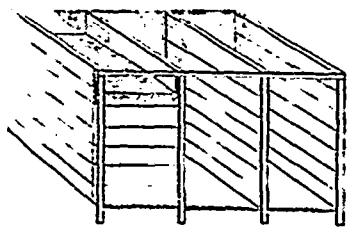


When the supply is plentiful, I feed 40 pounds per day to each cow in milk and 50 pounds to a steer. They are cut into fine strips. I have fed them for the last 30 years and never known any damage to arise therefrom. They are fed with advantage to young stock, sheep and horses. Mangolds do best the year after the land has been manured. I haul my barnyard manure on clover stubble and seed down the middle of September to rye and winter vetches which give me a heavy crop of green fodder the coming spring, before anything else is in sight. Whatever is left of this on May 15 is cured to hay, the land is broadcasted with 300 pounds of basic slag and 200 of kainit and turned under to be ready on June 1 for the planting of the mangolds. The Eckindorfer is to-day by far the most profitable kind to grow, perfectly cylindrical, smooth and flat at the top, with scant foliage and but one root. Then it is easily harvested and no woody part about it; even specimens 20 pounds in weight are to-day—May 8—fresh and soft all through. We consider 20 tons per acre a good crop. We plant at 24 inches between the rows and keep the ground well stirred and free from weeds.

Mangels are never given alone, but always in combination with hay and straw cut into 1½ inch lengths. As we cannot have the silo, we contrive to get a palatable food in the following manner: A box, shown at Fig. 146, is built out of pine scantling and 1½-in. boards, with the top and front open, the whole divided into three equal compartments, each to hold an entire day's feed for all animals, space being calculated on the basis of two cubic feet for each cow. A three-inch layer of chopped hay and straw is now spread evenly on the floor of the first compartment; then follows a thin layer of sliced mangels, which have previously been mixed with the daily allowance of oil-meal and bran; then another layer of chopped hay and straw, treading down firm as it grows up and setting in the front boards as needed. When full, a board covering



SUBSTITUTE FOR A SILO.

is put on. On the second day the next compartment is similarly filled and on the third day the last one. On the third day we commence to feed from the first compartment; this has now become thoroughly heated and has entered into a sweet fermentation giving an agreeable odor to the whole mixture and the avidity with which it is consumed proves that it is relished. The increased flow of milk shows that the cows are grateful for our having "roots on the brain."

J. F. SARG.

(R. N.-Yorker.)

CULTURE OF BEETS.

What is the cost per acre of raising beets for live-stock? Cost per acre of ensilage corn? Relative value of these two feeds for cows kept for milk? What variety of beet is best? How many tons per acre would be a good crop on good clay loam? In addition

to the manure made on the farm, I can buy stable manure a mile away at a dollar per load. It is said that beets exhaust the soil much faster than corn, but what of that, so long as they are fed on the farm and the manure returned to the land? B. B. Elk County, Pa. [The cost of raising an acre of beets will vary greatly with several conditions. If the soil is already in perfect order, deep, rich, free from weeds, the cost will be about the same or rather more than for an acre of turnips or c. roots, or an acre of potatoes. The cost of an acre of ensilage requiring reduced hand labor will be less, and not more than raising an ordinary corn crop. Taking its cost into consideration the ensilage will be commonly preferred, as it may be raised on almost any soil, and will not require the labor necessary for beets, but both have their special advantages. There are many varieties of beets, some of them especially adapted to different localities and modes of treatment, and therefore no one can be pointed out. Varieties of the sugar beet and of the mangel wurzel are commonly preferred, the sugar beet being richest and the mangels most productive. Twenty tons and often much more of mangels are raised on an acre. If you have a good strong soil it will probably pay well to purchase a fair quantity of the manure mentioned, the land being improved for future crops, but much will depend on the mode of application. If applied the previous autumn, so as to become thoroughly incorporated with the soil, it will be worth much more than if spread in the spring and simply plowed under. Fresh manure answers well if thoroughly incorporated. It is important that the land be not only free from the seeds of weeds but clear of all fibrous rubbish, which would clog the seed drill. The drills may be 25 (1) or 35 inches apart, and the plants finally thinned to eight inches for sugar beets or a foot for mangolds. A rapid mode for thinning is sometimes employed in large field culture, by means of a tool cutting eight inches wide and running across the rows at right angles, leaving cross rows four inches wide, which are finished by hand at greatly reduced labor. This mode requires very thick seeding. If the seed is quite fresh when sown, it will germinate freely, but old seed should be scalded and allowed to remain a day or two before planting. With a fine rich soil one inch in depth is sufficient. It is important to keep the crop of beets perfectly clean through the season—an essential not always observed by cultivators.]

(Country Gentleman.)

Poultry-Yard.

POULTRY ON THE FARM. (2)

BY MRS. IDA E. TILSON, WEST SALEM, WIS.

The fall, when yards are full of young stock, is a good time to buy fowls; if a beginner, choose a standard but not fancy breed, and buy as near home as possible, until time and experience determine whether you can

(1) the best English growers make the row 20 inches apart, and thin out to 10 inches, for mangels: sugar-beets are quite a different thing. Eo.

(2) We regret to say that our friend, Mr. Gilbert, of the Ottawa Experiment Farm, is too unwell to send us his usual monthly article.

fly higher and farther. Last fall, I paid \$1.75 expressage on two chickens from the southern part of my state, coming in an admirable "A" shaped cage which was composed of canvas, aside from its light, bottom and frame. If you send my distance for fowls, and would avoid all surprise and disappointment at transportation rates, it may be well that you should inquire the expense in advance, and also charge your shipper not to use unnecessary weight about his cage. For the sake of those who wish to improve their stock, it is hoped the present agitation will cause a helpful reduction in express charges. If there arises any disappointment at appearance of fowls when they arrive, remember fright and confinement may have put them a little "off condition," and suspend your judgment till they recuperate, unless you see a gross fraud has been committed, which I believe seldom occurs. I remember once buying some Wyandotte eggs that hatched chickens with almost every shade of leg color and style of plumage. I named the seven, "Ringed," "Streaked," "Speckled," "Shaded," "Barred," "None-such," and "Seek-no-further," but when they grew up, dark legs turned lighter, orderly plumage came out of chaos, beauty reigned and I learned that all composite breeds like the Wyandottes, till thoroughly established, vary somewhat, and any one bird at his different ages may show the successive stages in the formation of that breed. I was glad I had not given a piece of my mind to the one of whom I purchased, when that piece would have been so small. Last year, without enough inquiring into their habits, I bought some pullets which proved to be fond of roosting in trees, something my own hens had not done for years. Several nights witnessed up there and on sheds a roal feathered picnic, which I proceeded to pick. A bamboo fish-pole was found to fill a long felt want as a weapon of dislodgment, and after weeks of measuring my will-power against their won't power, my pullets were properly housed. Roosting and laying outside the hen-house are the bane of many farm poultry yards. I allow neither habit, there is so much danger of loss from strays, midnight marauders and storms. I recollect reading an article, wherein a writer recommended coaxing hens out into apple trees during summer, for the benefit of both trees and fowls, the latter being cool and the former rid of some insect pests. I wish I knew the end of that story. I often think about the man of our nursery jingle, who, when he saw a bramble had scratched his eyes out, jumped into the same bush and scratched them in again. How did that writer coax her hens out of the trees and "scratch them in" their houses again? It is true, chickens like to roost in those low, bushy trees, like fruit and nut trees, but it seems to me clean fruit and a hen-roost can hardly go in partnership. I also read about a man who put his hens in his hay-mow over winter, and let them bed and lay there, so cozy and warm, I wish I knew the rest of that story, too, and whether other larger stock would eat hay so well. Fowls are such creatures of habit, I wonder how he got them back to their house when summer came and he put in new hay.

Upwards of a hundred years ago, Mother Goose wrote about her black hen which laid eggs higgledy-piggledy for gentlemen. Surely there ought to have been improvement in that time especially now that women too are interested in poultry, and

biddy lays eggs for ladies as well. I for one, see a great saving of time when I know where to find things, and therefore prefer my hens in their house and their eggs in their nests. When I kept those breeds having strong tendencies to roam, I once found under a currant bush a nest of about thirty Hamburg eggs, and farther discovered in a fence corner another containing over twenty Polish eggs. Hardly any could be used, they had been so soaked with rain and scalded by hot weather, hence I sell no eggs except those gathered daily in the hen-house. When my hens and I are parted, we have varied experiences. While I was lately away at Lake Monona, my fowls received in the main good care, but egg production fell off greatly, and two eggs had been broken in the nests, which probably occurred because broody hens were not broken up, but, instead, left to fight layers. On the first night of my return I saw, alas, one little, two little, yes, three little pullets, in their nest tailor-like suits of full plumage, sitting on a tree, and was informed the ringleader had done so throughout my absence. I could not exactly have been knocked down with a feather, as the old saying is, because I am too robust, but my heart sank at sight of their collective feathers and bodies far above my head. These particular pullets were hatched from eggs laid by those which troubled me similarly last year. It seems a clear case of heredity, for these chickens never saw old fowls roosting outdoors—even their own mothers continue entirely reformed. "Blood will tell"; family resemblances and peculiarities are plain in people, and a long, choice pedigree is sought for horses and cattle. We have a cow the cream from which churns very quickly into butter. For at least two generations before her the same was true, nor is she the only one of her race inclined to kick. Fanciers believe in heredity in fowls, and have taken advantage of it to impress beauty and symmetry on their product. If they will be sure to add all good qualities of disposition, they can finish Keats' line, and prove it once more true that—

"A thing of beauty is a joy forever."

(Farmer's Advocates.)

CAPONS AS BROODERS.

EDS. COUNTRY GENTLEMAN.—These days of applied science make one utilize every method and means for a productive and useful end. The unsatisfactory and often disappointing use of various artificial incubators and brooders that go to make up chicken life led me to adopt a more natural and simpler scheme. I find so few raisers of poultry know of this adaptation of nature that your valuable columns are sought to expose something which has proved successful, economical and valuable to me, as I trust it may to others, and a vexed question solved.

Years ago, in Louisiana, the Creoles were accustomed to use their capons as brooders when the mink or some other destroying element compassed the death of the sitting hen. In the Middle States it has been a well known fact that a turkey hen can be made to sit at any time of the year; being a larger bird she covers a larger number of eggs. Putting these two bits of knowledge together, we accomplished very good results. At first we hypnotized these birds very scientifically, but as every farmer is not provided with mirrors and crystals, and the birds