

butter by working it with the wooden patters, or by the use of a mechanical butter-worker. There are circular butter-workers which are of use in improving the condition and purifying inferior or badly-made butter, but when butter is thoroughly well managed from the first they are not generally necessary.

In the winter season butter is generally slightly coloured by a special preparation of annatto, or sometimes by the use of the liquid from scraped carrots. The most scrupulous cleanliness in every particular, and neatness and attractiveness in packing and preparing butter for market are desirable. In this latter particular French butter is generally in advance of our native produce.

The use of salt in what is sold as fresh butter is a matter of taste. In the northern half of England fresh butter is generally rather heavily salted. This we think a mistake, as it overpowers the flavor of good butter, and is quite unnecessary to secure its keeping as long as it is generally required. The process of making butter not required for immediate consumption, is the same as that above described, the butter being salted regularly with from half ounce to one ounce of fine salt per pound of butter, and the butter pressed down tight in a clean jar or firkin, and covered with a little salt and a thin cloth. The finest flavoured butter may be made from cows fed on good sweet grass in the spring or summer season. The use of some meal or some kinds of cake, whilst increasing the yield, does not injure the quality. Linseed cake is somewhat objectionable.

The value of the butter imported into England is stated by good authority to amount from \$50,000,000 to \$60,000,000. Canada contributes to this supply; but much of our butter is of a very inferior grade; or as an English circular recently received by us says, "It gives receivers trouble to move at anything like satisfactory prices, importers often suffer heavy losses." We should remember that in the end the producers are the real sufferers. If our farmers and those connected with agriculture would endeavor to thoroughly understand each branch of their business into which they enter, they would find it greatly to their advantage. More reading and study is necessary in the farmers' families.

How London Gilt-Edged Butter is Made.

In Dorset dairies the milk stands for twenty-four or thirty-six hours, according to the season of the year, and in some cases is skimmed the second time after having a second period; the cream is considered ready for churning immediately after it is skimmed, and during the hot weather is commonly churned every day, while in cold weather the churning is done only on alternate days. To this practice of churning the cream while it is quite sweet and fresh, is owing in a great measure, the reputation which Dorset butter has long possessed; the practice, indeed, presupposes the strictest cleanliness with respect to milk-pans and other vessels used in the dairy, for without this primary condition the daily churning would be practically valueless. The old-fashioned barrel churn with improved beaters is commonly used in Dorset dairies, and after the butter is taken out of the churn, the greatest care is taken to wash out all traces of butter-milk, so as to avoid the light colored streaks that commonly appear in ill-made butter. The coldest and cleanest water that can be obtained is used for this purpose and the butter is repeatedly turned and pressed on a slab of wood. A dairyman whose hand is naturally cold always succeeds best in butter making, all other things being equal.

It is seldom that the butter is salted in a systematic manner; the dairyman generally guesses the quantity of salt to be used, and an experienced and careful person can guess it with surprising accuracy; it is, however, generally understood that the butter intended for market is more sparingly salted than that intended for the home consumption.

It is clear, however, that the Dorset dairy maids have got into a better system of butter-making than most of their sisterhood in other parts of the country have done, for Dorset butter has a popularity greater than the butter of any other country, and much butter made far enough away is sold in London under the assumed name of Dorset butter. The name is pirated, and the name sells the butter. This sort of thing is at once an honor and an injustice to Dorsetshire.—*Prof. Sheldon.*

Milk of Different Breeds.

BY PROF. SHELDON.

Some time ago we had occasion to make an examination of the milk of different breeds of cattle for the benefit of the class in dairying. The facts brought out by this experiment, although not by any means new seem to us to be of interest beyond the limits of the class.

In the examination referred to the milk of the pure-bred Jersey cow, and the half-blood Jersey, and the pure-bred Shorthorn was placed in separate test-tubes to the depth of five and one-half inches and allowed to stand twelve hours. Care was taken in the outset to secure the milk of cows which had received substantially the same feed and general treatment. The amount of cream thrown up by the different kinds of milk is shown by the following statement:

5½ inches Jersey milk gave 11-15 in. cream; 5½ inches half-blood Jersey milk gave 14-16 in. cream; 5½ inches Shorthorn milk gave 5-12 in. cream.

It will be seen from the above that the milk of the half-bred Jersey cow was the most productive of cream than that of the full-blood Jersey, and the Jersey milk was much richer than the short-horn. The fact that the milk of the half-bred Jersey was richer in cream than that of the pure-bred agrees with the common experience of dairy-men, who assert that the half of three-fourths bred Jersey is, for all the practical purposes of the dairy, equal to the full-blood.

Those who sell milk should return the phosphates thus removed from the farm by the milk thus transported. Every forty gallons of milk, it is said, contains the equivalent of one pound of bone earth. Estimating a cow to yield 750 gallons of milk per year, it will require 19 pounds of phosphate, equivalent to 30 pounds of bone dust. If the calf be sold off, we may assume there is a loss of 20 pound of bone, and the waste of phosphates in the urine equals four pounds. And thus for every cow a dairy farm maintains it will lose of earthy phosphates as much as it contained in 56 pounds of bone. This shows the amount which should be returned to the land if the soil be kept from becoming impoverished. When large quantities of bran and cotton seed meal are fed to the cows, and the liquid and the solid manures carefully saved and returned to the soil, the loss sustained by selling milk and calves will be made good.

Forty-five per cent off "foreign fats" in butter is considered by British justice rather too much of a poor thing, and in two recent cases the Judge imposed fines of \$100.

TECHNICAL EDUCATION.—Prince Leopold recently laid the foundation stone of the new College for Technical Education, established by the City and Guilds of London Institute, in Finsbury. His Royal Highness said the object of the institution was a truly national and patriotic one. The old apprenticeship system, whatever its merits might be, and whatever good work it might have done in the past, was not equal to the exigencies of the present age; and they were beginning to realize that a thorough and liberal system of technical education must be placed within the reach of the artisan in order to enable him to hold his own against foreign competition.

AGRICULTURE IN PRIMARY SCHOOLS.—We learn from an English correspondent of M. Georges Ville that already in one department of France alone there are no less than 200 schools connected with which plots of ground are worked by the teachers and the scholars, with a view to the illustration of those methods of ascertaining the agricultural character and value of the soil.

OFFICIAL statistics show that during the past ten years the annual production of buckwheat in the United States of America has increased about two million bushels. Barley has increased fifteen million bushels, and rye three million bushels in the same length of time.

A GOOD MOVE.—It is stated that Mr. Kenneth Chisholm, M. P. P., has offered the county of Peel Agricultural Society the sum of \$100 as a special prize to encourage the improving and beautifying of farmers' homes, which amount the Society has supplemented with \$50.

Poultry.

Poultry Items for the Farmer.

BY R. A. BROWN, CHERRY GROVE, ONT.

How many farmers know what roup is, or how to treat it with success?

If I were to answer I would say, not many.

Very often I have spoken to farmers about diseases among their flocks of poultry, and found they did not know there were such complaints. Roup is a very disagreeable, and if neglected, a dangerous disease. It affects the head in somewhat the same manner as "catarrh," and is sometimes taken for that disease. When a bird is suffering from this the face appears swollen, the nose imparts a disagreeable odor, and when of long standing is very offensive.

The first indications are a rattling in the throat, which is caused by phlegm about the wind pipe; even the eyes are filled with frothy humor, and before the fatal termination ensues the bird becomes blind. Sometimes there is a loss of appetite, when the bird becomes drowsy, and in about ten days the disease terminates in death, if not attended to. It is very contagious and will spread through a large flock in a short time if the ailing ones are not separated at once from the others. There is a dispute at present among breeders as to the cause of roup; it is generally believed that it is brought on by damp runs, or roosting in exposed places and neglect of care.

To remedy, bathe the face with sugar of lead and strong vinegar, put a drop of kerosene oil in each eye twice a day, and once a day three or four drops down the throat. Press the nose between the thumb and finger and remove all humor from it; if sponged out clean all the better; drop a drop of the vinegar solution in each nostril; feed some red pepper once a day, or make a bread pill with some red pepper in it and give once a day for a week. Of course you must have your patient removed to a dry, clean apartment, where it can be readily secured. Give fresh, clean water at least twice a day until better. If attended to in this way for a short time, success is sure. I have cured two of the worst cases of roup I have ever seen with these remedies, and am sure of a cure every time if directions are followed.

Cholera with poultry is supposed to emanate from insects in the depository canal, or discharge passage. It is sure that if those affected with this dread disease, if from vermin, death is the consequence, either with or without remedies being applied. In France it is certain that fowl are attacked with insects which are termed the Michobion, are sure death to nearly every bird affected. I have often seen hens purged, but never saw a case of real Cholera, as reported by others. The best practice would be, that tried in the State of Georgia and said to be correct.—Give to an adult bird one teaspoonful of castor oil at night or morning. In two hours give a teaspoonful of tea made from smart weed (polygams); dissolve then a small lump of alum, and in each dose one drop of laudanum. I have seen this administered to sheep and cattle with good success. When any purging is seen amongst fowl give a pill of alum about the size of a pea for immediate use; then dust a small portion in their feed or water, which is a certain remedy. The best tonic is cayenne pepper, asafoetida and sulphur, mixed and given in small quantities about twice each week; this will have a good effect on the flock if they are not overfed with it; it helps the digestive organs when given in moderate quantities and not too often.

To help the moulting, give camphor in their drinking water for a week. Then tincture of iron in the same way for two weeks.

Healthy, vigorous fowls may be easily known by the rich, red combs, which is as sure an indication of the state of health they are in as the pulse is to the human physician.

To prevent hens from sitting, place them in a small enclosure with a good, vigorous cock as a companion, and give plenty of food; if well filled with cayenne pepper all the better, two or three days is all that is needed in most cases. If this is not effectual, stand her in about two inches of water and keep her there by some means for two