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TURKEY BROODING AND REARING EQUIPMENT

The Poultry Council¹ of The State College of Washington

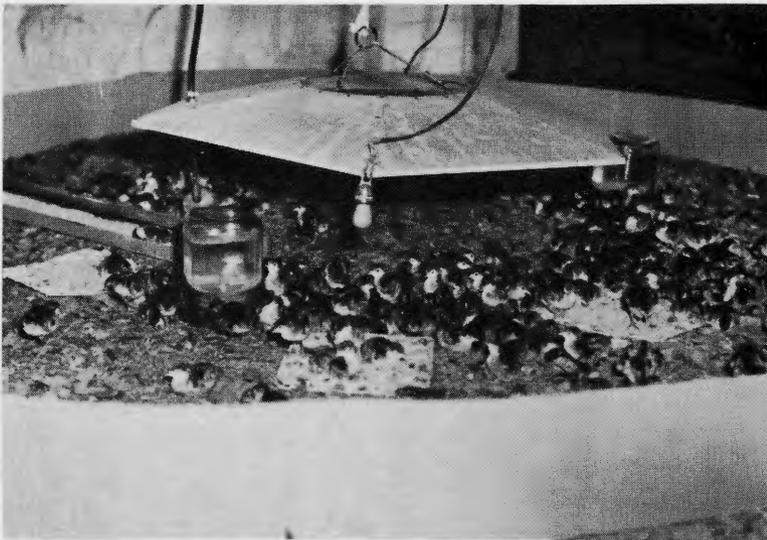


Fig. 1.—Good brooding conditions give day-old poults a good start.

¹THE POULTRY COUNCIL of The State College of Washington is composed of staff members of The State College of Washington at Pullman and Puyallup engaged in teaching, research, and extension work in poultry husbandry and pathology.

Good brooding and rearing equipment is a *must* for anyone planning to raise turkeys. You can avoid much grief, disappointment, and hard work if you keep this important point in mind.

BROODERS

A brooder provides the young poults with needed warmth during the first few weeks of their lives. In choosing a brooder, therefore, its efficiency in meeting this requirement is of first importance. This means that the brooder must be dependable, easy to handle, and have low operating costs.

There are several types of brooders in use today by the commercial turkey raisers in this state. Gas, oil, and electric brooders are the most popular.

At present, the bottled-gas brooder tops the popularity list among Washington turkey raisers. In the last few years, however, a considerable number of oil-burning brooders have been installed.

Both the gas and oil brooders heat underneath and near the hover, and, in contrast to the electric brooder, also heat the room.

This point is important because it permits the brooding of early-hatched poults. On the other hand, unless you are careful, it can lead to overheating the poults, which is just as bad as chilling them. In this respect, electric brooders have an advantage in late-spring and early-summer brooding.

In using the oil-burning brooders, it is necessary to keep the stove and the chimney pipe fairly clean of soot. To get a good draft, and to avoid fire hazard, the chimney pipe should extend not only above the highest point of the roof, but also above any nearby obstruction. The over-all length of the pipe should be at least 12 feet above the stove. The chimney should be secured by guy wires and provided with a check draft and a rotary cap.

More electric brooders for brooding turkeys are being adopted because of the larger supply of electricity available for industrial and farm use in this state. The cost of operating a modern brooder compares well with that of the other two types.

Two kinds of electric brooders, the fan-ventilated type and the radiant-heat type, have stood the test of practical use. Both types can be built on the farm.

If electric brooders are to be used, it is a good idea to have a few coal oil auxiliary heaters in reserve in case of power failure. These heaters, though they are not used very often, more than pay for themselves in your peace of mind. Larger operators may want to install auxiliary electric generators.

Under some conditions, the use of starting batteries for poults may be recommended. You may keep the poults in such batteries from 1 to 2 weeks following hatching when they are transferred to the floor system of brooding.

The underfloor radiant type of heating has gained popularity in this state among commercial turkey producers as a system of brooding, especially where the scale of operations is large enough to justify the initial investment.

TEMPERATURE CONTROL

All brooders have temperature-control devices to keep the temperature under the hover at the desired level. The expansion-type wafer is the heart of most of these devices. If the wafer is faulty, accurate temperature control under the hover is impossible. A reasonably accurate thermometer hung under the hover about 2 inches above the floor and 3 to 4 inches in from the edge of the hover provides a check on the temperature under the hover. No matter what the thermometer reads, however, watch the poults closely for comfort, and adjust the temperature accordingly.

A hover guard, about 12 inches high, made of board, corrugated cardboard, sheet metal or chicken netting covered with burlap during the first few days keeps the poults from wandering too far from the hover.

BROODER HOUSE

A brooder house of sound, draft-proof construction is also needed for successful poult brooding. A poult needs 1 square foot of floor space up to 8 to 10 weeks of age. This is in addition to any outdoor yard or sunporch area made available to them at 3 or 4 weeks of age.

There is no *best* plan for a turkey brooder house. Almost any reasonably lighted structure will do, as long as you can provide the poults with the required temperature under and outside the hover and can keep them out of direct drafts.

If the brooder house is permanent, then a concrete floor is desirable. This type of floor is easiest to clean. You cannot use concrete floors, however, in portable colony houses. Floors made of good-grade fir flooring are satisfactory.

Commercial turkey producers in this state prefer some form of permanent brooder house system of brooding. This system materially saves on labor costs incidental to brooding as well as on the long-term housing costs.

Whatever the type of brooder and brooder house used, it is desirable to brood poults in small units not over 200 in any one group. This problem does not arise in a small portable brooder house measuring, for example, 10 x 14 feet. In large permanent-type houses, you can use portable wire partitions which divide the floor plan into smaller units.

Some turkey raisers favor wire floors in brooder houses. Wire floors keep the poults off the droppings, an important factor in any sanitation program. You can make such floors of either $\frac{1}{2}$ -inch mesh 16-gauge hardware cloth (galvanized after weaving) or $\frac{3}{4}$ -inch electric-welded wire mounted on portable wooden frames. If you use the latter wire, it is necessary, for the first 3 to 4 weeks, to cover about two-thirds of the floor area, including that under the hover, with 0.4-inch square 21-gauge wire. Cover the wire under the hover for the first 7 to 10 days either with a nonskid paper or sacking. This eliminates underfloor drafts. Change the covering material at least every other day.

Sunporches (see Fig. 2) give additional floor space and help to harden the poults before they are placed on the range. You can get information on sunporches in *Poultry Pointers* 15, *Sunporches for Chickens and Turkeys*.



Fig. 2.—A sunporch gives additional floor space and permits the poults to be outdoors.

HOPPERS AND FOUNTAINS

Having provided the poults with a brooder and comfortable quarters, the next job is to see that the birds have sufficient hopper and water space.

Two linear inches of hopper space per poult is enough for the first 4 weeks. Provide three 1-gallon waterers for each 150 poults during the same period of time. The use of disposable paper hoppers is increasing. From the fifth week until the time poults are moved on the range (usually at 8 to 12 weeks of age), fewer, but larger, waterers are needed. Where there is running water, troughs are a welcome labor-saving device.

After the first week, place feed hoppers and waterers on shallow wire platforms, about 2 inches high and larger than the base of the hopper or waterers. This prevents feed and water pollution.

At least 4 linear inches of hopper space per poult is needed to see a poult through the 5-to-12-week period. Twelve-week-old poults can use adult-size, range-type hoppers. Plans for three sizes of feeders are given in Figure 3.

From then on, supply at least two 12-foot hoppers, preferably mounted on 2 x 4 inch skids, for each 100 turkeys, one for pellets or mash and the other for grain. Poultry Pointers No. 40, *Turkey Breeder Houses and Equipment*, has plans for a 14-foot storage hopper.

You can use a variety of watering devices on range, depending on the water supply. Water troughs are popular with many commercial turkey raisers.

In using troughs, consider the following points:

1. Provide at least one 6-foot trough for each 100 turkeys.
2. If the trough is stationary, find some way to keep turkeys off the wet ground, often found around the trough (see Figure 4). If wire-covered platforms are not available, use a shallow pit under the trough. The pit should run the full length of the trough and extend for 3 feet on either side. Three or four poles spaced 8 inches on center laid over the pit parallel to the trough provide a space for the turkeys to stand while drinking.
3. If the trough is portable, mount it on 2 x 4 inch skids. Provide either a wire platform or pit like that described above in the case of the stationary trough.

Where there is no running water, a wooden barrel or metal drum mounted on skids is a practical device. The flow of water from the barrel (or drum) into the watering trough or can is controlled by float valves attached to the outlet pipe located near

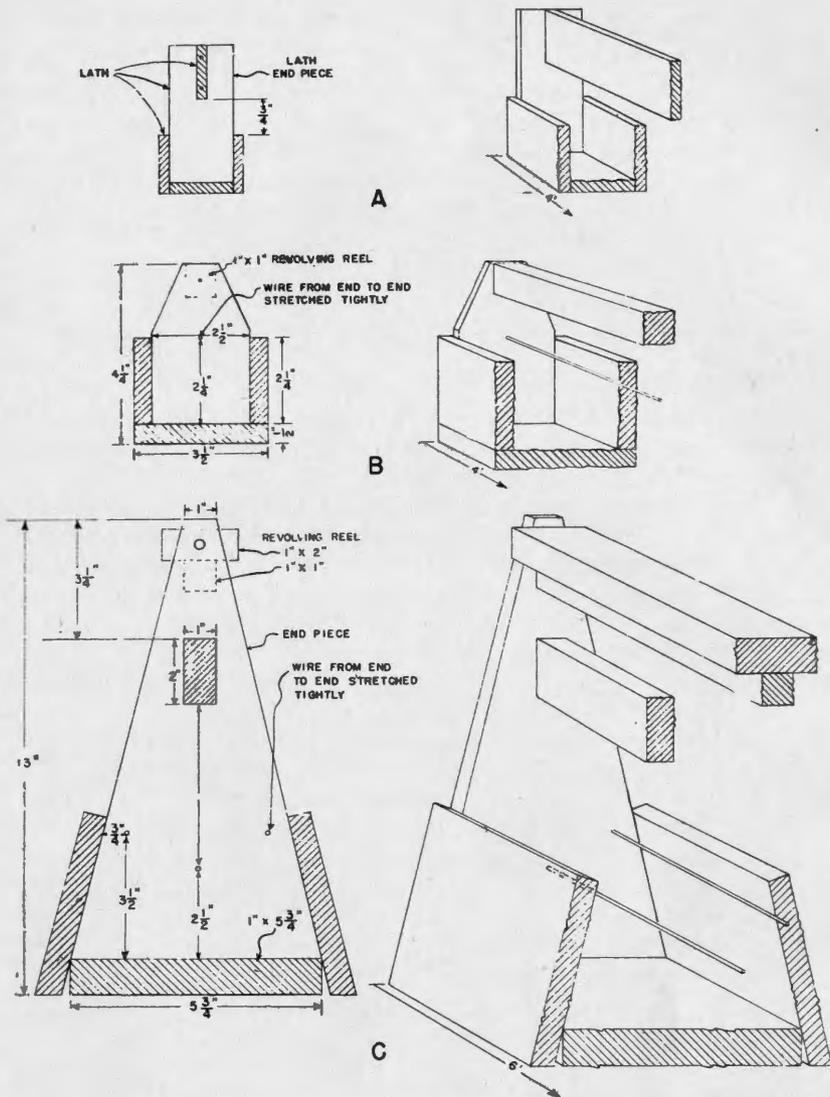


Fig. 3.—Turkey feeders for various ages: (a) a starting hopper, use 1 to 2 weeks; (b) intermediate hopper, use 2 to 4 weeks; and (c) intermediate hopper, use 4 weeks on range.

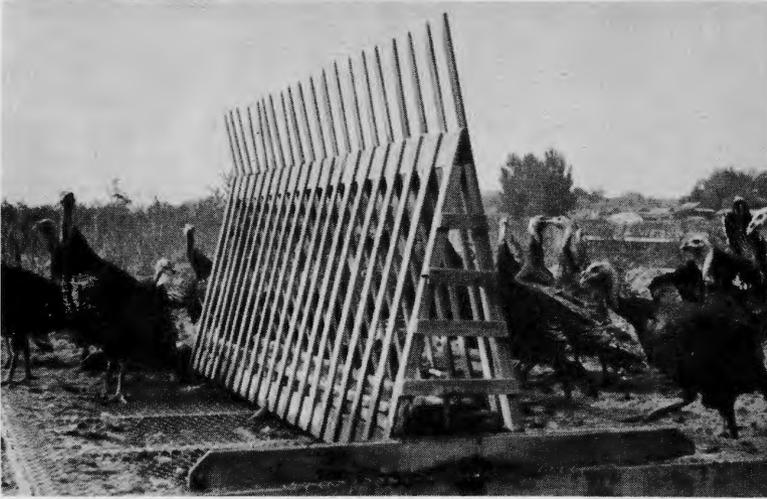


Fig. 4.—A water arrangement that prevents turkeys from getting into the container, prevents turkeys from roosting on the top, and allows waste water to fall into a hole in the ground.

the bottom of the barrel. One difficulty with this scheme is that unless there is strong water pressure (for example, when the valve is connected to a high-pressure water system), dirt and debris in the water can easily plug up the valve. A fine screen placed over the intake pipe usually prevents this.

Another watering device which does not depend on the valve to control the flow of water requires an air-tight drum from which the water can not flow unless air is permitted to seep in. In this device, an outlet pipe is provided under water in a trough or watering tin. When the level of the water in the trough falls below the pipe opening, air enters the drum and the water flows out, restoring the original water level.

RANGE SHELTERS

The turkey is a rugged, outdoor-loving animal and, when on range during summer and early fall, requires little protection from the weather. It is a good investment, however, to provide some shelter, especially during the first 2 or 3 weeks of the turkey's life on the range and in the fall, when persistent cold rains can be injurious to the birds.

Sudden blizzards have been known to wipe out whole flocks in a short time. A simple summer shelter with roosts, each to handle about 100 turkeys, is a cheap insurance policy .

Unless prevented from doing so, the young turkeys soon learn to roost on the roof of the shelter. If you intend to permit this, design the shelter to handle the weight of 50 or more grown turkeys on its roof. *Fly guards* are merely 2 x 2 inch or 2 x 4 inch, 5 to 6 foot uprights nailed securely around the edge of the shelter roof and joined by poultry netting. These fly guards usually slant outwards, making it almost impossible for a turkey to fly up on the roof.

RANGE ROOSTS

Plenty of roosting space gets rid of much of the crowding and picking among brooder and range turkeys. Roosts should be 2 x 4 inch laid flat, spaced at least 30 inches on center, and with 18 linear inches of roosting space allowed per bird. Many growers prefer to place the roosts off the ground on skids for easy moving. With Broad Breasted Bronze turkeys, low roosts are better than high roosts. If possible, use wire underneath the roosts to keep the birds off the droppings.

Turkeys are subject to attacks by dogs or coyotes; therefore, unless an attendant is on hand to protect the birds, have the range completely fenced. Or, as an alternative, herd the birds into a protective corral at night.

Use a catching corral or catching chute for ease in handling the birds. In addition, provide hospital and/or cull pen.

Other *Poultry Pointers* dealing with turkeys available from your County Agricultural Extension Agent are these:

- No. 6—Coccidiosis in Chickens and Turkeys
- No. 9—Coryza (Colds) of Chickens and Infectious Sinusitis (Swell Head) of Turkeys
- No. 15—Sunporches for Chickens and Turkeys
- No. 27—Pullorum, Fowl Typhoid, and Paratyphoid in Chickens and Turkeys
- No. 28—Fowl Pox
- No. 32—Feeding Turkeys
- No. 34—Common External Parasites of Chickens and Turkeys
- No. 37—Infectious Enterohepatitis (Blackhead)
- No. 39—Feeding and Managing of Turkey Breeders
- No. 40—Turkey Breeder Houses and Equipment