. There is a four-foot alley-way 30 feet long through the main house. Trap nests are con-

veniently placed, and under the nests is a clear space allowing fowls that much extra scratching room. Each pen is furnished with a Norwich Automatic Feeder which allows the birds to feed themselves and at the same time gives plenty of exercise. Each pen has 54 square feet and as the dropping boards are wide enough for double roosts each pen will hold from 8 to 12 birds. The partitions are solid matched pine, extending to the roof. In each pen there is a four light window, each pane being 12 x 16. This allows 5 1-3 square feet of glass to each pen. In the monitor top are swinging windows having three 9 x 12 panes in each. These windows swing out and are regulated from the passage way. The house, therefore is well lighted.

The pen windows are supplied with the Tanner ventilator method, a simple, yet effective way for admitting fresh air at all seasons without drafts, and for carrying off the foul air. The windows are arranged as follows: On each side of the opening, fitting closely to the sash, is nailed a three-cornered board, the length being the same as the sash, and the broad end, at the top, being from 8 to 12 inches wide. The sash is placed between these boards, the bottom resting on the window sill and the top against a stick nailed to the side boards near the top. A double current of air is thus set in motion, and the building is always supplied with fresh air. The entire window may be lifted out if necessary, or closed tight in zero weather, being then held in place by a cupboard catch. A strong screen on the outside of the opening keeps out intruders.

The house is eight feet above the walls at the highest point, and four feet at the lowest—the wall being nine inches above the floor.

The watering is automatic, the water being conveyed from an air pressure tank so that the pans are always full of clean water. In the summer they can be flushed as often as desired. In the winter they can be automatically emptied at night to escape any danger from



freezing. The house is cool in the summer, however, as with the wire-protected doors and windows wide open, there is a constant circulation of air. The house is relatively warm in winter because there is no dead, damp air to chill the birds.

The old fashioned and unsanitary dropping boards are not used in this house. The night droppings fall into the litter and as this is changed weekly there is no odor.

The house was built by taking ten of the sectional houses made by the Buckeye Incubator Co., of Springfield, Ohio, and putting them into position facing each other—five on a side. The fronts were held in reserve. The high sides faced at a distance of six feet, the partitions resting on boards nine inches wide. An additional roof was built, carrying it up so as to allow for the "Monitor" top. The fronts were utilized, so there was no waste of lumber. This made a first class house at far less cost than had we bought the lumber and built outright. And if one uses but two houses it is equally available.

## CHAPTER V

### THE FOOD PROBLEM

We may buy the best eggs in the world. We may get from them chicks that are marvels in health and vigor; but unless they are fed right, these chicks will never be anything but culls.

We may buy mature birds of the best quality; we may give them ideal quarters; but unless we feed them right they will not lay well nor throw good stock.

The secret of proper feeding has been well kept. The real breeders will usually tell you what they feed—in a general way; but they do not give you the essential facts. The fake breeder, who sells eggs from a fake “strain” may tell you of feeding 30 hens on scraps from his table; and a “system” man may tell of “feed” at a few cents per bushel. You cannot copy the legitimate breeder for you don’t know the particulars; and no man of sense will have anything to do with the other sort.

The secret of proper feeding cannot be told in a sentence. There is too much of it.

The beginner may be told what to feed his chicks. Possibly it will be right; probably it will be wrong. The proper food for the Mediterraneans won’t do at all for the Asiatics; and something still different is required for the American and English varieties.

But in the beginning of things, the knowing breeder feeds for chicks long before the eggs are laid from which those chicks are hatched!

Clinch that fact.

Now let us go into details.

It is the first of January. Your birds are properly mated, as described in Chapter 14. Very well. Now you are ready to feed your breeding stock—not for record laying, but for record chicks.

You are breeding some Mediterranean variety—Leghorns, Anconas, anything you please, of the small, nervous, fast growing, quick maturing sort. These birds require no nerve food. On the contrary they need fattening food—plenty of corn, milk, vegetables. Get your Leghorn hens as fat as you can—they won't take on too much flesh—and note the increased size and vigor of their chicks. And when the chicks come, crowd them to the limit. See to it that they have plenty of granulated bone, chick grit, green stuff, fresh water, sour milk, and exercise. The latter is a mighty important factor.

### **Keep the Chicks Busy!**

I have grown some immense Leghorns, and the way I did is this:

After the chicks were “nest ripe”—that is not earlier than 48 hours after the hatch is completed—I begin operations. First, they get some chick grit—just a pinch for each one—with some of the medicated charcoal prepared by the Des Moines Incubator Co., of Des Moines, Iowa, and water in a chick fountain. An hour or two later they get their first supply of the Gritless Chick Food prepared by Park & Pollard of Boston, Mass. I would say at the outset that I use the Park & Pollard foods solely because they give better results at less cost than any others—and I have gone far afield in my search for the best.

I keep the chicks in Buckeye colony houses either with hens or Lullaby brooders in lots of from 15 to 30—depending on the season.

These houses are large, snug, dry and vermin proof; and they make homes for the chicks until transferred to the laying or breeding houses.

After the second day the youngsters are given the Gritless Chick Food in ground alfalfa which is spread thickly on the floor. A liberal supply of this food is scattered in the alfalfa and they are kept busy thereby. A chick mash, called "Growing Food" is supplied after a week or ten days. There is plenty of animal food, so necessary to chick growth, in this combination.

When the youngsters are about a month old a coarser grain—the Intermediate Chick Food—is substituted for the gritless, but the growing food is used until they mature.

The chicks are confined in well shaded runs until they are weaned, when they go on free range. This prevents any loss from cats, rats and other vermin.

Scratching for grain gives exercise. But this is not enough. Odds and ends of food must be thrown into the pen many times daily. Bits of bread or boiled potatoes, leaves of lettuce or Swiss chard, an occasional earth worm—it matters little what, so long as it gives them something to race, chase and scrap over.

In breeding the Asiatics, and, to a certain extent, the Orpingtons, Rocks and Reds, different preparations are necessary. These larger breeds, being less active than the Mediterraneans, must be handled accordingly. No fattening food—no corn meal—no "Johnnie cake." A little corn, oats and oat meal, wheat and bran. These are the staples. For all purposes the Park & Pollard Screened Scratch Grain answers best. It contains enough corn to keep up steam during the cold weather, with a well blended variety of other grains.

The chicks of these larger varieties should have, in addition to the food already described, a considerable amount of oat meal which may be boiled or made into oat cakes. The chicks will relish this for a change. Bear in mind that your object is to keep them growing, but growing in the right way. Keep them busy every minute. Never allow them to "hump up" and mope. A brief set back is enough to turn a promising chick into a worthless cull. Therefore keep them growing.

The secret of feeding for eggs is easily mastered. Have your pullets butter fat when they go into the laying house. Remember that it is **as impossible to get figs from thistles as eggs from a scrawny, half-starved bird.**

In feeding for "commercial" eggs it is necessary to give food that will induce laying in the late fall and early winter when eggs command top prices. For this purpose foods rich in animal protein, blended with the right amount of carbon—like corn for instance—must be supplied. The "standard" foods—wheat, oats, corn and barley—were formerly used, exclusively. Then somebody began feeding a "wet" mash, made up of bran, middlings and so forth, and mixed with water. This produced "results" by increasing the egg yield. It likewise produced, in many cases, disastrous results—causing bowel trouble—especially when vegetable protein was used—getting birds "off their feed" and out of condition generally.

A mash food is necessary. A wet mash is unnecessary. In our laying tests with various breeds we have produced remarkable results with never an ounce of wet mash.

One method of feeding whereby such records as 1,321 eggs laid by six Partridge Rocks in one year, 1,215 by six Leghorns, 1,165 by six Reds, and 863 by four White Rocks—each in one year—was as follows:

The pullets were kept growing until matured and up to weight. And here I want to say most positively that the fellow who advertises that his "strain" lays at 3½ months is, if possible, a bigger fool than knave. The claim, like many others made by reckless people, proves how ignorance and mendacity go together. The most precocious Leghorns do not lay at such an age. And any bird that is forced to lay before it is able to stand the strain is ruined both as a layer and breeder.

When the pullets were placed in the laying or breeding house they were fed—as a rule—a small amount of scratch feed—a handful or two each—in the morning, and a heavier feed in the afternoon. Meanwhile the Dry Mash and Growing Feed, mixed half and half, was kept before them all the time until they began laying; then the Growing Feed was dropped. Now and then—as often as they seemed to relish it—some steamed alfalfa was given them, with occasional extras in the vegetable way—cabbages, potatoes, apples, beets, etc. Pure water in clean vessels, grit, charcoal, shells and some granulated bone—there you have it.

This method means a great saving of time and money. It means that when birds are properly housed—not in a ridiculous "system" coop, where all the work is done while exposed to the elements, but in a real poultry house—that one man may care for dozens or hundreds. It means strong and healthy birds and a big egg yield, with no condiments nor forcing of any sort.

Don't waste your money and ruin your birds with any of the so-called "egg makers," "patent foods," or on any of the "hundred-eggs-for-a-cent" swindles. Nobody gives something for nothing. And the knave who advertises real food at a few cents a bushel is no better than the so-called "breeder" who advertised eggs from a flock of prize birds at 50 cents per 15.

## CHAPTER VI

### HATCHING

It looks so easy!

Apparently all that is necessary is to put a hen in a box, along with some eggs—or load an incubator, light the lamp, and let it go!

Then, when the eggs fail to hatch, how easy it is to blame the breeder and demand free eggs; and if he won't supply them—as there is no reason why he should unless they were unquestionably infertile—what a pleasant pastime it is to write a letter of accusation to some editor.

The beginner should understand one thing clearly: No matter how far a dishonest breeder may go to get trade, yet the worst of them do not send out “doctored” eggs, nor rotten eggs, nor infertile eggs. On rare occasions some notorious humbug may buy up pages of space and by filling that space with shameless falsehoods may rob beginners thereby. But the worst of these knaves will send hatchable eggs.

Why is it then that good eggs, bought from reliable breeders, so often fail to hatch well?

There are several reasons.

One is that the hen often sits too well.

Impossible?

Oh no. Eggs must have plenty of fresh air.

Oxygen is a vital necessity.

There is a secret worth remembering,

If the hen is set in a close, musty room; if she hugs her nest—as some of them do—and if, as a result, what little fresh air might reach the eggs is smothered, so to speak, the hatch will not be good. And if the eggs are “all rotten” you may be sure that they were all fertile, but that they had died for want of the necessary oxygen to sustain life.

The secret of getting good hatches with hens is this:

Set the hen out of doors, on new laid eggs, where plenty of pure, fresh air can reach her. You may place her on the ground with a narrow cover at one end, and a dusting place with corn, water, charcoal and grit, under cover, at the other. This is the ideal way to set a hen—provided that she is a strong, lusty bird.

Never set a hen on the ground unless she is full of good red blood—a vigorous, “sassy” creature, ready for a fight at any time. The “nice, quiet hen,” the lady-like hen, the poor vitality hen, should never be used; but if you must chance such a one, keep her off the ground, and don’t expect many chicks, nor good chicks either.

See that the hen doesn’t sit too “tight.” As the hatch progresses she should remain off longer and longer. If she knows her business she will time herself. If she doesn’t, you must extend the time gradually from five minutes to half an hour—depending upon the weather.

As a matter of course you will see that she is kept free from lice while incubating and brooding. If she neglects to dust herself—as some of them do—then dust her yourself. Give her grain and perhaps a little green stuff to eat, but no mash food of any sort.

There is another reason why some eggs will not hatch strong chicks even under the best of hens. Hit or miss mating by ignorant



breeders who do not understand the art; weak stock, shown by narrow breasts, thin legs, dull eyes and pinched heads; cheap eggs bought from cheap men; stock purchased from unknown breeders with no knowledge of its blood lines; all these lead to poor hatches. If you want to succeed, and save money while doing it, buy the best—the best from an honest man. A half dozen eggs from Lester Tompkins' best pen at four dollars per egg would be much cheaper than a hundred cull eggs at four cents each. And the same truth applies to all our really great breeders—men of honor and intelligence, who grew into the business from boyhood.

When it comes to hatching by incubators we face other problems.

We may buy the best incubator made—if there is a “best.” We may use the best oil and follow directions to the letter. We can regulate the heat, and supply plenty of moisture. We may fill the incubator with the very best eggs obtainable. We may start two machines at the same time and test out so that one may be filled with fertile eggs. And when the chicks come we may get a hundred from a hundred eggs or we may not get one. Every chick may live, or every chick may die.

What causes this wide range?

Many things.

First, and most important:

Lack of oxygen!

Remember that.

**LACK OF OXYGEN.**

The “heavy” air of the cellar; the burned out air of a small room; the breathed out air of a living room; in all of these the eggs are deprived of the life-giving oxygen to a greater or less extent, and the hatch suffers accordingly.

Another cause of failure is in buying the worthless so-called "incubator" eggs—the sort that costs from two to four dollars per hundred. It is an insult to the machines to fill an incubator with such trash. Unless you can afford to buy enough good eggs to fill the machine you better depend on hens. For the best and freshest eggs should invariably be used in machine hatching.

Hot air and hot water machines are both used. Under proper conditions either will give satisfaction; under improper conditions neither will do so.

A close, ill ventilated room is the worst place for an incubator. A well ventilated cellar is the best.

And don't be timid about cooling the eggs. They need it.

Don't use a turning tray. Turn by hand. A quarter turn is enough. But do it three or four times a day.

And finally, bear in mind that the eggs must have fresh air. This does not mean that a current of air should blow over the eggs; for that would dry them out and ruin the hatch: but it does mean that pure fresh air must reach the eggs if they are to hatch and the chicks are to thrive.

## CHAPTER VII

### BROODING

Let us suppose that your hen has about finished her work. The infertile and spoiled eggs have been removed. If any eggs were broken the nest has been cleaned and the remaining eggs carefully washed in warm water. The hen has been well fed, watered and dusted. The incubator eggs have been properly turned, cooled and ventilated.

Very good.

Most of the eggs came by express and escaped butchery on the way; if they came from good, virile stock; if the weather conditions were right—if all the many “ifs” have been favorable, then you will have a good hatch.

Are your troubles over?

Not exactly.

They have just begun.

Reports of tests made by intelligent men have shown over and over that seventy-five out of a hundred chicks hatched would be a high average to reach maturity.

Barring accidents every chick should, in theory, reach adult age. But accidents will happen and they must be considered. Sickness will come and it cannot be ignored. Therefore we might as well face the fact that any man who brings an average of seventy-five chicks out of a hundred to maturity has done exceedingly well.

And what is the result of this well doing?

Breeding and feeding.

These are the two stumbling blocks that trip the beginner.

The latter has been considered; now for the former.

The secret of successful brooding is easier shown than told.

The two methods—natural and artificial—vary widely. Success or failure does not depend on either. Good management means success in either case just as surely as poor management means failure.

Let us first consider the natural method.

If one raises only a few chicks a good "mother" hen makes the best brooder. She will teach, hover and protect them. The dreaded white diarrhoea will rarely trouble her little flock. If she "runs" with them in a roomy pen—as she should do—rats and cats will leave them alone. And so, barring accidents, she will raise most of her flock.

But a good hatcher is not always a good brooder. An excitable hen, that is forever rushing about, will tread many chicks to death; and a clumsy, awkward hen will crush them.

I never let a lot of valuable chicks out on free range until they are large enough to care for themselves. I don't believe in furnishing chick meat to cats or rats.

The roomy Buckeye colony houses, with large covered runs, allow plenty of exercise. They give shelter in cold or stormy weather, and a cool, well ventilated retreat on hot days. When the hen is removed they make ideal homes for the growing youngsters, and they are vermin proof. Although each house measures six by three feet, with liberal head room, yet two men may carry one of them with ease.

In early spring no hen should be given more than a dozen or fifteen chicks; but as the days grow warmer the number may be increased. In June thirty-five are none too many.

In warm weather be sure that houses and runs are placed where they will be shaded from the mid-day sun.

And bear one thing in mind—I would repeat it again and again: **Yarded chicks must have plenty of green food.**

What kind?

Oh, any kind! Lawn clippings, clover, dandelion leaves, lettuce. Anything green that they will eat is good. Twenty-five cents worth of Swiss chard thinly planted in rows will furnish enough green stuff for a hundred chicks from May to December; for this plant puts out new leaves as fast as the older ones are broken off.

Artificial brooding is a necessity in this commercial age. In no other way could the immense number of chicks be furnished to meet existing demands.

Artificial brooding is not recommended to the beginner. Better trust the old hen at first. But if one is bound to try it, in the name of dollars and cents, try it on nothing earlier than May hatched chicks

The secret of successful artificial brooding may be summed up in one word—warmth.

We must supply steady heat, of the right degree, or trouble will begin; and once started it goes rapidly from bad to worse. A chick will live, though not thrive, on poor or insufficient food: but it will neither thrive nor live without proper heat. Without going into details, which is unnecessary, I will explain that the chemical changes whereby food is made to sustain the body demand a high temperature. If this is lowered, even for a little time, or if too high for a given

period, proper digestion ceases and trouble follows. The dreaded white diarrhoea in little chicks and many functional disorders in mature fowls may be traced to chilling or overheating.

The beginner will hardly go to the expense of building a regular brooder house. And yet, if a brooder is used in cold weather—no matter whether it is a heated or “fireless” machine, the room in which it is placed must be warmed. Don’t depend on the heat from the brooder lamp; and never, under any circumstances, use an oil stove. The first is wholly inefficient; the second vitiates the air. A coal stove, large enough to keep the room comfortable during the night, should be used—the object being to retain an even temperature at all times.

In buying a brooder always discount the capacity one-half. Thus, if is a “guaranteed 200 chick” machine you may safely place 100 in it at first, afterwards reducing the number to 50.

There are numerous “fireless” brooders on the market. The Buckeye Fireless, used in colony houses, is excellent for 25 to 50 chicks. And it is inexpensive.

For occasional use the Lullaby, made by Park & Pollard, of Boston, has many advantages. It is adjustable, and will take care of any number from one to a score. For emergencies it is invaluable. And it is sent, charges paid, for \$1.50. In making test hatches, where I might have only a few chicks of one variety, I have found that this little brooder answers every requirement.

Take particular care to keep the brooders clean. I use ground alfalfa for a bedding, stirring it up every morning and renewing it once or twice a week.

## CHAPTER VIII

### YOUNG STOCK

At last your chicks are weaned from hen or brooder. They are no longer in danger of white diarrhoea or any other baby illness. You no longer need coddle them. They know enough to go in when it rains; and if caught out in a sudden shower it won't harm them. You draw a long breath at the thought that your work is done.

Don't deceive yourself.

A poultryman's work is never done!

The secret of success with chicks after they are able to care for themselves is to keep them growing every minute. Therefore you should get them out on a good run where there is plenty of green stuff and plenty of shade.

But be careful that you do not bar out the sunshine. The colony houses should be so placed that the sun can get at them for an hour at least every day.

Keep the houses clean. I see to it that every house is thoroughly sprayed with Zenolium or the Park & Pollard liquid lice killer once a week during the summer. Give the youngsters a dusting with good lice powder every week or ten days. It means work, of course, but it is work that pays.

Clean out the litter on the floor of the colony houses as often as once in ten days. This duty is too often neglected after the chicks get on range.

Don't be in too big a hurry to have them roost. Better wait until they are three-quarters grown. Then there will be no danger of crooked breast bones.

The chicks need lots of fresh air. Therefore hook up both windows and keep them open day and night. The stout wire screens will bar out vermin. Be sure, however, that the door is closed every night. One single lapse may cost you twenty-five valuable birds.

Don't neglect the birds because they are "on range." See that their fountains are full of fresh water daily. Remember that. Too often chicks that run free are left to find water as best they can.

On stormy days provide a liberal amount of scratch grain—I find that the Intermediate Chick Feed is of especial value—so that the youngsters may keep busy.

The secret of getting quick money on young stock is to bring the chicks to broiler size in the shortest time possible. If you can get your broods out early enough you can sell your January hatched broilers in March as the trade does not demand birds weighing more than a pound each. As the season advances the weight increases, and the price decreases. In May the demand is for birds weighing from two to three pounds each.

And right here let me sound a note of warning.

Don't take stock in any miserable "system" faker who advertises that he can teach you how to raise two pound broilers in eight weeks. Like those fabulous pullets that lay 26 eggs per month when six months old; like "feed" at 15 cents per bushel; like making \$7,500 a year on a plot 40 feet square—as the same knave claimed he could do—all these are palpable falsehoods.

You cannot get commercial broilers weighing two pounds at



eight weeks. While an occasional extra precocious chick may hit that weight at the age, it cannot be done with any general flock.

In fact, the beginner, unless most favorably situated, should be cautious about going into the broiler industry. If all goes well there is good money in it; but if the chicks get any setbacks—if they are not kept on the jump—then they will not reach a broiler age at any profit whatever.

The beginner, if he has the very best stock obtainable to start with, will be able to make quite a tidy sum from his surplus birds. Along in December or January he should have them leg-banded and scored by a competent judge. This will enable him to know which are the best; and the judge will also price up the stock for him. Then, if possible, get an experienced breeder of the variety in hand to mate up such pens as are wanted for the coming season.

The beginner will often be amazed to find that his highest scoring birds—especially in the males—are passed by in favor of birds of less value. The experienced breeder may not be able to score the birds as the judges can do, but he knows how to mate, which the judge does not know, unless he chances to breed that variety.

Having matched his pens the beginner may now advertise and sell his surplus stock. And he will be agreeably disappointed to find that his second birds—even those running under 90, will bring much better prices than if sold unscored. The reason is that a reputable judge has given his birds a standing, and thus a value, which they could not attain otherwise.

If among these birds are any that score especially high, and the chances are that he will have them if the parent stock is right, the beginner will do well to insert a modest advertisement in a first class poultry magazine stating that he has such birds for sale. He should

name the breed, variety, strain and sex, also the score, and the judge who rated them, with the price of each. He will have but little difficulty in disposing of such birds; and while he will not obtain any such prices as a great breeder gets for stock of the same grade, yet his expenses, being so much less, will leave him a handsome profit.

The beginner will do well to continue hatching through the summer. After May first the demand for eggs drops off and the trade is practically dead by the first of June. But there is always a demand for stock. And while the chicks hatched in mid-summer may not do as well as those turned out in April and May, yet they will pay far better than it would to sell eggs for market. Pullets of many varieties hatched as late as September first will be laying in March. And while their eggs should not be used for breeding they will bring very good prices for household use.

The secret of getting young stock up in weight quickly is found partly in feeding and partly in care.

One should remember that growing chicks tire of the same food day after day. Give them a variety. Today boil up small potatoes and see how they will scamper for them. Tomorrow give them boiled potatoes chopped up and mixed with bran. The next day give them some Growing Food dampened with sour milk. And so on. Mixed in thus with their regular food the youngsters will relish these extras and will thrive amazingly.

In caring for the youngsters one must combat two ends—lice and overcrowding. The former may be kept in check by a never ending fight. Overcrowding of course results from hatching more chicks than one can accommodate. What would be roomy quarters for a hundred week-old chicks will be crowded quarters for a half-dozen adults. When the chicks are weaned no more than twenty-five should be kept together. Make this a positive rule, and live up to it.

## CHAPTER IX

### MATURING THE STOCK

It is a common saying that the early layer is the payer.

Like many another "saying" this is true or not, according to circumstances.

A pullet that begins laying too early is likely to "soldier" during the winter—"eating her head off" when eggs are highest.

Early hatches are necessary for market birds; but for winter layers—and winter payers—the pullets should not begin work before November.

Too early laying is often followed by a late moult—and that means good-bye to eggs until the following spring.

The secret of producing heavy winter layers is in hatching at the right time—according to the breed—and in bringing the pullets to the pink of condition late in the season instead of early.

One of the most absurd claims made by a certain alleged breeder, was that pullets of his pretended "strain" laid when less than four months old! Had this been true it would have proven that his birds were worthless. The Orpingtons—which this person handled—are large birds; and while this breed is a wonderfully fast grower, and can be forced to lay as early as the Leghorns, yet no legitimate Orpington breeder ever attempts it. He knows better.

No pullet of any variety should lay before she is six months old if she is to be used thereafter as a breeder.

Forcing means ruin.

Precocity is abnormal. It is gained only at the expense of the vital powers.

If you are running an egg farm, and replenish your stock by buying a new lot of pullets every year, you may slaughter the innocents—forcing early maturity, forcing heavy laying, and sell the broken down, played out birds the next summer, just before they begin to moult. But you cannot breed successfully from such birds.

The light, nervous Mediterranean breeds may be hatched in June with excellent results. They should begin laying in December, and, if properly housed and fed, will continue laying through the winter. Winter layers in the American breeds must be got out earlier. The first of May is late enough.

Crowd your pullets for size. Get them "on their legs," large of frame, big of bone. Give them muscle first, and meat later.

If the youngsters look "leggy" you may be sure that they are doing well.

The "gawky" pullet usually makes the biggest, healthiest, best laying hen.

Better retard laying than hurry it, except as noted. Unless running an "egg farm" I would move the pullets from one pen to another, after housing them in the fall, so that they would not lay too early.

Let the young birds have free range as long as possible. If not overcrowded they can be kept in colony houses until the middle of October, and sometimes even later.

The so-called "utility" pullets—meaning those kept merely for eggs—should be housed earlier than the choice stock that has been reserved for future breeding.

The cockerels of course should have been separated from the pullets as soon as they became annoying. If the cockerels become quarrelsome—and they are apt to do so—put an old male among them. He will act as a peace-maker, preventing any serious fighting.

Be sure that the growing stock has plenty of roosting room. The ordinary 3 by 6 colony house, if well ventilated, and provided with two roosts, will accommodate from 12 to 20 pullets, as they approach maturity. The great thing is to avoid over-heating at night. The late summer and early fall days require that especial attention be given the youngsters.

In these days keep up an unending warfare on lice and mites. If troubled with insect pests they will not sleep well—which means a set-back. If overcrowded they become overheated, and will be almost certain to catch cold on going out in the cool morning air.

To the egg farmer the first year of a hen's life is the profit making year. After that she should be marketed. Buy or raise pullets yearly to take the place of the old birds.

If the beginner has high grade stock he will find some good breeders and perhaps some strong show birds when his youngsters mature.

These birds require different handling from that given the layers.

Take the pullets, for instance. The experienced showman knows that a pullet is at her very best just before she begins laying. Bear that fact in mind, as it has much to do with your pullet winnings.

To have your pullets "show ripe"—that is, at their best when exhibited—they must be hatched at the right time, and matured in the right way.

Supposing you plan to show in October. If you breed any of the small, quick maturing Mediterraneans you can get your pullets—and cockerels, too, for that matter—into show shape if hatched any time between the middle of March and the middle of April. But the same birds shown in December should not see daylight before the first of May. And the pullets to be shown in January will, if properly matured, do best if hatched in June.

The American and English breeds must break their shells earlier.

Pullets of the Rock, Red, Wyandotte or Orpington classes should not be shown by novices in the fall exhibitions. Such birds must be hatched, as a rule, in February; and there are few beginners who have proper facilities for keeping winter hatched chicks on the jump. Better wait until March or April and get out birds for the winter shows.

Cockerels should have an earlier start than pullets. It takes longer to get them right in weight and plumage.

And here I want to say something to the beginner that will—if heeded—enable him to write Success, where otherwise he would spell Failure:

**NEVER FORCE YOUR BIRDS FOR THE FALL SHOWS!**

By stuffing your promising show birds; by tempting them with frequent feedings; by coaxing them with tid-bits—scraps of meat, sweetened bread, boiled and sugared rice, and so forth, you may put the weight on late hatched birds, and may win the blue in October.

But note the result:

Your stuffed and untimely fattened birds will go off their feed in January. With impaired digestion, with every organ weakened by the strain of over-feeding, your prize winners will throw you scrub stock, if indeed they breed at all. More likely the best of them will be dead by spring. Congestion in one form or another—for roup, bowel troubles, acute indigestion,—these and other ills, are congestive—will carry off the flower of your flock.

In maturing your birds there is nothing better than a liberal feeding of the Park & Pollard Scratch Grain in deep litter, with their Growing Food in hoppers. To the latter you might add their Fattening Food during the last week before your show birds go out—the ratio being four quarts of Growing Food to one quart of Fattening Food. Give them plenty of milk to drink, with grit and charcoal—mixing some in the mash—and plenty of bulky green food—cabbage, alfalfa, beets, etc.,—and then let nature do the rest.

## CHAPTER X

### DISEASES

Prevention is better than cure. Indeed, with a few exceptions, there are no "cures" for poultry ills.

These things are necessary for health: good stock, proper housing, feeding, and cleanliness. Given these, and there will be very little sickness in any plant.

Good stock is the principal thing. Birds that are bright, alert, with keen appetites; with clear eyes, red combs, smooth plumage, clean legs; the male that crows, "talks", digs, fights; the female that scratches, "sings" and lays. Such birds are healthy, and will beget healthy chicks.

Breeding stock should be mature. To be on the safe side, no bird should be placed in the breeding pen before it is a year old. While most varieties are laying long before this, there are few that lay eggs fit for hatching at an earlier age. The two year old hen lays eggs that are larger, and better in every way for breeding purposes.

There is no danger from judicious inbreeding. Indeed, inbreeding is absolutely necessary to produce certain results.

#### BUT BE CAREFUL.

If the breeder is heedless or ignorant; if he uses birds that are, or have been, afflicted with any disease; if both parents have a similar fault—in any of these cases inbreeding is dangerous.

Never use a bird for breeding that has been sick. Remember this rule and live up to it. A slight ailment—a trifling cold or "off" on



feed—is not a bar. But anything serious should remove the afflicted bird forever from the breeding pen. It takes courage to do this, especially if the bird is a high scoring male. But it pays.

It is usually a waste of time and money to “doctor” any bird that is seriously ill. Better use the axe at once and be done with it.

If from healthy stock, little chicks will be healthy when hatched. If they fail to remain so the breeder is at fault ninety-nine times out of a hundred.

There are various causes for disease, among the most common being the following: Unsuitable location of buildings, lack of sunshine, dampness, vermin, impure water, lack of grit and charcoal, of green food and of fresh air and exercise. And there is no excuse for any of them.

The dusty “dusting boxes” are not used in our testing house. If the birds are dusted with a good lice powder about the first and seventh of each month there will be no trouble with body lice and no need of choking the house up with unsanitary dust. The worst lice are those that infest the roosts and nests. These can be kept in subjection by using plenty of Zenolium or the Park and Pollard Liquid Lice Killer.

Be careful about the drinking water, and equally careful about the vessels that hold it. The latter should be cleaned daily—thoroughly cleaned—and that, too, in winter as well as in summer. Look after the floors. If of dirt—which they should not be—you must dig up and cart off six or eight inches of the filthy surface and replace with new dirt. This should be done twice a year—say in April and October. If board floors are used, which are expensive, they should be scraped clean three or four times a year, disinfected, and covered with plenty

of sand. Cement floors should be cleaned twice a year, and covered with two or three inches of sharp sand and six or eight inches of oat straw.

Look after the runs. Unless you have the "no yard" houses—which are often the best—you should see that the runs never get foul. If the space is limited let it be spaded frequently—two or three times per month—from early spring to late fall. Each time mix in a liberal quantity of oats. This will start the birds digging, and will also supply a limited amount of green food. Sunflowers or field corn might be grown, thus supplying both shade and food. If large enough the runs could be seeded down in a stout lawn grass or alfalfa—for green food is a necessity.

All the foregoing is in the way of preserving health.

Don't dose the birds.

Charcoal—especially the medicated charcoal—will usually keep the bowels regular. But if the droppings seem too hard, a little linseed meal, mixed with bran in a moist mash will be effective.

In considering a few particular diseases it is best to say at once that no very sick bird should be "doctored." Kill and bury it; bury it deep; or cremate it.

The most common and fatal disease of small chicks is the deadly "white diarrhoea." In almost every case it is really an intestinal indigestion, resulting from many causes—the most common being chilling or over-heating.

There is no "sure cure" for this disease. I have carefully tested many alleged "cures," but have found nothing reliable. When a chick cannot digest its food; when it "pastes up," becomes droopy, and

“peeps” dismally, the best thing is to end its misery; for if, by chance, it recovers from a bad attack it will always be a stunted, worthless bird.

But while this disease is generally incurable, yet it is easily preventable. And the “secret”—so called—of avoiding it is first, to hatch right; second, to brood right; third, to feed right.

Careful tests show that artificially hatched and brooded chicks are more liable to attacks than are those hatched by hens. This should not be the case, and would not be the case if we understood the business as well as the hen does.

We don't. We never can.

But if we would equalize matters we should use incubators and heated brooders early in the season, and employ hens later.

Chilling is fatal. A fireless brooder is all very well in warm weather; but any man who offers to sell a “system” for keeping chicks in a heatless brooder, out of doors, in zero weather, is a knave. Have nothing to do with such a person.

Keep the chicks comfortably warm, don't overcrowd, feed as directed, and your early hatched birds will seldom have any bowel trouble.

While chilling is fatal, over-heating is equally so. Chicks can safely endure much more heat in late winter or early spring than in the summer. Therefore “mother” your late hatched chicks with hens or fireless brooders.

The fine spun theories of salaried people; the “tweedle dum and tweedle dee” arguments over the source of this disease have no practical value. You can prevent white diarrhoea. You cannot “cure” it.

Fowl cholera is a contagious, rapid and deadly disease. Symptoms are great thirst; loss of appetite; high fever; drowsiness; comb, face, and wattles seem bloodless; excessive diarrhoea; death.

There is no cure.

The treatment is preventive. Disinfect thoroughly and often. Promptly remove all infected birds. Give them water to which creolin has been added—a teaspoonful to an ordinary wooden bucket. For individual treatment with valuable birds that are under suspicion, give a small dose—a one-thousandth of a grain tablet of mercury bichloride every two or three hours. If the disease is established, then promptly kill and cremate the bird.

Genuine cholera is rare. Therefore note all the symptoms.

Roup is a cold—that means, a congestion. But a cold is not often roup. When the bird stinks—that's the proper word, for the roup "odor" is a stench—when this smell is present with the usual marks of a bad cold—don't hesitate.

#### CHOP OFF ITS HEAD!

All the roup "cures" on earth will not make such a bird fit for breeding. She is almost certain to transmit the disease, or a tendency to contract it, even though she herself should apparently be "cured."

Don't "fuss" with a roupy bird. If you do you are liable to catch the distemper—for it is very contagious.

A neglected cold is the usual exciting cause of roup. And a cold is easily cured if taken in hand at once.

As soon as you hear any wheezing or sneezing among your birds you should begin operations. A dollar cure for dime—or less—may be had as follows:

Mix a teaspoonful of pure creolin in a gallon of water. At night take a hand pump—one that throws a fine mist—and spray about the roosts so that the birds may inhale the creolin. They will cough and sneeze. Never mind. Make a thorough job of it. Repeat every night for a week. Pour a little kerosene oil—enough to make a film—over their drinking water. Give each sick bird one grain quinine pill at night. Repeat once or twice. Place enough permanganate of potash in a cup of water to color it a deep red. Dip the bird's head in the solution keeping it there ten or fifteen seconds. Repeat. Give this treatment twice daily so long as need be. If it is nothing but a "cold" this treatment will cure. If it grows worse, if the peculiar roup odor is present, then the hatchet is the only safe and sure "cure."

The disease called gapes is caused by worms in the windpipe. It mostly affects chicks from one to four weeks old, and therefore it is very hard to treat effectively.

If any of your chicks are drooping, sneezing, coughing, going about with their mouths open, look for gape worms. They are thready creatures from an eighth to a half inch long and are found clinging to the chicks windpipe.

The only thing to do is to separate the sick from the well and remove each to a new location. And the old ground should never be used again for young chicks. If you have the time, skill and patience, you may remove the worms by hand. If not, you might place the afflicted chicks in a box or barrel and let some air-slacked lime sift over them through a piece of bagging. Use care in this so that the little fellows will not strangle.

Enough could be written about other ills affecting poultry to fill a book as large as this. The writing of such a book might help a man employed by an endowed state college or station to kill time; but it

would be of little or no practical benefit. To illustrate: I might prepare a long article on tuberculosis, filled with words of "learned length and thundering sound," beginning with the "diagnosis" and ending with the "concomitant" fatality. But as there is no possible cure for the disease it would avail but little to discuss it.

To sum up: Breed from healthy, well-mated stock. Provide roomy, dry, well-ventilated houses that are free from drafts. Feed as directed. Keep the premises clean and the birds free from vermin. If these rules are followed there will be very little sickness.

And finally: **LET THE WELL BIRDS ALONE!**

Don't try to increase their growth or egg production with "tonics," "condiments," "egg food," or any other atrocities. If you do, you'll rue it.

## CHAPTER XI

### THE MARKETS

The secret of selling eggs and stock at a profit may be told in one word:

Advertise!

And the secret of continuing to sell year after year may be told in one word:

Quality!

Advertising will sell; but unless the quality is there, to back the advertising, there can be no permanent business.

Knaves have bought space in magazines from fawning publishers, and by thus sharing their plunder have robbed the public for a time; but only for a time. Their fraudulent claims and "strains," backed by no real quality, have been exploded, and they have disappeared one after another.

There is a right way to sell, and a wrong way to sell.

The wrong way—in selling market eggs—is the ordinary hit or miss—usually miss—"farmer" method. Eggs gathered and sold at odd times—stale, fresh or spoiled—never assorted for shape, size or color—and bartered at the village store at the lowest rate. Stock carried over long after it has ceased to pay. Young stock sold when prices are at their lowest.

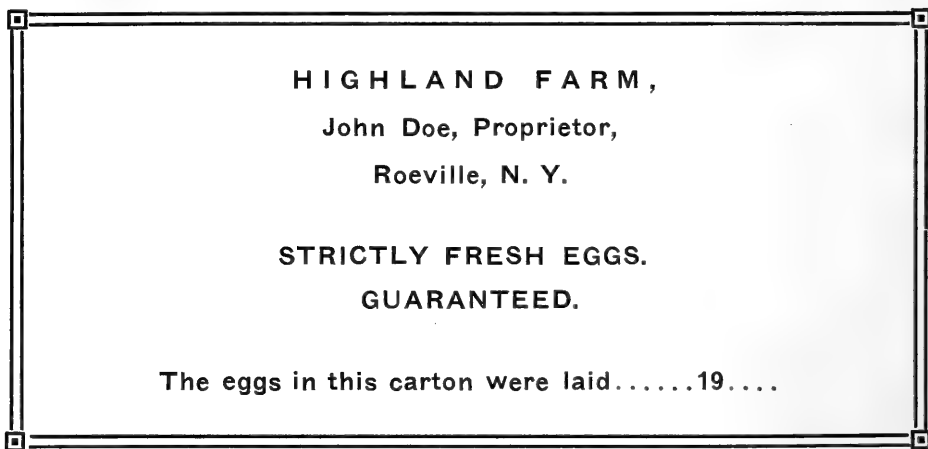
The right way to sell what is known as "commercial" poultry and eggs, is to take pains—lots of pains—and do business in a business-like way.

Get your hatches off early. Push the young stock hard. Broilers weighing from a pound and a half to two pounds command high prices early in the season, while late hatched broilers are often a drug in the market. Hens should be fattened and sold—if you run an egg farm—in their second year, before they begin to moult. Roasters, as a rule, should be confined to the larger breeds, and may be grown at a profit only where food is cheap.

Egg farming may be very profitable—or it may be a financial graveyard. The secret of avoiding the latter is to satisfy the public. If white eggs are wanted, give them white eggs. If they—with equal foolishness—demand brown eggs, then the eggs must be brown.

But whether white or brown, the eggs must be fresh, clean, and graded to size-up evenly. And the larger these fresh and clean eggs are, the better prices they will bring.

Eggs should be neatly packed in cartons holding one dozen each. These cartons, or boxes, should be labeled, with some catchy name for your farm, or yards, and sold under a dated guarantee. A typical label would read like this:





Having got your labels and boxes ready, pack a few dozen and get busy. If you live within reach of a city of fair size your market is right there. Make a personal canvas, starting in on the afternoon that the label is dated. "Eggs laid today" is a big puller. Try it. You will be amazed to see how quickly you can work up a route and at advanced prices. Sell for cash only. Make it a positive rule—**No money, no eggs!** Thus you avoid bad debts. The rule may be hard sometimes, but never mind that. Live up to it. You will be a big winner in the end.

If you go in for "blooded stock" and sell eggs for hatching, you will face a different problem.

In the beginning you must have good birds. Your stock or eggs must come from a noted breeder unless you want to go through long years of needless toil.

Show your stock; first at the smaller shows. As your skill increases, branch out. Don't be afraid to go where the big noise is made.

Stand on your feet as soon as possible. But don't imitate that flagrant faker who advertised that he had "originated a strain" before he had raised a single chicken.

Advertise. But don't lie. Don't say that you have a ten thousand dollar hen, for there never was such a thing. Don't say that your flock "averages 256 eggs per hen," for no "flock," nor even a pen, ever did that. Don't say that your six months old pullets are "all laying 26 eggs monthly," for they are not. In brief, don't try to fool people with any such silly lies. You are certain to be found out. They all are. And then you will wish that you had emulated the Father of our country.

But don't hide your light.

Advertise.

Talk big. Tell what you have done. Make a noise. That is all in the way of business, and it is legitimate business.

Don't scatter your shot. Better put a good advertisement in one prominent magazine than a little card in twenty.

If you have a good "selling face," have a cut made from your photograph and use it. But if you look like a poet, or a prize fighter or a "confidence" man—as the best of us may do—then keep your face out of print.

Advertise.

But advertise according to the season.

Don't offer eggs in October, baby chicks in November, nor stock in April.

Eggs for hatching should be advertised in late winter and early spring; baby chicks from early to late spring; stock in the summer and fall.

At the outset you cannot expect to secure the prices that are paid old breeders. But don't give your eggs away. Three dollars a setting is better than thirty cents.

The secret of getting better prices for your stock is this: Have a competent judge score them and furnish a score card numbered to correspond with the leg-band on each bird scored. Have this card made out with ink or an indelible pencil, and signed and dated by the judge. This gives each bird a standing and a value.

Advertise.

Let people know that you are offering birds for sale that have been scored by Judge So-and-so, and that you will furnish the score card with each bird. Have the judge put a price on each bird as he scores, and advertise that fact.

All this gives confidence, makes value, and will sell your birds where nothing else would do it.

And finally—

Keep right on advertising.

Before, and during the busy months, tell what you are doing. In the dull months tell what you are going to do.

Then do it.

## CHAPTER XII

### THE SHOW ROOM

Why do the most successful breeders show their birds in competition? It is troublesome and costly. Why not tell what they have, and let it go at that?

The reason for exhibiting is that people must not only be "shown," but they must know who has the winners.

Moreover, the poultry show is a great inciter of public interest. We catch the hen fever in the show room.

The "American Standard of Perfection" is the authority, and the only authority on show birds recognized in this country. Every breeder should own a copy of this book as it gives a full description of every recognized variety. One cannot breed exhibition birds without a Standard.

The value of the poultry show, both from an educational and business viewpoint, is very great.

The beginner learns more by observation than he could in months of study elsewhere.

Show your birds.

You may not "win the blue" nor a ribbon of any color; but you will get in line for future winnings.

Begin cautiously.

Don't rush your birds off to New York, Boston or any other big city the first year.

Start in at the fall fairs. Here is where many a fancier is born, for it is at the fall fairs that thousands of people get their first ideas of thoroughbred poultry.

Groom your birds carefully. See that they have clean feet and legs. Some of your best birds may be in moult. Never mind. The youngsters may not be up in weight. All right. Show them just the same, for many of your rivals will have the same trouble.

Of course you want to win at the fall shows, and here is a secret that will aid you:

**See that the birds shown in the fall were hatched at the right time.**

Thus the adult birds exhibited, say, in September, should have been hatched late in the previous year. This will throw their moult back so that they may be in good feather at that time. The young stock should be hatched about the first of April, and should be well up in weight by September. Don't get birds out for the fall shows earlier than the middle of March, for you don't want the pullets to begin laying before they are shown. This fact is very important. A pullet is at her best just before maturity. Therefore if she begins her "egg song," and you think she is ready to lay, discourage her from so doing by changing her from one pen to another.

The beginner is, at the outset, puzzled greatly over the question of choice of breeds. Frequently he is advised to take up with some one of the rarer varieties. It is urged that by so doing he will have much less competition and therefore a much greater chance to win the coveted blue ribbons. If the winning of ribbons was the sole object

of poultry culture, such advice might be good. If there was any credit in winning with little or no opposition, such advice might be good. But as prizes are but incidents, and as a winning where there is no competition is merely a walk-over, such advice is decidedly bad. To show without competition is wasted effort. One may learn far more by losing in competition than by winning without competition.

Don't go in then for the freaks. You will find that the Plymouth Rocks, Rhode Island Reds, Orpingtons, Leghorns or Wyandottes will give you plenty of variety. In fact there are 27 standard varieties of these five breeds, and about a dozen more that have not been admitted to the Standard.

For a secondary group we have the Brahmas, Cochins, Dominiques, Dorkings, Houdans, Langshans and Minorcas. These are all standard and valuable breeds. But the beginner will find that any of the more popular varieties from the first group will be in greater demand than all those in the last.

It is impossible in the scope of a single chapter to give the multitude of secrets for preparing and showing birds. Each breed, and indeed each variety, requires particular treatment. All this will be found in my special book on the subject entitled "Show Room Secrets." In this book every Standard breed and variety is taken up separately and the beginner is told, for the first time, how to breed, grow to weight, and condition birds to win.

Winning is not, as some believe, a matter of luck. Nor do prizes go by favor. There have been and there will be some dishonest showmen and dishonest judges. But the fakers are few and juggling judges are fewer yet. The standard is high and the showroom demands that exhibitors and judges shall be men of unblemished reputation.

## CHAPTER XIII

### FANCY STOCK

No man ever had a well developed attack of "hen fever" without desiring, sooner or later, to show his birds and win some prizes.

That is a proper ambition.

Moreover, it is an ambition that leads to fortune, if wisely followed.

Please keep in mind that last phrase: **If wisely followed.**

I emphasize it because too many beginners do not follow wisely.

All show birds are expensive—the cost depending upon quality. The perfect bird would score one hundred points. But no such bird has ever been seen, and there is no probability that one ever will be seen. I have scored a multitude of birds; but even in the highest scoring varieties—solid colored birds—like the White Leghorns or White Wyandottes, I have never found one that would come within several points of perfection; while in some of the parti-colored varieties—which naturally score lower than those of solid color—it is a rare bird that will go over ninety. Indeed there are some particularly difficult varieties which seldom reach that score. For this reason one should bear in mind that what would be a comparatively low standing for one of the easier breeds would be very high for another. A ninety-six point white bird may be had, but don't look for it in a Rhode Island Red.

There is nothing in which the beginner is more likely to form a wrong idea of value than in exhibition birds. I have sold a bird for \$75 and another, from the same hatch for \$5.

Why should there be such a wide difference in price? The beginner cannot understand it. He thinks that one is too dear or the other too cheap.

The answer to this puzzle is that, not considering the breeder's reputation or the value of his strain, every bird is judged by its own individual value.

Beginners are prone to think of birds as of dollars coming from the mint—that each is as good as the next; or, admitting a difference, he thinks it should be slight.

It is true that "strain" has value. A bird bred by a man of acknowledged standing is far more likely to show value than if bred by a novice. Thus I would rather have a ten dollar White Rock bred by U. R. Fishel than one apparently worth fifty, of whose antecedents I knew nothing. The former would throw stock of a known value. The latter would carry one immediately into the unknown; and the chances would be that such stock would have market value only—and poor value at that.

And here is a fact worth remembering. The beginner makes a mistake—usually a fatal mistake—in buying, at the outset, birds of exceptional quality. He does not know how to mate for the best results nor how to raise the youngsters that come from the mating. Consequently he would be courting disaster to buy such a bird.

None of the really great breeders will sell a bird of the highest quality to an inexperienced man, unless he has a manager who knows



how to handle such stock. They know—those men of quality—that otherwise failure would result; and they place reputation above dollars.

The beginner should buy good stock—birds good enough to show if need be—but not thousand dollar birds, nor hundred dollar birds. A trio at a hundred dollars, or a pen at a hundred and fifty, properly mated for best results, is as high as any novice should go. And he may well begin with cheaper birds than that.

A common mistake—and this is a “secret” known to every experienced fancier—is that of the amateur who buys a blue ribbon winner—especially a male—and places him at once in a breeding pen.

Don't do it.

Birds must be shown. Public interest demands it. Show birds must be used—at the right time—as breeders. But if you possibly can avoid it do not place the birds you have shown in your breeding pens for weeks after; months would be better; a whole year would be best.

Why?

Well, here is another “secret”, also well known to every breeder of experience: No bird that has been shown is fit to use as a breeder until he has had a thorough rest and is again in condition for breeding.

Show “condition” and breeding “condition” are not always the same. Often they are very far apart. A bird, of the variety where weight counts, which has been stuffed to make that weight, is not fit for the breeding pen until restored to a normal condition.

The selling of show stock is an art not easily mastered. The beginner may as well understand at the outset that he cannot get the prices paid to men of established reputation. He may have as good

individual birds as Fishel, Tompkins, Cook, Tecktonius, or Kaufmann and Windheim. But if he charges as much for stock as these well-known breeders charge, the buyer will, naturally, go to them. The beginner, therefore, must make his prices low at first, or he will do no business.

One secret of success—which is a “secret” only to the more observing—is that of advertising.

One of the “secrets” of successful advertising is to tell the truth.

Don't imagine that because some big swindler buys his way into print, filling page after page with lies about his “strain”—which he “originated” by the simple process of hiring somebody to buy some birds for him—don't imagine, I say, that he is successful. He may carry on his nefarious business for a time, but, sooner or later, he pays the penalty. Don't imagine that the poultry business is all crooked, and that you, too, must be a crook, because some “system” knave is advertising, with apparent success, that he has made tens of thousands of dollars with poultry on a few square feet of land. There is but one end to all such cheap rascals. Either they quit suddenly or land in the penitentiary.

Lying never pays.

Therefore tell the truth.

At the outset you will find that the “Classified” advertisements pay the best. These cost a few cents per word, and give better returns for the money invested than can be had in any other way.

From November to May, inclusive, you should advertise eggs for setting—also stock, if you have any for sale. From June to October, inclusive, advertise your breeders which you may have for disposal

and also your young stock. Give prices for single birds, pairs, trios and pens. Make your prices low. Advertise in a few of the best poultry magazines. Don't expect too much at first. You won't get rich in a month, nor a year, nor in several years. But if you tell the truth, if you carry out every promise, if you give your customers a little the best of it every time, you will surely—though perhaps slowly—build up a business that will lead to fortune when the “get-rich-quick” knaves are “broke” or wearing stripes.

Even in your small advertisements be careful what you say.

Don't brag.

You may have a wonderful pullet with an apparently authentic trap nest record of 256 eggs in a year. Even if so don't pretend that this pullet is a “flock” and advertise that your “flock has an average of 256 eggs in a year.”

Be modest.

Look through the advertisements of men who have made a worthy name in poultrydom, and notice how little they boast. Isn't it better, then, to copy such men than to follow some ignorant faker who tries to push himself ahead by stupid bragging and untruthful boasting?

If you are in doubt, then your experience will give the answer.

You will need printed matter. A neat circular giving your winnings—if you have made any—or of the birds from which your stock came; a modest letter-head and envelopes to match; labels for your egg boxes. These you will need at the outset. The circular and letter-heads should be of the very best quality—best paper, ink and workmanship. As soon as possible have photo-engravings made from good photographs—for pictures are great pullers. Never use “stock” cuts. They cheapen you in the eyes of most people.

Occasionally you will meet with dishonest buyers. They will tell you that the eggs were broken, that they were infertile, that they did not hatch.

Never mind.

You may not believe what they say, but give them the benefit of the doubt. Duplicate their order at half price, or, as I often do, at no price. Pocket the loss and let it go.

It will pay in the end.

To make money on fancy stock one must be content to make haste slowly. The trade along this line is wholly a matter of confidence. One must gain that confidence before it has a financial value; but, when once established it is an asset of the greatest value. The good-will of a business like that built up by Fishel or Tompkins or Cook is worth an immense fortune; for, in each case, it has been built up by years of painstaking labor, in which truth and square dealing have been the foundation stones on which their fortunes are built.

## CHAPTER XIV

### POULTRY SECRETS

A secret is something studiously concealed. Many widely advertised "secrets" have been sold at high prices, which proved on investigation to be merely well known facts. One of the worst of these fakes was a little booklet advertising a so-called "original strain" of birds, eked out with a few facts stolen bodily from a produce firm's year book, which this firm sent out gratis! In this "way" the knave was able to sell a catalogue of his pretended "strain" at a dollar each. The only original thing in the whole wretched swindle was the advertising, which the fellow hired somebody to prepare, and which heedless publishers accepted—not thinking, possibly, that in taking his money they were sharing his plunder.

Other alleged "secrets" were those of the various "systems"—some good, some bad, mostly bad, because they promised impossibilities. One fellow had a "system" for making more than sixty dollars yearly from each hen! Another swindler of the same sort advertised that his "system" would enable **"six people to make a good living from six hens!**" Aided by his stool pigeons this petty cheat robbed thousands of unsophisticated people before he was finally taken in hand. The poultry business offered a rich field for these contemptible crooks, because it took the authorities some time to close down on them. And in the interim the industry suffered and thousands were plundered, directly and indirectly.

Many of the secrets discussed in this book are known to various breeders. Some of them have been disclosed and are secrets no

longer. They are published with such additions or improvements as experience dictates. Others are new discoveries now made public for the first time.

### MATING SECRETS.

The great breeder is one who has learned how to mate his birds for best results for eggs, meat or exhibition. Percy A. Cook, with his wonderful Orpingtons; Fishel with his massive, snow-white, non-sitting Plymouth Rocks; Lester Tompkins and Kaufman and Windheim with the Rhode Island Reds; Parks, the "bred to lay" Barred Rock man; Young's White Leghorns and Tecktonius with his superb Buff Leghorns are instances of what can be done in scientific mating.

Let us consider the proper mating of certain varieties:

**Barred Rocks.** The secret of mating this grand old variety for producing big birds and big layers is this: Breed to the female line, using light colored males, and always from two-year old hens. Select big, active hens that have large, red combs, and are broad between the legs; whose feathers, on each side of the comb "stand out" instead of lying smooth; the singers, eaters, scratchers; the first off the roost in the morning; the last on at night. Select those that lay best the second winter, rather than those that have laid themselves out in their pullet year. In other words, breed from those that are on the up grade instead of down. Do not use a male that is too heavy, nor one that bullies the hens. And be sure that his dam was a good layer. When the breeding season is near give muscle making, strength building food. You want abounding vitality, rather than quantity, in the eggs laid for hatching.

In order that the fertility may be good the male should be a well developed cockerel or a lusty yearling. Old males are not good breeders. These rules are general and apply to all breeds and varieties.

By breeding to the female line you will get good pullets both for utility and exhibition. You may use your very best hens for breeding—the skill required being in the selection of the male. He should be lighter than the hens but be careful that he is not a “washed-out” open-barred bird. The barring should be sharp, regular, with as strong barring on the flights as is possible to get in a pullet-bred male. He should be a rangy bird, standing well up on well spread legs, with a four—or at most a five point comb. Don’t use a “logy” bird, and for that reason be very careful in selecting one that is over weight, for such birds are liable to be sluggards. See that he has a good red or bay eye and be sure that he comes from a good laying strain.

**Leghorns.** In no breed is vitality so quickly depleted as in the Single Comb White Leghorns. Bred primarily for eggs, pushed to the limit, then cast aside after the first year, it is only natural that some played out stock should get into the breeding pen. When this happens the result is disastrous. The chicks are weak, “leggy,” with thin, “crow” heads, long, drooping wings and pinched breasts. Utterly lacking in stamina, their growth is slow and they fall easy victims to the dreaded white diarrhoea.

In breeding White Leghorns observe one cast-iron rule: Breed only from two year old hens, from strong, alert birds that were not forced to unusual laying in their pullet year.

The foolish craze for extra low tails has caused some breeders to throw White Minorca blood into their Leghorns, with the resulting pale legs and flat backs. It is bad practice. **Remember, the Standard calls for a tail only five degrees lower in the Minorca than in the Leghorn.** And a judge who knows his business will penalize a Leghorn with too low a tail as surely as if it be too high.

Breed from erect, bold, upstanding birds. And get your breeders as tame as possible.

The buff color in all varieties is a difficult proposition. Buff is a "made" color—a combination of red, white and black. To blend them into that "rich, golden buff," required by the Standard, demands skill and experience. White is the hardest to combat. There is only one way, if you do your own mating, and that is to spend a season in making test hatches. The work is so intricate, so difficult that I advise the beginner to purchase either tested birds from a reliable breeder, or else secure eggs from such birds

Rhode Island Reds breed very true to type, and very untrue to color. The "secret" of securing good color in these birds varies with the different breeders. Each has his own. But the following general rules are necessary in all cases: The Standard calls for red undercolor throughout in both sexes. But if your birds are sound in hackle, wings and tail, and if the male and female are reasonably matched in surface color you need not fear a little smut in the undercolor of the female. Indeed, it will be an advantage if the male is a clear, bright red, as it will prevent the chicks from running into buffs.

In mating Reds it is best to use a male that is under exhibition weight. Otherwise you are likely to get stilty, "gamey" cockerels.

Houdans are not as popular in America as their merits deserve. They are good layers of large eggs, non-sitters and excellent table fowls.

In breeding this variety regularity of plumage should be carefully considered. Too often this is overlooked. The Standard requires that the surface plumage in each sex should be glossy black, and that about one feather in five be tipped with white. This proposition should be carried out regularly. To secure it breed from evenly marked specimens. I have got the best results from males that were somewhat lighter than the females, though this does not follow in all cases. It



would appear, therefore, that each breeder should find out for himself the best method with his own individual flock and mate accordingly.

### SECRETS OF SELECTING LAYERS.

It is a trite but true saying that the hen that lays is the hen that pays. Among the very best "bred to lay" pullets there will be some that will never pay for their keep. Such birds should be marketed along with the culls. But the trouble has been to distinguish the prospective layers from the loafers. It will be found to be not especially difficult when the secret is known. And here is the secret:

Three things require especial consideration when selecting future layers. Observe them in order:

First—General appearance.

Second—Shape.

Third—Conduct.

**Appearance.** The pullet that will lay well always looks well. Her comb is bright red, eyes are brilliant, feathers glossy. As noted, the feathers on each side of the comb stand out like brushes. This has proven to be a sure indication. The "why and wherefore" has never been clearly explained, but results have been noted.

**Shape.** A wide and deep abdomen, a long and broad back, well spread tail, a full, red comb, bright eyes, broad, full breast, a duck-like walk—all these indicate the layer.

**Conduct.** The pullet that will lay well always eats well. She is scratching from dawn to dusk—the first to get busy in the morning.

the last to quit at night. She never loafes time waiting for food; she gets out and hustles for it. Don't be afraid of fat. The lean, scrawny pullet never makes a layer.

**Breeders and Winners.** In theory, the bird that "wins the blue" should be the best for the breeding pen; but this does not always follow. A first prize pen of Barred Rocks, for instance, would make very sorry breeders. And in several other varieties the "show" male is usually unsuited for breeding. Of course there are exceptions. The Grand Championship Pens of Lester Tompkins, from which he sold all the eggs he could spare, at \$4 each, were also wonderful breeding pens.

One point should always be kept in mind. **No unknown bird should ever go into a breeding pen.** This means that you should know the strain from which the bird comes. And a "strain" is not "originated" by purchasing birds from other breeders, nor in a 3 by 6 coop.

### THE SECRET OF FERTILE EGGS.

Nothing annoys a buyer more than to find a lot of infertile eggs among those purchased. And surely nothing annoys a breeder more than to find that eggs—possibly from his choicest pen—are running infertile.

How can this be remedied?

What is the secret of fertile eggs?

I shall tell you.

But before doing so it will be well to tell the beginner once again the difference between an egg that is fertile and one that is not.

What did you say? "If it rots it is infertile." Did you say that? Yes? Well, you are wrong.

An infertile egg will not rot during the period of incubation.

Therefore,

If an egg rots while incubating you may be sure that it was fertile.

I have told this fact again and again. I repeat it now that it may not be forgotten while considering this subject.

Fertile eggs!

Don't expect them by following any of the alleged "systems." Merely alternating males will not do. Yet this has been sold as a great "secret." Breeding old males to pullets or cockerels to hens will not, of itself, produce the results. No "system" of feeding will do it.

We may as well admit at the outset that the hundred per cent. fertility seen in wild fowl is very uncommon among domestic birds. But to get the highest fertility possible we should follow nature so far as we can. To that end we should separate the sexes until the breeding season is on. We should use only mature birds for breeding. The age of maturity varies with the breed and care. The Mediterraneans, of course, mature earlier than the Asiatics; and well fed birds that have been kept growing every minute with high grade food, like the Park and Pollard Chick Grain and Growing Food, will mature quicker and produce far more fertile eggs than those that have been left to hustle for themselves—fed poor or improper food and in limited quantities.

Generally no male should be used for breeding before he is a year old. And hens are always better than pullets.

Watch the male.

If he gives attention solely to one or two of his mates you should either alternate him with another or remove his favorites. The former plan is best.



Where the Little Chicks Get Their Start in the Townsend Tests

See that the breeders have plenty of green stuff, and get them out of doors whenever you can.

Make them exercise. You will get no fertile eggs from drones.

### EGGS IN WINTER.

The secret of getting eggs in winter depends upon three things: The right strain, the right hatching, the right care.

Winter laying is unnatural. Hens must be bred to it. This is not as difficult as it seems. The Leghorn is not considered the best of winter layers. Yet a pen of four exhibition Buffs, bred by F. A. Tecktonius, of Racine, Wis., laid in our test pen as high as 22 eggs in seven days in February. Since Leghorns can be bred to such winter laying, the heavier varieties may surely do as well or better.

How is it done? Well, here is the secret: Hatch your birds so that the pullets may begin laying late in the autumn. As chicks keep them growing every minute. Stuff them daily. **Don't let them begin laying too early!**

I have made the last rule emphatic. A pullet that begins laying too early is apt to "soldier" in December and January when eggs are highest in price.

Keep the pullets busy. Don't allow any old hens nor males to hector them. Feed them to the limit with the right kind of food—and you will get the eggs.

### BREEDING EXHIBITION BIRDS.

Like produces like—as a rule; but there are exceptions. One exception, as noted, is that of the Barred Plymouth Rocks, when shown in mated pens. Such a pen would not breed winners. You must double

mate these birds using one pen to produce exhibition males and another to produce exhibition females. And at that you will be lucky if you get one really high grade show bird out of a hundred chicks. Indeed, this follows true with most breeds. And that is the reason why high grade exhibition birds command such big prices.

The secret of getting exhibition birds of any variety is to mate your birds so that one sex may compliment the other—meaning thereby that the male must supply any shortcoming in the female, and vice versa. The subject is too extensive to be treated fully in a single chapter. It is thoroughly covered in my book "Show Room Secrets," to which the reader is referred, if interested in this branch of the poultry industry.

#### DYING IN THE SHELL.

It is most discouraging to find that a number of well developed chicks, almost ready to hatch, have "died in the shell." Low vitality may account for this in some cases; but usually the chicks die for want of breath—smothered in the shell.

Lack of oxygen!

There you have it.

Far more incubator chicks die from this cause than are lost under hens.

The secret of prevention is to supply more oxygen.

I have saved many chicks that were ready to pip by dipping the eggs in hot water for a moment then removing them quickly so that the air might work in through the opened pores of the shell. A better way, especially with incubator eggs, is to use the Oxy-Vitalizer,

invented by Dr. Merkley of Buffalo. This is an inexpensive attachment which may be applied to any incubator, and which greatly increases both the number and vitality of chicks hatched.

### EGG EATING.

This is a vicious habit. An egg eating hen will demoralize a whole flock, for the trick is easily learned.

Various "cures" have been suggested. Paring down the offenders beak; filling an egg shell with nauseous compound; leaving china eggs about; any of these methods may prove effective. And they may not. Prevention is better than cure. Provide nests that are so high in front that eggs cannot roll out. Place a number of china eggs in the nest. Use trap nests and have them quite dark. Furnish plenty of oyster shells, beef scraps, bone and green food. Gather the eggs often, and feed scratch grain in the litter at short intervals. Keep the hens busy and they wont have time to learn bad habits.

### HOW TO GET MORE PULLETS.

An excess of pullets is desirable, and for unknown ages men have sought to find a way to obtain them. There have been "ways" without number. The shape of the egg; the time of the moon; the sizes of the fowls all were sure to work—until tried.

After a careful series of tests it has been demonstrated to the satisfaction of many people that mating a reliable cock that will be two years old late in the following spring, to very large and active females that are at least one year old, and by allowing from twenty-five to forty of such females to one such male the offspring will be pullets by a good majority.

## CHAPTER XV

### THE TOWNSEND TESTS

For a number of seasons I have been conducting a series of important tests in the interests of the poultry industry

Unlike all other tests at home or abroad there are no ulterior motives in these. They are not conducted to advertise a newspaper nor a college. No admission fee is charged. Breeders who enter their good birds—and only birds of quality are accepted—such breeders receive, as they deserve, the full benefits of the publicity achieved. These tests are not confined to laying as are others. They cover a multitude of interesting and valuable questions—laying, hatching, vitality, fertility, diseases, feeding, growth, housing, appliances and so on and on.

These tests are absolutely impartial. If the birds entered by famous breeders make big showings—as have those of U. R. Fishel, the late Robert C. Tuttle, Lester Tompkins, Wm. Cook and Sons, F. A. Tecktonius and others of their class—it is their good fortune. If a new breed, unknown and unheralded, wins first honors as did a pen of Partridge Plymouth Rocks entered by S. A. Noftzger, well and good. Known or unknown, big or little; all are free to enter; and there is no charge for so doing.

These tests are practical. Facts are sought, not fancies; results, not theories. And the results thus far have been satisfactory in every way.

Among the facts established are these: That little chicks do not require feeding five or six times a day. We fed once a day, and the



chicks thrived exceedingly. That dropping boards are needless and unsanitary. We have done away with them entirely. That if given the same chance a good, healthy Leghorn will eat as much as a Rock—with this difference: that the Leghorn wastes surplus food in needless exercise, while the Rock wastes it in needless fat. That the claims made of a whole family of six living off the product of half a dozen hens—of tens of thousands cleared yearly from half an acre—of pullets laying at three months—or “flocks” averaging “258 eggs yearly per hen”—of baby chicks thriving out of doors in fireless brooders during zero weather—that such claims were absolutely false. That there is no “best” variety, although some are better than others. That laying is more a matter of breeding and feeding than of breed. That sex can be influenced to a considerable degree. That chicks die in the shell chiefly for lack of oxygen; and many more equally valuable and interesting.

These tests will be continued for an indefinite period, for there are multitudes of facts yet to be established.

Therefore I shall be pleased to hear from breeders at any time. If you have a popular variety that you want tested; or an old variety that has been neglected; or a new variety that is fighting for recognition—let me hear from you, and I will help you so far as I can, and without any cost to you. The same offer applies to anything new in the way of appliances or products.

Meanwhile you are cordially invited to visit me whenever possible. My testing plant is open for inspection every day. If you are an old breeder you are surely welcome. If you are a beginner you are doubly welcome. I thank you one and all, and hope to see as many of you as possible whenever it is possible for you to come.



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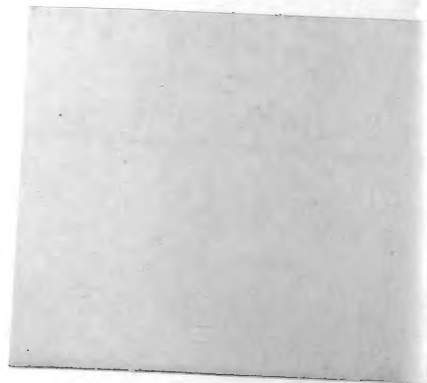


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