

Packing Butter.

A few hints on this subject will now be useful not only for farmers who manufacture their own dairy products, but also for those who send their milk to the cheese factory or their cream to the creamery, and creamery men and other butter packers may also have something to learn. A great deal of butter is made on the farm after the cheese factory and creamery close their season's operations, and much good butter fails to reach profitable prices owing to imperfect methods of packing. It will not be amiss first to consider the various methods adopted in countries which pay more attention to the subject than we do, and whose reputation in the leading butter markets is superior to ours.

The first question is, who and where are our consumers? What are their demands, and what is the number and character of the middlemen? Does the butter go directly from the producer to the consumer? Is it for immediate consumption, or is it to be preserved for the near or far future? When it is sold in small lots directly to the consumer, it is necessary, in order to attract the best customers and get the highest prices, that the packages should have an attractive and a uniform appearance. If it has to be colored in order to attain these objects, so much the worse for the butter, and sensible consumers will shy at it. In this method of preparation, the butter is usually made into pound or half-pound rolls, covered with clean muslin cloth, and the rolls should not be touched with the hands in handling. When roll butter for immediate consumption is to be shipped short distances and gets into the hands of middlemen, a good practice is to make a neat wooden box holding say 12 rolls, each roll being wrapped in a piece of muslin cloth. This method has attained great popularity in England and France. Another method of preparing butter for immediate consumption is to pack it in porcelain vessels, in which case it is usually peddled around the town or city, sometimes by the producer and sometimes by a middleman, and sold in any quantities desired. For such purposes tin vessels are objectionable, as they rust easily and injure the flavor of the butter.

However, in this country, where mostly all the butter is made in summer, we are more directly concerned in *preserved* butter, packed in such a manner that it will stand long journeys or voyages and keep sweet for several months. Under this system, firkins are used; and as this country is destined to become one of the greatest dairy countries in the world, it would be well to mention the varieties of timber which farmers should now commence to grow in order to supply the demand for firkins. It is not likely that any material will surpass wood for cheapness, convenience and durability. In Holland, France, and Ireland, oak firkins are used, while in Schleswig-Holstein, beech, when felled in winter, is regarded as the best timber for making them. Basswood and poplar enter largely into some methods of packing, especially for making boxes for roll butter. On this continent, white ash, spruce and white oak are favorite timbers out of which firkins are made.

However, the kind of wood has less to do with the firkin than the method of preparing it. The chief objection to certain kinds of wood is the "woody flavor," which can be removed, although by different methods, according to the nature of the flavor. For example, less effort is required to prepare beech than oak. In Holland the oak

firkins are prepared by steeping them two hours in lye, and, after pouring off the lye, letting them stand in the air for a day to dry, after which they are filled with a solution of alum for 24 hours, and left to dry for another day. Just before packing the butter into them, they are thoroughly cleaned with cold water. In preparing the beech firkins, they are simply washed out with a solution of soda, then washed with water and dried. Sometimes they are also filled with a brine, which is allowed to remain in them several days. In the United States, the woody flavor is removed by soaking the firkins in hot brine, one quart of salt being placed in each tub, and boiling water added. When the brine gets cold, the same operation is repeated, except that cold water is added instead of hot, and the second brine is allowed to remain in the tub until it is ready for packing.

It is preferable, if possible, that the firkins used by each packer should have a uniform weight; otherwise the honest weight of the wood should be marked on each tub, which facilitates the ascertaining of the just weight of butter. There are many conveniences in having a uniform tare for the butter tubs, but this does not mean that every tub should contain the same quantity of butter. These tubs may vary from 30 to 100 lbs. in butter capacity; what is meant is that each tub which contains the same quantity of butter should have the same weight.

After the butter is packed in the tub, it is customary to place a "salt plaster" under the lid; but Prof. Robertson, who made observations at the Colonial Exhibition, informs our dairymen that this layer of salt breaks before the butter reaches the English markets. On the continent of Europe, where the best systems of packing are adopted, paraffine or parchment paper is highly recommended. Tin-lined tubs, although favored in some quarters, are objectionable from the fact already stated. When cloth is used to prevent the butter from adhering to the walls of the tub, care should be taken that it is free from impurities, or any substance unpalatable to the taste or injurious to the health.

When it is considered that Britain imported last year 77,170 tons of butter (value £8,140,188), it will be seen that our butter trade is capable of enormous development, and as our reputation depends largely upon our style of packing, the importance of the question is quite apparent.

Causes of Inferior Cheese.

In a previous issue we pointed out the causes of bad milk, which influence the quality of the products; we shall now trace the origin of bad cheese, the inferior quality of the milk only causing a part of this failure. The milk may be perfectly good, but mischief may originate in the vat, the press, or the curing room.

Puffy cheese may originate directly after the manufacture or in the curing room. Such cheese are known by the openings they contain or by their distorted form. This condition is caused by an abnormal development of carbonic acid gas, which produces a rustling noise, and is traced to a rapid decomposition of the milk sugar. Such cheese lose in value, not only on account of their irregular shape, but also on account of their flat and insipid, or bitter taste. The trouble lies in the milk itself, the presence of colostrum in the milk, the use of spoiled rennet or extract, the im-

proper manufacture of the cheese, especially leav-

ing in the curd too much whey and consequently too much milk sugar, and in pressing or curing at too high a temperature. The remedy consists in removing these causes. *Leaky cheese* are chiefly those which are made too soft. In this condition they also lose their natural form, and assume a strong and often a disagreeable smell and taste. This condition, which also arises in normal soft cheese if they do not go into early consumption, is caused by overly-rapid curing and decomposition, also under conditions which hasten the latter—such as warmth, dampness and access of air to the interior of the cheese. Cracks in the cheese favor the admission of air, and an excess of whey favors decomposition. The whey should be thoroughly removed, and as one means to this end a larger amount of salt is sometimes added.

Cracked or chinky cheese—that is, cracks found on the surface, have their origin in too small a percentage of water, either on the surface or throughout the entire mass. In soft cheese, the cause is attributed to pressing the curd when the particles are too dry, when the milk is coagulated at too high a temperature, when sour milk is employed—in short, when any condition arises by which the water in the particles of curd is unnecessarily reduced. Especially when sour milk is used, the interior of the cheese has a dry, crumbly composition; but, also, in soft as well as hard cheese, dry air drafts, even when the cheese are exposed to them only for a short time, may become a source of cracks. Such cheese do not ripen perfectly, and their value is reduced.

Blue cheese have two causes, one being from blue milk—described in a previous issue of the *ADVOCATE*—the other being from the presence of oxide of iron. The latter has only been found in milk from separators where parts of the machinery have become rusted. In blue cheese, blue spots are observed on the surface or throughout the entire mass.

Mouldy cheese are caused by a fungus, which commences on the surface and eats into the interior, whereby the goods lose in weight, appearance and flavor. Where mould occurs, conditions are present which favor the growth of the fungus, namely, dampness and insufficient ventilation. The best preventative is to remove these causes.

The night's and morning's milk should be kept separate. It has been found by long experience that straining or pouring the warm morning's milk into the cold night's milk, causes rapid change and souring. It is well known that reducing the temperature of any animal product and then raising it again, hastens decomposition. Eggs, butter and cheese, kept in cold storage, have to be soon disposed of and consumed when brought out into a higher temperature. Meat and butter put into a refrigerator the good housewife finds soon rapidly taint and go off flavor. On the same principle, raising the temperature of the cold night's milk by mixing hot morning's milk with it, hastens change and decomposition. Hence they should be delivered at the factory in separate cans.

Ten acres of soiling crop (says the N. E. Farmer), will give the same results as sixty acres of pasture; and during the hot, dry months of August and beginning of September, when the pastures are burned up, will prove vastly more satisfactory. One man for an hour during the early morning will cut enough for two meals; and the feeding to the animals is only a very short chore.