

The food of support alone to a steer, for the second two years, would probably be quite equal to the entire food eaten by the steer the first two years. This was proved by the prizes at the last Chicago Fat Stock Show in the class on "*cost of production*."

In the three-year-old class, J. D. Gillet's steer Mammoth took the prize, weighed 2,445 pounds, and cost \$214 53, or 8.77 cents per pound. In the two-year-old class, the first prize went to the heifer Hattie, weight 1,135 pounds, cost \$58 18, or 5.12 cents per pound; second prize to steer Dan, weight 1,505 pounds, at a cost of \$78 35, or 5 20 cents per pound. In the one-year-old class first prize went to steer Stonington, weight 1,160 pounds, cost \$47.11, or 4 61 cents per pound; second prize to steer Arthur, weight 1 045 pounds, cost of production \$44.43, or 4 25 cents per pound.

Here is a most instructive exhibit, not of theory but of fact. The three-year-old steer Mammoth cost more than double per pound of the year-old steer Arthur. It is sure that the cost of production bears an almost uniform ratio, according to age. It does not give much aid to the statement of *The Times*, that a given weight made in two years will cost as much food as if made in four years. No, this idea is totally without foundation, and it is most important to economical feeding that this old idea should be exploded, and wholly banished from the American feeder's mind. It has cost American agriculture more than one thousand millions of dollars during the last half century. It had possession of the minds of some of the best feeders but a few years ago.

Prof. Morrow corrected a statement of the writer in the *COUNTRY GENTLEMAN* in reference to the system of the great Illinois feeder, John D. Gillet, that he never allowed the calf to slacken in its growth till he was ready for market, by giving a conversation with him, in which he said he did not care to have the calf pushed the first winter, thinking it no harm if it came through rather thin.

Well, since that Mr. Gillet has exhibited at five fat stock shows, and he was reported about a year ago as saying that he had become convinced that it was bad economy to feed to three and four years, and that the calf should be full fed every day of its life till ready for market.

That fat stock show is the most important school of reform in feeding ever established in America. It has done more to produce definite ideas on alimentation than all the agricultural colleges in the country. If people will study the figures of these shows, they will soon get all the notions about storing animals out of their heads.

Then the talk about the "forcing" system is all wild. Is it forcing an animal to give it what food its natural appetite craves? I believe cramming, as with turkeys, is not practised. The criticism on surplus fat is well taken, but this does not apply to year and a half olds more than to three-year-olds.

Some of the oldest animals at the Fat Stock Show were the fattest. This disproportion of fat is attributable to errors in feeding, not to the ages of animals. It has been proved that steers and heifers twenty months old, fed on a regular system in England, gave a quality of meat greatly liked by the very best consumers—the meat being found nicely marbled and juicy.

The principal cause of too much fat is owing to the excessive feeding of Indian corn—our greatest fattening food. The English feeder gives a proportion of rape cake, linseed and cottonseed cake, malt sprouts, bean meal, barley, &c., containing a large proportion of muscle-forming matter.

The muscles and frame are grown rapidly, and abundance of fattening material is found in the oil of the cake, in the barley and corn meal which make a part of the food. Mr. Gillet modifies the corn ration by his splendid blue grass pastures. He makes the most of the summer, gives to his steers all the

corn and grass they will eat—the corn being in troughs scattered over his pastures. He now believes in maturing the beef animal at the end of two years.

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E. W. S.

## POULTRY DEPARTMENT.

### Hints for the Novice.

**EDS. COUNTRY GENTLEMAN**—The troubles of the poultry-keeper, especially if new in the business, begin when disease sets in. Roup, in its many varied forms, is the disease most to be dreaded. The symptoms are seldom twice alike. Those not familiar with it do not discover it until too late, when the victim is too far gone. In the seasons of sudden and severe changes of weather, there is great danger of the fowls freezing, as well as of colds. Then there is dampness and chilliness on many days, which cause colds. The fowls should be well protected by tight rooms, under a good roof, with matched siding, well battened. The fowls then fare much better in severe cold than when the temperature is higher.

Some varieties or breeds have been considered tender, because they were not understood. The Houdans are an example of this fact. They can endure almost any dry cold weather, but are not proof against dampness, even with a high temperature. Indeed, no variety of land fowls can endure dampness and remain in health. I mention the Houdans, as they are often thought too delicate for common farmers' use. There is no denying the fact that the fowls of to-day are more delicate and tender than those of a preceding generation, but admitting this fact, are they not double or quadruple the value, as far as profit is concerned?

Localities and markets vary, and the breeds must vary accordingly in order to suit the demand of the nearest market. Early flesh-producing varieties are in demand for broilers, and these breeds are at the same time the great egg-producers. Some markets demand white-fleshed fowls, and also white eggs, while another wants only the yellow-skinned carcasses and brown or coffee-colored eggs. With a correct taste there is a difference. Yellow-skinned fowls never possess that sweet tenderness of flesh that is met with in the white-skinned sorts.

There are always weak fowls to be found in every lot, and such are the first to be attacked with disease. Some varieties are perfectly hardy with the exception of liability to become frost-bitten in low temperatures. Other sorts cannot endure confinement and high feeding. With the right management the Asiatics are the best for the ordinary keeper. They possess size, and will give a goodly number of eggs if fed aright during the winter. They require quantity rather than high quality. The beginner is apt to be disappointed with the breed when meeting disease, but this is wrong, for no breed is exempt. All birds should not be treated alike.

*Duchess County, N. Y.*

C B

### Diphtheria from Chickens

**EDS. COUNTRY GENTLEMAN**—I notice and extract from the *London Times* in a New-York paper, stating that a German professor (Gerhardt of Wurzburg) has determined to his satisfaction, by experiment and observation, that diphtheria is sometimes communicated to persons by means of fowls. This will be a new idea to many people, but after all ought not to surprise. Fowls frequently have throat diseases, which sometimes kill them, and as diphtheria is attributed usually to some want of cleanliness about the premises, when it cannot be traced to contagion from some person, it should be an additional reason to all who keep fowls to give them more attention in the way of cleanliness. And want of cleanliness is, after all, the cause of more fail-