

Agriculture of the United States  
in 1860  
Compiled from the Eighth Census  
U.S. Government  
Pages CLiX to CLXiii

(Note – spelling and punctuation in this document is exactly as it is in the original document.)

## Vineyards and Wine Making in the United States

In the first settlements on this continent, the grape-vines found indigenous, were esteemed among the most valuable productions. In “Force’s Collection of Historical Tracts” – 1620 to 1760 – frequent allusion is made by the writers to our native grapes and to the wine made from them. According to Sir John Hawkins, wine was made in Florida in 1564. A vineyard was established in Virginia in 1620, also in 1647. In 1652 premiums were offered in Virginia for the production of wine. In 1664 a vineyard was planted near New York by Paul Richards, and in 1683 and 1685 attempts were made at Philadelphia but failed. At a later period Mr. Tasker, of Maryland, and Mr. Antil, of New Jersey, were more successful. These, however, were mere experiments. There is no evidence that wine was produced in any quantity worth naming, until the close of the last and the beginning of the present century. About this period vineyards were planted in various parts of the Union, near the cities of New York and Philadelphia; near Lexington and Blasgo, Kentucky; Cincinnati, Ohio; Vevay, Indiana; York and Harmony, Pennsylvania; Baltimore, Maryland; and in some parts of North and South Carolina, Georgia, and Virginia. These plantings were generally in small vineyards of one to five acres, and, unfortunately, most of them with foreign grapes which, proving to be unsuited to our climate, resulted in failures. Those who planted with native grapes did better. In North and South Carolina the “Scuppernong wine” from a native grape soon became famous, and was praised as a home production worthy of American patronage.

AT Vevay, Indiana, Dufour and his Swiss settlers adopted the “Schuykill Muscadel”. a Pennsylvania grape, then erroneously called the “Cape”. This grape was grown to suit the climate, and made a red wine, that soon acquired a fair reputation , and laid the foundation for wine-growing in the west, with the better varieties that succeeded it.

The celebrated traveler, Volney, “tasted wine made from native grapes at Gallipolis, Ohio, in 1796”, and Dufour, in 1799, “found a Frenchman at Marietta, Ohio, who made a few barrels of wine every year from grapes collected in the woods, equal to the wine made in several parts of the United States that I visited in 1794, were found worthy the name of vineyards”. “I went to see all the vines growing that I could hear of, even as far as Kaskaskia, on the Mississippi, where I was informed the Jesuits had planted a vineyard shortly after the first settlement of the country, but that the French government had ordered it to be destroyed, for fear that vine culture might spread in America and hurt the wine trade of France”. “I found only the spot where that vineyard had been planted, in a

well-selected place on the side of a hill, under a cliff to the northeast of the town. No good grapes were found there or in any gardens of the country”.

Dr. Daniel Drake, in an address on “The Early Physicians, Scenery, and Society of Cincinnati” states that “Third street, running near the brow of the upper plain, was on as high a level as Fifth street is now. The gravelly slope of that plain stretched almost to Pearl street. On this slope, between Main and Walnut, a French Political exile, M. Mennesieur, planted, in the latter part of the last century, a small vineyard. This was the beginning of that cultivation for which the environs of that city have since become so distinguished. I supposed this was the first vineyard cultivation in the valley of the Ohio”. The well-known naturalist, F. A. Michaux, in his travels through the United States in the foreign mildew”. The foregoing extracts afford a fair sample of the pioneer efforts in vineyard culture in the west; they were much like those in the east, and wherever foreign vines were planted disappointment and loss resulted. In the south, owing to its genial climate, the experiments were more successful, but most so with native vines. In 1812 I was first cheered by the sight of a vineyard. It was on the south side of a hill at Rapps German settlement of Harmandy, in Butler county, Pennsylvania. The grapes planted were principally native varieties, the most of them “Schuylkill”. five years later I visited the vineyard of the Swill colony, at Vevay, Indiana, where the same grape was the favorite. At the former the vines were planted in 1808, at the latter in 1806. The product was a red wine, resembling claret, but rather too harsh for the American palate. Still it was received with favor as a home production, giving promise of great results in the future.

I now come to a period when the second class of pioneers in this cultivation were more fortunate than their predecessors, and with other grapes, produced better wines. About the year 1820 Major John Adlum, of George town, D.D., first brought the Catawba into notice as a wine grape, and Thomas McCall, of Georgian, Mr. Herbemont, and other gentlemen of the south, the Warren, Herbemont, Madeira, and other varieties which have since proved so valuable.

To Major Adlum belongs the honor of introducing the Catawba, and so high was his appreciation of this grape that he wrote to Mr. Longworth, of Cincinnati, that he believed he had conferred a greater favor on his country than if he had paid off the national debt; in which, after a trial of the grape for wine, Mr. Longworth agreed with him.

The memory of the late Nicholas Longworth, of Cincinnati, will ever be held in the highest esteem by the wine-growers of our country, as he was the father of successful vine culture in the west. By a large expenditure in money in his various experiments with both foreign and native grapes, during a period of forty-three years, he at last succeeded in producing sparkling and still wines highly creditable to himself and the county, and the practical knowledge he acquired from year to year was liberally made known through the public prints for the benefit of all.

The late John J. Dufour, of Vevay, Indiana, is also entitled to the grateful remembrance of the people of the United States for his early and persevering efforts in the cultivation of the vine in this country of his adoption. For thirty years succeeding the introduction of the Catawba grape, the large emigration of Germans into the Ohio valley, many of them from the wine districts on the Rhine, furnished practices and willing vine-dressers, who were glad to have the opportunity of trying their skill in this new county with a grape so promising. Numerous vineyards were planted in the western States, in localities supposed to be favorable, especially in the vicinity of Cincinnati, and in 1850 Catawba wine, produced in hundreds of thousands of gallons, had acquired a high reputation as a rival of Rhenish wine, and became an article of export to our eastern cities. The cultivation had spread over all the western and southwestern States, and we thought then as we do now, that wine-

growing would eventually be ranked amongst our most important agricultural interests. This the next generation may possibly realize.

Vineyard culture in the United States may now be considered as fairly established. Wine is made in thirty of the thirty-four States of the Union, of different qualities of course, and with varied success. As to its future production in quantity, I should name, first California; second, the mountainous districts of the southern States, as most favorable on account of the climate; third, the Ohio and Mississippi valleys; fourth, the middle States; and last, the eastern. As to quality, the best samples have been found in Georgia and the Ohio valley. The impression is that in the middle and eastern States the climate is too cold to elaborate sufficient saccharine matter in the grape to make a wine that will keep without the addition of sugar. But this may prove a mistake – new varieties may yet be produced to suit each section of our country where the grape is grown. They are now numbered by hundreds, and new hybrids are annually added to the lists. After all our experience during the last seventy years, vine culture in the United States is but yet in its infancy, and we have much to learn. The few millions of gallons which we produce annually, are as nothing when compared to the nine hundred millions of France, or the three thousand million of all Europe. The vineyards of Europe are estimated at twelve millions of acres. We have far more grape territory than that in the United States; but our climate, with the exception of California, is less equable. In California alone, it is stated, there are five millions of acres well adapted to grape culture. Here is something to reflect upon, and to give hope for the future.

### Cultivation

Vineyards are usually planted on hills, or rolling uplands; such positions are chosen on account of the natural drainage, which is considered essential. Porous soils are preferred to stiff clay, or such as are retentive of water. No trees should be permitted to grow within one hundred feet of the vineyard, nor should any crop be cultivated in it, as the vine is selfish plant, and demands all the ground for its own use. The ground is prepared for planting by trenching with the spade two feet deep, or by breaking up with a subsoil and common plough 18 to 20 inches; the latter is much the cheapest, and always adopted where the situation of the vineyard permits. In planting the vines, the distance apart in the rows appears to vary in different localities. Around Cincinnati and in the Ohio valley, 3 by 6 is the usual distance; on the shores of Lake Erie, 6 by 8, and 8 by 8; and in California, 8 by 10 is recommended as the proper distance. The object in this country, where labor is dear, is to cultivate with the plough where it can be used, and to avoid the spade, which is expensive. Vineyard-planting is a system of dwarfing the vine, but with our long-jointed and rampant-growing native vines it may be an error to plant too close, or to prune too severely. Our European vine-dressers, accustomed to short jointed vines, naturally fall into that error here, but they are now correcting it.

The method of training also varies with localities. In the Ohio valley and the southern States the single stake to each vine, and the bow system, is adopted. On the lake shore and in California, the trellis is used, the vines being trained on it horizontally.

The estimated average annual yield of good vineyards in the west is about that of France—200 gallons to the acre. In the south they claim 500, and in California 800; these latter I consider too high. A bushel of grapes—fifty pounds—will make three and a half gallons of good wine, and a half gallon inferior. In a mere sketch like this article, it is only intended to impart general information on the subject of which it treats; the reader is therefore referred for special directions as to setting out the vines, spring and summer prunings, cultivating the ground, and securing the crop, to the several treatises on grape-culture and wine making recently published. But I may remark, in brief, that a free exposure to the wind, with the bunches of grapes sheltered from the hot sun by the leaves of the vine,

tying neatly to the stake or trellis, a judicious shortening in the superfluous branches, and the keeping the ground cultivated and free from weeds, is considered essential.

*Disease, insects, and frost.*—The grape, like other fruits, has its enemies. The most destructive of these is the mildew or rot. Was it not for this disease the Catawba would be immensely profitable; but of late years, in the Ohio valley, it has destroyed from one-fifth to four-fifths of the crop in many vineyards, and discouraged some persons from planting that fine grape. A sudden change of weather from hot to cold when the vine is in rapid growth, and the seed in the berries about hardening, is sure to produce rot. A free under-drainage—either natural or artificial—and a full exposure to the wind, will in part prevent it. No system of pruning or cultivation has yet proved a sufficient remedy in vineyards. Vines trained against the side of a house, and under cover of the eaves, seldom, if ever, rot. The disease probably results from atmospheric causes, as the rust in wheat.

Insects have not as yet been found very injurious, but the careful vine-dresser will watch closely, and permit none to get colonized in his vineyard. The frost in some localities kills the young shoots of the vine in April, or early in May, but the twin or latent bud will put out, and yield about half a crop. To prevent serious injury by hail, let the bunches of grapes be well sheltered by the leaves of the vine, which will also prove a protection from the hot sun.

## VARIETIES OF GRAPES FOR THE VINEYARD

These are now quite numerous, and every year adds more to the list. It will only be necessary to name a few of the most popular varieties, and—

1. *Catawba*.—Nine-tenths of all our vineyards in the west and southwest are planted with this fine grape. With all its liability to rot, it continues a favorite.

2. *Delaware*.—This hardy and delicious table grape promises to rival the Catawba for wine. It is becoming popular with some of our best cultivars. The wine is light and delicate, and preferred to the Catawba by many good judges. The Delaware is less subject to rot than that variety.

3. *Herbemont* makes an excellent wine, but the vine is not hardy enough to be much planted.

4. *Norton's Seedling*.—A hardy, free growing vine, but little affected by rot, makes a rich red wine like Burgundy, and is becoming quite popular.

5. *Schuylkill*.—This old favorite of sixty years ago is now but little planted. The wine resembles claret when well made, but the vine bears light crops. It is almost free from rot.

6. *Isabella*.—Another favorite of former years that is now but little cultivated for wine. It is deficient in saccharine matter to make still wine that will keep without adding sugar to the must or juice; but the sparkling wine from it is delicious.

The Concord, Hartford Prolific, and some of Rogers's hybrids, appear to suit our climate, and to be free from disease, but are not yet fairly tested for wine. Grapes of recent introduction in high credit for northern cultivation are the *Iona*, and *Adirondack*, native of the State of New York, and the *Creveling*, a native of Pennsylvania. In the south, in addition to the Catawba, the Warren is largely cultivated, and the Scuppernong still holds the reputation it acquitted sixty years ago. Other varieties are being tested which it is unnecessary to enumerate here. The varieties in the vineyards of California are said to be foreign or of foreign origin. I have no means of describing or even naming them.

## WINE MAKING

The process is as simple as making cider. The bunches of well-ripened, selected grapes, are mashed by passing through a pair of wooden rollers in a small grape-mill, or by a beetle in a barrel;

then poured into the press and the juice extracted. This “must,” as it is termed, is put into a clean cask to ferment. A few inches of space is left to allow room for fermentation, and a tin siphon is placed tight in the bung-hole, with one end in a bucket of water, through which the carbonic acid gas escapes, thus preventing a contact with the air from injuring the new wine. In ten days or two weeks the fermentation ceases; then fill up the casks and drive the bungs tight. In March rack off the wine into clean casks. A second but slight fermentation will take place in May, when the bungs should be loosened until it subsides; then fill up the casks and tighten the bungs. The wine is now free from the air by filling up the casks and tightening the bungs every two or three weeks. So important is this, that in Europe they have a quaint proverb; “A man might as well forget to kiss his wife on coming home, as to leave a vacancy in his wine-cask,” implying that the omission would turn both sour.

From the refuse grapes, and the last pressing of the good ones, and inferior wine is made by the addition of sugar, and sold at half price. The lees of the wine and the pomace of the grapes are distilled for brandy, which, in three or four years, compares favorably with foreign.

The pride of the wine-grower is to make a good *natural wine* from the pure juice of the grape, without the artificial appliances of sugar or spirits. And, if this “must” or juice of the grape, without the artificial appliances of sugar or spirits. And, if this “must” or juice weighs over 80° (or 1.080) by the areometer or saccharine-scale, it will do so ; if not, then loaf sugar, dissolved in water, must be added before fermentation. Catawba “must” averages 86°; Isabella, 72°. This is the product of the wine farmer who only makes “still wines.”

Sparkling wines are made by the wine merchant or vintner, who purchases the new wine before its second fermentation, fines and bottles it, and, by placing it in deep, arched sub-cellars, usually twenty-five feet under ground, and letting it remain there from fifteen to eighteen months, is enabled to prepare it for market, with the fermentation principle so subdued as not to endanger the bursting of the bottle. Sirup of rock-candy is added to sweeten it, and sometimes a spoonful of brandy to each bottle, to strengthen it. To make this wine right and profitably requires a large capital, and liberal outlays in preparation. This showy and popular wine sells for about double the price of still wines. The great art in making *good* wine is to have the grapes well ripened, and all unripe or imperfect berries picked from the bunch before pressing. The press casks, and vessels should be perfectly clean. Then, with a good cellar, and the casks kept bung-full and tight, there is no danger. The grapes are not stemmed, the *tannin* in the stems being useful in clearing the wine.

To the forgoing views of Mr. Buchanan, we add the following statement of ex-Governor Downey, of California, on the culture of the wine in that State ;

“In the tier of counties extending south from Santa Cruz to the Mexican boundary the grain crop is precarious, the seasons being uncertain, and the wheat subject to rust. Stock-raising and the culture of the vine are the chief employment of the husbandland. The number of vines now bearing in this State is about 4,500,000, and, if well attended, these will yield 4,500,000 gallons of wine; the capacity of our State for this product is beyond conception. The counties of Los Angeles and San Bernardino have now 2,000,000 vines; with increased supply of water for irrigation, they could be increased to 30,000,000. The grape generally cultivated, and as yet the best adapted, is that introduced by the Catholic missions. It is the same that is in general use in Spain, Madeira, and the Canary Islands, from which springs *Xerez*, or Sherry, and Madeira, or Teneriffe, altered somewhat by the change of climate and soil. There is less change in the process of wine making than in any other branch of modern agriculture, the same old process used hundreds of years since being yet followed by many, with as much advantage as by any modern innovation ; and it is as simple as by a cider-mill

and press. Our vines, up to the present, are free from disease. The average yield of a well-attended vineyard is 1,000 gallons to the acre, and the vine will bear vigorously until it reaches sixty years of age. One hundred acres of vineyard can be planted, the ground prepared, and attended with as little cost as the same extent of land planted in tobacco: deep ploughing once or twice, harrowing, and laying off the rows six feet apart each way. The cuttings are about two feet long, planted with aid of a crow-bar, and from four to six inches left above the surface. The third year will produce, and at the age of six years, produce profitably. The first year we irrigate frequently, in order to assist the rooting of the vine, and thereafter once or twice annually, according to the soil or relative moisture. I am induced to make these lengthy observations on the simplicity of vine culture from the fact that many are led to believe, from the dissertations and reports of agricultural societies, that the work of planting a vineyard on anything like a large scale must be a Herculean task. They suggest deep spading, (three feet,) and various composts, and a thousand and one fertilizers as adjuncts, which may, in their localities be necessary, but surely not in California, and it is very doubtful if they are in the vine region on the Atlantic side of the continent. Our process of irrigating is a never-failing source of fertility; and destroy, in a great measure, all insects and larvae. It is this natural irrigation of the valley of the Nile that has made it yield its successive crops, from the remotest antiquity, without exhaustion. In the connexion, I would suggest to our farmers and gardeners in the older States, that when practicable, they should have one field at least that could be irrigated.”

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