Agricultural.

Chemical Properties of Butter.

Butter is nothing more than the substance formed by the union of the oily particles contained in milk. Each of these globules is surrounded by a very thin film of casein, or curd, which can be easily detected with a microscope. When the temperature of the cream or milk is raised, these films, their lightness, press towards the surface, break through the delicate covering which envelopes each globe, and run together into an oily mass: this is butter. The same result is attained by beating or violently agitating the cream, as in churning. This action is purely mechanical, and no chemical action takes place except in the formation of the acid by which the cream is soured, and which is absolutely necessary before the butter particles will unite. Thus the cream must either be permitted to stand until it sours, or else it becomes sour during the process of churning. In the latter case it is often necessary to raise it to a higher temperature, and sometimes it is best to add a little sour milk, or some other acid substance while churning, and this will be found often to hasten the formation of butter. In many parts of Holland they are very careful to skim the milk while yet sweet, but allow the cream to become sour before it is churned. By churning the cream sweet, you obtain butter of a more delicate flavor but in less quantity. When soda or ammonia is used to keep the cream sweet, you obtain the largest possible quantity of butter, and it has all the delicate flavor peculiar to that made from sweet cream. In many countries all the milk is churned, under the impression that in this way more butter is obtained than from the cream alone. This cannot be the case where the cream has been properly separated from the milk; and besides, in churning the whole of the milk, it is impossible to separate all the butter, from the difficulty of acting equally upon and keeping in motion so large a body of fluid. In the vicinity of towns, where there is a ready sale for butter-milk, it may perhaps be good economy to churn the milk; but in the country, where there is no market for butter-milk, it is undoubtedly a better plan to churn only the cream, while from the skimmed milk a marketable cheese can always be manufactured. The proper temperature of cream in churning is about 55 deg; when the whole milk is churned it should be 8 or 10 deg higher. If it is raised too high, the butter comes quick, but is usually soft and white. This is often the case in warm weather, and the only remedy is to use ice, or to keep the milk in a very cool dairy. In churning, the motion should be regular and moderate; slower in warm weather than in cold, that the temperature may be uniform throughout the whole mass; and it has been found, from a series of experiments, that the hardest and finest quality of butter was obtained after churning at the above temperature from an hour and a quarter to an hour and a half. To ensure good hard butter at all seasons of the year, particular attention should be paid to the temperature of the cream; and on a good dairy farm ice should always be accessible, by which, even in the hottest summer weather, the cream can be brought down to the proper temperature.

It is well known that the food of the cow influences both the quantity and quality of the butter. When the cow is fed on hay or dry fodder, the butter always comes the hardest; and it is said that the orange carrot, when fed to milch cows, will impart an agreeable flavor and a rich yellow color to the butter. To add the juice of the carrot to the butter after it is made, as is sometimes done to give it a saleable color, is a very bad plan, as it makes it much more difficult to keep sweet.—When butter is to be kept any length of time, it should be worked as free from butter-milk as possible. The imperfect manner in which this is done, is the principal cause of its becoming rancid so soon. On taking it from the churn, it should be placed in a linen cloth and pressed between two boards until most of the butter-milk is extracted; it should then be washed in cold water, changed as often as it becomes milky, and after being salted it should be set away in a cool place until the next day, when by again working it over, the remainder of the butter-milk can be easily separated. Now let it be put down in either or some-ware jars, packed as closely as possible, and after sprinkling the top with salt, let a thin layer of powdered charcoal be put over all, the more effectually to exclude the air and to absorb those gases the tendency of which is to hasten decomposition. Butter put down in this way can be kept sweet a long time even in warm climates. In Holstein, where very choice butter is made, they pack it in firkins made of beech-wood charred on the inside. The salt used should be of the best quality and very fine. Much butter is spoiled from using salt containing lime and other substances which hasten its decomposition. Salt can easily be purified by pouring upon it a little warm water and allowing it to drain: it dissolves and takes out the lime and other extraneous substances, and leaves the salt nearly pure. The quantity usually added to butter is one ounce to a pound. After butter has become rancid, it can be restored and made perfectly sweet by a very simple process. This is, to wash it well in cold water, often changed, and after pressing out the water, melt it anew and add a little sugar, say half an ounce to the pound. This will be found to render it much more palatable, although it may not entirely restore that delicate flavor peculiar to new and sweet butter, which once lost can never be restored.—*Genesee Far.*

Corn Raising.—For many years I have supposed that fresh barn-yard manure well worked into a rich calcareous clay soil to be planted with corn, would enable the crop to stand our summer drouth better than old and well rotted manure; but the experiment of the past season proves otherwise. Last spring I put no manure on my corn patch. The drouth in July and August was the most trying I have known for many years; yet not a corn leaf rolled. I never saw more corn, or more perfect corn, grow on the same extent of surface. Had this patch been manured as usual, the temperature of the soil would have been increased during the fermentation of the manure in the hot weather of the long drouth, and the evaporation would have been great; as it was, the manure applied the previous spring now performed in the soil the office of well rotted manure. Stirring the soil often during the drouth, let in the oxygen of the atmosphere, which readily formed water with the hydrogen of the decayed humus. For several previous years, my corn being manured with fresh stable dung, to loosen mellow during the drouth, and many ears did not fill. But I would advise farmers to manure with well-decomposed manure this spring, as the probability is that after so many dry seasons the next will be cold and wet, when a necessary increased temperature in the soil can only be obtained by draining or the application of fermenting manures! S. W.—*Genesee Farmer.*

Bank Note Table.

☞ Refuse the notes of all Banks in the States named below, that are not noted in this table.

N. B.—Although the Walter Joy and Jamesville shinplaster New York are marked failed, owing to their being secured by state stocks their notes go at nearly par.

Pennsylvania.

Bank of Commerce, North America, Northern Liberties, Pennsylvania, Penn Township, Philadelphia, Farm & Mech., Girard, Kensington, Manuf. & Mechan., Mechan's, Philadelphia, Southwark, & Western—all of Phila.,	par	
Bank of U States,		
Chambersburg,	par	
Bank of Chester county,	par	
Do Delaware county,	par	
Do of Germantown,	par	
Do of Gettysburg,	par	
Do of Middletown,	par	
Do of Montgomery co.,	par	
Do of Northumberland,	par	
Bank of Pittsburg,	par	
Bank of Susq. county,	failed	
Carlisle bank,	par	
Columbia bk & bridge co.,	par	

☞ Keep Notice of genuine notes.

New York.

American Exchange Bk,	par
Banks of America, Commerce, New York, Bowery Dock Company, State of New York, Bowery Bank, Merchants', Drovers', Chemical, City, & Mech. Chemical, Fulton, Leather Man's, Greenwich, Manhattan Co., Mechanic's, Mechanic's & Ass'n, Mech & Traders', Mercantile, Merchants' Exchange, National, Nor. River, Pacific, Phenix, Ward, Tradesmens, & Union Bank of N. Y. city,	par
Agricultural, Angelica, Albany City, Albany, Bank of Utica, Bridgeport, do. America, Leabivia, Bank of Buffalo, Bank of Commerce, Manhattan, Bank of Rochester, Bank of Troy, Bank of Utica, Bridgeport, Mechanic's & ag Ass'n, Mech & Farmers', Mechanic