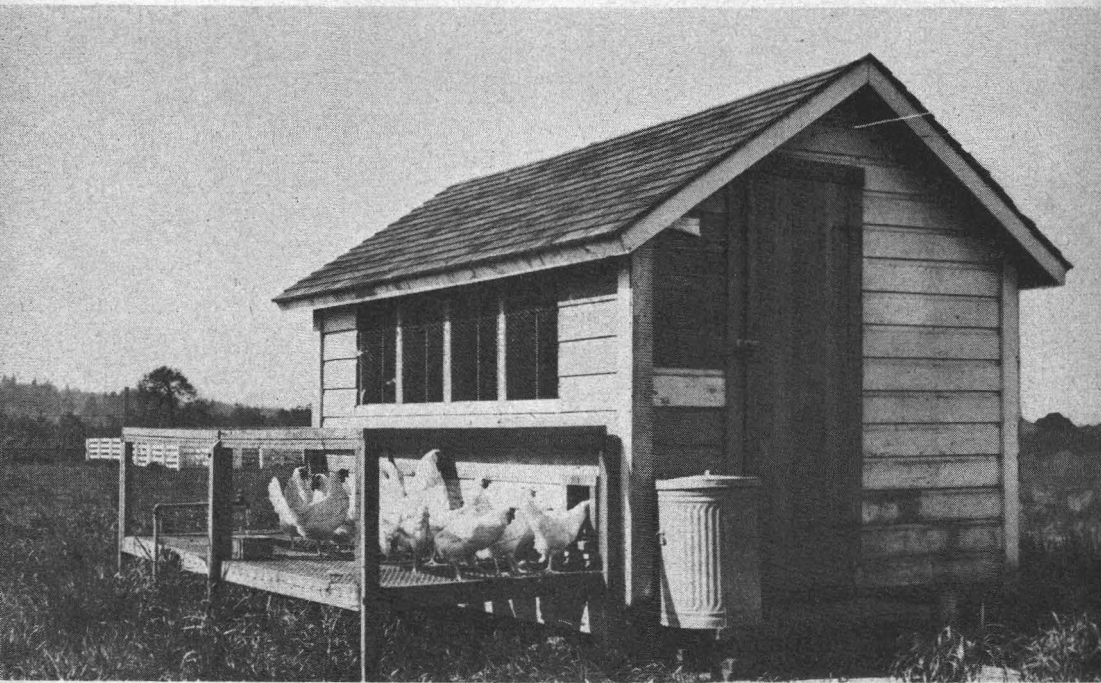


THE HOME UNIT

Poultry House

By JAMES A. HARPER and CLYDE WALKER



Oregon State System of Higher Education
Federal Cooperative Extension Service
Oregon State College
Corvallis, Oregon

Extension Bulletin 625

November 1943
Revised August 1945

FOREWORD

Home table poultry flocks are being established in ever-increasing numbers throughout the state and nation. The practice of rearing and keeping poultry on small plots of land produces soil contamination conditions that eventually lead to poultry diseases when the birds run on the same soil year after year. This practice also interferes with the production of vegetables and flowers.

This bulletin presents plans for an all purpose home-flock poultry house in which young birds may be reared or laying hens kept in confinement without interference with gardens and exposure to contaminated soil.

WM. A. SCHOENFELD
Director

The Home Unit Poultry House

JAMES A. HARPER, Research Assistant in Poultry Husbandry

CLYDE WALKER, Extension Agricultural Engineer

INTRODUCTION

The war developed a food consciousness among the citizens everywhere. To supply the home table with eggs and poultry meat, many have turned to small poultry flocks. The type of poultry enterprise for those of limited time and ground area is of even greater importance than the style of poultry house or its equipment.

For this reason it is well to determine the type of enterprise to be followed before embarking upon a poultry project. It is recommended that the prospective small poultry flock owner select one of the three types of enterprises listed below when beginning a poultry production program.

TYPE OF ENTERPRISE

1. Purchase mature ready-to-lay pullets each fall. Consume throughout the following year the birds that go out of production. Eliminate all of them by or before the following fall, purchase new pullets and start anew.

2. Build a partition through the house and wire porch, reduce the number of laying hens and purchase straight-run chicks for brooding in half the house early in the spring. The cockerels may be consumed as broilers and the pullets grown to maturity to replace the original number of laying birds.

3. If the house is partitioned, but time or brooding equipment is not available, then partly grown, 8- to 10-week-old pullets may be purchased in sufficient number to replace the original number of old stock.

BIRDS IN CONFINEMENT

Laying hens need not run out on the ground. Pullets may be grown to maturity in the confinement of the house when given free access to the outside porch.

The wire porch provides additional space, prevents diseases due to contaminated soil, and permits the birds to get out into the fresh air and sunshine.

HAZARDS OF CONFINEMENT

Some form of cannibalism may develop among birds held or grown in close confinement.

Birds in confinement have no chance to supplement their diet as free range birds can do. They must depend entirely upon their caretaker to provide them with everything they need to grow and to lay eggs.

THE POULTRY HOUSE

Figure 1 shows an exterior view of an 8 foot by 12 foot 25-hen capacity poultry house equipped with a portable wire porch 4 feet wide. The porch provides additional floor space, permits access to sunshine, prevents the birds from contacting contaminated soil, and avoids poultry interference with gardens or flowers.

The corner posts of the porches and the supports for the wire floor can be made from 2" x 3" or 2" x 4" material. The frame for the poultry netting on top of the porch may be of 2" x 2" or 2" x 3" material. For the floor of the porch $\frac{3}{4}$ -inch mesh hardware cloth may be used. Two-inch poultry netting is satisfactory for the sides and top where only mature stock is kept. When baby chicks are brooded and allowed on the porch, boards or smaller mesh wire must be used to prevent the chicks from escaping.

The top of the porch should be at least 30 inches above the floor in order to provide adequate head room for the poultry. The top frames are usually hinged on the side next to the house so they can

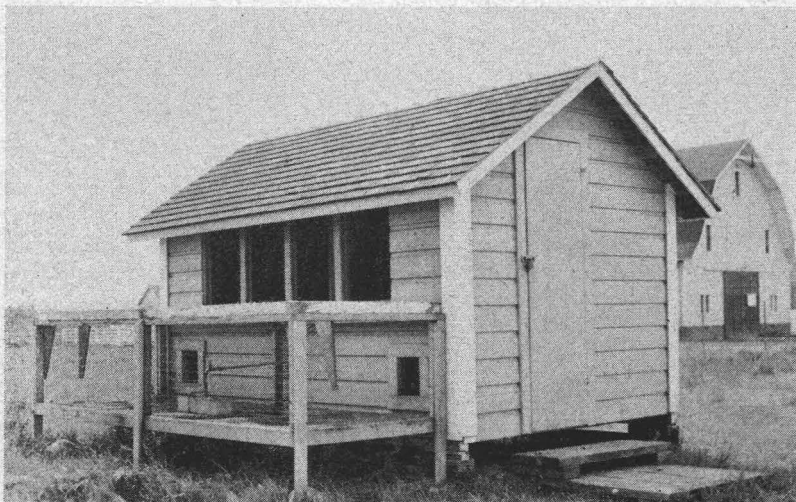


Figure 1. Exterior view of home unit poultry house.

be lifted easily to provide outside access to the porch. Note the water trough located in the center in order to provide water for both halves of the porch in case it should be partitioned.

This exterior view also shows the arrangement of the four windows along the front side of the house and the location of the door a little to the left of the center of one end. The bottom of the window opening is about 30 inches above the floor, the windows extending 30 inches upward to the wall plate.

Note that the roof is of shingles, which should be laid with not more than 5 inches exposure. A conventional type of drop-siding is used on the sides.

Figure 2 shows an interior view of the poultry house, showing two tiers of four nests each placed on the end wall. In the lower right hand corner the roosts can be seen, with a netting beneath the roosts covering the droppings pit. The droppings pit is approximately 12 inches deep, a 1" x 12" board being used at the front of the pit beneath the roost. This board is held in place by two cleats nailed against the wall at each end so it can be removed easily when necessary to clean the droppings pit. The roosts are of 2" x 3" placed on edge and spaced about 10 inches apart on a framework of 2" x 3", which also carries the wire netting cover for the droppings pit. The roost frame is 30 inches wide and rests on 2" x 3" cleats nailed on the wall at each end. It can be removed by simply lifting it off the cleats.

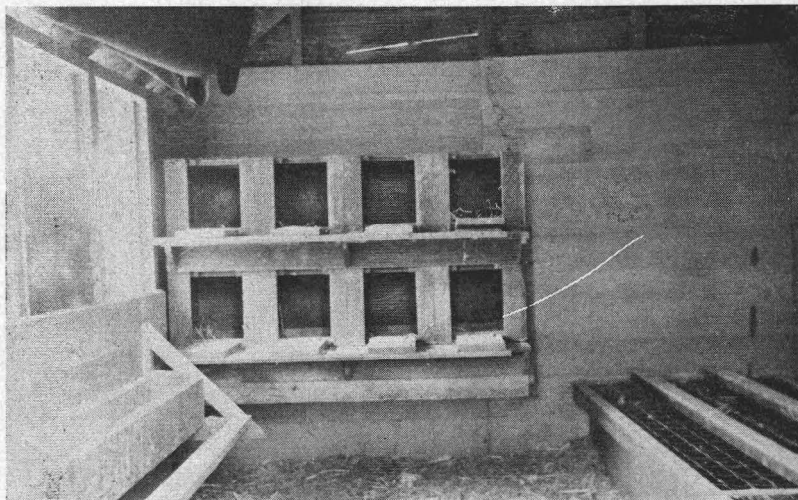


Figure 2. Interior view of unpartitioned house showing arrangement of equipment.

At the lower left can be seen one end of a feed trough or hopper that is placed directly below the windows. The second window frame from the end has been partly raised. Note the cleats on the studs that serve as guides for the windows.

Since the top of the nest boxes is flat, poultry netting has been placed at an angle above it to prevent hens from roosting there. This could be avoided by making the top of the upper tier of nests slope on an angle of about 45° .

It will also be noted that the walls are of double construction from the floor to the top plate. A double wall assures better insulation and also makes cleaning easier.

To avoid the expense of a separate brooder house it is economical for some home table flock owners to divide the small laying house and use half of it for brooding chicks.

Figure 3 shows a front view of the house with mature hens in the left hand porch and baby chicks in the right hand section. The small doors in each corner are 8 inches wide and 10 inches high and are closed by a wood slide on the inside wall. The openings are trimmed with 1" x 3" or 1" x 4" material.

The containers at either end of the porch are for green feed for mature birds, while water is provided by the trough in the center that projects through the middle partition of the porch.

The window openings are covered with 1-inch mesh poultry netting. This view also shows, in the left hand windows, the cords

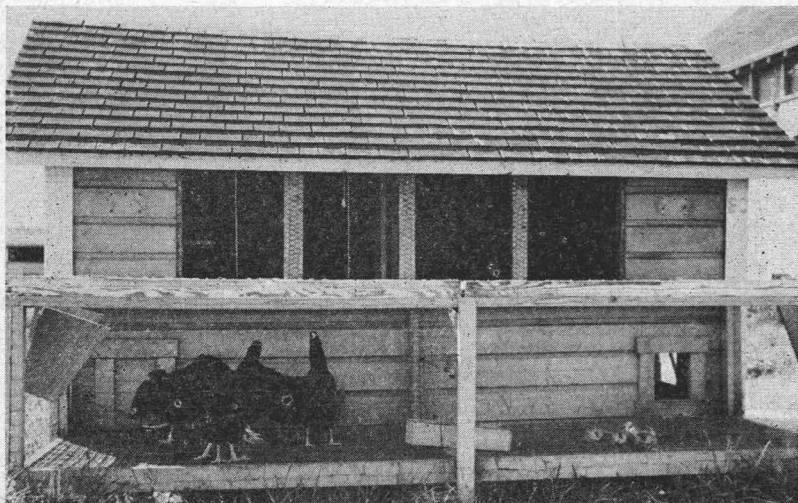


Figure 3. Exterior view of house and porch partitioned for chicks and hens.

used to close the windows during cold or stormy weather. The windows are merely light frames of 1" x 2" material, covered with muslin or glass substitute. The windows slide up and down between 1" x $\frac{3}{4}$ " cleats nails on the sides of the 2" x 4" studs.

Figure 4 shows a portion of the partition in the 25-hen house. Note that the wall is solid at the right of the door, while the door and the partition to the left are covered with poultry netting. This allows better air circulation through the entire house and also permits the operator to observe conditions in the other half of the house without opening the door in the partition. The door is built up of two thicknesses of 1" x 4", with the netting between.

The removable roosts and front board for the droppings pit can be seen in the lower right hand corner of this picture.

When it is desired to use half of the poultry house for brooding baby chicks, the roosts and front board are removed from the droppings pit, and the pit, as well as the rest of the building, is thoroughly cleaned. Fresh litter is then placed on the floor and a brooder installed. Figure 5 shows a small brooder of about 50-chick capacity that is heated by five electric lamps. The view also shows the thermostat that controls the lamps. Plans for building this brooder are available in Oregon Agricultural Experiment Station Circular 146.

Figure 6 shows a brooder installed, together with a feed trough and a water fountain. Two types of feed troughs are shown in this illustration. When the chicks are small, as shown in this picture, a

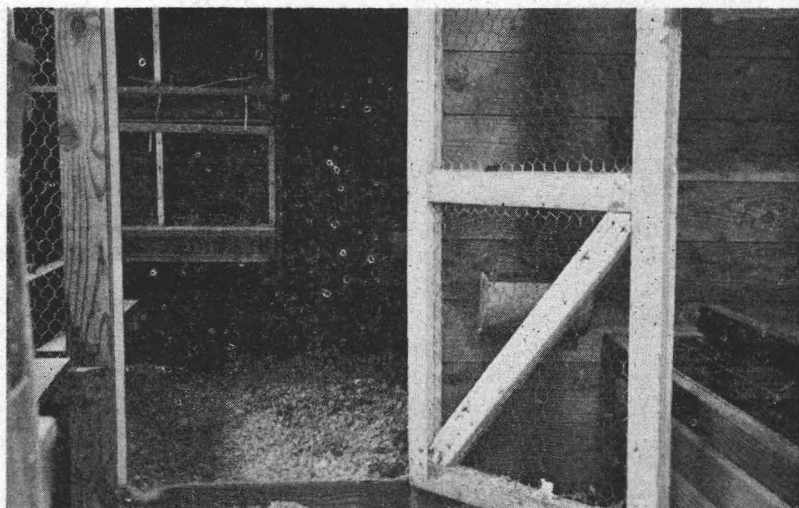


Figure 4. Interior view showing partition and equipment.

satisfactory trough may be made by edging a 1" x 4" or 1" x 6" with lath or blind stop. For use after the first 2 weeks a trough may be built that is about 4 inches deep and 4 or 6 inches wide, having a square stick at the top, pivoted at each end so that it revolves easily.

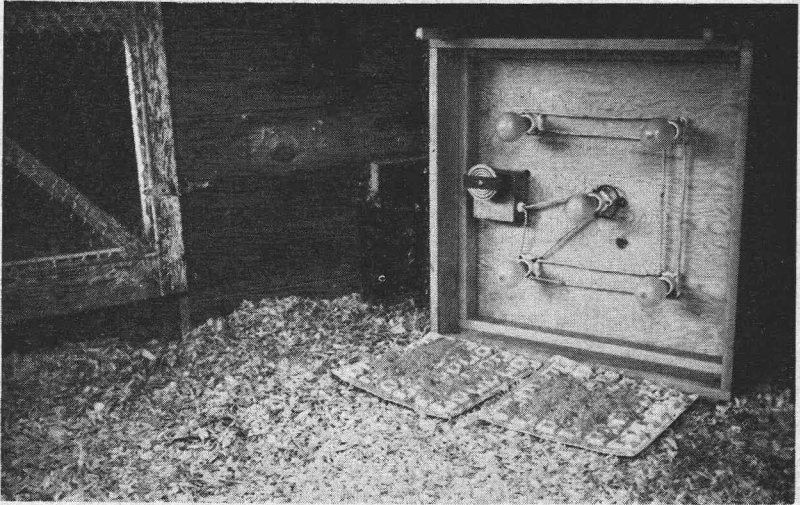


Figure 5. Underside of homemade 50-chick capacity brooder.

One-half of the poultry house provides a floor space 6 feet by 8 feet that is adequate for brooding 50 chicks to 8 weeks of age. Cockerels should be utilized at this age as broilers to allow additional room for the pullets to develop. The mature fowls will be confined to the other half of the house. Since the chicks will require the most attention it is desirable to place them in the section nearest the door.

When hens are held in one-half the house and growing stock in the other, there is always the possibility of tracking disease from the mature to the immature stock. The construction of a door in the other end of the house would permit handling each unit separately. If the extra door is not employed the caretaker should exercise all reasonable sanitary precautions.

Where it is desired to keep 25 mature hens or more the year around, it is suggested that two of the units be built. This will permit brooding and rearing to be conducted in one of the houses and allow the full space of the other house for the laying hens. Some danger of spreading disease from the old stock to the young stock would be eliminated. The house used for brooding could be utilized at other times of the year for raising broilers or fall hatched pullets.

GENERAL REMARKS

It is the intention of this circular to give approximate dimensions and general suggestions for a poultry house suitable for a small flock of 25 mature hens or less. Since these houses will be built of a wide variety of materials, only the essential dimensions have been given here. Each grower will need to work out the exact dimensions based on the sizes of lumber and other material that he

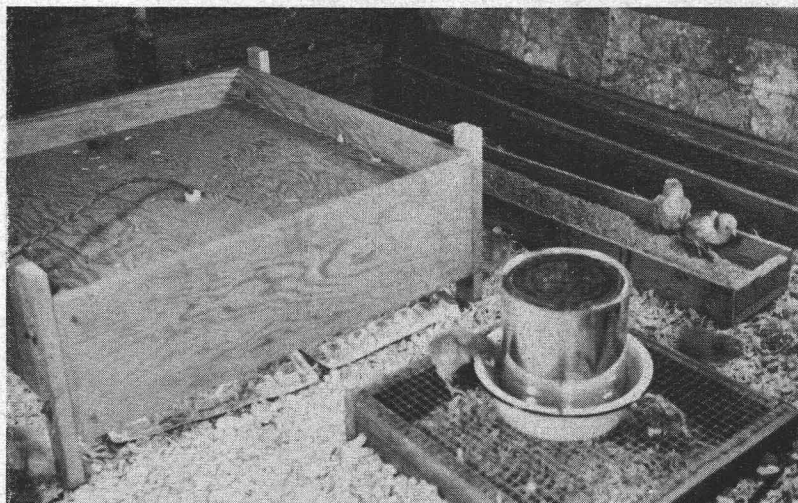


Figure 6. Brooder and equipment in use.

has available. For example, the doorway is shown as being 2 feet 3 inches wide between the 2" x 4" studs. There is no particular reason why this door cannot be as narrow as 2 feet in case a 24-inch door is already on hand, or it may be increased to 2 feet 6 inches or more if necessary to accommodate a door that is available ready-made. It is not necessary to build a partition in the house or divide the wire porch unless brooding is desirable. The coverpiece shows a poultry house in use without partitions.

To prevent litter from escaping through the doorway it is desirable to place a 1" x 6" or 1" x 8" board on edge between the studs, just inside the door. This board can be held in place by two small cleats nailed on each stud, the board slipping between the cleats. In this way the board can be removed easily when cleaning the house.

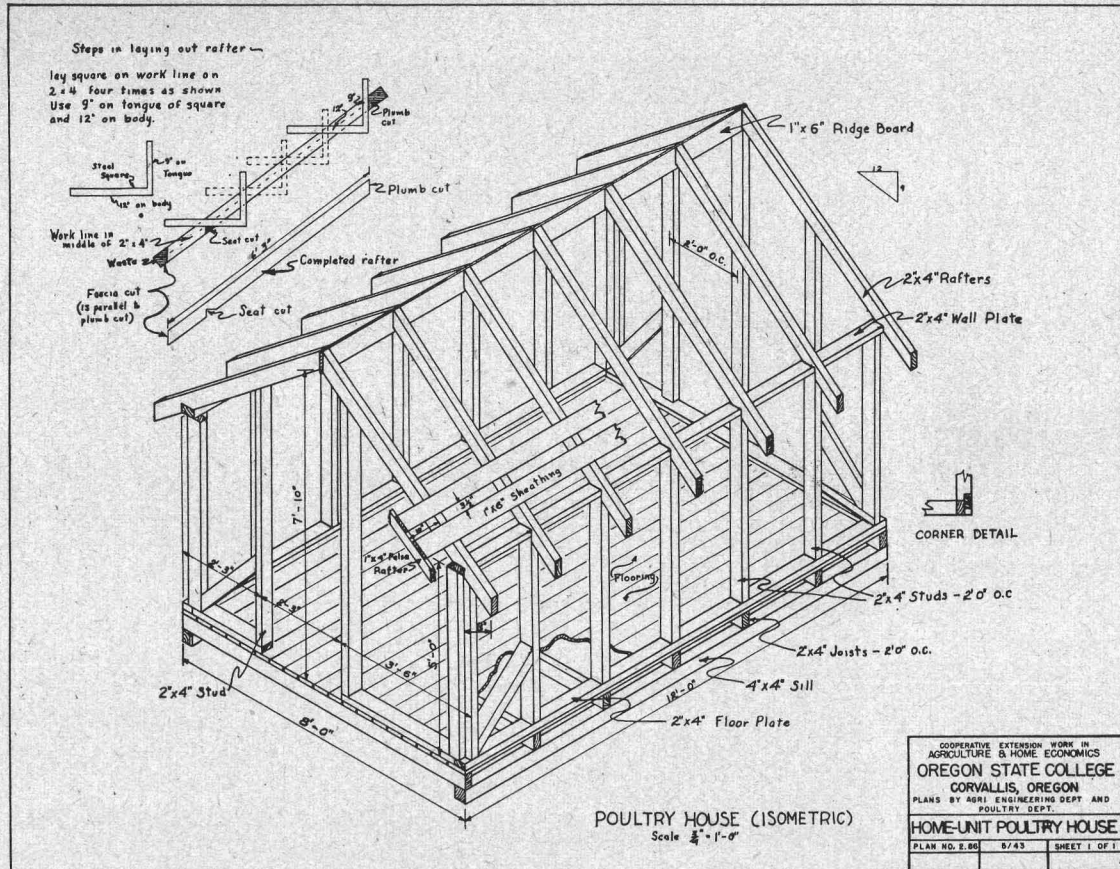


Figure 7. Isometric view of framework of poultry house.

MATERIALS REQUIRED

Figure 7 shows an isometric view* of the framework of the poultry house. As shown in the drawing, rafters and studding are 2" x 4" material; however, 2" x 3" material would be sufficiently strong, if available. Two-by-fours should be used for the floor joists that rest upon the 4" x 4" sill. The sill in turn should be supported on concrete blocks, bricks, or other permanent material. Supporting the sills in this way prevents their coming in contact with the earth and adds greatly to their life. It is desirable either to paint or give them a coat of some preservative such as creosote before constructing the house on them.

Note that the flooring is laid on the joists before the sidewall frame is placed in position. The 2" x 4" floor plate shown at the bottom of the studs can be omitted if desired and the studs toe-nailed directly to the floor. It is generally easier to assemble a wall section, however, by laying the floor plate, the studs and the wall plate horizontally on the ground, nailing through the wall plate and floor plate into the studs. When nailed together the entire wall section then can be raised easily into a vertical position and the floor plate nailed to the floor.

The 1" x 6" sheathing is spaced $3\frac{1}{2}$ inches apart for shingles and extends about 10 inches past the last rafter at each end of the roof. A 1" x 4" false rafter is then used as trim at the extreme end of the sheathing. In Figure 1 this 1" x 4" trim is also shown extended along the lower ends of the rafters.

Two studs are used at each corner, one being offset from the other about half the width of a 2" x 4", as shown in the "corner detail" drawing at the right of the isometric view. This arrangement provides a nailing surface in each direction on the interior of the house as well as on the exterior and provides a more rigid corner for the wall of the building.

* A 17" x 22" blueprint of this drawing can be obtained from the Agricultural Engineering Department, Oregon State College, Corvallis, for 50 cents. Order plan No. 2.86.

BILL OF MATERIALS

The specifications listed below either are the number of pieces of stock sizes required for cutting the actual members or represent the areas to be covered by flooring or siding.

Sills	2—4" x 4"—12'	Droppings pit front	2—1" x 12"—6'
Floor joints	7—2" x 4"—8'	Roosts and frame	5—2" x 4"—12'
Floor plates	2—2" x 4"—12'	Doors for openings to porches	1—1" x 6"—4'
	2—2" x 4"—8'	Trim for openings to porches	1—1" x 4"—10'
Wall plates	2—2" x 4"—12'	Windows	4—1" x 2"—10'
Studs:		20 sq. ft. muslin or glass substitute	
Side walls	9—2" x 4"—10'	Poultry netting:	
End walls	5—2" x 4"—8'	Window openings.....20 sq. ft. 1" or 2" mesh poultry netting	
Rafters	7—2" x 4"—14'	Partition24 sq. ft. 2" mesh poultry netting	
Ridge board	1—1" x 6"—12'	Droppings pit cover2" mesh poultry netting, 30" wide, 12' long	
Braces	3—2" x 4"—6'	Hardware:	
Flooring	1" x 4" or 1" x 6"	2 pr. strap hinges, 5" or 6"	
T&G flooring to cover 96 sq. ft.		10 lb. 20d common nails	
SidingDrop siding to cover 225 sq. ft.		5 lb. 8d common nails	
Interior siding	1" x 6" or 1" x 4"	5 lb. 8d finish nails	
T&G material to cover 200 sq. ft.		5 lb. 8d casing nails	
Corner trim	4—1" x 4"—10'	10 lb. 3d shingle nails	
Sheathing	20—1" x 6"—14'	1 lb. poultry netting staples	
Shingles	2 squares or 8 bundles	Porches:	
False rafters	4—1" x 4"—8'	Legs	3—2" x 4"—8'
Fascia board or eaves trim..	2—1" x 4"—14'	Floor joists	4—2" x 4"—12'
Roof ridge	2—1" x 4"—14'	Side wall, top rail	3—2" x 3"—12'
Door1 door 2'3" x 6'6", or flooring to cover 15 sq. ft. to use in constructing a door		Top frame	2—2" x 3"—12'
Door trim	1—1" x 4"—16'	2—2" x 3"—8'	
Partition	2—2" x 4"—8'	Floor	48 sq. ft. hardware cloth or poultry netting, 3" or 1" mesh
1" x 6" flooring or 1" x 8" shiplap to cover 36 square feet		Sides	2" mesh poultry netting, 30" wide, 20' long
Partition door frame	4—1" x 4"—6'	Top	48 sq. ft. 2" mesh poultry netting
	2—1" x 4"—10'	2 pr. 4" T hinges	

COST ESTIMATES

For estimating costs, the materials required may be summarized as follows:

Dimension lumber (2" x 4"s, etc.)—Approximately 410 bd. ft. required.

Boards (1" x 4"s, 1" x 6"s, etc.)—Approximately 240 bd. ft. required.

Flooring—Approximately 150 bd. ft. required.

Siding—Approximately 275 bd. ft. required.

Interior siding—Approximately 250 bd. ft. required.

Shingles—2 squares required.

Nails and staples—Approximately 36 lbs.

2 pr. 4" T hinges

2 pr. 5" or 6" strap hinges.

2 door bolts or locks.

20 sq. ft. muslin or glass substitute.

48 sq. ft. 1" mesh hardware cloth.

182 sq. ft. 2" mesh poultry netting.

Cooperative Extension Work in Agriculture and Home Economics

Wm. A. Schoenfeld, Director

Oregon State College and United States Department of Agriculture Cooperating

Printed and distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914