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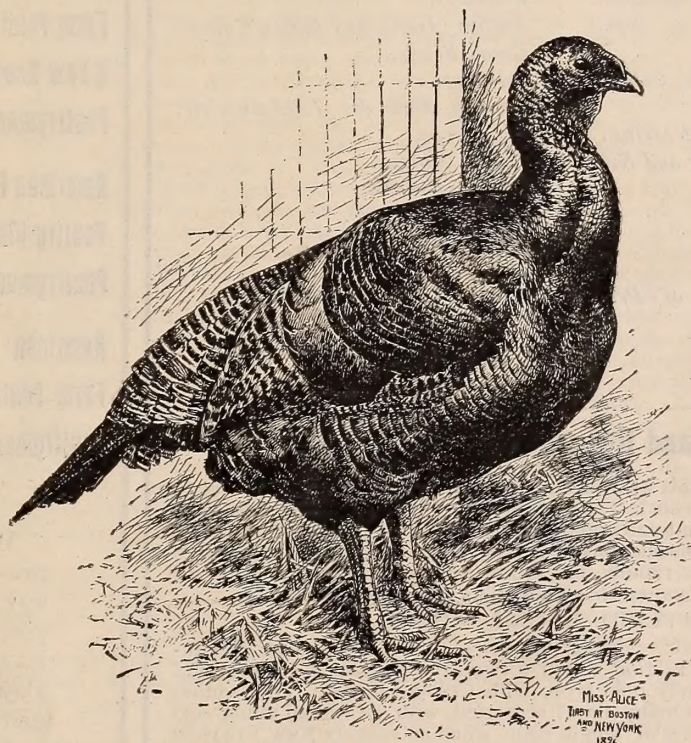
The Poultryman AND Pomologist.

DEVOTED TO PRACTICAL POULTRY AND FRUIT CULTURE.

Vol. I.

South Freeport, Maine, November, 1899.

U. S. Department of Agriculture No. 1.



MISS ALICE.

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A Standard Guide to the management of Poultry for Domestic Use, the Market or Exhibition,

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ENTIRELY RE-WRITTEN,

and the remainder thoroughly revised. The work in its new dress is CONSIDERABLY ENLARGED, and two of the Colored Plates are devoted to varieties of poultry which have been recently introduced. Endeavor has been made to embody the essence of that

PROGRESS AND INCREASE OF KNOWLEDGE

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POULTRY FARMING,

and some endeavor has been made to set forth that truth, and to correct the exaggerations which have been published on both sides. The author has done his best to make this new edition of THE PRACTICAL POULTRY KEEPER as practical as ever, whilst embodying the *best knowledge and methods of the present day.*

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The Poultryman AND Pomologist.

DEVOTED TO PRACTICAL POULTRY AND FRUIT CULTURE.

Vol. I.

South Freeport, Maine, November, 1899.

No. 1.

General Care and Feeding of Fowls.

(Written for the Poultryman and Pomologist.)

The beginner who launches into the poultry business today with good thoroughbred stock (not necessarily high-priced birds), but just good, hardy, thoroughbred stock, and has his land and good comfortable buildings for his fowls, has an ideal foundation laid to establish a successful poultry business.

But there are a thousand and one things to learn, and one never learns all of them in a day or week, but it takes years of careful thought and study to successfully manage the poultry business. The beginner is very apt to over-feed poultry, more so than to under-feed, with the consequence that the birds will shortly become overfat, and eggs will be few and far between. If the careful, observing poultryman, when he feeds his fowls, notices that they act lazy and seem indisposed to hunt and scratch for the grain which he scatters among the straw and litter, he knows that these birds are being over-fed and the grain ration must be cut down, or serious trouble will surely result. At the same time, one may go into another pen in the morning, and the fowls will be down from their perch as soon as there be the slightest sign of light and will go right at work hunting for particles of grain, and these hens seem lively, and are healthier, happier and are the ones that give the profit in the shape of filling the egg basket, while the former are sure to produce but few eggs, if any at all, and at the same time are more subject to the different diseases.

How seldom it is that any one sees a bright, healthy, active hen ever attacked by disease, provided of course that she has the right kind of care and good, clean, warm quarters. Sometimes, of course, one will occasionally "kick the bucket," an apparently healthy fowl, and one that has been laying right along, these things are to be expected and must be overlooked.

Try and feed your poultry so they will keep just a little hungry always, do not think that the biddies want to be starved to death (far from it), but just keep your eyes open, keep a watch to see if they hang listlessly around, do not go at the food as if they were hungry, and watch the other way also, if they seem to act hungry after their meal is eaten, give a few handfuls more, and after a little time, one can tell almost exactly what every certain pen will eat. Anyone cannot feed safely by measure, for no two pens will hardly ever eat just the same quantity of food. Some feed their hens a quart to ten hens, and stick right to that, no matter what the breed be. This is entirely wrong, for a Leghorn will stand a great deal more food than a Plymouth Rock and not get fat, owing to their active nature. Feeding a pen by measure is all right in some cases, but not mine. Feed what the fowls want, whether it be a pint or two quarts. A person beginning the poultry business should have a good variety of grain foods, as fowls do better with a change occasionally, than they do

confined to the same food the year around. This supply should also consist of some sort of animal food, grit, shell, cracked charcoal and cracked bone. Cut clover, salt and the numerous other articles which are used on a poultry farm he should have in stock. Mash fed once a day is absolutely necessary to secure the largest egg yield. I know there are many, yes hundreds of poultrymen, that still cling to the old way of feeding the mash in the morning, but if one cares to take a step in advance in the poultry world, he must drop the morning mash. Mash fed at night is far more satisfactory, and I cannot see a single reason for feeding it at morning instead of at night. Some say they feed the hot mash in the morning to warm the fowls up. That may be all right, too, but if I had a hen that could not get warmed up by hustling after grain in the loose straw for her morning feed, she would have to hustle out of that pen into the butcher's wagon.

Again, if the mash is fed at night the hens may be allowed to eat all they desire, and they go to roost, happy and contented with a crop filled with the mash that tends to increase egg production, while if fed in the morning, it has to be fed carefully, or the fowls will eat too much, and consequently will have no desire to scratch till way along towards noon. Of course hardly any two poultrymen feed a mash just the same, but the following seems to have the best effect on my poultry in the way of producing eggs. In winter or extra cold weather more meal should be added, as it is more solid and heat producing than other grains. Take two parts cut clover, two parts ground oats, one part meal, one part middlings, one part shorts, mix the grain foods together, and add a little salt and charcoal twice a week. Let the clover steam and not cook, as cooking blackens it and boils the juice all out of it. Let it steam for about two hours, and it will come out looking and smelling good enough for one to eat, himself, if he felt so disposed. Add the clover to the grain and enough boiling water to make a crumbly mash, and be doubly sure that it is not in the least sloppy. Try and get it so you can pick up a handful and not squeeze the water out of it. It should be thoroughly mixed so no clover is found in lumps. Animal food such as boiled beef and bone or Bowker's Animal Meal should be added at least three times a week in the proportion of a quart to thirty hens. Contrary to a great many perhaps, this mash contains no cooked vegetables. My reason is this:—when cooked vegetables are mixed with the grain all the stirring and mixing cannot prevent grain from sticking to the vegetables and forming lumps, and of course a hen would get one of these lumps and run into a corner and peck away at it, and when she came back to the trough nearly all the grain was gone, and she had to content herself with mostly vegetable and no grain for supper. After watching this thing a great many times I discarded the vegetables entirely from the mash, and gave them the vege-

tables (uncooked) about three times a week, thrown into their scratching sheds. This was far more satisfactory than the previous way.

Another thing of importance that every up-to-date poultryman ought to have is a green-bone cutter. The fresh bones can be procured of your butcher for nothing to compare with their value when fed to the laying stock. Green cut bone should be fed at least three times a week, if it can possibly be had.

Every pen of fowls should be watered with fresh water every morning, and at noonday if the dish is low or the water dirty in the least. Keep a grit, shell and charcoal box in every pen and make sure that it is always well filled. Have a good warm poultry house, with a good chance for the biddies to scratch and dust. Keep the dropping boards cleaned off at least twice a week and then use coal ashes and plaster on the dropping boards. Keep plenty of straw or other coarse material for them to hunt for their grain in. Kerosene the roosts once or twice a week, and give them plenty of room, and you will have but little doctoring to do. Cracked corn, oats wheat and barley make the morning food for the fowls the year around. The grain may be mixed or fed separate or most any way to make a variety. Give them just enough so they will have to work nearly all the forenoon for it. Taking a pen of ten fowls that will eat a quart perhaps, and another pen will want only a pint, right beside them, so one must keep a close watch to secure best results. If any noon feed be given, it should be very light, and of something that will make them work. Millet is excellent for this purpose. Have the mash previously mentioned ready at night, and give them their fill of it and they will go to the roost a happy and contented lot of fowls after working all day, and if they are early pullets or hens that moulted early, there is no reason why your extra care and attention should not be rewarded by a well-filled basket of eggs for the market at Thanksgiving time.

FRED L. DAVIS.

The Muscovy duck, says an exchange, is one of the largest of the duck family, and is very hardy. Crossed with the Pekin or Aylesbury breeds, a superb fowl for market results. The cross-bred birds are sterile and the eggs do not hatch, which indicates that the Muscovy may not be a true duck. Their eggs require the same length of time for hatching as do those of the goose.

Bees, small fruits and poultry keeping make a good combination, and with good management will make a nice living. One advantage is that only a small acreage will be necessary.—Ex.

Especially when given a good range, it is better to keep the appetite sharp and compel the fowls to be active and search for food.

Does Breeding to an Exhibition Standard Detract from Utility Qualities?

(Written for the Poultryman and Pomologist.)

With the question standing as above, I am bound to admit that, in a considerable degree, *it does*.

That tempting bait, the "showroom honors," has led many fanciers to pay practically no attention to the egg or flesh-producing properties of the stock they raise; and in most instances when they are in shape to raise a few prize-winners every season their birds are by no means up to the requirements of the average "utility" (so called) poultryman.

But, if these breeders can get more money, or more pleasure, or more of both by their methods of conducting the business, then, provided they make no other *claims*, they are certainly not to be found fault with.

But let us change the subject so that it will read "Does Breeding to an Exhibition Standard *Necessarily* Detract from Utility Qualities?" and I unhesitatingly answer it negatively.

Among those not acquainted with the facts in the case a misconception as to the meaning of the "Exhibition Standard" is general and has an effect very detrimental to the fancy. I refer to the belief, current in such circles, that a bird bred to an Exhibition Standard is a bird debilitated. Now that is all wrong; a bird must be *healthy* and endowed with a strong constitution in order to develop the size, weight and conformation required by the standard referred to. Who ever saw a winner in the heavy classes at our representative winter shows that was of a sickly nature? What else do you need in this line for your "Utility" specimen?

Let us note what "Exhibition" *form* has to do for the market poultterer. In every breed that he uses the "Exhibition" requirement is a "full, deep, broad, fully developed breast." How many birds, failing to fulfill this requirement, win at the best shows? What other requirement would mean more heavy weighing breast meat? To put it stronger, how would the "poult" grower amend the Standard to better his condition? It may be that in some instances plumage is preferred to shape in the showroom; but that is the fault of the judge and should not be laid to Exhibition Standards.

Between the exhibition type and the egg-laying type I can make no comparison; because, I have not yet been able to fix upon a type for the great layers. I have had birds of the generally accepted type that have laid very well, and I have had birds of other and, in some cases, directly opposite conformation, that have laid equally well.

But I am certain that birds of the best exhibition type may yet be first-class layers and this is what the majority of poultry-keepers want.

I believe that the way to bring about the desired result is by careful selection supplemented by such care as is calculated to produce eggs. Of course a reasonable amount of caution must be used or the exhibition qualities of the birds may be spoiled.

The best and most carefully laid line of great layers will yield to two seasons of feeding for eggs at hatching time and at that time only.

I have always been interested in the subject of our discussion and, working along the lines that I have indicated, I

have succeeded in producing in my prize-winners the habits of laying eggs and of laying them frequently. For instance the hen that won third prize at Boston last winter has a record of over two hundred eggs in a year; and I have others that are valuable in both capacities.

H. A. NOURSE.

New England and Poultry.

(Written for the Poultryman and Pomologist.)

It certainly argues well for the future of the New England states when we see so many young men (and for that matter, women, too) casting about to see what occupation can be successfully carried on on the farm.

The fact that there is not room for all in the large cities, or if there is, that the methods of life there are not conducive to the highest enjoyment of living, is slowly but surely dawning upon them, and this awakening, I feel sure, will result in a few years in the re-peopling of those now deserted places with the class of sturdy men and women that in times past have made the name and fame of New England a household word throughout this broad land.

The raising of horses, cattle and sheep, though much more promising than for some years past, requires the possession of considerable capital to make even a very modest beginning, and then several years must elapse before the returns begin to come in.

Not so with poultry. A good breeding-pen and a dry goods box made weather proof and reasonably lighted is all that is required; yes, even less will do, for the writer's start nearly forty years ago, consisted of an old ash barrel, a three year old hen, and a cockerel scarcely four months old. It matters not what the start is, be it ever so humble, if the boy or girl only possesses the determination to make poultry keeping a success.

The greatest trouble with poultry is that it increases too fast for beginners, faster than they acquire proper knowledge as to how it should be kept to make it profitable.

Nature supplies most of the wants, without money and without price, pure air, pure water, sunlight, dry leaves for scratching material, dry earth for cleansing purposes, etc, are at one's command, and the hens, if properly fed, will lay eggs enough to more than pay their keeping and furnish some for hatching purposes, so that really all the capital a beginner actually requires is money enough to pay for his breeding house and dry goods box, and have enough left to purchase the food on which to raise his first year's chickens.

The person, be it man, woman or child that is satisfied to thus commence at the bottom and work up is the one that will make the most successful poultry keeper in the end. "Great oaks from little acorns grow."

Take all the good poultry papers you can afford, visit all the poultry yards you possibly can, attend the poultry shows whenever possible, study, think and reflect, and if you get in a tight place, go to your paper for advice.

If I have awakened enough interest in you, to get you to start in the business, I will try to tell you something in my next article about caring for your birds.

FRED B. COCHRAN.

In nearly all cases early matured fowls pay a better profit than those that mature slowly.

Poultry Lessons.

At the agricultural fairs where regular poultry show methods govern the awards and displays, the farmer who is interested in poultry can by inspection gain much valuable information. It is at such fairs that the expert poultry judge in his awards selects the best of each of the pure breeds. By studying the awards it is comparatively easy to determine the true type and characteristic excellence of the breeds. Intelligent study of the pure breeds of poultry at such leading agricultural fairs as Hagerstown, Md., and Carlisle, Pa., will reveal some very interesting facts and at the same time upset some very silly theories. There are farmers who really believe that pure-bred poultry are inbred until they are weak and unhealthy. Ask them why they believe it, and they can only say they have heard so. These same farmers do not believe in pure-bred cattle, sheep or swine, for similar reasons. They are going through life chin-deep in prejudice, letting their silly theories become millstones around their necks, keeping them away from progress. Let this class of farmers examine the display of pure-bred poultry at a first-class poultry show or an agricultural fair that makes pretensions to having a poultry exhibition on the lines mentioned. What do they find? Specimens of all pure breeds, old and young, that are perfect marvels of thrifty growth and vigor; specimens that are beyond the standard requirements of weights, and each respective breed impressive in its uniform excellence and typical characteristics. Can any of these doubting Thomases show specimens from among their scrubs that will half equal in weight any of the pure-bred fowls of the same age? No. "But these men are chicken cranks, and look at the care they take of them." That's just the point. Where a man has a good thing it pays to take care of it. There are farmers in the dairy business who own herds of pure-bred Jerseys, Holsteins, Ayreshires, etc. They are all "cranks"—their success proves it.

The man who makes poultry raising a success makes a study of it. Good poultry exhibits are the best of schools—provided, always, of course, they are judged by experts. This proviso is always necessary, because there are some agricultural fairs so far behind in their ideas that they economize by having the poultry display judged by a cattle judge or a local committee. The economy amounts to this usually: there is about four times as much money paid out for prizes on culls and disqualified pure breeds as it would cost to employ a competent poultry judge. Each year the quality of the poultry exhibits grows more and more inferior at such shows. After a while the exhibits become so poor and few that they are a positive disgrace. Farmers, therefore, who are commencing to take an interest in good poultry should be cautious that they make their studies in good schools.

With regard to any breed they may fancy and conclude to try in a business way, with an idea of profit, they will find that there is "as much in the feed as the breed." By this is meant simply that no matter what breed may be selected, it must receive "crank" attention to secure success. Scrub treatment will result in scrub results, even with pure breeds. The farmer who keeps Plymouth Rocks, Wyandottes, Langshans or Brahmans can by careful selection improve their utility qualities. Pedigree is a good thing as far

as it goes, but it is the record of results that makes the real money value of the fowls, just the same as in cattle. A Jersey cow may have a pedigree much longer than the cow, but unless she has a churning record she is comparatively valueless. A Plymouth Rock hen may come from prominent ancestry, yet if she is not an egg layer what good is she? The farmer will find that proper selection will add size, vigor, thriftiness and greatly improve egg-laying qualities to any of the pure breeds. In thus improving a flock it will generally be found that the specimens that make the quickest and best growth and possess in the greatest degree the desirable utility points are likewise those that have in the most distinctive degree the true type and plumage markings. Thus the complaint that "breeding to feather qualifications" is injurious is utterly unfounded. Study and learn the facts.—*Baltimore Sun*.

Selecting Winter Layers.

In selecting your stock for winter laying hens, it is always best to set aside for this purpose the strong, vigorous, early maturing pullets, not necessarily the earliest hatched specimens, for some of these may not mature into so strong and vigorous pullets as some of the later hatched ones. Size, strength and vigor are the most important features of a good egg producer, and that it is the first consideration to the majority of all who keep hens.

The vigorous hen is an active, hard-working hen, always on the go hunting for attractive morsels of food that will build up her constitution for the duty at hand. Her very activity gives her strength and vigor of constitution, and like all of the animal and bird creation, the most active and industrious are the most prolific producers. An idle lazy hen seldom produces many eggs. She is usually overfat, and longing to do her duty as a market fowl, so as to end her useless and unproductive existence. Hens that lack the energy to hustle, might as well be killed at once to save the expense of food they will consume if allowed to continue their useless lives.

An idle hen is always a lazy hen; an idle, lazy hen is always an overfat hen. This condition may be either your fault, or it may be the hen's fault. Be this as it may, it is time wasted in the effort to reduce her to proper laying condition, for the time lost in this process could be given to the good laying specimens that pay for their keep. We all know it is a useless waste of time and food to keep year after year a cow for milk that appropriates the greater part of her food to making herself fat. Better send her to the butcher, and select one to take her place that does not rob the milk pail to make beef.

Just so with hens. Some naturally accumulate fat, while others turn all their food supplies into eggs, only absorbing to themselves sufficient for vigor and good condition. The most noticeable feature of a good laying hen is her vigor and industry, being always on the go, hunting and digging for her living. These conditions give her a bright clear eye, and very red comb, face and wattles—the barometer of her health, and the indicator of her ability to give full return in eggs for all the food she consumes.

In selecting your hens for the winter's egg production, study well all these points. We select our seeds of all kinds with care and judgment. No inferior cow, hog or sheep is selected as the

medium for increase in our live stock. The future milk cow is selected from among the daughters of the best milk producing cows. All these matters have our consideration. Why not bestow equal thought to the selection of our hens, that can, if properly handled, purchase the full grocery supply for the family, and return to you quite a sum of money besides.

When only the best egg producers are kept, then you can feel assured that the chicks from their eggs will inherit their inclination to lay, and by careful selection each year the egg production of your whole flock will be gradually increased. This increase per hen is a growing profit in her favor that will more than repay the effort for her improvement.

This careful selecting of the better layers year after year, and the use of them only mated to males as carefully selected from the largest egg producers, has increased the egg yield till today many flocks of hens average over one hundred and fifty eggs each, and individual flocks or pens have gone as high as one hundred and eighty per year. This shows what careful selecting will do for a flock of hens. If this can be with one, why not to a greater or less extent with all? In these days, when the average income of all is reduced, we must look with care after the small things that add to our comfort.

Formerly the average egg production of one hundred hens was about twelve dozen per week; today it is about twenty dozen a week, or a little better; and those who do not average so many or its proportion from their hens, can feel assured that they are not getting what they should, while those who use the most approved methods get as many as twenty-five dozen per week from each one hundred hens. This is only three eggs per week from each hen, or one hundred and fifty-six eggs per year from each hen—not an unusual number at the present time.

In looking over the yearly egg record of a lot of hens kept by a Mr. Morris, I found the average to be, for the lowest month, thirty-five per cent, and the highest seventy per cent; or in other words, the lowest average was for each hen about eleven eggs per month, while the highest was twenty-one eggs each per month. This only shows the capabilities of the hen that is bred to produce eggs when handled to the best advantage. These well known cases prove beyond all question that the proper selection of the breeding stock is the key note to success. The best of stock poorly handled cannot prove a success. Inferior stock properly handled will do better; but well selected stock properly bred and looked after will do truly good work.—*T. F. McGrew, in Country Gentleman*.

It is impossible to walk through the markets at any time without seeing large quantities of extremely poor turkeys, fowl and chickens. It is seldom that one sees a poorly fatted hog in the market. If it pays to stuff with corn a hog that won't net his feeder five cents a pound dressed, why isn't it good business sense to use some of that corn to fatten a bird that will bring twice as much per pound? Will the same corn make twice as many pounds of pork as poultry? If not, it would seem wiser to put the corn where it will do the most good.—*Rural New-Yorker*.

White Wyandotte cockerels bred from a long line of productive layers. W. H. Scovil, East Lebanon, Me.

An Amateur's Experience.

(Written for the Poultryman and Pomologist.)

In choosing an occupation, select one that you have a preference for, and whose products are staple and always bring cash. In our case, we live on a farm, and like poultry keeping the best of any farm work, and not having much capital we thought poultry keeping offered the most inducements to us. In the spring of 1897 we decided to get our living with poultry in a few years. We thought it best to keep small numbers of fowls for a few years while we are learning the business and have some other source of income. The first year we set all our broody hens and hired some, until the weather got to be very hot. October first we began our account with them, when we had 122 hens and pullets and 47 late hatched cockerels. But few of them were pure bred. The roosters and many of the late pullets were sold as soon as a market was found for them until by January 1, 1898 we had but 87 females and two male birds. During the winter we purchased a trio or pure bred fowl. At the end of the year, September 30th, our account showed a net profit of \$56.78 and an increased value in stock of \$17.04, making a total profit of \$73.82 or a fraction over 60 cents apiece for every female on hand October 1, 1897.

The year commencing October 1, 1898, we had 158 hens and pullets, one-third were yearling hens and five male birds. The middle of January a flock of twenty-five hens got very fat and not having laid but few eggs previous they were put in market, also a pen of about fifteen pullets learned the vice of egg eating and were also sold. At the end of the year our books showed a profit of \$110.01 or a net profit of about 70 cents a piece for the entire number of females on hand October 1, 1898.

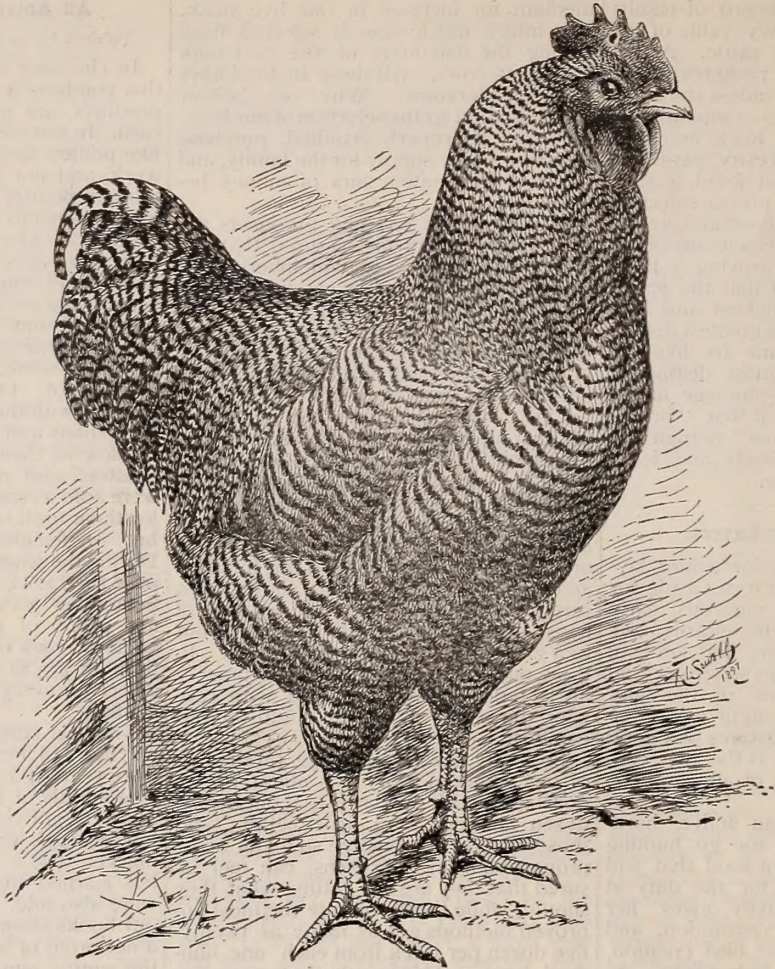
These profits will probably seem small to all, but it shows the actual profit an amateur made in connection with other farm work, and the experience we have had will be worth many dollars to us in the future.
E. T. PERKINS.

The Buff Wyandotte.

The degree of perfection reached by this breed, as shown at the recent large shows, has been a surprise to all. It is impossible to conceive a handsomer or more striking variety than the Buff Wyandottes—their fine buff color, bright red combs, yellow legs, tasteful and comely forms. They have only been known for the past few years, but each year the demand for them increases, showing that their good qualities are not illusions, but facts, which are appreciated by the public.

The demand is steadily increasing for solid-colored birds having yellow skin and legs and fine-flavored meat in connection with superior laying qualities. My experience with the Buff Wyandottes has been that they are egg machines, and I do not believe a man can ask for more eggs than the Buff Wyandottes produce. They lay a good-sized egg. There is one advantage this breed has, and that is, when you dress one you do not have those black pin-feathers to contend with. They dress up nicely, and for broilers they are unequalled. Their bright yellow skin and juicy and delicate meat place them in a front rank as a table fowl. In my opinion I think the Buff Wyandottes have a great future.—*The Feather*.

Subscribe for THE POULTRYMAN AND POMOLOGIST, 25 cents per year.



BONNIE LADDIE.

We present a cut of one of the fine Barred Plymouth Rock cocks owned by W. H. Palmer, Beverly, Mass. This cock has won five first prizes. His score is 93, and weight 11½ pounds. He is a strong breeding bird, and his cockerels resemble their sire in shape and color, and are large and strong, while the pullets are extra layers.

Mr. Palmer, with his handsome and productive flock of these grand birds, can prove their title as a Utility Strain, while their scores under several competent judges is proof of their exhibition qualities.

He has about 100 Bonnie Laddie cockerels, and can offer good breeding or exhibition birds at low prices, if ordered at once.

Help the Hens.

"Something from nothing you can't take." The most of us are beginning to realize the truth of this trite saying in regard to most things about us. It is a poor farmer who does not realize that he cannot take grain from his fields year after year, returning nothing to them, without some time, sooner or later, getting to the end of his string and finding his land run down and bankrupt. But some poultrymen have not discovered that the same principle holds good in regard to hens. You can't get something from nothing there, either. If your hens are to lay eggs they must have something to work with; they must get egg forming elements from some source or other.

In recent years the practical poultryman has been able to double his egg supply in the winter by a careful study of egg producing foods. Prominent among these must be placed green cut bone, a food that is easily and cheaply obtained and that is undoubtedly the greatest egg producer ever fed to hens. The bone,

when finely cut while it is still green, supplies that element of animal food so needed and so relished by fowls, taking the place of the bugs and worms which the hens devour so greedily upon the range. Moreover, the bone supplies the mineral matter needed for egg formation, the lime, the phosphate, the magnesia, and is, in short, an ideal egg food.

When we consider how cheaply the bones can be procured and how little trouble it is to prepare them for the fowls, it is difficult to understand why any poultryman neglects their use.—*Frank B. White.*

Ducks on the Farm.

It will pay to add ducks to the poultry department of every farm. Nothing was ever known to grow so fast and cause so little worry and work as ducks. Everything is "grist" that comes their way. They consume vast quantities of coarse foods and convert it rapidly into flesh and money. The growth they make is won-

derful. They are independent of the caretaker, except so far as food is concerned. When they have grown to be two or three weeks old, they even provide the greater part of their own food by hunting for it. They are the happiest, brightest and most independent things on the farm. They require a house or houses of their own, plenty of water to drink and puddle their bills in, and grit in some form. Their houses should be sprinkled well with sand or dry litter, and swept out every day. If one has many of them, a park of their own fenced off with poultry netting, is best for all concerned, for they are always getting into the drinking water set out for the hens and chicks. A large park need not be very expensive. Low netting answers every purpose, unless you wish to keep every hen out of their yards, and that is really best, for hens and ducks do better if kept separate. It is not a necessity, but for the sake of cleanliness and comfort it would be better to have the ducks by themselves.—*Epitomist.*

Some Causes of Failure in Poultry Culture

A great many have made a decided success of poultry raising, and finding it a pleasant and profitable employment, have had no reason to regret the day they engaged in it.

Yet not every one who has attempted poultry culture has proved it to be a successful venture for them, and it is of some of the causes of failure in the industry that I would speak in this article. Since a great number of persons have not only made a living at raising poultry, but have obtained from it a yearly income that many times covered their living expenses, we should accept the fact of such success as conclusive proof that poultry culture is a very profitable business if rightly conducted.

Then the success or failure of one as a poultry breeder depends almost entirely upon himself or herself, as the case may be.

Many have failed while they were yet only beginners. In some way they caught the "chicken fever." Possibly they had read some of the articles in a poultry journal that gave them the impression that poultry culture returned enormous profits on a small amount of money invested, was a pleasant pastime—just the thing for a man or woman with whom work never would agree, and that any one could succeed in it, as no especial qualifications were necessary to make success certain. It is so easy for us, who are enthusiastic breeders and writers, to give to the poultry public such glowing articles, speaking only of the pleasures and profits of the business, that wrong impressions are often given. We do not intend to mislead, but we are so accustomed to looking on the bright side only that we almost forget the side of shadow.

But to return once more to those who enter the ranks of breeders expecting to find it all pleasure and play, with money rolling in every day. Not one thought was given as to whether they were adapted to the work or not, and there are many chances to one they will meet disappointment and failure. As the merchant, the farmer, etc., must possess certain qualifications to be successful in their vocations, so must the prospective poultry raiser be adapted to that work, or his inadaptation will mean failure.

Another cause of failure is—too much is expected at the beginning.

The lesson of patience and perseverance has not been learned. Some expect to mount in a few months up to the place occupied by breeders who have only gained their high position after years of ceaseless labor, untiring faithfulness, and persistent advertising. Not being able to reach such an enviable place in a short time these aspiring ones, with such great expectations, give up and vote poultry culture a failure.

Carelessness and laziness go hand in hand, and together are a fruitful source of failure. The careless or lazy would-be breeder knows of the work to be done, and yet he neglects to do it. Usually the performance of duty is put off to a "more convenient time" in the future.

His or her poultry are not fed and watered regularly; the nest boxes are not emptied and then replenished as often as they should be; the broody biddies that are not needed as incubators are allowed to remain on the nests, where they are in the way of the laying hens; the incubators and brooders do not receive the careful attention and management needful, if best results are to be obtained;

the dropping boards are left uncleared, the poultry houses are foul and filthy, and so on through the entire list of work necessary to be done in and around the houses and yards.

One belonging to this class is sure to meet utter and complete failure. Others have a few hundred dollars that they have decided to put in the poultry business. They have had no experience with poultry, but that does not deter them from building large houses, buying possibly a pen each of ten or twelve varieties of fowls, all thoroughbred and costing a big price. All the accessories to a large poultry plant are bought—nice things to have if one is to be permanently engaged in the business.

Everything goes well for a season, until some of the trying and perplexing things that comes to every one in the business, is encountered, then the lack of experience is felt. It may be disease caused by unwise feeding or careless management, attacks his fowls, and although he does the best he knows how to do, failure is imminent.

I have shown a few of the causes of failure in poultry raising, and I believe you will agree with me that the reason of failure is not in the business, but in the one engaged in it. Two persons may make a beginning at the same time, one with capital, the other with little or none. One commences on a large scale, the other in a very small way, gradually working up and gaining experience as he climbs. The one may make a complete failure, the other a perfect success. Do not say it was "luck," my brother or sister fancier; I have very little faith in what is commonly called "luck." I believe our "luck" is the result of our own efforts and faithfulness, or of our laziness and carelessness. — *National Fancier's Journal*.

The complaint is often made that the advice given by different writers for the poultry press is so contradictory that it confuses rather than aids the beginner in poultry raising. There is a basis of truth in the complaint, but this admission would be unjust to the writers and to the poultry press if unaccompanied by an explanation. Poultry breeding is not an exact science, like mathematics. That is to say, a formula cannot be prescribed for poultry breeding that will work out in all respects according to rule, like a mathematical problem. There are certain laws governing breeding on which all experienced breeders agree, and a disregard of which inevitably results in failure and disappointment. These laws are what may be termed the essentials. But there is another class of matters—feeding for example—about which the experience of breeders differs. They are affected by circumstances and conditions, which are not always known even to the persons who have to deal with them. These are things about which advice is contradictory. They all have a relative importance, but for the most part they may be classed as non-essentials. In time, as knowledge progresses, they will become settled, and no longer subjects of controversy. Meanwhile the proper course for the beginner to pursue is to carefully follow those rules which have come to be generally accepted as laws, and to rely upon his own judgment for guidance in those matters about which the wisest and most successful breeders disagree. The exercise of common sense goes a long way toward keeping a man in the right path. — *Ohio Poultry Journal*.

The Necessary Qualifications.

(Written for the Poultryman and Pomologist.)

Some time ago I received a letter from a young man who was considering the question of embarking in the poultry business. His idea was to start on a scale large enough so as to make it an exclusive business, and yet he was without experience. Among the questions which he asked was, "What qualifications do you consider necessary?" Perhaps he thought it as easy to describe an ideal, perfect poultryman as it would be to repeat the standard requirements of a Rhode Island Red, but I found his question a hard one to answer. Not hard to find some answer, but hard to give a complete one.

If poultry breeding were as solid and substantial a business as some of the poultry breeders would have us understand, all other industries would be of secondary importance, and poultry culture would be the sole occupation of millions of Americans.

The man who expects to succeed in poultry keeping without doing some work is bound to meet with disappointment. It takes a vigilant, systematic worker, with a love for the business, and the same attention to details that are given to other branches of farming.

Nearly every poultry paper has articles advising the novice to start in poultry raising on a large scale, and although we can see in every town where some misguided person has undertaken to make a living at the business and failed, we can also see many more who are planning to embark in the business.

The success that has crowned the efforts of those who have put time, money, energy and unremitting care into the business, has been held up as an example of what could be done with poultry, and many have rushed into the business who have failed in everything else they have undertaken, and because they could not succeed with poultry can hardly be ascribed to the fault of the business, but rather of the party engaged in it.

There is no business in which any one can engage that is absolutely sure and safe. It is said that more than ninety per cent of the firms engaged in mercantile pursuits meet with failure, but this does not deter others from investing. How many farmers do we see who are scarcely making both ends meet! And yet do we not see hundreds of mechanics and clerks who are tired of their style of living and long for the true home life and freedom that the farmer enjoys?

As we consider the qualifications necessary to succeed in this business we would enumerate thrift, patience, energy and economy, or close attention to the little things of every-day. A love for the business is another of the qualifications, and the successful breeder spends considerable time with his flocks. He likes their company and learns their wants. The careful selection of the stock is a part of the work, that calls for intelligence and knowledge, and is of great importance.

Suitable location for the plant and comfortable buildings for housing the stock, as well as careful, systematic work in every department are needed to bring the success that is longed for and the money that is needed, and so the man who hopes to gain both must possess a knowledge of the business, energy, determination and capital. A lack of one of these essentials will spoil the success of any business, and poultry culture is no exception to the general rule.

E. A. R.

THE POULTRYMAN & POMOLOGIST

SOUTH FREEPORT, MAINE.

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Make all remittances payable to GEO. P. COFFIN, South Freeport, Maine.

The columns of this paper are open to communications concerning anything in which our readers may be interested. Contributions and questions on Poultry or Fruit topics are solicited, and our readers are invited to use the paper as a medium for the exchange of ideas of mutual interest.

NOVEMBER, 1899.

SALUTATORY.

In presenting this, the initial number of THE POULTRYMAN AND POMOLOGIST, we make no apology for its existence, nor do we claim to fill a "long felt want."

Our paper is one whose mission is to teach practical methods of poultry and fruit culture, and our readers will be favored with articles giving the experience of men who have achieved success in these lines.

Poultry and fruit go well together, as is evidenced when we see the chickens resting in the shade of the fruit trees, or the geese eating the fallen apples (containing, possibly, the *tryptae pomonellae*) or even on our Thanksgiving table, when we carve the central figure, that noble specimen of domestic poultry, whose fame has been doubly enhanced because inseparably connected with that of the cranberry sauce.

Certain it is, that in the combination of poultry and fruit culture, the farmer can produce two crops at once, upon the same land, and each be beneficial to the other.

To turn the attention of our farmers to this practical combination, as well as to help those who are already engaged in either or both industries, will be the mission of THE POULTRYMAN AND POMOLOGIST. With this purpose in view, we shall endeavor to conduct the paper in the interests of its readers, and would extend a cordial invitation to all to discuss any article appearing in these columns, and to send us communications on any topic of general importance.

We hope our readers will also feel free

to write us concerning any changes in the paper, that would make it of more value to them.

In short, it will be our aim to make this paper worthy of the support it seeks, and a fitting representative of the industries to which it is devoted.

Two Important Meetings.

The Maine Fruit Growers will have their annual public meeting at Newport, Me., November 16 and 17. Plans are arranged for a general exhibition under the auspices of the State Pomological Society. The programme also includes lectures and papers by some of the best authorities. The secretary, Elijah Cook, Vassalboro, Me., will give further particulars.

The other important meeting to which we refer is the Maine State Dairy Conference at Lewiston, December 12 and 13.

At this meeting there will be an exhibition of dressed poultry and eggs. Liberal prizes are offered. Refrigerator cases will be furnished for the dressed poultry, and if exhibitors will inform the secretary in advance, proper facilities will be in readiness for the stock upon its arrival. A large exhibition of poultry foods is expected; also incubators and brooders in operation.

While this exhibit is but an annex to the great dairy exhibit, it is in itself worth seeing. Last year, at Portland, some of the specimens were superior to prize winners in similar classes at the Boston show, and although the poultry department at that meeting was not extensive, it comprised some live, energetic breeders, who have been successful in poultry culture. We hope the second exhibition of poultry and eggs will bring out larger entries than did that first attempt, and shall hope to see some of those choice turkeys from the northern part of the state.

There are great possibilities for poultry raising in Maine, and we hope the breeders will respond to the efforts the Board of Agriculture is putting out in their behalf.

B. Walker McKeen, Secretary Board of Agriculture, Augusta, Me., will give further information.

Poultry and Fruit.

In the southern part of the state of New Jersey there are many farms upon which a living is made by devoting the land and time entirely to growing fruit and poultry. The most work in the poultry line is done in winter—the fruit commanding the most attention in its regular season. Some of these people raise broilers in winter; others house and feed for winter eggs. Houses scattered in a large orchard will be colonizing the fowls right among the trees. They will keep in flocks by themselves, and each flock will keep the trees within its territory free from worms, insects and weeds. It is not true that fowls are enemies to trees, as one writer puts it. We have quartered young chicks in a vineyard, had them grow up in that vineyard, and the amount of grapes or leaves that they plucked was indeed mighty poor pay for the way they kept scratching around those vines, and destroyed the insects, besides keeping down the weeds. There is a peculiar taste to a grape vine leaf that is not exactly to the liking of poultry, and they are not very apt to eat much of that kind of food.—*Exchange.*

NOTES AND OBSERVATIONS.

As the cold, rainy season sends its chills to remind us of what is in store for us later, it is a wise poultryman who heeds its warnings and makes his houses comfortable for winter. A single night's exposure to a draft may start a case of roup that a whole winter's work will not cure.

Have you ever noticed what indefatigable workers some of the club secretaries are? How they will have a notice of some kind in nearly every copy of any poultry paper that you can pick up? This is the kind of work that tells, and the hustling secretaries should receive the thanks of their respective clubs for their energetic work. The specialty clubs have been the making of some of the breeds, or, more properly speaking, have been the principal advertising medium through which their merits have become known.

Speaking of specialty clubs reminds us of a recent rumor to the effect that the White Wonder Club and Rhode Island Red Club were to amalgamate and push the utility qualities of these two breeds, for they rightly feel that in this day and generation, there is room for any breed whose practical qualities are universally acknowledged.

The American Poultry Association may have spurned these breeds with contempt (and may again for that matter), but popular demand, based on practical worth, will place the breeds on a firmer basis than could the formulating of a technical standard of descriptions, and its adoption by an august body of self-constituted censors who pass judgment on everything seeking a place in the standard.

Keep up the fight, brothers! In union there is strength, and co-operation may achieve success on the same grounds where individual efforts met defeat. "So mote it be."

A bill has been introduced into the House of Commons, Canada, which is designed to fix the weights at which eggs shall be sold in the Dominion. It provides that unless otherwise specifically agreed upon between the buyer and seller eggs shall be sold by weight, and the weight equivalent to a dozen shall be one and one-half pounds.

It is rather surprising to see how some of the intelligent farmers of our acquaintance manage their poultry. A short time ago, one who is engaged in dairying and hog raising complained about the "hard luck" he had this season with his poultry. "I would find good, fat, yearling hens dead under the roosts in the morning," said he; "eggs were very few until late in the spring; early eggs would not hatch; those that did hatch produced mostly weaklings"; etc., etc.

Asked as to his feed, his reply was, "corn twice a day and plenty of water." And yet he complained of "hard luck," and would probably have been perfectly willing to ascribe it to some bacteria or infectious malady, but could not for a moment consider that his ration was not fitted for the demands that healthy growth and egg production would make. Recollections of his boyhood, when the hens roosted on the "great beams" of the barn and were fed twice a day "all the corn they would eat" were fresh in his

memory, but he had not thought of their free access to the hay mows and sheaves of grain stored in the same barn. He would not acknowledge that a hen can ever get too fat to lay well, yet would study feeding problems in order to prepare balanced rations for his cows. He could easily understand that a sow should not be fattened before the farrowing time, for fat in the tissue seriously interferes with reproduction in swine, sheep or cattle, and yet a successful farmer (in other lines) could not be made to see the error of his ways in poultry keeping. Here is a chance for a poultry paper to do some missionary work "in darkest Maine," for we can find many such cases which need "watchful and prayerful attention."

SPECIAL NOTICE

To Contributors and Advertisers.

It is our intention to issue this paper promptly on the first of each month, but owing to unavoidable delays we find that we shall be ten days late with this issue. We must, therefore, hope to make up the lost time in the next two months. We want to mail the December number by the fifth of the month, and the January number on time.

Our contributors will please note that we must have their articles in hand *before* the 20th, and the earlier the better.

Advertisers should forward copy as early as possible, as the last advertisements will go to press November 27.

THE PUBLISHERS.

To Maine Poultry Breeders.

The Board of Agriculture, at its State Dairy Meeting, to be held in Lewiston on December 12th and 13th, offers the following premiums on dressed poultry. The name of each variety must be given in all entries:

Largest and best display of dressed poultry by one exhibitor—1st, \$5.00; 2nd \$3.00; 3rd, \$2.00.

Heaviest and best dressed turkey—1st, \$2.00; 2nd, \$1.00; 3rd, 75c.

Heaviest and best dressed goose—1st, \$2.00; 2nd, \$1.00; 3rd, 75c.

Heaviest and best dressed duck—1st, \$2.00; 2nd, \$1.00; 3rd, 75c.

Heaviest and best dressed capon—1st, \$2.00; 2nd, \$1.00; 3rd, 75c.

Best pair yellow meated chickens—1st, \$2.00; 2nd, \$1.00; 3rd, 75c.

Best pair white meated chickens—1st, \$2.00; 2nd, \$1.00; 3rd, 75c.

Best pair fattened fowl—1st, \$2.00; 2nd, \$1.00; 3rd, 75c.

Best dozen brown eggs, form, size and color considered, name of each variety to be given—1st, \$1.00; 2nd, 75c.

Best dozen white eggs, conditions same as for brown eggs—1st, \$1.00; 2nd, 75c.

Heaviest dozen eggs, any color—1st, \$1.00; 2nd, 75c.

Best dozen ducks' eggs—1st, \$1.00; 2nd, 75c.

The Board will pay all express charges and dispose of the goods at the close of the meeting, as exhibitors may direct. All shipments should be marked plainly with name and address of shipper, and directed to B. Walker McKeen, City Hall, Lewiston. They should be sent so as to arrive not later than 2 o'clock Tuesday, December 12th.

B. WALKER MCKEEN, Sec'y.

Poultry Fattening.

Our English cousins have made a study of the fattening of poultry and have various processes for securing the prime quality of flesh that meets the demands of the European epicures. With darkened coops and cramping machines, they succeed in loading the fowls with abnormal quantities of fat, to such a condition that would not be marketable in America.

But this study has shown other interesting features of the trade, and it is a common practice to fatten fowl for home consumption which are usually put into the condition known among the professionals as "half-fatted." Mr. W. M. Freeman M. P. S., contributes to Poultry, (London), this method of fattening.

What I have in view at the present moment is not a dissertation on the scientific methods of fattening poultry for the market, which are recommended by various authorities who have made a special study of that particular subject. My object is to suggest one or two points in connection with table poultry that have arisen in my own experience, and are likely to be of interest to those who, like myself, have neither leisure for, nor occasion to do, more than provide a few table fowl for consumption at home, or by a limited circle of acquaintances. Therefore I put aside at once any question about caponizing, which, though undoubtedly a valuable aid to the work of the professional fattener, is yet an operation which everybody who wants to fatten a few chickens does not care to undertake. I set aside, too, the matter of fattening coops for individual birds, recognizing, albeit, that these have their place, too, in the arrangements of the marketing poulterer.

To obtain the best results, without resort to any professional methods, I have found these things essential:—

- 1, Separation of the sexes.
- 2, Absolute quietude.
- 3, Abundance, but not surfeit of food.
- 4, Plentiful supplies of (a) water, (b) grit, (c) green food.

Upon these points let me offer some few observations *volatim*.

When chickens are becoming well feathered, and the distinction of sex is evident, the cockerels intended for the table should be reared altogether out of sight of their sisters. If this be not done, directly they approach the age of puberty there will be a checking of growth, and although ultimately they will not necessarily make smaller birds than they should, yet this adult size will not be attained at so early an age as it will be if they are kept apart. The same thing applies to pullets. Nothing will retard growth and spoil "table" prospects more than early production of eggs. And there is another point affecting the cockerels—if taken away whilst they are still *impubes* they will not acquire the pugilistic propensities of their kind, which will count for a good deal in the way of quietude, that second essential I have named.

A quiet life—if possible in a shady orchard or on some sort of grass run—(not huddled together in some dirty hole termed by courtesy a "pen," where the food of each succeeding meal adds its quota to the miry puddle under foot, and where the odors of prolonged confinement emaciate where it is intended to fatten)—this is the environment necessary for our present purpose. Fowls will never fatten unless they are contented and free from interference.

Then in regard to food. There is nothing better for fattening purposes than

the oat. Whether it be in the form of the ground oat, prepared on the "Sussex" principle or the ordinary commodity known as "oatmeal" or "Scotch oatmeal," or again, even the whole untouched oat grain, matters little; but pin your faith to the oat chiefly as the principal food upon which to depend for that whiteness and tenderness of meat which are sought after in a table fowl. Of course there are excellent fattening foods on the market which are useful, and these may be advantageously mixed with our basis of oatmeal for morning feeding.

The first three meals of the day should consist of soft food, the last of hard corn. Begin at 6 o'clock a. m. with a breakfast of oatmeal and milk; let this be made up into porridge form, and then be made crumbly dry with some plain biscuit meal or patent fattening food. Let the birds eat all they can. As soon as they have finished, remove the food entirely, and do not allow any of it to remain lying on the ground. The next meal may be about 10 a. m., by which time they will be found to be quite ready for another feed. Again give them similar "crumbly" food, adding a small percentage of meat fibre or any such special dainty, and perhaps a little Indian meal by way of change. As regards the latter a small quantity is undoubtedly useful, but if given too freely it has a tendency to create coarseness. The third meal of the day is best given at about 3 p. m., that is after five hours' interval; and the last meal (which is to be hard corn only,) as late as is possible, in order to carry the birds well through the night. The reason for a five hours' interval between the second and third meal is that the digestive powers will not then be so active as earlier.

If these arrangements be carried out there will be economy in cost and excellent results will follow, providing, too, that the necessary minor matters, such as clean water, plenty of green food and ample, suitable grit be provided. The latter is a most important necessity because if the fowls do not get enough grit their assimilative capacity will be so much the less, and consequently preparation for the table will take proportionately longer; this is applicable, too, to the green food point. There is a certain amount of waste material in all the food taken. To enable this waste material to be got rid of as quickly as possible is to help the bird to take so much more food, and consequently a faster rate of feeding is made possible.

I should like, before concluding, to say a word on how to dispose of old poultry. That is an appropriate topic now (if not almost too late) for many poultry keepers who *intended* to get rid of antiquated roosters and hens that are now mere *consumers* of food and not *producers*, but *neglected* to do so, are sending such surplus stock to cattle sales, where they often realise only ninepence or a shilling apiece. Pot them. That several times suggested plan I have seen in these columns, of steaming first and then roasting, is the right one. It has been tried and approved in my own household, so I do not hesitate to recommend it to others.

After their days of roaming the fields for insects are over and the fowls are confined within the four walls of the house, meat, in some form, is needed. For a flock of a dozen or so the table scraps may suffice. Large flocks require a green bone cutter and its product.

Practical Strawberry Culture.

The following is a copy of a paper read by R. M. Kellogg, the famous strawberry grower of Three Rivers, Mich., at the meeting of the Michigan State Horticultural Society:

It has been demonstrated that extensive strawberry growing is not profitable and that intensive culture is profitable. The time was when bushels governed the dividends, but now it is one of large yields of the highest quality on the smallest possible acreage.

The person who would practice intensive horticulture must acquire a knowledge of plant life and plant them under congenial environments and give them foods suitable to the requirements. And this cannot not be done by working at random but the grower must proceed with a definite purpose and knowledge of the life, habits and previous treatment of the soil.

The natural home of the strawberry is in a moist loamy soil, rich in humus or vegetable matter. It will not flourish in a hard, flinty, lifeless, dry soil. The claim that the roots of a strawberry will penetrate any hard, dry soil, harder the better, is true only to a very limited extent. It must have resources to combat unfavorable climatic conditions, for the drouthy, frosty seasons seem destined to remain with us, and unless provision is made for them our labor is frequently lost.

It requires at least two years to bring land of moderate fertility to a condition to meet the ideal requirements of the strawberry grower. The application of large quantities of stable manure, or even commercial fertilizers at one time, just before the plants are set, is bad. All manure must be thoroughly decomposed, actual dirt, before they can be taken by the plants. Rank, unfermented manure, coming directly in contact with roots, is always an injury and frequently kills the plant or causes it to make a viney growth.

My idea is to manure heavily in the fall and winter and in the spring plow shallow and mix with soil and then sow to cow peas at the rate of at least two and a half bushels per acre, sown broadcast. When they have attained two or three leaves and the stems have become slightly woody the weeder should go over them, breaking the crust and destroying the young weeds which germinate first, and then again in ten days to keep the surface mellow until the leaves so shade the ground that weeds are smothered.

These peas will gather a large amount of nitrogen and fill the ground with an immense mass of humus. I have sown corn with satisfactory results so far as the humus is concerned. The stalks were cut up fine by a rolling stalk cutter and they were worked into the soil with little trouble. In any case, the crop should not be plowed under until the next spring. It will rot quickly if left during the winter, and soon go to pieces. Some careful experiments have convinced me that it is a great blunder to plow ground in the fall and leave it bare during the winter. The rain drops and frequent freezing and thawing puddles the surface, causing it to dry out. A careful experiment of plowing alternate strips in fall and spring will convince you of the injury done, unless some cover crop is used. In any case the peas should not be turned under until the wood is thoroughly ripe. It is vegetable fibre we want and this is not secured by plowing under green stuff, which is practically water.

Formerly I was an enthusiast for deep plowing, but I am thoroughly convinced

that in ordinary soils the turning of ten inches is about five inches too much, unless you have sufficient vegetable matter to put it in the proper mechanical condition.

Subsoiling is of prime importance on hard pan or gravel clay. It separates the grains of the substrata so that the surface for water films is multiplied many times and thus a large quantity of water is stored under the plants to be drawn upon for the drouthy season, but a loose gravel or a waxy "gumbo" soil, which when wet will again settle down into a hard mass, is injured by subsoiling. It will be in better condition if we leave this work to the earth worms.

Time cannot always be taken to do this and in that case barn yard manures are next best. They should be spread broadcast in the fall and winter so their juices will be washed into the soil and in the spring the long straw should be raked off and used for mulching or piled up to rot for future use. Before plowing it should be worked into the soil by cultivator or disk or replowed and harrowed until every square inch contains some of the vegetable matter.

Wood ashes are a specific fertilizer for the strawberry. They not only dissolve the plant food already in the soil, rendering it immediately available, but they impart to the fruit a firmness and bright color especially desirable. The caustic properties require that they should be applied sometime before the plants are set and diluted by being worked into the soil.

To plow this vegetable matter to the bottom of the furrow, leaving the dense soil at the surface, is a blunder often made. It leaves the ground bottom side up. We want as much of this vegetable matter at the immediate surface as possible. It not only prevents the crust formed by the rain drops puddling the surface, but it separates the soil grains so that the rise of water by capillary attraction is very slow and the ground will not dry out quickly. If necessary to plow a second time to accomplish this, it will be found the most profitable work connected with fitting the ground. It will be much more than compensated for the subsequent cultivation, since the crust will not form thick as if the surface was poor in humus.

Another thing on which I wish to place especial emphasis is the rolling of the ground a day or so, not more, before the plants are to be set, to give the water a chance to draw up so the ground will be moist and aid in accurate setting of the plants. If it be left several days the surface should be loosed up an inch or so with the weeder or very light harrow to conserve moisture.

Every small fruit grower should plan his work two or three years in advance and be his own nurseryman and propagate his plants so as to get the very best results.

Strawberry plants should be grown in a special plat from carefully selected plants, which show a tendency to form strong fruit buds. The propagating bed should be sprayed with Bordeaux mixture immediately after the plants are set, using the atomizer sprayer so it will go to the plant in the finest mist. It will destroy every spore of rust and leave the foliage as clear and waxy as the newest growth.

For several years I tried to eliminate the disease by selecting plants which would resist it. We all know it is a fungus growth and under favorable climatic conditions will spread very rapidly. Some varieties are more susceptible to it

than others, and these are our most productive sorts when kept free from it. This year we have sprayed every ten days, using a cart with Eclipse barrel pump sprayer with three nozzles, taking three rows at a time.

The other day I offered a visitor a dollar each for every leaf he could find on the farm containing a live spot of rust. Although a diligent search was made he did not replenish his bank account by finding a single leaf. It is well known that strong fruit buds or roots cannot be secured without healthy foliage and plenty of it. Rust is propagated by spores, and if all these are killed in the propagating bed we shall have little fear of having our crop lessened or destroyed by it in the fruiting field.

Another advantage of propagating plants in a special bed is that they can be kept dormant by mulching lightly as soon as the ground is frozen slightly and then in mid-winter, when the ground is frozen deepest, cover several inches thick with fine chaff. You can keep the frost in the ground and prevent them from starting until your beds are plowed and fitted. No matter how hot the sun may be, a dormant plant set in the ground will grow vigorously, where one loaded with a mass of green foliage would surely perish. Another feature of the propagating bed is the blossom buds should be removed before they open, so as to prevent the great strain of pollen secretions at a time when they have no roots to sustain them. Potency of pollen is of the utmost importance in the development of fruit, and a plant once exhausted does not soon recover. The cost of removing the buds is no more than when done at a later time and you will find results satisfactory.

It is of the utmost importance that the rows be arranged exactly straight and all the same distance apart so the cultivator will do perfect work and the spray pump can cover every leaf. There are many devices for setting plants. We prefer the machine for making the cone, but if there is considerable grass or straw or many large stones it will not work well. It must have clear, firm soil. And so we then use a wedge shaped casting with a flange so it is quickly dropped into the ground and then pushed over so the soil is loose on one side with an opening sufficient to insert the roots, and two motions of the hand fills it and leaves a little mound of soil on the side permitting it to be stepped on, leaving the ground firm and level around the plant.

We always cultivate immediately to prevent escape of moisture where the earth is packed down hard around the plant.

I most decidedly prefer to set plants so as to form a hedge-row, and after all the plants are filled in, the rest of the runners are clipped off with a rolling runner cutter. It works perfectly where there are not too many stones. I prefer to attach it to a hand wheel hoe as it can be used more skillfully than on the cultivator.

You may have all the plants to the acre you can furnish sunshine for, and perform the necessary work of tillage. Left to itself, without crowding, the plant will adjust itself so every leaf and the crown where the fruit buds are forming will be fully exposed to the suns rays and thus secure the most vigorous development of all parts of the plant. The wide matted row will be best where the land is poor and only second or third class berries are desired. Cultivation should be shallow, thorough and frequent. I have never seen a tool equal to the Planet Jr., 12-tooth cultivator with pulverizer attach-

ment. It leaves the surface perfectly level and loose so the water below is prevented from rising to the by capillarity.

Cultivation adds no water to the soil but it does hold that already there for the use of the plants. It aerifies the soil so that the millions of living organisms which prepare the food for the plants, can do their work, and at the same time it renders other minerals soluble so the plants can take them up and make a vigorous growth, and last and not least it is done to prevent the encroachment of weeds. Most any grower will cultivate to destroy the weeds, but neglects it when necessary to accomplish the other equally important results.

Examine the texture of your soil and determine how thick the loose earth or dust mulch should be and never allow the teeth to go deeper. Some soils require two inches and very few exceed three inches. No person must expect to grow fine fruit who sends the cultivator teeth down among the feeding roots and tears them to pieces.

We believe if the growers will contract their acreage and put in practice these suggestions, we shall hear of a great boom in strawberry growing without a trust to back it.

The market and high prices are made by putting on the market a grade of fruit so delicious and tempting that everybody will eat it, but nobody will pay even a small price for things which he has no craving for.

The Pollenization of Fruits.

The pollenization of fruits is a subject that fruit growers should give more attention. Last year, on a large field of strawberry plants, I grew only buttons, and my loss on the crop was several hundred dollars. During the blossoming period it rained most of the time, so there were only a few days of sunshine when the bees could work in them. There were no bees kept very near the field, and I have reason to believe that the cause of the imperfect pollenization of the blossoms was that there were not enough bees to do the work in the few days that the sun shone when the plants were in blossom. It is evident that twice the number of bees would have fertilized twice the number of blossoms in the same time, and therefore it would have been profitable for me to have had more bees in the field. I made the mistake of depending on the bees kept by a neighbor living a considerable distance from me, when I should have kept a few hives on my farm. More bees would have been working in the field, more blossoms would have been pollenized, and the result would have been larger berries. Experiments have shown that if the blossoms of pistillate varieties are covered so that bees or insects can not get to them, that they will bear no fruit. From the experience of a rainy season we learn the importance of having plenty of bees close at hand to do as much as possible when the sun shines. Last year some orchards on farms where there was a large apiary, bore good crops of fruit, and other orchards in the vicinity bore no fruit, which seems to prove that the bees are needed for the orchard as well as for the strawberries.

W. H. JENKINS.

Do not feed damaged grain to your fowls. Good, clean wheat is much better than screenings. The latter are cheaper in price, but the wheat is the cheapest if good results are expected. Feed corn and oats with the wheat.

Poultry Judges and Judging.

The editor of the Poultry Herald states some pertinent truths regarding judges and judging, and "hits the nail on the head" three times in the following paragraphs.

"The system of judging used at any poultry show cuts no figure, so far as honesty in the judge's work is concerned, and any judge who is inclined to be dishonest and place awards other than where they belong, will do so by one method of judging as well as by another, and there is no protection against "crooked work" on a judge's part, except by selecting those judges who are known to be thoroughly honest and conscientious in their work, and we believe most judges are honest. Let every exhibitor be as honest in his words and acts in the show room as is the average judge and there will be far less complaint of dishonesty on the part of judges.

Many a fancier's ability to judge of the merits of any variety of fowls depends upon his knowledge as to whom the birds belong, and if his own birds are on exhibition "they should win," or if a choice is to be made between the birds of a friend and those of another person, his friend's birds should win. The quality, in his judgment, depends upon the owner of the birds, and such fanciers are never satisfied with any judge who favors any birds with premiums other than those of their own or those of a friend. Quality is, in their minds, determined by "ownership," and not by that found in the birds themselves. It is this class of fanciers who cause much of the trouble in the show room over the matter of awards, and the judge has not, as yet, been "hatched" who can give satisfaction among exhibitors of this class.

Don't be too hasty in criticising the work of a judge unless one is certain that he is wrong and they are right. Most judges are honest in their work, and mean to place the awards where they belong. They may make mistakes, but are usually ready to rectify them. They often find defects in birds that the owners have overlooked, such defects often losing them a place among the winners. The owner, however, not being aware of the defect, or defects, often criticises the work of the judge without waiting to find out why his birds were not among the winners. Had he gone to the judge and asked an explanation he would have at once learned why it was, and have been satisfied with the awards. A judge is usually disinterested, and can look upon the birds with an impartial eye, while it is the tendency for many fanciers to see a little more merit in birds that belong to them than in those belonging to others. It is one of the failings of human nature. Be certain that you are right before being too hard upon the judge."

If you noticed that a few of your hens did better as layers last season than the others, place them by themselves, and purchase a full blooded cock to place with them. You will find that all the pullets from this flock will be much better than the succeeding ones. This is the way to breed up a flock of useful birds.—*The Indiana Farmer.*

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Utility Bred Birds.

In the first place, what does the word utility mean? It means usefulness, worth, profit; and the word utilize means to make useful or profitable. According to the above definition, then, the utility breeds, or those that can be utilized, are those that have been so bred that they can be turned into profit.

This we do not always find, I am sorry to say, in birds or flocks that are producing fine exhibition specimens, and that are bred for that purpose. The Standard, I am also sorry to say, is responsible for at least a part of the mischief. Take White Plymouth Rocks for an example: The Standard calls for a yellow beak, yellow legs, and white plumage. This at first glance may seem all right, but is it? Do these qualities go hand in hand, or do they have a tendency to work against each other? My experience with the White Rocks is that pure white specimens cannot be produced year after year without the yellow skin, beak and legs suffering, as will also the vitality of the flock, the young stock being weak and not growing as fast as they should, while the legs and beaks of birds a year or more old will become pale, and in some instances I have seen them almost white. I find that this is not my opinion only, but that of other first class breeders. D. Y. Taylor, who has bred the Whites as near perfection, probably, as any other breeder, says: "Don't be afraid of the yellow tinge, as it brings out the yellow beaks and legs, also assists in keeping up the vitality." J. I. Wilson, who is producing a fine quality of Barred Rocks, says about the same thing concerning his breed. I might refer to others, but think the above will give some idea of how to breed for utility or profit in the White Rocks.

While there is a certain class of breeders—and may they grow less—who breed especially for show purposes, the majority combine the two—show and utility—to a very appreciable extent; and a few, perhaps, breed for utility, and let the show room qualities take care of themselves. I think, from my experience, that the best plan is to breed the best specimens possible for the show, when such breeding does not interfere with utility.

The first thing any business man does is to take into consideration the wants of his prospective customers, and he will watch their interests, as from this must come success; and success or failure depends entirely on how they succeed in pleasing the class of people who deal with them. Thus it is with the poultryman. He must study the wants and wishes of the buyers, and must strive to furnish what they want, or failure will be the result. For instance, a certain breed has been very popular in this section for a few years on account of being represented as the fowl for farmers. This breed has been bred almost to death for color, at the expense of size and vitality. Well, what is the result? Already they are being discarded, and if the true lovers of this breed are not careful, it will get a setback that they will not easily overcome. Utility is coming to the front, and the wise breeder will take note of the fact, and breed accordingly, and it will not be many years until show qualities will be compelled to conform to utility, and not utility to show qualities.—*W. B. German, in Poultry Graphic.*

Eggs are always a cash product, and the returns come in every day of the year.

The Practical Utility of Poultry Shows.

November ushers in the series of poultry shows and for nearly three months there will be shows every week somewhere in Uncle Sam's domain.

The progress of poultry culture and its territorial expansion may be seen as we notice the increasing number of these exhibitions and note that nearly every state has one or more of them during the season. Ohio will hold twenty-seven shows, and Illinois fifteen.

A few years ago, the poultry fancy was considered as a mere fad or pastime in which one might engage, who could spare the time and money required for the gratification of his "whim."

Now, we see the breeding of fancy poultry taken up as a business, and can cite numerous instances where the business is successful and yielding good dividends annually. The progress of poultry culture along the utility lines has been, and must be, inseparably connected with the breeding of thoroughbred stock, and since the exhibition standard is the perfect type of the thoroughbred specimen, it follows that the breeders would naturally turn to the shows when needing new stock, and would also want to compare their productions with others.

Each year the number of fanciers increases, and while it is the fanciers that make the exhibition, it may also be said that the exhibitions make many fanciers, for as the visitor at these shows observes the pleasing appearance of the birds on exhibition, his aesthetic sense is touched and he has a desire to try success with fancy poultry. Having made the start, he finds the work pleasing, he becomes interested in studying the markings of his birds, and if he finds that these markings approximate the standard requirements, he is anxious to make his *debut* as an exhibitor.

The following, by H. S. Babcock, (contributed for the American Fancier) treats of the show as an educational institution, which is truly one of its proper spheres:

The poultry exhibition is the fancier's festival. Here it is that he feasts his eyes upon the finished products of the art he pursues. Here he studies the work of his brethren, rivals in pursuit but friends in heart. Here he gains suggestions of defects to be eradicated and excellencies to be attained. Here he finds men who, like himself, are in love with the art of breeding and who can discourse excellently, ay even eloquently, over matters caviare to the uninitiated. At the exhibition the fancier is at home with friends, ornithological and human, and it is a question which interests him the most—the feathered or unfeathered bipeds.

The poultry show was produced and is sustained by the fancier. The earliest exhibitions of which we have any knowledge were held by Hamburg enthusiasts, and the prizes were copper kettles and other useful utensils. The modern public exhibition was fathered by the Cochins, the curiosity to see which, increased by the marvellous tales told about the bird, induced the public to take an interest in what it had not heretofore cared for.

I have said that the poultry show is sustained by the fancier. I repeat the assertion. The practical poultryman, especially when a practical department is provided, ought to take a lively interest in the poultry show, but the melancholy fact is that he does not. While the departments devoted to the interests of the fancier, despite large entrance fees and small prizes, are filled to overflowing, the practical department, with small entry fees in com-

parison with the liberal prizes offered, is sometimes not filled at all, sometimes partially filled, and in the latter case usually by the help of the fancier. Practical poultryman need to wake up to their opportunities and arouse to their interests. The practical department can be made, if those specially interested will only do so, one of the most attractive departments in the whole exhibition.

The poultry show should everywhere be regarded as an educational institution, a place where different breed and varieties can be studied, where the most advanced results in breeding can be seen, and where many excellent and valuable lessons can be learned. This can be accomplished in a greater degree than it has ever been accomplished if the following plan is carried out: Every breed or variety entered alive should also have dressed representatives, at least one cock, hen, cockerel and pullet. With every breed should be exhibited at least one dozen eggs laid by hens and an equal number laid by pullets. If this were done, the department of dressed poultry, as well as the department of live poultry, would take on an additional meaning.

It goes without saying that the judges should be competent and impartial, and to secure the latter I think it advisable to have the judges from away. Not but that home judges can be impartial, but if the judge is from a distance he is not apt to know the exhibitors, and a prize won by a member of the association will not be looked upon with suspicion by the unsuccessful competitor from a distance. It may sometimes be absolutely necessary to employ a home judge, but in such a case of necessity he should be assigned to classes in which only home exhibitors compete or to classes in which only outside exhibitors compete. The judge, like Cæsar's wife, should be above suspicion.

We inherit from our distant ancestors a love for battle. Modern civilization has refined away the cruelty that attended such contests, but there still remains the fighting instinct. After men themselves ceased to fight, they fought beasts and birds. The cock fight was a legitimate expression of this instinct. But that, too, had to go as more and more refined manners came in. But the poultry show has still left an arena in which this instinct can exercise itself, and the peaceful contests for prizes, won not by force but by skill in breeding, are the modern survivals of the old spirit, of battle. The poultry show, therefore, meets a real need of human nature, and is likely to survive so long as this instinct survives in man. Breeders of game fowls now do not gather about the sides of the pits when their pets demonstrate their superiority in the destruction of their rivals, but they do gather about the exhibition coops and wait to see which specimens are superior in shape and color, which are in fact, the highest embodiment of the art of breeding. Truly "Peace hath her victories no less glorious than war."

In selecting varieties of fruits for a commercial orchard the choice should be given to those varieties that have a standing in market. Among the winter fruits we will always notice market quotations for Northern Spies, Kings, Baldwins and Greenings. These varieties, together with Roxbury Russets and Ben Davis, constitute the major portion of the winter shipments to England.

You will make no mistake if you place your order with W. H. Scovil.

Partridge Cochins.

The beautiful plumage and exquisite penciling of the Partridge Cochins attract many breeders to them, and they are now bred to a state of perfection both as regards shape and color that seems almost impossible to make further improvement over the best specimens.

The cock is resplendent in the orange deeply striped with black of his hackle and saddle; in the deep dark red of his back; in the gleaming black of his breast and body; in the lustrous greenblack of his tail; and in a combination of deep red, rich bay and iridescent black of his lovely barred wing. The hen is almost, if not quite, as beautiful as her mate. The black striped orange of her neck is set off by the reddish brown of her body, each feature of which is pencilled with dark brown or black lines one within the other, and all conforming to the configuration of the web of the feather.

The Partridge Cochins, while it has practical qualities, is the fanciers' fowl, if the fancier happens to be an admirer of Cochins. Its beauty attracts him, and the difficulty of its production allures and stimulates his efforts.

In breeding Partridge Cochins it is the general custom among fanciers to make two separate matings—one for the production of exhibition males, the other for beautifully pencilled pullets. For the former a deep colored, solid blackbreasted cock is mated to hens whose pencillings are black, and whose ground color is deeper; for the latter, males with lighter, brighter hackles and saddles and with pencilled or mottled breasts are bred to well pencilled females. There are breeders who advertise that they breed exhibition stock of both sexes from a single pen, but they are not numerous. The majority practice the double mating method.

Its great beauty wins admirers for it wherever it is shown and overcomes the objection to its difficulty in breeding among those to whom this is not an added attraction. If man has once fallen a victim to its charms and has undertaken its breeding, though he may desert it for a time, generally after the lapse of a very few years he returns to his first love, repentant for his temporary infidelity.—*Am. Stock Keeper.*

The Scratching Shed.

It is only a matter of some ten or twelve years since this useful adjunct to the poultry house was first brought into use, but when once brought before the public it did not take long for the careful poultryman to see its many advantages, and its need for immediate adoption. These sheds are usually built onto the roosting house, and constructed upon much the same order as the roosting house itself, but with the entire front (preferably the south side) left open. During the winter this opening is usually covered with heavy canvas, or glass, but some good poultry keepers prefer no covering whatever. The bottom of these sheds should be kept covered to a considerable depth with some good scratching material (straw is good). The grain is then thrown into this litter, and the hens are thus kept scratching all day. Some people use these open sheds for roosting during the hot nights, and during the day they serve for an excellent shade. We would advise all our readers who do not now have these sheds, to build one for next winter, and see the immense value of them.—*Poultry West.*

Fruit with Poultry.

Every poultry keeper who has not yet undertaken some kind of fruit culture in connection with his poultry plant has missed something of the good which life holds out and bids him take. Fruit growing and poultry keeping are naturally friendly and allied pursuits of rural economy. They go hand in hand, each assisting to make the other a larger and more perfect success. While the poultry present orchard and fruit plantations with splendid fertilizer and do large work in the destruction of hostile and predaceous insects which threaten all profitable fruit culture, the trees, vines and plants of the fruit garden afford the chickens as well as mature fowls, with abundant foraging territory and protection from wind and sun beneath their leafy foliage.

The poultry keeper and his family usually possess a taste for eating fine fruit freshly gathered, and this should certainly be gratified when it may so easily.

But furthermore, there is ample opportunity here for materially supplementing the income from the poultry by the sale of a considerable quantity of the various fruits at highest market prices.

The best market for fruit is usually found in the nearest small city, the inhabitants of which are ready to buy good fruit, neatly put up and delivered regularly, at prices far superior to what would be realized by sale on commission in the market of a very large city, where heavy consignments are too frequently met for competition.

Among the desirable fruits for culture upon poultry farms are the various so-called small fruits, such as strawberries, raspberries, currants and blackberries, and the princely orchard fruits, such as the apple, pear, plum and peach. Plums have been recommended for years as being desirable for setting in poultry runs; the idea being advanced that the poultry would catch and consume the troublesome curculio, which stings the fruit so badly. This is good advice on general principles, although it can not be said truthfully that any man who wants a good crop of plums can afford to depend upon the hens to fight insect enemies for him. The poultry will help but man must spray and jar the trees also to acquire success. But there is no doubt but that fowls, like all insectivorous birds, are of large assistance in checking the ravages of many species of insects, the bane of all other fruits as well as the plum.—*Poultry Monthly*.

Showing to Win.

Back in the good old days when the only poultry show was the county fair and the judging was done by committees there was only one way to win and that was to show the largest birds. When the birds were of equal size the prize went to the ones which were shown in the best looking coop and the man who showed his birds in an old box was handicapped several points.

Things have changed somewhat now and size has given away to quality in most cases but a new trouble has come to bother the small breeder, the amateur, who sees birds owned by a professional (?) chicken man carry off the prizes while his own are left to wonder why.

One is very apt to get the merits of his own stock so firmly fixed in his mind that he can see no merit in any other and because an unprejudiced judge gives the award to another he feels aggrieved and immediately makes a kick, believing that

the other man "stands in" with the judge.

As the breeding of show birds becomes more general, competition becomes closer and every point must be made to count for all there is in it.

This brings into greater prominence the word "condition" and successful exhibitors have made almost as close a study of this as they once did of quality. Condition does not mean or imply faking but goes hand in hand with real quality, making a specimen show for all it is worth and not trusting alone to luck to fit a bird for the judge's hand.

If a bird is supposed to be white the exhibitor must present him in a white condition, and that means the bath tub experience.

If a bird should have yellow legs they must not be a straw color, and that means that he must have a grass run.

And so on through the list. The beginner must learn how to assist nature in her work in making his birds presentable if he would compete against those who do the same.

Food, surroundings and training have much to do also in making the show bird. If a male is kept with another which bosses him he never will carry himself as he would were he alone and the bird which is never handled will not show as he would were he accustomed to the hand of his owner.

Nothing should excuse the man who deliberately "fakes" his birds for the purpose of winning prizes but neither should we apologize for an exhibitor who does not show his birds at their best.—*Practical Poultryman*.

A Successful Maine Breeder.

We enjoyed a call on Mr. A. L. Merrill, Auburn, Me., a few days since. We found him busy dressing chicks for a select trade, but he found time to show us around his farm. He has a number of neat houses built after the English style, with a low basement. These houses Mr. Merrill does not like so well as those built lower and without the basement. He has lately built scratching sheds on the sides of his brooder houses and is planning to winter a larger number of birds than ever before. Besides his White Wonders he has Buff Wyandottes of fine quality, also a few Buff Plymouth Rocks.

One of the cardinal principles of Mr. Merrill's method of breeding is to aim for form first and color afterward. He believes in the idea that form makes the breed, and color the variety, and in his White Wonders he has reached a stage in their development where he can safely turn his attention to the minor points like comb and color of eye, etc.

The best thing in the way of a brood coop that we have ever seen was in use in large numbers upon the Merrill farm. We hope to present a full description and drawing of the coops in an early issue of THE POULTRYMAN AND POMOLOGIST.

Mr. Merrill is a firm believer in utility poultry, but wants his birds to conform to standard requirements, for he has the true fancier's eye and spirit, and the birds that he sends out are pleasing to look at as well as profitable business birds, being the embodiment of health and vigor, which is induced by careful breeding, careful feeding and intelligent handling.

Houses that are low, dark, with cracks in walls or roof, either too much or too little glass, are not the ideal homes for placing hens.

Winter Layers.

There is no doubt in the mind of anyone who has tried the Buff Rocks that they are, pre-eminently, an all around fowl, more so, I believe, than any other in existence at the present time. They hatch out strong, grow rapidly, mature early, and are hardy, active and vigorous, not having been inbred, as is the case of some others, until their constitutions are impaired and their prolificacy ruined. Pullets begin laying in the early fall and keep it up all through the long, cold, cheerless winter. When some other varieties are moping round, nursing frozen combs, the Buff Rock pullet is tripping gaily around, singing and gladdening the heart of her owner by filling his basket with high priced eggs. As broilers or roasters they are all than can be desired—plump, full-breasted, rich and juicy meated at all stages of growth. Of course this means with proper care, without which no breed of fowls can give satisfaction. No breed or variety will respond more quickly to generous treatment than the Buff Plymouth Rocks.

When dressed they present a very neat and attractive appearance, having nice yellow legs and that rich yellow meat so desirable in a first-class table fowl; and you will look in vain for those unsightly black pin feathers so conspicuous in some other varieties. They are good sitters, but easily broken up, and excellent mothers.

So much for the utility side—how about the fancy? I admit my inability to do justice to this question, and after I have said my little piece it will remain for mightier and more artistic pens than mine to describe the beauties of this noble bird. We have in this bird the crowning success of American skill in breeding. They are purely an American idea—form modeled after the grand old Plymouth Rock, than which there is none better; color, the richest of gold, glistening in the sunlight—truly an object of admiration to a lover of the beautiful. No other variety ever bounded so suddenly into popular favor as this, and the best of it is, it is not a mushroom growth, that will decay as quickly; but a steady growth, firm as the rock whose name they bear. Ever onward, making friends wherever they go until not a hamlet within the pale of civilization so distant that it will not be within hearing of the lusty crow of the Buff Plymouth Rock.—*W. H. Scovil, in Pacific Poultryman*.

American White Wonder Club.

Editor Poultryman and Pomologist.

Dear Sir: There has been a transfer of the office of Secretary and Treasurer of the American White Wonder Club, Mrs. French, the former efficient secretary, being unable to serve the Club in that capacity any longer.

All communications for the Club should be mailed to the address below.

I desire to extend a hearty invitation to all White Wonder breeders who are not members of this Club, to join, and I will gladly answer any questions in regard to White Wonders or the Club.

A. L. MERRILL.

Sec.-Treas. Am. Wh. Won. Club.,
490 Court St., Auburn, Me.

High roosts and dropping boards are the cause of many a case of bumble-foot.

Scovil's Buff Rocks are winners.

Orcharding.

If we are to make our orchards pay it is absolutely necessary that we grow a fancy grade of fruit. To do this four things are needed: cultivating, fertilizing, pruning and spraying. It can hardly be said that either one of the above is of more importance than the others, for if we neglect either we shall surely fail to get fruit of the first quality.

In cultivating an orchard in bearing do all the work possible with the harrow, and when necessary to plow, plow just deep enough to turn the sod under. For young trees it will do to plow four or five furrows on each side of the rows, and keep thoroughly cultivated with a spring tooth cultivator. As the trees grow a wider strip can be plowed. The strips in grass between the rows can be mowed and raked handily.

For fertilizing use a fertilizer containing the following per cent of plant food: ammonia three per cent, phosphoric acid ten per cent, potash (K_2O) as muriate ten per cent. For trees large enough to bear from one to five barrels of fruit, from ten to twenty pounds of the fertilizer should be applied broadcast and harrowed in. An application of this kind every other year will do nicely. I should advise applying it the off year. If stable manure be used it should be supplemented with potash in some form, either in wood ashes or muriate, and with fine ground bone, for it is deficient in both phosphoric acid and potash for the required purpose.

Pruning does not receive the attention that it should. As a rule our trees carry more top than they ought. Thin out by cutting out small limbs, and do not cut out large limbs unless absolutely necessary. Do not let them go five or six years without pruning and then in a spasm of enterprise do a wholesale job. Prune a little every year.

It is hardly necessary to estimate the value of spraying in dollars and cents, but that it gives large returns for the time and money expended is beyond question. It is impossible to grow first-class fruit unless we spray thoroughly.

The writer is so fortunate as to be one of the favored ones this year, and will probably have three hundred barrels of Baldwins and Spys which will grade ninety per cent fancy. Since 1892 the orchard has been treated about as outlined above, and has given a number of large crops. It has failed to give a fair crop but one year, and then the trees bloomed well but drenching rains and cold weather blighted the blossoms.

During the last fourteen years the writer has been travelling through nearly every town in the state, and it is his opinion that there are hundreds and hundreds of acres of land, hardly giving returns enough to pay taxes, which might be made to give a large income if set out to apple trees and thoroughly cultivated along the lines laid down above.

Take a given area, five, ten or fifteen acres as the case may be, and make the growing of the orchard of first importance, and everything else, so far as this particular piece of land is concerned, of secondary importance.

Have confidence in the results and in a few years you will not want to go West but will be satisfied to stay right here in the good old State of Maine.—C. S. Phinney, in *Bulletin of Maine Board of Agriculture*.

Do you want a nice vigorous Cockerel? Write to Scovil.

Orcharding.**LOCATION.**

The apple tree seems to take kindly to the greater part of Maine. It may be seen growing by the road sides, in old pastures, well cultivated fields, on high rocky soil, in the sand, as well as in the clays. But to one who is about to start an orchard the higher, rocky, strong soil of the western part of the state will be found to furnish plant food that will give vigor to the tree as well as color and keeping quality to the fruit. Many orchards may be seen on the north cant, but we should risk the danger of sun scalding or the buds starting in the early spring in the choice of the south side of the hill. It is very doubtful if it will pay to spend much time or money on drainage as there are plenty of farms here in New England that are naturally well drained. A tree to do its best requires a good amount of moisture, but it cannot survive if planted in a cold wet soil.

RICHLAND.

Profitable Apple Culture.

Indications go to show that the apple is again the king of fruits, for today a good apple orchard is worth more to its owner than the same area of ground covered by any other tree or crop. The intelligent use of insecticides through the spray has much to do with this, and growers are also fast learning that the proper packing of fruit means profit, and the old slipshod method loss. True, the shortage in the apple crop during the past few years has had something to do with the present high prices, but the demand has increased more rapidly than for any other fruit, the demand for fine fruit here and abroad being especially strong. As this demand can only be filled by properly packed fruit, dealers are buying apples on the trees and having them packed under the direction of their own men rather than run the risk of losing sales by the usual indifferent packing of the grower. It is good advice to say that if the grower is not fully prepared to gather and pack his apple crop after the most approved methods he will find it much more profitable to sell the fruit on the trees for cash. Intelligent users of the various insecticides begin operations early. There are the scab, codlin and bud moths, caterpillar and canker worm to fight. The first spraying should be done before the buds start, using the copper sulphate solution. After the blossoms have formed, but before they open, spray with Bordeaux mixture and Paris green carefully. Within a week after blooms have fallen, use Bordeaux mixture and Paris green again, repeating ten days later, and then two weeks later with weak solution of copper sulphate.—*Green's Fruit Grower*.

Wood Ashes for Apple Trees.

In some tests at the New York Experiment station it was found that the foliage was greatly improved in sections of orchards treated with wood ashes and the trees were free from scab. The color of the fruit was also improved in some seasons and with some varieties, but during the seasons which favored the perfect development of the fruit, the color was not helped. Apparently the use of ashes has a tendency to hasten the perfect development of the fruit. Some seasons this ripening process was carried so far where ashes were used that the apples did not keep as well as on plats untreated.—*American Agriculturist*.

Fruit Culture of the Future.

The consumption of fruit increases in this country every year, and people are learning to buy fruit now as a food instead of a luxury. There is a little chance of the industry of raising fruit for market being overdone, for this demand more than keeps pace with the supply. The nursery business has increased enormously also in recent years. In 1890 there were in the nurseries of this country 37,000,000 pear trees, 240,000,000 apple, 38,000,000 cherry and 49,000,000 peach trees. Most of these trees would in the ordinary course of events be in bearing today, and at time when the nursery statistics were supplied it was supposed that these trees would swamp the market with their fruits. But the fact is there are not enough trees today in bearing to supply the demand. In the first place account is not taken of the great number that die. A good percentage of trees from the nursery perish after being planted out through negligence and ignorance of their need. It is estimated that from one cause and another at least one-fourth of the trees die before they reach maturity, leaving only three-fourths which actually come into bearing.

Then the great number which are killed off after they reach maturity. In a winter like the past, millions of fruit trees have been killed, throughout the country, decimating the number to produce fruit the coming summer very materially. When one considers these statistics the dread of a great fruit overflow does not seem so near at hand. One cannot judge the probable outlook of the fruit industry by counting the number of trees set out every year, and then multiplying them by the average product of a full bearing tree.

The planting of more fruit trees each year should be the policy of every farmer. Close planting for all fruits is desirable, which will bring the largest yield from an acre when young. Old trees are not in favor today. When they begin to fall off in their production it is time to replace them with new blood. When the trees in the orchard touch each other they can be thinned out if necessary by removing every other tree in the row. Interlacing of the branches should not be allowed. Trim back rather than permit this.—S. W. Chambers, in *Journal of Agriculture*.

Drying Out of Twigs In Winter.

It has probably not occurred to many people that trees are damaged by drying out during very severe weather while the ground is frozen. Professor Waugh of Vermont points out that the ground may be so thoroughly full of frost that no water at all, or, at most, very little, can be taken up by the tree. Yet at the same time a measurable quantity is being constantly lost by evaporation through the bark, especially through the thin bark of young twigs. He says Professor Bailey calculates that a large apple tree loses daily through the winter about half a pint of water.

If the ground remains frozen so that no water can be supplied, the tree may easily become so thoroughly dried out as to suffer great damage, and, according to Professor Waugh, without doubt much winter damage to twigs of young fruit trees is caused by drying in this way instead of by freezing. The tissues become so dry that in spring they cannot recover.

Nests built into the house, and hence hard to keep free from lice, are not without great possibilities of "tired" birds.

Poultry Keeping with an Eye to Business.

(Special Correspondence.)

A visit to a down east poultry farm by the writer revealed many good points in poultry keeping which every person who goes into the business, with an eye to business, should consider.

There are many who enter the poultry business for pleasure, but they don't stay in it long just for the pleasure they receive, and are not be blamed either.

Mr. Howard Barton, of Columbia Falls, entered into the poultry business about five years ago. At that time he was a young man and took a certain fancy to thoroughbred poultry like other young fanciers and selected the Barred Plymouth Rock variety for his breed.

Unlike many young breeders, Mr. Barton was contented to start on a small scale. The first year besides the old house, which would comfortably accommodate thirty hens, he built his first house, which was 24 by 16 feet with a partition through the center making two pens in which he could keep 25 hens each. The house is a convenient one, the roosts being built along side the aisle which runs to the back of the pen. The nests under the roost board, as well as the roost boards, may be reached from the aisle.

The feed is dealt out, in the winter, on the floor, through a set of slats where the fowl may eat but not scratch the food from the trough. This first year Mr. Barton raised 150 chickens which was a much larger number than the "old folks" were in the habit of raising.

The second year from the new poultry house and stock he raised 200 chickens and built 36 feet of a poultry house on the scratching shed plan which has given great satisfaction.

The third year with his new buildings he wintered 140 old stock and the following spring raised 350 chickens. Up to this time Mr. Barton had been using hen power for incubating and brooding purposes, but after thoroughly investigating the artificial means he decided to give the new method a try.

A 200-egg Prarie State incubator was purchased, and a brooder house 36 feet long, with an incubator cellar stoned up under one end, was also erected which will, if necessary, accommodate three, 200-egg machines or possibly more. The brooder house is divided into three pens and with the three Peep-o'-day brooders will comfortably look after the output of the machine until they are large enough to occupy a house without artificial heat. The brooder house has separate yards for the chicks to run in but after a while they are allowed the run of the farm.

The fourth year the large poultry house was enlarged to 96 feet, and 600 chicks were raised that year. The past year being unfavorable for him in hatching, he only raised 550 chicks. At present, and for the past two years, Mr. Barton has kept 175 to 200 head of fowl and they have paid well.

THOROUGHBREDS PAY BEST.

At the Barton farm only thoroughbreds and first crosses are kept.—Barred Plymouth Rocks and White Wyandottes.

The advantage of starting with good thoroughbred stock has been, first, a good list of premiums at the county fair, which helps swell the profits, the advertisement alone which he receives at the fair paying well for all the trouble. Second, the young stock which he sells in lots of pairs, trios, breeding pens and cockerels at a much better price than he

could obtain had he but common stock is another item of profit which is not to be sneered at. Again the benefit he derives from his stock owing to their thoroughbred qualities, is that even dressed they bring a better price in the market than had he but an ordinary lot of mongrels.

MARKETING EGGS AND POULTRY.

From the very start Mr. Barton shipped much of his eggs and chickens to W. H. Rudd of Boston, who paid a better price for a yellow skinned carcass and good brown eggs than the ordinary market quotations. But after the second year he began shipping his early hatched chicks to Southwest Harbor, a favorite Maine coast summer resort, where he secured 25 cents to 15 cents per pound, alive, according to the season. After the season was over he shipped the remaining stock as light roasters to Mr. Rudd, who has always paid satisfactory prices.

A year ago the little poultry mites got a footing in his poultry houses, but after a hard struggle with oil and fire he has practically conquered them.

The 200 laying hens and the rearing of 600 chicks each year kept the proprietor pretty busy the greater part of the time, but the profits coming from the faithful work and honest treatment of his stock pays well for the time he spends.

E. F. BARRY.

A Reliable Poultry Book.

We have received a copy of the 20th Century Poultry Book, issued by the Reliable Incubator and Brooder Co. of Quincy, Ill. The book was compiled by practical, experienced poultrymen who are extensively engaged in different branches of the poultry business.

It contains much reliable information for the poultry breeder. Some of the subjects treated are "Magnitude of the Poultry Industry," "Poultry Raising on the Farm," "Feeding for Eggs," "Raising Broilers for Market," "Characteristics of Breeds," "Marketing," "Successful Egg Farming," "Capon for Profit," "The Pekin Duck Industry."

This book is a credit to the enterprising firm and is worth several times the price asked for it—ten cents.

P. S. We have arranged to have this book sent FREE to applicants who mention the POULTRYMAN AND POMOLOGIST.

Address RELIABLE INCUBATOR AND BROODER CO., Box O O O, Quincy, Ill.

Breeding Fancy Poultry.

Breeding fancy poultry is a fascinating science, and those who follow it carefully and use fair intelligence can make it a paying industry. The trouble is that people take it up without knowledge of the work. There is a science in all poultry breeding, but far more so in raising fancy breeds than the ordinary farm yard fowls. There are several points that the breeder must keep well in mind. It is shape and feathers that he is breeding for, and not for the qualities which make ordinary poultry valuable. Without perfect shape and appearance the fancy birds would be of little use in a show, and it is for exhibition qualities that he must strive. One may ignore the exhibitions of poultry when raising the birds for market, but he cannot do that if fancy fowl are his object.

In order to understand the business one must read and study upon the subject of fancy fowl. He must have the shape of his breed fixed firmly in his mind. Half the battle depends upon the shape of the

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Under this heading cards of forty words or less will be inserted once for 40 cents, four times for \$1.00, or one year for \$2.50, always in advance. For extra words add one cent per word per insertion. Each initial or figure will count as a word. No changes allowed on four months' ads. Cards will be run in uniform style and without display. Full amount must accompany copy, or the advertisement will not be inserted.

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bird. By conforming to the ideal shape one lays foundation for all other successes. No matter how perfect the carriage or markings of the bird may be, if the shape is poor they will never come up to the standard set by the exhibitors of fancy breeds. Good shape generally indicates the rest of the essential points. But not always. Otherwise it would never be necessary to breed for carriage and plumage.

A well-shaped fowl will usually have a good carriage, but occasionally this can be improved by selecting for further breeding the birds that are stately and graceful in their walk and deportment. Breeding for plumage is not the least fascinating part of the fancier's work. It probably yields more genuine pleasure than any other part of the labor. Starting with birds of excellent constitution and shape, it is remarkable what change can be made in the markings of the feathers without in any way destroying or injuring the type. But it takes long years of careful selection and breeding to accomplish this in a way that gives satisfaction. It is a work of love as well as wages.—*Journal of Agriculture.*

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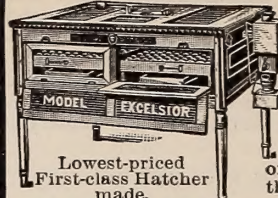
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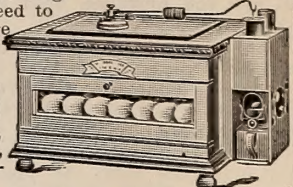
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