

July 22, 1982

Bureau of Alcohol, Tobacco & Firearms
Washington, D. C. 20226

ATTENTION: Mr. Thomas George

Dear Mr. George:

We are requesting your consideration in being established as the
"Hermann Viticultural Area".

We are submitting the following evidence:

Report on soils of the area
Historical Evidence
U. S. G. S. Maps

Present wineries in the area in existence:

Bias Vineyards & Winery, Inc., Berger, Mo.
Hermannhof Winery, Hermann, Mo.
Stone Hill Wine Co., Hermann, Mo.

There are 102 acres of grapes growing in this area.

Thank you in advance for your consideration in this petition. If you
need additional information, please advise.

Sincerely,

Bias Vineyards & Winery

Stone Hill Wine Co.

9
[Redacted]
Jim Bias
President

[Redacted]
Jim Held
President

A REPORT ON THE SOILS OF A PROPOSED "HERMANN VITICULTURAL AREA"
IN NORTHEAST GASCONADE & NORTHWEST FRANKLIN COUNTIES

Robert J. Held, Soil Scientist, SCS, USDA
Party Leader, Franklin County Soil Survey

The area under consideration is bounded on the north by the Missouri-Pacific Railroad, on the east and southeast by Big Berger Creek, and by the Gasconade River and its tributary, First Creek, on the west and southwest. The south boundary is designated as the line separating Townships 44 and 45N.

This report will discuss arable soils of the uplands in the proposed district. Steep stony soils, and those which are shallow or moderately deep to bedrock are omitted from the discussion. Also excluded are soils on alluvial flood plains and stream terraces, where spring frost hazard normally precludes profitable grape culture.

Detailed soil maps have been completed for the Franklin County portion of the area. Information for the Gasconade portion was obtained from soil maps made for cooperators of the Gasconade Soil and Water Conservation District, by field reconnaissance, and by extrapolation from the completed Franklin work.

In the category under discussion, soils of the Menfro, Crider, and Minnith series are dominant. Of lesser extent are soils of the Union, Marion, and Bucklick series.

The deep, well drained Menfro soils formed in deep aeolian deposits (loess) on upland ridgetops and side slopes within a mile or two of the Missouri River floodplain. Typically, they have brown silt loam surface layers and dark brown silty clay loam subsoils. The substratum, extending to 60 inches or more, is brown silt loam.

The deep, well drained Crider soils formed in 20 to 40 inches of loess and the underlying clayey materials. Typically, they have brown silt loam surface layers and brown silty clay loam upper subsoils. The lower subsoil is reddish brown silty clay loam. Like the Menfro soils, Crider soils have high available water capacity and no restrictions to root development.

The deep, moderately well drained Minnith soils formed in about 30 to 40 inches of loess and the underlying loamy materials weathered from sandstone. They occupy areas downslope from sandstone cliffs and outcrops. Typically, they have brown silt loam surface layers, dark brown clay loam subsoils, and loam substrata. Available water capacity is moderately high and there are no restrictions to root development.

There is considerable contrast between the pattern and proportion of soils in the proposed district and that of the area immediately to the south. Menfro soils do not extend to this boundary, while Crider and Minnith soils become minor in extent to the south of it. The Union, Marion, and Bucklick soils, of minor extent in the proposed district, are much more extensive to the south of it. The moderately well drained Union soils have fragipans that restrict root development below depths of about 30 inches. Root development in the poorly drained Marion soils is restricted by excess water and clayey subsoils. Bucklick soils have bedrock at depths of 40 to 60 inches.

HERMANN WINERIES from "Western Horticulture Review" November 1, 1852

Awards on wines went to:

Mr. Adam Vallet (Beard's)	Henry Rasche
Mr. Frederick Fricke (Hugo's father)	C. Kneisel
Mr. Michael Poeschell (Stone Hill)	Casper Greis
Mr. Jacob Rommel (Bottermuller House)	John Siedler
George Ackermann	G. Gronman
Matthias Klink	Jacob Donyer

Also, mentioned wines bought from Longworth and Zimmerman

This summer (1852) there were 473 acres in vineyards near Hermann, more than half of which is in bearing. At this time there were twenty or thirty acres near Washington. Hermann's list came from Charles Eitzen.

From "The Arts and Architecture of German Settlements in Missouri"
by Charles van Ravenswaay - Page 255

By 1865 the wine industry had become so lucrative that local (Hermann) vintners excavated massive caves for storing and aging their wines.* Generally these wine cellars were barrel vaulted with brick or stone. Many residents who produced only a limited quantity of wine built wine cellars as subbasements to their homes.

* The design, construction, and cost of a large wine cellar built at Hermann about 1865 for George Husmann is described by Husmann in his "The Cultivation of the Native Grape and Manufacture of American Wines," pp 133-35. The Husmann cellar was designed to be 100 feet long, by 18 1/2 feet wide inside, and 12 feet high under the middle arch. This will be divided into two compartments. This cellar will, at the present rates of work, cost about \$6,000.00.

From Connie's "A-C Centennial" issue

E. Rhodius shipped grape cuttings to France. In 1882 Stone Hill Wine Company purchased several hundred thousand pounds of grapes from local grape growers. In addition, grapes from Stone Hills own vineyards.

Wine Cellars around Hermann

Harrison	Gentner House
Locher	Stone Hill
Brandenburg	Hermannhof
Petrus	Beard
Judge Faerber	Klenk
Wissmath	Foot
Streck	Cooperage
Virgil Fricke	Bert Robertson
Kemper-Horace Hesse	Streley House
Sohns	

Taken from "The State of Missouri" 1904
by Walter Williams
p. 388 Gasconade County

It produces more wine than any other Missouri County. Along the Missouri River loess lands favor fruit raising: Every farmer grows grapes sufficient for home wine, and Hermann is the location of Stone Hill Wine Cellars, largest East of California.

From "The German Settlement Society of Philadelphia"
by Wm. G. Bek - p. 154

From these small, determined beginnings the wine industry rapidly grew, outstripping all similar undertakings, not only in Missouri, but in the entire stretches of the great Missouri Valley.

p. 151

The Missouri State Labor Bureau issued this statement: "Missouri for 1904 shipped a twelfth of the wine placed on the market by all states". According to this same report, the surplus number of gallons of wine Missouri produced is 3,068,780 gallons. Of this quantity Gasconade County alone furnished 2,971,576 gallons. Almost all of this amount was produced at Hermann, or its immediate surrounding county districts. (This information was taken from "Annual Report of the Bureau of Labor of Missouri for year ending November 5, 1905 p. 21).

Taken from "Hermanner Volksblatt for October 27, 1905
Bek listed the following people in the wine business at Hermann:

Pioneers - Michael, Wilhelm (at Harrison's) and Melchior (Locher's), Poeschel, Franz Langendoerfer (Virgil Fricke's), Jacob Rommel, Sr. (Bottermuller's), George Hussmann, Strecker, Vallet (Beard's), Grein and others. Among the later and present promoters were Fleisch, Eberlin, Vogt, Hundhausen, Henze, Franz and Jacob Kuhn, Mueller, Petrus, Weydemeyer, Puchta, Loehring, Rhodius, Sobbe, Jacob Rommel, Jr., Sperry (Foot) and others.

From "The Hermann Centennial" published in 1936

Mr. Jacob Fugger introduced the first grapes "Isabella" in 1843
Mr. H. W. D. Wiedersplecher introduced Virginia Seedling.
Also listed award for wine made by Mr. Riefenstahl.
Mr. Poeschel settled in Coles Creek area and with Mr. John Scherer started wine making in Hermann area that later became Stone Hill Wine Co.

1847

1912

65th Anniversary

**Stone Hill
Wine Co.**

Wine Growers

... and ...

Brandy Distillers

HERMANN, MISSOURI

HISTORY.

Our winery and business were established in the year of 1847 by Michael Poeschel, and was known from then until 1861 by the name of its founder.

From 1861 until 1878 the business was conducted under the style of M. Poeschel & Scherer, it being a partnership and John Scherer became the partner of Michael Poeschel.

In 1878 M. Poeschel and John Scherer sold the greater part of their interests to their two managers, Wm. Herzog and Geo. Stark, who became partners and the firm was thereafter known as M. Poeschel, Scherer & Co.

In 1883 Wm. Herzog and Geo. Stark became the sole owners and these partners continued under the new name of Stone Hill Wine Co.

In 1893 Wm. Herzog withdrew and Geo. Stark was the sole proprietor, continuing under the same style.

In 1898 the Stone Hill Wine Co. was incorporated under the Missouri laws, with a paid up capital stock of \$225,000.00.

Geo. Stark and his sons, Ottmar G. and Louis J., are the owners and directors and under their management, the business has grown steadily and rapidly.

All our vaults are underground, the hills being tunneled from one side to the other, and all entrances from the outside are on a level.

1847



MICHAEL POESCHEL

FOUNDERS

1878



JOHN SCHERER

1878



WM. HERZOG

SUCCESSORS

1893

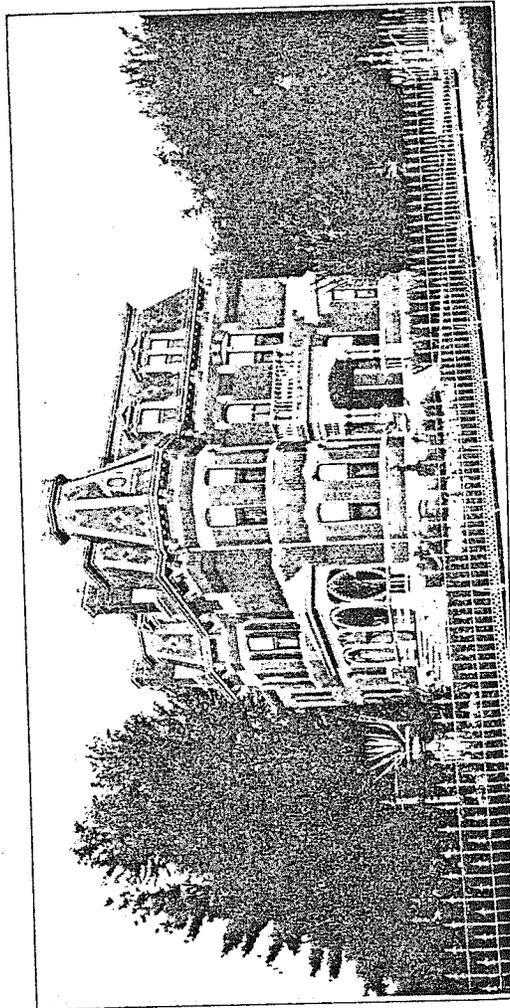


GEO. STARK

Our Present Officers,
Geo. Stark and His Sons.
1893—incorporated 1898.



GEO. STARK, President,
OTTMAR G. STARK, Vice-President,
LOUIS J. STARK, Treasurer.

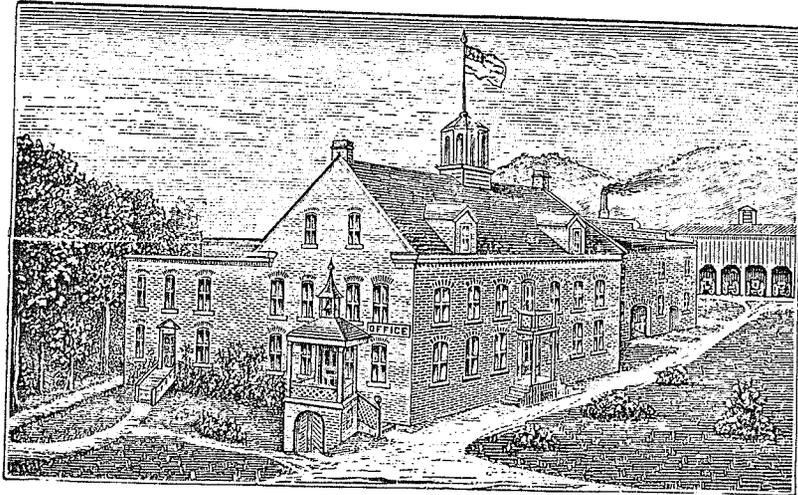


Residence of our President, Geo. Stark.

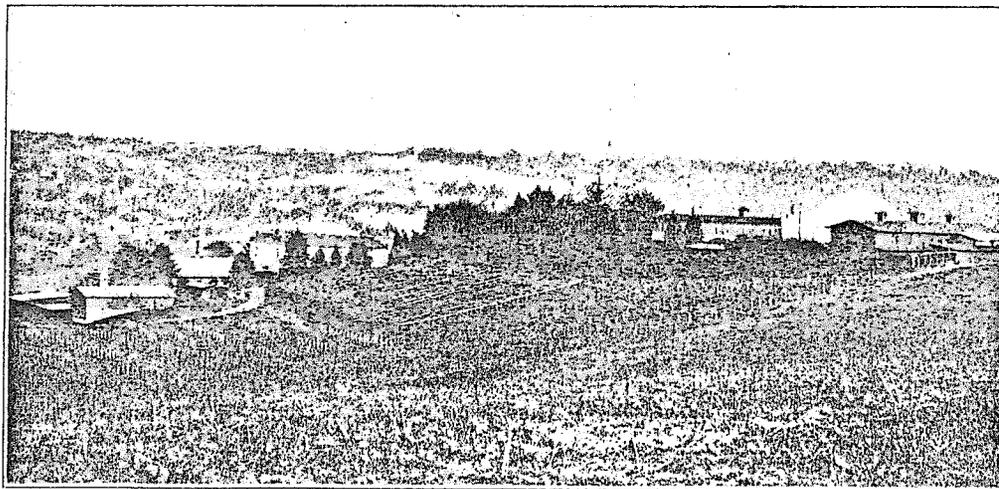


GOLD MEDALS AWARDED US AT WORLD'S EXHIBITIONS

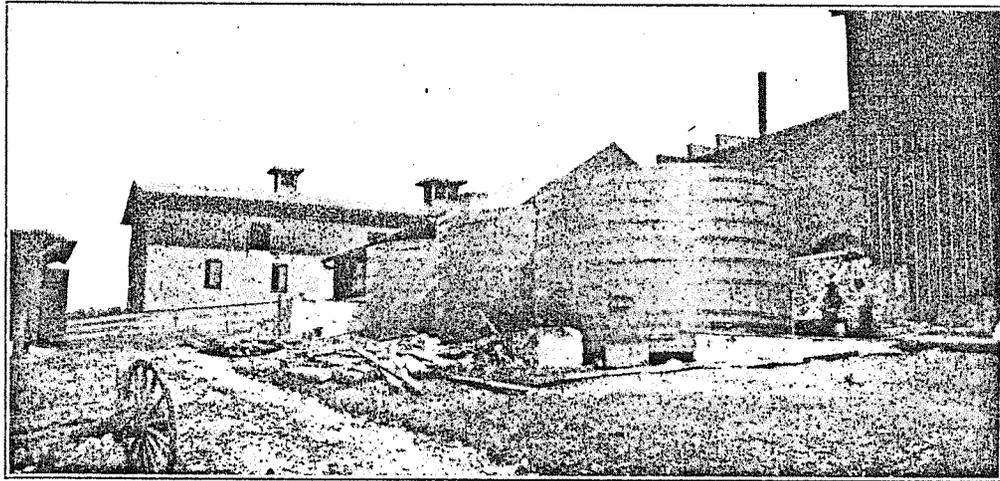
- 1873 Vienna, Austria.
- 1876 Philadelphia, Pa.
- 1878 Paris, France.
- 1885 New Orleans, La.
- 1889 Paris, France.
- 1901 So. Car. and West Indies Expo., Charleston, S. C., (7 gold medals.)
- 1901 Pan American Expo., Buffalo, N. Y.
- 1904 Louisiana Purchase Exposition, St. Louis, Mo. (Grand medal.)



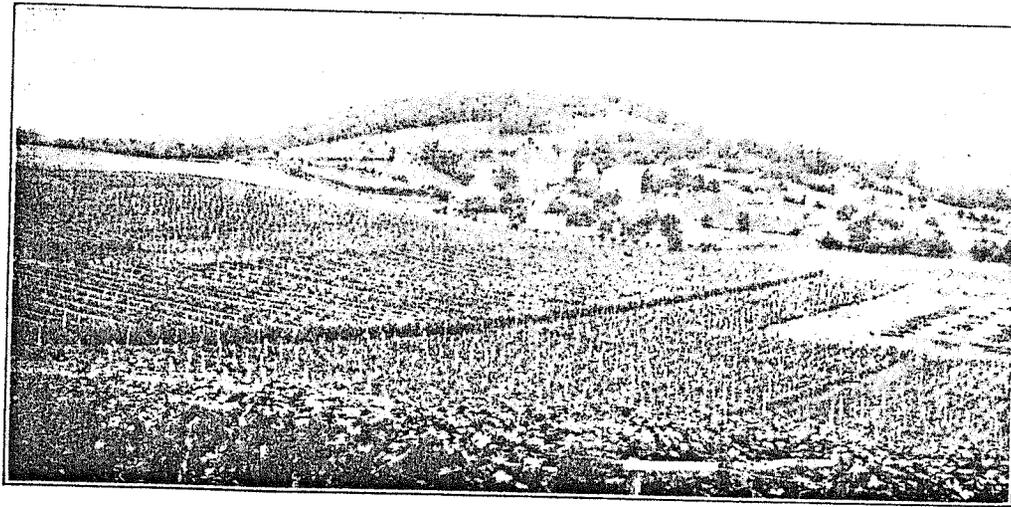
Office, Press Houses and Grape Crushing Plant.



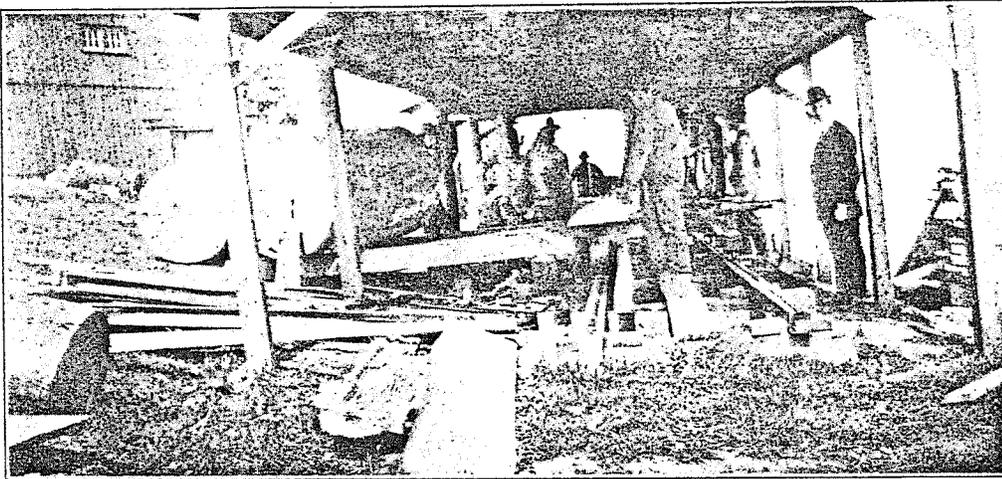
View of Winery.



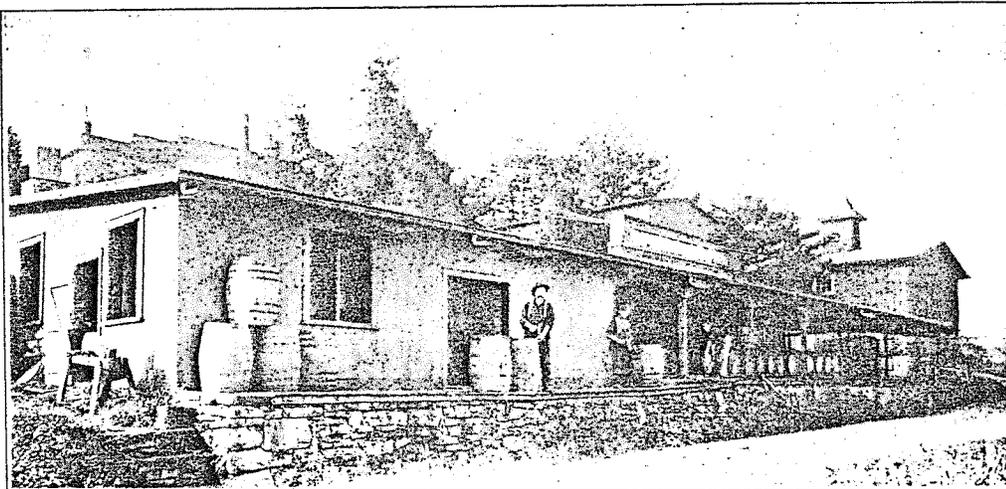
One of our storage cellars under construction. Each cask 25,000 gallons capacity.
Is now complete. Capacity 275,000 gals.



View of One of Our Many Vineyards.



Our Saw Mill. Cooperage and building lumber for our own use. Trees from our forests.



Our Cooper Shop.

Stanley's

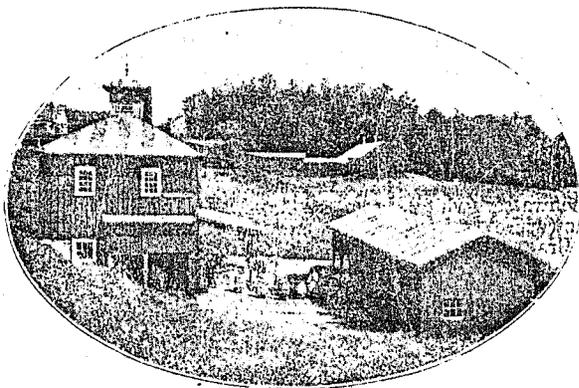
*Price
Current*

Established

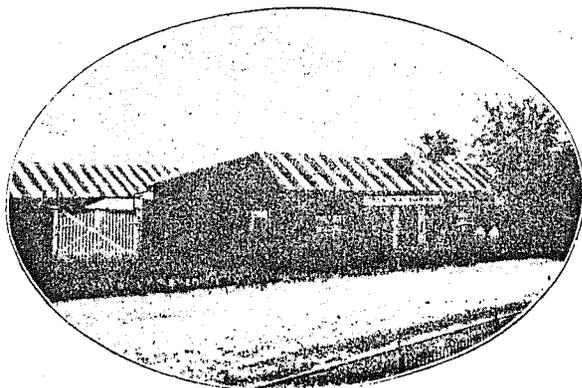
1847

Brandy

DISTILLERY AND WAREHOUSES



Fruit Brandy Distillery No. 226, 1st District Mo., Hermann, Mo., where our Brandies are made. Surveyed capacity 4650 barrels per year.



U. S. Int. Rev. Special Bonded Warehouse No. 2 where our brandies are stored and aged in wood.

(6)

Stark's Pearl EXTRA DRY CHAMPAGNE



Always the Same
Fine Quality.

The Only Rival
of Imported
Champagne

This wine (PEARL) was selected, above all others, to christen the battle-ship Missouri, when launched.

Per Case, 12 quarts.....\$18.00	Per quart.....\$1.50
Per Case, 24 pints..... 20.00	Per pint..... .85

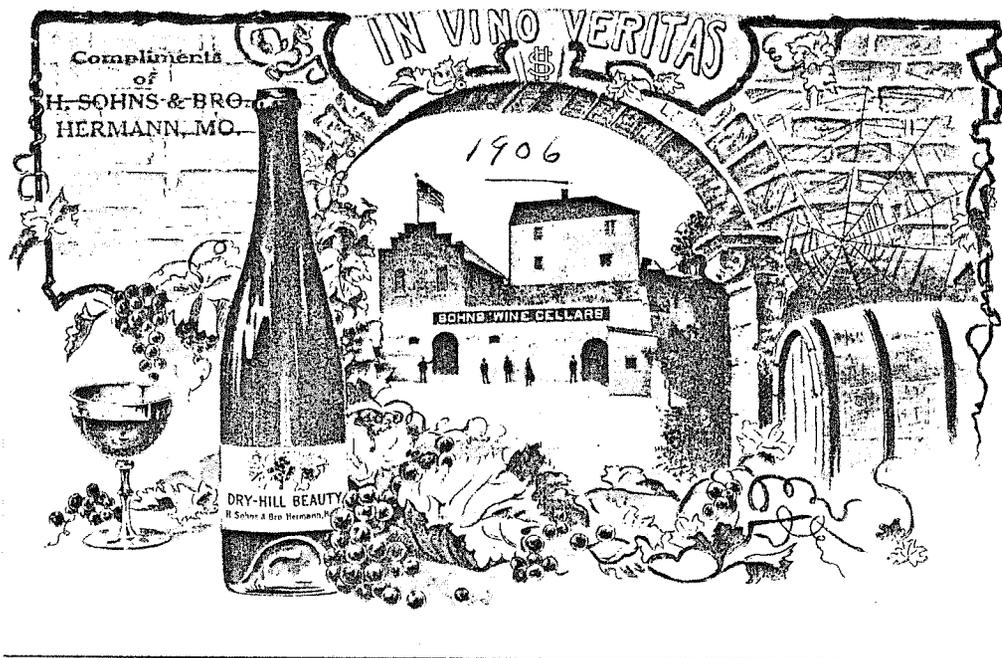
Red Label

SPARKLING BURGUNDY.

Per case, 12 quarts.....\$18.00	Per quart.....\$1.50
Per case, 24 pints..... 20.00	Per pint..... .85

We prepay all transportation charges.

(7)



Second largest winery in State of Missouri in 1906.

DICTIONARY
OF
American Biography

VOLUME V
HIBBEN - LARKIN

Edited by
DUMAS MALONE

*Author: [illegible]
[illegible]
[illegible]
[illegible]*

Charles Scribner's Sons *New York*

people. He gave to the problems of the poor the same keen interest as to those of the upper classes. Though at the time of his death relations between the United States and Mexican governments were strained, and feeling against the United States was high, a popular movement was inaugurated for the erection of a monument to his memory. Physically he was short and heavy-set. He was an all-around athlete who had been the star quarter-back of his college football team. He had a ruddy face, with irregular features and laughing blue eyes, topped by a mass of red hair. Husk contributed a number of articles to medical periodicals dealing with the medical and sanitary problems of the Mexican people.

[H. W. Jackson, in H. A. Kelly and W. L. Burrage, *Am. Med. Biogr.* (1920); *N. Y. Times*, Mar. 21, 1916; personal acquaintance.]

J. M. P.

HUSMANN, GEORGE (Nov. 4, 1827–Nov. 5, 1902), viticulturist and author, was born at Meyenburg, Prussia, son of J. H. Martin and Louise Charlotte (Wesselhoft) Husmann. He attended school at Meyenburg, where his father was a village schoolmaster, and was inspired by him with a love of nature and of horticultural pursuits. The family emigrated in 1837, took shares in the Ansiedlungs-Gesellschaft of Philadelphia, and in the winter of 1838–39 joined the company's settlement at Hermann, Mo. George received instruction in German, English, and French from his elder brother, Frederick. His first vineyard was planted on his father's farm in 1847. In 1850 he went to California, tried mining, but returned two years later to look after the farm of a widowed sister. Here he planted extensive vineyard and orchards, which became known as the model fruit-farm of Missouri. He married Louise Caroline Kielmann in 1854. During the Civil War he was quartermaster of the 4th Infantry, Missouri Volunteers, 1862–63. In 1860 he moved to Bluffton, Mo., as president of the Bluffton Wine Company. Following a ruinous decline in the prices of grapes and wines, which caused his company to fail, he moved in 1872 to Sedalia, Mo., and started a nursery. From 1870 to 1875 he shipped millions of cuttings of phylloxera-resistant vines to reestablish French vineyards. In 1878 he went to Columbia, Mo., as professor and superintendent of pomology and forestry at the state university. Indefatigable, he taught, made extensive plantings, converted the campus into an arboretum, warred against itinerant peddlers of nursery stock, pleaded for recognition and financial support from the legislature. Three of his children attended the university. In 1881 he moved to Napa, Cal.,

where he managed the Talbot Vineyards, grew vinifera grapes, and made prize wines. He was United States statistical agent for California from 1885 to 1900, and was a member of the first Viticultural Congress at Washington, D. C. He died at Napa.

Husmann was a small man with sparkling eyes full of humor, and a bearded, German countenance. He was energetic, keen, outspoken but unobtrusive. He enjoyed a reputation as viticulturist and wine-maker second only to that of Nicholas Longworth [q.v.]. Active in public affairs, he served sixteen years on the Missouri State Board of Agriculture, of which he was vice-president, 1867–68; was a member of the convention of 1865 to revise the Missouri constitution; was presidential elector for Grant; and member of the board of curators of the University of Missouri, 1866–72. An unselfish promoter of horticulture, he helped found and was a charter member of many organizations. By invitation he contributed many essays to journals and society reports. He published the *Grape Culturist* from 1860 to 1873, and was the author of *An Essay on the Culture of the Grape in the Great West* (1862), *The Cultivation of the Native Grape and Manufacture of American Wines* (1866), *American Grape Growing and Wine-Making* (1880), *Grape Culture and Wine-Making in California* (1888).

[*Annual Reports Mo. State Hort. Soc.*, 1859–81; *Ann. Reports Mo. State Board of Agric.*, 1865–81; *Univ. of Mo. catalogues*, 1869–72, 1878–81; *Hist. of Franklin, Jefferson, Washington, Crawford and Gasconade Counties, Mo.* (1888); *In Memoriam, Prof. George Husmann* (1902); *Mo. Hist. Rev.*, Oct. 1929; personal information from C. B. Rollins and G. C. Husmann.]

H. D. H-k-r.

HUSSEY, CURTIS GRUBB (Aug. 11, 1802–Apr. 25, 1893), miner and manufacturer, was born on a farm near York, Pa., the son of Christopher and Lydia (Grubb) Hussey. Soon after his birth, the family moved to Ohio, where he grew up, attending the district school in the intervals when he could be spared from the work of the farm. When he was about eighteen he entered the office of a physician at Mount Pleasant, Ohio. In 1825 he qualified to practise medicine and moved to Morgan County, Ind., where he quickly built up a lucrative practice. Within four years he had accumulated a capital of several thousand dollars with which he purchased general stores in the territory which he covered in his practice. The stores, bought as an investment, grew so rapidly that soon he devoted his entire time to their management and finally went into the business of dealing in pork, an important product of the section.

Since Pittsburgh was the center through

1862
1862
Plants of vineyard
& wine
sold 1872

The Wines of AMERICA, Second Edition, Revised
Leon D. Adams

10

Wines of Some Mid-Continent States



AT HERMANN, MISSOURI, in 1866, the year after the Civil War, Professor George Husmann penned his first book, *The Native Grape and the Manufacture of American Wines*.

"The nation is affected with grape fever," he wrote. "I firmly believe that this continent is destined to be the greatest wine-producing country in the world. America will be, from the Atlantic to the Pacific, one smiling and happy Wineland, where each laborer shall sit under his own vine, and none will be too poor to enjoy the purest and most wholesome of all stimulants, good, cheap, native wine."

In that year Missouri surpassed Ohio as the second largest winegrowing state of the Union, and the grape-planting fever was spreading through such neighboring states as Iowa, Kansas, and Illinois.

But local prohibition laws and vine diseases were also spreading while Husmann wrote his book. Too many grapes were being planted for the wineries to absorb, and the prices paid for grapes declined. Vineyards became neglected, were attacked by plant pests, and were abandoned to die. Husmann, professor of horticulture at the University of Missouri, abandoned his home state in 1881 to become a winemaker in California's Napa Valley. He had discovered in a single visit during that summer how ideal the conditions were for winegrowing there.

National Prohibition in 1920 closed all of the mid-continent wineries except two monasteries which continued producing altar wines. A few dozen commercial wineries reopened in 1933, but much of the area was still legally dry, and there was little demand for any wine except the cheapest dessert types. Eighteen states between the Appalachians and the Rockies (not

Wines

counting Michigan) have American wine since Repe

Yet all of these states Labrusca-type grapes flourish in gardens, and more anywhere else on earth. Most today comes from vineyards with, native midweste

• 2 •

More than a century since of Americans, including table wines for mealtime Missouri again. New vine are expanding in a dozen their own vineyards have years, giving the state a t

Professor Husmann's h River hamlet of Hermar happening. For the first t from the huge, turreted Poeschel from Germany l the south edge of town. It and was the second larg Hermannsberger, Starke gold medals at world's Prohibition closed the w vineyards destroyed, virtu The great Stone Hill cell rooms, producing sixty-f

In 1965, farmer James mann 128 years earlier, popular in Missouri. He of the old winery with children. The Helds in ther's wooden roller-cru and made a thousand ga sold so well that they sin of the other seven vault year of Missouri Rieslin; Concord, and Gasconac have quadrupled to forty ba, and French hybrid v

counting Michigan) have produced less than three percent of American wine since Repeal.

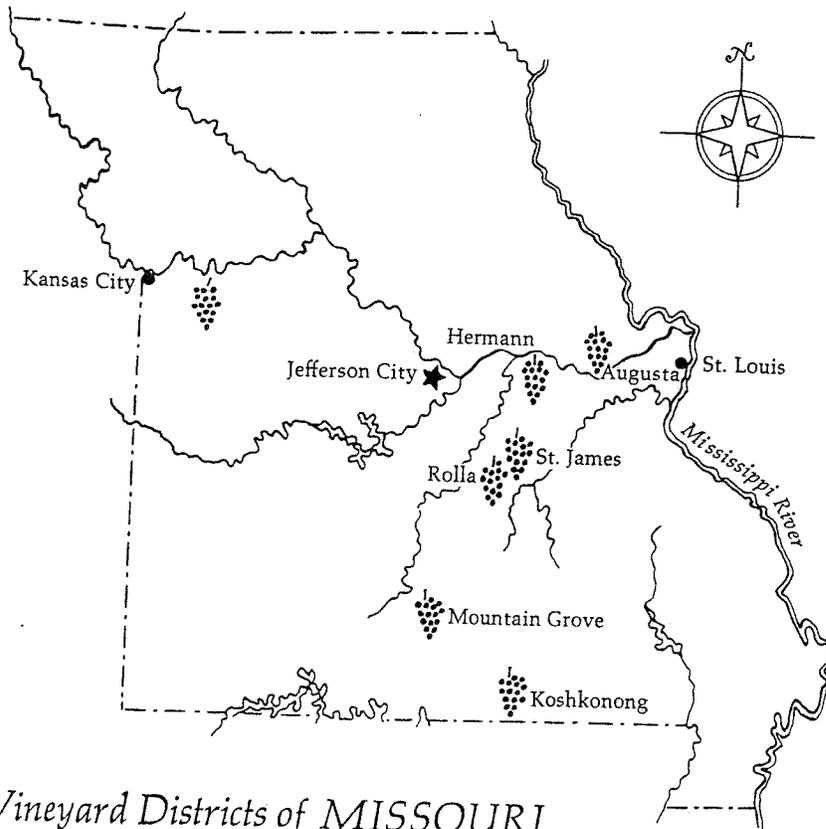
Yet all of these states are natural grape-growing country; Labrusca-type grapes flourish in tens of thousands of midwestern gardens, and more vine species grow wild here than anywhere else on earth. Most of the wine produced in the world today comes from vineyards grafted to, or crossed by hybridizing with, native midwestern vines.

• 2 •

More than a century since Husmann wrote his book, millions of Americans, including midwesterners, have begun buying table wines for mealtime use, and now there is grape fever in Missouri again. New vineyards have been planted and old ones are expanding in a dozen Missouri counties. Ten wineries with their own vineyards have been established within the past few years, giving the state a total of thirteen.

Professor Husmann's hometown, the picture-book Missouri River hamlet of Hermann, is one of the places where it is happening. For the first time in half a century, wine is flowing from the huge, turreted Stone Hill Winery, which Michael Poeschel from Germany began building in 1847 on the hilltop at the south edge of town. It once held more than a million gallons and was the second largest in the nation. Its wines, such as Hermannsberger, Starkenberger, and Black Pearl, won eight gold medals at world's fairs between 1873 and 1904. When Prohibition closed the winery, Ottmar Stark ordered all of its vineyards destroyed, virtually ruining the economy of the town. The great Stone Hill cellars then were used to cultivate mushroom rooms, producing sixty-five tons of the fungi per year.

In 1965, farmer James Held, whose ancestors came to Hermann 128 years earlier, saw that table wines were becoming popular in Missouri. He arranged to move into the second floor of the old winery with his wife Betty Ann and their four children. The Helds installed antique casks and his grandfather's wooden roller-crusher in one of the underground vaults and made a thousand gallons of Catawba wine. Their first wine sold so well that they since have cleared the mushroom beds out of the other seven vaults and now turn out 60,000 gallons per year of Missouri Riesling, Catawba, Niagara, Norton Seedling, Concord, and Gasconade Red, White, and Rosé. The Helds have quadrupled to forty acres their vineyard of Norton, Catawba, and French hybrid vines on the Gasconade River hills, and



Vineyard Districts of MISSOURI



have sent their son Jonathan to study enology at Fresno State University in California. Stone Hill now offers wine tasting and a tour of its cellars for a dollar, and has opened its own wine museum.

Wine has been part of the flavor of Hermann since grapes were first planted there by Jacob Fugger in 1843. Many of its citizens, including the Helds, rear their children by "the Hermann formula: the first year wine, the second year wine and sauerkraut." The revival of Hermann's "days of wine and glory" is now celebrated on the third weekend of each May with German bands, folk dancing, knackwurst, and a house tour of "Little Germany." In autumn the Helds hold a three-week Oktoberfest at the winery.

Wi

• 3 •

Another historic Missouri wine is from Augusta, a town of German bluffs thirty miles west of St. Louis. An accountant Lucian Dressel, who studied during his travels in Europe at Harvard and Columbia University, was drinking in America and was touring with his wife Elizabeth. There were eleven wine cellars, some crumbling skeletons remaining in underground storage vaults. Dressel bought it and converted it into an apartment. Mount Pleasant Vineyard was an minister and grape grower. German, its title in English was Münch built the winery. The wines were known from coast to coast.

Dressel replanted two acres with French hybrids and made wines of the hybrids "Emigré Red" has planted and made wine since 1860 ago by Münch. One is a red wine grape breeder Thomas Munson of South Carolina. The wild grape; Munson named it. The vintage of Münch was 1860. Italy's light Valpolicella. Another, also not foxy, was named Münch called Cynthian. The wine retained. Third was Missouri wine named Hermann about 1860. Dressel's wine was detectably foxy and had a strong character.

Emigré Red and these wines attracted some attention in the states, Dressel foresees the increased planting of grapes in the Rockies will become known. Its various soils and climates. Missouri thus far has been known for its reds, the Missouri River valley producing the fullest-bodied red wine.

• 3 •

Another historic Missouri winery was reopened in 1968 at Augusta, a town of German heritage on the Missouri River bluffs thirty miles west of St. Louis. The proprietor is young accountant Lucian Dressel, who became enamored of wine during his travels in Europe. On completing his studies at Harvard and Columbia, he recognized the trend to wine-drinking in America and decided to become a winegrower. Touring with his wife Eva, he found the place at Augusta where there were eleven wineries before Prohibition and six of their crumbling skeletons remained. Another old brick cellar with underground storage vaults was in better condition; it had been converted into an apartment house and was for sale. The Dressels bought it and discovered that this was originally the Mount Pleasant Vineyard of Friedrich Münch, a famous Lutheran minister and grape breeder, who once wrote a book in German, its title in English, *School for American Grape Culture*. Münch built the winery in 1881 and his prize-winning wines were known from coast to coast.

Dressel replanted two dozen acres of the original vineyard with French hybrids and *Labrusca* types and named his first wines of the hybrids "Emigré" Red, White, and Rosé. He since has planted and made wines of three grape varieties grown long ago by Münch. One is a non-foxy cross made by the late Texas grape breeder Thomas Volney Munson between the Herbe-mont of South Carolina and the Mississippi Valley post-oak wild grape; Munson named the cross for Münch. Dressel's 1975 vintage of Münch was a dry red wine I liked, somewhat like Italy's light Valpolicella but with a powerful bouquet of its own. Another, also not foxy, is the Norton grape of Virginia, which Münch called Cynthianna, a name and spelling Dressel has retained. Third was Missouri Riesling, the grape bred at Hermann about 1860. Dressel's 1975 Missouri Riesling was not detectably foxy and had an aroma of botrytis, the noble mold.

Emigré Red and these Mount Pleasant historic wines have attracted some attention from out-of-state connoisseurs. With the increased planting of new grape varieties in many more states, Dressel foresees a time when each district east of the Rockies will become known for the wine types that grow best in its various soils and climates. He predicts that while New York State thus far has been better known for its whites than for its reds, the Missouri River area will become recognized as producing the fullest-bodied red wines.

Meanwhile, Dressel has built an additional cellar and a tasting room with a patio where visitors bring their own cheeses to enjoy with his wines. Most of the local visitors seem to prefer his sweet red and white Concord and his medium-dry Mount Pleasant Rosé.

• 4 •

Three miles west of Augusta, also on the river, is a winery named Montelle (little mountain) Vineyards. Former St. Louis journalist Clayton Byers and his wife Nissel make wine in an old smokehouse from the French and New York hybrid grapes they began planting in 1970. Their son Brian, who once worked at the Tarula Vineyard in Ohio, and another son, Bruce, are also interested in the winery. The Byerses also use grapes from the nearby vineyard of Robert and Ella Knoernschild.

Handsomest winery in the river area is the Austrian chalet built by New York psychologist Albert Firestone, a distant relative of the rubber kings, on the several acres of French hybrids he began planting in 1975. Dr. Firestone's vineyard is on state road TT three miles north of the old German town of Dutzow.

Also new along the river are aircraft engineer Nicholas Lamb's 15,000-gallon Green Valley Vineyard winery fifteen miles west of Hermann at Portland, and Harold and Larry Kruger's 3,000-gallon winery and two-acre vineyard off Highway 41, two miles west of Arrow Rock, near Nelson.

• 5 •

Wine grapes are being planted again in the part of Missouri's Ozark Plateau known as Big Prairie, where the principal grapes grown are Concords for the Welch co-operative's grape juice plant at Springdale, Arkansas.

Near St. James, where the Ozark Grape Festival is held each September, Concord-grower William B. Stoltz began adding wine varieties in 1965 to his seventy-acre Concord vineyard on South Bishop Avenue three miles northeast of town. He planted mainly such Labrusca wine types as Missouri Riesling, Catawba, and Delaware, but also some French and New York State hybrids. In 1968 he opened the 5,000-gallon Stoltz Vineyard Winery and introduced several native Ozark table wines, which he named for his grapes, and also an "old-Fashioned Missouri Sweet Grape Wine." Stoltz soon found that many people in the area especially liked those of his wines with the least Labrusca

flavor. With his sons William and Bruce, he expanded his vineyard to a hundred acres. He has introduced several new hybrids, has expanded his production, and has introduced such new wine varieties as the medium-dry bottled Dinner White.

• 6 •

A second winery opened in 1975, producing the only champagne-style wine from Missouri grapes. It is James and Patricia Stoltz. The access road beside Interstate 44 is a high degree in microbiology from five years' experience with the wine before coming to St. James. The winery is in the Big Prairie section as the place where the Missouri's 2,500 acres of French hybrids. The winery holds 45,000 gallons of wine with an inviting rustic taste. It produces three bottle-fermented sparkling champagnes and an almost perfect one. The best of the three. His tall vineyard near Niagara to such popular hybrids as Baco Noir. To my taste his best is a white hybrid, a red of the rare New York dry red of the rare New York variety. Someday planting Vinifera grapes will grow well in the Ozarks.

• 7 •

Off Interstate 44 east of St. James, named by Italian immigrant bishop who built the first winery in Mississippi. At the edge of the Big Prairie, Ashby's 54,000-gallon Rose of Sharon stop to taste wines and Concord.

Growers who had planted the vineyard during the 19th century provide a home for surplus wine. When the Second World War ended, the place as a grape depot. G. Stoltz moved to the winery and made production ended. Damaged by fire

flavor. With his sons William and Robert, he since has expanded his vineyard to a hundred acres, with two thirds of it now in the hybrids, has expanded his winery to 25,000 gallons, and has introduced such new wines as "Rose der Liebe" and estate-bottled Dinner White.

• 6 •

A second winery opened at St. James in 1970 and began producing the only champagne now made wholly of Missouri grapes. It is James and Patricia Hofherr's St. James Winery, on the access road beside Interstate Highway 44. Hofherr holds a degree in microbiology from the University of Texas. He had five years' experience with the Bardenheier winery at St. Louis before coming to St. James and also had made champagne for a year at the Post Winery in Altus, Arkansas. He chose the Big Prairie section as the place for his winery because most of Missouri's 2,500 acres of vineyards are there. The St. James Winery holds 45,000 gallons and is new from the ground up, with an inviting rustic tasting and sales room. Hofherr makes three bottle-fermented sparkling wines, a brut and a pink champagne and an almost-dry Cold Duck. I found the pink the best of the three. His table wines range from Catawba and Niagara to such popular hybrid types as Aurore, Chelois, and Baco Noir. To my taste his best were his Villard Blanc of that white hybrid, a red of the hybrid called Cascade, and a flavorful dry red of the rare Neva Munson grape. Hofherr talks of someday planting *Vinifera* varieties, which he thinks should grow well in the Ozarks.

• 7 •

Off Interstate 44 east of St. James is the village of Rosati, named by Italian immigrants at the turn of the century for their bishop who built the first Catholic cathedral west of the Mississippi. At the edge of the village is Robert and Sally Ashby's 54,000-gallon Rosati winery, popular with tourists who stop to taste wines and Catawba grape juice in its wine garden.

Growers who had planted Concords for sale to Welch built the winery during the Depression years of the late 1930s to provide a home for surplus grapes the co-op could not buy. When the Second World War broke out, Welch bought the place as a grape depot. German war prisoners were quartered in the winery and made preserves for the military until the war ended. Damaged by fire in 1969, it was bought and rebuilt by

Ashby, a veteran horticulturist who once taught agriculture at the state university branch in St. James. The Ashbys' horticulturist son Henry cares for their seventy-acre vineyard, and son-in-law Ronald E. Moreland is their winemaker. Ronald and his wife Liz also have started their own champagne cellar in the former Royal Brewery at Weston, northwest of Kansas City.

• 8 •

On the Meramec River near Steelville, a few miles southeast of St. James, is Dr. Axel Norman Arneson's Peaceful Bend Vineyard. His winery, a two-story wooden structure with a Dutch barn-style roof, is built into a hillside with earth on three of its sides.

Dr. Arneson, professor of clinical obstetrics and gynecology at Washington University School of Medicine in St. Louis, first learned about winemaking by helping his father ferment grapes for their home use in Texas during Prohibition. His travels in later years through Europe so stimulated his interest in viticulture that in 1951 he purchased some French hybrid vines from Philip Wagner and planted them on his Missouri farm. When Peaceful Bend winery was first bonded in 1972, the doctor made only two red table wines, each a blend of several hybrids. The red was named Meramec for the river and the white was called Courtois, the name of the township and of a nearby Ozark mountain stream. When I was there in 1976, he had added a pink dry wine and named it Huzzah Crawford County Rosé. The name of the winery, which is on Highway M, comes from the deep bend the river takes at the Arneson farm. The doctor is fascinated with the history of Missouri viniculture and is writing a book that traces Professor George Husmann's career.

A fifth winery in the Big Prairie area was opened in 1975 by St. Louis postal clerk Laurence Ziegler on his Concord vineyard outside the town of Cuba. A year later, a group of farmers headed by Catawba grower Hershel Gray bonded the 5,000-gallon Ozark Mountain winery in Gray's concrete milk barn near Chestnut Ridge, thirteen miles south of Ozark.

• 9 •

Another sign that winegrowing is coming back in Missouri is that the state's biggest vintner, Bardenheier's Wine Cellars of St. Louis, which mainly blends and bottles California wines for sale in thirty midwestern states, has become a Missouri winegrower, too, and is preparing to make its own local champagne.

The Bardenheier Brothers whose grandfather founded mid-1960s that Ohio and Ne of the Catawba grapes that Experiment Station at Mou large their St. Louis cellar at their own. "Our state's wine Carl, who was trained in er nia," and we're going to be

In 1970, the Bardenheier acres of native and French River Ranch of Ott Coelln a southern Missouri. This is t border, where Michael Br ville, began producing Oz reverted to cattle grazing w

The success of the Barde in 1972 when the vineyard think was unprecedented. Methodist minister and a Bardenheiers introduced tl named Chelois, Maréchal

• 10 •

Winegrowing has also r the border of Kansas. Uni sor George Gale, his wil have planted a five-acre built the 3,500-gallon M Jackson County, four mil first wine, an excellent re teaching a course in Wir Kansas City campus.

But vineyards and wir the old winegrowing dist River, twenty miles nort during the 1960s to the l then in the basement of Wepprich's Wine Garde: filled the air on moo: founded the winery ir vineyards, but Weppi developers who uproot

The Bardenheier Brothers, John, Joseph, Carl, and George, whose grandfather founded the firm in 1873, noticed in the mid-1960s that Ohio and New York wineries were buying most of the Catawba grapes that grow around the Missouri Fruit Experiment Station at Mountain Grove. They decided to enlarge their St. Louis cellar and to begin making some wines of their own. "Our state's wine industry is reviving," said brother Carl, who was trained in enology at the University of California, "and we're going to be part of it."

In 1970, the Bardenheiers planted their first vineyard, fifty acres of native and French hybrid varieties, on the big Lost River Ranch of Ott Coelln at Koshkonong on US Highway 63 in southern Missouri. This is the area, six miles from the Arkansas border, where Michael Brand, the founder of nearby Brandsville, began producing Ozark Maid wines in 1887. The land reverted to cattle grazing when Brand closed his winery in 1904.

The success of the Bardenheiers' first planting was celebrated in 1972 when the vineyard was blessed in a ceremony which I think was unprecedented, for it was conducted jointly by a Methodist minister and a Catholic priest. Three years later the Bardenheiers introduced their first Missouri Valley wines, reds named Chelois, Maréchal Foch, and Baco Noir.

• 10 •

Winegrowing has also returned to far western Missouri, near the border of Kansas. University of Missouri philosophy professor George Gale, his wife Carol, and architect Dutton Biggs have planted a five-acre vineyard of French hybrids and have built the 3,500-gallon Midi Vineyard winery on Road F in Jackson County, four miles from Lone Jack. I have tasted their first wine, an excellent red of the Leon Millot grape. Dr. Gale is teaching a course in Wine and Civilization at the University's Kansas City campus.

But vineyards and wineries are only a cherished memory in the old winegrowing district around St. Charles on the Missouri River, twenty miles northwest of St. Louis. I remember a visit during the 1960s to the last winery at St. Charles, still operating then in the basement of Emil Wepprich's home next door to his Wepprich's Wine Gardens, a bit of old Germany where waltzes filled the air on moonlit evenings. When his grandfather founded the winery in 1859 it was surrounded by hillside vineyards, but Wepprich sold the land a century later to developers who uprooted the vines. The terraced gardens are

still there, however, and its new owners Bill and Chris Hallam cherish the wine tradition. They have preserved the little winery, complete with its antique presses and casks, and they offer their guests free winery tours.

• 11 •

The late Irvin Brucker, a St. Louis oenothusiast, spent half a lifetime gathering the history of Missouri winegrowing and once published some of it in a mimeographed publication he called *The Wine Press*, but he had enough unpublished material left to fill a fascinating book.

The first Missouri wine was made in 1823 from wild grapes by the French Jesuit priests who founded the St. Stanislaus Seminary at Florissant, now a St. Louis suburb. They later planted vineyards around the Seminary and sold both sacramental and commercial Florissant Valley wines in the St. Louis area for more than a century. When the winery at Florissant closed in 1960 for lack of labor, it was the oldest in this country, having produced wine continuously for 147 years. The Seminary's vineyard was uprooted, except that Brother Eilert, who had tended it for most of his life, kept the best half-acre and continued making wine as his hobby until the Seminary closed in 1973. When Lucian Dressel was buying equipment for his Mount Pleasant Vineyard winery, he found the ancient casks at Florissant being broken up for firewood, and rescued them for his winery at Augusta.

There were wineries in forty-eight Missouri counties before Prohibition. Bluffton, Boonville, Cape Girardeau, Hannibal, Owensville, and Stanton were some of the addresses on famous Missouri wine labels. In the Kansas City area, the town of Independence, with Shaffer's Winery and Lohse's Native Wine Garden, was known for its wine long before Missourians came to know Harry Truman. A history of Newton County records that in 1867 grape breeder Hermann Jaeger of Neosho advised French viticulturists to graft their phylloxera-devastated vineyards onto wild Ozark vine roots. He shipped them seventeen carloads of rootings and later was awarded the Cross of the French Legion of Honor.

St. Louis was the nation's chief early center of wine study and research and was also the home of Missouri's most famous winery. The story of Cook's Imperial Champagne Cellar is one of the strangest in the annals of this country's wines. The cellar is still in existence, a stone-arched maze four levels deep beneath an entire city block on Cass Avenue—but it is now a

vinegar plant. Built in 1859 and purchased in 1859 by the wine leader Isaac Cook, who reopened after Prohibition the Wine Company, it was the father of the Heck vineyard in California. It was until a little-known Swiss winemaker. Five years later, during the Prohibition, investigators tracing the secret ownership of the foreign minister, ex-chancellor, were arrested. The American Wine Company was sold to the government and was sold to the Schenley liquor empire. The winery was hanged for his wine. It has since been made as French wine with eastern California grapes. The winery in Lodi, California.

Missouri's greatest contribution to the work of Professor Hussey was the discovery of a phylloxera-resistant vine. It was the dying vineyards of E. J. Conner, a *Grape Culturist*, one of the great viticulturists, and wrote the beginning of this industry. The man helped to overcome the problem and made prize-winning wine. The Oak Glen Vineyard.

• 12 •

Winegrowing is also a major industry in Pennsylvania, where it flourishes. In 1968, University of Pennsylvania researchers wrote a virtual copy of the Indiana Legislative Report on the Oliver Winery on Hightstown University campus at Bloomington. His winery is pro-

When Pennsylvania researchers in 1968, University of Pennsylvania researchers wrote a virtual copy of the Indiana Legislative Report on the Oliver Winery on Hightstown University campus at Bloomington. His winery is pro-

vinegar plant. Built in 1832 by the Missouri Wine Company, it was purchased in 1859 by Chicago connoisseur and political leader Isaac Cook, who made its Missouri champagne famous. Reopened after Prohibition by new owners as the American Wine Company, it was headed by Alsace-born Adolf Heck, Sr., the father of the Heck brothers who later owned the Korbel vineyard in California. Heck was uncomfortably short of capital until a little-known Swiss firm invested in Cook's stock in 1939. Five years later, during the Second World War, Government investigators tracing Nazi investments in this country discovered that the secret owner of the Missouri winery was Hitler's foreign minister, ex-champagne salesman Joachim von Ribbentrop. The American Wine Company was seized by the Government and was sold several times until it became part of the Schenley liquor empire in 1946, the same year von Ribbentrop was hanged for his war crimes. Since 1954 Cook's champagnes have been made as Heck, Sr., made them—from California wines with eastern Catawba in the blend—but at the Guild winery in Lodi, California.

Missouri's greatest contribution to the wine industry was the work of Professor Husmann. Like Jaeger, he shipped millions of phylloxera-resistant vines from Missouri to re-establish the dying vineyards of Europe. He established at St. Louis *The Grape Culturist*, one of the earliest American periodicals on viticulture, and wrote two books after the one quoted from at the beginning of this chapter. On moving to California, Husmann helped to overcome the phylloxera plague there. He made prize-winning wines for the Talcoa Vineyard of Napa and the Oak Glen Vineyard of Chiles Valley until he died in 1902.

• 12 •

Winegrowing is also reviving with great excitement in Indiana, where it flourished over 150 years ago. Seven bonded wineries have opened in the Hoosier State in a period of seven years, and owners of new vineyards are preparing to start half a dozen more.

When Pennsylvania enacted its law permitting small wineries in 1968, University of Indiana law professor William Oliver saw in this a way to turn his winegrowing hobby into a business. He wrote a virtual copy of the Pennsylvania law, got it passed by the Indiana Legislature in 1971, and a year later opened the Oliver Winery on Highway 37 seven miles north of the university campus at Bloomington.

His winery is prospering. He produces estate-bottled table

Missouri Cooperative Extension Service

University of Missouri & Lincoln University

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August 2, 1982

Norman Blake
BATF
Washington, D.C. 20226

Dear Mr. Blake:

Temperature factors are crucial in the success of a vineyard. Involved are:

1. Adequate number of growing degree days - normally we have an excess of growing degree days, giving us as much as 30 days after harvest to store carbohydrates in the vine.
2. Optimum Summer Temperatures - Ideal growing temperatures for grapes - maximum 80-90; Minimum 60-70. The proposed Hermann viticulture area has an average of 61.0 degrees F. minimum and 84.5 degrees F. maximum temperature for the growing season (May-Sept.). The data suggests this area affords the ultimate in growing conditions for grapes in Missouri. (Reference) EC 928 "The March of Seasons thru Missouri".
3. Elevation with respect to surrounding areas. This is most critical in the survival of the vine (during winter cold) and the protection of the new shoots from spring frosts. The proposed Hermann viticulture area is so located along the elevated loessal soil deposits to afford good freeze and frost protection to the vines. It has been my experience that there can be differences in temperature during winter cold spells and spring frost periods of as much as 25 degrees F. from the elevated loessal hill lands to the lower flood plains. The attached Horticulture Research and Information Report, March 1979, paragraph one, relating to elevation, although indicated for orchard site selection would apply equally, if not more so, to vineyards.

The above comments are based on my experience in working with fruit crops in Missouri for the past 28 years. Temperature is most critical in achieving adequate yields of high quality grapes. This area is one of the most favorable in Missouri.

Sincerely,


Dr. Arthur E. Gaus
Professor of Horticulture
State Fruit and Vegetable Specialist



HORTICULTURE

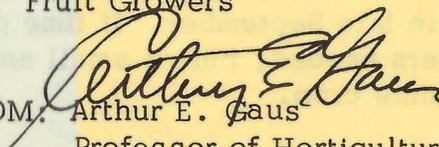
research and information report

File: APPLES
PEACHES

March, 1979

Orchard Site Selection
Orchard Site Preparation

TO: Fruit Growers

FROM:  Arthur E. Gaus

Professor of Horticulture
State Fruit and Vegetable Specialist

A question often asked is, "What is a good orchard site?" There is no simple answer. With peaches and apples elevation is the key word. A site with sufficient elevation relative to the surrounding terrain to permit proper drainage and escape of cold air is essential in preventing severe damage from spring frosts to both peaches and apples and winter fruit bud damage to peaches. Equally important to a good orchard site is soil characteristics-- basically soil type, soil depth and water holding capacity.

Select a good orchard site. It will pay off in subsequent years in productive trees, uniform growth, annual crops and minimum costs. Marginal orchard sites can be made productive, but only at a cost--for frost protection (wind machines, heating pots); for droughty soils (irrigation); for poorly drained soils (drainage tiles, berms).

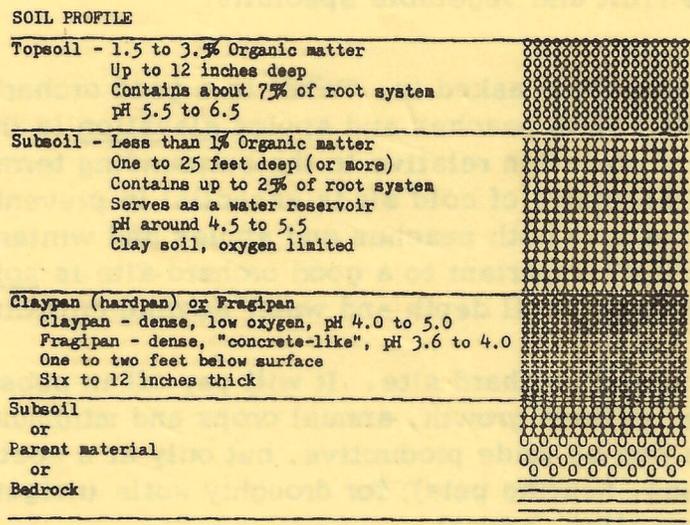
Know Your Soil: Determine depth and physical characteristics of the soil. Find out if the Soil Conservation Service has the soil mapped for your county. Find out the soil type. Read the description of the soil type. Determine the depth and nature of the topsoil. Determine the depth, nature and water holding capacity of the subsoil. Is there a fragipan or claypan? Study soil profile chart (next page).

Test Your Soil: Take samples to your County Extension Office. Since the only part of your soil you can economically alter is the surface 7 inches (the plow depth), all fertilizer additions will be made based on this soil depth. The amount of basic nutrients needed by your soil type is determined by the cation exchange capacity of your soil. The major cations influencing tree growth are: calcium, magnesium and potassium. These three, along with hydrogen, make up the cation exchange capacity of your soil. Find the cation exchange



capacity of your soil from the soil test results (may also be called total exchange capacity). See table on Cation Exchange Capacity (note below). This table indicates a reasonable level of the cations necessary for good growth for a soil with your cation exchange capacity. If the levels of potassium, calcium and magnesium are significantly less than that indicated (about 10% margin), add the necessary nutrients to the soil and mix thoroughly in the upper 7 inches of soil. (Not on an established orchard!) (We have added an acceptable hydrogen level to give a slightly acid soil.) (We have also included estimated phosphorus levels for each range of cation exchange capacity.)

Put Life in Your Soil: Grow a green manure crop(s). At least one year (preferably two) before planting. Sudex (a hybrid sorghum) is a good summer green manure crop. Sow in early May, mow in early July, plow under re-growth in early September. Then sow rye grain in late September. If time permits, repeat a second year. Any basic fertilizers needed, plus a small amount of nitrogen, can be applied to the green manure crop.



Cation Exchange Capacity	Potassium	Calcium	Magnesium	Hydrogen	Phosphorus
5					
6	200	2000	150	1	150
7					
8					
9	250	2500	200	1	175
10					
11					
12	300	3500	250	1	200
13					
14					
15	350	4500	300	2	225
16					
17					
18	400	5500	350	2	250
19					
20					
21	450	6500	400	2	275
22					
23					
24	500	7500	500	3	300
25					

ACRES OF GRAPES PRESENTLY IN THE HERMANN VITICULTURAL AREA

Van Moore -- 5 acres

2 acres 1981: 1/2 acre Cuyuga
1/2 acre Chancellor
1 acre Villard Blanc

3 acres 1982: 1/2 acre Vidal
1/4 acre Cuyuga
2-1/4 acre Chancellor

Bias - 7 acres

4-1/2 acres 1968 Catawba

2 acres 1981: 1 acre Vidal
1 acre De Chaunac

1/2 acre 1982 Sevyal

Hermannoff - 30 acres

1980: 6 acres Villard Blanc
5 acres Delaware
8 acres Vidal
5 acres Cuyuga
5 acres Sevyal
1 acre Vinefera

Stone Hill - 60 acres

1/2 acre Norton 1867

4-1/2 acre Norton 1965

10 acres Catawba 1964

6 acres Missouri Riesling 1973

5 acres Niagara 1973

21 acres Vidal 1979

5 acres Ravat 51 1979

7 acres Chancellor 1979

1 acre Villard Noir 1979

Comments for the Justification of the Hermann Viticultural Area

The boundaries for the Hermann Viticultural Area were picked for the following reasons:

The Missouri Pacific Railroad was chosen for the northern boundary because for the length of the Hermann Viticultural Area it follows the bluff line that separated the hills, where grapes were grown since the mid 1800's, from the bottom land along the Missouri River. This Missouri River bottom land is superior for corn or soybeans but is useless for grapes. Although the Missouri River could have been used for the north boundary since this body of water does have an effect on the micro-climate, the Missouri Pacific Railroad is a more accurate boundary separating the grape land from other farm land.

The West and Southwest boundary starting at the mouth of the Gasconade River thence south to First Creek following First Creek to the line separating Township 44 and 45 N. is an example of natural boundaries created by air drainage patterns created by the difference in elevation. With these differences in elevation we get the advantage in temperature as referred to by Dr. Gaus in his comments on the Hermann Viticultural Area.

Starting in 1961 three vineyards were planted on the West side of the Gasconade River in the Pershing area just south and west of the Hermann Viticultural Area. They were planted to the Catawba variety, one vineyard 10 acres, another 5 acres and 4½ acres. All three have now been abandoned because of continued spring frosts and colder than normal winter temperature.

Big Berger Creek is used as the eastern boundary for the same reason. It is the largest natural air drainage barrier on the east side of the Hermann Viticultural Area. The Bias Vineyard has been growing successfully on the west side of Big Berger Creek since 1968.

The Southern boundary, Township line 44 and 45 N. is the area of changing soil type as indicated by the SCS Soil Survey Report enclosed in this application. Land south of this line, although being of suitable elevation has a very different soil structure whereby giving grapes grown south of this line a noticeably different character. Experimental wines have been made from a small vineyard in the Swiss area for the past 17 years so I am very much aware of this difference.

All of the South half of Missouri has more than enough degree-days to ripen grapes. The problem is not the length of the season but the number of frost free nights after the grape buds start to swell in the spring of the year. When we combine the number of frost free nights in the Hermann Viticultural Area and the deep soil we have on the hills south of the Missouri River, we have an area justly fitting the phrase of Dr. Gaus "the ultimate in growing conditions for grapes in Missouri".

Included in one of the vineyards of Stone Hill is a planting of Norton grapes that time has reduced to now only $\frac{1}{2}$ acre, that were planted around the year 1867. I submit this is the oldest plot of bearing grapes in the State of Missouri and their existence speaks of the superiority of the Hermann Viticultural Area.

