

Mr. A. Payen, in his *Traité de la Distillation* (1861), page 166, says, speaking of grapes deficient in saccharine matters:—"If one had at his disposal a saccharine matter of cheap price, such as honey, raw sugar, molasses, or syrup of starch, it would be easy then to increase the proportion of alcohol in a wine of such nature, ameliorating at the same time the conditions of alcoholic fermentation."

Mr. Maumené, who is a strong partizan of the generalization of the practice of adding saccharine matter to grapes, says, in an article published in the *Journal de Viticulture Pratique* (1867), tome 1st, page 10:—"Why should the sugared wines have had adversaries? Why have they perhaps some yet? It would be hardly conceivable, having passed condemnation on themselves some years ago, in a somewhat amusing circumstance. Several of them had gravely solicited from the Executive, measures against these wines, which they represented as dangerous. His Excellency the Minister naturally enough took the question as a serious one, and asked from the plaintiffs to point out to him the characteristics by which the sugared wines could be distinguished from the natural wines. "There is none," answered the gentlemen in an unsuspecting fit of despair.

The Société d'Agriculture de France, in its public sitting of the 7th April, 1839, gave one gold and one silver medal to manufacturers of starch sugar as connected with the production of wine. I see quoted in a book now before me, the fact that in the Department of *La Cote d'Or*, one of the best vine growing sections of France, 75,000 kilogrammes (that is about 150,000 lbs.) of glucose were added to the grapes of one unfavorable year, and 34,000 kilogrammes to the grapes of a favorable year. The addition of alcohol to the wine when made, and found absolutely deficient or not strong enough for keeping or transport, although deprecated by some authors and practitioners, is also largely resorted to in France and under the surveillance of the authorities. But the effect is not exactly the same as in case of addition of saccharine matters to the must; in the latter case the addition may be called an *assimilation* of substances by the process of fermentation, while in the other case it may be said to be simply a *mixture*. The quality of the wine made with addition of saccharine matters, or of the wine to which alcohol has been added, is in direct relation with the qualities of the grapes and of the sugar employed; good if these are good, and, to a proportionate degree, passable if the conjuncts are passable; bad if they are bad. From all which precedes, it is easily concluded that the producing, making, purchasing and using of saccharine matters, in connection with the manufacture of wine, is a thing legitimately appertaining to the industry of vine-growers. The quantity of saccharine matter to be added to the must, when wanted, depends naturally on the strength already possessed. A good wine, generally speaking, ought to have from eight to fifteen per cent. of alcohol, and it is calculated that to raise the must of one degree of the glucometer, which practically represents about one per cent of alcohol, about three pounds of crystallized sugar or six pounds of glucose are required for every thirty (30) gallons of must. The number of degrees to be attained as representing the percentage of alcohol depends entirely on the natural qualities of the wine and on the condition of the must; because all the different elements of a good wine ought to be in harmony with one another. Some grapes will bear to receive an additional dose of saccharine matter, equal to six per cent of alcohol for instance, while other would be deteriorated by such a large addition of extraneous substance.

*Question 13.* Do you think that good ordinary wine or brandy can be made from grapes cultivated in Canada without any addition of saccharine matter?—I really cannot express an authorized opinion on the subject, not having cultivated grapes myself, and not having experimented on the must produced by grapes grown in Canada. I cannot say whether the Canadian wines, which I have oftentimes tasted, had been manufactured with or without addition of extraneous saccharine matters, or whether alcohol had been added to them after the process of fermentation; the question seemed to me to be whether these wines were absolutely good and wholesome, and on the whole, the product of our vines, the presence or absence in them of a certain amount of extraneous saccharine or alcoholic substance, being quite immaterial to the general question, as may be deducted from the opinions quoted in my next preceding answer.

*Question 14.* If it were a necessity to add certain amount of saccharine matter to the grapes raised in Canada to manufacture wines and brandies therefrom, do you think that the Cultivation of the Vine would be still profitable and otherwise desirable?—If it