

UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Agricultural Economics
and
MICHIGAN DEPARTMENT OF AGRICULTURE
Bureau of Foods & Standards Cooperating

MARKET NEWS SERVICE ON FRUITS AND VEGETABLES

MARKETING THE MICHIGAN GRAPE CROP

Brief Review of the 1937 Season

By
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Market reports on grapes were issued from the Benton Harbor, Michigan office from September 27 to November 4, 1937.

National Situation

The United States grape crop for 1937 is estimated at 2,731,980 tons which is 43% larger than in 1936 when production amounted to 1,916,460 tons and 23% larger than the 5-year average (1928-32) of 2,214,482 tons. Favorable growing conditions in all principal grape producing sections, especially California, accounted for the bumper crop. Carlot grape shipments for the entire United States amounted to 37,367 cars (through January 1, 1938) and compares to forwardings in 1936 of 31,483 cars for the same date and 31,504 cars for the entire 1936 season.

Michigan Situation

Michigan's 1937 grape harvest was estimated at 67,200 tons. This is slightly under average (1928-32) of 67,960 tons but is 75% above the short crop of 1936 of 38,700 tons. The pre-season prospects were for a very large crop of fine quality grapes. Rainfall was ample to keep the vineyards growing healthily and the set was heavy. However the cool weather in September combined with late growth held back maturity so late that stock did not ripen properly. There were many red berries as late as the latter part of October, especially in Van Buren County. Stock did not have the proper sugar content for fresh pressing and wine purposes until late in the season. Early frosts injured many vineyards very severely where harvesting was held back to allow the grapes to mature properly. This was especially true in vineyards with poor frost protection situated back away from Lake Michigan. Late maturity and early frosts played havoc with most vineyards in the Lawton-Paw Paw-Mattawan section. In this section many vineyards were injured so badly that the grapes could not be used either for fresh or fresh juice purposes. About the only outlet was to wineries that could utilize frosted stock, or for making jam pulp. Quality likewise was injured by severe infestations of berry moth in many vineyards. This section had one of its worst grape seasons in history.

F.o.b. prices were quite low. 1937 prices over the Benton Harbor Cash Market averaged 21¢ for 12 quarts and 12¢ for 4 quarts and compares to 35¢ for 12 quarts and 16¢ for 4 quarts in 1936. Carlot sales on an f.o.b. usual term basis ranged from 21¢ to 27¢ for 12 quarts Concord. Carlots sales to the Surplus Commodity Corporation for Government Relief purposes moved at 25¢.

Grapes sold to pressers, especially to Michigan wine makers and to fresh juice processors returned good prices. The weighted average price paid for all Michigan grapes pressed for fresh juice, jam pulp and wine juice amounted to \$43.60, the highest average price paid for juice stock since 1924, and \$1.10 a ton above the average price paid a year ago.

The agreement by the State of Michigan for tax refunds on Michigan wines to local wineries whereby the wineries agreed to pay \$55.00 a ton to growers accounted for this high average price for juice stock in face of the large crop. State wineries report 5136 tons processed for which growers were paid \$55.00 per ton. Out-of-state wineries bought frosted grapes as low as \$10.00.

A total of 10,956 tons of grapes were reported as being sold to pressers, the heaviest tonnage so handled in Michigan since records have been tabulated.

Trucks continued to move the bulk of Michigan grapes. However, the rail movement picked up this season, amounting to 716 cars. Reduced rail rates into the Northwest stimulated forwarding into this territory. Commercial shipment by rail and boat amounted to 344 cars as compared to 100 cars moved in 1936. Government purchases of grapes which were billed via rail amounted to 372 cars. Movement over the Benton Harbor Cash Market, which largely moves by trucks, amounted to 1800 cars and compares to 820 cars in 1936 and 1643 cars in 1935.

Summary of Grape Movement and Average Prices of Benton Harbor Cash Market:

(Season)	(Carlot Equivalents)	(Value:-- 12 qts. 4 qts.)		(Total Value)
1931	1328	\$.27	\$.12	\$512,307.73
1932	2885	.15	.08	537,518.00
1933	1786	.18	.12	523,844.94
1934	1837	.23	.12	657,790.37
1935	1643	.18	.11	460,849.22
1936	820	.35	.16	431,204.60
1937	1800	.21	.12	501,713.19

THE GRAPE OUTLOOK FOR 1938

Average production of grapes in the United States during the next few years, the Bureau of Agricultural Economics points out in its annual outlook, is likely to be slightly larger than the 1932-36 average of 2,100,000 tons, but considerably smaller than the near-record crop of 1937. If consumer buying power during this period remains near present levels, such crops could probably be disposed of at prices a little higher on the average than are being received for this year's extremely large crop.

THE GRAPE OUTLOOK FOR 1938

Preliminary estimates indicate that the 1938 bearing acreage of grapes in California will be about 487,000 acres, an increase of nearly 19,000 acres over that of 1936. The 1938 bearing acreage is likely to be maintained and perhaps increased slightly during the next few years, since the relatively good prices this season, considering the very large crop, are expected to encourage good vineyard care. With average yields, this acreage would produce approximately 1,875,000 tons of grapes.

There has been no pronounced trend in production of grapes in the principal producing regions outside California. Production in these regions during the next few years will probably average near the 1932-36 average of 267,000 tons, although bearing acreage is likely to decline slightly. Reports indicate that plantings in all eastern regions are light.

(Released Washington, D.C., November 10-37)

Amount of Grapes used by Juice Factories in Southwestern Michigan and Value

Year	Total Used	Weighted Average Returns	Total Value
1937	10,956 tons	\$43.60 per ton	\$477,630
1936	8,000	42.50	340,000
1935	4,600	26.26	120,800
1934	5,700	28.00	159,600
	2,432	33.00	77,286
1933	3,400	19.06	65,800
1932	1,085	12.00	13,020
1931	600	40.00	24,000
1930	4,250	40.00	170,000
1929	2,468	40.00	98,720
1928	8,011	32.00	256,352
1927	6,700	41.50	278,050
1926	8,620	31.00	267,220
1925	----- (Very small crop)		
1924	3,500	76.00	266,000
1923	4,500	60.00	270,000

JOBGING SALES OF MICHIGAN GRAPES IN IMPORTANT MARKETS - 1937

Sales include both rail and truck receipts. Prices for 4 qt. climax baskets are Fancy Table grade, for 12 qt. climax baskets are Number 1s.

DETROIT			CHICAGO		
Date	Concords		Date	Concords	
	4 qts	12 qts		4 qts	12 qts
Sept. 27	.18		Sept. 27	.13- .15	.30- .32
28	.16- .17	.33- .35	28	.13- .16	.32- .34
29	.11- .17	.32- .33	29	.13- .16	.30- .32
30			30	.13- .15	.27- .30
Oct. 1	.15- .16	.29- .33	Oct. 1	.11 ¹ / ₂ - .14	.21- .25
4	.14- .15	.26- .27	4	.12- .13	.22- .27
5	.12- .13		5	.12- .14	.25- .28
6	.12- .15	.26- .28	6	.12- .15	.26- .28
7	.14- .15	.29	7	.12- .14	.24- .28
8	.13- .14	.27- .28	8	.12- .14	.28
11	.13- .14	.27- .28	11	.11- .13	.24- .27
12	.12- .13	.25- .28	12	.11- .12	.23- .25
13	.12	.28	13	.11- .13	.23- .25
14	Too few sales reported to quote		14	.12 ¹ / ₂ - .13	.22- .26
15	"		15	.12- .13	.23- .26
18	"		18	.11- .13	.22- .25
19	.15	.28	19	Too few sales reported to quote	
20			20	.11- .13	.23- .25
21	.14	.27- .28	21	.12- .14	.21- .25
22	Too few sales reported to quote		22	.11- .14	.22- .25
25	"	"	25	.12- .14	.20- .25
26	"	"	26	.12- .13	.23- .25
27	"	"	27	.12- .13	.22- .24
28	"	"	28	.12- .13	.22- .24
29	"	"	29	.11- .13	.22- .24
Nov. 1	"	"	Nov. 1	.11- .13	.21- .23
2	"	"	2	.13- .15	.21- .22

MILWAUKEE

Date	Concords		Date	Concords	
	4 qts	12 qts		4 qts	12 qts
Sept. 27	.15- .16	.30- .32	Oct. 14	.13- .14	.25- .27
28	.15- .17	.28- .33	15	.13- .14	.25- .27
29	.15- .17	.28- .33	18	.13- .14	.25- .27
30	.16- .18	.28- .33	19	.13- .14	.23
Oct. 1	.13- .14	.26- .28	20	.13- .14	.23
4	.14- .15	.25- .27	21		.24
5	.15- .16	.27- .29	23	.13- .14	.23
6	.15	.27- .28	25	.13	.23
7	.14- .15	.28	26	.13	.22- .23
8	.14- .15	.27- .28	27		.22
11	.13- .14	.26- .27	28	.13	.22
12	.13- .14	.26- .27	29	.13	.21
13	.13- .14	.25- .27	Nov. 1		.20

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 MARKETING THE MICHIGAN GRAPE CROP (Cont'd) 1937 Season
 JOBBING SALES OF MICHIGAN GRAPES IN IMPORTANT MARKETS - 1937 (Cont'd)

CINCINNATI				KANSAS CITY			
Date	Concords		12 qts	Date	Concords		12 qts
	4 qts				4 qts		
Sept. 28		.20	.37-.38	Sept. 28	.13-.16		.32-.34
29	.18-	.20	.35-.37	29			.40-.45
30		.18 ¹ / ₂	.32-.36	30			.40-.50
Oct. 1	.16-	.17	.28-.32	Oct. 1			.40-.45
4	.12-	.14	.30-.31	4			.33-.40
5	.13-	.14	.30-.34	5			.33-.40
6			.31-.33	6			.33-.40
7			.31-.33	7			.40
8			.30-.32	8			.40-.45
11			.29-.31	11			.35-.40
12			.28-.30	12	.20		.35-.40
13			.29-.30	13			.32 ¹ / ₂ -.40
14			.28-.30	14			.32 ¹ / ₂ -.40
15			.28-.30	15	.20		.30-.40
18			.27-.30	18			.35
19			.27-.30	19			.32 ¹ / ₂ -.40
20			.27-.29	20			.32 ¹ / ₂ -.45
21			.27-.28	21			.27 ¹ / ₂ -.30
22			.28-.30	22			.27 ¹ / ₂ -.40
25			.25-.27	25	.12 ¹ / ₂ -.15		.28-.35
26			.24-.25	26	.12 ¹ / ₂ -.15 ¹ / ₂		.28-.32
28			.23	27	.15-.17 ¹ / ₂		.30
29			.27-.28	28	Too few sales reported to quote		
Nov. 1			.23-.25	29	"	"	"
2			.20-.25	Nov. 1	"	"	"
3			.20	2	"	"	"

ST. LOUIS				MINNEAPOLIS			
Date	Concords		12 qts	Date	Concords		12 qts
	4 qts				4 qts		
Sept. 28			.35	Sept. 28			.43-.45
29			.35	29			.43-.45
30			.35	30	Too few sales reported to quote		
Oct. 1			.32 ¹ / ₂ -.35	Oct. 1			.43-.45
4	.15-	.16	.30-.32	4			.35-.38
5		.15	.28-.30	5			.33-.35
6		.15	.28-.30	6			.33-.35
7		.15	.30-.32	7			.38
8		.15	.30-.33	8			.39
11			.32	11	.19-.20		.38
12			.31-.33	12	.18-.20		.34-.35
13	.15		.28-.31	13	.19-.19		.34-.35
14	.15		.30-.32	14	.17-.18		.32-.33
15	.15		.30-.31	15	.17-.18		.33-.35
18	.15		.28-.30	18	.17-.18		.34-.35
19	.15		.28-.30	19	.17-.18		.34-.35
20	.13-.15		.30	20	.17-.18		.34-.35
21	.13-.15		.28-.30	21			.35-.38
22	.12-.13		.29-.30	22			.35-.38
25	.12		.29-.30	25	Too few sales reported to quote		
26	.13		.28-.30	26	"	"	"
27	.11-.12		.28-.30	27			.34-.35
28	.13		.27-.29	28			.34-.35
29			.26-.28	29			.34-.35
Nov. 1			.25-.26	Nov. 1			.34-.35
2			.23-.25	2			.34-.35
3			.23-.25	3			.34-.35

WEST MICHIGAN CARLOT F.O.B PRICES - 1937 SEASON

Date	Concords		12-qt juice*	Date	Concords		12-qt* juice*
	4 qts	12 qts			4 qts	12 qts	
Sept. 27	.16			Sept. 18			.25*
28				19			.25*
29			.27	20			.25*
30	.13 ¹ / ₂		.26	21			.25*
Oct. 1	.13		.21	22			.25*
2	.13		.21	23			.25*
4	.13			25			.25*
5	.13	.26 ¹ / ₂	.27	26			.25*
6		.26-	.26 ¹ / ₂	27			.25*
7		.23-	.23 ¹ / ₂	28			.25*
8		.23-	.24	29			.25*
11	Too few sales reported to quote			30			.25*
12	"	"					
13	"	"					
14	"	"					
15			.25*				
16			.25*				

(*) Purchased by Surplus Commodities Corporation.

Basis sales: Carloads f.o.b. usual terms and carloads f.o.b. cash track. All stock graded as follows: commercial sales 4-qt. Michigan Fancy Table; 12-qt. Michigan No. 1; Relief 12-qt. U.S.No. 1 Juice.

PRODUCTION OF GRAPES 1937 SEASON WITH COMPARISONS

Note: Figures are in tons.

State	Average 1928-32	1936	1937	State	Average 1928-32	1936	1937
Maine.....	38	20	30	Tennessee.....	1406	2340	2650
New Hampshire.....	78	70	120	Alabama.....	894	1560	1680
Vermont.....	42	20	50	Mississippi.....	260	320	320
Massachusetts.....	526	660	900	Arkansas.....	10860	7000	12800
Rhode Island.....	286	290	370	Louisiana.....	54	70	50
Connecticut.....	1794	2320	2520	Oklahoma.....	3050	1600	4000
New York.....	84100	49300	89100	Texas.....	2100	2300	2900
New Jersey.....	3040	3100	4000	Idaho.....	546	550	470
Pennsylvania.....	25180	16000	26000	Colorado.....	412	600	570
Ohio.....	27140	26400	37800	New Mexico.....	940	1300	1180
Indiana.....	3600	3100	5300	Arizona.....	1606	500	560
Illinois.....	6080	4300	8600	Utah.....	1084	1020	630
MICHIGAN.....	67960	38700	67200	Nevada.....	94	90	100
Wisconsin.....	374	320	450	Washington.....	5600	4600	4100
Minnesota.....	278	170	260	Oregon.....	2460	2200	2100
Iowa.....	7020	2600	5000	California.....	1924000	1714000	2409000
Missouri.....	9660	5800	12300	Wine varieties...417800	472000	572000	
Nebraska.....	2840	1000	1800	Raisin varieties...161400	918000	1438000	
Kansas.....	4420	1200	3600	Dried 3/.....219740	182000	---	
Delaware.....	2120	2000	2200	Not dried.....282400	190000	---	
Maryland.....	694	740	750	Table varieties..344800	324000	399000	
Virginia.....	1900	2600	3000	Total U. S.	2214482	1916460	2731980
W. Virginia.....	1214	960	1900	1/ Short-time average.			
North Carolina.....	4704	7900	8100	2/ Includes some quantities not har-			
South Carolina.....	1076	1950	1990	vested on account of mkt.conditions.			
Georgia.....	992	1850	1860	3/ Dried basis:1 ton dried raisins equi-			
Florida.....	816	840	710	valent to 4 tons fresh grapes.			
Kentucky.....	1144	2200	2960				

---Released at Washington, D. C. November 10, 1937

MICHIGAN GRAPE SHIPMENTS BY COUNTIES AND BILLING STATIONS 1937
(rail and boat)

County and Station	September	October	Total
<u>Berrien</u>			
Benton Harbor	78	97	175
Coloma	1	1	2
Derby	21	118	139
St. Joseph	9	4	13
Sawyer		7	7
Sodus		142	142
Stevensville	14		14
Total	123	369	492
<u>Cass</u>			
Dowagiac		2	2
<u>Van Buren</u>			
Lawton	12	46	58
Mattawan		1	1
Paw Paw	2	32	34
So.Haven		1	1
Total	14	80	94
Unknown #			114
Boat Shipments	5	9	14
GRAND TOTAL	142	460	716

Reports by counties billing station incomplete at time release.

PRIMARY DESTINATIONS OF MICHIGAN CARLOT GRAPE SHIPMENTS 1937

R - Relief		C - Commercial		State and City		Cars		State and City		Cars	
State and City	R	C	State and City	R	C	State and City	R	C	State and City	R	C
<u>Arizona</u>			<u>Illinois (Cont'd)</u>			<u>Iowa (Cont'd)</u>					
Phoenix		2	Gillespie	2		Minden		1			
<u>Arkansas</u>			Hillsboro	2		Sioux City				2	
Ft. Smith	2		Jacksonville	1		<u>Kansas</u>					
Helena	1		Joliet	1		Concordia				2	
Little Rock	2		LaSalle	1		<u>MICHIGAN</u>					
Newport	1		Lombard	1		Battle Creek				1	
Pinebluff	1		Marion	2		Bay City				2	
<u>Colorado</u>			Marshall	1	1	Big Rapids				1	
Denver		12	Mattoon	1		Calumet					6
<u>Illinois</u>			Mitchell	4	1	Cadillac				1	
Allendale	1		Pekin	1		Cheboygan				1	
Beardstown	1		Peoria	1		Detroit				12	10
Benton	3		Quincy	1		Escanaba				1	2
Blue Island		2	Rockford	1		Flint					2
Cairo	1		Springfield	2		Grand Rapids				2	
Canton	2		Taylorville	1		Grayling				1	
Centralia	1		Urbana	1		Hancock				1	
Chicago	30	8	<u>Indiana</u>			Houghton					2
Danville	2		Evansville	1		Iron Mountain				1	3
Decatur	1		Gary	1		Ironwood				2	2
DuQuoin	1		Indianapolis	5		Ishpeming					1
E.St.Louis	4		South Bend	1		Jackson				1	1
Edwardsville		1	Terre Haute	2		Kalamazoo				1	
<u>Iowa</u>			<u>Iowa</u>			Lansing				2	
Eldorado	1		Carson	1		Lola				1	
Elgin	2		Clinton	2		Manistee					1
Freeport	1		Estherville		2	Muskegon					2
Galesburg	1										

MARKETING THE MICHIGAN GRAPE CROP (Cont'd)

1937 Season

PRIMARY DESTINATIONS OF MICHIGAN CARLOT GRAPE SHIPMENTS 1937 (Cont'd)

R - Relief

C - Commercial

State and City		Cars		State and City		Cars		State and City		Cars	
Michigan (Cont'd)		R	C	North Dakota (Cont)		R	C	Tennessee (Cent'd)		R	C
Newberry		1		Jamestown		1	1	Memphis		2	
Pontiac		1	1	Killdeer		1		Nashville		2	
Port Huron		1		Linton		1		Texas			
Stambaugh		1		Mandan		1		El Paso			2
Traverse City		1		Minnewaukau		1		Utah			
Minnesota				Minot		3	5	Salt Lake City			1
Aitkin		1		Mott		1		Wisconsin			
Austin			1	Napoleon		1		Eau Claire		2	
Breckenridge			1	Selfridge		1		Fond du Lac		1	
Bemidji		1	1	Stanley		2		Green Bay		1	
Benson		2		Steele		1		Hayward		1	
Brainerd		1		Towner		2		Kenosha		1	
Detroit Lakes		2		Valley City		1		Madison		2	
Duluth		4	7	Wahpeton			1	McAllister		1	
Elbow Lake		1		Walford City		1		Milwaukee (Boat)			14
Faribault		2		Washburn		1		Milwaukee (Rail)	10		
Hopkins		1		Williston		2	2	Superior	1		
Mankato		1		Wishek			1				
Minneapolis		8	137	Ohio							
Olivia		1		Canton		1		TOTAL BY STATES			
Owatonna			1	Cincinnati		8		State	Cars	R	C
Rochester		2		Cleveland		1		Arizona			2
Roseau		1		Columbus		4		Arkansas	7		
St. Cloud		3		Dayton		2		Colorado			12
St. James		1		New Lexington		1		Indiana	10		
St. Paul		5	59	Portsmouth		1		Illinois	76	13	
Savage		1		Steubenville		1		Iowa	4	4	
Thief River Falls			1	Youngstown		2		Kansas			2
Virginia		1		Zanesville		1		Michigan	38	31	
Warren		1		Oklahoma				Minnesota	41	210	
Willmar			1	Alva		1	1	Missouri	31	1	
Winona		1	1	Antlers		4		Nebraska	9		
Missouri				Claremore		4		N. Dakota	35	27	
Camden		1		Enid		1	1	Ohio	22		
Hannibal		1		Guthrie		4		Oklahoma	35	2	
Jefferson City		2		Lawton		2		Pennsylvania	1		
Joplin		1		Mangum		2		S. Dakota	35	11	
Kansas City		5	1	McAlester		2		Tennessee	8		
Moberly		2		Muskogee		4		Texas			2
Polar Bluff		3		Okemah		4		Utah			1
St. Joseph		3		Purcell		4		Wisconsin	20	14	
St. Louis		6		Shattuck		2					
Springfield		7		Stillwater		1		TOTAL	372	332	
Nebraska				Pennsylvania				Unknown		12	
Gering		1		Milbell		1		GRAND TOTAL			716
Grand Island		2		South Dakota							
Lincoln		2		Aberdeen		7	4				
Norfolk		1		Chamberlain		1					
Omaha		3		Huron		5	1				
North Dakota				Mobridge		4					
Bismarck		3	4	Pierre		1					
Bowbells		2		Rapid City		5					
Crosby		1		Sioux Falls		5	4				
Devils Lake		1	1	Watertown		2	2				
Dickinson		3		Winner		3					
Dover		1		Yankton		2					
Fargo		1	4	Tennessee							
Fessenden		1		Chattanooga		1					
Grand Forks		1	6	Jackson		1					
Hettinger		2		Knoxville		2					

BENTON HARBOR CASH MARKET ON GRAPES -- 1937 SEASON

Note: Price ranges are for truckloads, cash to growers, 4 qt. packages are Fancy table, 12 qt. packages are No. 1 grade. Daily movement over the market, calculated with the following carlot equivalents: 4 qt. packages 3,000 to the car, 12 qt. packages 1,200 to the car.

Date	Champions		Moore's Early-Wardens		Concords		Carlot Equiv.	
	4 qts	12 qts	4 qts	12 qts	4 qts	12 qts	4 qts	12 qt
Aug. 30	.11-	.12					.60	.23
31	.10-	.12					1.00	.52
Sept. 1	.10-	.11					1.70	1.28
2	.09-	.11		.15			1.72	.84
3	.10-	.11		.18-	.20		.68	1.21
6	.10-	.12		.21-	.22		2.38	3.09
7	.10-	.12		.13-	.15		2.83	3.83
8	.10-	.12		.13-	.14	.20-	3.73	3.24
9	.10-	.12		.12-	.15	.20-	4.87	3.67
10	.10-	.12		.12-	.15	.20-	4.01	3.04
12	.10-	.12		.13-	.15	.22-	5.14	3.78
13	.10-	.12		.15-	.18	.24-	1.93	1.70
14	.11-	.12		.15-	.17	.23-	5.14	3.83
15	.12-	.13		.14-	.17	.25-	4.37	3.54
16	.14-	.16					3.59	3.33
17	.12-	.14		.15-	.18	.30-	2.17	2.33
19	.12-	.14		.14-	.18	.30-	4.63	3.63
20	.12-	.13 ¹ / ₂		.15-	.17	.35-	3.12	2.91
21	.12-	.13		.13 ¹ / ₂ -	.16 ¹ / ₂	.33-	7.51	10.69
22				.14-	.16 ¹ / ₂	.32-	6.73	16.20
23				.11-	.14	.25-	7.99	27.07
24				.12-	.13	.23-	5.76	26.27
26	Delawares			.12-	.14	.24-	11.24	46.25
27				.13-	.14 ¹ / ₂	.24-	6.90	36.03
28				.13-	.15 ¹ / ₂	.24 ¹ / ₂ -	12.17	66.87
29				.12-	.13 ¹ / ₂	.22-	12.73	72.75
30	.14 ¹ / ₂			.10-	.12	.19-	12.40	83.78

BENTON HARBOR CASH MARKET ON GRAPES -- 1937 SEASON (Cont'd)

Note: Price ranges are for truckloads cash to growers, 4 qt. packages are Fancy table, 12 qt. packages are No. 1 grade. Daily movement over the market, calculated with the following carlot equivalents: 4 qt. packages 3,000 to the car, 12 qt. packages 1,200 to the car.

Date	Niagaras		Concords		Carlot 4 qts.	Equiv. 12 qts.
	4 qts.	12 qts.	4 qts.	12 qts.		
Oct. 1		.27-.30	.09-.10	.18-.21 $\frac{1}{2}$	10.71	66.39
3		.28-.30	.11-.12	.20-.23	10.02	60.13
4		.27-.30	.10-.12	.21-.23 $\frac{1}{2}$	6.65	41.91
5		.27-.31	.11-.12	.21-.23	8.42	60.89
6		.28-.32	.11-.11 $\frac{1}{2}$	.21-.23 $\frac{1}{2}$	11.30	71.93
7		.28-.32	.10-.11	.21-.23	8.03	94.56
8		.30	.09-.11	.20-.21 $\frac{1}{2}$	7.18	81.60
10		.30	.09-.11	.20-.23 $\frac{1}{2}$	10.81	81.24
11		.30-.31	.10	.20-.21 $\frac{1}{2}$	6.92	49.37
12			.10-.10 $\frac{1}{2}$	.20-.21 $\frac{1}{2}$	3.90	56.35
13		.27-.30	.09-.10	.20-.21	4.14	49.67
14		.25	.10-.11	.20-.22	3.54	43.88
15		.30	.09-.11	.20-.21	4.06	39.27
17			.09-.10	.18-.19	6.77	70.35
18			.09 $\frac{1}{2}$ -.10	.17-.19	2.13	20.36
19		.22-.25		.19-.21 $\frac{1}{2}$	2.01	24.61
20			.11-.13 $\frac{1}{2}$	.20-.22 $\frac{1}{2}$	2.27	11.61
21			.10-.12	.20-.22 $\frac{1}{2}$	4.02	29.37
22			.09 $\frac{1}{2}$ -.12	.18-.22	3.07	24.25
24			.10-.12	.18-.20	1.30	19.72
25			.10-.11 $\frac{1}{2}$	.17 $\frac{1}{2}$ -.20	1.12	15.23
26			.10	.16-.19	2.96	18.81
27			.09-.10	.16-.18	1.93	16.93
28			.10-.11 $\frac{1}{2}$	.16-.18	1.72	13.09
29			.09 $\frac{1}{2}$ -.10	.16-.18	.64	8.51
31			.10	.15-.18	.62	11.48
Nov. 1			.10 $\frac{1}{2}$	.15-.18	.43	4.33
2			.08 $\frac{1}{2}$ -.09	.15-.16	.45	5.55
3			.09	.16-.17	.22	2.11
4				.16-.19	---	2.52
5			.09 $\frac{1}{2}$	.15-.18	.09	.87
7			.08-.09	.16-.20	.13	2.05
9			.10	.16-.20	.02	.74
Equivalents previous to Aug.30:					2.58	.16
Total for entire season:					267.	1533.