THE MISSOURI POULTRY HOUSE

H. L. Kempster

The Missouri poultry house was designed by the Poultry Department of the University of Missouri, College of Agriculture to meet the demand for a house of such size as to accommodate the average Missouri farm flock and also be adapted to Missouri conditions.

Since the average farm flock in Missouri is from 100 to 150 hens, this house is 20 feet square, the square house being the most economical to construct and affording a maximum amount of floor space. The ridge of the roof runs north and south, the roof being of equal spans and 11 feet high at the peak. The walls are 5 feet high at the eaves. The south side contains a door in the center and
6-light windows of 8x10-inch panes on either side of the door. These windows are placed high enough to afford a thirty-inch opening beneath, one foot above the floor and extending the entire length each side of the door. This opening is covered with wire screen to keep the hens in and the sparrows out.

Roomy but economical. The roosts should be on the north side away from drafts.

**LIGHT**

On the east and west sides are two windows, each of 6-light, 8x10-inch glass. On the north end next to the floor is a 6-light, 8x10-inch glass window. An arrangement which admits light from all directions has decided advantages because the light is so distributed that there are no dark corners, thus discouraging the lay-
ing of eggs on the floor. Also, when light comes from one direction the hen always faces in that direction when she scratches. In consequence, there is a gradual movement of the litter toward the back side of the house. When light comes from all directions and

![Diagram of the Missouri Poultry House](image)

**Front View**

**Sectional View**

Ventilation and insulation. The open front insures fresh air at all times; the straw loft helps keep the house dry in winter and cool in summer

is evenly distributed this trouble is eliminated. One hen scratches in one direction and another in another and the litter never piles up on the dark side of the house because there is no dark side in such a house. The litter remains evenly distributed.
VENTILATION

Another decided advantage in having openings on all sides is the excellent summer ventilation which can be afforded by removing the windows. This is an important point and should not be overlooked in constructing a poultry house under Missouri conditions. Summer ventilation is as important as winter ventilation. Winter ventilation is provided by the wire opening along the front of the house. The objectionable features of the open front can be eliminated by having a curtain which can be dropped in case of storms or whenever deemed advisable. During winter the success of ventilation of this type depends upon having the east, west, north and roof entirely air-tight so that cross drafts will be avoided. The wind drives into the house only a short distance and never back to the roosts which are located on the north side. There is a gradual movement of the air outward, thus insuring an abundance of ventilation without drafts. The open-front ventilation has an advantage over all other types of ventilation in that it requires practically no adjusting, never plugs up, is economical and always works. The house adapts itself to temperature changes without constant attention and in this way reduces to a minimum the labor of caring for the house. The popularity of this house among farmers indicates that it meets the requirements of a simple farm poultry house more nearly than any house which has been previously designed.

WALLS AND ROOF

The walls in the original house are of car siding, running up and down, which forms a tight and attractive wall. Missouri poultry houses have been constructed of concrete, hollow tile, and stucco, all of which have given satisfaction.

The roof is made of shiplap covered with shingles. The roof should be practically air tight. Steel roofing, if used, should be insulated by a layer of boards and roofing paper, otherwise it will not give satisfaction.

FLOOR

The floor is made of earth, which is both economical and durable. Earthen floors are efficient if properly constructed. In constructing an earthen floor there should be a wall six to eight inches high. A fill of five inches of coarse material, such as cinders, should be made to prevent the rise of moisture which is responsi-
ble for damp floors. This fill should also be made if a concrete floor is to be built. On top of the tamped cinders should be placed two or three inches of wet clay, packed firmly and permitted to dry thoroughly so it will harden. A foot or more of straw should be kept on the floor at all times. Such a floor will be dry and satisfactory.

The greatest objections to earth floors are (1) the possible invasion or rats, and (2) the fact that the straw will become dirty quicker than with a concrete floor and cause an injurious rising of dust. However, because of the low cost of construction, the earthen floor can be safely recommended and will prove very efficient.

**ROOSTS**

The roosts should be level at the back of the house; four feet high, fourteen inches from the wall, twelve inches apart, and made of 2x4's with the upper corners rounded. Poles two inches in diameter, if firmly placed, will serve the purpose nearly as well. Eight inches beneath the roosts should be placed a droppings platform to keep the floor clean and increase the floor space available for other purposes. The nests are placed underneath the front edge of the droppings platform. There should be six to eight inches of roosting space for each bird and one nest for every six or seven hens.
LOFT

Joists or collar beams are placed just high enough to afford head room. In order to prevent the birds from roosting on these, they are covered with boards placed two inches apart. This forms a loft which is to be filled with straw. The straw acts as a sponge by absorbing the dampness, thus keeping the house drier and preventing the accumulation of frost on the roof in extremely cold weather. The straw also absorbs the heat and keeps the house cooler in summer. On the University poultry farm it is not at all unusual to find the Missouri Poultry House 10 degrees cooler in summer than other types of poultry houses.

FEED BOXES

Labor can be saved and the hens will overrun the other farm buildings less if feed boxes are installed in the house. By hanging them on the wall they will occupy no floor space and if provided with sloping tops the hens will not roost on them. A feed hopper for the purpose of feeding the ground feed mixture is also a valuable addition to the poultry house equipment. A water stand two feet high on which the water pail may be placed also keeps the water clean.

FEED HOPPER

In the Missouri poultry house is placed a feed hopper for the feeding of dry mash. The hopper is built on legs two feet in length so as not to occupy floor space. The hopper is a foot wide at the top and four inches at the bottom. The bottom is made of tin bent

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[Diagram of loft and feed hopper]
in such a manner that it forms a partition four inches high in the center; the tin being bent in the form of a half cylinder on each side affords a smooth curved bottom which insures feed working down without clogging. There is a space of two inches between the sides of the hopper and the bottom. The sides of the feeding trough are three inches high, the top having an over-hang of one inch which prevents the wasting of the feed. There is a space of two inches between the edge of this projection and the sides of the hopper. One inch strips are placed three inches apart from the sides of the hopper to the edge of the trough which also prevents wasting. The hopper can be made any length and in the Missouri poultry house extensions at each end provide a stand for the water pails.

**BILL OF MATERIAL FOR HOUSE 20x20 FEET**

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**COOPS FOR BROODY HENS**

Every poultry house should be provided with a slat-bottomed coop for broody hens. This should be built in three sections. As soon as a hen shows signs of broodiness she should be placed in the coop and be well fed. After three days she can be returned to the flock. By having three coops one coop can be emptied and re-filled each day. Usually three days is sufficient to break up a broody hen, provided she is placed in the coop as soon as she shows inclination of broodiness. The longer hens are permitted to sit the
more difficult it is to break them up. Broodiness is a cause of considerable loss and provision should be made to combat conveniently this expensive habit. If broken up the hens will soon return to laying.

OTHER SIZES

While the Missouri poultry house was originally designed 20 feet square, other sizes have been used with equal success. A house 25 feet square for 200 to 250 hens has given excellent satisfaction. Some have been built 30 feet square, housing 300 to 400 hens. One farmer has a two-story Missouri poultry house. By building on a side hill he has runs out from both floors thus making one roof serve for a double size house. There is no reason why larger houses should not be built if larger flocks are to be cared for.

For a house 25 feet square one should use six-light windows, 10x12-inch glass, and add an extra window on the north.

For a house 30 feet square one should use four six-light windows, 8x10-inch glass, on each side of the house.

For a house 30x40 one should use four six-light windows, 8x10-inch glass, on the front and back, and six windows on each side. The open front should be three feet wide.

The Missouri poultry house suggests the possibilities of remodeling other farm buildings into satisfactory quarters for poul-
try. The house is also suitable for other purposes than that of housing poultry in case the farmer should find occasion to change his system of farming. The house has given universal satisfaction and while designed for Missouri conditions it is adapted to localities where the winters are more severe or the summers are warmer. It is not at all unusual to find hens preferring the house to the shade of trees in summer. Scores of these houses have been built since the original house was constructed in 1915. The popularity of the house testifies to its practicability for farmers and poultrymen.

A Missouri poultry house twenty-five feet square, accommodating from 200 to 250 Leghorns. The canvas curtains may be used in case of storm.

THE MISSOURI POULTRY HOUSE

1. Is cheaper to construct than the average house.
2. Has a ventilation system which always works.
3. Can be built to accommodate the entire farm flock.
4. Is constructed of cheap material but is durable.
5. Has an excellent circulation of air and is comfortable in summer.
6. Has light from all sides.
7. Is easily constructed because uniform in type with other buildings found on the farm.