

can raise any objection against this method of valuation, the purchaser being at liberty to select a cheap, bulky article, should he prefer it to a dear, concentrated one. In the same way, a man should be permitted to buy or sell milk containing a large percentage of water so long as he does not pay for such water; in other words, so long as he pays no more for the milk than it is worth. Let the consumer be his own judge of how much water, or other worthless ingredients, he wishes to have in his milk, butter, or cheese; let him be the judge of the quality as well as the quantity of the milk which he needs.

Let us now examine the economic effects of this system. The farmer sells his milk to the cheese factory or to city customers; he puts in say ten percent of water, but he gets no pay for this water, and it is quite probable that he will find few purchasers for such milk. The consumer, by watering it to suit himself, is sure of the quality of the water added. It will therefore be to the producer's interest to leave the watering, should such be necessary, to other people. The same principle will apply to cream, and it makes no difference whether the watering is done when the milk is in the cow or in the pail, or whether the percentage of water is affected by the system of skimming or by tampering with the strippings. Let us suppose that, under this system, Farmer A gets a cent per quart for his milk, or 10 cents per 113 cubic inches for his cream (the quantity supposed to make a pound of butter), and that Farmer B gets 1½ cents and 16 cents respectively for his milk and cream. What will be the result? Farmer A will be compelled to study his business or send his dairyming to the wall. Under the present system, he finds dairyming profitable because he robs Farmer B of a portion of his profits. Farmer A will find that he must breed or select better cows, and that he must feed more liberally; for his profits now depend upon the quantity and quality of butter-fat which his cows produce, and not upon the quantity of water which the milk or cream contains. These principles apply both to butter and cheese making, for the milk which produces the most butter-fat also produces the most cheese, and the quality in both instances will be superior. The same rules will apply to the sales of milk in cities, for no citizen, however poor, can save a farthing by the purchase of inferior milk.

It will not do to urge that this system involves more labor or expense than the standard system, for in either case the percentage of fat or water in the milk must be ascertained. The proposed system merely adopts the principle that each milk pail should stand on its own bottom, thereby securing justice to all parties concerned. We take up these points mainly to show that, while the impending boom in favor of dividing dairy herds into milk, butter and cheese cows or breeds, may be a step in the right direction, the principle is utterly false, and the boom must therefore have its day. At present the percentage of butter-fat in milk and cream can easily be ascertained. For the present let the value be based upon this, and should it ever prove necessary to take the percentage of total solids into the calculation, methods will undoubtedly come into use which will be sufficiently expedient to meet all requirements. In short, the time has already come when our dairy breeders should converge their energies into one focus, instead of splitting them up into milk, butter, and cheese.

Garden and Orchard.

Fruit Cellars and Storage Houses.

T. S. Gold, Secretary Connecticut Board of Agriculture, in speaking on this subject, describes the refrigerating house on the fruit farm of a grower near Meriden, Conn. It is constructed of sufficient size and so closely encased by double walls as to preclude any danger from frost. An even low temperature is secured during the summer by a large stock of ice, which, uncovered, occupies one end of the fruit room. The apples are brought in as picked from the trees in baskets and stored in large slatted bins. No draft is allowed in the building, either in storing or removing the fruit.

The ripening of pears, says Mr. Gold, may be retarded for a moderate period without injuring their quality. The dampness from the ice is not injurious, and in some cases the drip from the ice falls on the fruit without harm.

There is a great difference in the keeping qualities of fruits, as all growers know. The skin of some, as the Greening, is liable to become discolored. The fruit should be ripe and full grown, but picked while hard and firm. Fruit that is green will never ripen well. That which is too ripe will become discolored and lose flavor. Bruised and worm-eaten fruit is not worth the storage and will injure the rest.

An even temperature, just above freezing, not only prevents decay but favors an even degree of moisture, keeping the fruit plump. Apples when frozen solid and not handled or moved while in this condition, will keep well all winter. Pears are injured more than apples by freezing, and even careful handling while frozen will spoil them.

A common cellar, which is clean and sweet, not affected by a furnace, and can be closed up, is a very good place for keeping apples. Next to butter, cream and milk, apples are the most sensitive to unpleasant odors and lose their own delicate aroma with the greatest facility. Kerosene, cod fish, cabbages, turnips and onions are all well enough in their places, but their place is not in a fruit cellar.

Wintering Cabbages.

Various methods have been employed for preserving cabbage through the winter, but the easiest way has usually proved the most successful. Storing cabbage in the cellar is out of the question, for it occupies too much space, and, besides, it does not keep so well as by other methods of preservation.

Cabbages should not be stored away until late in the season, and if they are not harvested until a few slight snaps of frost appear, no damage will be done. In the easiest and best method of storing, they are first pulled out of root, allowing as many leaves to remain attached to the heads as possible, and they are then removed to a dry place, where the soil is somewhat heavy, and where thorough drainage can easily be secured. Dig a shallow trench wide enough to contain four to six rows of closely-packed cabbage, placing the heads therein with roots upwards. It is not specially necessary, however, to dig a trench, as the rows may be laid on the surface of the soil. The length of the rows will depend upon the quantity of cabbage, but it is not desirable to have them too long, it being preferable to make two or more pits side by side. Earth is then thrown on and packed firmly until the roots are almost covered. In pro-

curing the earth, it is well to dig a trench around the pit, so as to afford sufficient drainage, and if the pits are placed lengthwise down the slope of a hill, so much the better, as the drainage will then be still better. It is well to have the earth roofed up as much as possible, but this can only be efficiently done when a trench is dug, the centre of the trench being higher than the sides. This will also increase the drainage efficiency. If the heads are placed on the level ground, it will be difficult to roof the pit without covering the roots in the centre row, leaving those of the side rows exposed too much; but this can be largely averted by placing the largest cabbages in the centre row. Such pits are most conveniently made with five rows, one in the centre and two on each side. Cabbages wintered in this manner have been known to keep perfectly sweet and fresh; and, if they should receive a touch of frost, no damage will be done, as the earth will throw it out in the spring.

Keeping Roots in Winter.

One of the seeming obstacles to raising root crops on a large scale is the lack of a proper place for keeping them in winter, says Peter Henderson, the well known horticulturist. A general impression prevails that they must be kept in cellars or in a root-house specially built for the purpose. There is really no necessity for a special root-house, as the simple and cheap method of preserving them in pits in the open ground is far better. I will briefly describe my plan, which I have practised with all kinds of market garden roots for twenty five years. Mangels, in this section of the country, are dug up towards the end of October, or just after our first slight frost. They are then temporarily secured from severe frosts by placing them in convenient oblong heaps, say three feet high by six feet wide, and are covered with three or four inches of soil, which will be sufficient protection for three or four weeks after lifting; by that time, say the end of November, they may be stowed away in their permanent winter quarters. For turnips and carrots, there is less necessity for the temporary pitting, as they are much hardier roots, and may be left in the ground until the time is necessary for permanent pitting, if time will not permit of securing them temporarily.

The advantage of this temporary pitting is, that it enables them to be quickly secured at a season when work is usually pressing, and allows the period of their permanent pitting to be extended into a comparatively cold season. This is found to be of the utmost importance in preserving all kinds of roots; the same rules regulating the preservation in winter apply as in spring sowing. While in this section of the country it must be done no later than the end of November, in some of the Southern States the time may be extended a month later, while in places where the thermometer does not fall lower than 25° above zero, there is no need to dig up any of these roots at all, as that degree of cold would not injure them.

The permanent pit is made as follows:—A piece of ground is chosen where no water will stand in the winter. If not naturally drained, provision must be made to carry off the water. The pit is then dug four feet deep and six feet wide, and of any length required. The roots are then evenly packed in sections of about four feet wide, across the pit, and only to height of the ground level. Between the sections a space of half a foot is left, which is filled up with soil level to the top. This gives a section of roots four feet deep and wide, and four feet long, each section divided from the next by six inches of soil, forming a series of small pits, holding from six to twelve barrels of roots, one of which can be taken out without disturbing the next, which is separated from it by six inches of soil.