

potatoes without spraying to eradicate blight and potato beetles as to think of growing a high-class fruit without the use of a spray in a scale-infested district. Such persons had better quit the business, or, what is better, never go into it.

This general distribution of the scale through Canada and the States has been brought about by planting unfumigated nursery stock. Prof. L. O. Howard, of the United States Department of Agriculture, tells us that, in spite of the wide dissemination of scaly fruit in this country, and to some extent abroad, there is not a single authenticated instance of the scale having been established from such material.

In one of our old Greening-apple orchards the scale had killed most of the ends of limbs, and we cut it back to within three or four feet of the trunk two years ago, and we now have a vigorous top, low-down, and hope for good results. The same is true of our peach trees, where cut back on account of scale. They have grown fine crops, and are bearing excellent fruit, equal to young trees.

GOLDEN OPPORTUNITIES IN FRUIT-GROWING.

The great question is, "Does fruit-growing pay?" When I see young men in our fruit-growing districts leaving the farm for work in the shops, on the railroads, and many other professions, for the great wheat-growing districts of the West, or chasing the will o' the wisp to the gold-field Klondike or Cobalt, and overlooking the golden opportunities right at home, I think something must be radically wrong. The old-fashioned, happy-go-lucky manner of fruit-raising does not afford sufficient remuneration to keep the boys on the farm, while I could cite hundreds and thousands of instances where small farms of 100 acres in Western New York, between Genesee and Niagara River, with only a portion of them in fruit, have earned for the owners a competency, producing in single years \$5,000 to \$10,000, and even \$15,000.

I will recall an instance of a young man buying, six years ago, a 100-acre farm for \$7,500, with 30 acres of fruit. It was paid for in four years. This year he received \$7,000 for the fruit on the trees from his 20-acre apple orchard. Another orchard, of equal age and size, within half a mile, gave as many hundred dollars. The scale and codling moth took one, and the sulphur and lime and the Bordeaux took the scale and codling moth in the other. Another instance, where a young man a year ago bought a fruit farm of 140 acres for \$25,000, having \$5,000 capital. His sales this year amounted to over \$15,000 from his farm. I could cite instance after instance where neglected fruit farms are bought and paid for in a short time by up-to-date young men.

The fruit-grower's life, it seems to me, is very much preferred to that of a clerkship, even in a Government office, or an ordinary profession. Where is there a more delightful spot for a home than in our Niagara Peninsula or in Western New York? Instead of having to send our products thousands of miles to market, paying often \$300 or \$400 a car, we are within four-hours' ride of 40,000,000 hungry people.

In conclusion, I would say that I have no regrets that I selected fruit-growing as a profession. After all its uncertainties, when three, four and five years ago it seemed as though the scale would ruin all our orchards, it seems like getting back what I thought was lost. The present season being unfavorable for many varieties of fruits, we were satisfied to receive from the sales of our home farm upwards of \$20,000, and, from all our orchards, upwards of \$26,000. After deducting the amount paid for help, spraying material and machinery, we have a nice bank account to winter on.

POULTRY.

LIME AND EGG-SHELLS.

Editor "The Farmer's Advocate":

I notice an article with the above heading in your issue of December 5th, by Mr. Seare. As he wishes to know whether anybody else has had a similar experience, I may say I have, for one, and I know of several other prominent poultrymen who have had a similar experience. I will not go into details about it, but suffice to say I have been a poultry-breeder for 30 years on a very large scale, and find that there is sufficient lime in wheat to make a strong shell; but, as wheat is too high-priced in some places to be used generally, the addition of oyster-shells in small quantities is beneficial. J. MORRISON.

Halton Co., Ont.

Roll in the renewals and the new subscriptions.

EGGS DON'T HAPPEN BY CHANCE.

Editor "The Farmer's Advocate":

Nothing that happens in the world happens by chance, yet some people shut a lot of hens up in the darkest corner of the barn, throw some grain into the pen (when they think of it), and then wonder why their hens don't lay in winter.

We must remember that the great principle of cause and effect applies as much to egg-production as to anything else—baking, for instance. If a cook were to mix some flour and water and rice in a dish, and set it over a fire, no one would expect it to turn into an apple pie. Why? Because she didn't use the right recipe to make an apple pie.

Now, then, eggs are not produced by chance any more than anything else. People sometimes ask me if I can tell them why their hens don't lay. There is a reason, and it is because there is some condition of egg-production which has not been fulfilled. It is just as natural for a hen to lay eggs as it is for a rooster to crow, and, if the conditions of egg-production are present, I'll risk the hens not laying the eggs. But what are the conditions? Possibly we had better enumerate them:

1. Hens.
2. Suitable henhouse.
3. Good grain.
4. Fresh water.
5. (a) Cut bone or meat scraps; (b) grit—oyster-shells are necessary to make shell; (c) green food—a mangel or turnip should be kept before them.
6. Exercise.

Let us discuss some of these more fully:

1. Hens: Don't think it is necessary to have pure-bred hens to get eggs. The value of the common grade hen has been underestimated of late years. Pure-breds are all right, and have their advantages, but the ordinary farm hen will respond to good treatment, and is not to be despised. Remember, I am not championing the cause of the barnyard mongrel, but I do say that a flock of good grade hens is good enough to start with. It is a good plan to keep pure-bred cocks, and in a few years you'll have a good flock of hens.

In selecting the winter layers, pick out only the matured pullets. May-hatched chickens make good winter layers. Year-old hens often lay well the second winter, but my experience has convinced me that it pays best to keep only pullets. A good many make the mistake of keeping too many. Take only the best. Each hen should have at least 4 square feet of floor space. More is better. Most poultry writers advise from 5 to 6 square feet per bird. However, I have had good success with 4 square feet per pen. According to this rate, a pen 10 x 10 feet would accommodate 25 birds.

Another thing: It is better to have several small flocks than one large one. Of course, it makes a little extra work, but experience proves that, the smaller the flock, the better the results per hen.

Now, then, as to the poultry house. It is not necessary to have a frost-proof building, but it is essential to have one free from draughts. To line it with building paper, tarred or untarred, doesn't cost much, and will make a cold house much more comfortable. Tar-paper has the advantage of preventing lice, on account of its smell, but it gives a building a rather gloomy appearance, and it is very important that the henhouse be light. So, if the building has not many windows, it would be better to use the plain building paper.

As to the floor, a ground floor answers first-rate if it is perfectly dry, but too often they are damp. For myself, I prefer a good board floor. It is always dry, and, besides, has the advantage of being easily cleaned. The roosts should be near the floor, and a means of approach should be erected. If suitable nests are not provided, the hens will begin laying their eggs on the floor; then, before you know it, they will have formed the egg-eating habit. The nests do not need to be expensive. A few small boxes from the grocery store will answer well, but keep nice fresh straw in them so as to make them attractive.

About feeding: It is advisable to feed a variety of grains. Wheat, oats and buckwheat are the best grains for laying hens. In cold weather a little corn should be fed to keep up the body heat, but corn is a fattening food, and should be fed sparingly to the heavier breeds, or they will

get too fat to lay. All the grain should be mixed in the litter, so as to make the hens work for what they get. Don't give very much grain in the morning. Better give a little at a time three or four times during the day. This keeps the hens busy. In the evening, though, give them a little more than they will eat. What is left from the evening meal will be ready for them as soon as they come off the roost next morning.

It is surprising how unimportant a good many people think it is to supply fresh water. Laying hens, especially, require plenty of it, because an egg is composed of a large percentage of water. Let us not neglect to see that the hens have a supply before them all the time. It is surprising how much they will drink in a day.

Again, if we want eggs, we must see to it that the hens have something to make shell from. Lime, coal ashes and crushed oyster-shells are easily procured, and should be kept within their reach. It pays. Besides good grain, water and oyster shells, hens require some animal food. This can be easily supplied in the form of meat scraps and crushed bone.

We have often heard it said that we read too much. It is not that we read too much, but the trouble is we don't put into practice enough that we read. The busy work is over now, so let us get around and make a comfortable place for the hens. Then, with a flock of selected, matured pullets, we can expect to have good returns from them this winter if we give them a little attention. FARMER'S SON.

Lincoln Co., Ont.

A BEGINNER'S EXPERIENCE.

Editor "The Farmer's Advocate":

I have been reading with interest the different methods of poultry management, and, as profit is what we are all aiming at, I thought perhaps my experience would be of use to someone.

I got, as one of your writers expresses it, the chicken fever. Although I never had attended to chickens or hens, I thought selling chickens at 50 cents per pound a very easy way of making money, so I was not long in deciding to get an incubator. However, I got it so late in the spring of 1906 that I could only expect to get one hatch off as broilers. Even in this I was disappointed, for, by the time they were ready, prices were down to 15 cents per pound, so my next best thing to do was to get them weighing as much as I could. I noticed, in "The Farmer's Advocate," articles on crating, and what rations to feed them—a business quite new to me, but I made quite a success of it. I got two or three cents more per pound than market price, and sold all to one dealer as the different lots came. I had set the machine so many times, and had so many to fatten, that the late pullets, about 75 Barred Rocks, started to lay (we fattened the early pullets, not knowing any better). This was the latter part of February, and, as eggs were 35c. per dozen, a new business loomed up before me. I decided to keep the 75 Rocks and see what profit I would have. I kept account since the last of February till the last of November—nine months. I had sold 869 dozen eggs, that came to \$173.21. The feed has to come out of that; I have it all booked, so I can tell real profit. A lot of my hens layed all the time they were moulting, and a few had their new feathers and were laying by the last of August.

As for my henhouse, I had made no preparation, as I had intended to sell the chicks. When cold weather came, I fixed up an old shed by putting rails across the top and covering with straw. I had quite an up-to-date henhouse; the sides had been double-boarded, so I packed some straw in between. I aimed at dryness and light—two essentials. I think feeding has a lot to do with success. I give them three meals a day, wheat twice, and a mixed mash for the third. I notice one writer has no use for the incubator; I differ. I never saw nicer chickens in every way than those were, and a good many others that saw them expressed the same opinion. I think the 200-egg machine the easier to run, for I have tried both. The temperature is not so easily changed. By the time you have one hatch off, with average luck, you will have as many chickens as you would have by setting hens all summer. I find, when you have them in lots, they will stay together, and not lose so many as people say they do when they have them with hens. I will say to beginners, do not set more than twice the first year, as only experience can teach. We got useful articles in "The Farmer's Advocate" last year; there seemed to be more on chickens than this year. BEGINNER.

York Co., Ont.