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NEW YORK GRAPES

Economic Data on Production,
Prices, Varieties and Costs

G. P. Scoville

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NEW YORK STATE COLLEGE OF AGRICULTURE

Department of Agricultural Economics and Farm Management

Prepared for meeting of grape growers
Hammondsport, New York, March 30, 1934

arranged by

Steuben County Farm Bureau

NUMBER OF GRAPE VINES IN IMPORTANT GRAPE
PRODUCING STATES

United States Census

State	Millions of vines			Per cent increase or decrease	
	1920	1925	1930	1920 to 1925	1925 to 1930
	number	number	number	per cent	per cent
American type					
New York	32.1	34.9	38.5	+9	+10
Michigan	11.7	17.2	17.8	+47	+4
Ohio	7.1	8.8	9.6	+24	+9
Pennsylvania	7.9	7.8	8.9	-1	+14
Arkansas	0.7	4.3	5.5	+514	+28
Missouri	2.8	5.2	4.8	+86	-8
Other states	16.1	21.8	23.4	+35	+7
Total	78.4	100.0	108.5	+28	+8
European type					
California	174.6	280.6	257.8	+61	-8
Arizona	0.1	0.9	0.4	-	-

The increase in grape vines from 1920 to 1925 was the result of the unexpected demand for grapes following prohibition. Grape prices from 1918 to 1921 were about three times pre-war.

California's increase from 1920 to 1925 of 107 million grape vines exceeded the total number of grape vines in 1925 in all other states. California's increase was 61 per cent compared to an increase for the rest of the United States of 28 per cent. New York state had nearly 3 million more vines in 1925 than in 1920, an increase of only 9 per cent. Ninety-eight per cent of the increase in grape vines in the United States from 1920 to 1925 was due to plantings outside of New York state.

In 1930, California had 8 per cent less vines than in 1925. The other states had 8 per cent more. In 1930, 36 per cent of the grape vines outside of California were in New York state.

NUMBER OF GRAPE VINES IN IMPORTANT GRAPE PRODUCING
COUNTIES IN NEW YORK

United States Census

County	Millions of vines			Per cent increase or decrease	
	1920	1925	1930	1920 to 1925	1925 to 1930
	number	number	number	per cent	per cent
Western New York					
Chautauqua	15.6	16.4	17.9	+5	+9
Erie	2.0	2.4	3.2	+20	+33
Niagara	0.7	1.4	1.5	+100	+7
Total	18.3	20.2	22.6	+10	+12
Finger Lakes					
Yates	4.1	4.0	4.1	-2	+2
Steuben	2.6	2.0	2.3	-23	+15
Ontario	1.4	1.1	1.0	-21	-9
Schuyler	0.8	0.9	0.8	+12	-11
Seneca	0.5	0.6	0.7	+20	+17
Total	9.4	8.6	8.9	-8	+4
Hudson Valley					
Ulster	2.3	2.7	3.2	+17	+18
Columbia	0.5	0.9	1.1	+80	+22
Orange	0.3	0.5	0.6	+67	+20
Dutchess	0.1	0.3	0.4	+200	+33
Total	3.2	4.4	5.3	+38	+20

From 1925 to 1930, the number of grape vines in Erie County increased 33 per cent, while the number in Chautauqua County increased only 9 per cent. Erie County grape growers are between Buffalo and Chautauqua County and truck many grapes to Buffalo, while Chautauqua County growers ship by rail to more distant cities.

The only important grape producing counties in New York state to report less grape vines in 1930 than in 1925 were Ontario and Schuyler. Low producing vineyards on steep hill-sides have been worked with increasing difficulty during the period of relatively high costs, 1925 to 1930.

From 1925 to 1930, Hudson Valley growers expanded their grape acreage more than any other New York area. These growers were in trucking distances of the best markets in the east.

GRAPE PRODUCTION IN IMPORTANT GRAPE PRODUCING STATES

State	Thousands of tons per season			
	1909*	1919*	1926 to 1930**	1931 to 1933**
	tons	tons	tons	tons
American type				
New York	127	76	79	76
Michigan	60	58	62	62
Ohio	22	21	24	30
Pennsylvania	17	21	21	24
Arkansas	1	1	10	12
Missouri	9	5	10	10
All other	59	47	57	60
Total	295	229	263	274
European type				
California	837	1028	2182	1602

*U.S. Census. **Division of Crop Estimates, U.S. Department of Agriculture.

Grape production often fluctuates violently from year to year, but the output of American type grapes has averaged about the same for the past 10 years and was probably somewhat larger 20 years ago.

In 1909, New York's production of 127 tons was 62 per cent greater than the average of 78 tons from 1926 to 1933. In the last 8 years, New York produced about 30 per cent of the grapes grown outside of California.

California's production has expanded rapidly. California's grape tonnage increased 23 per cent from 1909 to 1919. In 1927, California's grape crop was estimated at 2,406,000 tons, or over twice as much as the 1919 crop.

California's grape production averaged 27 per cent less per year in 1931-33 than in 1926-30.

CARLOT UNLOADS OF GRAPES FOR SELECTED CITIES

Truck arrivals are not included

City	Average number of cars of grapes unloaded per season shipped from			
	California and Arizona		All other states	
	1924-30	1931-32	1924-30	1931-32
	cars	cars	cars	cars
Eastern cities				
Boston, Mass.	4,478	3,048	294	193
New York, N. Y.	15,571	11,143	659	810
Philadelphia, Pa.	3,560	2,055	585	612
Pittsburgh, Pa.	2,180	1,135	637	402
Washington, D. C.	191	214	66	68
Great Lake cities				
Cleveland, Ohio	1,397	496	177	4
Detroit, Mich.	1,559	714	101	54
Chicago, Ill.	5,464	2,688	514	276
Milwaukee, Wis.	640	346	408	390
5 Southern cities	654	452	37	16
All other	31,735	18,773	5,073	2,720
Total	67,429	41,064	8,551	5,545

California and Arizona produced 22 per cent less grapes per season in 1931-32 than in 1924-30 and loaded 39 per cent less cars. The rest of the United States produced 18 per cent more grapes per season in 1931-32 than in 1924-30 but loaded 35 per cent less cars. More Eastern grapes were trucked to market in 1931-32 than in 1924-30. To pay the freight on a car of grapes from Hammondsport, New York to Boston, Massachusetts required in 1932 about 7 times as many grapes as in 1925.

California grape unloads were decreased by one-half or more in the Great Lake cities because local grapes could be bought for less than one-half the freight on California grapes.

Because of the depression, Boston's grape consumption was decreased about one-third. Washington, D. C. was the only city that took more California grapes per season in 1931-32 than in 1924-30.

ESTIMATED GRAPE CONSUMPTION PER CAPITA BY
GROUPS OF STATES, 1928

States	Consumption per capita for grapes grown in		
	California and Arizona pounds	All other states pounds	Total pounds
New England	33.7	2.3	36.0
New York, Pennsylvania and New Jersey	37.5	6.5	44.0
Ohio, Indiana, Illinois, Michigan and Wisconsin	17.0	8.8	25.8
Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska and Kansas	8.4	4.6	13.0
Delaware, Maryland, District of Columbia, Virginia and West Virginia	6.8	3.2	10.0
12 other Southern states	2.7	1.8	4.5
Rocky Mountain and Pacific coast	38.8	1.6	40.4
Total, average	19.4	4.6	24.0

In 1928, the most grapes were consumed per capita in the states of New York, Pennsylvania and New Jersey. These states consumed between 5 and 6 pounds of California to 1 pound of Eastern grapes. The average consumption of California grapes in New England was also large, over 30 pounds per capita. There were about 15 times as many pounds of California as Eastern grapes consumed in New England.

The Great Lake states of Ohio, Indiana, Illinois, Michigan and Wisconsin consumed the most Eastern grapes per capita. Dr. Rasmussen found from a study of 896 families in Chicago that the consumption per capita averaged 12 pounds of Eastern and 20 pounds of California grapes (Cornell Bulletin 276).

The states west and south of the Great Lake states consumed about one-half as many pounds per capita and about the same proportion of Eastern grapes as the Great Lake states.

The south consumed only about 10 per cent as many pounds of grapes per capita as New York, Pennsylvania and New Jersey.

MARKETS FOR GRAPES, 1928

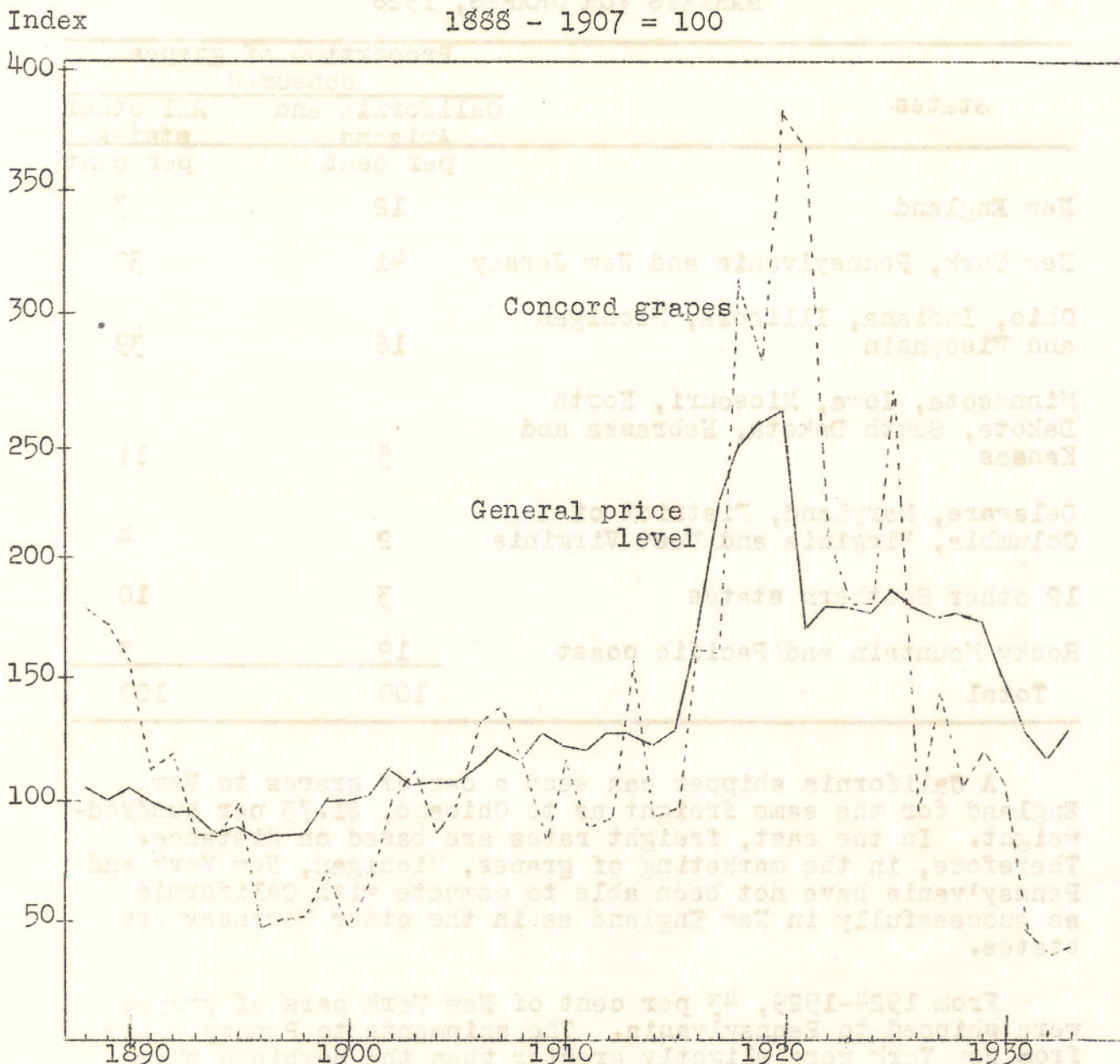
States	Proportion of grapes consumed	
	California and Arizona per cent	All other states per cent
New England	12	3
New York, Pennsylvania and New Jersey	41	30
Ohio, Indiana, Illinois, Michigan and Wisconsin	18	39
Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska and Kansas	5	11
Delaware, Maryland, District of Columbia, Virginia and West Virginia	2	4
12 other Southern states	3	10
Rocky Mountain and Pacific coast	19	3
Total	100	100

A California shipper can send a car of grapes to New England for the same freight as to Chicago, \$1.73 per hundred-weight. In the east, freight rates are based on distance. Therefore, in the marketing of grapes, Michigan, New York and Pennsylvania have not been able to compete with California as successfully in New England as in the other Northeastern states.

From 1924-1929, 43 per cent of New York cars of grapes were shipped to Pennsylvania. The shipments to Pennsylvania from New York were slightly greater than the combined shipments to the 5 next most important states receiving New York grapes. These five states in order of their importance were New York, Massachusetts, Ohio, Illinois, and Michigan. These six states took 85 per cent of New York's cars.

Most of the New York grapes shipped by rail went to the large cities. Philadelphia, Pittsburgh and New York City took one-third. The cities and towns receiving one car of New York grapes per season took only 2.3 per cent of the cars although they represented 37 per cent of the cities and towns.

CONCORD GRAPE PRICES AND GENERAL PRICE LEVEL



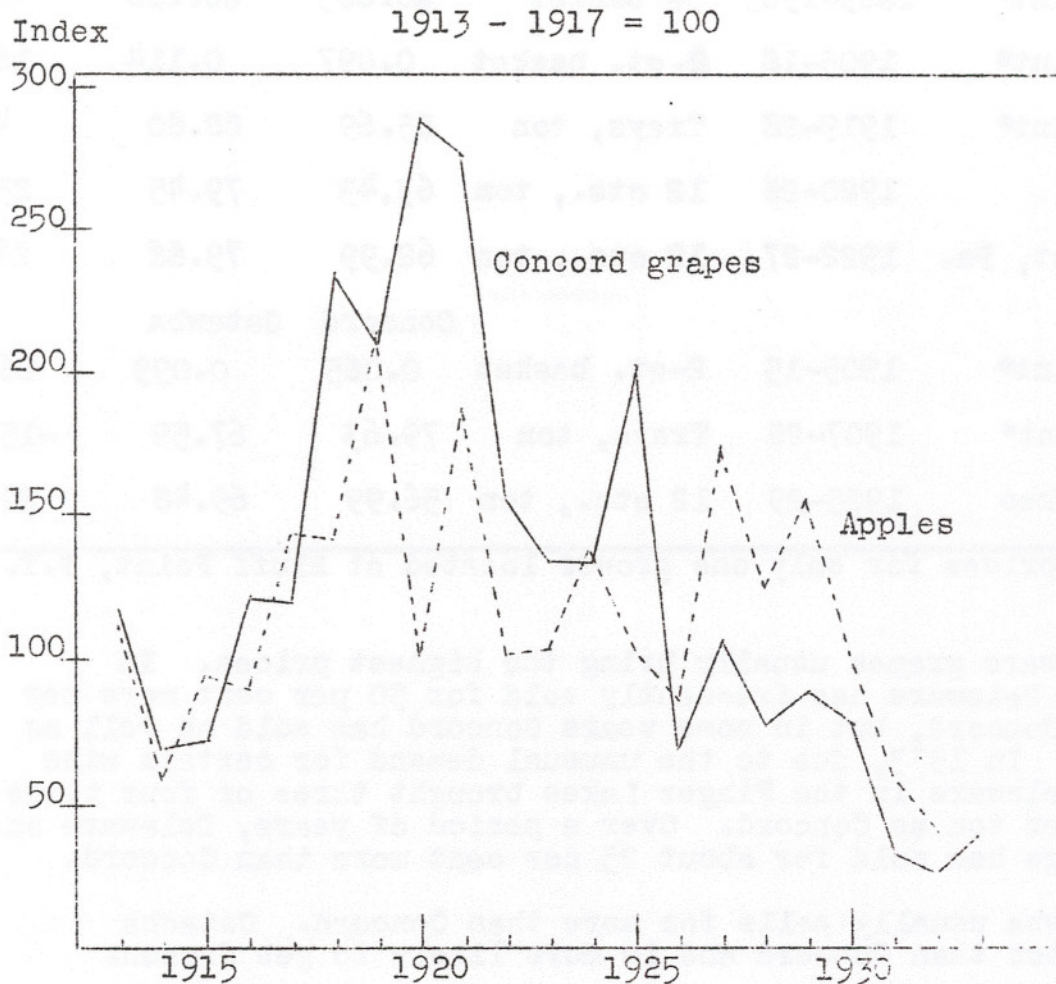
Grape prices move more violently than the general price level. Forty-six years ago, grape growers received about \$60 per ton. Eight years later, in 1896, they received only \$16. Grape prices stayed low for about 5 years. During this 5-year period, 1896 to 1900, the general price level was 91 and grape prices 53 when 1888-1907 was 100. This depression was not as severe for grape growers as the present depression.

Grape prices came into adjustment with the general price level in 1902 at \$33 per ton and moved about the general price level until 1918 when the prohibition law resulted in an unexpected demand for grapes. By 1920, grape prices had soared to a new high, \$128 per ton. In that year grape prices stood at 382 compared with 260 for the general price level. Grape prices

were back to the general price level by 1923 and since 1926 have been far below.

The severity of the present depression to grape growers is indicated by the fact that grape prices in 1932 were 69 per cent below the general price level. In the depression year, 1896, grape prices were 44 per cent below the general price level.

CONCORD GRAPE PRICES AND APPLE PRICES



One ton of grapes would buy as many other commodities as 31 bushels of apples in 1926-32. In the previous 8-year period, one-half ton of grapes would buy as much as 31 bushels of apples. Grape prices have declined much more rapidly than apple prices since 1921.

PRICES RECEIVED BY GROWERS FOR DELAWARE AND CATAWBA
GRAPES COMPARED WITH CONCORD

Area	Years	Package unit	Price per unit		Per cent premium
			Concord	Delaware	
Bluff Point*	1889-1903	5# basket	\$0.083	\$0.118	42
Bluff Point*	1905-18	2-qt. basket	0.097	0.114	18
Bluff Point*	1919-28	Trays, ton	85.69	88.80	4
Michigan	1920-28	12 qts., ton	63.43	79.45	25
North East, Pa.	1922-27	12 qts., ton	62.99	79.88	27
			Concord	Catawba	
Bluff Point*	1905-15	2-qt. basket	0.085	0.099	16
Bluff Point*	1907-28	Trays, ton	79.63	67.59	-15
Finger Lakes	1925-29	12 qts., ton	56.99	69.48	22

*Average prices for only one grower located at Bluff Point, N.Y.

Delaware grapes usually bring the highest prices. In Michigan, Delaware has frequently sold for 50 per cent more per ton than Concord, but in some years Concord has sold as well as Delaware. In 1933, due to the unusual demand for certain wine grapes, Delaware in the Finger Lakes brought three or four times as much per ton as Concord. Over a period of years, Delaware on the average has sold for about 25 per cent more than Concord.

Catawba usually sells for more than Concord. Catawba ripens later than Concord and is more likely to get frozen.

For about one-half the years in Michigan and Chautaucua County, the season's price for Worden averaged higher than for Concord.

The season's price for Niagara averaged higher than Concord in 3 years out of 5 in the Finger Lakes area and in 6 years out of 9 in Michigan. From 1926 to 1928, Niagara prices averaged about one-third higher than Concord.

RELATIVE IMPORTANCE OF GRAPE VARIETIES

113 Finger Lakes vineyards, 1928

Area, variety	Percentage of 1928 grape acreage of indicated age set to following varieties			
	1928 to 1914 per cent	1913 to 1894 per cent	1893 and earlier per cent	All ages per cent
Hector, Pulteney,				
Naples				
Concord	84	62	44	56
Catawba	1	6	20	24
Delaware	0	10	10	8
Niagara	11	12	3	7
Worden	1	3	0	1
All other	3	7	4	4
Total	100	100	100	100
Bluff Point				
Concord	91	86	80	85
Catawba	4	5	11	7
Niagara	3	7	6	6
Delaware	0	0	3	1
Worden	2	2	0	1
All other	0	0	0	0
Total	100	100	100	100
Seneca County				
Niagara	6	27	96	66
Concord	91	73	4	33
Worden	3	0	0	1
Total	100	100	100	100
All varieties grown in vineyards studied in the Finger Lakes	22	27	51	100

Vineyards set in the Finger Lakes from 1914 to 1928 were largely Concord. Nearly all of the old vineyards in Seneca County were Niagara. Thirty-nine per cent of the acreage of old vineyards studied about Pulteney, Naples and Hector were Catawba and 11 per cent Delaware.

In 1928, Niagara County and the Finger Lakes areas were less specialized in Concord than the other areas studied. The Niagara growers interviewed had 56 per cent of their vineyard acreage in Concord and 39 per cent in Niagara. The Hudson Valley growers interviewed had 80 per cent Concord, 7 per cent Delaware, 5 per cent Worden, and 3 per cent Niagara. The Michigan growers had 93, the Arkansas growers 97 and the Chautauqua-Erie growers 98 per cent of their vineyard acreage in Concord.

YIELD BY VARIETIES

Area	Period years	Average yield per acre		Concord yield higher by tons
		Delaware tons	Concord tons	
Finger Lakes	1924-28	0.94	1.62	.68
Michigan	1920-28	1.13	1.55	.42
Finger Lakes	1924-28	0.92	1.54	.62
Bluff Point*	1910-17	0.60	0.97	.37
Bluff Point*	1920-28	0.78	1.67	.89
Finger Lakes	1924-28	1.38	1.73	.35
Niagara County	1928	2.26	2.09	-.17
North East, Pa.	1924-28	1.84	2.11	.27
Finger Lakes	1926-28	1.19	1.49	.30

*Averages for only one farm located near Bluff Point, N. Y.

Concord grapes usually yield higher than other varieties. Finger Lakes growers who had one or more acres of Delaware grapes 6 years and older had yields from 1924-28 of about one ton of Delaware grapes per acre. These same growers had yields of 1.62 tons of Concord grapes. On these farms, the Delaware vineyards produced about .68 of a ton per acre less than Concord vineyards.

The Catawba, over a period of years, has yielded from one-third to one-half less per acre than Concord. Niagara in the Finger Lakes has averaged about one-fifth less per acre than Concord.

COSTS TO GROW AND HARVEST GRAPES

Items	1928		1932
	Finger Lakes 110 farms	Chautauqua Co. 84 farms	Chautauqua Co. 84 farms
Quantities per ton			
Labor, hours	80	65	50
Horse work, hours	25	27	22
Tractor work, hours	1	2	1
Truck, auto, miles	8	4	5
Vineyard, acres	0.65	0.61	0.62
Fertilizer, pounds	38	74	22
Manure, tons	0.7	0.7	0.7
Spray, gallons	17	27	21
Cost per ton			
Labor	\$33.22	\$28.46	\$11.64
Horse work	5.08	4.92	3.20
Tractor	.71	1.35	.76
Truck, auto	.99	.53	.50
Vineyard			
Interest on value of			
Land	2.65	4.43	2.32
Vines and trellis	4.76	4.96	2.57
Depreciation	1.80	2.62	1.12
Taxes	1.73	1.74	1.40
Materials			
Fertilizer	1.08	1.47	.39
Manure	1.18	1.77	.97
Spray	.15	.33	.28
Total	\$53.35	\$52.58	\$25.15
All other	6.83	6.44	4.19
Total cost per ton	\$60.18	\$59.02	\$29.34

By using quantities listed above, costs at different prices may be estimated. The 8 items amounted to 89 per cent of the total costs in 1928 for both the Finger Lakes and Chautauqua farms and to 86 per cent in 1932.

MARKETING GRAPES

Professor M. P. Rasmussen in Cornell Bulletins recently published, describes the marketing of grapes from the producer to the consumer. Information is given relative to the cost of packing and selling grapes at country points, the services and costs of the wholesale distributors, the kind of stores where the consumer buys, and finally who the consumers are and how they use the grapes.

SOME FACTS CONCERNING THE MARKETING OF EASTERN GRAPES

Part I. Competition, Distribution and Wholesale

Marketing. Bulletin 275.

Part II. Retail Distribution and Consumer

Demand. Bulletin 276.

If you wish a copy of these, write to The Office of Publication, Roberts Hall, Cornell University, Ithaca, New York.