

Notes on the Culture of the Vine, and on the Making of Wine. By DANIEL CLOETE, Esq. Member of the South African Institution.

*Communicated by the Wine Committee.**

1. THE mode pursued in the culture of the Vine in this colony, is perhaps better calculated for the exposed situations of most of the vineyards, and the violent storms of wind to which we are subject, than the system of training the vines on espaliers, as at Madeira, by which there is, moreover, a manifest waste of labor, without any improvement in the quality of the grape, which certainly in this colony is not inferior to that of Madeira. How far manuring vineyards may be considered essential in this colony, I cannot venture an opinion, but it is not a custom pursued at Madeira, from an idea that it increases the quantity but affects the quality of the wines.

2. Greater attention ought, in this colony, to be paid to the selection of grapes destined for the press, in order rather that wines of two qualities should be obtained, namely, a superior and inferior sort; than one mass of comparatively indifferent wine.

3. At Madeira, the grapes upon having obtained a proper degree of maturity, are cut and thrown into the receiving vessels for the purpose of being trodden, as long as any juice can be expressed from them, when the stalks and husks are collected

* Along with Mr. CLOETE's communication is the following extract from the Minutes of a Meeting of the Committee, held on the 10th February, 1830, and signed FRANCIS COLLISON, Secretary:

"Resolved, That the members present are sensible of the value of Mr. CLOETE's Treatise to the Public, and that the Secretary be requested to convey the thanks of the Committee, for the communication.

"Resolved, That the same be forwarded to the South African Institution, for insertion in the Quarterly Journal."

together and subjected to the pressure of a lever or common screw; the liquid thus expressed being mixed with the juice first obtained by mere treading; the whole of this liquid is allowed to pass from the vessel in which the grapes are pressed into another, through a basket or sieve, in such manner as to prevent any husks, seeds, or stalks, from escaping and remaining in the liquid about to undergo the vinous fermentation.

4. The liquor obtained in the foregoing manner is placed in vessels with *only* the bung-hole open, in order therein to undergo the required fermentation; the casks being kept constantly filled. When the fermentation ceases, the wine is racked off into other casks, wherein the second fermentation is carried on.

It is in my opinion desirable, that the casks in which the fermentation is to be carried on, should be previously well washed with French brandy; and that the casks into which such fermented liquor is racked off, be not only well washed with French brandy, but should contain a small quantity when the new wine is poured in.

The system pursued at Maderia, as described in the foregoing articles, differs very materially from the practice in this colony. It is and must be admitted that the grapes here are not inferior to those of Madeira, neither are they wanting in saccharine matter and flavor, the two essential requisites for the production of good wine. The evil must, therefore, be in the subsequent treatment of the juice, and undoubtedly arises only from the injudicious manner in which the fermentation is conducted, comprised in the following:

No regard is ever paid to the seasons, whether they prove dry or unusually wet; and thus whether the grapes contain the required quantity of saccharine matter or not; nor is art made to supply the defects occasioned by a wet season, the necessity of which I view as more important, generally, to the wines of this colony than those of Madeira, from the circumstance of at least two-thirds of the vineyards of this colony being situated in such low marshy lands, or in situations subjected to such continued dampness, that the effects of superabundant moisture (although the seasons may not, in reality, have been unusually wet), are thereby generally and annually felt; and the results are wines of very inferior qualities, without any effort being ever made to remedy the defects occasioned by such superabundant moisture, and consequent comparatively aqueous state of the grapes.

The remedies are extremely simple, and consist either in boiling down a quantity of the newly expressed juice into a syrup, and distributing this syrup in quantities proportion-

ed to the deficiency of saccharine matter in the grapes, or by boiling sugar into a syrup, or by throwing raisins or dried figs into the *must*; any of which admixtures should be applied previous to fermentation, and will tend materially to the improvement and body of the wine.

It will have appeared from Articles 3 and 4, that the expressed juice of the grape is subjected to fermentation in casks (if possible, brandy pipes) well washed with brandy, as being thereby freed from impurities which must otherwise deteriorate the quality of the wine. Their size is of course immaterial, but they should not be of the description commonly used in this colony, having their *heads or tops* entirely open (I mean the vessels called *kuipen*).

The use of these vessels must, upon reflection, appear extremely detrimental to the production of good wine, even to the most prejudiced minds; and I feel satisfied, that, to the operation carried on in them, is to be attributed the bad quality of Cape wines in general, and so long as that system is persevered in, wines of more flavor and body, or of better quality, cannot be expected.

It must be evident to every observer that when the mass of expressed juice, husks, stalks, &c. is subjected to fermentation in these open vessels or *kuipen*, that the husks, &c., during the fermentation, rise to the top, and becoming exposed to the atmospheric air, soon contract acidity, and almost immediately become putrid; the fermentation of the expressed juice during this time continues under this surface of putrid matter, with which, by the continued ebullition of the juice, every part thereof is in turn brought into contact; hence the liquor acquires a flavor which, under whatever term it may be called, is, in my opinion, that which has established the character so peculiar and so destructive to Cape wines.

The liquid having thus acquired a detestable taste from which it never can be properly freed, even under the most judicious subsequent management, is not the only evil which must result from the use of these vessels; for, by having so large a surface at once exposed to the atmospheric air, all the flavor which the wine might have acquired under a proper mode of treatment, is allowed to escape with the carbonic acid gas which is copiously disengaged during fermentation, and the wine is thus left with the taste acquired from the putrid matter with which it had been in contact, and, moreover, is deprived of any flavor the grape might have conveyed.

The following remarks, generally considered of minor importance, if attended to, would perhaps materially improve the quality of wines in this Colony:—

The examination of casks or other vessels, previous to being used for the vintage.

Constant attention to keeping casks filled, particularly when the wines are new. Putting fresh rags to the bung at each filling, as, from the evaporation which had taken place previous to each re-filling, the rag will have become dry and sour.

Neglecting to keep casks constantly full not only subjects the wine to deterioration, but is of considerable loss to the owner, by the progressive increase of evaporation proportioned to the space of liquid exposed to the air; further, the confined air in any vessel not kept full, admits a disengagement of the spirituous parts of the wine, which become vitiated and immediately generate acidity, which at first is communicated to the surface of the fluid, and shortly after to the whole mass.

Wines cannot too frequently be drawn or racked off, and thereby freed from impurities which must otherwise prove detrimental. There are periods of the year at which this operation becomes absolutely necessary, even to wines of a certain age, viz.:—When the vine begins to shoot,—when the vine blossoms,—when the grapes begin to ripen,—and when the fermentation of the grape takes place, at which periods a fermentation more or less sensible is always observable. I have noticed much improvement in wine, if in the operation of racking it be allowed to pass through a blanket or baize, being thereby gradually cleansed of much dirt, without actual fining, which latter operation always tends in some degree to weaken it.

The use of good brandies for mixing with wines, is of the utmost importance. The article generally known by the name of *Cape Brandy*, ought never to be used, even for washing the casks preparatory to the reception of wines; it is a spirit possessing every quality but that one likely to improve them; its empyreumatic qualities must alone condemn its uses. It cannot be expected that the Cape should produce brandies from the distillation of putrid husks, stalks, and lees, of a quality proper for wines, when even France with every effort that art can devise in the use of machinery for distillation, has not succeeded in producing from *such materials* a spirit entirely free from a smoky, burnt, and empyreumatic taste,—this is a fact acknowledged by all French authors who have treated on distillation.

Cape Town, 4th February, 1830.