

alcohol acts upon the human body, "bracing" it up for a time, and after the effects begin to wear off, leaving it in a worse state than before. Such a statement is easily made off hand, but a little investigation will prove how inaccurate it is.

The commercial fertilizers on the market are compounded for the purpose of supplying three plant ingredients. These are phosphoric acid, nitrogen and potash. The mixture contains a number of other ingredients like soda, magnesia, etc., but no attention is paid to them for the simple reason that they exist in sufficient quantities in any soil to meet the demands of the crop. The purchaser, therefore, has only to concern himself about the phosphoric acid, nitrogen and potash in his fertilizer, but often the entire success or failure of his crop is to a great extent dependent upon the proportions in which these three important constituents are applied.

Before deciding how to apply fertilizers, the farmer should learn which fertilizers to apply. The best way to

After having brought a soil to this state, the next important point is to put on the fertilizers in such a way as to ensure conditions that will be favorable for the change from the solid to the liquid state, and also to allow a sufficient time for the transformation to take place. The great mistake so many make is in applying their fertilizers just at the time of sowing their seed, and as the fertilizers do not then have sufficient time to become dissolved and disseminated, the results are apt to be disappointing, especially during a season of drought, when there is but little moisture in the soil.

If the fertilizing materials are put into the soil some weeks before planting, they have a better opportunity to get into the proper condition. Some attention, however, must be given to the special action of certain fertilizer materials; for example, nitrogenous fertilizers like nitrate of soda and sulphate of ammonia are quite soluble, and if they were put into the soil too long before planting there would be a loss from leaching; such materials,

Don't allow your milch cows to drink impure water.

Don't allow your milch cows to go without salt.

Don't allow your milch cows to eat apples or refuse from the cider mill.

Don't allow your milch cows to eat rape or rye.

Don't allow your milch cows to be abused, whipped or run by dogs, or excited.

Don't allow your milkers to milk with dirty hands.

Don't milk in a dirty or filthy stable.

Don't leave your milk standing in the stable or barnyard.

Don't allow your milk to stand in an impure atmosphere.

Don't milk into wooden pails.

Don't allow your milk to stand in the hot sun.

Don't mix hot and cold milk together if you can avoid it.

Don't allow your cans of pure milk to be placed on a dirty, filthy wagon.

Don't allow whey to be taken home in your milk cans.

Don't draw cheese to the railway in

cheese, unless the cheese-maker or some one who knows is there to see every cheese boxed right.

Don't allow your cheese to leave the factory uncovered.

Don't allow anyone to put in the cheese which were left out by the buyer.

If you carry out all the above "Don't's" you will win.

A GOOD COW.

We have just received from Messrs. A. & G. Rice, Curries, a report of an official test for seven days of their celebrated Holstein-Friesian cow, Calamity Jane. She was calved January 6th, 1891. Her last calf was calved on November 12th, 1897, and two weeks later she was tested. The following is a summary of the test:

1897.	Lbs. of milk.	Average per cent. of fat.	Lbs. of fat.	Lbs. butter.
Nov. 26.	74.1875	3.73	2.7695	3.462
Nov. 27.	81.3750	3.6	2.9285	3.6618
Nov. 28.	80.321	3.38	2.713	3.392
Nov. 29.	81.0	3.4	2.750	3.638
Nov. 30.	82.437	3.25	2.6769	3.3462
Dec. 1.	80.687	3.4	2.743	3.429
Dec. 2.	80.93	3.5	2.834	3.543
Total.	562.9375		19.41	24.2716

It will thus be seen that Calamity Jane gave 560.93 lbs. of milk, containing 19.41 lbs. of butter fat, which would make 24.2716 lbs. of butter, containing 80 per cent. fat. During the test the cow's rations were 27 lbs. of bran, oat chop, pea meal, and oil-cake, 36 lbs. of ensilage, 30 lbs. of mangels, 10 lbs. of carrots, and 10 lbs. of hay per day. This is a heavy ration, but the results show that it pays to feed a heavy producer a large ration.

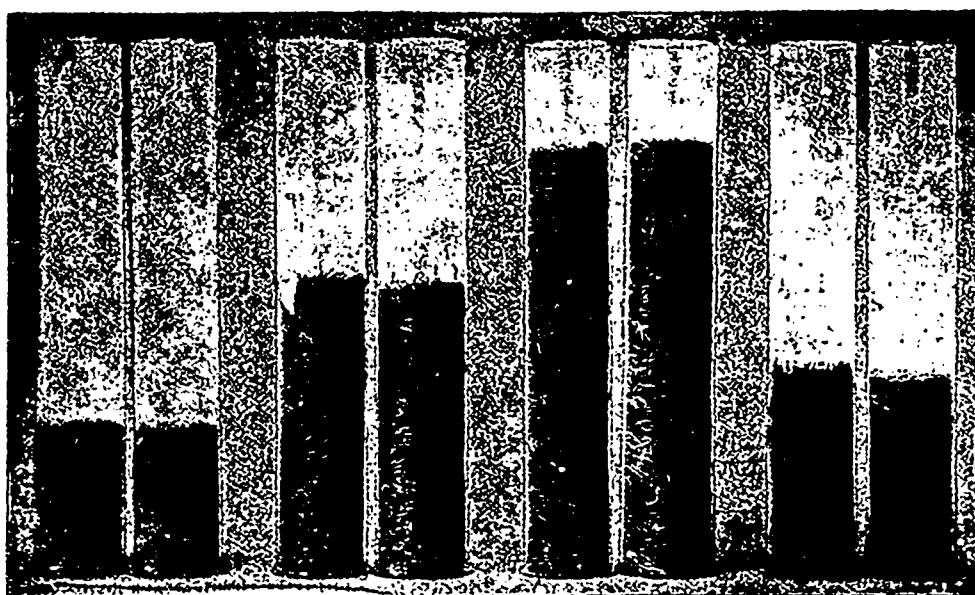
Messrs. Rice estimate that this ration costs 31c. a day. The aim, however, was not to see how cheaply, but how much milk the cow could produce. Taking it, however, as it stands, it shows that the butter cost less than 9c. a pound, and of course less than this if the skim milk were deducted.

A remarkable feature of the test was the amount of water the cow drank. She drank daily 200 lbs. of water besides the water in her bran mash. This strikingly shows the necessity of having a plentiful supply of water for milch cows, and also that this water should not be too cold, as it requires to be warmed to the temperature of the body.

Compared with the record made by Holstein cows tested in 1896 for the advanced registry of the American Holstein-Friesian Association, Calamity Jane would stand in 7th place, no mean place to stand in when competing against the best cows of the continent. The best cow tested in 1896 gave 27 lbs. 13/4 oz. of 80 per cent. butter.

The clover catch for a number of years has not been a good one, and many a field has missed its enriching influence. Clover seed is cheap this spring, therefore every farmer should aim to sow as much of it as possible. There is nothing equal to it for improving the character of the soil, for it gathers nitrogen from the atmosphere, and stores it in the soil. A clover sod nearly always gives a good paying crop.

YIELD OF THE CROP OF OATS TESTED WITH PHOSPHORIC ACID, AND SHOWN ON OPPOSITE PAGE.



No Phosphoric Acid.
Crop: 4 ozs.

Manured with Phosphoric
Acid in form of Bohemian
Thomas-Phosphate.
Crop: 8.2 ozs. Oats. In-
crease 4.2 ozs.

Manured with Phosphoric
Acid in form of Albert's
Thomas-Phosphate.
Crop: 12 ozs. Increase
8 ozs.

Manured with Phosphoric
Acid in form of Bone Meal.
Crop: 5.4 ozs. Increase
1.4 ozs.

gain this information is by practical field tests. Apply different fertilizer combinations to different parts of the field, and then compare results. This is actually putting the question to the soil itself, and the answer is received in the shape of yields of varying proportions.

After having found the combination of fertilizers best suited to any particular soil, the next thing is to study the best manner of applying the same. The aim should be to give the food at such a time and in such a way that the plants can absorb and assimilate it to the best advantage possible. We all know that the plant food in the soil must first become dissolved before it can be taken up by the plants; hence, we should see that the soil conditions are favorable for the transformation of the fertilizing materials from the solid to the liquid state. This means that the soil should be reduced to the finest possible physical condition, as free from lumps as possible, and so well cultivated that it will afford an easy passage for air and water.

therefore, should be applied at planting time. Experience has demonstrated that nitrate of soda gives the best results when used in small doses as top-dressing throughout the growing season; in other words, applied at times when just needed by the plant.

The mineral ingredients, on the other hand—that is, the materials like acid phosphate and muriate of potash—will not leach out of the soil; in fact, they form combinations in the soil which holds them there. It is best to put on the potash and phosphate at least some weeks before planting, and then work them lightly into the soil.

If more attention were paid to the proper application of fertilizers, they would become more popular than they are at present on the farm.

A CHAPTER OF DON'T'S.

Part of an address by A. F. McLAUREN, M.P., at the Western Butter and Cheese Association Convention, London, January, 1898.

Don't allow your milch cows to eat turnips.

a dirty filthy wagon, one which has been hauling manure the day before.

Don't allow your cheese-maker to buy second hand supplies.

Don't pay him such poor prices that he is obliged to use inferior goods.

Don't allow him to buy poor salt, poor rennet, poor bandage cloth, or anything poor, get him the best supplies and make the very best cheese.

Don't allow him to keep a dirty, filthy, slimy factory.

Don't allow him to go round with dirty clothes, dirty pants and dirty aprons which will stand alone.

Don't allow him to neglect curing his cheese, see that he keeps the fire on in curing room in spring and fall, and at the proper temperature.

Don't have a pig pen under your milk stand.

Don't allow your cheese to leave the factory an inch or two above the box.

Don't allow your cheese to leave the factory with the box above the cheese.

Don't allow your cheese to go to the railway station in the rain.

Don't allow anyone to box the