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EC1403 Revised 1953 Features to Consider in Buildings for Poultry

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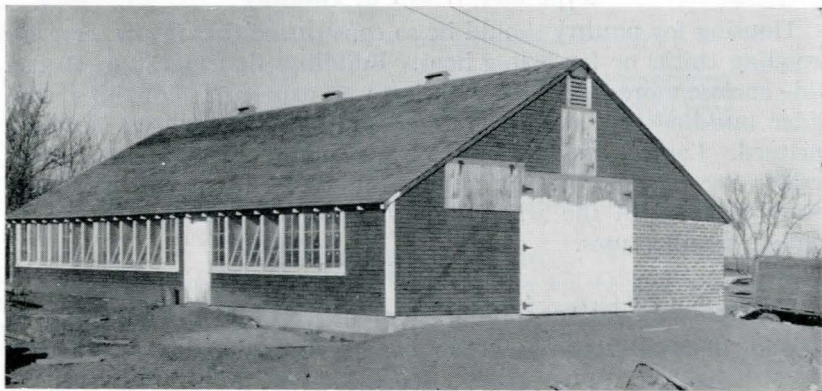
Features to Consider in **Buildings for Poultry**

J. H. CLAYBAUGH

THIS CIRCULAR is designed to answer some of the questions asked by persons who plan to remodel or build new houses for poultry. Questions about equipment for the poultry house are answered in Extension Circular 1441 (Revised), entitled "Practical Poultry Equipment." Circular 1441 also discusses floors, wall and ceiling insulation, vapor barriers and ventilation.

Location of the Poultry House

Careful planning is necessary to make certain the poultry house is put in the right location. It should be convenient to other buildings, and located so that the chickens will not be disturbed by other farm enterprises. The poultry house needs to be placed at least 100 feet from the dwelling and milk room, and so located that prevailing winds do not bring odors to these buildings.



This 30 by 60 foot chicken house has such modern features as the drive-in door and outside doors for the feed bin and attic on the east end. The regular service door is in the center of the south side. (Courtesy *The Nebraska Farmer*.)

The Extension Service, College of Agriculture
University of Nebraska, Lincoln, E. C. 1403 (Revised)
February, 1953

Other factors to be considered in locating larger poultry buildings are a minimum of leveling for the floor and foundations, ease of approach by trucks delivering feed, practicability of extending the length of the house, and the long range program for the farmstead. This must include the possibility of the building being used for other purposes.

Exposure

Poultry houses that are not more than 20 feet wide are usually faced south. Windows are placed to permit the maximum amount of winter sunshine to cover the floor. However, poultry houses that are 30 feet or more in width may be located on a contour. The front side is then the east or more southerly exposure. For adequate light distribution, the wider poultry houses need windows on both sides.

Drainage

Good drainage, away from the poultry house, is important. In level areas poor drainage can be improved by having the floor 6 to 8 inches above the ground and grading the surrounding area to permit rapid runoff of rain water.

Wind Protection

Southern slopes and windbreaks north and west of the chicken house help to reduce heat loss during cold weather.

Type and Width of Housing

Housing for poultry should be so constructed that it can serve for brooding chicks or for laying hens. Buildings that are 30 to 40 feet wide enclose more floor area with less wall exposure. For this reason wider buildings are usually warmer and cost less to heat per area enclosed. Larger houses accommodate more chickens, and allow greater use of labor saving equipment. Drive-in doors, which are found in most of the wider houses, make the buildings easier to convert to other uses.

Foundations

Concrete foundations should extend at least 2 feet below grade to prevent undermining by rodents. Placing the foundation below frost line will help prevent heaving. When masonry walls are built, adequate spread footings to support the building should be used to prevent uneven settling.

To prevent damage to frame walls from built-up litter, foundations should be built 15 to 18 inches above the floor. This will also permit doors to swing above the litter.

When constructing a concrete foundation, arrangements should be made for trucks or tractors to enter through the drive-in doors at floor level. This can be done by building the foundation only as

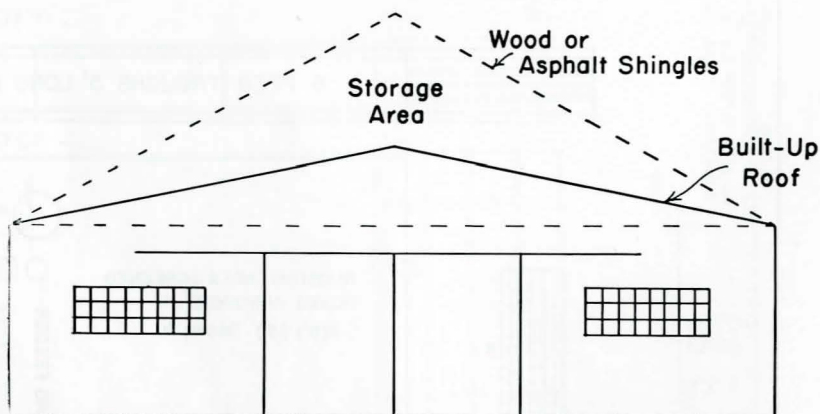
SUGGESTED FLOOR PLANS
and
ARRANGEMENT OF EQUIPMENT

For 30' x 50' house for 500 hens

(Pages 3, 4, 5 and 6)

Approximate Requirements

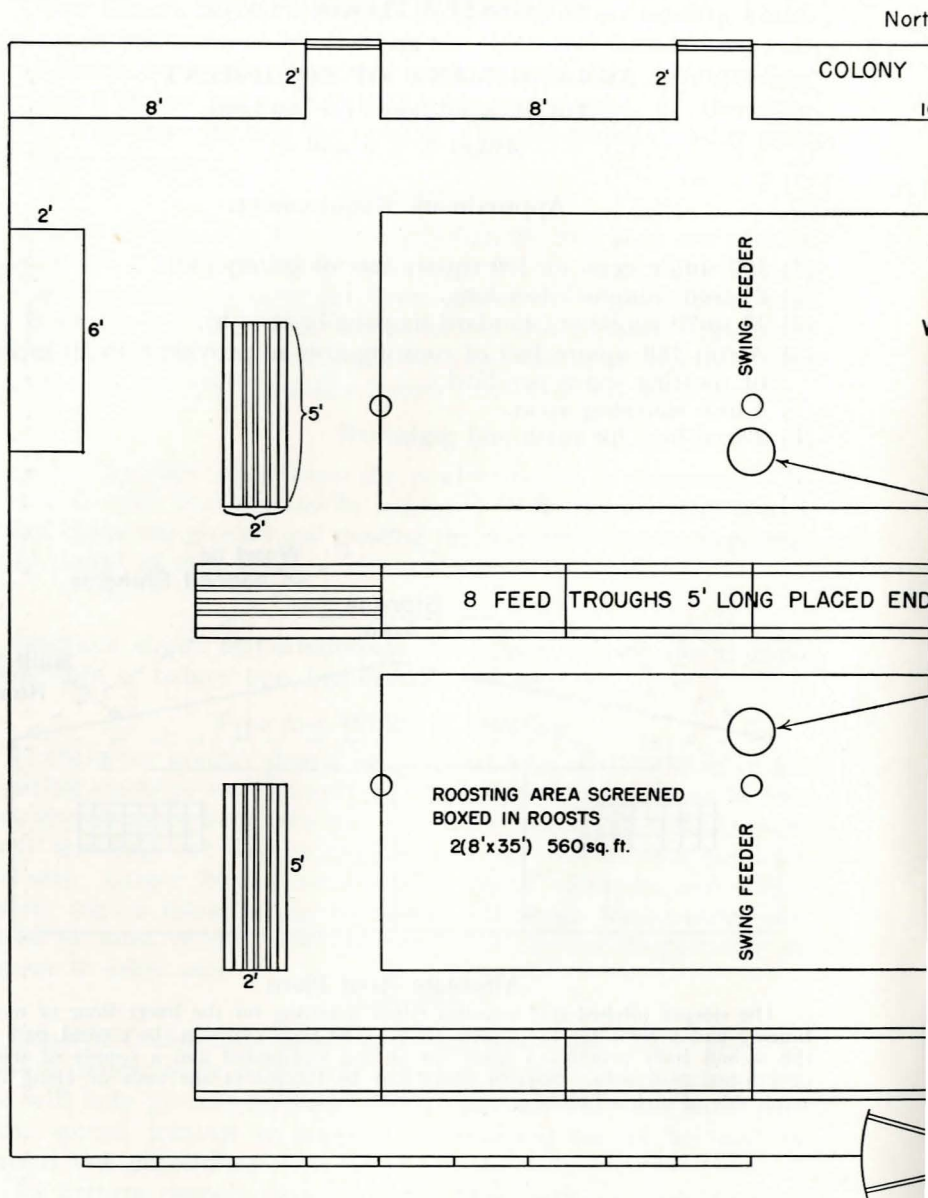
- (1) 100 single nests or 100 square feet of colony nests.
- (2) 24 feed troughs 5 feet long.
- (3) 18 to 20 windows (standard six-pane barn sash).
- (4) About 480 square feet of roosting area to provide 8 to 10 inches of roosting space per bird.
- (5) 4 to 6 watering areas.
- (6) 2 feed bins for mash and grain.



Alternate Roof Plans

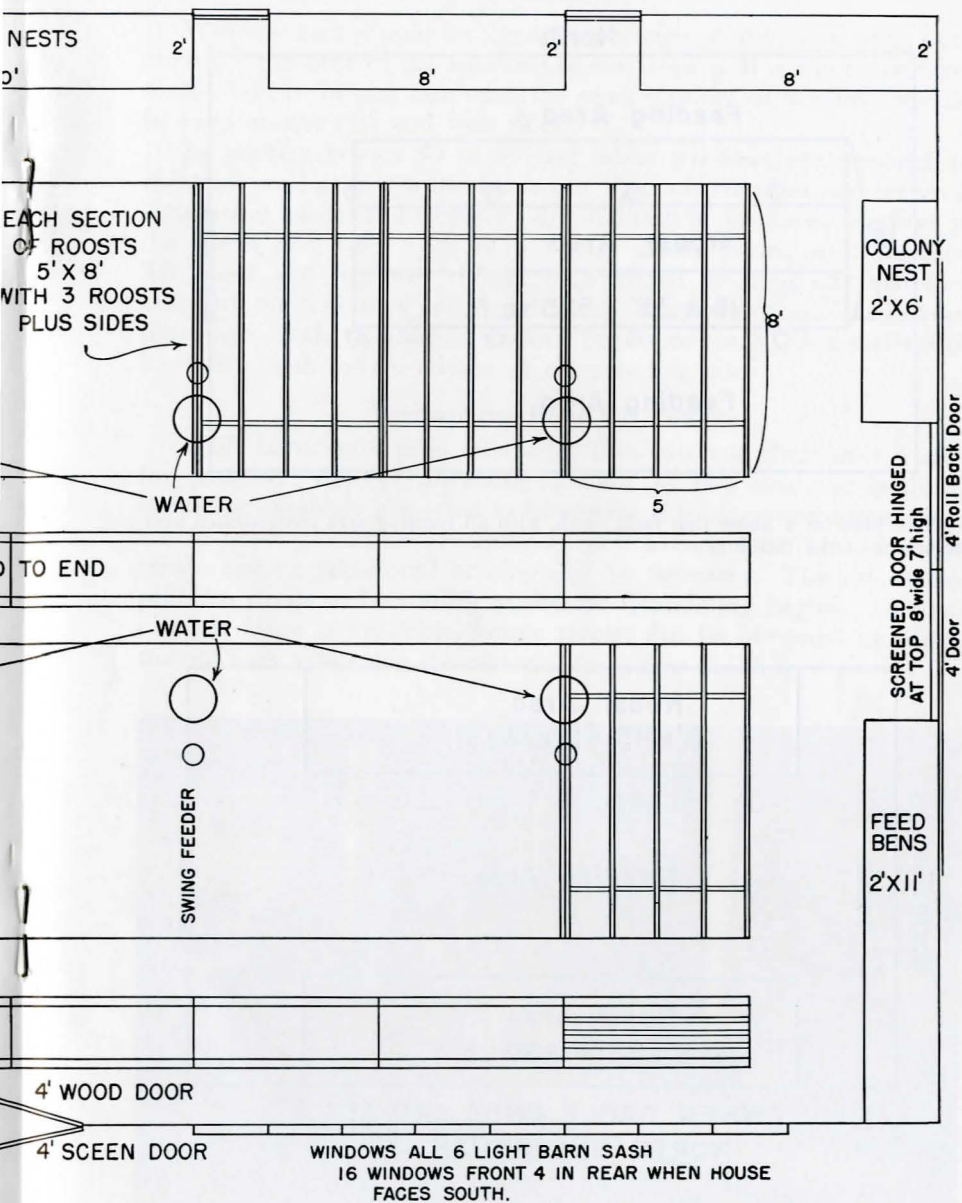
The steeper pitched roof requires either a ceiling for the lower floor or more bracing and a floor for the second story. The floor covering the central part of the second story provides a space for storing equipment and a supply of straw or crushed corn cobs. Drive-in doors may be located at the ends or along the south side of such a building.

high as the floor level at the drive-in doors. A plank that fits on edge into the concrete groove can be made to serve beneath the doors. The groove in which this plank is to fit must be made in the foundation at the time the concrete is poured.



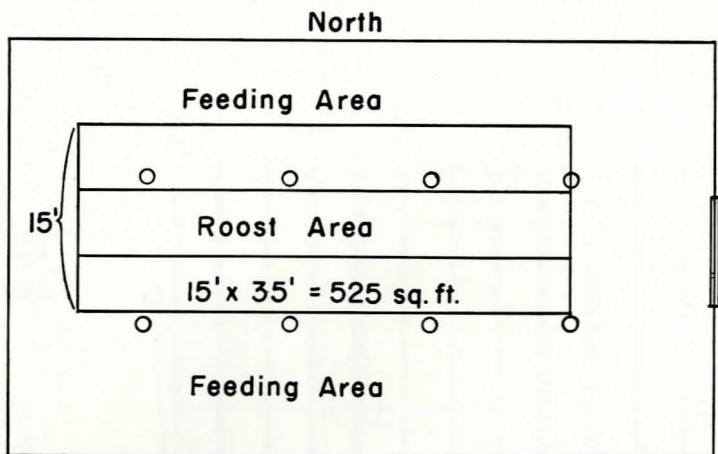
Floor plan for a 30' x 50' poultry house.

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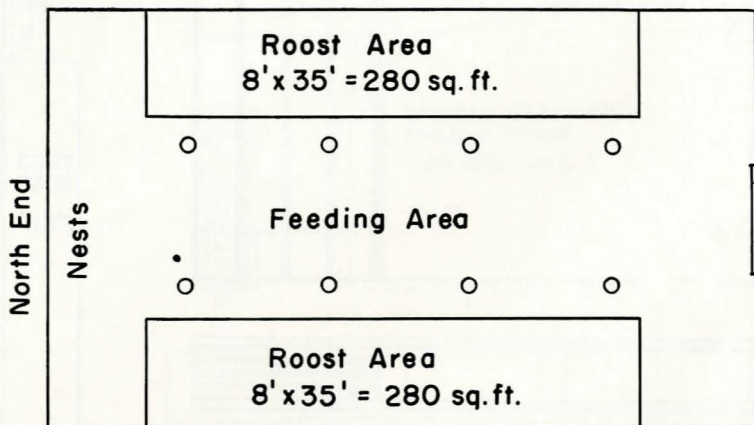


Scale: 1 inch represents approximately 5 feet.

Alternate Floor Plans



Floor plan for a house that faces south, with all roosting area concentrated near the center of the building.



WHEN GABLE ENDS ARE AT NORTH AND SOUTH

Floor plan for a house having equal number of windows on east and west sides and with roosts along outside walls.

Windows

Window area should be $2\frac{1}{2}$ to 5 per cent of the floor area, with about 75 per cent of the windows in the front wall if the house faces south. When houses face east, the same number of windows should be used on the east and west sides.

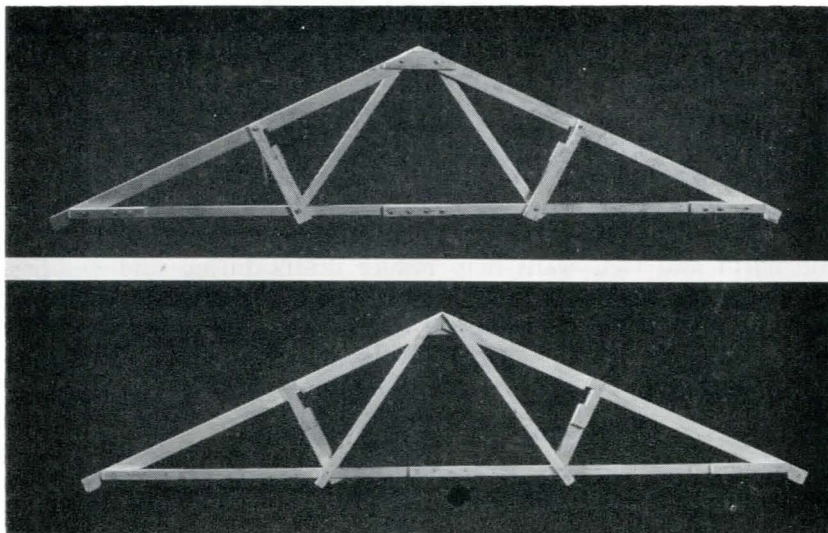
In poultry houses 30 to 40 feet wide, windows are essential in the back wall of the house for better light distribution and for cross ventilation during hot weather. Double sash or insulated windows in the north and west walls help reduce drafts during cold weather. All doors and windows should be screened to keep out sparrows. One-inch mesh poultry netting will keep the sparrows out. Hail screen (hardware cloth) is also satisfactory but more costly. A quarter-inch hardware cloth has the advantage of excluding mice.

Remodeling Barns for Poultry

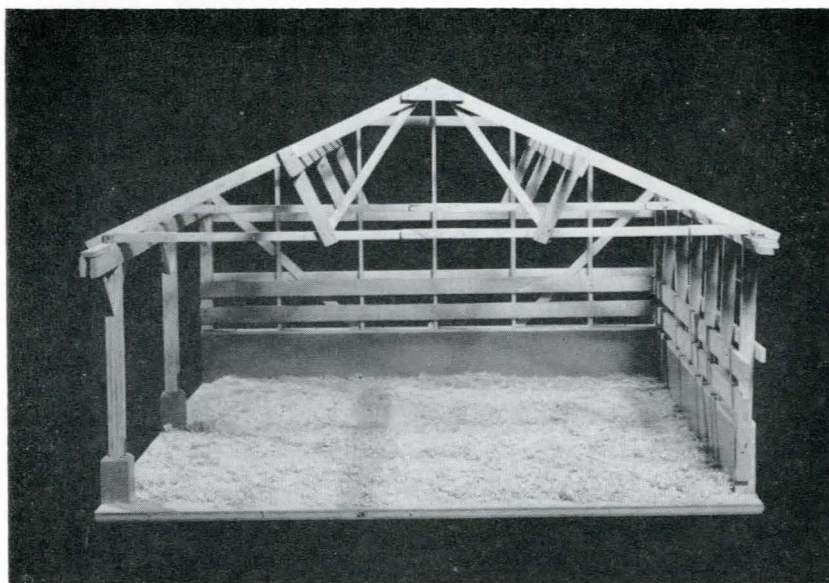
Many barns have been remodeled into two- and three-story houses for poultry. Before converting a barn to this use, the building should be carefully inspected to determine if framing and foundations are in good condition. Frequently, new foundations, new wall coverings and/or additional bracing will be necessary. The rat control problem needs to be considered before remodeling begins. In some cases, if labor is available, better results can be obtained by razing the old barn and using the material for a new building.



Two full lines of feed troughs are in front of the roosts. Extra feeders are on top of and at rear of roosts. Nests are concentrated between the windows on the north wall. When necessary to clean out under the roosts, the manure spreader is backed through the wide door to the edge of the boxed-in roosts.



Truss-roof framing for poultry houses has many possibilities. Trusses are readily built on the ground and lifted into position with a manure loader. Roofs constructed with trusses are economical and may be stronger than conventional rafter framing. The picture above illustrates the construction details of both sides of the truss.



Poultry houses constructed with trusses are free of obstructing poles or posts. This feature allows for convenient arrangement of roosts, feeders and nests and also permits easy cleaning with power equipment. When ceilings are used in the poultry house, trusses should be spaced 2 feet apart.