

his judgment and his skill, not alone with whey but also with the grain ration. The square is preferable to the V trough. The pigs having drank all they need, the grain ration (ground) should be given. Shorts at current prices is one of our best and cheapest swine foods, especially for young pigs, but variety is better than any single fodder. For pigs four months and under, shorts and barley make a most excellent combination. Shorts with peas and oats, the latter ground fine, make a splendid ration with whey. With advancing age corn (grain) makes a very desirable addition, being perhaps the most profitable grain that can then be fed. The proportion of corn should depend on the age of the animal and the nearness to "finishing."

But how should these grain mixtures be fed? Certainly not by pouring them on top of a trough full of whey—grain should be eaten and not drank. Too watery a mixture results in imperfect digestion—less pork for each pound of grain fed. This is a very important dietetic maxim: It is better to feed the grain dry than very watery. It should be mixed with whey till of the consistency of a moderately thick batter, such as would run out of a pail. This may be done either in each trough or in one large mixing vat. We think twice a day often enough to feed the grain ration—morning and evening.

**Pen Management.**—The number of pigs in a pen we would regulate by the trough room, and therefore have pens wide rather than deep. The floor should be water-tight and sloping to the gutter at the back. Open floors are productive of much stench. With a wide hoe or scraper one minute will serve to clean the sleeping floor and gutter of each pen, which is best done while the pigs are eating. The floors should be cleaned at least twice each day. A cistern at the end and outside of the building will receive the cleanings of the pens, which may then by a coarse, large-bored pump be pumped into a tight box on a wagon and drawn on to the land. This manure, if rightly used, will return a handsome interest on the whole investment.

As the season advances, should whey become scarce, we would recommend to mix the food with water as a substitute. A plot of green corn under these conditions would return a neat profit. A light sprinkling of gypsum on the floors and in the gutters will do much to preserve sweetness and will add to the value of the manure. A mixture of wood ashes, salt and sulphur kept in each pen will pay one hundred per cent. on the investment. A few sods thrown in occasionally are excellent.

Under this system and routine one man can attend to three hundred hogs, putting in ten hours a day.

#### A Good Standard to Work To.

A very good annual average yield of milk is 5,000 pounds instead of 3,000, and 200 to 225 pounds of butter per cow instead of 125 pounds. Many herds kept in a plain, practical, farm fashion attain still better results. There are manifestly many cows in the country, probably some millions, that do not produce the value of their annual cost, however cheap and wastefully poor their keeping may be. It is apparent that if but two cows were kept, of the suggested standard of production, in place of every three of the existing average quality, the aggregate products of the dairy industry of the country would be increased more than ten per cent., while the aggregate cost to their owners ought to be less and probably would be. Every possible influence should be exerted to induce dairy farmers to weed out their herds and keep fewer cows and better ones. At least the average quality of cows kept for dairy purposes should be brought up to a respectable and profitable standard. For the present the cow owner may reasonably require something over two gallons of milk per day for four months, then two gallons a day for the next four, and at least two months more in milk during the year, with constantly decreasing yield. This provides for an annual yield of 5,000 pounds of milk, or about 575 gallons, which is a fair ideal standard for the dairy cow in the United States.—*From Alvord's Statistics of the Dairy; Bulletin II., U. S. Dept. of Agriculture.*

#### French Rules for Milking.

(1) Work rapidly; slowness causes loss of cream. (2) Milk thoroughly, to the last drop, because the last milk is the best. (3) Milk at the same time every day. (4) Milk cross-wise—that is to say, one fore teat on the right and a hind teat on the left and vice versa; the milk thus flows more copiously than by parallel milking. (5) Milk with five fingers, not with index and a thumb, a fault too common with milkers. (6) Do not employ any kind of milking machines. (7) To milk young, restive cows, raise one of the fore feet. Never strike them. (8) Always keep the hands clean, and also the cow's udder and dairy utensils. (9) During milking avoid distracting or disturbing the cow. Those who neglect any of these prescriptions infallibly lose milk.

#### The Cost of Milk Production.

On the basis of a year's observations with the herd at Cornell University Experiment Station, H. H. Wing, Professor of Dairy Husbandry, reaches the following conclusions:

1st. With a fairly good herd, carefully fed and kept, milk can be produced for sixty-five cents per cwt. and fat for sixteen cents per pound for the cost of food consumed.

2nd. That individuals of the same breed vary more widely in milk and butter production than do the breeds themselves.

3rd. The larger animals consumed less pounds of dry material per 1,000 pounds live weight per day than did the smaller animals.

4th. That in general the best yields of fat were obtained from cows that gave at least a fairly large flow of milk.

5th. In general, the cows consuming the most food produced both milk and fat at the lowest rate.

6th. For the production of milk and fat there is no food so cheap as good pasture grass.

## POULTRY.

### A Farm Poultry House.

To the Editor FARMER'S ADVOCATE:

SIR,—I herewith send you plans for an inexpensive farm poultry house. Fig. 1 represents a perspective; Fig. 2, a plan; and Fig. 3, an end elevation of the same. Two noteworthy features in the

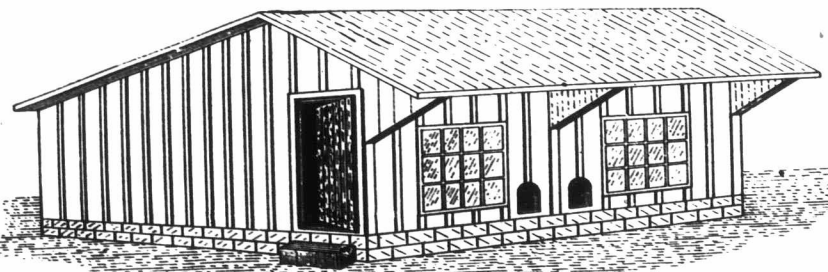


FIG. 1.—POULTRY HOUSE ELEVATION.

design of this house are in the extension of the roof and receptacle for winter droppings; the one preserving dry earth or dust continually through the summer season, which is so essential to the health and comfort of the flock, and the other in reducing the labor of those in attendance to a considerable extent, and at the same time preserving the manure until such time as it is wanted. This poultry house is 16 x 20 feet and designed for 50 fowl, and should not contain over 60, separated into two flocks.

In building this house a trench should be dug about 2 feet deep by 18 inches wide, then filled in

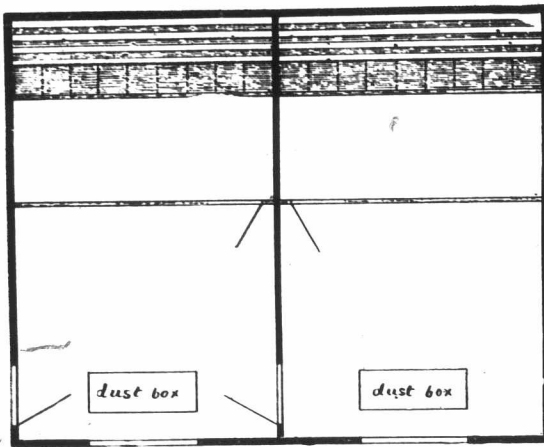


FIG. 2.—GROUND PLAN.

with small stones to level of earth, after which comes the mason work, one foot high; this completes the foundation. Next come 2 x 6" sills well bedded in with mortar—and do not be afraid of using too much of this—thus preventing rats and mice from scratching their way through into the house. We are now ready for the frame work, which is composed of 2 x 4" studding and 4 x 4" plates. The studding in front, or south side, are 7 feet long, and for rear, or north side, 5 feet long. I should use 13 2x6" rafters on a side. On the north they are 134 inches long from heel to toe, and on

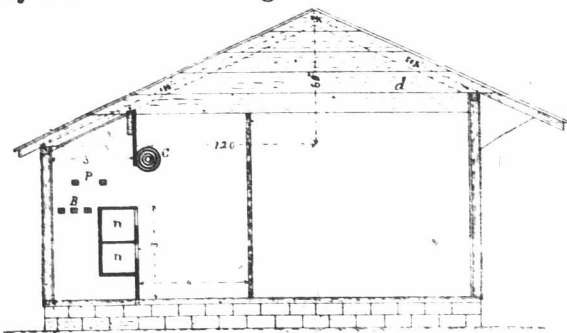


FIG. 3.—CROSS-SECTION.

the south 80 inches from heel to toe. In cutting bevels of rafters, take the figures representing the half span, and pitch lines and arrange them in the form of a fraction, thus:  $\frac{1}{2}$ ; now dividing these by, say, 10, we get  $\frac{1}{20}$ . Now these figures, or their equivalent, are those which are used in cutting the said bevels; that is, 6 inches on tongue and 12 inches on blade of steel square; using blade to cut heel, or that bevel which rests on plate, and tongue to cut toe. About 1 foot may be allowed for projection of rafters on south side. In nailing these rafters to plate I should use 6-inch

wire nails, first countersinking for the same with half-inch bit the proper depth so as to give the nail a good hold in plate. In boarding up on the outside I should of course first tack on my tar paper, then take boards 12" wide and nail on under the eaves of south side, then nail the others vertically as shown. By manipulating thus, a 12-foot board sawn in two will answer for front and rear of house. For inside of poultry house, tongued and grooved lumber should be used; hemlock would do, and it should be perfectly dry; if not dry I would advise tacking it up for a season until it got thoroughly cured; of course, tar paper should be used same as outside. If waterproof paper were used in connection with sheeting and shingles for roof, it, no doubt, would be much better for preserving an even temperature through the winter months. Nests for Leghorns, size should be about 13 x 13, and 14 inches high inside; opening, 6 inches wide and cut down half way. They are shown in dotted lines in plan, and arranged one above the other as shown at N in end elevation. The windows should be as low as possible so as to admit of the sun's rays at dust boxes, and they should be

double if winter eggs are required. Double doors are a necessity for poultry houses, one to swing inside and the other outwards. The ordinary droppings board is dispensed with in this connection, and 2 1/2 x 3-inch cedar scantlings placed about three inches apart are arranged in its stead, thus allowing the droppings to fall through to the pit below. The two dots at P in elevation indicate perches, and should be same size as those below at B, and can possibly be got, as dry cedar is such a good nonconductor of cold. The concentric circles at C represent a piece of canvas rolled up and ready for use. This I know the poultry will appreciate if attended to and let down on winter nights when mercury is descending below zero.

The dust boxes should be of convenient size and let in level with the floor, and they should have movable covers to keep dust clean when not in use; a bath once a week in winter will suffice. The partition through the center of the building should be boarded about 2 feet high, then wire netting of say 3-inch mesh to complete, fastening the same to boards above at D, which are part of partition. The longitudinal partitions as seen in plan and elevation should have small windows in, as there are none in the rear of the house.

Now, this house as viewed in plan and elevation is intended for winter use only. A general cleaning and transformation should take place about the first of April. The droppings from the pit should be removed, and the longitudinal partition taken down and set aside, to be used again on the approach of another winter. The perches should be taken down, cleaned, and set up again in the more roomy part of the house. If these perches are sun-chinked so much the better, as then they make excellent traps for lice, and they can be disposed of in short order by scalding with boiling water. I think it would be wise to hang these summer perches from above with, say, three-eighths inch iron rods, and within about three feet from floor. Droppings boards may be used to advantage in the summer months, although they are a harbor for lice, and therefore should be of a portable nature. My plan would be to have one under each perch, of the proper width and supported by iron legs and these legs set in tomato cans. Perches or boards should not come in contact with any part of the house through summer months, if one desires to keep vermin down to a minimum.

The canvas (C) should be lowered and made fast to board over nest boxes after housecleaning, so that the fowl can not get up and squat in their winter quarters. Two small doors should be constructed in the rear of the building, through which the droppings may be removed, and care should be exercised in fastening in the fall, so as not to admit of a particle of cold. For water arrangement see FARMER'S ADVOCATE of October 15, 1894. I have no provision for a ventilator in these plans, from the fact that I think the farmer's poultry house is as well without one. To have a good dry house the inside should be filled in with earth level with top of stone; the last few inches should be of heavy clay, and well rammed in. This I find makes a very good floor for a poultry house. It can be conveniently got, 12 x 6 cedar timbers would answer the purpose of stone for a foundation.

Simcoe Co., Ont.

A. T. GILBERT.

#### A Cheap Egg Tester.

The reputation for always offering fresh eggs for sale is certainly worth something when the same purchaser is to be dealt with week after week. This can be obtained only when absolutely fresh eggs are offered. While a person is ever so careful and honest, a stale egg will steal in among the good ones during the hot weather, especially when they are fertilized. The use of an egg tester, however, will certainly be of value in preventing bad eggs going to market. The *Poultry Keeper* describes a simple and effective home-made contrivance for testing eggs, which is made as follows: Take an old stovepipe and set it over a lamp;