A Colony Brooder House That Starts Chicks Right

By L. E. Card and F. P. Hanson

The Completed House

This type of colony brooder house, which is being used successfully on many Illinois farms, is rigidly built; it provides for plenty of light and ventilation and can be moved from place to place.
For Best Results in Brooding Chicks—

The brooder house should be portable, so that the chicks can be grown on an entirely fresh patch of ground each year. There must be plenty of ventilation, if the chicks are to develop into strong, thrifty fowls. The house described here has large windows and a rear ventilator to keep fresh air circulating all the time.

The floors of the house must be tight to keep the chicks warm and dry.

A house that will take care of 500 chicks will be large enough for most farms, since not more than 500 should be started in one flock.

Correct building principles determine the efficiency of a brooder house. A low priced house is not necessarily the cheapest house.

### Bill of Materials for Colony Brooder House

<table>
<thead>
<tr>
<th>Lumber:</th>
<th>Hardware:</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 pcs 4&quot; x 6&quot; x 14' yellow pine</td>
<td>1 pr. 4&quot; T-hinges</td>
</tr>
<tr>
<td>6 pcs 2&quot; x 6&quot; x 16' yellow pine</td>
<td>1 door latch</td>
</tr>
<tr>
<td>8 pcs 2&quot; x 6&quot; x 10' yellow pine</td>
<td>1 pr. 6&quot; heavy T-hinges</td>
</tr>
<tr>
<td>4 pcs 2&quot; x 4&quot; x 14' yellow pine</td>
<td>4 spring bolts</td>
</tr>
<tr>
<td>4 pcs 2&quot; x 4&quot; x 12' yellow pine</td>
<td>1 gallon paint</td>
</tr>
<tr>
<td>210 bd. ft. 1&quot; x 8&quot; x 12' No. 2 yellow pine shiplap</td>
<td>10 lb of 8d nails</td>
</tr>
<tr>
<td>150 bd. ft. 1&quot; x 8&quot; x 10' No. 2 yellow pine shiplap</td>
<td>11 lb of 10d nails</td>
</tr>
<tr>
<td>150 bd. ft. 1&quot; x 6&quot; x 10' No. 2 yellow pine flooring</td>
<td>3 lb of 16d nails</td>
</tr>
<tr>
<td>1 pc 1&quot; x 4&quot; x 10' No. 1 yellow pine</td>
<td>2 lb of 20d nails</td>
</tr>
<tr>
<td>4 pcs 1&quot; x 4&quot; x 12' No. 1 yellow pine</td>
<td>12' of 30&quot; hardware cloth or 1&quot; poultry wire</td>
</tr>
<tr>
<td>4 pcs 1&quot; x 4&quot; x 16' No. 1 yellow pine</td>
<td>5c worth ( \frac{3}{4} ) &quot; galv. staples</td>
</tr>
<tr>
<td>2 pcs 1&quot; x 6&quot; x 12' No. 1 yellow pine</td>
<td></td>
</tr>
<tr>
<td>2 pcs 1&quot; x 6&quot; x 16' No. 1 yellow pine</td>
<td></td>
</tr>
<tr>
<td>4 sash—4 light (2'4&quot; x 2'9&quot; overall each)</td>
<td></td>
</tr>
</tbody>
</table>
A Colony Brooder House That Starts Chicks Right

By L. E. CARD, Chief in Poultry Husbandry, and
F. P. HANSON, Extension Specialist in Farm Mechanics

Success in poultry raising depends to a large extent on how well the young stock is brooded and grown. Since successful brooding is nothing more than proper housing with the addition of a heat requirement, any money that is spent for a properly built colony house is a good investment.

The essential features of the brooder house described in this circular are its rigid construction, the provision that it makes for plenty of light and ventilation, and the fact that it can be moved from place to place. Its cost is not excessive. It was designed to be used with a coal-burning colony brooder stove for brooding chicks in flocks of 300 to 500.

Size probably is one of the first points that must be decided in building a brooder house. Just how big to make the house will be determined by the number of chicks it is to accommodate and by the ease or difficulty with which it can be moved. A house that will take care of 500 chicks will be large enough for most farms since more than this number should not be started in one flock. The usual rule is one square foot of floor space for each four chicks. The best arrangement is one square foot of floor space for each three chicks in the brooder. A house smaller than this is likely to be more expensive for each chick it accommodates than is one of the size described in this circular, while a larger house would not be so easy to move.

Portable House Aids Sanitation

Portability is an essential feature of any colony house. The chief advantage in being able to move the building from place to place is the fact that sanitation is much less of a problem when chicks can be grown on an entirely different patch of ground each year. Where large numbers of chicks are raised it often is desirable to keep the colony brooders near the farm house while the chicks are young and need frequent attention and then move the houses out to the range when the chicks are six to eight weeks old.

As in proper housing, one of the essentials in successful brooding is dryness. The brooder house floor will be warm and dry if made with both a sub and top floor, and if a layer of tar paper is used between them.

Plenty of ventilation is necessary if the chicks are to develop properly. Poultry houses are not so easily ventilated as are most other farm buildings because chickens give off more moisture from the lungs
and less heat for each unit of live weight than do other classes of farm animals. With more moisture to be removed and less heat to keep the air moving, openings must be provided to circulate the air thru the house. The rear ventilators and the large window area in this house are designed to take care of this.

The exits in this house deserve special attention. They are wide enough so that the chicks can get in and out easily without crowding. Each door slides on a smooth sill, rather than in a groove, and hence

FIG. 1.—FLOOR PLAN OF THE HOUSE

Setting the heater toward the rear of the house rather than in the exact center gives plenty of room in front for small mash boxes and drinking fountains.

FIG. 2.—THE FLOORING OF THE HOUSE

This double floor construction with the tar paper between the two layers makes a stiff building and insure a warmer and drier floor than would be the case if a single floor were used.
The large window area in this house permits free circulation of air and thereby aids in ventilating the brooder.

cannot stick. Furthermore there is little opportunity for dirt to collect and keep the door from operating.

Since the house can be moved, the best place to build it is where it can be worked on most conveniently. Near the barn or the corn crib is a good place, as the materials then can be stored in a dry place until they are used. It is especially important that the lumber be used when dry. A bill of materials is given on page 2.

Skids Make Moving Easy

The house is built on 4-by-6-inch skids so that it can be moved easily, and if it will not be convenient to keep the house up on blocks

Plenty of ventilation is necessary if the chicks are to develop properly.
most of the year it will pay to treat these skids with a wood preservative to prevent their decaying. However, there will be little decay if they are kept dry. The skids should be cut to stand on edge and should be slotted near the ends where the two-by-four joists, which are used flat, will cross them. Details of this are shown in Fig. 6. If the house is to be dragged over rough ground or for any very long distance it will pay to put a carriage bolt straight up and down thru the skids just in front of the hole thru which the clevis is connected that is used in pulling the house. This bolt, the position of which is shown in Fig. 6, will prevent the top of the skid from shearing off in front of the hole.

After the skids are set up and leveled with blocks they are squared by making the two diagonals the same length, as shown in Fig. 7. The two-by-four joists then are spiked in the slots.

**Double Floor Keeps Chicks Warm and Dry**

The sub-floor, which is made of No. 2 yellow pine shiplap, is nailed to the skids diagonally, or at an angle of 45 degrees, instead of at right angles. Laying the sub-floor in this manner braces the entire house. Tar paper is used between the sub and top floors to make the floor tight, warm, and dry. The top floor is made of tongue and groove boards, No. 2 yellow pine being satisfactory, provided the boards do not have loose knots or checks. This double floor construction makes a stiff building with skids that cannot be pulled out easily and also insures a warmer and drier floor than would be the case if a single floor were laid on two-by-four or two-by-six joists.

With the floor laid, the front and rear frames as shown in Figs. 9 and 10 are set in place and nailed to the floor. Temporary braces are used to plumb the frames as shown in Fig. 10.

One two-by-six rafter then is cut out, as shown in Fig. 11, and tried to make sure that it fits. It is then used as a pattern in marking the other five. Care must be taken in cutting the rafters from the 16-foot lengths, as the pieces that are cut off are used in the overhang.
After the rafters have been nailed in place, the side studding is cut and nailed as shown in Figs. 10 and 12.

Before the drop siding or sheathing is put on, care should be taken to see that the walls are plumb. The siding should not be put on if wet, as cracks will open up when it dries out. The siding must be tight to insure a warm building. All sections from which the beading has been broken should be cut off.

The siding is nailed to the frame as if the house were to have no door, with the exception that the notches “a,” “b,” “c,” and “d” shown in Fig. 13 should first be sawed in boards “A” and “B” and the strip “X” sawed out of the board “C.” The strips “E” shown in Fig. 14 are nailed on the inside of the door after the siding is in place and before the door is sawed out.

With the inside strips nailed in place, the notch “d” is sawed down until it extends about four inches below where the top hinge of the door will be, and the notch “c” is sawed up until it is about four inches above where the bottom hinge will be. The hinges are then put on and the door sawed out by extending the notch “a” to “b” and notch “d” to “c.” The small strip “D” which is nailed to the two-by-four serves as a door bumper.

**Shiplap Best for Roof Sheathing**

Shiplap is better than plain boarding for the roof sheathing, as it makes a tight roof that keeps the wind from blowing thru and tearing off the prepared roofing. Enough overhang should be allowed in nailing on the roof sheathing. The outside ends need not be squared but should be marked with a straight edge and sawed off after all the sheathing is on.

Three-ply prepared roofing paper is preferable for a roof as flat as the one on this house. Instructions for putting on the
FIG. 7.—SQUARING THE SKIDS

The skids are squared by being shifted until the two diagonals are the same length.

roofing will be found in each roll and should be followed carefully for the best results.

The windows may be made conveniently of four-light barn sash 2 feet 4 inches by 2 feet 9 inches. The windows can be adjusted easily if the sash are put in so that they can be raised and lowered and held in place by a spring bolt, as shown in Fig. 15, but a simpler arrangement is to hinge each sash so that it will swing in. However, there is more danger of breakage by wind with this arrangement and in addition the windows will be in the way of the person working inside the building.

FIG. 8.—DETAIL OF THE FLOORING

Laying the sub-floor diagonally braces the entire house.
With the floor laid, the front and rear frames are set in place and nailed to the floor.

**Rear Ventilator Keeps Air Circulating**

The small ventilator in the rear of the house may be made to slide, as shown in Fig. 16, or it may be hinged at the top and swung out, as shown in Fig. 12. The sliding door arrangement is not quite so easy to make as the hinged one, but it is more convenient to open and close. The large ventilator is arranged by hinging the three bottom boards so that they will swing out.

Both the life and the attractiveness of the colony brooder house can be increased by the use of paint. In fact, unless the sliding doors and windows are painted they will swell and warp as they become water soaked. A gallon of paint should be enough to give the house two coats.

**FIG. 9.—DETAIL OF FRONT FRAME**

**FIG. 10.—THE FRAMEWORK IN PLACE**

Temporary braces are used to plumb the framework.
Fig. 11.—Detail for Cutting Rafters

One rafter is cut and fitted and then used as a pattern in marking the other five.
Fig. 12.—Side Elevation

The side studding is cut and nailed after the rafters are in place.

Fig. 13.—Outside View of Door

Fig. 14.—Inside View of Door

Fig. 13.—The siding should be nailed to the frame as if the house were to have no door, with the exception that the notches “a,” “b,” “c,” and “d” should first be sawed in boards “A” and “B” and the strip “X” sawed out of board “C.” Fig. 14.—The strips “E” are nailed on the inside of the door after the siding is in place and before the door is sawed out.
It is better to set the stove toward the rear of the house rather than in the exact center, as this arrangement gives plenty of room in front for small mash boxes and drinking fountains. There will still be space enough between the stove and the rear wall to put in low roosts for the chicks before they are old enough to get along without heat. These roosts later can be raised above the lower rear opening and used for summer roosting quarters.

The brooder house that is to be used for early chicks had best be put on a south slope, as this location will be warmer than a north slope. Care also should be taken to see that the ground is high enough to have good surface drainage, as the chicks then can be let outdoors at an early age.

It will be well to block the house up off the ground, as this not only will help preserve the skids but also will prevent their freezing into the ground, thereby making it easier to move the building if this is necessary.

The windows can be adjusted easily if they are put in so that they can be raised and lowered and held in place with a spring bolt.

![Figure 15. Details of the Windows](image)

![Figure 16. Ventilators in the Rear of the House](image)