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# EC1470 Poultry House Remodeling

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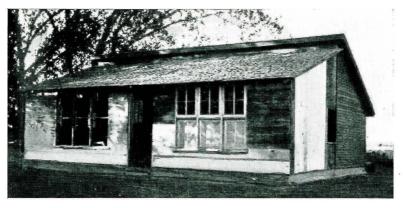
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Extension Circular 1470

E.C. #1470

August, 1932

## **Poultry House Remodeling**



One of the remodeled poultry houses. These demonstrations serve as patterns for neighbors to follow.

The University of Nebraska Agricultural College Extension Service and United States Department of Agriculture Cooperating W. H. Brokaw, Director, Lincoln

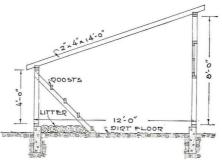


Figure 1.—A common type of poultry house. Insufficient light, poor type roosts, no dropping boards and too narrow to provide sufficient scratching space.

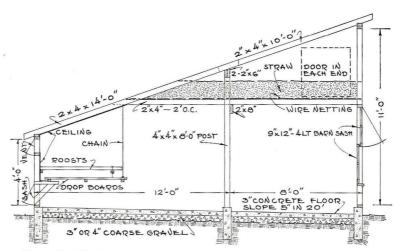


Figure 2.—The house shown in Figure 1 remodeled to provide light and ventilation. The width is increased to 20 feet, and straw loft added to decrease the amount of air space. The concrete floor will make the house much easier to clean as well as making it more sanitary.

### Poultry House Remodeling

BY J. H. CLAYBAUGH AND PAUL R. HOFF

Formerly poultry houses were built to furnish roosting and laying quarters for the hens. Now a poultry house is not an asset unless it is a complete home where hens can live in comfort and produce eggs at a profitable rate during the winter months. Equipment that protects the birds from disease and parasites and conserves labor of the attendant is considered necessary before a poultry house can be called modern.

This bulletin outlines plans for remodeling old poultry "coops" into modern, profit paying homes for hens. There are very few poultry houses which cannot be improved and the caretaker's chores made lighter by the addition of one or more of these recommendations.

The following plans show some of the most common types of old poultry houses and the ways of remodeling them. In each case we have tried to approach the standard Nebraska house as closely as possible. Houses made over in the manner shown will have good ventilation, a maximum amount of sunlight and a minimum amount of waste space. They can be more easily cleaned and, if properly insulated with straw or some good insulating material, will be reasonably dry and will have a more even temperature throughout the entire year.

#### FLOOR AREA REQUIREMENTS

Experienced poultrymen find that it is necessary to allow four square feet of floor space for heavy breeds or three to three and one-half square feet for lighter breeds. Less amount of floor space results in over crowding. Very often respiratory troubles accompany such conditions.

Mortality resulting from over crowding is very likely to decrease

the flock until each bird has the proper floor area.

When poultry houses are to be remodeled, the first decision to be made is regarding the floor space. With some, the size of the flock will be reduced to suit the floor space. With others, the size of floor

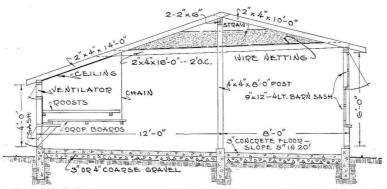


Figure 3.—Another way of remodeling house shown in Figure 1. The width is increased to 20 feet, ventilator and cellar sash are placed in the rear wall and additional windows installed in the front wall. A small straw loft is provided which aids in keeping the house warm in winter and cool in summer. The rear wall and part of the roof are covered with ceiling to stop north winds in winter.

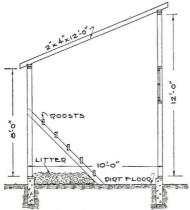


Figure 4.—High and narrow type poultry house. Excessive air space makes a cold house. The roosts are poor, there are no dropping boards and the scratching space is too small.

space will be increased to fit the size of the flock desired. The illustrations show how new additions may be added to narrow buildings, and how high ceilings may be lowered by the addition of straw lofts. Since the partitions between the old and new parts are often removed, it is seldom that much new lumber needs to be purchased.

#### STRAW LOFTS

Old poultry houses may be made warmer in winter and cooler in summer by insulating the ceiling with straw. Lofts covered with six to eight inches of straw are often built into poultry houses to lower the ceilings and prevent the accumulation of frost. When one inch poultry netting is used to hold the straw in place, but little of the chaff will sift through. Plac-

ing narrow boards on the ceiling joists to hold the straw in place is another popular method because it is easy to push the boards to one side when the straw is removed from the loft. Straw insulation is also often packed between rafters and rear studdings. Wire netting seems to be the most popular method of holding this straw in place.

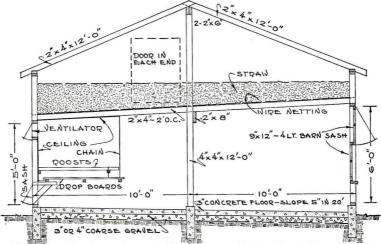


Figure 5.—The house shown in Figure 4 remodeled. The width increased to 20 feet provides adequate scratching space. Plenty of sunshine and ventilation are available thru the front and rear windows and rear ventilator. The addition of a straw loft reduces the air space and makes the house much warmer.

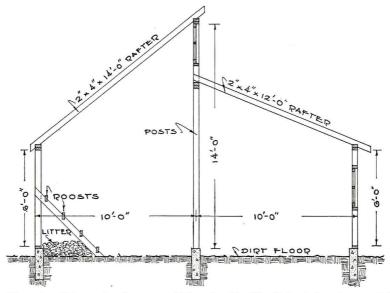


Figure 6.—Half monitor houses are high and cold. The high window does not help ventilation or allow the light to fall where it is needed.

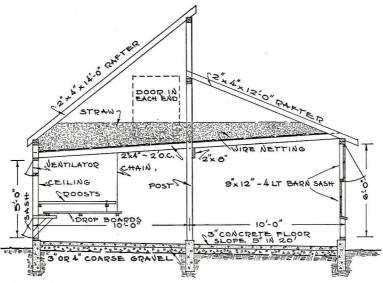


Figure 7.—Half monitor house remodeled by the addition of a straw loft, sufficient windows and rear ventilators. This house will be warm, bright, dry and well ventilated.



Fig. 8.—The low windows let in light below the dropping boards.

When straw lofts are built, arrangements must be made to protect the house from sparrows, rats, mice, and mites which may find protected hiding places there. Sparrows can be kept out by screening all windows and doors with fine poultry netting. Since sparrows import mites and are known to be disease carriers, their presence should not be tolerated in any poultry house.

When arrangements are made so cats have free access to the top of the straw loft, they can be depended upon to help destroy mice, rats,

and sparrows.

#### LIGHT AND SUNSHINE

The door and window arrangement should provide an even distribution of light over all parts of the floor. Two light cellar sash spaced ten feet apart in the north wall under the dropping boards provide even distribution in what is ordinarily the darkest part of the house. These windows are easily removed in summer and the cooling

effect greatly appreciated by the hens.

Since direct sunshine is necessary, all doors and windows must be hinged to open easily. Glass filters out the health giving, short, ultraviolet rays in sunlight. Even on bright winter days, one or more windows on the south side of the house should be opened for several hours during the middle of the day. Placing a door with a screen in the center of the south wall of each room provides additional direct sunshine on the floor. When new front walls are made for remodeled houses, the Nebraska type front shown in Figure 9 may be used to secure full benefit of direct sunshine.

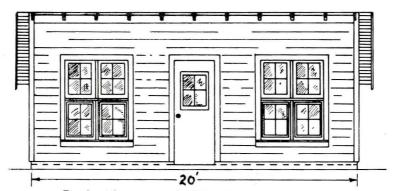


Fig. 9.—The front of the Nebraska type poultry house.

#### PERMANENT FLOORS

Without permanent floors in the poultry house, it is practically impossible to protect hens from an outbreak of filth borne diseases. With permanent floors, the flock can be confined during epidemics of disease, the litter can be hauled to cultivated fields, and the house made clean again. Dirt floors are generally full of holes and increase the labor of cleaning the house. Concrete floors troweled as smooth as possible are the most popular of permanent floors. Concrete floors are not damp when built on a gravel foundation with light weight rubberoid roofing between the concrete and the gravel.

Foundations must be made deep enough to prevent rats burrowing under the floors. No cracking of concrete has been reported when foundations were built first, then the concrete floor laid in ten foot squares with two thicknesses of rubberoid for expansion joints. To keep the straw of the litter evenly spread concrete floors are built with a slope. The front part is made five inches lower than the rear when

a house is 20 feet deep.

#### DROPPING BOARDS AND ROOSTS

When dropping boards and roosts are hung in place as shown in Figure 10, they become standard equipment that can be fitted to any house and moved by farm tenants. The dropping boards and the roosts are considered as night quarters only. Roosts should be spaced at least 14 inches apart. About seven inches of roosting space is allowed for light breed hens and  $8\frac{1}{2}$  to 9 inches or roosts for each heavy breed hen. Dropping boards are built five feet wide in houses that are 20 feet deep.

While common lumber or shiplap can be used, matched flooring is most popular for building of dropping boards. This can be blind nailed which leaves no nail heads to catch upon the scraper when cleaning.

To prevent mites from getting started, dropping boards and roosts should be painted on both sides with wood preservative at least twice

each year.

If arrangements cannot be made for the daily cleaning of dropping boards, wire netting should be nailed beneath the roosts. This netting will prevent hens walking through or scratching in the filth and later soiling the eggs. When hens cannot walk on the dropping boards the manure is easier to scrape from the boards.

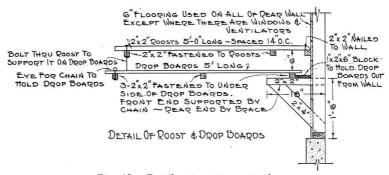


Fig. 10.—Details of roost construction.

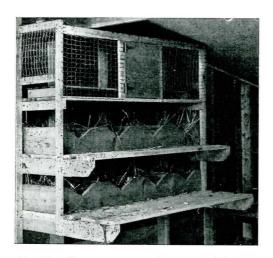


Fig. 11.—Clean nests mean clean eggs. The coop above is for broody hens.

#### CLEAN NESTS

If clean eggs are to be marketed, the poultry-man must furnish well padded, clean nests so built that hens cannot roost in them at night. A nest for every six hens should be provided. Where trap-nests are used, a nest for every four hens will be needed. The bottom dimensions of a good, practical nest should be about 14x14 inches. For old buildings, nests made from orange boxes and covered with sloping frames are both movable and low in cost.

#### REMODELING DEMONSTRATIONS

County extension agents arrange for remodeling demonstrations to assist in setting a pattern of how old poultry houses can be remodeled into comfortable quarters with labor saving equipment. These demonstrations have been helpful in encouraging better equipment with improved management and increased profits. The services of the Extension Engineer and Extension Poultryman are offered to county agents for these demonstrations. Those interested in building new houses or remodeling old ones should first consult the county extension agent who is the local representatives of the College of Agriculture.

Distributed in furtherance of cooperative agricultural extension work. Acts of May 8, 1914, and June 30, 1914. Extension Service of The University of Nebraska Agricultural College and U. S. Department of Agriculture cooperating. W. H. Brokaw, Director of Agricultural Extension Service.

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