

Home and Farm

Realizing that the farmers are too busy with the work of threshing, this department is devoted this week to some side line which is destined at some not far distant day to become an important item on the farms of North Dakota. Poultry raising will be one of the means of diversification which in time will be the aim of every farmer.

Incubating and Brooding.
After harvest it is a good time for the farmer to consider whether he cannot do more with his poultry and make this portion of his farm stock pay a larger dividend. Surely the addition of one, two, or five hundred dollars to his income each year would be acceptable. When this proposition his mind naturally turns to winter eggs, and he recalls the trials he has had in the past trying to secure them, and in chasing the phantom of hope without once getting sight of an egg. Perhaps our farmer reader is thinking now that I am going to advise him to build new hen houses and turn his farm into a model poultry plant, but such is not the case. I surely would advise him, however, to prepare comfortable quarters for his fowls, while the weather is yet good. Build new houses if necessary or clean up, disinfect and repair those he already has. Another thing I would suggest is that he get rid of every scrab hen on the place, and save only his choicest young hens and pullets for layer and brooder.

Place the scrabs and old hens in a pen and fatten them by feeding a mash made of equal parts by measure of corn meal, wheat bran and wheat middlings. If you have them, ground oats can be substituted for the middlings, or corn and oats ground together will answer nicely. Moisten the mash with skim milk or buttermilk. This will put them in market shape in about three weeks. Then sell them before the bulk of farm poultry begins to come in.

Winter eggs are easily secured if one goes about it in the right way, but it is too late to think of them now unless the start was made in the spring. We must have early hatched pullets for winter layers, or at least those which will be fully matured and start laying before cold weather sets in, for as winter layers old hens are a very uncertain proposition. If we do, or if we do not get eggs the coming winter we should lay our plans now to secure them hereafter. We will take time by the forelock and be prepared.

Then there is the meat proposition. You can make a pound of chicken cheaper than you can a pound of pork. A nine-pound capon can be grown and wintered on fifty pounds of grain, or you can grow the same weight by feeding meat in seven months on forty pounds of feed. These capons will sell right in your home market for one dollar or more. Hens and smaller capons will afford a proportionate profit. For this work you want heavy fowls such as Light Brahmas or Plymouth Rocks. The old scrub hen won't do. Large grade hens may return a profit but the chicks will not be uniform and will not afford the profit that can be got out of thoroughbred stock.

There are just two ways that the farmer can increase his income from poultry, but to make any such mater-

ial increase he must hatch in appreciable numbers, and he cannot do this with natural methods. His hens will not set early and he cannot spare a sufficient number from egg production to rear the chicks he may need, and then it would take a great amount of time to look after so many sitting hens and chicks, and if they are not looked after the result will be far from satisfactory. He must turn his attention to artificial methods, and now, after harvest, when work is not pressing, he can give this matter due consideration. That is why I chose this subject for the September number of Western Poultry Journal. I want to present it to those farmers who are sufficiently interested in poultry to read a progressive poultry paper, and at a time when they can consider the matter fully. You may wonder why I should try to interest the farmer in artificial methods. I have no incubators for sale nor do I derive any profit from this source. It is because the demand for high grade poultry and eggs is not met and the American farmer can produce these cheaper than anyone else on earth, therefore he can make the most money from their production. Millions of dollars could go into the pockets of the western farmer for poultry and eggs every year that they are not getting now. It would mean prosperity to a large class to increase their income one to five hundred dollars each year.

To secure this money, he must make some outlay and expend some effort. Poultry raising requires care and judgment, as much as is bestowed on other farm animals. The details are more minute and this often leads the busy farmer to believe that fussing with chickens don't pay. But it does. It affords the largest kind of profit, but the man must not be above his business, he must look after small things, but when once well established, if he follows right methods, the work will come along with the general run of chores and not be noticed or take appreciable extra time.

It takes no more time to look after an incubator than it does a couple of fussy old hens, and one can care for a brooder of fifty chicks as easily as he can one hen with ten chicks. Hopper or continuous feeding does away with most of the work. The heat of the brooders will have to be looked after and the brooders cleaned, but there will be no fighting lice or numerous other disagreeable jobs which is always necessary with hen-hatched chicks. I would not discourage the use of hens for incubators entirely. Use them, but use the incubator also and thus materially increase the output.

Most farmers do not care to invest largely in incubators and brooders, and it is not wise or expedient for them to do so. One good incubator of not less than 100 egg capacity will answer the purpose of most farmers. It costs very little more to run a 200 than a 100 egg machine, and if one has a large number of hens the larger machine is the cheapest and most satisfactory to buy. By building a small cheap brooder house he can use indoor brooders which are less expensive than outdoor brooders; or home-made brooders can be constructed. It is not necessary to have any chicks come off before the first of April, un-

less one is raising broilers, or has a slow maturing strain of fowls from which to secure winter layers. Broiler raising is a trade, and it is not expedient for the farmer to enter largely into this class of work unless he thoroughly learns the business, has a suitable equipment and makes it a regular winter employment.

If hatching is to be done early in the spring preparations should be made now for securing eggs and caring for the chicks. Unless the hen houses are made comfortable the hens will not commence to lay early, and it is the eggs from two-year-old hens we want. The brooders should be in readiness, and if a brooder house is to be built it should be done during the warm weather so as to thoroughly dry out. Outdoor brooders can be used quite early in the spring if they can be set in an open shed. Such a shed will keep the ground dry and prevent the wind from blowing on the chicks, so no matter if it is cold, they can be let out of the brooders during the warmest part of the day. Such a shed should be of the south and may be put up of rough boards or slabs. Perhaps some unused building is to be devoted to the chicks. If so plans for equipping it should be formulated if the work is not actually done until winter. Much of the work of preparing for early chicks should be done in the fall, as these preparations cannot well be made when there is snow on the ground, and we often want to get our first hatches off before the snow leaves in the spring. Then, too, if the work is done in the spring or winter the quarters are apt to be damp and dampness is fatal to young chicks.

The beginner should exercise great care in the selection of an incubator. There are some worthless machines on the market, and others with which which an expert can secure satisfactory results. They all have long lists of testimonials, and of course each claims to be the best. A good plan is to purchase a machine which has done well in your locality. Most of the standard makes will hatch well under the right conditions. The success of the operator depends in a large measure on the incubator he purchases.

Poultry as a Sideline.
The writer is in receipt of a letter from a young man, a clerk we judge, who wishes to know if hens can be made to lay eggs in winter in this climate, at a profit. He says "There is an old adage to the effect that if one had enough money he could make a hen lay in the winter." He wishes to engage in the business as a sideline to supplement an insufficient salary, if he can see a profit in it.

This young man has a good idea and we will say at the start there is a good profit in winter eggs in an Iowa climate, or any other place in the same latitude. Many a young man who has an insufficient salary might materially supplement it by engaging in poultry both with a view to obtaining eggs in winter and raising fowls for the market or for the fancy trade. The latter perhaps, offers greater opportunities although it takes longer and requires a greater outlay, at least as to the stock item. The business offers no fortune and one must be content to go slow and put up with small profits. The work of caring for a few fowls is not much and most any clerk can find plenty of time night and morning after working hours, that is if he really wants to better his condition. If he prefers to chase the streets at night and

put in his whole spare time in pleasure seeking such as usually appeals to the young person, he need not expect to make hens lay at a profit in winter, or raise many chicks to marketable age, or for the show room. He must give it time and attention and he must stick to it whether success crowns his efforts at first or not.

Many a man and woman too, has started into the poultry business in this very way and gradually built up a large and profitable business that not only took all their own time, but that of a number of assistants. But that such an effort might grow into what we will not take up in this article, we will endeavor to confine the article to the small venture conducted as a side line to supplement an insufficient salary.

There is a profit in the business conducted in this way, larger in proportion than when conducted on a larger scale. What the profit will be largely depends upon the market and the person so engaged. The breed all the food required, namely: wheat, corn, buckwheat, oats, etc. Grit of some kind should always be accessible, and in winter it is necessary to see that it is on hand.

The profits of the poultryman depend entirely upon the health of the flock; vigor and vitality are the factors which make money for him. A sick chicken is about the most useless thing on earth; and the only thing worth considering is the ax. The thing to do is to keep the fowls healthy; not let them get sick. Some may ask "How do you do this?" There is no golden rule. "Labor conquers all" is an adage as old as the hills and it applies to the poultry business as well as any other. Healthfulness depends upon many things, cleanliness, proper ventilation and, most of all, the proper kind of food, and the person behind the feed bucket.

The food must be similar to that which the fowl would get in the natural state. The greatest mistake in feeding poultry is in overlooking the elements which make flesh, bone and blood. Such enter largely into the making of the egg. On the range in the summer time the hen manages to pick up worms and bugs which furnish the need food. In winter and spring or upon a limited range we must supply this needed food. In my experience I have proved that green cut bone is the most economical as well as the most satisfactory form in which animal food may be given to poultry. It furnishes the exact material for the egg; it stimulates the digestive organs, thus rendering the kinds of food of greater value in the egg production. Green bone will certainly make hens lay. Observation is a great help in keeping a flock in good condition. Comfort in a flock is synonymous with profit. Every day I come nearer believing this to be true.

In winter, in summer, in spring, the case is the same—the comfortable bird is the one that is giving the profit. And the most profitable thing the owner of a flock can do is to go

over very carefully the conditions which cause discomfort to the flock, and to use every effort to overcome these losses. When you see a poultryman begin to get lazy and neglect his fowls, it is a sign that the end of his career is not far off. The poultryman who expects winter eggs from immature or stunted pullets is going to be badly disappointed. It requires good food, good care and a steady growth from shell to maturity to develop winter layers. Never omit to keep a record of the poultry yard products. A showing of what is done there is sure to make converts to poultry keeping. Do not make the mistake of leaving the early hatched pullets too long on the range, where they work off much of the food that should go to laying early.

They will mature quickly if confined in a moderate run and fed for eggs. The genuine value of a flock of hens cannot be measured by a few months egg yield. The total product of the future year, or even two years, and the final condition of the birds should be considered together.

Action of Animals of Sign.
Certain animals act peculiarly before storms, or when they are clearing, and to the observing assist in determining what may be expected in the way of weather. The croaking crows in the morning is an indication of fine weather. When ducks and geese fly backward and forward, when they plunge frequently into water, and send forth cries and fly about, it shows rain and storms are to be expected. If the bees do not remove to a great distance from their hives it announces rain; and if they return to their hives before the usual time it may be concluded the rain will soon fall.

If pigeons return slowly to the pigeonhouse, it means the succeeding days will be rainy. When bats remain longer abroad than usual from their holes, and fly about in great numbers, perhaps to a greater distance than common, it announces that the following day will be warm and serene; but if they enter houses and send forth loud, repeated cries, it indicates bad weather.

If the owl screams in bad weather, it is going to change to fine. It is a sign of rain or wind when the sparrows chirp a great deal and make a noise to each other to assemble. When fowls and chickens roll in the sand more than usual, and also when the cocks crow in the evening or at uncommon hours, it means rain.

Peacocks which cry in the night have a presentiment of rain. It is believed to be a sign of bad weather when the swallows fly in such a manner to brush the surface of the water, and to touch it frequently with their wings and breasts.

Fowls as Weather Prophets.
When flies sting more troublesome than usual rain is coming. When gnats, before sunset, form a vortex in the shape of a column it indicates fine weather. A sudden storm is coming when sea fowl or other aquatic birds retire to the seashore or marshes. If cranes fly high in silence and arranged in order it is a sign of fine weather, but if they fly in disorder or return at once with cries it announces wind. When dolphins sport and leap frequently, the sea being tranquil and calm, it denotes that the wind will blow from that quarter where they sport. If frogs croak more than usual or toads issue from their holes in the evening in great numbers, if earth worms come forth from the earth, and scorpions appear on the walks, if ants remove their eggs from the small

hills, if moles throw up the earth more than usual, if the asses frequently shake and agitate their ears, if hogs shake and spoil the stalk of corn, if the bats send forth cries and fly into the houses, if the dogs roll on the ground and scratch up the earth with their forefeet and if cows look toward the heavens and turn up their nostrils as if catching some smell, if oxen lick their forefeet, and oxen and dogs lie on their right side—rain is coming.

What Lamp Flame Tells.
If the flame of a lamp crackles or flares it indicates rainy weather. The same is the case when the soot detaches itself from the chimney and falls down. When the soot collects round pots and kettles, takes fire in the form of small points, like grains of millet, it means rain, as the air is cold and moist. If coals seem hotter and the flame more agitated than usual, though the weather be calm at the time, it indicates wind.

When the flame burns brightly and steadily straight up, it indicates fine weather. The sound of bells heard at a great distance is a sign of wind or change of weather. The hollow sound of forests, the murmuring noise of the waves of the sea, their foaming and green and black color announce a storm.

Pleasant or unpleasant smells, as if they were condensed, are signs of change of weather. Spiders webs, or leaves of trees, agitated without any sensible wind, indicate approaching wind and perhaps rain. A frequent change of wind, accompanied by agitation of clouds, indicates a storm. A want of dew or a too great quantity of it, the morning fog, the appearance of rain, announces rain. The same is good when white hoar frost is thick. Salt, marble and glass become moist some days before rain; corns and old scars become painful. Dry stones and moist earth announce fine weather. Dry earth and moist stones announce rain. Wind, beginning to blow in the day, is stronger and endures longer than that blowing in the night.

Most farmers speak of their business being well under their own control and refer to running the farm but in very many cases the farm is running the owner and the latter is being poorly paid for his labor. Any business, no matter what it is, is profitable to the owner just to the extent of the amount of profit it makes for him and no more. The man who does a business of \$10,000 a year with \$2,000 a year profit is succeeding just as well as the man who does half again as much business with just the same profit. Some of us are running our farms along these lines and are doing it by trying to farm too many acres and hiring too much help. We find in the end that while our operations are larger and we have handled more money, we have worked harder and under more expense with exactly the same amount of profit. So far as it is possible so to do the farmer should put himself in position so that he can do the bulk of his own work and do it without injury to himself. To accomplish this he must reduce his cultivated area and specialize the crops. There is scarcely a section of the farming country where a little thought would not enable the farmers to grow some one or two or three crops with greater profit than they are now growing a dozen and do it with less hard work and as much or more profit. Are you running your farm, friend or is your farm running you?

Try this plan of getting humus into the soil and at the same time furnishing a good forage crop for your stock. On the soil intended for potatoes sow some hairy vetch this September, sowing a little rye with it. Cut this in the spring and sow cow peas to the later used as a forage crop and then next August sow this field with crimson clover and the following spring turn the whole thing under and prepare the soil for potatoes. This method will not only add humus to the soil but you will be reasonably sure of this clover making a stand, your soil will have been more or less enriched by the droppings of the animals at pasture and, if the potatoes are properly fertilized and cared for you will have a bumper crop which will more than pay you for using the land and pasture one season.

Much of the trouble in getting good crop of first class potatoes is due to the use of home grown seed selected without intelligence. In some cases it were better not to use the home grown seed at all although there is no objection to it if the variety is doing well and is not running out. By all means select the seed tubers at the time the crop is dug and plant your selection on this line. During the growing season, so far as possible, mark the hills that are the most vigorous and when the tubers are dug select the seed potatoes from these marked hills provided, of course, they have turned out well. Select the medium sized tubers and always those without a flaw. Never, under any circumstances select the seed from the hills which have done poorly for the chances are nine out of ten of the following crop will be far from desirable. This is a simple method of selecting seed potatoes yet there is no surer way of getting what you want.

Many poultrymen object to the use of water glass for the preservation of eggs because of its expense hence will be interested in the use of vaseline which has been tried and pronounced of great value. The idea is that a coating of any kind which will prevent the air from reaching the inside of the egg is all that is necessary to preserve it. Those who have tried vaseline pronounce it perfect. The plan of working it is to select strictly fresh eggs, no over eggs can be successfully preserved, by any process and coat them thickly with vaseline an then pack them away in shallow boxes in layers with bran and keep them in some cool place. It is said that eggs in this way will keep in condition as long as those preserved by water glass, and the expense is about about one-half.

There is no doubt but what the main diseases with which swine suffer are those known as transmissible diseases and these invariably come from the dirty pens and yards. We have never believed that it was necessary to have hog wallows although we will admit that it requires some trouble to prevent swine from making a wallow. If you consider it inseparable from hog raising then make it a part of your work to see that the wallows are not so frequently and that the enclosure in which the hogs run is sown to rye or cow peas once a year and plowed under the following spring. During the winter see to it that the swine have plenty of water to drink but none to muss in. Nothing is better for disinfecting purposes than a two per cent solution of the tar solutions made for this purpose. Once in a while the swine themselves should be sprayed with a mild solution of this tar. Try this plan of keeping things clean and you'll have healthier hogs.

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