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THESIS

A Model Poultry House
For Fifty Hens

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Senior Agricultural Thesis.

A Model Poultry House For Fifty Hens.

-by-

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THESIS

A Model Poultry House For Fifty Hens.

Great improvements have been made within the last few years in the constructing of poultry houses. There are as many varieties of poultry houses as there are individuals in the poultry business. All, no doubt, have commendable features. Many prefer to house a great number of fowls together in a large house while others prefer a double house and shed system. Of all the plans I have looked into, the latter for the beginner, at least, seems to commend itself. We must bear in mind that no plan of a poultry house can be formulated so as to meet the particular wants of every person. In the plan for this particular house, I have made no claim to originality, but have sought freely for advice from every possible source. I am indebted to Prof. C. D. Smith, Prof. J. D. Towar, Mr. I. K. Felch, Dr. A. A. Brigham, Farm Poultry, and Reliable Poultry Journal for suggestions.

Every poultry-keeper should provide proper shelter for his fowls. By proper shelter we mean the making of a house that will answer every requirement demanded by the fowls and that shall be easily constructed and economically built.

During the days of our grandfathers, when the present improved breeds of poultry were unknown and when a few fowls were kept simply to supply the family with a few eggs, it may have been well enough to let the chickens roost around in the trees, on

fences, and all over the implements in open sheds; but during the present age of rearing improved poultry when men and women make a living off the products of poultry alone, neat and attractive houses are necessarily demanded.

Poultry will not pay unless properly cared for. Proper care includes proper housing.

Location.

The first thing to be considered is the building of a poultry house, is the selection of a proper site, and this is not a trifling matter by any means, as a great deal depends on whether or not the selection is made judiciously and for the best interests of the fowls. Elevated ground, sloping toward the south or southwest is to be preferred. It is very important when selecting a spot upon which to build the poultry house, to have it on a slight elevation and well drained on all sides, so there will be no possible chance of having any standing water in the immediate vicinity. Sometimes the breeder is so situated that he cannot have much choice in the selection of a location for his fowls, but has to put up with what little space there is adjacent to the dwelling. In such cases, if the soil is not well drained and slightly elevated, it should be made so artificially by filling in with dirt and using tile for draining. Dampness and lice are the two great enemies of the poultry breeder. Damp houses and yards are where many of the poultry diseases originate. A sandy soil is the best,

Location continued.

as it absorbs the moisture and dries off quickly.

On the farm it is a good idea to have the poultry yards located adjoining the orchard, as the fowls can be allowed to range over the orchard and destroy a great many insects.

Size.

The size of the building must, of course, be governed by the number of fowls to be housed and the amount of capital on hand to be expended. A house must be sufficiently large to accomodate the birds without crowding. Eight by eight feet is the least floor space that should be allotted ten fowls. In addition to this there should be a covered scratching pen or shed room. No matter what kind of a poultry house may be preferred the fact must not be overlooked that during a portion of the winter when the ground is frozen or covered with snow, also during stormy or very windy weather the fowls must be kept confined in the house and unless a large floor space and scratching pen be provided the needed exercise to keep them in condition can not be had.

Though a separate shed or building is usually recommended, there are some who cannot afford it for want of yard room. Those who are so situated can have the extra floor space by building the house three feet higher, putting in a floor for the roosting apartment, leaving the lower room for a scratching pen. This is a very economical plan as it gives double the floor space under one roof and makes a very unique plan, if a few hens are kept on a

Size continued.

small city lot. At the south this shed should have the front covered with wire netting or lath; but at the north and west where severe snow storms rage it will be necessary to board up all sides tightly, putting in a glass window in the front for the admission of sunlight.

For the number of square feet per fowl I can do no better than quote from men who are authority on this question: Dr. A. A. Bingham, Prof. of Agriculture in Rhode Island Agricultural College, says: "Allow at least eight square feet of ground or floor space for each fowl, or fifty cubic feet air space in the building per fowl."

Prof. J. A. Tillinghast of the same college says, "My experience has been that a house and scratching shed for each pen, building as many as necessary and at such distances apart as to insure plenty of ground room, is a more practical plan."

"One for about thirty hens should be about 13 1/2 ft. by 8 ft.. 2- pitch roof, the long pitch at the back and a short one at the front, 4 ft. high at the back and seven or eight ft. high at front. Partition of seven or eight feet in length for roosting room, leaving the remainder for a scratching shed."

The **Reliable Poultry Journal** give the following as the plan followed by them and the one best known to them all things considered.

The measurement of the plant are as follows: Closed houses

Size continued.

10 by 30 ft. Height, front elevation eight feet; rear elevation four feet. Scratching pens are 10 by 10 ft.

Yards (entire), 25 by 100 ft. Green food lots (included in the foregoing), 25 by 25 ft. Each closed house is divided into two pens by a wire or lath partition, making each pen 10 by 15 ft. and suitable for ten Asiatic fowls, twelve medium sized fowls, or sixteen of the leghorns or Mediterranean class. (These numbers are right where the pens are used for breeding purposes. If used as an egg farm fifty hens can safely and profitably be kept in these houses and yards.)

Each scratching shed complete is 10 by 20 ft., but these sheds are divided by a yard fence into two pens of 10 by 10 feet."

The house that commends itself to me is what is called the "Double Open Shed Poultry House." The double house has two pens and a scratching shed. It is forty feet long, twelve feet wide, three feet high in rear and nine in front. The closed part is divided by a board and a wire partition into two pens 12 X 12 ft., with a door in same next to the front wall. There is no hallway, all of the room being accessible to the fowls. The partition is of boards two feet up from the earth floor. The upper part of the partition can be made of wire netting.

Each closed pen has an 8 X 12 foot open scratching shed attached. These sheds are open to the south, or rather the whole building should face the south. A storm door is provided for the

Size continued.

shed, it is made of oiled canvas, tacked to a light frame and is made to let down in stormy weather to protect the fowls from wind and cold. It is hinged at the top and when not in use is swung up against the ceiling of the open shed. Oiled canvas is good because it admits light. This door to the scratching shed seems an indispensable adjunct and is advised by all practical poultry men.

Materials.

The sills of a poultry house like this may be of 4 X 4 in. stuff. These sills may be set on a rock foundation or on cedar posts. If posts are to be used dip them in tar to prevent them from rotting, also dig a hole 20 or 24 in. deep in which to set the stakes, putting a stone in the bottom of the hole. If one is situated in the country a stone wall could be made with little expense and would last a life time.

For the framework and rafters use 2 by 4 in. stuff. We should have a double wall with four inches between. A fairly good quality of lumber should be used for the outside, it should be grooved to keep out the drafts of air. For inner wall cheaper stuff can be used, planed on one side so it will take kindly to white wash. Put on outside boards up and down and inside crosswise, or vice versa. This will greatly strengthen the building. After the outside wall has been built cover the inside of the outside wall with tar paper putting this on with lath and not tacks. Be

Materials continued.

careful that this has been done properly for this if well done will greatly aid in making a warm house of it. A close fitting ceiling or something of that nature will suffice for the inner wall.

Materials in detail.

Sills.

8 pieces (4 by 4 in.) 12 ft. long,	\$1.23
2 " " " 16 ft. "	.43

Framework.

Front side 15 pieces(2 by 4 in.) 9 ft. long,	.90
Ends 12 " " " 12 " "	.96
Back side 21 " " " 3 " "	.42
Rafters 21 " " " 14 " "	1.96
Plates 9 " " " 12 " "	.72
For petition and perches 3 pieces (2 by 4 in.) 12 ft. long,	.24

Siding - Outside.

Front 216 ft.,	3.02
Ends 288 "	4.03
Backside 120 "	1.68
Matched sheeting inside 550 ft.,	4.40
Tar paper,two rolls,	1.92
Roofing -560 ft.,	4.48
5000 shingles,	7.50
Two windows,	2.00
One door,	1.50
Hinges and lock,	.25
Nails,	1.65
Partition --wire,	1.00

Inside door,	.75
5 pieces of 6 in. lumber, 12 ft. long,)	
3 " for next boxes, 12 ft. ")	.48
10 " " platform,	<u>.64</u>
Total cost of Materials,	\$42.21

Nothing has been estimated for the labor for any man or boy handy with the saw and hammer can readily comprehend and build a poultry house similar to the one mentioned above, or if the labor was hired a house similar to this one could be built in the vicinity of from \$60 to \$75, depending upon the price of labor.

Light.

The windows should not be large. For a 12 by 12 apartment two half windows put in side by side is preferable. They can be put in so as to slide either side or they can be hinged at the top and made to swing outward. They should be located near the floor so the sunlight in winter will fall upon the floor. No greater mistake could be made than the too free use of large glass windows. While light and sunshine are excellent things in their way, and are indispensable in a poultry house, yet it should never be forgotten that glass admits the cold as well as the heat; if a hen house is largely made of glass, it will be warm during the day and colder at night, the very time when the fowls need the heat most, it will be lacking. The extremes of temperature between day and night will be much greater in a poultry house having a large glazed surface than in one having less glass. These extremes of temperature should be avoided.

Ventilation.

How to ventilate a poultry house and supply fresh air is a much discussed question as the house problem itself. One writer on poultry says: "It is very difficult matter to ventilate a poultry house without causing draughts of air on the fowls at night. The proper mode is to keep the poultry house clean, leave the doors open during the day, and shut the house at night, allowing no ventilation at all. We have found that it is very difficult to keep the fresh air from coming in, and it is a fact that many who

Ventilation continued.

take pains to render the poultry house warm and comfortable, by stopping all cracks and crevices, and lining the house with paper, make a hole in the roof or gable ends which they style a "ventilator," and thus let in more cold than they desire. There is not as much foul air in a poultry house as may be supposed. The severe cold renders all gases heavy, and less volatile matter exists. Fill a poultry house with smoke, and close the door; then step outside and notice where it escapes. You will at once be convinced that you need no ventilator, and that despite all our precautions, your house is full of air holes that you cannot easily close; and that your birds are liable to roup and other diseases, due to cold draughts of air over them at night."

The windows should be made movable so that the sash can be removed and replaced with screens during very warm weather.

Roof.

The roof is the most expensive part of the house and should be made to cover as few square feet as possible. A roof made of shingles is the best and cheapest that can be built. Use cheap sheeting and follow with tar paper, then put on your shingles. If it is desired to make the house warmer a ceiling can be put on just as was used for the inside wall.

Floors.

Floors for poultry houses can be made of natural earth,

Floors continued.

concrete cement or of wood, just as one may prefer.

Perches.

Roosts should be low and roosting poles broad. High roosts are not advisable in the poultry house and should not be more than 2 1/2 ft. from the floor. It is preferable to have the perches placed on a level with a platform underneath to catch the droppings. It should be just high enough to be handy in cleaning, and the perches about one foot above it. All perches should be movable so as to facilitate the application of kerosene when necessary to every part.

The more simple and least complicated a roost, the better. It seems to me that a 2 X 3 scantling rounded on the upper corners, reaching across the room, and resting in a slat or mortise affixed on the wall of each side answers the purpose very well. Under the roost, resting on the floor and edgewise, should be a plank six inches wide running lengthwise of the house same as the roost and about 2 1/2 ft. from the wall. This is to prevent the droppings from becoming scattered over the floor.

Nest Boxes.

There are many different ways of constructing and placing nests. There are three points to be observed.

- (1) The nest should be made in such a way that it can be removed for the purpose of disinfection.

Nest Boxes continued.

(2) It should be so made or placed that it will be partly in the dark.

(3) There should be plenty of room. Nest boxes should be made about 12 by 12 in. square. They should not be made less than 15 in. in height. For 25 fowls eight to ten nest boxes will be sufficient.

Interior arrangement.

In presenting this house more emphasis has been put upon the exterior structure than upon interior arrangement, from the fact that most persons have their ideas already formed as to this particular part of the building, however, a very ingenious arrangement is to have the roosts, dropping board and nest boxes in the same part of the house with the perches twelve inches above the dropping board and the nests located underneath, where there is scarcity of room this arrangement is recommended. However, where the house is roomy, it will be found to be much better to have perches and nests in separate places, where they can be more readily attended to and kept free from mites. With the arrangement above the perches, dropping board and nests should be placed next to the back wall. The nests are in a dark place, being underneath the platform and at the same time easy of access. The perches should be on the same level and fifteen inches apart. Two in number, for each pen, the whole length of the building. The parti-

Interior arrangement continued.

tion is made of wire with the exception of the lower portion which should be a board partition two and one half feet from the floor up. This partition should be placed in the middle, dividing the house into two equal pens; The door should be placed near the front wall, or in the most convenient place. The cost of the materials have been given above.

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