

A parliamentary committee has since then recommended assistance, but no action of any kind has yet been taken, and in the meantime, myself and my friends have solved the problem, unassisted.

I am preparing the history of our efforts, and hope to publish it before many months; whilst in the meantime, both this country and Europe will be enabled to form an opinion of the quality of our productions, as the first produce of the Clair house vineyards will, before many months, be in the markets.

Wine is the antidote of Dyspepsia and Delirium Tremens—has even at the same time banished the use of spirituous liquors, and “made the heart of man glad.” It seems to be a necessity of the human organization. It awakens the forces of the stomach, and exercises an action of radiation upon the entire nervous system, and the complicated vital functions, and appears to be a beverage indispensable to man—being that which is the most easily obtained, the most agreeable, and the most generally appreciated, which is proved by the fact of the exclusion of all others within the climates where it can be produced. But in order that wine should be within the reach of all classes it must be produced of every quality and of every price. Good, ordinary wines are the only real basis upon which such cultivation can be established: for it must be remembered that, as for every other description of merchandise, poor consumers are the most numerous. Unlike most other productions, it is by no means a defined substance, presenting everywhere the same composition.

For some, it is a delicate beverage, the merit of which consists in the odour or “Bouquet,” in the unctuous and agreeable savour to the palate, much more than in the greater or less quantity of alcohol it contains.

For others, it is only a spirit, more or less diluted; and between these extremes, all tastes and necessities may be discovered.

But, in the wine-growing countries, the mass of consumers are poor; so are the ordinary wines the most numerous, and their value more easily appreciated. With regard to fine wines, you can discover no other criterion than the palate of the connoisseur, whose opinion will only be guided by an acquired taste, or by the fashions of the day.

A great number of questions present themselves to the wine-grower, in a new country, where no agricultural experience can guide him, and the problems he must solve are so complicated and so numerous, that I cannot at present discuss the Agricultural, Economical, and Commercial considerations necessary for relating to, or dependant upon—the success of so arduous an undertaking.

CONDITIONS OF SUCCESSFUL CULTURE.

I have previously remarked elsewhere that the great art of vine culture consists in planting and pruning—which can only be acquired by considerable practical experience. Pruning of any description, and there are five hundred different methods, is by no means arbitrary. Both that and the distance to be preserved in the rows (and the former is always regulated by the latter) must depend altogether upon the nature of your climate, the inclination of your land, and the vigour of the vine you propose to cultivate. As you approach the southern portion of the region, you must allow your vines to rise, and also extend the distance between the plants, which practice is based upon the vigour of the vine, which diminishes as you approach the North; for although in the South, it furnished the staircase of Diana's temple of Ephesus, in the North it would not produce the wand of a centurion.*

Independent, also, of latitude, altitude, or the inclination of the land, the nature of the vine itself must be taken under the most careful consideration. Certain varieties have a propensity to rise before bearing abundant fruit, and are generally to be found amongst the wild grapes of all countries, as the “Vignes de Treilles,” of France, and the “Pergulanes,” of Italy; and it is only from their horizontal branches, “Guerlande” that you can hope to obtain an abundant fructification.

The vigour of their vegetation, if allowed to run wild, will expend itself in wood branches and leaves, and if kept low and short, the same effects will be produced.

Monsieur De Gasparin, in his “Cours d'Agriculture,” vol. 4, page 667, exemplifies this doctrine in an interesting manner: “We made an experiment upon a vine from Corinth, brought home from the expedition of Morea, in 1828. Kept low for fourteen years, it produced a very small quantity of fruit, used only as samples. Having then been allowed to climb upon a neighbouring tree, it covered itself with fruit, and gave that year a quantity sufficient to furnish a ‘hoctolitre’ (25 gallons) of wine.”

I presume many persons in this country have remarked amongst the wild vines, that some prefer to climb to the summits of the highest trees, whilst others content themselves with spreading over brushwood. The same thing exists in Europe, and in a greater degree with the cultivated vines, (vitis vinefera,) whose natural propensities have become fixed habits, from many centuries of judicious pruning; and those varieties that have long been preserved low, would wear themselves out immediately if allowed to rise, or if the mode of pruning was materially altered. At the same time all varieties, if abandoned to themselves, produce an innumerable quantity of branches, and either perish or become wild within three years.

As the vigour of the vine varies according to the climate, and increases as it approaches the south, so (in the same proportion) does the distance between the plants extend itself—and the increasing evaporation of the vine makes it absolutely necessary to allow a greater cube of earth, so that the roots may extend themselves, and absorb the degree of moisture requisite for vegetation.

In our climate (including that of Lower Canada) I have planted in squares of four yards distance, and pruned accordingly, and I find I have by no means over estimated the nature of the climate, or the vigour of the plants. In Cincinnati they have estimated their climate and their vines according to the feeble vigour of an extreme northern limit, (Gormany) and plant at distances of two or three feet, pruning of course accordingly. By my estimate of their climate, I should judge at least eight yards as the distance to be preserved. Had they obtained the assistance of able and scientific wine growers from Europe; they would not have been groping for thirty-five years after (in my opinion) unsatisfactory results. But the ordinary labourers they have employed, and by whose advice they have been guided, however useful they might have been in their own climate, are hardly to be depended upon elsewhere, unless under a reasoned direction, and an experience newly acquired.

After deciding upon the distance to be preserved between the plants, and consequently upon the manner of pruning them, the next and the most important consideration for the vine-grower, in a new country, where he cannot be guided by agricultural experience, is undoubtedly the choice of plants. Before entering into many necessary details upon this very difficult question, I must first endeavour to explain the principles upon which are carried—on the manufacture of pure wines,—which, as a general rule, are difficult (if not impossible) to be obtained outside the limits of the region of the vine. It is an undoubted fact that the best French wines are sold in France, and bring there the highest prices. The value of those exported are more easily calculated, by the amount of alcohol they contain: I believe that Chateau Lafitte, or Chateau Margaux have never fetched less than ten francs a bottle (\$2.) and therefore all may judge how much of such wine may be obtained in this country.

The following analyses of some of these valuable wines, by one of the most able French chemists, Monsieur Faure, will show that such value can not be attributed to the amount of alcohol they contain:

BORDEAUX WINES.	
Alcohol	9 488
Tannin	0 112
Bisulphate of Potass	0 160
do of Iron	0 059
Inorganic Salts	0 022
Colouring Matter Blue	0 019
do Yellow	0 022
Water	90 053
	100 000

I find that Chateau Lafitte the most celebrated of those wines, contains only 8.70 of alcohol, and Chateau Martillac only 8.75. Their value, therefore, evidently consists in the organic salts of potassi, and of iron, and above all in the quantity of tannin they contain. It is necessary to endeavour to obtain an association of plants in a vineyard, that united, will furnish the kind of wine you desire to produce.

De Gasparin says: “If your wines are too sweet, and want ferment, correct them by planting vines that possess contrary qualities. If abundant in sediment, or likely to turn into vinegar, supply the deficit by planting vines possessing a great deal of tannin; and it is not only necessary to calculate the taste required, but also the degree of colour preferable to consumers.”

But I must, before going any further, say that in this country, the question of the greatest importance must be to use no vines whatever having (what has become almost a slang expression) a foxy flavour. That very disagreeable flavour belongs to almost all the grapes hitherto used in America, for the manufacture of wine. The Cattawba, Isabella, and Hartford Prolific are examples. The Clinton, the Delaware, and most of the wild vines of Canada, are altogether exempt from it, and with the Golden Chassalas, and other varieties which I shall afterwards examine, will ultimately, I doubt not, form the great basis of the future vineyards of this country, — I might say of North America. However, before entering further into details or minute calculations on this matter, I must endeavour to explain the great principles upon which the amalgamation of different varieties of grapes, and their metamorphosis, into wine consist.

1st. Almost all out-door grapes contain within themselves the material necessary for the production of wine, which are sugar, water, and free acids.

2nd. Only perfectly sound and ripe grapes, in the centre of the vine region, can furnish them in proper proportions; and even then only by a judicious mixture of several varieties.

3rd. The extreme southern portion of the wine region, furnishes an excess of sugar, with a deficiency of water, and of acids.

4th. The extreme northern limit (being the portion where Indian corn ceases to ripen), holds an excess of acids, being at the same time deficient in both water and sugar.

In the northern portion of the wine region, more than thirty per cent. of sugar is rarely produced, by the most sugar producing varieties of the grape, inferior varieties in the same region often producing only eleven per cent. In the southern portions of the region, fifty per cent. is no uncommon production, and the Island of Cyprus furnishes grapes producing eighty-four per cent. Indeed it is this propensity of the southern grape to produce sugar at the expense of its acids and organic salts, that prevents wine of any value being made to the south of the forty-fifth (45th) degree of north latitude. And very often it can not be made at all from these grapes, for the reason that they do not contain sufficient ferment to effect any change in their juices, preserved from fermentation by the saccharine matter with which they are over-charged.

The Tomato.

The tomato is a native of South America, and was introduced into England as early as 1596. For a long time it was cultivated only for the ornamental appearance of the fruit, it being a common notion that it was not only unwholesome as an article of food, but absolutely poisonous. For this latter supposition there was some reason in fact, as the plant contains more or less of the poisonous principle which pervades the whole family to which it belongs. This family or group of plants is the Solanaceae, and we have already mentioned the potato as one of its members. Any one who calls to mind the leaves, stems and flowers of both the potato and the tomato will perceive a marked resemblance between these two plants. Not only are they alike in appearance, but they are alike in this, that they contribute largely to the comforts and wants of man. But their methods of making these contributions are very different. In the potato a large supply of starch is stored up in an underground stem; in the tomato, the fruit becomes fleshy, and is highly nutritious and wholesome. In the tomato there are no underground stems, nothing but roots below the surface. In the potato, the fruit, or ball, does not become fleshy and edible. Nature has a multitude of ways in which she subserves the wants of man, and it is very interesting and instructive to study them. The poison which exists in the tomato is so small in quantity that it becomes dissipated by cooking or by the ripening of the fruit.

The tomato first began to be used as an article of food in Italy, afterwards in France, and finally in England. In this country it has come into general use within the last twenty years. Previously it rejoiced under the name of love-apple, and was grown by housewives only to be looked at. To nearly every one the flavour of the fruit is at first disagreeable, but there are few who do not soon become accustomed to it and esteem it one of our best garden vegetables.

The botanical name of the large garden tomato is Lycopersicon esculentum. The first literally means wolf peach, referring to the fine appearance of the fruit and its supposed deceptive character. The latter name refers to the esculent or edible fruit, and came into use much more recently than the former. The small, cherry tomato, sometimes cultivated for pickles,

*Flay, Book 14, Chap 5.