

COLONY HOUSES FOR POULTRY

WHERE THE COLONY SYSTEM PREVAILS POULTRY KEEPING IS MOST SUCCESSFUL; THE FOWLS ARE MORE ACTIVE AND THERE IS LESS DANGER FROM DISEASE

The main requirements of a good poultry house are good ventilation and protection from storms and cold winds.

Hens will not lay when weather conditions prevent them from scratching and exercise. Many poultry houses have proven failures because



Colony House With Cloth Window.

the variations in night and day temperature were too great. Prominent authorities on the building of poultry houses state that ventilation can best be furnished by leaving one end of the house open or covered with burlap or canvas, using no glass windows unless necessary for light. The idea of building a warm house should be abandoned. It is shelter that is needed. The house should be built in such a way that the fowls will not roost near the open front where they would be exposed to winds; nor should it face the prevailing winds. A long house is more expensive to build, for a given capacity, than one more nearly square. A long, narrow house is also a cold house, having more ex-

posed surface for a given capacity than a square house.

The size of house necessary for a certain flock will vary in different sections. Where there is little or no snow and where the fowls can be outdoors every day in the year, two square feet of floor space per fowl will be ample. Where the climate is such that the fowls will seek shelter part of the year, rather than go outdoors on the range, considerably more space should be provided, say four to five square feet per fowl. The idea should not be to crowd them so much that their activity will be interfered with. Whether the shelter is provided by enlarging the house or providing cheap scratching sheds, is immaterial. Two square feet per fowl, or even less, is ample for roosting quarters.

Roosts should be made low or near the ground—not higher than two feet. There are several reasons for this. Fowls of the heavier breeds cannot fly high, and those of the lighter breeds frequently injure the soles of their feet in jumping from high perches. Roosts should be made all the same heights; for if they are made some higher than others, the birds will all flock to the higher ones and crowd, which is undesirable.

When dropping boards are used they should be low down, to permit of easy cleaning. They should be made of matched lumber and be twenty inches wide for one perch and three feet wide for two perches, the first perch placed at least ten inches from the wall. A good roost may be made

from material two by two inches, then slightly rounded on the edges.

Poultry keeping is most successful where the colony system prevails. The colony system means the housing of fowls in small houses, preferably portable, where the fowls have free range. The chief advantage is that the fowls are more active or busier than when confined in yards; second, there is less danger from outbreaks of disease, as it is possible to keep the houses on clean ground by moving them occasionally; and third, the fowls require less feeding and care, as they pick up considerable food on the range. Another advantage of this system is that the fowls will rid the farm of many injurious insects, such as grasshoppers. Then, the colony system will fit in with crop rotations, and for part of the year the fowls will live on the stubble fields.

The illustrations shown represent a successful colony house used at the Utah experiment station. The house has a cloth window, and the traps are very convenient, as they open from the outside.



Colony House Showing Trap Nests Opening at the Rear.

SAVING SEED CORN.

If the seed corn I saved this fall fails to germinate when planted, the fault is in my selection and care of the corn, but if I buy my seed next spring, and it proves to be bad seed, I suffer loss from someone else's carelessness as well as my own, so I make it a rule to select my seed in the fall as I husk my corn.

Only nice, smooth, solid, sound ears are selected. Those that most nearly approach my ideal of good ears. These are stored in a safe, dry place, where they will dry out well. Then they are put in barrels and covered so that mice cannot get into the barrel.

If a mouse should get into a barrel of seed corn, the chances are that it will ruin most of the corn so that it will not grow.

Last fall I selected my seed as I usually do, and stored it away. The corn was not well matured and I had trouble in getting enough that was of good quality. I made a test in the early spring, and found that every grain used in the test germinated.

I secured two packages from a prominent seed grower. One of these tested a germinating power of 75 per cent, the other 84 per cent. If I had trusted to this man to furnish my seed, it looks as if I would have had a very poor stand of corn.

This would have reduced the yield several bushels per acre and would have been a costly experience. I think it is always safe to save plenty of seed corn to meet the requirements of the farm, then if new varieties are to be tried, purchase seed only in a limited way, and see whether the new variety is adapted to the locality where it is to be grown, before depending upon it largely.—A. J. Legg.

It is almost as necessary to keep the atmosphere of the house moist as it is to keep it warm in winter. A vessel containing water always should be kept on the stove. It requires less heat to keep a room warm when the air is humid than when it is dry.

Some men who willingly spend \$10 for horse blankets suddenly feel the grip of poverty when their fives ask for a new cloak.

PREPARING BEES FOR WINTER

THE IMPORTANT CONSIDERATIONS IN WINTERING ARE PLENTY OF STORES OF GOOD QUALITY, SOUND HIVES, AND PROTECTION FROM COLD AND DAMPNESS.

BY F. G. HERMAN.

In considering the requisites for successful bee wintering, it may be well to note that success is frequently hinged upon very small things. The neglect in attending to the small affairs of life is sure to bring about disaster.

Bees starve to death with honey in the hives, and sometimes that within two inches of them, from the fact that during cold weather bees form themselves into one compact body, and when all the honey is consumed within their reach, unless the weather is warm enough for them to change their location from one part of the hive to another, in order to reach their stores, they will surely starve with plenty of feed near them.

This is usually the case with single-walled hives, hence the option of chaff hives to confine the heat arising from the bees. Bees usually move toward the warmer part of the hive. If the air shines on one side of the hive in cold or cold weather, the cluster goes to that side. I have often had colonies eat out all the honey in one end of the hive, and leave the other end full.

As to passageways through the



Drone and Queen Trap on Hive Entrance.

combs, there is a difference of opinion. However, my experience leads me to conclude that they are unnecessary.

It is true that they afford an opportunity for an outer portion of the cluster to reach adjacent inner combs if the bees happen to be located directly over the passageway and the weather is warm, otherwise they serve no purpose.

I have settled down for my own part on using a woolen blanket or carpet cover, and on top of it, porous and absorbent material such as sawdust, chaff, cut straw and leaves.

The woolen material next the bees covers the moisture to the other side of the piece of blanket or carpet where contact with the absorbent material causes it to pass upward, rendering it harmless to the bees.

I suppose there is the slightest possible upward ventilation, a sort of slow percolation of air and moisture, but it works well, provided the entrance of the hive is not too narrow and contracted.

Bees inhale vapor, and when this vapor strikes the cold walls of the hive it sometimes congeals into frosts, melting into water and running out of the hive as soon as the weather is warm enough.

Sometimes it merely condenses into water and runs out of the hive as soon as enough is collected. Whether cold or warm, this vapor is being sent off all the time, only when it is warm enough it does not condense into water or ice.

It very often occurs that the entrance of hives becomes clogged with dead bees, and the colonies do not have ventilation enough. One of the indications of this is when you see bees running out of the entrance, which goes to show that the air inside is damp and impure.

Take a stout piece of wire with a hook on the end, and rake out the dead bees. When frost forms about the inside of the hive, the vapor from the bees, together with the congealing of it in the remote parts of the



Spring Bee Escape.

hive, gives a bluish-white appearance to the surface of the combs, which by the inexperienced, is often mistaken for mold.

The bees also must be kept dry. A substantial hive, with a tight roof, will keep out the rain.

A few inches of dry, porous material, such as chaff or ground cork packed between the cluster and the roof, will have a good effect on keeping the bees comfortable, allowing the moisture to pass off slowly.

A draught would be injurious. We advise a wind-break of some sort on the north and west sides of the hives. Also guard against the mice, and have the hive entrances shallow and long, rather than round.

Do not neglect the bees; see to it that they have food enough and to spare. Bees differ from other farm stock in this respect, that they can be given their full supply of food at once and they will help themselves as their need requires. Plenty of good food above the cluster is what takes them through every time.

THE RIGHT WAY TO SHED MACHINERY

BY M. CLOVERDELL.

Shedding machinery is not merely farming tools and implements under shelter. There's a proper method of procedure in accomplishing the work, the same as in storing anything else.

Arrange to have all the implements under some kind of shelter, and the first rainy day that comes get them ready to house in the regular machine shed.

In order to do this properly, it will be necessary for you to have on hand a good supply of implement paint, some first-class machine oil, some old cloths, a hammer, wrenches, bolts and nuts galore.

Your very first step will be that of inspection, cleaning up and repairing. With any kind of clean, coarse cloth go carefully over each implement, removing all grime, dirt and grease. It is most essential that you clean off all cog wheels, shafts and bearings. In doing this, one will ascertain where all taps, bolts, straps of iron, castings and pieces of wood are loose, damaged or missing. These should be fully replaced or repaired while they are fresh in the mind, lest they be neglected till the machine is needed again.

When each implement is thus overhauled, a thorough oiling should follow. Let every cup and oil receiver be filled to overflowing. Oil is mighty cheap when we consider its saving qualities.

Where a plow or cultivator is gone

over, all shovels and shares should be given a thin coat of linseed oil to prevent rusting. Sickles should be oiled, carefully wrapped in old dry gunny sacks, and laid away in a safe place.

Where implements have the paint nearly worn off, it is preferable to give the entire surface a good coating. Where there are only occasional places scaled or broken off, a stroke or two of the paint brush will be sufficient.

Be especially particular to paint all woodwork, carefully filling each crack and crevice to prevent further decay. As soon as the paint has dried sufficiently for one to handle the machinery, it should be placed in the machine sheds, and here a system should be employed.

Shed each piece of machinery in the order it will be taken out for service next spring—the tools used in the fall occupying the back part of the shed, or overhead; those used in the summer next; and those needed for early spring work nearest the door right where they may be run out easily and on quick notice.

This will save an enormous amount of time and energy in shifting machinery about; while every piece will remain in its place and receive the full benefit of being in shelter until actually needed. And when the season for using machinery comes on, everything will be in readiness.

BAD ROADS AND SMALL LOADS.

The president of a western railroad shows what the difference between good roads and bad mean to the farmer, by some facts relating to his own road.

He says that twelve years ago the railroad was able to handle only 132 tons to a train. It today hauls 257 tons in one train. This was made possible through improvement of track, engines and cars, which additional improvement has cost many millions of dollars.

The same principle applies to the farmer with his team as to the railroad man with his locomotive. Our country has some of the best railroads and some of the worst wagon roads. If the wagon roads were improved so the farmer could have a continuous good road from the farm to the market, he would be able to pay the cost from the increase in cash in a very few years.

Fine roads cost big money. It is true—about a billion dollars for 500,000 miles of macadam—and we cannot expect western farms, to stand this expense, but we do maintain that the common dirt road of the south and west can be improved fifty per cent—made possible during the rainy seasons and to carry good loads at all times and at very small expense.

Drainage by tile and ditches, the constant use of the log drag, which costs practically nothing, would, in three years, convert thousands of miles of bog into fine highways and add millions to the income of the farmers.

Keep the young cockerels by themselves, for they annoy the pullets and interfere with their laying. If they are not to be caponized sell them off now. What's the use of feeding a lot of young roosters for three or four months? No profit in it.

Many persons try to cover up their lack of knowledge by trying to be witty.

DAIRYING IN PERSIA.

A missionary who has spent several years in Persia gives a most interesting account of how butter is made in that country. The churn consists of the skin of a goat or sheep sewed up in the form of a bag.

Into this bag the sour cream is poured and it is then agitated by the



bag being swung on a rude frame hung on sticks, as in the illustration. It is said that this is the origin of the American swing churn.

Dairying, and all farm work in Persia is now carried on just as it was centuries ago, and only in a very few places have any improvements been made.

A NEW ONION.

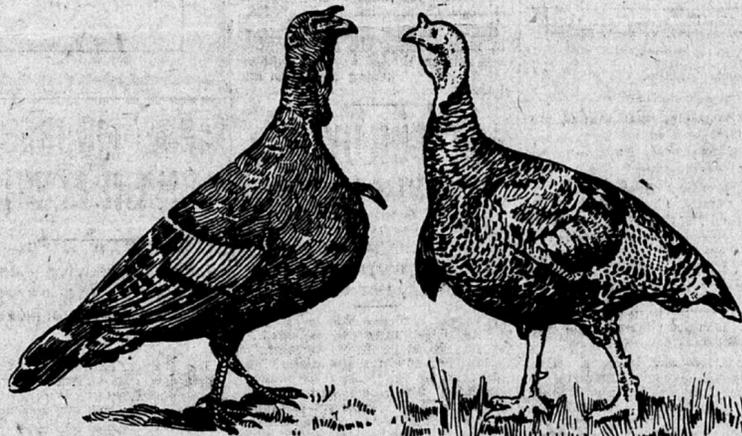
The potato, or hill, onion is becoming more and more a general favorite because it will stand the severe cold of northern winters, and also, because of its freedom from the ravages of the "onion maggot." Besides, of its very tender and delicate flavor.

Sets planted in the fall will produce marketable bulbs the next June or early in July, and will bring a desirable price.

The large bulbs planted in the spring make sets by the fall, so making it necessary for the onion-grower to save mature bulbs for spring planting, in order to keep up his supply of sets.

The mature bulbs should be stored in layers in a dry and well-ventilated place.—F. L. R.

THE SEASON'S FAVORITES



FEEDING FOR HEALTH AND VITALITY

By W. M. Kelley.

I believe it is time that we dairymen took a more rational view of our business and feed our cows in a manner that would promote their health and vitality instead of forcing them to their very limits, as is the practice in many sections where dairying is the exclusive branch of agriculture. We are feeding too narrow rations for the good of our cows.

Cows that are raised and developed on clover hay, ensilage, wheat, bran and oats, with good luxuriant pasture grass during the summer will make better cows than those that are overfed on a ration ill adapted to their needs. I will stake my reputation on this fact. We may not make as much milk, but we will have better producing cows and calves, and what milk we do make will be made cheaper and our herd will gradually be getting better.

I do not care whether a ration is 1 to 4 or 1 to 7 as long as it does the business and is beneficial to the health of the cattle. Then, again, the average dairyman does not employ methods best calculated to give the best results in breeding. Some dairymen will raise every heifer calf born on his farm, while another dairyman will not raise any. I wish we could induce

dairymen to make some exchange of calves, hereby only the best calves from high-producing cows would be raised.

In this way dairymen who had the facilities for raising and developing the best calves could get the very best calves and raise them and sell them for a good price instead of growing the weedy, inferior calves that were born on his farm.

This would do more than any one thing to improve the quality of our dairy herds, and growers could realize greatly increased profits upon the cows that they raised. In connection with this calf exchange there would need to be a system of selection, for the laws of heredity control the dairy function as fully as they do the other characteristics.

The matter of providing comfortable and sanitary stables for dairy cattle is a matter that is rapidly approaching a science. Years ago cow stables were perfectly ventilated by half-inch cracks between the boards, but these stables proved too cold for winter milk production, and farmers were advised to build their stables tight, enclosing them with matched lumber, and not to allow their cows

to go outside during cold weather. Some even went to the extreme of warming the cow's drinking water for them in the stable.

The result of these close, warm stables was vitiated air, lack of exercise, debility and tuberculosis. Next, dairymen were advised to allow a certain number of cubic feet of air space for each animal when building their stables, and many of these stables proved too cold for winter milk production and too damp for the health of the cattle. Now the stable question seems narrowed down to a practical system of ventilation and many of the most practical dairymen are putting in such a system.

Suitable feed, pure water, good ventilation and proper exercise are all necessary. The great question for practical dairymen is to draw a line between the essentials and the non-essentials.

Water in front of each cow is a nice thing, but if the cows are not turned out for exercise each day, it is a question whether it is a good thing or not. I would much prefer not to have water in front of my cows, if it was to be used as an excuse for not turning them out to exercise in the yard.

RAIL FENCE PHILOSOPHY.

The sermon on the mount contains all the religion and philosophy in the world.

I always prepare ourselves for the worst that may happen, we will never be disappointed.

If it is a serious mistake to set trees too deeply, because the roots are more apt to rot than if planted reasonably near the surface.

TRAP NESTS PAY.

Some people say a trap nest is more trouble than it is worth, but others who are really interested in the chicken game find it to be of great benefit. In fact, there is no other way of telling just what each individual hen does, but they require the attention of somebody who can be on hand at all hours during the day to open the traps and let out the hens.

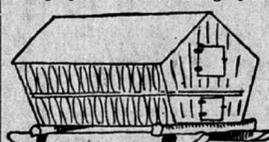
TIMELY SUGGESTIONS.

If the ram gets too fat, do not reduce his fatness by starving him, because that is as bad as a fat woman trying to reduce her flesh by the same process. Give him plenty of exercise, and cut down his rations so gradually that he will not suffer from hunger. It is cheaper to feed sheep with bran at \$20 per ton than all corn at 40 or 45 cents. A good combination is about one part bran to three parts corn by weight.

A MOVABLE CORN CRIB.

The walls of this corn crib are built of barrel staves; the roof may be of lap-siding or any kind of roofing you want.

For the side walls, use two lengths of staves and run a pole on the middle, as shown in the cut to nail the staves on, and run the two rods through the middle of the crib, one through poles and one through planks.



The size of the crib is according to the amount of corn raised.

The walls must slant out a little, as shown in the cut, as this will keep out the rain better. The floor is tight.

This kind of a crib is quite cheap and may be built of small poles nailed close together if no barrel staves are at hand.

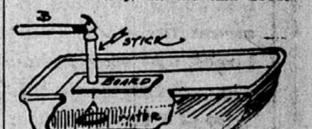
Such a crib keeps the corn in good condition. It dries quickly and keeps dry all the year around, which is not possible for corn kept in a tight granary where it molds and spoils at once.—J. G. Stein.

Use small scions two or three inches longer than the width of the girdled place. These scions should be cut in the fall and carefully preserved during the winter. The grafting should be done as early as possible in the spring.

To fatten western lambs or yearling wethers, they must never be allowed to go hungry. Give all they will eat up clean every day.

FORCING DIRT OUT OF A SINK.

When the sink drain becomes stopped up with matter caught in the trap, unscrew the cap from the bottom of the trap, fill the sink about



one-third full of water, place over the strainer a board, and strike several good, sharp blows with the hammer. To prevent the water from splashing, place a stick on top of the board and strike that.

orchard notes.

Many trees that have been girdled by mice can be saved by bridge grafting, which consists of bridging over the bark above the place where the mice have gnawed and that below.

Where orchards are cultivated, the top soil should be kept in a state of fine mulch in order to keep as much moisture in the ground as is possible.

Do not try to keep large flocks of poultry together during the winter. Small flocks do better, and the expense of separating them is not great. A few old boards, a day's time, and a little elbow grease will make a new compartment.