

from those set next, while it came off from the last ones in about one hour. The most striking thing in connection with this experiment is the fact that although these different vats—of the same milk previously mixed—were set two to three hours apart, the whey was drawn off all at exactly the same time, with the same amount of acid, by the hot iron test, when the curds were stirred dry, and they were also ready for the press at the same time.

Now, this is the point I wish to make, not as an argument against the practice of ripening milk in moderation, remember, but to show the uselessness of running chances of injuring the quality of the cheese by over-ripening the milk in the hopes of shortening the day's work.

It is also worthy of note that as the ripening proceeded it took slightly more milk to make a pound of cheese.

These experiments were repeated later on with precisely similar results.

I believe in the use of a starter of good, pure-flavored milk, as described in these columns some time ago by Mr. A. T. Bell, of the Guelph Dairy School. It must be judiciously used, however, as well as carefully prepared, or it is likely to be more injurious than useful.

It is quite natural and perfectly right that a cheesemaker should be anxious to get through his day's work in the shortest possible time consistent with the best results.

Many hours of useless waiting around a factory are spent, especially in the fall, simply on account of a little lack of thought on the part of the maker at the early stages of the process. It should not be forgotten that a curd which is cut fine or much broken with the first stirring will work very much slower than if coarser; as much as two hours difference in time of hooping curd can be effected in this way without going beyond the range of the work of different makers. Every cheesemaker knows that it is advisable to cut a curd much finer than average when it is working fast, and the same principle applies when the milk is sweet or working slowly, for then we should endeavor to have the curd in a coarser condition.

Danish Dairies.

Of co-operative dairies (Andels-Mejerier) there are at present 907 in Denmark proper (in South Jutland 83), of joint dairies (Fælles Mejerier) 215 (in South Jutland 19); of estate dairies which are working their milk separately 283; altogether in Denmark proper 1,405 large steam dairies (in South Jutland 102). Of the smaller estates and farms working their own milk into butter and cheese the number is not known.

GARDEN AND ORCHARD.

Some Points on Quince Culture.

BY FRANK GARDINER.

The quince is one of the fruits most prominently mentioned in ancient history, possibly because it grows wild in the countries along both shores of the Mediterranean Sea; and it is of the past of those lands we are best informed. Botanically it is classed with the apple and pear, in the genus *Pyrus*, and takes its specific name, *Cydonia*, from the Cretan town of that name. The golden apples of the gardens of the Hesperides—Earth's wedding gift to Juno, in quest of which Hercules performed many valorous deeds—are believed to have been quinces.

Until very recently, horticulturists have neglected this fruit, and it has had little opportunity to show its possibilities. But as competition has increased, fruit-growers have cast about for new fields, and quince culture is experiencing something of a boom, particularly in parts of Essex County, Ont., also in some parts of the county lying around Lakes Erie and Ontario, in the United States. New varieties have been originated, and with better fruit has come an increased demand, though, naturally, there will never be the call for the quince that there is for other classes of fruit, as it is but rarely one finds a person who relishes a quince out of hand. The better quality of the fruit, when well grown, will bring it into higher repute in the kitchen, however, where it has a variety of uses best known to the housekeeper. The average man has a weakness for "quince sass," its distinctive, peculiar flavor being especially grateful to the masculine palate. With sweet apples, it makes a delicious sauce, and a well-ripened specimen, baked and eaten with cream and sugar, amply justifies Jupiter, in the old mythology, for sending the hydra-headed serpent to guard the fabled gardens where it grew.

The quince makes a scraggy, ill-shaped growth when neglected, but under good cultivation becomes a shapely tree, positively ornamental when in flower and fruit. The blossoms are produced on the ends of the branches; they are large, strong, and not as numerous as those of the pear and apple, and have large, faintly pink petals and leafy calyx lobes. The fruit, when properly ripened, is of a beautiful golden yellow, handsome, indeed, in its nest of green leaves. Neither tree or fruit, when properly grown, would be recognized in the neglected bush struggling for dear life with grass and weeds in a fence corner, as we so often see it.

The quince is usually grown as a bush, but may be easily trained in tree form by selecting a leading shoot, tying it to a stake, and cutting off all branches that start, until the leader is of the de-

sired height; then cut down to the proper point and let four or five branches grow. It is easy of cultivation, and repays well the care and attention requisite for it to do its best. It is easy of propagation—so easy, one is quite at a loss to account for the high prices (from 35c to \$1 each) asked by nurserymen for the trees—and cuttings root rapidly, and it may also be layered. Cuttings may be made in the fall and stuck down in the nursery row at once, or buried in sand over winter. The quince is largely used as stock on which to graft or bud the pear, which on a quince root becomes dwarfed and bears early.

The quince is a surface feeder and should be well fertilized. Cultivation should be shallow. Its feeding roots must not be cut too closely. Deep plowing and barnyard manure are two things to be avoided, as they cause spotting of the fruit, in the estimation of skillful growers. Ashes are an excellent fertilizer for it, and moderate applications of commercial fertilizers are, on most soils, found beneficial.

The trees should be set twelve feet apart and ten feet in the row. From 400 to 425 trees are usually reckoned to the acre. The tree is a good bearer, and has no off year; and is afflicted by but one insect enemy which is particularly troublesome, and that is the borer, which sometimes attacks unscaled trees, and must be dug out with a sharp, slender knife, or "gone for" with a bit of wire. Though, as I have said, there is not the demand for this that obtains for other classes of fruit, yet quince culture proves remunerative where a fine quality is obtained by decent care. Fifth baskets, containing from fourteen to sixteen fine quinces, sold at 35c from the wholesale houses last fall; and as a tree three years from the nursery row will generally yield a half bushel of beautiful fruit, one has not to wait long for returns from his investment.

Unfortunately, the quince is seldom seen at its best in market. Ignorant or careless growers pick it too green and glut the market with immature, imperfect specimens, which disgrace their own reputation and injure the sale of better stock. The fruit should never be gathered until the downy fuzz which covers it has disappeared. Not till then is it perfectly ripe. Several pickings should be made. The removal of the ripe fruit tends to the enlargement and perfecting of what is left, thus the entire crop is made good in quality and saleable at first-class prices.

The woman horticulturist will find quince culture peculiarly suited to her circumstances—if she is within reasonable distance of a city market. The number of trees that can be grown on an acre, the early maturity and quick-bearing and immunity from disease and insect depredations, and the ease of cultivation, all commend it to the woman who is seeking a way to piece out a slender income. The entire work of caring for a quince plantation, including gathering and shipping, may be done by a woman, if she is not afraid of work; for the fruit, coming in season late, ripening gradually and keeping well, does not necessitate the army of pickers and the hurry and rush incident to putting a crop of small fruit on the market. There is always a demand for really fine quinces, in small lots, and the price rarely goes below a remunerative figure.

Packing and Shipping Fruit.

BY F. G. H. PATTISON.

Grapes should be picked carefully, and then allowed to stand three or four days to wilt before shipping. When packing, handle the bunches by the stem and do not touch the grapes themselves, as that injures the bloom, which every care should be taken to preserve. All green, imperfect, or bruised fruit should be removed with the sharp-pointed grape scissors. Lay the clusters in so as to fill the baskets just level; then weigh and mark the weight on the handle of each basket. A uniform weight should be maintained for similar sized baskets. The two best kinds of baskets for shipping grapes are the ten pound and the twenty pound, or sixteen quart. Use the large size for the general crop and common varieties, the small for choice and early varieties, or for local market. Some basket factories turn out still smaller sizes, with wire handles, holding from two to five pounds; these will be found excellent for those selling on an open market, as they are no great weight for purchasers to carry, and look attractive when filled with choice grapes. Never ship unripe grapes; it is, alas! a far too common practice; but nothing injures the grape market so much and so permanently.

Pears.—In picking, avoid bruises, and do not separate from the stem, which is considered an ornamental feature. Do not let them hang too long upon the tree. All early kinds will sell much better if picked after they have attained their full size, and yet before they are ripe, and allowed to ripen gradually in a cool place. If intended to be placed in an artificial cooler, they should be picked as soon as they will readily come off the tree. Cull out small and imperfect fruit at once, pack in barrels and sell as such; if sold early they will generally fetch enough to give a profit, but usually there is little demand for such after September. The choicest specimens should be shipped in twelve quart baskets, or in bushel boxes; the rest of the crop, especially if pears be plentiful, is best marketed in barrels or half-barrels.

Apples.—The packing and shipping of apples, more especially if intended for the Old Country,

demands a great deal of care and trouble, and involves some considerable amount of risk. Those who do not wish to take the proper amount of care, etc., had better sell at home for a certain fixed price. Summer apples are usually sold at home in the local markets; the choicest specimens can be sent in twelve quart baskets, the rest in barrels and half-barrels. The same applies to most of the early fall varieties, which are usually too soft to stand the voyage across the ocean. The late fall varieties should be shipped early, then follow with early winter, then medium, and then late keeping, finishing up with the longest keepers in the spring. As a rule, winter apples are allowed to hang too long upon the trees. About the 20th of September is quite late enough to begin picking the earlier winter varieties, such as Kings, Cranberry Pippins, Greenings, etc. Pick very carefully, handling the fruit as though they were eggs; there is far too much rough tumble work done amongst apples. There are two ways of packing the crop—either pick and pack right in the orchard, or pick, place in barrels or bushel crates, draw into a storehouse and pack at leisure. The writer prefers the latter system, unless the apples are to be sold immediately, or are all hard, late keeping varieties. In either case, to pack properly, a movable sorting table is required. It should be about the following dimensions, viz.: seven to nine feet long, three and a-half to four feet wide, with a rim all round it five to six inches high; the legs at one end should be three or four inches longer than at the other, so as to allow the apples to roll down towards the sorter; wheels can be attached to the legs if used in the orchard. Three ordinary grades of apples should be made: No. 1, all first-class, perfect apples; No. 2, good cooking apples, but imperfect; No. 3, apples for cider or stock. Besides this, a fourth grade should be made of choice varieties, such as Blenheim Pippins, Kings, Spies, etc., containing the choicest highly-colored specimens; these, if carefully packed in half-barrels, will usually command a high price in the Old Country. Grade very carefully and honestly, and let each brand be exactly what it professes to be. In packing, use a lever or screw press; the former will, I think, give more satisfaction and is more generally used. Stand the barrel on a block or plank, so that the ends of the press can get easily under it; lay the first layer in by hand, afterwards empty gently from a basket, and as each basket is emptied in give the barrel a shake; heap the barrel slightly and press down till it is perfectly tight; then nail the hoops, fasten in the head securely, and brand the variety, quality, shipper's name, and the address of the consignee upon the head distinctly. Ship as soon as possible after packing, unless intended for storing. As a rule, in shipping to the Old Country it is a mistake to ship on consignment, except to one of the large distributing centres, such as London, Liverpool or Glasgow; and when shipping to London it is advisable to ship via Liverpool, as, if sent direct, the fruit is apt to be tampered with on its way up the Thames and at the London docks. The commission houses on the other side are not very satisfactory, but some are better than others, and it is advisable for beginners before shipping to obtain advice from an experienced hand, as to whom to send their fruit to, as otherwise the result may be disappointment. In conclusion, the writer would say, that if sufficient care and trouble be taken the results of sending apples to the Old Country are fairly remunerative, taking good and bad seasons together.

APIARY.

Wintering Bees—Outdoor vs. the Cellar.

Few winters pass without more or less fatality of swarms. The old practice of cellar-wintering still has many friends, although the more modern plan of incasing the hives in a larger box, packed about with a dry substance, is becoming more in favor from year to year. The question as to which plan shall be adopted for the coming season will be settled by the keepers' opinions of the two methods, comparatively.

According to good authorities and the writer's observation, the wintering on summer stands has advantages over the cellar storing method. One of these is doing away with all the heavy carrying to and from the cellar; it also saves all anxiety as to when bees should be set out. Very often there is an innocent-looking warm spell quite early in the spring, which continues long enough to give the bee-keeper faith that it has come to stay, and as a result, puts out his cellar-wintered swarms; the bees enjoy their liberty and take it until the almost certain cold change comes along and thousands of the little workers fall to rise no more. But when they are wintered by packing on the summer stands, they are their own judges of the weather, and are very instinctive as to when it is wise to stay at home. We would not wish our readers to infer that there is never any loss by this system, for a few always stray out too early and fall, chilled, upon the snow and perish, but this can be avoided by keeping a watch over the bees, and when thought necessary, a wad of pea straw can be used to stop the exit until all snow has gone, or, as is sometimes done, a handful of bright oat straw can be spread before the hive, upon which they will fall and from which they can rise again.

Mr. D. Chalmers, in the Canadian Bee Journal, gives his method of wintering, which is almost the same as the writer's way, with which he has always