



PROPER HOUSING OF POULTRY

The Chief Requisites of a House Are Dryness, Perfect Ventilation and Plenty of Light.

By N. E. Gilbert.

Frequently poultry keepers complain bitterly of the failure of their fowls to show profit, when the whole fault lies in defective housing.

Poultry lead an entirely artificial life when they are penned in a run, or even when at liberty and provided with a sleeping-house—that is to say they have their food provided them and do not sleep in the trees, as their natural instinct would teach them.

It is simply the difference between sleeping in a house and sleeping in trees that upsets them. When they do the latter, they may not lay well but they keep their health. More than half the diseases modern fowls suffer are caused primarily by this defective housing.

The chief requisites of a house are that it should be weather-proof, so that whatever the inclemency of the season, the fowls keep dry. It must be provided with ample ventilation and should have a sunny aspect.

The sun is free to all animals, and the more fowls see of it, the better. Yet, sometimes, fowl-houses are placed in dark, secluded corners, and built to admit hardly any light.



A colony-house thus supports plenty of fresh air to the chicks, six feet long, two feet six inches wide, two feet four inches high in front, eighteen inches high in the back.

poultry-house should always, if possible, be placed on ground sloping slightly away from it, in the wet weather the rain drains away, if the ground is quite level the rain off the roof shows a tendency to remain in the form of puddles.

A trench should be dug to carry it away, or better still, there should be a spout on the roof to carry the wet away down to a down spout connected with a surface drain.

It is important that the ground around the house, as well as the house itself, be kept dry, as fowls never do well on wet land.

Special attention should be paid to the roof. The eaves should overhang some three inches, and it is all the better if built of stover, wood than the walls.

There is no necessity to cover the roof with felt, provided it receives a good dressing of tar at first and a

further coat each year. On no account make the roof of corrugated zinc.

Such a house will be cold in the winter and hot in the summer. If the poultry-keeper has some sheets of this very useful article—for such it certainly is—make a roof of thin boards and put the zinc on top.

For the floor, the earth needs to be beaten down quite hard and a dressing of some inches of sand or light clay, if it is better to have a wooden floor, for it must be dry.

In any case, observe scrupulous cleanliness, removing all droppings once a week and taking care there is never any smell.

Ventilation is a subject better understood now than formerly. We indulge in more of it for ourselves and more for the fowls. Yet for the fowls, as for ourselves, we must not forget that the thing can be overdone and that a good deal depends upon the location of the house and the outside temperature.

In other words, wire a large part of the front of the sleeping-house, but have a sliding shutter arranged so that it can be closed in the winter or when the weather is extra cold.

If the house is of a lean-to pattern—indeed, in every case—it is well to admit all the ventilation in front, the only exception being in houses with a wide span roof where a little ventilation can be given at the top, but this is chiefly to let the bad air out.

A draft, we must not forget, is caused by having two windows or outlets of some sort directly opposite to each other, so that the air can blow through.

When the front is more or less open to the elements, see that the back and sides have no holes or crevices for the wind to blow through. In summer give the fowls ample ventilation; in winter enough to keep the house sweet, and for the fowls to breathe pure air.

In some sheltered localities, half the front can be open throughout the winter, but it is impossible to lay down any hard and fast rule.

Perches should be at least two inches thick and all at least two feet level, for if one is higher than the other, all the fowls will try to get onto that one.

Set them about three feet from the ground and do not nail them, but let them rest in slots fixed to the walls.

This simplifies cleaning the house and the perches too, for they will want a dressing of paraffin in the summer time, to keep the lice at bay.

ADDING MILLIONS TO THE CORN CROP

THE EASY HARVESTING OF AMERICA'S GREAT ANNUAL CORN CROP MADE POSSIBLE BY WONDERFUL MACHINERY.

By E. M. Gilman.

With the annual production of close to three billions of bushels of corn and the prevailing scarcity of labor, the farmers of this country would be utterly unable to harvest their crops without human hands.

Fortunately this condition of affairs was foreseen by manufacturers several years ago and they rose to the occasion by inventing machines which are almost as important in taking care of this crop as the harvester and binder is to the wheat crop.

The introduction of the corn binder has given tremendous impetus to the production of ensilage; in fact, the work of cutting corn by hand requires so much labor that the use of silos would be practically prohibitive.

With modern machinery, however, the corn crop can be cut, bound and reduced to ensilage in a few days. The great machines move over the ground rapidly, cut the corn evenly, drag it into bundles and drop it into windrows where it may quickly be stacked to wagons and hauled to the silos.

Some farmers claim that by the use of corn-harvesting machinery and the silo the value of their corn land is doubled. Nothing is wasted. When fodder is fed whole it is tramped into the ground, the husks, blades and tender tops only are eaten by the cattle while the stalks, which contain some of the most valuable food-elements, are wasted.

Corn that is not put into the silo is torn into bits by the shredder, the stalks being reduced to as fine a condition as the blades, tops and husks torn apart.



Harvester Made of Steel.



Derrick for Loading.

and is so greatly rattled by the shock of all kinds that it is eaten up clean.

The modern corn-husker will husk all the way from 500 to 1,000 bushels per day, the output being regulated by the condition of the corn and the weather. The husker does its best work on bright, snappy days when the corn is dry. This machine snags the ear, conducts them between two iron cylinders on which are fastened little pegs which grasp the ears and tear the husks from them. The corn is then elevated like the wagon while the shelled corn drops into another receptacle and all is saved. The machine of course shells more or less corn and the dryer the corn the more it shells.

After the fodder leaves the snapping rows it comes into contact with a shredder-head, which tears it into fine bits, and it is then blown into the barn or wherever it is wanted for storage.

Careful investigations, not only by the government, but by many of the State experiment stations, show that corn can be handled more cheaply by the use of machinery than by hand.

There are several kinds of corn-binders, and while each kind may have its special advantages, there are some points that should be particularly observed in the selection of the machine.

With a machine in which the bundles of corn are bound while in a horizontal position there is usually more or less trouble from the bundles catching on the stubble and being torn apart.

A short iron rod on each of the dividers helps to keep the binding gear from being checked. A machine which has two wheels does not need to raise the corn so high, hence less power is required to run it. A very handy attachment is a knife that cuts the stubble close to the ground, thus making further operations on the same ground more convenient.



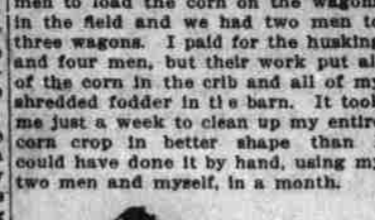
Corn Picker and Husker.

In binding corn, the old practice of husking the ears and leaving the stalks—which contain over 60 per cent of the total feeding-value of the corn crop—in the field to decay, is entirely too wasteful and must give way to more intensive methods.

This means of course that some kind of a modern corn harvester must be used, so the corn binder has become a permanent fixture on a large number of well-managed farms throughout the corn belt.

In hauling corn fodder from the field to the shredder or wherever it is desired, low-wheeled wagons are best. These have a platform extending over the wheels, and the corn is easily loaded and unloaded and much can be hauled at a time.

An Ohio farmer, writing of the conveniences of the modern corn husker, says: Last year I had 1,000 bushels of corn in shocks. I hired a man to come to the field and husk it. I have a team of my own with which I cribbed the corn, hauling from 25 to 50 bushels at a load. I arranged with six of my neighbors to haul up the corn and fodder. It took four men to load the corn on the wagons in the field and we had two men to three wagons. I paid for the husking and four men, but their work put all of the corn in the crib and all of my shredded fodder in it a barn. It took me just a week to clean up my entire corn crop in better shape than I could have done it by hand, using my two men and myself, in a month.



Corn Picker and Husker.



The Old Fashioned Way.

THE CRY "BACK TO THE LAND"

Experts Studying out the Problem of Why so Many City-Bred Men Fail at Farming.

By Professor W. J. Spillman.

A special study of the equipment, management and income of a large number of small fruit and truck farms, many of them run by people who have recently come from the city, is being made by the office of Farm Management of the U. S. Department of Agriculture.

This study has given us somewhat of a new point of view. In general these small farmers are not successful. This fact has led us to study the question more closely, and as a result a scheme for the management of a forty-acre farm is outlined which seems to be practicable.

The diagram shows a convenient scheme for subdividing forty acres to fit it for the cropping-system outlined. It will be observed that the forty acres are divided into eight five-acre tracts. One of these is set aside for what may be called the "homestead". These five acres are at the center on one side, and it is supposed that a public road passes this side of the tract.

Of these five acres, half an acre is utilized for the house and yard and the barn and barn lot. This space is ample for what we have in view. One-half acre is devoted to garden, one and a half acres to orchard and the remaining two acres to a paddock, into which to turn the stock for exercise.

By judicious management these two acres can also be made to furnish some pasture and some selling-crops. The other seven five-acre tracts are to be devoted to a seven year rotation.

When this rotation is in full swing, the crops on the farm for a given year are as follows: Field A, potatoes; field B, three acres of cabbage and two acres of onions; field C, corn; field D, cow-peas; field E, corn; field F, clover; field G, clover.

The next year each of these crops would move to another field as follows: The potatoes would go to field G, which was in clover the year before. The cabbage and onions next year would go to field B. The corn field B would go the next year to field C, the corn in field E would go to D, while E would be sown in clover and F in clover.

The next year each crop would move to another field in the same manner, so that each year potatoes are sown after second-year clover, cabbage and onions are planted after potatoes, etc. Commercial fertilizers would be required for the potatoes, cabbages and onions.

The potatoes, cabbage and onions on this farm would form the market crops. The two fields of corn, the field of cow-peas and the first year's seeding of clover would furnish twenty

acres of forage for the livestock, while the second year clover would furnish pasture for the livestock during the summer.

In each of the two cornfields some winter grain, such as wheat, rye, etc., could be sown early in August at the time when the corn is laid by, that is, when cultivation of the corn ceases. This wheat would furnish fall and winter pasture for the livestock.

In the cornfield, which is to be followed by clover the wheat would be turned under early in the spring in preparation for sowing the clover. In the cornfield, which is to be followed by cow-peas the wheat could remain until the second year clover field is ready to turn the stock on, at which time it might be plowed up and sown to cow-peas. We thus have pasture during the whole year in sections where the seasons permit winter pasturing.

In the cornfield, which is to be followed by clover the wheat would be turned under early in the spring in preparation for sowing the clover. In the cornfield, which is to be followed by cow-peas the wheat could remain until the second year clover field is ready to turn the stock on, at which time it might be plowed up and sown to cow-peas. We thus have pasture during the whole year in sections where the seasons permit winter pasturing.



Forty-acre Farm Subdivided Into Eight Five-acre Tracts. This Shows a Convenient Method of Subdivision Which Gives Access to All the Fields Without Wasting Much Land in Roads. Length of Lines Given in Rods.

The city man must not get the idea that he can start in a system of this kind without experience and make a success of it from the start. It will mean a lot of very hard work, very hard work, hard living and hard study, for the two or three years, and of these three things study is the most important.

A furrow plowed through a field that is soaked with water will aid and hurry the process of drying several days. On the bare spots scatter a generous quantity of grass seed, manure each lightly and go over the ground with a spiked-tooth harrow again. Frost throws grass roots out of the ground. Get out the roller and go over the fields before they are hard and dry.

FIGHT THE PEACH BORER NOW

Do Not Wait Until Spring, for by Then the Eggs Will Have Hatched and the Insects Scattered Into the Tree.

Go to your blacksmith with a ten or twelve inch flat file and have five or six inches of the small end made in the shape of a sharp-pointed knife blade with one side of the blade flat and the other half round.

Both edges of the blade must be sharp. Bend this blade to a crescent shape, with the flat side on the inside of the bend. Put a good handle on and you have an instrument with which you can cut down to a tree and scrape a



File for Scraping Trees and Half-Diamond Hoe.

sides of it without moving. The diameter of the bend should be at least three inches.

After the first frosts, go through the peach orchard with this little instrument, scraping the bodies of the trees at least two inches from the surface of the ground.

A small diamond or half-diamond shaped hoe, with a handle not over two feet long, is another tool you must have to get over the trees rapidly.

In the late fall, most all eggs have hatched out and most of the little grubs will be between the earth and bark, within a few inches of the top of the soil. In scraping the rough bark or outside of the bark of the trees, you will get 95 per cent of them.

In the spring go over the trees again. In three or four days after going over the trees the second time, go over them a third time. Then you can readily see all you have missed the second going-over. In the third going-over draw the soil back to the trees, leaving the dirt a little lower at the base of the trees—W. H. Underwood.

RAISING THE CALVES

By J. W. Ingham, Pennsylvania.

In order to raise cattle in the east with any profit, or without loss, we must have one or the other of the best breeds. The Shorthorns, Herefords and Aberdeen Angus, are all good and each has its admirers. I prefer the Shorthorns because the cows are generally the better milkers.

Whatever others may think they can do, or have done, I can't raise good calves on dishwater, milk stop and hay tea. Young calves need milk for a while as much as babies and to keep them growing right along they must have it.

We prefer to have our cows calve in the fall, both on account of winter dairying and for raising the calves, which if kept in a warm stable during the winter and fed milk, hay and meal will sooner obtain the size most profitable for their disposal to the butcher.

Our calves, when taken from their mothers, are each provided with a separate pen for convenience in feeding as they need not fight for the food bucket, rob each other of their meals, or suck each others ears and navels when done drinking.

The latter is a vicious habit which they soon acquire when two or more are penned together and unless prevented it soon causes a blemish on the belly.

Each calf is provided with a feeding bucket in a box which is nailed fast to the side of the pen. This prevents the bucket from being upset and the milk spilled by the calves' greedy butting, otherwise the feeder, for safety, would have to stand and hold it while the calves were drinking.

As soon as we begin feeding the calves skim milk, which is about ten days after being taken from the cow, a handful of wheat middlings is put into the milk for each calf and the calves are fed twice a day.

The quantity is gradually increased until a pint or more can be fed to advantage twice a day. After they have become fond of the middlings I feed to calves the milk makes them grow faster and pays as well as when fed to pigs. They are provided with a shelter in the pasture to go under when it storms or the sun is hot and they appreciate it highly.

to milk but there is more danger in feeding this kind of meal than middlings as it is more likely to produce diarrhoea or scour. A little flaxseed meal will improve the ration and supply the place of other foods.

Before they are four weeks old they are fed a little hay, or rowen, in addition to their milk and meal. There is more danger of feeding too much skim milk than too little, as too liberal feeding of it is apt to bring on the scours.

Some calves can stand more than others, but about five quarts at a meal twice a day is enough for any calf if it is supplied with hay, meal and water.

We provide our calves with water after they have drunk their milk and give them all they want. Skim milk should be warmed to blood heat before feeding to young calves.

Feed to calves the milk makes them grow faster and pays as well as when fed to pigs. They are provided with a shelter in the pasture to go under when it storms or the sun is hot and they appreciate it highly.

IMPROVING CITY MILK.

"Restricting the sale of milk to bottles in the city of Chicago, has been the means of improving the quality and lowering the infant mortality." The new city ordinance which went into effect in Chicago the first of this year requires all cows to be tested or the milk pasteurized, and the result of this measure is expected to be most beneficial to the consumer. In cooperation with the weeding out of insanitary milk rooms in the city—a campaign inaugurated by the authorities—marked improvements are looked for in the quality of milk sold to the consumer.

"Milk bottled in the country," is a slogan which has been extensively employed by dealers. It has increased the sale of milk delivered in this manner and earned for Chicago the distinction of having the supply bottled in the country instead of in the city as is the case generally.

"It is the inspection of retail milk rooms in Washington, D. C., requires more time and labor than in other cities. The reason is because the number of small dealers is large. Owing to the limited volume of business handled, many of these milk rooms are interspersed with domestic and business life, which, compared with other cities, might be considered a prominent fault. General conditions, however, show a steady improvement and the efforts of the health department are meeting with success.

The first cold rains are hard on the cows and they should be kept in the barn in such weather.

Make a practice of surrounding barns in the winter with a thick coat of manure. This will keep the ground from freezing and the cows will be able to get out to graze in the open fields.

ASKS GOVERNMENT AID.

"We have in this country 2,150,000 dirt roads. The government is investing 1,000,000 for star routes and rural delivery service. I believe there is a moral obligation upon the government to assist in the building and maintenance of public thoroughfares," was the statement of Mr. F. T. Colgrove of Hastings, Mich., President of the Michigan Good Roads Association before the fourth international good roads congress, in Chicago, recently.

"The government has done much in the building of federal structures. Much has been done for commerce. Billions of dollars have been paid for the development of our waterways, rivers and harbors. The manufacturers of our country have fared well at the hands of the government, whose revenue bills have protected them from the underpaid labor of the old world.

"It is true that the government has done much for the farmer in many ways, but as compared with what has been done for the cities, for commerce, and for the railroads, it seems to me a trifle.

PROFITS OF FRENCH GARDENERS.

The French gardener uses around Paris hundreds of his 50,000 hotbeds, over 1,100,000 bell glasses in the open ground. And he sells \$2,700,000 worth of spring produce forced by these bell glasses, every year, leaving out the profits of the other nine months when people do not sit at all sitting. London was taking its milk of spring from France, gardeners selling for a ton freight, and it is only within three years that English gardeners have been able to beat their own sales.

GUINEAS IN WINTER.

The guinea fowl is a native of warm countries and has a natural fear of snow, so in the north when guineas are caught out in a snow storm there is a good chance for trouble if we undertake to force them to walk through snow to the poultry house.

The guineas will take to flight rather than wade in snow and rather than fight on the ground when covered with snow they will light in trees or if there are no trees they will light on the tops of buildings.

It saves trouble to house the guinea as soon as it is apparent that snow will cover the ground and keep them housed until the storm is past.

RAISING PIGEONS.

Pigeons must have clean water for bathing once every day. It should be given them early in the morning. The birds cannot live without it.

The thing which should be emptied after the birds have used it, as it quickly becomes foul and should not be allowed to stand.

The pigeon that goes about with drooping wings is a sick bird. At the first sign of sickness the birds should be taken out of the pens and killed by themselves. Unless they are very valuable they should be killed at the end of three days if they are not entirely well.

HIS LUCKY HORSESHOE.

A New York farmer picked up a horseshoe in the road, and the next moment he was struck by an automobile which tossed him to one side. While Chester was shaking his fist at the chauffeur, another car came along and threw him 10 feet in the air. He alighted on the soft side of a ditch and was unhurt. When within 100 feet of his home it was struck for the third time by another automobile and thrown into a field where he lay unconscious for an hour. No bones were broken. Not once did he let go of the horseshoe, and he attributes to this talisman brought him, and has nailed it over the parlor door.



To dry a wet article quickly, wrap it in a Turkish bath towel and wring. The towel will absorb most of the moisture.

It is a great temptation to feed the pigs the ratty potatoes, but often they have had cases of scours. Note them in case.

Make seedling Dahlia's by raising as many as to the size as you can potatoes, and from seed if started early, transplant the seedlings when they are about 2 1/2 inches high from the soil.

NATURE'S METHOD.

Sow the seeds of lettuce, radishes and other vegetables of this kind this fall and cover very lightly with earth. Over this place a deep cover of litter and lay it on thick enough to keep out the frost.

Next spring you will be surprised to see these vegetables coming up the right the ground when you take off the mulch. They will have from one to two weeks start over those started in the spring.

Come to think of it, this is pretty near the way nature takes care of seeds in the winter. They fall from the plant, bury themselves in the soil and the wind covers them with the mulch of leaves and grass.

SUGGESTIONS THAT MAY HELP.

Start the youngsters in the way of reading useful books before they acquire the "dime novel" habit.

Do you sometimes envy your merchant or your banker his success? Then try systemizing your business, as he does.

Shoot the worthless farm dog; sell the kicky dairy cow and the stinky horse and give the chicken-eating hog a dose of the ax.

KEEPING THE BULBS.

After frost has destroyed the Dahlias and cannae cut the stalks off six or eight inches from the tubers, dig them and place in a dry, airy location until they are dusty, then place them in bags and hang in a frost-proof cellar where you keep potatoes. The frost must not be perfectly air tight.

The pipe should fit the openings in the floor and the chimney so as to allow no gases to escape in the closet, and to make the draught stronger.

HARVEST OF WHEAT.

It will be seen from the following that every month in the year has a wheat harvest somewhere.

January—Australia, Chili, Argentina.

February—March—East India, Upper Egypt.

April—Lower Egypt, Asia Minor, Mexico.

May—Algeria, Central Asia, China, Japan, Texas.

TO INSURE GOOD HEALTH, TOO MUCH ATTENTION CAN NOT BE GIVEN TO THE SANITARY CONDITION OF THE FARM HOUSE.

Many cases of typhoid and other malignant fevers may be traced to the presence of decaying vegetation or moldy piles of old carpets and rubbish in the cellar.

Let us clean up, take everything out of the cellar that can be moved easily and air it out, whitewash the side walls and ceiling with plenty of carbolic acid in the whitewash.

Put a ventilator in something like the one shown in the accompanying sketch.

The draught in the chimney will be improved by the addition of an opening from the cellar into the chimney about two or three feet above the fireplace or grate.

There is generally a wardrobe or closet at the side of the chimney through which the pipe may run. The pipe should be 8 or 10 inches in diameter, made of galvanized iron and perfectly air tight.

The pipe should fit the openings in the floor and the chimney so as to allow no gases to escape in the closet, and to make the draught stronger.

The drawing shows plainly the position of the pipe in the floor and the chimney.



Cellar Ventilator.