

be in the hands of every grape raiser, but I must caution them about his opinion, from a Southern point of view, in reference, on page 53, to many varieties which he condemns that we cannot at present afford to drop from our fruit list. Agawam, Allen's Hybrid, Diana, Croton, Diana Hamburg Northern Muscadine, Rebecca, and Hartford, he pronounces "worthless"; and they perhaps have been superseded in the South by many better varieties we cannot grow North.

Though I find by experience it is best to be somewhat conservative as to system of training the vine, and try new systems cautiously, I am giving trial to the Kniffin System now being introduced on the Hudson, and in N. Jersey. The trellis is, two wires, the lowest  $3\frac{1}{2}$  feet from the ground, the upper 6 feet. The vine has but one stalk tied perpendicularly to both wires, arms are allowed to grow opposite each wire, right and left, and all other shoots on main stalk brushed off as they appear. In fall, these arms are cut back to 5 or 6 buds for fruiting next year, and the following year, the new arms that will start from the buds at the base of the present fruiting arms, at their junction with the stalk are allowed to grow to end of trellis, only clipping off ends of shoots that may grow too rampant, after fruiting, and at fall pruning the present season's wood that bore is to be cut clean away to stalk; at the same time cut back present year's arms to 5 to 6 buds as before. The system is claimed to require very little attention and was highly recommended to me by Mr. Williams, secretary of the N. Jersey Horticultural Society at the last session of the American Pomological Society in Boston. The only doubt I have is, that in time the stalk will become too rigid to lay down for winter protection; if so, I will not remove vine from trellis but tie matting around it.

J. PATTISON.

Messrs. D. M. Ferry & Co., flower and seed catalogue for 1882 is at hand. It is really a work of art which should be seen, read and carefully scanned by all our readers. By referring to the advertisement elsewhere it will be seen how to apply for this catalogue which is sent free.

We have repeatedly tried seeds from this firm, with constant and complete satisfaction.

#### Allender on Dairying.—Continued.

##### BUTTER-MAKING.

I cannot do better than advise every one who wants printed information on this subject to obtain Mr. Jenkins' "Hints on Butter-making," price 6d.

One word, however, about churns. I am constantly asked, "Which is the best churn?" A good dairyman or woman will make good butter in any churn, but if I have to give my decided opinion, I prefer the churns that are put together like boxes, such a Bradford's, or Thomas and Taylor's, or the *End-over* barrel churn, as made by Waide; not forgetting my special favourite, the swing churn, undoubtedly the best for a small dairy; any of these in preference to the old *barrel* churn. It is only quite recently that I arrived at this conclusion. I find that the churns I mentioned, by reason of their angles, will do the work with a minimum of dashers inside, whereas in a barrel churn a considerable amount of dasher is necessary, otherwise the milk would rotate with the churn; therefore, in future, I shall avoid all barrel churns, no matter by whom made. Concussion is what we want, and not friction; and this we get, even without dashers, in a box form rather than a barrel.

Should cream be churned when sweet or when slightly "turned"—ripened? I say the latter, but the *exact* state of acidity, and how the requisite acidity is to be brought about, is yet a matter of question. This subject has received much attention in Denmark. Mr. Jenkins lately gave me

some very interesting information on this point, shewing that the new "world" that is being opened out by the investigations of M. Pasteur, Mr. Lister, and other scientific men here and in France and Germany, relating to the "germ theory," will play a part in dairy work, both in the manufacture of cheese and butter. It has been found that where, for the purpose of "turning" the cream, churned daily, some sour butter-milk from the previous day's churning is used, after a certain length of time, say three weeks or a month, a fresh start is necessary—that is to say, some fresh milk must be allowed to become sour, and this being used instead of butter-milk, new seed is, as it were, provided.

This is, however, too wide a question to enlarge upon here. One thing is quite certain, that both in butter and cheese making there are influences, at present unknown, which materially affect the quality and flavour of the product. A paper, entitled "The Effect of the 'Infinitely Little' in Cheese making," has been published lately in France, bearing on this subject. I have not yet seen it myself, but have been informed of it by Mr. Jenkins.

##### "MARKETING," AND "ASSOCIATED DAIRIES."

In my former paper I said: "To my mind, butter factories are quite as much, if not more, needed than cheese factories." The great advantage foreign butter has over our home produce is, that, in addition to the greater care bestowed in its manufacture, it is offered to the trade in a more *convenient* or more marketable form. Now I think this is perhaps the most important point to which I shall call attention to-day.

Take fresh butter. Twenty years ago, when I was living in Buckinghamshire, the retail butterman in London had to get up early, drive to Newgate Street, and there, looking over many hundred flats of butter at the various salesmen's stands, select that which pleased him most; the butter, received during the night from the farmers in the Vale of Aylesbury and elsewhere, being made up in 2-lb. rolls, packed in flats or baskets, these latter lined with paper (often old newspapers) to keep out the dust, and the latter wrapped in a coarse cloth. Having made his selection, and had his purchases carried to his cart, he drove back to his shop. Empty flats and cloths had to be cared for, and duly returned. This system, doubtless, had been in vogue for years and years before the time I speak of—before railways, in the old days of the carriers—and it is in vogue now, as you will see by the basket of butter which I have brought here to-day. That flat of butter was purchased just as you see it, in the market, and the box of French butter that I have here, was bought at the same time. The French butter cost 17, per dozen, the English 16. Now, I want to draw attention to this—is not the way in which that flat of butter is packed a disgrace to us? Look at it in comparison with the French butter, the one is the produce of a single farm. I suppose two such lots are sent per week, and any one buying it would require to see it, and if they bought six lots, each would have to be inspected, because no two lots would be alike; whereas if any one required one hundred boxes of the French butter, they need but look at a single box, or not even that. The name of "Bretel Freres" on that box is a sufficient guarantee. Their house is as well known, and stands as high, as any merchant in any business in the City of London. The business they do is enormous. Now they have had a profit out of that butter, the market salesman has had his commission, the box is included, and the package has come from a foreign country.

Butter marketed as you see in this flat, at one time formed the whole supply for London; it does not now amount to a twentieth—nay, not a hundredth—part of what is required. Few provincial towns used fresh butter, as we understand it; salt butter only being known. Foreign butter, as shewn by our imports, formed then but a very small item in our com-