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GOOD brooder houses are essential in the artificial brooding of chicks or poults if satisfactory results are to be obtained economically. They must provide adequate capacity, dryness, ventilation without drafts, protection from enemies, and ease of cleaning.

There are some advantages in having a brooder house that can also be used for layers. Under these conditions more laying hens can be carried during the summer and fall months when egg prices are higher. O.S.C Agricultural Experiment Station Circulars 173 and 174 contain plans for laying houses that can also be used for brooding.

Types of Brooder Houses

Brooder houses may be divided into two classes: (1) stationary, built on permanent foundations, and (2) portable, built on skids so they may be moved by team or tractor to new ground areas.

The size of the brooding operations, the acreage of land, the availability of draft power, and the need of saving labor are factors for each farmer to consider in determining whether the brooder house should be centrally located or the portable house plan. Most commercial producers use the stationary brooder house.

O.S.C. Stationary Brooder House

For a number of years Oregon State College has used stationary brooder houses with success. A number of houses of this general type have been built on Oregon farms and have proved successful under commercial conditions.

Dimensions. The house pictured on the cover of this bulletin is one for which plans are given on pages 8 and 9. It is 20 feet by 140 feet over all. It is divided by solid walls into eight brooding rooms each 16 feet square, and one feed room, which is 12 feet by 20 feet. A 4-foot hallway runs the length of the building at the back. A building of this design can be constructed to contain either more or less than the eight brooding chambers shown here. The partitions

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* This bulletin was prepared originally by H. E. Cosby, formerly head of the O.S.C. Poultry Department. Noel L. Bennion, Extension Poultry Specialist, has handled revisions since the death of Professor Cosby. Acknowledgement is given to H. R. Sinnard of the Department of Agricultural Engineering for assistance in the preparation of the building plans shown in this bulletin.
and the hallway can be eliminated if one large continuous pen is desired for brooding broilers, replacement stock or poults.

**Capacity.** Each 16 feet by 16 feet brooding room will accommodate 250 day-old broilers, pullets or poults during the normal brooding period of 8 to 10 weeks. Regardless of the size of pen at least one square foot of floor space should be allowed for broilers, replacement stock or poults. If pullets are raised in confinement the floor space should be increased to 2\(\frac{1}{2}\) square feet per bird from 2 to 5 months of age.

![Figure 1. Front windows, O.S.C. stationary brooder house.](image)

**Walls and ceiling.** The front wall is of double construction primarily to leave the inner surface smooth. The partitions are all of single construction with boards running up and down. This type of construction requires no studding within 4 feet of the floor, so that each wall is relatively smooth on both sides. For average conditions in most parts of Oregon it has been found that ceilings are not necessary and consequently none is shown in the drawing. In the extremely cold sections of the state, or in warm sections where summer brooding is done, the additional expense of a ceiling may be justified.

**Floors.** The floors shown in the drawings are of double construction; that is, two board floors with an insulating air space between. Cement floors are frequently used and are successful if they are properly constructed with adequate drainage.

**Windows and ventilators.** Two windows, 4 feet by 3 feet, are provided for each brooding room. These windows are equipped with glass-substitute covered frames hinged in the middle so that
the top half may be tipped in to any desired angle or opened entirely according to the amount of ventilation desired. Wind baffles are provided on each side of each window to prevent wind from blowing directly in when the frame is open.

In the rear wall of each brooding room a ventilator opening into the hallway is provided. The amount of ventilation is controlled by a slide regulated from the hallway.

Figure 2. An electric brooder in operation in an O.S.C. stationary brooder house room.
Doors. Each door leading into a brooder room from the hallway should be equipped with a glass window so that during routine inspection trips the brooder and chicks may be observed without the attendant needlessly entering the pen.

At the bottom of each door on the pen side a 1”x12” board is fitted in slides and the bottom of the hinged door comes to within about a half inch of the top of this board. This arrangement makes it possible to open the door without interfering with the litter. The board can be lifted out when the pen is being cleaned.

The small chick door that leads to the porch lifts up. Its bottom is on the same level as the floor and porch, which makes it easier to train chicks to go in and out. The height to which the door is lifted should be varied according to the size of the developing birds. As the birds grow larger it will be found desirable to put a 1”x4” across the bottom of the doorway to keep the litter from being scratched out onto the porch.

Roosts. The roosting frames are hinged to the rear wall until needed by the chicks or during cleaning. One-inch poultry netting is tacked to the underside of the roost rack. The perches should be made of 2”x4”x12’ material and should be left flat, with no rounding off of the edges.

When the chicks are first taught to roost the outer edge of the frame is let clear down to the floor. Later this is lifted up and supported to 1”x12” boards that run along the front and end, thus keeping the chicks from the accumulated droppings underneath. Roosts usually are not used in raising broilers.

Porches. Most broilers and replacement stock are brooded in confinement without porches. Many turkey growers still use wire or slat porches because turkeys grow faster. A wire porch is shown in the plans.
Concrete
Foundation Blocks—material required:
1 cubic yard coarse aggregate
½ cubic yard fine aggregate
5 sacks cement

Wood Blocks
As desired.

Stringers
3—4”x6”x12”—72 board feet
24—4”x6”x12’—768 board feet

Floor Joists
71—2”x6”x20’—1420 board feet

Floor Sheathing
2800 square feet

Floor Joists
3—4”x6”x12”—72 board feet
24—4”x6”x16’—768 board feet

Muslin Curtains
(16 total) 352 linear feet 1”x2” No. 1 Common; 192 square feet muslin

Shields for Windows
4—1”x12”x12” No. 1 Common

Poultry Netting
80 linear feet 4’ wide 1” mesh

Gutter
288 linear feet

Doors
2 with window sashes
16 without window sashes

Trim
800 linear feet 1”x6”—400 board feet No. 1 Common

Roosts
32—2”x3”x6” No. 2 Common
64—2”x4”x12” No. 2 Common
64—1”x2”x12” No. 2 Common
32—1”x2”x6” No. 2 Common
8—1”x8”x12” No. 2 Common
8—1”x12”x12” No. 2 Common
8—1”x12”x4” No. 2 Common

Carriers
8—2”x6”x16” No. 2 Common
1—2”x6”x12” No. 2 Common
35—3”x10” bolts

Ceiling
2860 square feet 1”x6”–3337 board feet

Windows
10—4 light sashes (20”x24”)

O.S.C. Brooder Houses

BILL OF MATERIALS
O.S.C. Stationary Brooder House
(Eight brooding rooms)
C. stationary brooder house.
**O.S.C. Portable Brooder House**

Portable brooder houses have been in use for a great many years. The O.S.C. portable brooder house, for which pictures and plans are included here, has been designed and successfully used by the O.S.C. poultry farm.

The reason for having brooder houses portable is to make it possible to move them to fresh ground to control soil contamination problems.

**Dimensions.** The O.S.C. portable brooder house shown here is 12'x14', which is quite large for a portable house. Experience has shown, however, that where birds are crowded satisfactory brooding results cannot be attained. The extra floor area that the large house affords is therefore of great value.

**Capacity.** The O.S.C. portable brooder house will accommodate 200 day-old pullets, broilers, or poults when an outside run is available.

**Moving.** In designing this house, strength, weight and durability, as well as serviceability, have been considered. A good team of horses can move the house, particularly when the ground is wet, although it is easier to move it with a tractor. When moving the
Figure 4. Side elevation and floor plan of O.S.C. portable brooder house.

house, pass a logging chain through devices attached to runner ends and fasten on opposite end of house to a piece of 4"x4" laid cross-wise on runner ends. This will prevent unnecessary strain and rocking, which may occur if chains are attached to runner ends only.

Note: Use 2"x4" Cross-Rotr for One-End-on-the-Wall

Door Latch...
Ventilation. Two windows, each 2 by 3 feet, are provided for light and ventilation. Frames, covered with muslin or a glass substitute, fit into these windows. The top sections of these frames are hinged so they can be tipped in to any desirable angle. At each end

Figure 5. End elevation and cross section of O.S.C portable brooder house.
Figure 6. O.S.C portable brooder house. It may be equipped with a porch and used in a permanent location.

Figure 7. Some poultrymen use a laying house for brooding. Temporary partitions can be used to keep the chicks in smaller groups. Under these conditions more layers can be carried during the summer and fall months when egg prices are higher.
of each frame there is a baffle board to prevent the wind from blowing directly on the birds. After the birds are completely feathered, the use of these frames is discontinued. The change should be made gradually.

Under most conditions the two windows will provide adequate ventilation. When more ventilation is desired for late spring brooding, two or three 2-inch holes may be bored in each end near the roof peak and a sliding board fitted over them for regulation.

Wire porch. A wire porch constructed of removable panels may be used to advantage with the O.S.C. portable brooder house, particularly in connection with the brooding of poults.

**BILL OF MATERIALS**

**O.S.C. Portable Brooder House**

<table>
<thead>
<tr>
<th>Foundation and Floor</th>
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<tbody>
<tr>
<td>2-4&quot;x8&quot;x16' runners</td>
<td>1 pair 4&quot; strap hinges for door</td>
</tr>
<tr>
<td>2-4&quot;x4&quot;x12' end sills</td>
<td>1 pair 4&quot; hasp for door</td>
</tr>
<tr>
<td>6-2&quot;x6&quot;x12' joists</td>
<td>235 bd. ft. 1&quot;x6&quot; T &amp; G Siding</td>
</tr>
<tr>
<td>2-2&quot;x6&quot;x14' headers</td>
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<table>
<thead>
<tr>
<th>Rooftop</th>
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<tbody>
<tr>
<td>200 bd. ft. 1&quot;x6&quot; T &amp; G Flooring</td>
<td>20—2&quot;x4&quot;x8' rafters</td>
</tr>
<tr>
<td>1-1&quot;x6&quot;x14' Fascia board (Label on drawing)</td>
<td>2—1&quot;x4&quot;x10' finish for cornice</td>
</tr>
<tr>
<td>30 Lath</td>
<td>300 bd. ft. 1&quot;x6&quot; T &amp; G Flooring</td>
</tr>
<tr>
<td>Runway sides of runway</td>
<td>1—5&quot; galvanized iron saddle (\frac{3}{4}) pitch</td>
</tr>
<tr>
<td>2-1&quot;x6&quot;x12' Top</td>
<td>1—1&quot;x6&quot;x16' ridge board</td>
</tr>
<tr>
<td>40 ft. Lath</td>
<td>2 rolls roofing paper</td>
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<table>
<thead>
<tr>
<th>SUMMARY</th>
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<tbody>
<tr>
<td>2—4&quot;x 8&quot;x16' No. 1 Common</td>
<td>1 length 5&quot; galvanized iron stove pipe</td>
</tr>
<tr>
<td>1-2&quot;x12&quot;x 8' No. 1 Common</td>
<td></td>
</tr>
<tr>
<td>1-2&quot;x12&quot;x 8' No. 1 Common</td>
<td></td>
</tr>
<tr>
<td>6-2&quot;x 6&quot;x12' No. 1 Common</td>
<td></td>
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<tr>
<td>2-2&quot;x 6&quot;x14' No. 1 Common</td>
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<tr>
<td>1-2&quot;x 4&quot;x16' No. 1 Common</td>
<td></td>
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<tr>
<td>7-2&quot;x 4&quot;x14' No. 2 Common</td>
<td></td>
</tr>
<tr>
<td>8-2&quot;x 4&quot;x12' No. 2 Common</td>
<td></td>
</tr>
<tr>
<td>1—1&quot;x12&quot;x 8' No. 1 Common</td>
<td></td>
</tr>
<tr>
<td>2—1&quot;x 8&quot;x14' No. 1 Common</td>
<td></td>
</tr>
<tr>
<td>1-1&quot;x 6&quot;x16' No. 1 Common</td>
<td></td>
</tr>
<tr>
<td>950 B. M. 1&quot;x6&quot; T &amp; G Flooring</td>
<td>950 B. M. 1&quot;x6&quot; T &amp; G Flooring</td>
</tr>
<tr>
<td>200 B. M. 1&quot;x8&quot; Shiplap</td>
<td></td>
</tr>
<tr>
<td>7—1&quot;x4&quot;x16'</td>
<td></td>
</tr>
<tr>
<td>1—1&quot;x4&quot;x10'</td>
<td></td>
</tr>
<tr>
<td>1—1&quot;x1&quot;x 6'</td>
<td>3 blind stop 14'</td>
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<tr>
<td>5 blind stop 12'</td>
<td>2 rolls roofing paper</td>
</tr>
<tr>
<td>60 linear feet 36&quot; Asphalt building paper</td>
<td>50 feet Lath</td>
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<table>
<thead>
<tr>
<th>HARDWARE</th>
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<tbody>
<tr>
<td>1 roll 9 feet of 48&quot;—1&quot;x1&quot; mesh poultry netting</td>
<td></td>
</tr>
<tr>
<td>1—21 yards light muslin</td>
<td></td>
</tr>
<tr>
<td>2 pair 2&quot; butt hinges</td>
<td>1 roll 9 feet of 48&quot;—1&quot;x1&quot; mesh poultry netting</td>
</tr>
<tr>
<td>2 lbs. 6 penny finishing nails</td>
<td>1—21 yards light muslin</td>
</tr>
<tr>
<td>2 pair 2&quot; butt hinges</td>
<td>2 pair 2&quot; butt hinges</td>
</tr>
<tr>
<td>1 pair 4&quot; strap hinges for door</td>
<td>1 pair 4&quot; strap hinges for door</td>
</tr>
<tr>
<td>1 4&quot; hasp</td>
<td>1 5&quot; galvanized iron saddle (\frac{3}{4}) pitch</td>
</tr>
<tr>
<td>1 5&quot; galvanized iron saddle (\frac{3}{4}) pitch</td>
<td>1 length 5&quot; galvanized iron stove pipe</td>
</tr>
<tr>
<td>10 lbs. 16 penny common nails</td>
<td>2 rolls roofing paper</td>
</tr>
<tr>
<td>2 lbs. 6 penny finishing nails</td>
<td>4—(\frac{3}{4})x10&quot; carriage bolts and washers</td>
</tr>
</tbody>
</table>

* The 300 bd. ft. of flooring and 2 rolls roofing paper can be substituted by 192 bd. ft. 1"x6" sheathing and 11 bundles Western Red Cedar Shingles.