



The Wine and Wine Making.

By J. M. McCORMENAY.

(Continued from page 143.)

PROPERLY made wine is an ether,—and frozen wine divides itself into two parts, one part (about half) being a concentrated wine ether, and the other solid ice, composed of water of valueless acids, and inorganic salts, injurious to wine. When wine is properly made, it is a compound, and not a mixture. Water, saccharine matter, acids, and salts combine and form "wine ether," each element having ceased to retain its own distinct character—in the same manner as common salt is no longer either chlorine or sodium, or plaster Paris, sulphur or lime. Every compound is a combination of fixed proportions, in obedience to the law of definite proportions, and it is this very distinction that constitutes the difference between pure wine, which is a compound; and impure wine, which is a mixture, and which might as well be termed punch, or cobbler, or any other term selected from the beautiful nomenclature of our waggish neighbours. Pure wine is often adulterated with sugar, water, spirits, log-wood, essences of all kinds, and alkalies of every description.—A thing is called pure wine, being a mixture of all the above mentioned materials, with the juice of some grape. Another thing is called pure wine or pure juice of the grape, made honestly but ignorantly, by pressing some imperfect grape and mixing a little brandy with the juice, without allowing it the time to make its own combinations with either skin or pulp, and which could never, therefore, become wine ether. In short, we receive from abroad all sorts of spurious mixtures, re-mixed here, and everybody pretends on this continent to make wine with grapes or gooseberries, or currants, and call their mixtures wine. Yet, strange to say, no man establishing a brewery will think of making his own beer, but will immediately obtain a practical brewer. Can it be possible that people think it less difficult to make wine? I see continually letters in the agricultural and other papers, speaking of the wines of one grape being superior to that of another, yet there is no wine made in Europe from the produce of one variety of grape, and no one variety can furnish the proper proportions absolutely necessary to the combination requisite for the production of wine ether. The great difficulty in a new country is to succeed in obtaining in a vineyard the proper combination of different varieties suitable to the climate, and capable of furnishing that combination required for the manufacture of wine ether, and at the same time obtaining an aroma and flavour so judiciously mingled as not to permit that of any particular grape to be distinguishable.

In my opinion a combination may be formed of the following varieties:—

1st. Clinton, which will furnish saccharine matter, tannin, and tartaric acid, and organic salts, with abundance of colouring matter; indeed all in excess except water, of which it is deficient. It furnishes a very fine "bouquet," but not equal to the

2nd. Delaware, which is also deficient in water and in tannin and colour.

3rd. The Golden Chasselas and Musk Chasselas will furnish saccharine matter and aroma, with organic salts, and ferment; and lastly—

4th. The Ontario, which, without any foxy or disagreeable flavour, will furnish some saccharine matter, and the water of which others are deficient, and which it holds in excess; and although it may be supposed that water may be easily supplied artificially, I would advise in preference, and for economy as well as for the security of supplies, obtaining it from a harmless watery grape.

Mr. Frederic Schoubo, the Danish botanist, has published a very remarkable essay upon the plants of

Pompeii, which has been translated into German, French, and English. I have gathered the substance of it from Blackwood, and think it most applicable to this country, where the metamorphosis of vegetation must already have become apparent to every one. We seem naturally to expect that the same class of trees and plants will grow for age after age on the same spot, but an inspection of the pictures preserved in Pompeii, and an examination of Virgil and other classics of that day, show that the character of plants and trees has been changed in Italy within the last 1800 years, and that they bore a far more northern aspect than at present.

The early settlers in Italy formed a forest region of common deciduous trees. The beech forest, which Schoubo calls the symbol of Danish character, and the maple, which is that of Canadian, flourished formerly throughout Italy, although now driven back to the Alps and Apennines. Some trees of which Virgil celebrates the grandeur are now impossible to discover, and the region he celebrated was not the land of the Cypress and the Myrtle, but of the Oak, the Ash, the Linden, Elm, and Beech. Trees like our own formed the forests of which he sang, and if the maple is yet discovered on the plains of Italy, it is because its affinity for the vine allows it to be used with advantages as a prop for that plant. In the course of centuries, southern vegetation seems to have crept upwards, and the characteristic plants of Italy have therefore now a far more southern appearance than they had when Virgil sang and Cicero declaimed; whilst in Greece, also, the Linden, the Yew, the Beech, the Alder, the Cornel, and the Ash have almost entirely disappeared. The productions for which Italy has since become famous, were known only to Pliny as "foreign plants." The citron was only cultivated the third year after Christ. Lemons came with the Saracens, and Oranges were brought by the Portuguese from the east, while the Aloe and Indian Fig came from America. The white or silk worm Mulberry was unknown to the Pompeiians, and only commenced to be cultivated in the sixth century, and silks were imported by the Romans from the East. Barley was cultivated for the common people, and now Rice and Indian Corn (then unknown) are the staple commodities. The same change going on there has everywhere been developed by civilized man. At first by great care and pains, southern plants have, by protection, been raised; they have by degrees become hardy, then indigenous, and thus the fruits of the South are everywhere creeping towards the North. The acclimatization of plants is becoming a science of itself, and its progress may well be illustrated by the introduction of the Olive into the Crimea. Before, however, endeavouring to introduce the more valuable Southern plants, let us succeed in developing our indigenous ones, such as the Vine, the Mulberry, the Walnut, and the Chestnut; and we require only to understand the manner of cultivating each in order to abound in the production of wine, oil, and silks, and obtain the "ready-made bread" of the Chestnut.

The difficulties to be overcome are, above all, our own prejudices, and of obtaining skilled labour, in order to set to work to machine in motion. Prejudice is the child of ignorance, but no government of civilized men is permitted in this century of advancement to plead ignorance; and the responsibility of a poor system of agriculture, far beneath the qualities of our climate, attach itself to them; for private enterprise dare not calculate beyond that which will give immediate returns: and as I have previously mentioned on more than one occasion, we have "an agricultural limit" to overcome.

How to Water Plants in Pots.

NUMEROUS are the enquiries as to the time and frequency of supplying greenhouse and other indoor plants with water—their most important want. The curious part of the matter is that people—almost in the same words—seem to take it for granted that it should be done at stated hours and intervals, as if, in this variable climate, it was as easy a matter to cultivate tender plants in a highly artificial state as to appoint the hours for relieving a scorching guard. It is an important subject for every cultivator of tender plants, and should be understood by all such. Those who water their plants at regular intervals and give each about the same quantity of water—as is often done, even by professional gardeners who do know their business—are pretty sure to kill some of the most valuable and delicate, as in a conservatory or other house full of plants there is scarcely one but will differ from its neighbour in the amount of water it requires at this season, even if the plants are all of the same species. In a mixed collection the difference in the amount of moisture to be supplied is very

considerable. Succulent plants—Aloes, Yuccas, Cacti Mesembryanthas, and such fat-leaved subjects—require little or no water from the beginning of November to the end of February; at least, such is the rule among good cultivators, though we believe it is not wise to apply it rigidly to some of these plants, which are apt to shrivel and get hurt if allowed to become dusty and dry.

Geraniums, again, though they must not get quite dry, require to be kept comparatively so in winter till their flower buds are formed. We now allude to show or greenhouse geraniums. Fuchsias are usually kept quite dry during the winter. Plants in a vigorous growing state, or coming into flower, as some are at all seasons, will of course require to be well supplied with water; that is, they require to be as moist at the root as we keep growing plants in summer, only that one-third the amount of water and watering which would be required in summer will suffice to keep them so at this season. It is impossible to lay down a rule which would be of the slightest use as to the time of watering, &c.; it must be left to the cultivator's judgment. So frequent were the bad results of promiscuous and regular watering in the generality of gardens fifteen or eighteen years ago that an outcry was raised about over-watering, &c., which certainly made no inconsiderable improvement, but was also productive of much evil by making people err in the other direction—by not giving enough of water; and we certainly have seen more plants killed and injured of late years for want of water than from an excess of it. In one particular instance a splendid and very valuable collection of specimen Camellias was ruined, from being kept too dry in a very cool house, the cultivator thinking they should be kept dry because the house was colder than such usually are. The treatment might not have had a bad result with many plants, but it killed the Camellias. A healthy-growing plant in a pot, which is, as it ought to be, thoroughly well drained, cannot well have too much water when it is watered. Our golden rule is: *Do not water a plant till it requires it, and then give a thorough soaking.* We are now dealing chiefly with greenhouse and conservatory plants, about which most inquiries have been made; but the rule is equally good for stove and pot plants in every structure. In hot summer weather, plants should be examined every morning, and in most cases watered; and in the case of free-growing Fuchsias and other soft growing plants in the height of their bloom, it may sometimes be necessary to water well twice a day. In the dead of winter, every second day is sufficiently often to look over greenhouse plants, and then not one in ten may require watering. The waterer should begin regularly at a certain place in the house, and examine every plant. After a little practice, he can readily detect those that are dry by merely looking at the soil; but in some cases, where the specimens have been top-dressed, &c., and soil without roots in it lying on top of that fall of roots, and where bad watering has been practiced, so that the earth is wet on top and dry at the bottom, it may be necessary to strike the pot with the knuckles to see if it sounds hollow, this indicating want of water; and now and then to turn a specimen out of its pot to examine the state of the roots. When a crack is seen between the soil and pot, caused by the shrinking of the soil, it is an almost invariable sign that the plant wants plenty of water.

When the operator meets with a dry plant, instead of pouring a little water on, as many do, he should fill it up quite, and if there is not a good space for water between the soil and top of rim, he should return to it and fill up again, so as to insure a thorough soaking, for a plant wet at the surface, and dry as dust down where its main roots exist, is in the worst possible condition. In fact, it is not a bad plan to make it a rule to water gross-feeding and large specimens twice when they get dry. The great harm used to be done in old times (and very often, we fear, in these advanced days) by pouring on a little sip every morning, which resulted in the pots becoming covered with green slime, and the soil often a mass of black mud. The same regular examination should occur in summer, only less care will be required, and four times the amount of water. When rapid growth begins in the first bright days of March, too, the plants must be looked over every morning, and from that time to the end of October. Some people fill the pots with too much soil, and do not leave sufficient space for a proper dose of water to be poured on; it is a very bad plan, and has caused the death of hundreds of valuable plants. As a rule, the pot should not be filled higher than within half an inch of the brim, and in the case of large pots an inch. When settled down there will then be sufficient room for water, and sufficient opportunity to give a good drink at once—not watering again till the plant really wants it. One good watering in mid-winter will often suffice a healthy specimen plant in full leaf for two or three weeks; ten weeks later it may require one every day.—*The Field.*