timate benefits of a home market; profit by it while you may. I am certain that there is to be a turn in the tide. The cheese dealers will assuredly be able some day, with your superior advantages in the way of production, to sell your articles in the Liverpool market, at a profit. Prepare to take advantage of, to make money by, that fact also.

## Packing Butter for Market

At a meeting of the Jerfferson County, Wis., Dairymen's Association, an essay was read from Messrs. Smith and Dexter, of Chicago, from which we take the following extracts :---

## PACKING BUTTER.

Jars .--- Use no jars except for a special order, or a known destination. They cost two cents a pound on their capacity; butter in them is burdened by a tax of 40 per cent. on the gross, on which freight or express charges must be paid ; they cannot be sold with the butter to any extent; there is a loss by breakage or damage to butter, which express companies refuse to make good, and cost of delivering jars adds still further to charges against their use. These and other drawbacks are much more than the offset to any advantage derived from their use.

Tubs.-The best packages for general use are the Welch tub, made in New York State of white ash, in two sizes, holding sixty-five pounds and thirty-five pounds. They are largely in use in New York and other Eastern States, and are sold in Chicago at about 70 cents for a larger and 55 cents for the smaller.

Firkins.-It is an open question whether tubs or firkins are the best to keep butter in. We advise packing of one-tenth of the product in firkins, provided good ones can be obtained, made of oak, clear of sap, tight, smooth and good style; but in preference to rough leaky firkins, use tubs always-and use firkins only for spring and summer make.

Directions.-Mark on the side of every package its weight, when dry. Soak twenty or twenty-four hours before packing, in strong brine, and before churning see to it that a package is soaked, ready to receive the butter as soon as salted. Pack a firkin so that when the head is in it will be completely full, leaving no space for brine, nor room for the mass to shift from one end to the other, when the package is turned. This shucking process in loosely filled firkins works more mischief that the lack of brine causes in a tight firkin well filled. Cover the top of the butter with bleached cloth; cover the cloth with a fine sprinkling of fine alt. Put gross weight and dry tare on the cloth end of the package, so that the seller may bore the head not marked, and find no cloth. Tubs intended to be sent at once to market, or packed after warm weather is over, may be filled to the brim, as full as if

for finishing tops of tubs ; cover the top with bleached cloth, reaching over the edge of the tub, not tucked down inside; sprinkle with salt and strap and cover down snug, with three strips of leather, not folded over the top, but nailed through the rim into the edge of the cover, and cut off even with the top.

Tubs intended to be held through the sea-son may be filled within one quarter of an inch of the top; cover with cloth as before, and fill to the brim with salt, add as much clear brine as the package will hold, strap down and do not disturb it till wanted, unless to add brine. As the water evaporates the salt crystalizes, forming a cover of hard salt, which should not be broken.

Use only Liverpool dairy calt, Ashton or other brands. Opinions as to the right quantities of salt differ fifty per cent. A slight excess is better and safer than a deficiency.

Allow no paper of any kind in contact with butter in any form. Use new bleached cloth, from which the sizing or starch has been removed by washing, and dip in brine before using. Fut no salt directly on the butter, nor between layers in packing, nor on the bottom of packages, unless the package, not soaked in fresh water, then use as much salt in the package as will stick to the inside when bottom up. Use small nails which will not reach through into the butter. Keep packages bright and clean, remembering that they must not only be clean, but look clean, in order that external neatness may suggest internal excellence.

## Churning Sour Milk.

Mr. N. A. Willard, in the Rural New Yorker, thus refers to the subject of churning sour milk :-

It is not necessary for milk to become "sour or thick" before churning, to make good butter. There is a difference of opinion among butter makers in regard to the proper condition of milk best suited for churning. Some contend that milk but slightly acid makes the best butter, others that the milk should be allowed to thicken. Good butter is made by either plan, if the milk be good, and all the conditions for keeping it be properly attended to. We know certain noted butter makers who insist that the best condition of the milk for churning-to get a superior quality of butter—is when the milk becomes thick and moist on the top of the cream. Where this plan is adopted, however, great care should be taken not to let the milk stand too long before churning, as in that case in hot weather it becomes too sour, and the butter will be sour also, and in cold weather it becomes bitter.

As skilful butter makers make good butter by churning milk when slightly acid, and also when it is thick or loppered, we are hardly prepared to decide as to the better system of the two. We hold, however, that the best system of butter making is to set the milk where it may be kept at an even temperature of about  $60^{\circ}$  for the cream to struck off by a striker. We suggest a roller rise, and which should be taken off before state of ripeness which cheese must acquire

the milk sours. The cream then may be allowed to become slightly acid before churning. This is the plan usually adopted by noted butter makers of this country and Europe, who make an extra fancy article and obtain for it extreme prices.

In butter making it is essential to have good, clean milk, to keep it in a pure atmosphere, or at least out of the reach of foul odors-holding it at even temperatures and getting up the cream quietly. When milk is set in vessels surrounded by cold spring water the temperature is more easily con trolled, and by getting up the cream on this plan and churning it, instead of the milk, there is less liability of making mishaps and of getting a poor article. We do not say but that good butter may be made by other processes, but they require more skill and watchfulness on the part of butter makers. and result in less uniformity of product than by the plan named.

## Rennet.

At a recent meeting of the National Dairymen's Club, held in Utica, the subject of discussion being "rennet," Mr. H. Lewls, of Frankfort, spoke as follows :-

We often speak of the agents employed in cheese making, and by common consent designate heat, rennet, acid and salts, as the agents employed in changing milk into cheese.

Again, we speak of cooking cheese and scalding cheese, at a degree of temperature below that of blood heat.

Rennet is in fact the only agent employed in changing milk into cheese, and the quality of the cheese from first to last depends entirely upon the milk used, the rennet employed as the agent, and the degree of skill used by the cheesemakers.

This may look to some at first sight like whittling cheesemaking down to a small point indeed; and so it is, when we consider the fact that success in cheese making de-pends upon our strict attention, and at the proper time, to all the minutia of the business

Again, cheesemaking is the most difficult, the most perplexing, the most recondite of all trades or occupations.

Notwithstanding this, success in cheesemaking depends upon three things, as I said before, pure milk, good rennet, and a skilful cheesemaker.

I have named these three things in the oder of their importance. We sometimes order of their importance. We sometimes find cheese of the finest quality made by persons without skill ; but with all the skill in the world concentrated in one person, we could not expect cheese of the best quality produced from bad milk and bad rennet.

If I am correct in placing rennet second in importance in cheesemaking, every dairyman must realize the advantage gained by pre-serving and preparing rennet for use in cheese making, in its purity.

Heat accelerates the action of rennet, and cold and salt retard its action ; but from the moment of its introduction into the milk its work begins, and we first discover its work in coagulation, then in a continual hardening of the curd, by which the whey is rejected, and going on with its silent but important work in the cheese until that is brought to a