

### How to Make Good Cider and to Keep It.

In localities where the apple crop is abundant the preparation of cider for market is a profitable industry when intelligently undertaken, and there are few beverages more palatable and less harmful than cider when properly prepared. Unfortunately, there are few farmers who really know how to make good cider, or how to care for and keep it when made.

In the first place, apples not perfectly sound and well ripened are not fit for making cider. The russet is one of the best of apples for this purpose, but other and more commonly available varieties need not be slighted.

To prevent bruising, the fruit intended for the cider press should always be hand-picked. After sweating, each apple should be wiped dry, examined, and any damaged or decayed fruit thrown out and used for making vinegar cider.

In the grinding or pulping operation the seed is often crushed, and is apt to taint the juice, so that despite the loss and extra time required it is always better to core the apples before grinding them, as the cider will not only taste and look better, but keep better. A cheap and handy coring machine is shown in Fig. 1. In this the coring tube, which may be of tin (free from iron rust), projects through a common bench or table, and is surrounded by an ordinary furniture spring, P, which supports a piece of wood, A. This has a hole in the centre of it, over and partly into which the apple is seated. The lever, D, on which the piece of wood, B, similar to A, but having an aperture only large enough to admit the coring tube, is loosely hung by side pins, is held in position by the spring, S. The operation of the machine will be readily understood by referring to Fig. 2, in which it is shown in section.

All iron work about the mill or press (rings, rivets, etc.) should be tinned or coated with good asphaltum varnish, as the color and sometimes the taste of the cider is apt to be affected by contact with the rusty metal.

In pressing the pomace many of the best cider makers prefer to use hair cloth in place of straw between the layers, as it is more cleanly and does not effect the taste of or add anything to the expressed juice.

As the cider runs through the press it should be filtered through a hair sieve into a clean wooden vessel capable of holding as much juice as can be extracted in one day.

Under favorable conditions the fine pomace will rise to the surface in about twenty-four hours—sometimes less—and in a short time grow very thick. Then it should be watched, and when white bubbles begin to appear at the surface the liquid should be drawn off slowly from a faucet placed about three inches from the bottom of the tank, so as not to disturb the lees.

The liquid drawn off should be received in clean, sweet casks, and must be watched. As soon as white bubbles of gas appear at the bung-hole it must be drawn off (racked) into clean casks as before, and this racking repeated as often as necessary until the first fermentation is completely at an end. Then the casks should be filled up with cider in every respect like that already contained in it and bunged up tight. Many cidermakers add a gobletful of pure olive oil to the cider before finally putting in the bung and storing.

If it is desired to keep cider perfectly sweet—and this is rarely the case—it should be filtered on coming from the press, and then sulphured, by the addition of about one quarter ounce of calcium sulphite (sulphite of lime) per gallon of cider, and should be kept in small tight full barrels. The addition of a little sugar—say one quarter of a pound per gallon—improves the keeping qualities of tart cider.

An easily constructed cider filter is shown in Fig. 3, and consists in a barrel provided with a tap near the bottom. The lower part is filled with dry wood chips covered with a piece of flannel. Over this a layer of clean rye straw is packed down, and then the barrel is nearly filled with clean quartz sand, not too fine.

When the first fermentation of cider has been checked and the liquid barreled it should be allowed to stand until it acquires the proper flavor.

Much of the excellency of cider depends upon the temperature at which the fermentation is con-

ducted. The casks containing the juice should be kept in a cellar, if possible, where the temperature does not exceed 50° Fah. When left exposed to the air, or kept in a warm place, much of the sugar is converted into vinegar and the liquor becomes hard and rough. On the contrary, when the fermentation is conducted at a low temperature nearly the whole of the sugar is converted into alcohol and remains in the liquid instead of undergoing acetification. The change from alcohol to vinegar (acetous fermentation) goes on most rapidly at a temperature of about 95° Fah., and at a lower temperature the action becomes slower, until at 46° Fah. no such change takes place. Independently of the difference in quality of fruit used the respect of temperature is one of the chief causes of the superiority of the cider made by one person over that made by another in the same neighborhood.

The more malic acid and less sugar present the less the tendency of acetous fermentation; hence it often happens that tart apples produce the best cider. But cider made from such apples can never equal in quality that prepared at a low tempera-

ling some champagnes. Such ciders are best bottled when fined.

The following are the methods by which some of the beverages found in the market under the name of "champagne cider," are made:

1. Cider (pure apple)..... 3 barrels.  
Glucose sirup (A)..... 4 gallons.  
Wine spirit..... 4 gallons.

The glucose is added to the cider, and after twelve days storage in a cool place the liquid is clarified with one-half gallon of fresh skimmed milk and eight ounces of dissolved isinglass. The spirit is then added and the liquor bottled on the fourth day afterward.

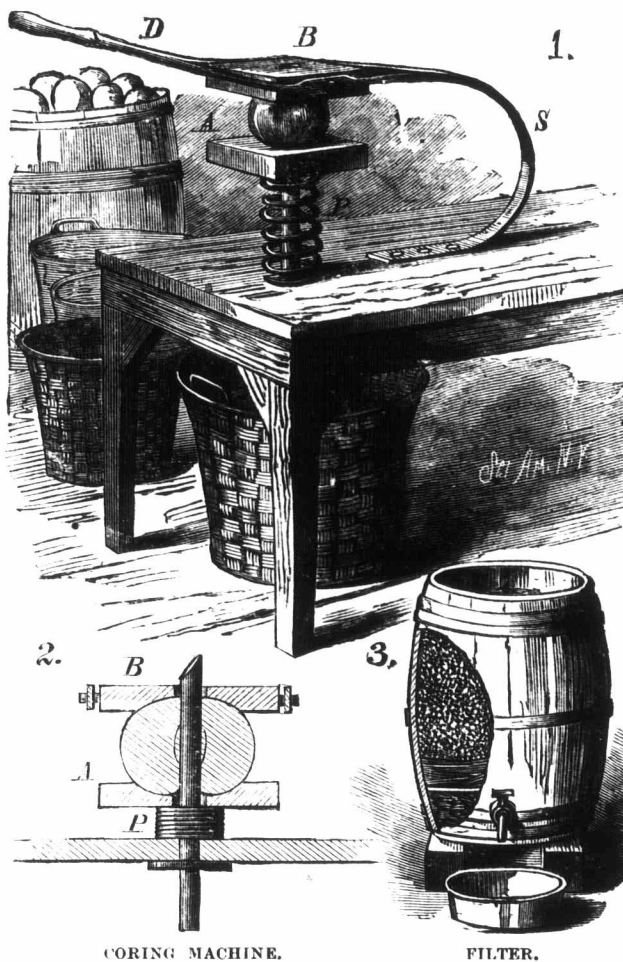
2. Pale vinous cider..... 1 hoghead.  
Wine spirit..... 3 gallons.  
Glucose, about..... 30 pounds.

The liquid is stored in casks in a cool place for about one month, when it is fined down with two quarts of skimmed milk and bottled.

Much of this and similar preparations are doubtless sold for genuine champagne.

3. Fine apple cider..... 20 gallons.  
Wine spirit..... 1 gallon.  
Sugar..... 6 pounds.

Fine with one gallon of skimmed milk after two weeks' storage in wood, and bottle.



CORING MACHINE.

FILTER.

Cherry trees are very much subject to disease, which appears in the bark, and is known as black knot. The bark of the trunk and limbs, especially the latter, swells and bursts, becomes black, and oozes a gummy substance. The cause is probably an exuberance of sap, which the tree, from weakness, cannot assimilate or dispose of, and it bursts the bark and escapes. The gum provides a suitable place in which fungoid germs can lodge and germinate, and in a short time the wound is filled with fungus growth, which disorganizes the tissue and spreads very rapidly. The way to treat this disease is to cut out all the diseased branches and pare away cautiously the knotty and decayed bark where nothing else can be done, and to invigorate the tree by spreading a peck of lime around it.

The greatest pest to house plants is the so-called ground aphid, a small blue-black fly belonging to the class of insects known as plant lice. This is a winged species a little larger than the green fly, which injures the leaves and it produces small white grubs, which suck the sap from the roots. Roses are especially injured by it, and so also are geraniums and fuchsias. The remedy is to apply strong tobacco-water to the roots of the plants. This will also destroy the green fly and its wingless progeny which injure the leaves.

It is impossible to lay down exact rules for pruning. The best rule that can be given is, first, learn what you want to do; then do it in the best common-sense way you can; if you make a mistake once, learn from that, and don't repeat it; in time you will know how to prune a tree as well as any person could.

One venture in lard cheese to England, sent there as honest goods, did not turn out well, and ought to serve as a warning to all concerned. When the weather came on warm the oil exuding from them was found by simple sense of smell to be nothing but "hog-fat grease of a low origin," and the price dropped at once from 10 cents a pound to 2½.—[N. Y. Tribune.]

Purslane is a weed which everyone is desirous to get rid of, and at the same time it is one of the most nutritive plants raised, either on a farm or in a garden. When once started it is a most rapid grower, crowding out everything else, and it is most prolific of seeds; few plants, however are so rich in gelatine. It is excellent feed for swine.

Pendleton, in his 'Scientific Agriculture,' gives the following directions for making rich compost: A layer of stable manure six inches thick, with a good layer of ground phosphate (or ground bone) over it; then a layer of muck three inches thick, or a mixture of ditch scrapings, poultry house scrapings, leached ashes, old mortar, leaf mold, sods or other waste matter; then a layer of stable manure six inches thick.

ture from fruit rich in sugar, which, if properly cared for, will keep good twenty years.

When the first fermentation has subsided and the liquor has developed the desired flavor in storage it is drawn off into other barrels which have been thoroughly cleansed and sulphured, either by burning in the bung-hole a clean rag dipped in sulphur, or what is better, by thoroughly rinsing the inside with a solution of bisulphite of calcium prepared by dissolving about a quarter pound of the sulphite in a gallon of water.

The isinglass—six ounces or more (in solution) to the barrel—should be stirred in as soon as transferred, and then a sufficient quantity of preserving powder of bisulphite of lime (not sulphate or sulphide), previously dissolved in a little of the cider, to entirely check fermentation. The quantity of this substance required rarely exceeds a quarter of an ounce to the gallon of cider. A large excess must be avoided, as it is apt to injuriously affect the taste.

Some makers sweeten their cider by additions, before fining, of sugar or glucose, the quantity of the former varying from three-quarters of a pound to one and a half pounds, while as a substitute about three times this quantity of glucose is required. Sweetened cider, when properly cared for, develops by aging a flavor and sparkle resembling