

mistake with regard to the feeding of our live stock. After all, practical experience must be our main guide. *The analysis of a food is far from a complete statement of the properties of that food.* Just as each animal we possess has an individuality of its own, so each article of food has some special and peculiar property not revealed by chemical analysis—a physiological property, we presume. But if chemical analysis does not give us every fact connected with food, that is no reason why we should not utilise such information as it does give. There can be no doubt that the animals we feed need the three constituents—albumen, fat, and starch—to build up their bodies, and it seems evident that these should be present in a definite relation to one another if we wish to make the most of the other foods—in other words, if we are to feed profitably. Let, then, one and all of us discover how far our practice meets this demand, and, if not, how we can improve it, for we may be sure that only good will result from a careful seasoning of our practice with the dictates of science. (1)

Mr. Gustaf Gylling, of the Fosbrooke, Farm Sorel, has my old Guernsey Bull—Rufus—for sale, as well as several heifers of his get out of Canadian cows. Rufus is from the now celebrated Vauxbelets herd, and when I saw him last was one of the handsomest Guernseys I ever met with. He has never been sick or sorry in his life.
A. R. J. F.

EXPERIMENT WORK.

It is very gratifying to note the practical turn which the older state experiment stations are taking in their work. The New York experiment station, under the direction of Dr. Collier, is making preparations to enter upon a system of careful experiments with breeds of cows and other points in dairying. The Michigan station is already engaged upon experiments with breeds of cattle for beef, and it is soon to enter upon another series of experiments for the purpose of testing the merits of spayed heifers against unspayed animals, and thus determine whether those spayed mature earlier or are ready for the shambles sooner than their unspayed neighbors, (2) also whether they will produce a superior quality of meat in flavor and tenacity of fiber, or fatten better upon the same quantity of quality and food. The effect of the operation will also be tried on old cows to test its influence upon the meat, with the length of time required to effect the change; also influence upon the milk in quality as well as quantity.

It seems to us that these and similar experiments will be of vastly more benefit to the farming community than a dozen series of pot experiments upon plant life and growth with the most careful chemical analysis of all the elements which enter into their life and growth. We do not wish it to be understood that we favor dropping entirely the analytical part of state experiment stations, for we believe that the analysis of plants and plant food has its proper place in the work of a station; but we do believe that this part of the work should be made subordinate to what is of more practical value to our farming communities.

Corn Fodder Surer than Clover.

EDS. COUNTRY GENTLEMAN.—Mr. C. S. Rice (p. 304) makes a strong plea for clover as compared with fodder corn. I think he has made two grave mistakes. He estimates the first cutting of clover at two and a half tons per acre, which

(1) A very sensible article, written by a thoroughly educated practical Hertfordshire (Eng.) farmer.
A. R. J. F.

(2) Not worth while trying, as we knew a hundred years ago that spayed heifers fatten faster for the operation.
A. R. J. F.

is one ton or more above the average of the State; he claims that at the end of two years the soil is in a better condition for crops than before, while analyses show that three and a half tons of clover hay remove from the soil nearly as much plant food as five tons of timothy hay, which he estimates to be the value of an acre of corn fodder.

The difficulties with clover in Western New York have been to get a catch, the grub in the root, midge in the head, and the leaf beetle. If we get a catch, the beetles devour a portion of the leaves, the midge destroys the head, and the grub injures the roots so that the plants nearly all die before the second year's cutting. (1)

The average yield of corn fodder per acre may not be worth more than five tons of timothy hay, but corn for ensilage can be produced worth double that, or more, and the seed will not cost \$1, as 10 to 12 quarts is all the seed that should be used per acre. If the soil is in fair condition, it will produce 20 tons of corn fodder per acre, and each stalk will produce an ear or nubbin, and if cut and packed in silo about the time the ears commence to glaze, two tons of the ensilage will be equal to one of timothy hay. A soil which will produce three and a half tons of clover will produce more than twenty tons of fodder corn, which has never failed in this section, where clover has, a great many times.

Yates County, N. Y.

JAS. MILLER.

—TOP-PRICED BUTTER.—I venture to assert that anyone who has good sweet pasture, who keeps his dairy and every utensil in it scrupulously clean, who never churns cream more than sixty hours old from the cow, and always at the proper temperature, tested by a thermometer; who uses a proper churn (there are lots of them), ventilating his churn at intervals by taking out the plug, who stops churning the moment the butter shows itself in small grains not so large as wheat; who then lets the churn rest until the butter "all" floats up to the top, and then carefully lets out the butter milk and replaces it with clean cold water, turning it very slowly; who again lets the churn stop to let the butter float up and then lets out the milky water and replaces it with a fresh supply of cold water; who then gives the churn very few slow turns round and then a little faster so as to gather the butter into a sort of lump, and then lifts out the butter with a cloth over both hands, so as not to touch it, and then, when cool, works it with a proper butter-worker and never touches it with his hands, but only with "wooden-hands," will most assuredly make top-priced butter.—G. A. H.

People do not throng out of a state like Vermont, as they have done for thirty years, without some good reason. This emigration has gone on until now, if it is stayed at all, it is because farm property in the state is, in many places, practically unsalable at any price. When a people want to go badly, and yet can't go because they cannot sell, they are really getting in sight of a sort of bondage that is not many degrees removed from the serfage of the middle ages.

DR. HOSKINS.

SALES OF SHORTHORN DAIRY CATTLE.

Having written in terms of commendation of a herd of cattle, it is ever pleasing to the writer to find that his judgment is confirmed by the test of the sale ring. This was my experience on April 19th and 20th, when the cross-bred Shorthorn cattle at Storrs and Cleabarrow Farms, Bowditch, Windermere, were sold by Mr. Robinson Mitchell, of Cocker-mouth. At Storrs on the Thursday, the animals were all young, ranging from eighteen months up to three years; a

(1) Because you sow clover too often.

A. R. J. F.