O.S.C. 400-Hen Laying House

Oregon State Agricultural College
Extension Service

Corvallis, Oregon
O.S.C. 400-Hen Laying House

By
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One of the hardest problems in successful poultry keeping is to maintain the vigor and health of the flock. Housing has particular bearing on this problem. If the laying-house is poorly lighted, has insufficient ventilation, or is overcrowded, the health of the fowls will be affected. The purpose of housing is to increase productiveness. In order to accomplish this the fowls must be comfortable.

So far as is now known there is no one style of laying-house that will suit all conditions. There is ample evidence that fowls may be kept successfully in different kinds of houses.

The O. S. C. 400-hen laying house has been in use at the College and by poultry keepers throughout the state for a number of years. As improvements have been found the plans have been altered accordingly.

Dimensions. The house is 20 feet deep and 70 feet long. This includes a 10-foot feed room in which an insulated egg storage room is provided. There are 1200 square feet of floor space provided which, on the basis of 400-hen capacity, allows 3 square feet per hen. This has been found satisfactory for a flock of this size. If it is desired to house more than 400 fowls the house may be extended in length 13 feet for each additional 100 fowls.

Floor. From the standpoint of durability, sanitation, ease of cleaning, etc., the concrete floor is recommended. It is important, however, that coarse rock or gravel be laid under the concrete as a foundation in order to protect the floor from dampness which otherwise would come up from the ground. The plan shows the floor construction. It is also important that the surface of a concrete floor be troweled smooth. Otherwise difficulty will be experienced when cleaning out the litter.

Under some conditions a board floor will be found best. A board floor plan is shown in the drawing. It will be noted that a double floor is provided with an air space between. It has been demonstrated that such a floor is warmer and will cause less trouble from damp litter than a single floor. Four-inch flooring is specified as wider material will buckle and cause trouble when cleaning.

Nests. The plan shows the construction details of an open type of nest. Allowing one nest for each four hens would require 100 nests or compartments. The nests may be built in tiers and located on the walls at either end of the house and on both sides of the center partition. If trap-nests are to be used they should be located along the front of the house. An egg carrier may then be constructed that will hang from a track similar to the litter carrier.

Ventilation. A ventilation shaft has been provided for each 100-hen capacity. The shaft is 15½ inches square when made of wood or 15½ inches in diameter when made in circular form of galvanized iron. The shafts open at the ceiling with an air-outlet control slide provided as shown in the plan. For winter use in Central and Eastern Oregon the shafts should extend to within eighteen inches or two feet from the floor. On the front of the house the air inlet is controlled by the cel-o-glass frames, the frames being opened, partly opened, or closed according to weather conditions.

Water fountain. The plan shows a circular water fountain that has been used successfully at the College and by poultrymen throughout the state. It is cheap in construction, easy to install, and requires but little labor to clean. It consists of two parts: a water pan and a cone or funnel-like holder in which the pan rests. To the funnel is soldered a piece of two-inch down spout which carries the overflow to the waste pipe. Your local tinsmith can make the fountains. For winter use the rod type of electric water heater can be used by bending it into circular form.

Egg room. A detailed plan of the egg storage room is given in Extension Bulletin 445, How to Construct an Insulated Egg Storage Room, which will be sent free upon request to Extension Service, Oregon State Agricultural College, Corvallis.

Blueprint. For those desiring a larger working plan, an enlargement in blueprint form 24 x 35 inches in size of the drawing shown in this circular may be obtained for $1.00.

A detailed blueprint of the ventilator cap may also be had for 25c.

Orders for blueprints should be sent to Department of Poultry Husbandry, Oregon State Agricultural College, Corvallis, Oregon.
# BILL OF MATERIALS

## Floor—Concrete
- Mixture—1:2:4
- Total yards 15
- 22.5 bbls. cement
- 5.5 cu. yd. fine ag.
- 20.0 cu. yd. coarse ag.
- 25.0 yds. gravel

## Floor—Wood
- 1.5 bbls. cement
- 0.5 cu. yd. fine ag.
- 1.0 cu. yd. coarse ag.

### Sills:
- 21-4"x6"—10' = 420 bd. ft. (No. 1 Common)
- 16—4"x11½"x8" straps
- 16 lag bolts

### Joists:
- 36—2"x6"—20' = 720 bd. ft. (No. 1 Common)

### Shiplap:
- 1600 board feet 1"x8" (No. 2 Common)

### Building paper:
- 3 rolls

### Purling strips:
- 240 board feet 1"x4" (No. 2 Common)

### Anchors:
- 18—4"x11½"x8" straps

### Sils and Plates
- 39—2"x4"—10' (No. 2 Common)

### Purlins
- 14—2"x4"—10' (No. 2 Common)
- 14—2"x4"—10' (No. 1 Common)

### Posts
- 6—2"x4"—18' (No. 1 Common)

### Studs
- 36—2"x4"—6' (No. 1 Common)
- 36—2"x4"—8' (No. 1 Common)
- 22—2"x4"—10' (No. 2 Common)

### Crossties
- 18—2"x4"—18' (No. 1 Common)

### Rafters
- 36—2"x4"—10' (No. 1 Common)
- 36—2"x4"—16' (No. 1 Common)

### Barge Board
- 2—2"x6"—16' (No. 1 Common)
- 2—2"x6"—10' (No. 1 Common)

### Braces
- 100 board feet 1"x4" random lengths (No. 2 Common)

### Roof Sheeting
- 1300 board feet 1"x6" (No. 1 Common)

### Shingles
- 16,500 (4½" exposure)

### Siding
- 1400 board feet 1"x4" clear T & G or car siding

### Ceiling
- 1400 board feet 1"x4" clear or (1"x6" T & G or car siding)
- 1400 board feet (No. 1 Common) ceiling (1"x6" T & G or car siding)

### Partition
- 2—2"x4"—12' (No. 1 Common)
- 1—2"x4"—16' (No. 1 Common)
- 400 board feet 1"x6" T & G (No. 1 Common)

### Dropping Board
- 140 board ft. (No. 1 Common)
- 500 board ft. 1"x4" T & G flooring

### Roosts
- 140 board feet 2"x3" (No. 1 Common)

### Nests
- 60 linear feet 1"x12" (No. 1 Common)
- 20 linear feet 1"x8" (No. 1 Common)
- 20 linear feet 1"x4" (No. 1 Common)
- 40 linear feet 1"x3" (No. 1 Common)
- 40 linear feet 1"x1½" (No. 1 Common)

### Grain Bins
- 250 board feet 1"x6" T & G (No. 1 Common)

### Ventilators
- 4—15½" revolving metal ventilator heads
- 4 galvanized iron shafts

### Windows
- 9—8x10—4 light sash (20x24)
- 72 board feet 1"x4" (Select Common)
- 12 sq. yds. cel-o-glass
- 15 board feet 1"x3" sill

### Trim
- 54 linear feet 1"x4" (Select Common)
- 90 linear feet stop for cel-o-glass frames
- 140 board feet 1"x4" (Select Common) (cut in between rafters)

### Hardware
- 86 feet barn door track
- 6 barn door hangers
- 2 hasp locks
- 7½" strap hinges
- 20—4½"x10" bolts
- 30 lb. 20d common nails
- 200 lb. 8d common nails
- 100 lb. 16d common nails
- 40 lb. galv. shingle nails

### Paint
- Outside—6 gallons
- Inside—10 gallons
- Roof—20 gallons

### SUMMARY OF LUMBER

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<tr>
<th>Description</th>
<th>Quantity</th>
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<tr>
<td>2&quot;x4&quot;x10' No. 2 Common</td>
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<tr>
<td>2&quot;x4&quot;x18' No. 1 Common</td>
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<td>1&quot;x1½&quot;x12' No. 1 Common</td>
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<td>1&quot;x4&quot;x10' No. 4 Clear</td>
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<tr>
<td>15 board feet 1&quot;x3&quot; sill</td>
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<tr>
<td>36 6' Posts</td>
<td>36 8' Studs</td>
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<tr>
<td>9—8x10—4 light sash (20x24)</td>
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*If the cement floor is used deduct the lumber specified for a wood floor.*