

wines in Canada. And, inasmuch as the extensive Cultivation of the Vine would offer a new field for industry in Canada, inviting capital and a class of immigration for which, without it, we cannot hope; and, inasmuch as I believe that a pure and wholesome native wine would be welcomed by the people of Canada as a moral and commercial benefit, I cannot but think the Cultivation of the Vine and the manufacture of wine most desirable.

D. W. BEADLE, Esq., of St. Catharines, President of the Canada Vine Growers' Association, examined:—

*Answer to Question 18.*—I have been engaged in the Cultivation of the Vine at this place for nearly fifteen years, and have taken a deep interest in the progress of vine culture in Canada, during that period. The first attempts were made with the Catawba and Isabella, the former ripening its fruit only in most favored localities, and the latter also ripening too late to be of any value in a large part of the country. For a long time these were the only varieties we had, but the introduction of other sorts more suited to our climate, as the Clinton, Concord, and the Delaware, gave a new hope to the cultivators of the vine, and now, within the past few years, efforts have been made to make wine from these varieties of grapes, and these efforts have been favored with a good degree of success. I have seen and tasted wines made by several gentlemen in this place, wines made under great disadvantage for want of the skill which experience alone can give, and the conveniences requisite to the highest success. I have also seen and tasted wines made at Grimsby, Beamsville and Hamilton, and at Amherstburgh, all made by those that may be termed amateurs. I have also visited, frequently, the establishment of the Canada Vine Growers' Association, at the Village of Cooksville, where the manufacture of wine is carried on by skilled labour, and the vine is cultivated to a larger extent than at any other establishment in Canada. I have also visited the vineyards and wine cellars on the islands in Lake Erie, known as Put-in-Bay and Kelly's Islands, also the vineyards and wine cellars at Hammond's Port, belonging to the Pleasant Valley Wine Company, in Steuben County, N. Y., and have at these places carefully examined their systems of Cultivation of the Vine, and their method of manufacturing wine and brandy.

*Answer to Question 19.*—I have never visited the Continent of Europe and can therefore speak only from information derived from sources other than personal observation; but the testimony of those manufacturers in the United States who are acquainted with the grapes of Europe, is to the effect that our grapes have some advantages over those of Europe, particularly in this, that they possess more flavor and are richer in acids. Mr. Husmann, in his able little treatise upon the vine and the manufacture of wine, boldly claims a superiority in our grapes, that is, in the grapes of America, for the manufacture of wine, over those of Europe.

*Answer to Question 20.*—It is necessary to use extraneous saccharine matter in the manufacture of wine whenever the acids bear an undue proportion to the saccharine matter and aqueous portion of the grape, and the proportion of saccharine matter required to be added will vary with the varying relations of the acids, sugar, and water present in the juice of the grapes. The use of extraneous saccharine matter is the result of the labours of a distinguished European chemist, Dr. Gall, who sought to find some method whereby the vintages of inferior seasons might be improved, and the wines brought nearer to the standard of a favorable year. He ascertained that grape juice, which made an excellent wine, contained 262 pounds of sugar, 5 pounds of acids, and 733 pounds of water in every thousand pounds of grape juice; and that, whenever, from an unfavorable season, the proportion of acids became greater than six pounds in a thousand of juice, the wine was too acid and inferior in quality, just in proportion to the excess of acids; and that by adding extraneous saccharine matter, dissolved in water, to the grape juice so that the proportion of sugar to the acids and the water shall be as 262 of sugar, 5 of acids, and 733 of water, the wine was again of excellent quality. As I have already stated, the grapes of America are richer in acids and flavors than the grapes of Europe, and particularly is that true of the grapes that have thus far been experimented with in Canada. The Clinton grape, which is the variety most extensively used in Canada in the manufacture of wine, and which contains more sugar than any other grape grown here, is also so very rich in acids that there is usually from ten to fifteen pounds of acids in every thousand pounds of juice. In order to bring the proportion of acids, sugar and water, to the proper standard, it is necessary to ascertain by the saccharometer the proportion of sugar in the juice, and by the acidimeter,