

Housing Of Chickens



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Housing Chickens

By James Dryden



IN LESSON 1 of this Reading-Course it is stated that the hardest problem in poultry-keeping is how to maintain the health and vigor of the fowls. Housing has considerable to do with the health and vigor of the stock. Ages ago, before domestication, chickens roosted in trees, and they still have a little of the wild nature. Did you ever notice when the curfew of the poultry-yard summons the

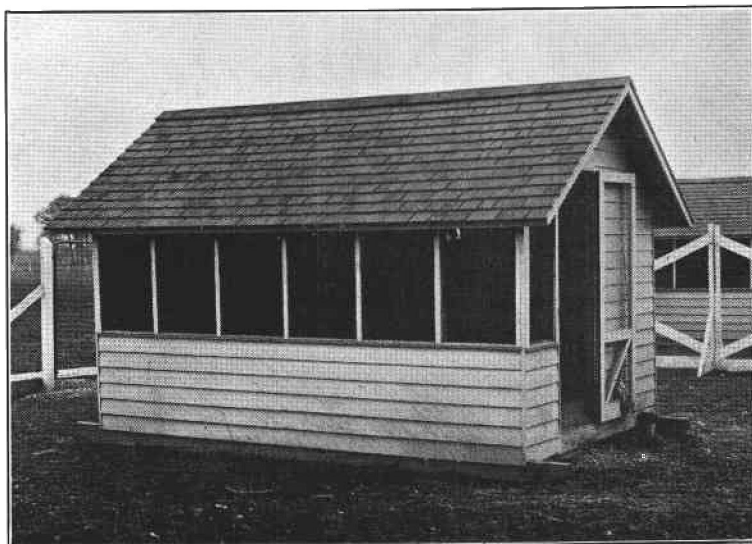


Fig. 1. An Oregon Station portable colony house.



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chickens to their roosts that they usually go to bed on the branches of a tree if there is one nearby? Not long ago I watched a large flock of fine chickens near Corvallis "retire" for the night. The farmer had built good houses for the flock, but near the houses there was a giant oak tree decorated by nature with mistletoe; one after another the hens flew into this tree, some hopping from one branch to another until they reached the top-most branches, higher than the highest barn on the farm. It was interesting to see the chickens nestle down under the mistletoe for the night while the roosts in the poultry houses were vacant.

It is the nature of the hen to roost in the tree rather than in the house, and the poultryman should study her nature if he wishes to succeed.

On another occasion I watched a flock of hens retire for the night where they had the choice of two houses. One was a sort of shed affair with one side about all open; it was a fresh-air house. The other was a closed house with a few small holes for ventilation. About nine out of every ten of the hens crowded into the open house, though they had originally been equally divided between the two houses. They preferred the fresh-air house. If there had been a tree in the yard they probably would have preferred that to either of the houses.

There are times, of course, in severe storms when chickens prefer the shelter of a roof to roosting in a tree; but the lesson is, that fowls prefer the out-door life, or the "simple life," and when we put them in close houses and compel them to live there under the mistaken notion that we are being good to them we are imposing conditions that will result in decreased vitality. Housing is really an artificial condition for chickens and it is a serious mistake in poultry-keeping to follow too closely artificial lines.

It should not be concluded, however, from what has been said above, that the best kind of housing for chickens is in the trees. It should not be inferred, either, that we should avoid all so-called artificial methods in poultry-keeping. While housing may be an artificial condition for fowls, nevertheless good housing is necessary if we wish to get the greatest profit. In a state of nature, fowls lay only during the breeding season, and it is necessary in order to get eggs during the winter season to surround the hen with conditions that are more or less artificial. If winter egg production is an artificial condition, then we must resort to artificial means to induce the fowls to lay in that season. The danger is that we are liable to forget the nature of the hen and compel her to live under conditions too highly artificial.



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PURPOSE OF HOUSING FOWLS.

When we build houses for chickens we have in mind their health and comfort. We may be influenced in this by kindness for the fowls but more often by selfishness that looks for a full egg basket; that is, we usually build houses for chickens to make them lay more eggs. We may say then that the purpose of housing is to increase productiveness; poor housing will decrease it.

LOCATION.

1. *Soils.* Chickens will thrive on a great variety of soils, but certain kinds are more adapted than others to successful



Fig. 2. The first, but not the worst, poultry house that was ever built.

poultry-keeping. If possible, heavy clay soils should be avoided. They are hard to keep clean or sanitary. A rather light porous soil is preferable; this is drier in wet weather and not as hard in dry weather as a heavy clay soil. A wet soil is colder than a dry one.

2. *Drainage.* If the ground selected has not good natural drainage, provision should be made either by underdrainage or by open ditches for carrying off the surplus water. The water should not be allowed to stand in the yards. Muddy feet mean muddy eggs. Dampness means catarrh, roup, rheumatism, tuberculosis, etc.

3. *Air Drainage.* Air drainage is sometimes as important as soil drainage. Cold moist air seeks the lower levels. It



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is better to locate the house and yards on higher levels where there is some air movement to carry off the cold damp air or prevent it becoming stagnant. Fowls should not, however, be exposed to high winds. You will notice that on windy days the fowls mope around in sheltered corners or in houses. This is not favorable to high egg production. Sufficient air drainage without interfering with the comfort or activity of the hen is the ideal condition. The houses may be built on the leeward side of an orchard or in the shelter of buildings. A windbreak of trees may be set out where necessary to provide shelter.

4. *Sunshine.* If possible the houses and yards should be built where they will get the full benefit of the sunshine. Face

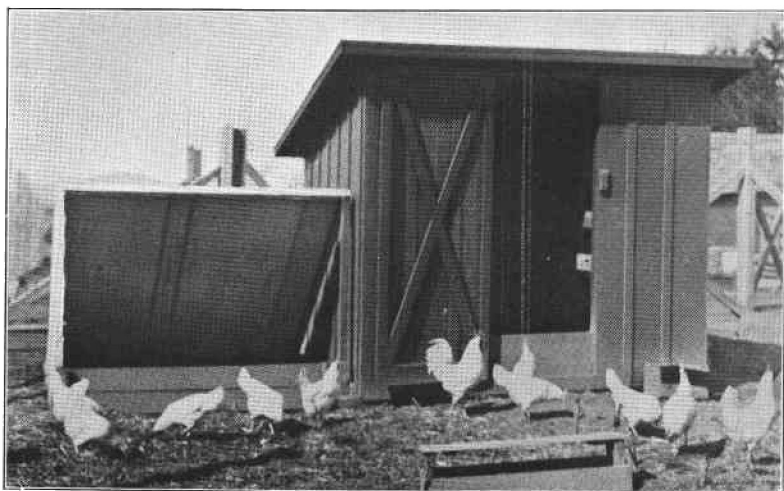


Fig. 3. A colony house with scratching shed. It is 6x8 feet, and has a door of poultry netting, which gives good ventilation. Used at the Oregon Station for small breeding pens.

them south unless the prevailing winds are from that direction. Sunshine is a germ destroyer and a better egg producer than red pepper or other condimental foods.

5. *Other Points.* Other points that should be considered in locating the houses are (a) the convenience of the attendant; nearness to the feed and water supply will save in labor; (b) building the houses away from the other buildings will make it easier to keep the premises free from insect pests, rats, etc. (c) Other things being equal, a location near a city market or a good shipping point should be given the preference.



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REQUIREMENTS OF GOOD POULTRY HOUSES.

No one style of poultry house will suit all conditions; besides, fowls may be kept successfully in different kinds of houses. There are certain principles, however, that should govern in the building of any kind of poultry house.

1. *Ventilation.* A good poultry house should be well ventilated. Fowls require considerably more fresh air than farm animals. It has been estimated that a hen in proportion to her weight requires double the weight of oxygen that a man or a horse requires. The amount of air breathed per 1000 pounds live weight of hens is given by King as 8,272 cubic feet in 24

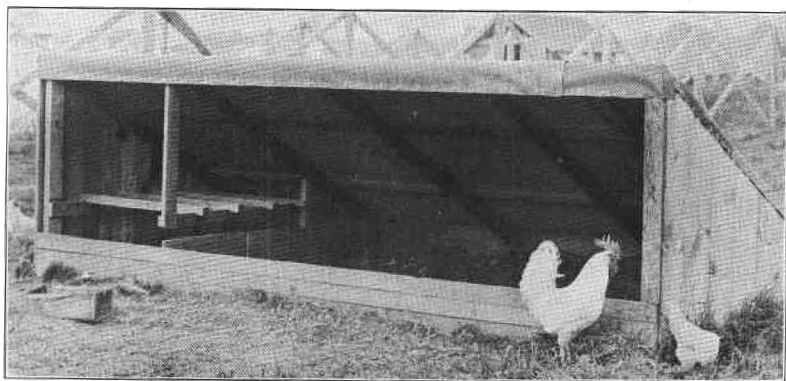


Fig. 4. This shed was all the house a flock of Single Comb Leghorns had for a year at the Oregon Station. Excellent egg record was secured. This shows what little housing is necessary.

hours; the requirements of a man being 2,833 and a cow 2,804 cubic feet. Ventilation, moreover, keeps the house dry. A close, warmly built house, with glass windows, is always damp, because of the extremes of temperature between day and night. Dampness is overcome by ventilation. Ventilation can best be furnished by leaving one end or one side open or partly open. In cold sections or exposed or windy locations this opening may be covered with burlap or canvas. This will admit the air and add to the comfort of the fowls. In most sections, however, the curtain will not be needed. The other three sides of the house should be draft-proof. The idea is to give plenty of ventilation without drafts.

2. *Protection from Cold and Storms.* A good poultry house should afford protection from the winds and the storms and severe weather. A little shelter from the winds and the storms will add to the comfort of the fowls and therefore to



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the egg yield. A cold wave or a sudden change to colder weather, means an immediate demand for increased fuel to keep up the heat of the body. In this case the fuel is the food that the hen eats, and the food that has been going into the making of the eggs will be drawn upon for fuel purposes. It is the food that furnishes the heat of the body as well as the material for eggs. Any shelter therefore that protects fowls from storms or sudden change in temperature is an incentive to egg production. Fowls maintain rugged health roosting in trees, but sudden and frequent changes in the weather to which they are subjected in the trees interfere with egg pro-

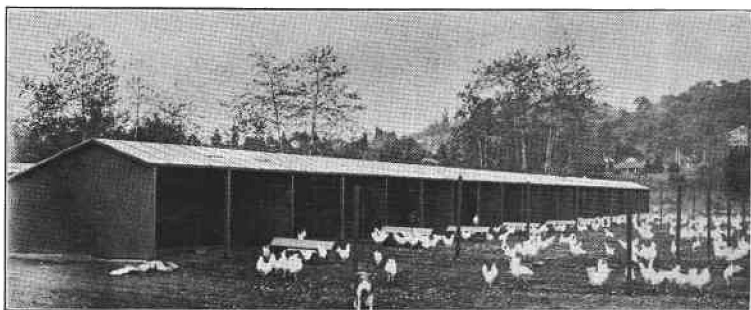
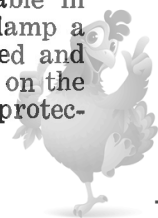


Fig. 5. A good type of long stationary house. It is 12x200 feet, entirely open front. Four feet high at back, 8 feet at center and 6 feet at front. It may be divided into eight sections of 25 feet with 100 fowls in each section.

duction. The house, while affording protection from storms, should also furnish scratching room, for activity is the life of the hen.

3. *Space Required per Fowl.* Where there is little or no snow or where the chickens can be out of doors every day in the year, about 2 square feet of floor space per fowl will be sufficient. This will apply to flocks of twenty or more. For smaller flocks a more liberal allowance of space should be made. Where the climate is such that the fowls will seek shelter part of the year rather than go out doors in the yards and fields, more floor space should be provided, say 4 to 5 square feet per fowl. The house should be built high enough for a man to work in without bumping his head. This height will allow sufficient air space for the fowls.

4. *Floors.* Floors, are seldom necessary or desirable in poultry houses. Where the ground is inclined to be damp a floor will be an advantage, but where it is well drained and porous there need be no floor. Fowls prefer to scratch on the ground rather than on a floor. A wooden floor gives protec-



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tion for rats underneath, and for this reason a cement floor is preferable. On the other hand, cement floors do not permit of moving the house, where this is desired. Where an earth floor is used it should be higher than the ground outside of the house, to prevent water running in. It is a good plan to fill the floor with 6 or 8 inches of clean coarse sand, and once a year or oftener scrape off part of this and replace it with clean sand. This will keep the floor comparatively clean and lessen the danger from disease in the flock.

KIND OF HOUSE TO BUILD.

Poultry houses may be divided into two classes: 1. Portable houses; 2. Stationary houses.

1. *The Portable House.* The portable house is used where the colony system prevails. Much of the trouble from dis-

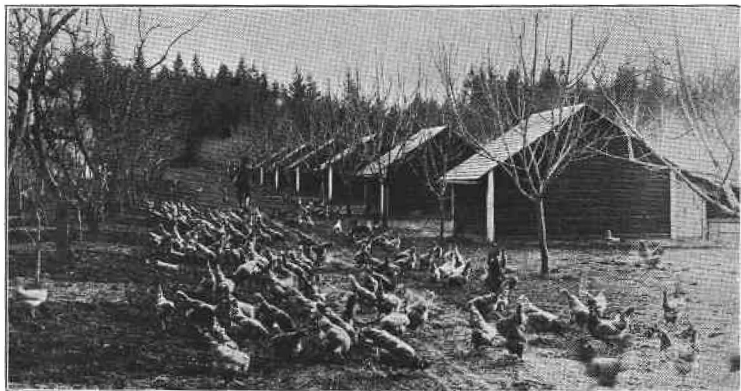


Fig. 6. Separate colony houses with free range in a thirty acre orchard for 1000 fowls. Owner N. C. Jorgenson, Marion County, Oregon.

eases comes from keeping the chickens on the same ground year after year. By keeping them on clean ground, which is possible with portable houses, they are under natural and hygienic conditions. This system, moreover, fits in with a system of crop rotation on the farm. About fifty chickens to the acre will keep the land in high fertility. Besides, the chickens will find a considerable portion of their food in the waste grain and weed seeds, grasshoppers, and other insects. They often rid the farm of grasshoppers and other injurious insects, thus saving valuable crops. Another important advantage of the colony system, is the fact that the fowls are more active when they have the liberty of fresh fields than when confined in yards. Finally, with the colony system



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there is no expense for fencing. Where fowls are kept on an extensive scale the colony system is undoubtedly the best.

A good size for a portable house is 8x12 feet. A team of horses will pull a house of this size and it will accommodate from 30 to 50 fowls. These houses are built on runners and are moved about twice a year. A house 8x12 may be built at a cost for lumber of \$15 and about \$2.50 for hardware.

DETAILS OF CONSTRUCTION.

Bill of Materials for Portable Colony House 8' x 12'.

LUMBER.

- 2 3" x 6" 14 feet long runners.
- 2 4" x 4" 8 feet long sills.
- 5 2" x 4" 8 feet long sills.
- 14 2" x 3" 5 feet long studs.
- 4 2" x 3" 7 feet long studs.
- 2 2" x 3" 8 feet long studs.
- 3 2" x 3" 12 feet long plates.
- 14 2" x 3" 6 feet long rafters.
- 8 2" x 3" 12 feet long nest frames, etc.
- 2 2" x 2" 12 feet long roosts.
- 3 2" x 2" 3 feet long roost supports.
- 175 board feet 8" ship lap for flooring and dropping boards.
- 125 board feet 6" roosting boards and slats for dropping boards.
- 260 board feet 8" channel rustic siding, No. 2.
- 1250 shingles.
- 4 1" x 4" corner boards, each 6' long.
- 4 1" x 3" corner boards, each 6' long.
- 5 1" x 3" door and door opening. Each 12 ft. long.
- 2 1" x 4" 14 feet long cornice finish.
- 4 1" x 4" 6 feet long cornice finish.
- 1 1" x 3" 14 feet long ridge board.
- 1 1" x 4" 14 feet long ridge board.
- 5 1" x 4" 16 feet long miscellaneous use.
- 1 1" x 2" 14 feet long stops for oil can nests.

HARDWARE

- 6 lbs. 8 D case.
- 10 lbs. 8 D common.
- 3 lbs. 16 D common.
- 4 lbs. shingle nail
- 1 pair of strap hinges.
- 6 feet of heavy wire.
- 18 feet of 3' mesh wire for door and front.
- 8 10" x 10" x 15" oil cans, for nests.
- $\frac{2}{3}$ of one end cut out.
- 4 $\frac{1}{2}$ " x 10" anchor bolts.



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BILL OF MATERIAL FOR 100-HEN HOUSE.

Concrete work. (1:2:5 mixture. 1:2 wearing surface.
10 barrels of Portland cement.
2 cubic yards of sand.
5 cubic yards of gravel.

LUMBER

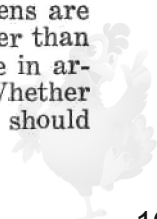
7 4" x 4" 6 feet long.
14 2" x 4" 10 feet long.
12 2" x 4" 12 feet long.
4 2" x 2" 12 feet long.
2 2" x 2" 14 feet long.
125 board feet of 8" ship lap for dropping boards.
400 board feet of 8" channel rustic siding.
3250 shingles.
50 1" x 6" 14 feet long for roof sheathing.
32 1" x 4" 14 feet long for miscellaneous use.
4 1" x 5" 14 feet long for eccentric corner and ridge boards.
2 1" x 2" 10 feet long for stops for oil can nests.

HARDWARE

18 lbs. 8D case.
18 lbs. 8D common.
6 lbs. 16D common
10 lbs. shingle nails.
One pair of 4" strap hinges.
Three heavy wires six feet long each.
30 feet of 4'—1" mesh wire.
Six 1/2" x 10" anchor bolts for bottom plate.
16 10" x 10" x 15" oil cans for nests. 2/3 of one end cut out.
Paint.

An opening through the boards in the gable will furnish additional ventilation which will be needed during the warmer weather.

2. *Stationary Poultry Houses.* Where little land is available for keeping poultry, as on a town lot, stationary houses are used. The portable house, already described, may be used as a stationary house, with this advantage, that it may be moved should the owner change place of residence. For a smaller flock than 40 the house may be smaller. For 25 hens a house 7'x10' will be ample. Where more than 50 hens are kept, I recommend a separate house for each flock rather than one long continuous house, on account of the advantage in arrangement of yards, which will be discussed later. Whether separate houses or one continuous house be used, they should



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be built in such a way as to permit of double yards or two yards for each flock, as it is very desirable not to keep chickens on the same ground continuously.

A plan of a good stationary house of 100-hen capacity is given herewith. A cement floor, on the whole, is the most satisfactory in a permanent house, but it may not be necessary in some locations.

INTERIOR ARRANGEMENT.

Whether the house be used as a portable or stationary house, practically the same arrangement of the interior may be had. All the floor space should be used by the fowls for scratching. If possible all nest boxes, perches, hoppers, etc., should be movable. This will make it easier to clean out the house and to keep it free from lice and mites.

The Nests. Nests for laying hens should be somewhat secluded, for fowls are less liable to acquire the egg-eating habit when the nests are in a darkened place. They should be from 10x12 to 12x14 inches in size and 8 to 10 inches high, the larger breeds requiring the larger size. A cheap and serviceable nest may be made out of a 5-gallon oil can by cutting the end out, leaving about 3 inches at the bottom to keep the nest material in the nest. Such a nest can be easily cleaned either by washing or spraying. The illustration shows top of can taken off; this makes the nest more roomy. Several of these nests may be set on a platform about 2 feet from the floor, turning the entrance of the nest towards the wall and leaving a space of 8 inches between the nest and the wall for the hens to walk along. The nest platform is about 2 feet from the ground; it is nailed to a cleat on the side of the house and is braced from top of sill. Over the nests, to keep the chickens from standing on them and to help to darken them, is fitted a sloping top. This top should be built high enough so that the attendant can see into the nests from the rear. One nest to five or six hens should generally be provided.

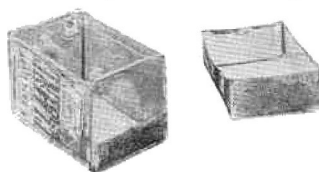


Fig. 7.

Good serviceable nests may be made out of 5-gal. oil cans. Such a nest is cheap and easily cleaned. The same may also be used for watering the flock.

Where an empty pen or yard is not available, a broody coop should be provided for the broody hens. This may be made from an ordinary box with the floor of slats. At the first symptoms of broodiness the hens should be removed to the broody coop unless they are wanted for hatching. This coop may be hung on the wall inside the house if there is room enough, otherwise it may be hung outdoors on the shady side of the house, or in some other convenient place.



Fig. 8. An Oregon poultry farm, with separate houses and double yards.



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YARDS.

If the poultry houses are located near a neighbor's fields or gardens it will be necessary to yard the fowls. For other reasons, such as the keeping of more than one variety or strain of fowls, separate fenced enclosures must be maintained.

Keep the Yards Clean. When chickens are confined throughout the year in yards, care must be taken to keep the yards clean, otherwise there will in time be serious losses from diseases and general loss in vitality. When they are kept year after year on the same ground the yards sooner or later become contaminated with disease-producing germs, and losses through sickness and decrease in vitality will render it unprofitable to keep fowls. Dr. Salmon says: "Accumulations of excrement harbor parasites, vitiate the atmosphere, and

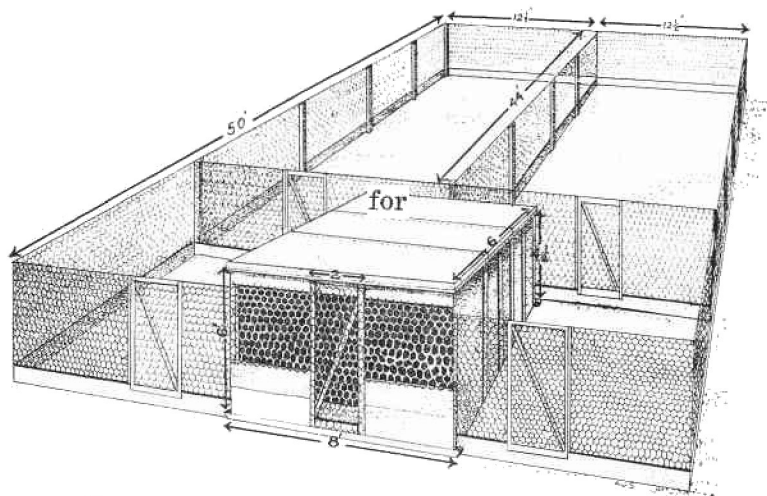


Fig. 9. A plan for housing and yarding chickens on a town lot.

breed contagion." It may be possible, but it is doubtful, to keep yards sufficiently clean by disinfection and other means to prevent troubles of this kind. At any rate, the expense of disinfection and cleaning would render it impracticable.

Size of Yards. The larger the yards the more exercise the fowls will take. Poultrymen usually figure on so many square feet of yard space for each fowl, estimates varying from 20 to 100. In a large yard, however, the fowls will do better than in a small one, even though the same number of square feet be allowed each fowl, because there is more room for exercise. Each fowl has the use of the whole yard whether it be large or small. The cost of fencing will largely govern the size of



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the yard. Fencing is expensive, and if the yards are very large the cost may exceed that of the houses. For a pen of 100 fowls a yard 20x100 is a good size. This is 20 square feet for each fowl. For small flocks this allowance should be greater. For a pen of 10 fowls, for example, the yard space per fowl should be about double that for 100.

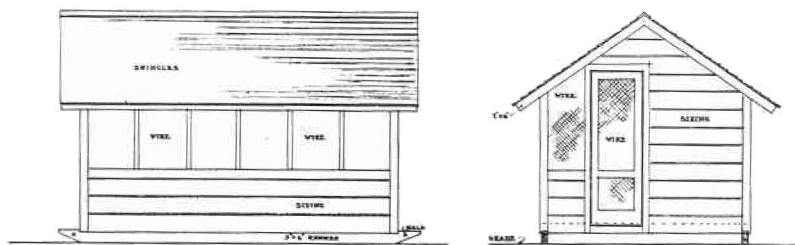


Fig. 10. Side and end elevation of O.A.C. portable colony house.

Double Yards. In order to give the fowls clean ground and prevent "ground poisoning," the best plan is to have double yards; that is, two yards for each pen of fowls. If one long continuous house be used and it is divided into small pens, it will be better to have the yards on each side of the house,

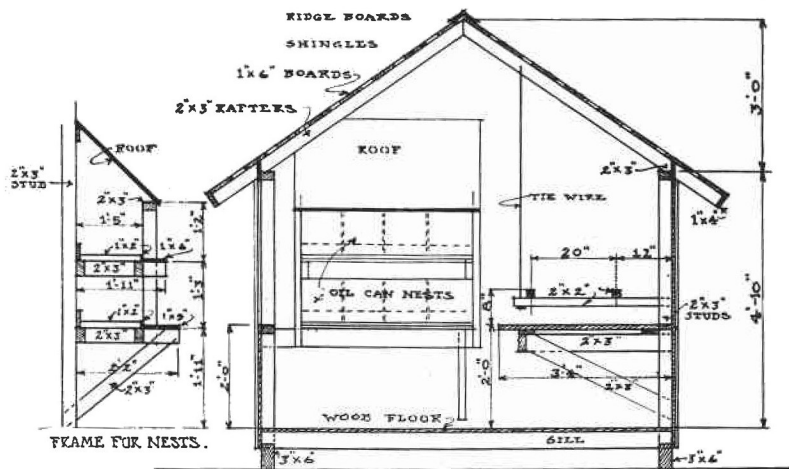


Fig. 11. Plan of frame for nests and end section of O.A.C. portable colony house.

rather than two yards on one side, in order to get width enough in the yards for cultivation. Where the yards are too small for horse cultivation, spading will have to be resorted to.

Separate Houses. A more convenient arrangement than one long house is to use separate houses of the same size as the

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pens in the continuous house placed in a row 20 feet apart. By this arrangement the yards may all be on one side of the house, and one can walk or drive a team on the other side from one end to the other without opening gates. Another

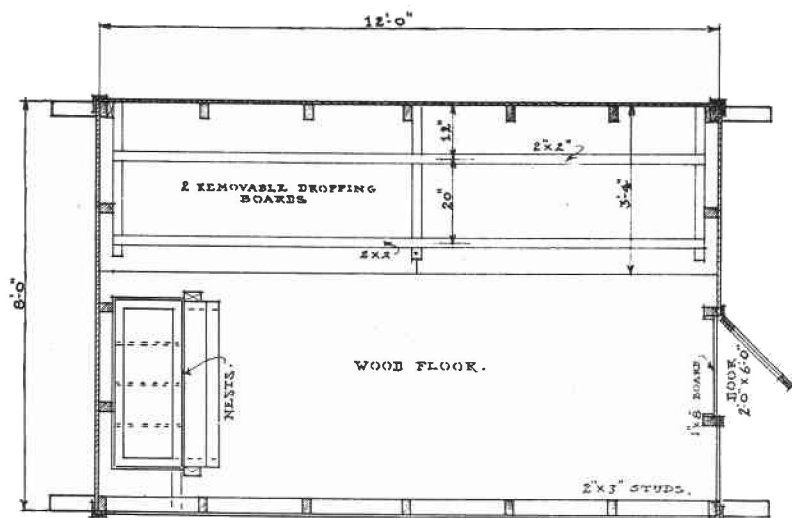


Fig. 12. Floor plan of O.A.C. portable colony house.

advantage of this arrangement is this: By having every other yard vacant the trouble from males fighting through the fence is avoided. Another advantage is that there is less danger of contagious diseases spreading from one flock to another than in the continuous house; every flock is practically isolated from the other.

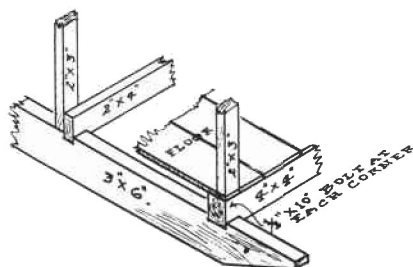


Fig. 13. Detail of runners for O.A.C. portable colony house.

Cultivation of Yards. The cultivation and cropping of the yards will keep them in good condition. The crops will use up the manure and lessen the danger from spreading of disease. The cultivation also keeps the surface of the soil loose;

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unless cultivated, the soil, from continuous use, will become hard and baked, if it be of a clayey nature. The expense of building the extra fence for the double yards will be offset by the value of the crops that may be grown on the vacant yards. It will pay to plow the yards two or three times during the year. Cultivation has a double purpose; first, it cleans the yards; second, it gives the fowls more exercise.

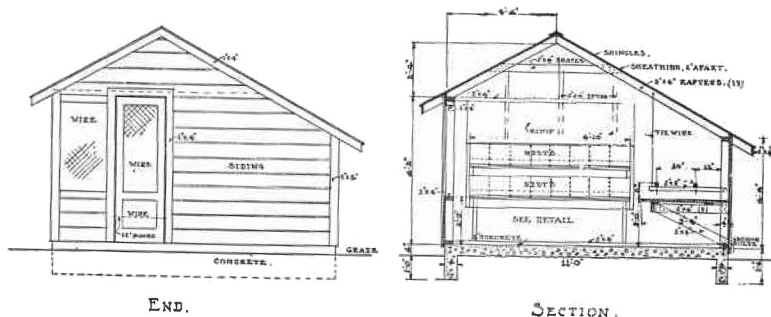


Fig. 14. End view and section of stationary colony house.

Crops to Grow. Different kinds of crops or vegetables may be grown on the vacant yards. Green food may be grown for the fowls, or vegetables may be grown for the family. The droppings of the fowls will keep the soil in a very productive condition. If it is not desired to use the yards for garden purposes, such crops as vetch, clover, kale, rye, etc., may be

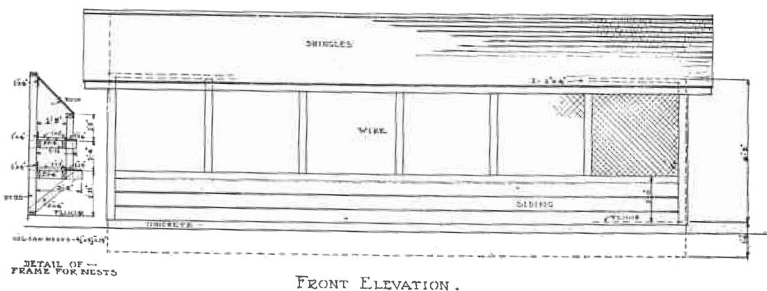


Fig. 15. Front elevation and detail of frame for nests of stationary colony house.

grown. Where it grows well, clover may be planted early in the spring and the chickens turned on it in the fall. Vetch sown in the fall will furnish a great quantity of excellent green food in the spring and summer. Where it thrives, probably no other forage plant will furnish more green food per acre than the thousand-headed kale. If planted early in the spring, it will furnish a great quantity of green food in the fall and



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following winter. Rye sown in the fall will make considerable green food in the following spring and summer .

Shade. Shade is very necessary for fowls in summer. This may be secured from fruit trees or other trees. Two or three fruit trees, such trees as will do best in the particular soil and location, in each yard 20x100, will furnish some revenue as well as shade. Most varieties of fruit do well in poultry yards. Plums, apples and cherries do especially well. The droppings fertilize the trees, and the poultry aid materially in keeping in check certain of the fruit pests. Sour apples should be fed sparingly to fowls. Where it is not desired to plant trees, sun flower or corn may be planted early in the season in a part of the yard fenced off temporarily.

Fences. The fences are usually made from 5 to 6 feet high. Poultry netting of two inch mesh may be used ; for small chicks

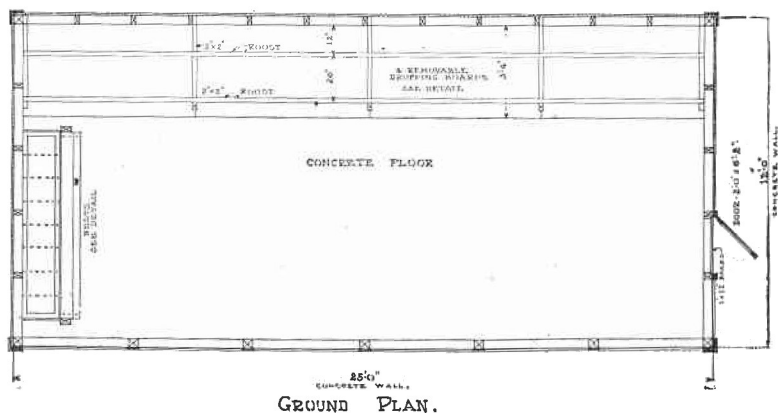


Fig. 16. Ground plan of stationary colony house.

1-inch mesh. Posts should be set about 10 feet apart. If there are male birds in adjoining yards, it is well to put 2 feet of boards on bottom to prevent fighting.

CHICKENS ON THE CITY LOT.

Chickens may be kept on a city lot at a profit. The waste food from the table of the average family, in addition to a little grain, will feed enough fowls to furnish the needed fresh eggs for the family. Feeding, however, will form the subject of another lesson. With good hens and careful attention to houses and yards, a piece of ground 25x50 will accommodate enough hens to produce as many fresh eggs as the average family will consume, besides a considerable number of broilers.



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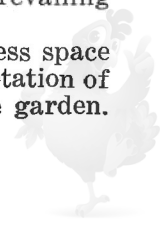


It must be understood, however, that the chickens will require daily attention throughout the year. The feeding must be done regularly and intelligently and the premises be kept clean and sanitary. It is not necessary that a chicken yard should be a disfigurement to the back premises; a chicken yard may be made a thing of beauty as well as profit on the town lot. It is not necessary to make the chicken yard a nuisance ground, or dumping place for old shoes and tomato cans. Chickens do not thrive on such things. The spectacle of a chicken yard made into a dumping ground for rubbish and the chickens treated as scavengers is disgusting, and should not be tolerated in any community. A nice flock of chickens properly cared for and housed, and yarded in becoming style, may become an attractive feature of the vacant lot; and besides furnishing the daily fresh egg, will afford a mental diversion to some of the older people and a pleasure to the younger members of the family. Young boys and young girls of the town, lacking something to do, will find in a flock of chickens interest and instruction. The more ambitious youngster will find opportunity for a study of problems that are of absorbing interest to all students of plant and animal breeding; for though the chicken is a chicken, it is subject to the same laws of heredity as are plants and live stock in general. Profit therefore may be realized in different ways from chickens on the city lot when given proper care and attention.

A Plan. We have outlined a plan (Fig. 9), for keeping on a piece of ground 25x50 feet enough fowls to furnish the eggs needed for an average family. It is not expected that the plan can be followed under all conditions. The details can be modified to suit different conditions such as size and shape of available ground. The main feature of the plan is that it offers opportunity for keeping the fowls under sanitary conditions. It may be that the required number can be successfully kept on a smaller area; but by decreasing the area, it will be more difficult to keep the ground in proper sanitary condition and the fowls in good health.

The house shown in the sketch is 6x8 feet, with a shed roof. The roof is rather flat for shingles and may be covered with roofing paper, such as Paroid, Ruberoid, Neponset, etc. There is a door in the front of the house. Sufficient ventilation will come from the door. Usually it will be best to face the house to the south, but it should be faced away from prevailing winds.

The plan shows double yards, each $12\frac{1}{2} \times 50$ feet, less space occupied by the house. This means there will be a "rotation of crops." The chickens will "rotate" with a vegetable garden.



Housing Of Chickens

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That is, the chickens will be in one yard this year and in the other yard next year, and the garden will be on the vacant yard. The house and yards are large enough for 10 to 20 fowls, but the smaller number is recommended. The hens should furnish the eggs required for home use, and it will be a mistake to crowd the yards beyond ability to keep them clean. The chicken yard should be spaded frequently. This will prevent accumulations of droppings on the surface and keep the ground in better condition for the chickens to scratch in. It will be better to spade a little at a time instead of doing it all in one day. There is a double purpose in the spading; first, to keep the soil in sanitary condition; second, to encourage the fowls to exercise, for the active, busy hen is the producing hen. When the ground is wet, of course the spading should not be done.

At each end of the house there is a small enclosure about 6x8 feet. This may be used as a place for hatching chicks, where it is desired to hatch and raise them instead of purchasing mature pullets. Enough pullets to renew the flock of layers may be hatched in these enclosures. Methods of hatching and rearing the chickens will be treated in another lesson.

