

wise of the vat with the perpendicular knife again. Cheese left in hoops until just before the hoops are wanted. The curd was cut into narrow strips after working the whey out well. Maker puts four pails of curd in each hoop. All single upright presses. Did not use cap cloths."

Sept. 8.—"Visited another factory. Building very old. Warm and cold air comes in all around. The building and appliances poor. Used but one knife—the perpendicular. Agitators on two vats. The vats will not hold water. Heat with dry steam. Curing-room in bad shape; grease running out of cheese. About 30 soft ones, and some had collars on them."

Large amount of poor milk this morning. Maker sent home about 1,000 pounds of milk, and another 1,000 not fit to take in. Cut in 15 mins. Cut six times, making mince meat of the curd. Dipped in about an hour, but did not grind very quickly, as curd was gassy. Bad smell all around. Only one dipper in factory, and that an old one. Cheese-maker discouraged."

My readers will remember that the foregoing are extracts from a diary of several years ago, and which was almost forgotten, but I accidentally came across it while writing this article, and have given it to show the contrast between then and now. I hope the factories mentioned have improved since.

POULTRY.

Poultry on the Farm.

BY MRS. IDA E. TILSON, WEST SALEM, WIS.

In this age of close competition we need the best of stock, else others will accomplish more for time and money invested than we can do. We ought to breed from our choicest, since even from them will come some indifferent birds. What then could we expect from poor stock? If only the best specimens are retained in the poultry yard, there is no danger of multiplying and perpetuating the poorest. When a poulterer is not sure how his chickens are going to turn out, it may be well to wait and study them a while. If combs are flabby, less soft food sometimes "tones up" both them and the fowls. A pale, pink comb generally indicates a bloodless hen, and meat, gravel, table-scrap, or any digester, helps such a one assimilate her food, builds her up, and thus adds life and substance throughout. With age, undersized combs develop, defective plumage becomes even, and greenish legs fade into a very fair yellow. Buff legs sometimes get a richer yellow, but usually change the other way. A wing that folds badly may be corrected by nightly or often refolding it properly after the chicken is quiet and sleepy on his perch. If he is not being prepared for exhibition, clip those heavy, dragging feathers which persist in coming outside their proper coverts, and the latter may catch up in growth and spread over better. But spiteful, mischievous and non-laying fowls especially, or those having wry tails, misshapen combs, tender feet, or matured feathers wrongly placed, are not unfit for eating if in good order, and their room is better than their company. Shakespeare's Portia says of a fop, "God made him, therefore let him pass for a man." I would not say a similar thing concerning either man or animal of indifferent appearance, since the Creator has left us freedom and opportunity to persevere or to mar His work. I do not believe in letting anything and everything pass as fowls and eggs, but in trying what patience, skill and selection can do toward bringing our layers up to the full standard of excellence and capacity for laying. Poultry culture receives increased attention as its profitable, scientific and interesting features become known, and it yearly passes into more intelligent hands. Ex-President Hayes became interested in blooded fowls, and ex-Vice-President Morton has enlarged his already large broiler establishment, which illustrates what Ruskin says, that "the thoroughly great men are those who have done everything thoroughly, and who have never despised anything, however small, of God's making." Though pullets are our best layers on an average, a first-class tested hen will lay more than a poor pullet, therefore cull prudently and "hold fast all that is good."

I once undertook to follow some newspaper advice about giving hens colored nest-boxes. It was said every hen would then know and could each time select the same nest, and thus feel at home. I could not afford a variety of paints on a mere experiment, so interested friends helped me to a lot of circus posters and patent medicine advertisements, with which and flour paste I decorated the nest fronts gaily, striped, solid and variegated. Perhaps I left some blisters or loose corners; at any rate, my birds, with beak and nail, fell upon those decorations, till, in a few weeks, no traces remained. The artistic education of hens had not been promoted, but valuable exercise was secured them. It might be well to try this plan with fowls disinclined to exertion, and then, again, it might not be. I think a nest not lice infested makes biddy feel most at home. She will generally find it very convenient to lay in a clean, comfortable house, where she is not driven around and made suspicious. My hens seldom steal their nests, though I bought and now own a rooster which must have lacked the advantages of a happy early home, because he is continually trying to show them nest places, outdoors, in barrels and behind the boxes in our woodshed. Unknown to me, a

hen once strayed away during cold weather, laid her clutch in an ash box, then, before discovered, froze one leg stiff setting there; and I actually saw, one pleasant summer day, another biddy setting on a self-selected nest in a basket under a neighbor's kitchen table, and by an ironing fire. But cleanliness, care and training generally attach its inmates to a hen house. A Tennessee friend, in a late letter, inquired how I would like the sawdust nests they use there, and was surprised when I wrote back that it is my favorite filling here. Clear of chips and splinters, an old spoon will scrape off the top any time, leaving the under part as good as ever. Sawdust can be the foundation, and on top hay, or better yet, something odorless and lice-discouraging, like onion skins, cedar trimmings and dried hops, all of which I have used with success. I rode a distance recently, and saw nest boxes with round holes in top instead of front entrances, built thus so hens would not be apt to see the eggs within and eat them. The fowls in question were light weights, being Brown Leghorns, and had not, therefore, crushed eggs when jumping down into the nests. I was told I might have seen a similar arrangement near by at the Insane Asylum hen house, and there had followed no particular advantage from the plan anyway, few eggs having been broken either before or since use. My nest boxes open in front along a narrow platform, upon which a hen can walk and look in if she please, but I have only once encountered real egg-eaters. Provide food that will make strong shells, satisfy biddy's cravings for change, then gather her products often, and she couldn't break eggs if she would and wouldn't if she could. Clean nests make clean, attractive eggs, but if there should be soiled eggs, wash at once before the dirt is set or has time to taint them.

Pointers in Poultry Feeding.

BY M. K. BOYER.
SCRATCHING PENS.

Mr. Felch is in favor of the scratching pen. So are all practical poultry men. No matter what the style of a house may be, it is not complete until a pen for the fowls to exercise in is added. Exercise makes hens lay. Exercise stimulates growth in the young stock. Exercise makes fowls healthy, and keeps them so. Look at the houses of the man who complains that his hens do not lay, and see if he has scratching pens. Examine the premises of the person seeking cures for sick fowls, and note if there are any scratching pens. It is a fact that fowls will not stay in the roosting houses during the day time, no matter how bad the weather may be outside—and it is another fact that they will be at work in the scratching pens even during nice weather. Get to work now, and put up such pens, if you have not got them already.

KEEPS THEM BUSY.

While scratching pens are necessary, the fact remains that they will only be ornaments unless you keep the floor of them well littered with chaff or leaves. You must give them something to scratch. Bed the floor about six inches, and scatter the wheat among this litter, and then stand back and watch. It won't be long before you see every fowl busy at work. And they will scratch long after the last kernel of wheat has been found. If you have it so arranged that they can get into this pen in the morning before you are out of bed, or as soon as they leave their roosts, you will find them busy at work in this litter long before you have their breakfast prepared. The man who is studying the egg problem soon learns that this is the only way to get eggs in winter.

PULLETS FOR EGGS.

If you hatched out a lot of pullets last April or May, and you now have them yarded alone, with or without a male, and feed them good laying material, you should have eggs, and plenty of them, now, and the supply should keep up all winter. Past experiments have proven that the only way to make poultry profitable is to rely on the pullets and the two-year-old hens. The pullets can be brought into profit in the fall and winter, and the two-year-olds can be made good winter layers, but after that there will be more or less trouble to have winter eggs, as the older a fowl is the later she will moult, and the later she will moult the less are her chances for laying before spring. If these facts would be more generally minded by the poultrymen—more reliance put on the pullets then is now done—there would be more money for them.

CHANGING THE GRAINS.

Experience has proven that wheat and oats are the best egg-producing grains, yet it is not well to confine the birds to these grains alone. There should be several changes during the week. Wheat, oats, rye, buckwheat and barley would be a better bill of fare. They could be given, say, wheat on Sunday; rye on Monday; oats on Tuesday; buckwheat on Wednesday; wheat on Thursday; barley on Friday; and oats on Saturday. Or, they could be changed about, supposing that the above bill was made for evening feed, so that one kind would be used for noon feeding, and one kind for night. In addition to these whole grain diets, the morning mash must not be forgotten.

THE MORNING MASHES.

There are some poultry editors and writers who think the smartest thing they can do is to attack the advice of some well-known writer, and declare that such and such opinions are "all theoretical," and "the writers are working on salary." One of the latest attacks is made on the morning mash.

They declare that it is all foolishness to mix up the ground grains, and that the good results obtained will not pay for the time taken to mix the feed. There is one thing certain, those who oppose mashes never speak from experience. They may keep a few fowls for fancy, but they never ran an egg or a general poultry farm. During the past few months I have taken the trouble to inquire into the poultry condition of all the writers who oppose the morning mashes, and with one exception, none of them keep poultry. That exception was where the writer had a few breeds on a town lot. Morning mashes reach the point quicker than the whole grain, and they present a combination of feeds in a proper state for assimilation. If you want eggs in winter you must have a warm mash in the morning, and grain must be strewn among the litter at noon, and grain again at night, and grain food all the time.

Pointers.

BY JOHN J. LENTON.

Fine combs and vermin are sometimes seen together.

Gravel for fowls must always be accessible.

The soil has much to do in affecting the shading and color of poultry, and it is a point that is seldom taken into careful consideration, though its importance is conceded by a few.

Calves' or sheep's liver, which can always be had in the market for a few cents a piece, are valuable to feed fowls for two reasons: They are devoid of bones, and they closely resemble insect diet. We advise the cooking of any sort of meat always.

When soft eggs are laid by fowls they intimate usually that the egg organs are inflamed. This state is occasioned by the birds being overfed or too fat. Spare diet and plenty of green food is the best treatment for fowls in such a condition.

In addition to those who take up poultry as a pleasurable pursuit, there are many to whom it is a means of livelihood. In France and America, I believe, the breeding and rearing of poultry is regarded a good way of making a living, and although it is usual to say that poultry keeping will not pay, there are many who find it a most profitable source of income. Unfortunately we are unable to discover those in any great numbers who find poultry add greatly to their income, for they maintain a few hens, and never tell how much they make, if even they know themselves, which is very doubtful. But that there are hundreds of such is an undoubted fact. Descriptions of these have been given from time to time, but of course their operations are not on a large scale, and therefore have not impressed the imagination. It is the failure of large and pretentious ventures that has given the idea that poultry keeping does not pay, and once let such an opinion as that gain credence and it will be reiterated *ad nauseam*. Some large poultry farms have been dismal failures. Attempts have been made, over and over again, but it came to the same end. But it looks so well on paper. Given that twenty-five hens will lay so many eggs, cost so much for food, and rear so many chickens, leaving, a good margin of profit, this has only to be multiplied by a hundred or a thousand when there is a fortune for the owner. If fowls were machines and could be multiplied as can machinery, making no demands for space, air and natural conditions, or were not in any way liable to disease, then the thing could be done; but it has been proved that a large number of fowls cannot be in the same flock with profit. Disease comes in, the result of overcrowding; hens do not lay as well in large numbers as in small, and more work is required, increasing the expense so rapidly that the thing becomes a heavy loss and has to be given up. This has been the experience of many who have tried poultry farming, both in this and other countries. The fact is that poultry may be made to pay when kept in small flocks. They will always pay well as an addition to the farm stock, when they can obtain their food either for nothing or almost so, and do not need special care, or have any rent charged against the account, but this is altogether different from being a profitable pursuit alone. Well managed, they will be an important source of revenue to every farmer or cottager, and it is in this direction that the keeping of them should be encouraged.

Plant a sunflower grove, keep fresh water before old hens and chicks, provide shade from the sun and shelter from storms, watch for lice, and don't count your chicks before they are hatched, tell the truth and mind your own business.

Poultry reared with free range of orchard and meadow are the largest, and also finest in plumage and symmetry. They have a prouder carriage, and look of thrift and health not often seen in chicks reared within the limits of town lots. If the breeder must from necessity limit the range, he must provide artificially the advantage which the country naturally supplies. Insects he must replace with chopped meat, and, lacking grass range, he must cut grass and clover daily. Shade must be provided during summer, otherwise failure is sure.

Your birds need shade as well as sun. Set out a few plum trees in the yard and the hens will destroy the grubs, and enrich the soil, so that with little trouble and expense you can raise some of the most delicious fruit. With certain poultry men, this plan has worked well, and paid handsomely. Try the plan next spring and see if you are not well satisfied.