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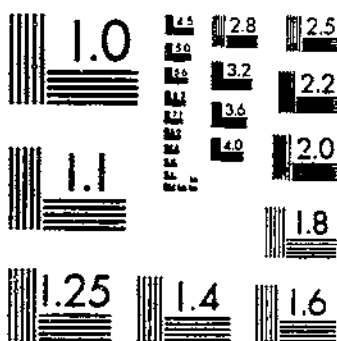
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MARKETING CANTALOUPS AND OTHER MUSKMELONS

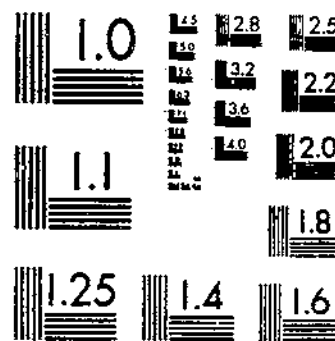
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MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A

UNITED STATES DEPARTMENT OF AGRICULTURE  
WASHINGTON, D.C.

# MARKETING CANTALOUPS AND OTHER MUSKMELONS<sup>1</sup>

By J. W. PARK, *agricultural economist, Division of Fruits and Vegetables, Bureau of Agricultural Economics*

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## VARIETIES AND TYPES

Distinct varieties of cantaloups are many in number. Regardless of varieties cantaloups are generally referred to commercially as "salmon meat" or "salmon tint", "pink meat", and "green meat", in accordance with the color of the edible portion. Both the salmon meats and the pink meats are grown for market in most of the leading districts from California to the Atlantic, and a large part of the commercial crop is included under these classifications. Green meats were formerly commercially important in the Eastern and South-eastern States, but have been largely replaced by salmon- or pink-meat varieties.

In some instances variety names are used in price quotations. In the Federal market news reports varieties<sup>2</sup> classed as salmon meats include Hale Best, Pollock 10-25, and Abbott Pearl (Pearl Pink); varieties classed as pink meats include Burrell Gem, Hearts of Gold, Edwards Perfecto, Osage, and Tiptop. There is no sharp distinction in color of the edible portion of the salmon-meat and pink-meat types, and for this reason there is some variation in the commercial classification of varieties in different districts and under different conditions.

<sup>1</sup> The term "other muskmelons" as used in this publication refers chiefly to casaba, Honey Ball, Honey Dew, and Persian melons. The term "melons" also refers to this group.

Acknowledgment is made of the assistance rendered by field representatives of this Bureau and various States who supplied specific information relating to certain producing districts.

<sup>2</sup> A more detailed description of varieties is contained in the following publication: BEATTIE, W. R., MUSKMELONS. U.S. Dept. Agr. Farmers' Bull. 1468, 38 pp., illus. 1926.

Changes in popularity and production of varieties have been marked in recent years. Efforts have been made to develop new varieties which are highly resistant to disease and which can be allowed to ripen on the vine and still be satisfactory for shipping. Varieties recently developed in western districts include the Melodew, Weaver Special, McDaniel Nugget, and Jagger Mildew Resistant.

Honey Dew, Honey Ball, casaba, Persian melons, and a few other varieties are produced commercially in some of the Western States. This group of miscellaneous melons, particularly Honey Dew and Honey Ball, has increased greatly in commercial importance in the last decade.

### PRODUCING DISTRICTS AND PRODUCTION

Cantaloups are grown commercially in many districts throughout the United States. The commercial acreage of cantaloups and other

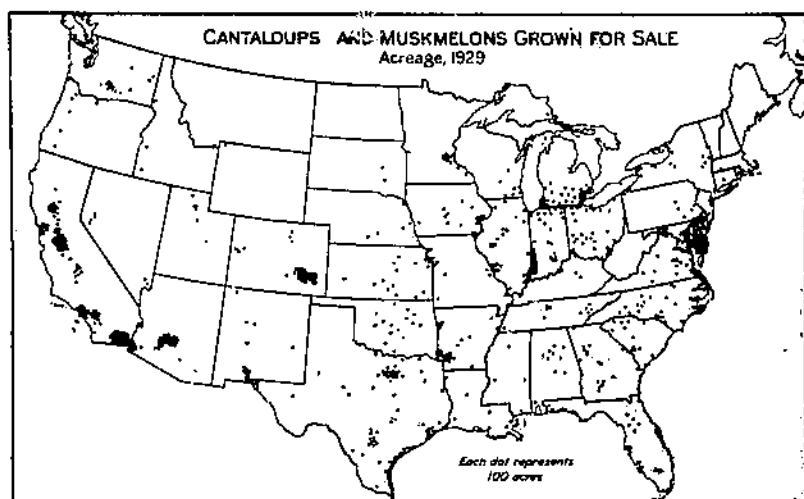


FIGURE 1.—The census listed 129,000 acres of cantaloups and muskmelons grown for sale in the United States in 1929. These melons are grown in many of the States, but nearly two thirds of the commercial acreage was in California, Arizona, and Colorado, according to estimates for the period 1928-32.

muskmelons (including chiefly Honey Dew, Honey Ball, casaba, and Persian melons) in 25 States for which official estimates are available varied in the period 1928 to 1932 from 102,000 acres in 1928 to 138,000 acres in 1931 (table 1). The census figures for all States showed 129,000 acres grown for sale in 1929. Commercial production has become largely concentrated in districts that have proven to be well adapted to this crop. These include districts in Imperial Valley, Calif., north-central California, south-central Arizona, southeastern Colorado, southern New Mexico, southwestern Arkansas, southwestern Indiana, southwestern and southeastern Michigan, New Jersey, Delaware, Eastern Shore of Maryland, the Carolinas, Texas, Washington, and a number of other States (fig. 1).

During the 5 years ended in 1932, approximately 75 percent of the commercial crop of cantaloups and other muskmelons was grown in three Western States—California, Arizona, and Colorado. More than half of the production was in California. The crop produced in Colorado, New Mexico, and States farther west is referred to in this bulletin as the western crop.

TABLE 1.—*Acres and production for market of cantaloups and other muskmelons*<sup>1</sup>

Group and State or district	Acreage					Production <sup>2</sup>				
	1928	1929	1930	1931	1932	1928	1929	1930	1931	1932
Early shipping group:										
California, Imperial Valley.....	Acres 33,460	Acres 38,360	Acres 50,900	Acres 51,640	Acres 45,750	1,000 crates 6,224	1,000 crates 6,713	1,000 crates 6,752	1,000 crates 7,840	1,000 crates 6,405
Florida.....	920	600	600	250	200	37	36	30	12	15
Texas, early district.....	140	740	1,250	540	150	10	70	113	59	15
Total.....	34,520	39,700	52,700	52,430	46,100	6,277	6,819	5,895	7,920	6,435
Second-early shipping group:										
Arizona.....	10,000	11,500	15,700	13,800	12,500	1,800	2,024	2,068	1,725	1,500
Arkansas.....	0,000	2,400	2,550	2,600	3,350	564	185	115	182	234
California, other than Imperial Valley.....	12,050	14,020	15,330	15,680	18,180	2,470	2,734	2,851	2,540	3,039
Georgia.....	650	600	750	800	1,100	52	48	75	56	77
Nevada, Moapa district.....	250	170	150	120	190	50	23	14	20	12
North Carolina.....	2,310	1,000	620	1,100	2,600	261	70	53	90	182
Oklahoma.....	500	500	500	530	560	34	38	38	45	45
South Carolina.....	640	510	600	1,200	2,000	50	28	72	150	190
Texas, other than early district.....	1,570	1,500	2,320	11,530	7,300	141	111	139	885	1,367
Total.....	33,970	32,200	38,520	47,360	47,780	5,428	5,259	5,415	5,682	5,663
Intermediate shipping group:										
Delaware.....	2,200	2,200	2,200	2,500	2,700	207	231	167	226	335
Illinois.....	900	900	900	1,020	1,070	94	94	63	82	96
Indiana.....	4,640	4,180	4,390	4,610	4,610	524	418	255	438	507
Maryland.....	0,040	6,800	7,010	7,550	8,100	676	578	380	680	834
New Mexico.....	1,400	1,570	1,800	2,100	3,400	189	198	243	258	391
Tennessee.....	470	120	170	220	240	33	10	13	15	18
Washington.....	1,750	1,850	1,950	1,600	1,650	192	278	224	197	193
Total.....	17,400	17,620	18,420	18,600	21,770	2,068	1,805	1,371	1,895	2,382
Late shipping group:										
Colorado.....	0,000	11,000	10,000	8,100	7,370	1,170	2,530	2,000	1,134	1,106
Iowa.....	780	580	520	620	900	78	39	42	53	90
Kansas.....	450	450	450	450	450	57	54	40	50	54
Michigan.....	3,000	3,400	3,800	4,000	4,200	300	357	437	420	420
Nevada, other than Moapa district.....	220	320	280	260	260	36	40	44	22	24
New Jersey.....	3,000	2,500	3,100	4,000	5,000	480	275	388	420	525
Ohio.....	300	300	300	540	650	27	27	41	57	72
Oregon.....	600	600	600	700	600	60	120	120	122	90
Utah.....	250	250	250	250	700	42	42	42	42	84
Total.....	10,450	19,150	19,310	18,920	20,130	2,121	3,382	3,112	2,320	2,541
Total.....	102,340	108,670	120,010	138,310	135,780	15,834	17,265	15,823	17,817	17,021

<sup>1</sup> Other melons include chiefly casaba, Honey Ball, Honey Dew, and Persian melons, but not water-melons.

<sup>2</sup> In terms of standard crates containing approximately 60 pounds.

<sup>3</sup> Includes some quantities not harvested on account of market conditions as follows: Arizona, 438,000 crates in 1932; California, Imperial Valley, 1,693,000 crates, and California, other than Imperial Valley, 758,000 crates in 1932; Texas, other than early district, 433,000 crates in 1931, and 182,000 crates in 1932; New Mexico, 100,000 crates in 1932.

Division of Crop and Livestock Estimates.

Production for market of cantaloups and other muskmelons in the period 1928 to 1932, stated in terms of standard crates, has ranged from 15,800,000 in 1928 to 18,000,000 in 1931. The annual per-capita commercial production for the United States in this period has ranged approximately from 8 to 9 pounds.

### SHIPMENTS

The important western producing districts are at great distances from the leading markets and the greater part of the movement from them is in car lots. The proportion of total shipments of the western crop moved by motor truck is small, although there is a considerable truck movement to points within a radius of several hundred miles of the producing districts. The estimated motor-truck shipments were less than 5 percent of the total movement in the Imperial Valley, Calif., in each of the years 1931 and 1932.

From the eastern and midwestern districts, which are much nearer to markets than are the western, a large part of the crop moves by truck. Records of these shipments for some districts are not available, but for Delaware and the Eastern Shore of Maryland in 1932 about 84 percent of the cantaloup shipments were by truck. The car-lot shipments of cantaloups reported for Michigan in 1932 totaled only 13, whereas the motor-truck shipments from the Benton Harbor market alone were equivalent to about 550 cars.

In 1932, motor-truck receipts of cantaloups in New York City were 30 percent of the total supply coming by rail and truck. For Philadelphia, the corresponding figure was 64 percent, and for Los Angeles, 94 percent. In Los Angeles, 90 percent of the miscellaneous melons came by truck, whereas in New York and Philadelphia there were practically no truck receipts of such melons, as they are grown chiefly in the Western States.

The rail-shipment figures represent the commercial movement of cantaloups and other muskmelons fairly well in the Western States, where about three fourths of the United States crop is produced. In other parts of the country, particularly in States near large eastern and midwestern markets, the rail shipments are not a good index of the commercial movement, because of the large quantities hauled to market by truck.

In 1928, carload shipments were equivalent to about 80 percent of the production for market. The proportion moved in car lots declined yearly from 1928 to 1932, when it was only slightly more than half of the production. Part of this decline was due to increased movement by truck, but in some years, particularly 1932, large quantities were not shipped because of low prices.

Carload shipments of cantaloups during the 10-year period 1923-32 varied between approximately 17,000 cars in 1932 and approximately 30,000 cars in 1925 and in 1927 (table 2).

TABLE 2.—Car-lot shipments of cantaloups by States or districts, 1923-32

State or district of origin	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
	Cars	Cars	Cars	Cars	Cars	Cars	Cars	Cars	Cars	Cars
Alabama	0	3	1	3	0	0	1	0	0	0
Arizona	1,208	1,864	3,057	3,140	4,640	5,224	5,163	5,436	4,461	3,020
Arkansas	337	1,052	1,245	1,127	784	646	413	245	443	541
California	2,457									
Northern district	0	70	98	0	81	428	100	0	0	5
Southern district	1	0	2	1	2	16	42	7	9	
Central district	2,535	3,016	2,233	2,234	2,922	1,502	1,744	1,701	1,461	
Imperial Valley	12,092	15,756	13,410	11,678	15,439	14,072	14,391	11,151	12,986	7,592
Colorado	2,116	2,654	3,224	3,574	2,996	2,110	3,195	2,764	1,733	1,785
Delaware	818	511	557	551	427	427	285	193	233	190
Florida	36	7	4	5	12	14	7	1	0	13
Georgia	216	585	117	136	103	104	76	138	80	81
Idaho	0	2	1	0	0	0	0	2	3	6
Illinois	86	45	126	57	9	19	10	13	25	45
Indiana	681	822	1,087	595	365	459	387	172	278	230
Iowa	105	79	88	99	48	101	35	31	38	20
Kansas	28	17	18	2	1	9	7	3	12	4
Kentucky	0	0	10	5	0	0	0	0	0	0
Louisiana	1	7	12	43	4	4	4	3	0	26
Maryland	1,270	690	1,116	1,283	1,169	1,002	561	274	347	264
Michigan	306	114	146	84	74	52	13	13	16	13
Missouri	11	11	31	34	0	2	3	7	2	14
Montana	0	0	0	0	0	0	0	0	2	0
Nebraska	0	0	0	0	0	0	0	0	0	0
Nevada	107	231	346	182	133	159	170	124	102	64
New Jersey	83	70	147	15	12	13	1	0	0	4
New Mexico	364	518	574	640	415	370	352	416	612	560
New York	1	2	3	0	0	0	0	1	0	0
North Carolina	520	401	655	397	606	364	88	19	110	180
Oklahoma	1	34	64	67	52	54	4	18	31	0
Oregon	0	0	1	0	0	0	12	131	89	21
South Carolina	70	115	33	172	179	94	44	125	89	224
Tennessee	173	55	184	68	40	42	1	7	20	0
Texas	387	416	460	490	242	241	176	355	715	571
Utah	0	1	2	10	0	0	17	27	123	163
Virginia	3	23	30	19	23	4	2	5	11	2
Washington	207	298	221	145	239	244	381	277	150	105
West Virginia	2	0	0	0	0	0	0	0	0	0
Total	24,771	28,929	30,165	26,940	30,241	28,975	28,148	23,827	24,375	17,215

<sup>1</sup> In shipment statistics for California, "northern district" is roughly the area north of San Francisco and Stockton; "central district" is between northern district and a southern boundary roughly defined by a line from Santa Barbara through Mojave; "southern district" is south of central district but exclusive of Imperial Valley.

<sup>2</sup> Not segregated by districts in 1923 reports.

The Imperial Valley is by far the most important cantaloup-shipping district in the United States. Its car-lot shipments have in many years about equaled those from all other States. Central California, or the area south of San Francisco and Stockton and north of a line through Santa Barbara and Mojave, is the source of a large volume of shipments. The crop of Arizona showed an upward trend from 1923 until 1930 when 5,400 cars of cantaloups were marketed; then came a decline in 1931 and 1932. The Colorado shipments reached a peak for the 10-year period in 1926 with about 3,600 cars. In Michigan, Indiana, and Maryland, the decline in rail shipments during the decade beginning in 1923 was due chiefly to the increase in motor-truck shipments.

Honey Dew, Honey Ball, casaba, and Persian melons, are shipped from a number of States, but nearly all of the commercial movement



originates in the Imperial Valley and central California, Arizona, and Colorado (table 3). California alone in recent years has made approximately 90 percent of all such shipments. Car lots of miscellaneous melons increased from less than 1,200 in 1923 to more than 12,000 in both 1930 and 1931. The 1930-32 average shipments of miscellaneous melons (including some cantaloups in mixed carloads) were approximately 11,000 cars which is about one half of the average shipments of cantaloups for the period.

TABLE 3.—Car-lot shipments of miscellaneous melons<sup>1</sup> by States or districts, 1923-32

State or district of origin	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
	Cars	Cars	Cars	Cars	Cars	Cars	Cars	Cars	Cars	Cars
Alabama.....	0	0	0	2	17	1	0	0	0	0
Arizona.....	0	281	776	586	577	677	294	398	81	89
Arkansas.....	0	0	0	0	4	8	0	0	0	0
California <sup>2</sup> .....	1,037	1	37	7	0	27	189	216	186	319
Northern district.....	0	0	7	0	5	0	0	0	2	0
Central district.....	1,463	1,594	1,042	2,045	3,456	4,008	3,353	2,080	1,961	
Imperial Valley.....	174	573	2,350	2,682	4,747	5,916	7,020	8,745	6,922	
Colorado.....	111	575	613	1,534	935	679	1,400	1,334	1,057	790
Florida.....	0	0	3	0	69	3	0	0	0	0
Georgia.....	0	0	0	0	0	0	0	0	3	2
Idaho.....	0	0	0	0	1	0	2	0	0	0
Illinois.....	0	0	1	0	7	1	0	0	0	0
Indiana.....	0	0	2	34	60	6	2	12	9	0
Iowa.....	0	0	0	0	48	75	10	2	1	0
Kansas.....	3	30	19	1	0	3	1	1	8	9
Michigan.....	0	0	0	0	3	0	0	0	0	0
Mississippi.....	0	0	0	0	0	18	0	0	0	0
Missouri.....	0	0	0	5	0	0	0	3	6	0
North Carolina.....	0	0	3	4	0	0	0	0	0	0
Oregon.....	0	0	0	1	4	0	2	5	1	0
South Carolina.....	0	1	0	1	0	0	0	0	0	0
Texas.....	0	40	29	24	0	3	0	3	43	12
Utah.....	0	0	0	3	0	1	0	0	0	3
Washington.....	0	0	0	0	13	14	1	5	0	0
Total.....	1,152	2,505	3,554	6,484	6,516	6,719	11,894	12,352	12,207	9,107

<sup>1</sup> Includes casaba, Honey Ball, Honey Dew, and Persian melons (and mixed melons reported since 1930. See footnote 2, table 4), but not watermelons or cantaloups.

<sup>2</sup> See footnote 1, table 2.

<sup>3</sup> Not segregated by districts in 1923 reports.

As an average for the 3 years, 1930-32, about 56 percent of the Honey Dew shipments came from the Imperial Valley. Central California and Colorado are also important sources of supply. Honey Dew shipments exceeded 6,000 cars in both 1930 and 1931 (table 4).

The Imperial Valley is by far the most important source of Honey Ball melons. In the period 1930-32 this district furnished nearly 95 percent of the total supply, which averaged slightly under 2,400 cars per year for the period (table 4).

The car-lot shipments of casaba melons totaled only 155 in 1930 and did not reach this figure in 1931 or 1932. Nearly all the casaba shipments are from the Imperial Valley and the central district of California.

Total shipments of Persian melons, most of which come from the central California district, were slightly more than 400 cars in 1931, but only 161 cars in 1932 (table 4).

TABLE 4.—*Car-lot shipments of casaba, Honey Ball, Honey Dew, Persian, and mixed melons by States or districts, 1930-32*<sup>1</sup>

State or district of origin	Casaba			Honey Ball			Honey Dew			Persian			Mixed <sup>2</sup>		
	1930	1931	1932	1930	1931	1932	1930	1931	1932	1930	1931	1932	1930	1931	1932
	Cars	Cars	Cars	Cars	Cars	Cars	Cars	Cars	Cars	Cars	Cars	Cars	Cars	Cars	Cars
Arizona.....	0	0	0	46	4	20	225	35	15	0	0	0	127	42	35
California: <sup>3</sup>															
Northern district.....	22	1	1	12	0	3	182	157	315	0	0	0	0	28	0
Southern district.....	9	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Central district.....	97	85	98	137	82	76	1,668	1,551	1,74	333	394	101	1,121	384	453
Imperial Valley.....	32	43	33	2,401	2,865	1,646	2,873	4,201	2,745	10	31	0	1,704	1,805	1,498
Colorado.....	0	0	0	0	0	0	1,156	785	677	0	0	0	178	262	113
Georgia.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Indiana.....	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0
Iowa.....	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0
Kansas.....	0	0	0	0	0	0	1	8	9	0	0	0	0	0	0
Missouri.....	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
Oregon.....	4	1	0	0	0	0	0	0	0	0	0	0	1	0	0
Texas.....	0	3	0	0	10	0	3	19	11	0	2	0	0	9	1
Utah.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Washington.....	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0
Total.....	155	135	132	2,590	2,750	1,704	6,105	6,392	4,946	343	428	109	3,153	2,532	2,104

<sup>1</sup> Shipments of these melons were not reported separately prior to 1930.<sup>2</sup> The term "mixed melons" refers to cars loaded with two or more kinds of melons including cantaloups and any other kinds of muskmelons.<sup>3</sup> See footnote 1, table 2.

## SHIPPING SEASONS

Competition among various producing districts is influenced not only by the quantity produced and the markets to which the crop is shipped, but also by the time in which the crop is moved to market.

The time of ripening of cantaloups and other melons varies with seasonal conditions from year to year. For instance, the time when the cantaloup movement from Imperial Valley reached 5 cars or more daily varied in the period 1928-32 from May 1 in 1930 to May 15 in 1929. The date of peak shipments was as early as May 22 in 1930 and as late as June 18 in 1928 (table 5). Other cantaloup districts show similar variations.

TABLE 5.—*Period of car-lot movement of cantaloups from specified States or districts, 1928-32*

State or district	Year	Date of first car-lot shipment	First date on which as many as 5 cars were shipped	Date of peak shipment and number of cars shipped that day	Date on which shipments fell to 5 cars or less	Date of last shipment
California, Imperial Valley.....	1928	May 3	May 7	June 18	400	July 15
	1929	May 11	May 15	June 16	423	July 30
	1930	Apr. 25	May 1	May 22	463	July 16
	1931	Apr. 18	May 2	May 25	380	July 9
	1932	May 1	May 8	June 7	273	July 11
Arizona.....	1928	May 16	June 11	July 9	306	July 26
	1929	May 27	June 18	July 16	239	Aug. 6
	1930	May 21	June 2	July 3	315	July 28
	1931	June 8	June 12	June 27	275	July 20
	1932	June 2	June 8	June 30	192	July 23
Texas.....	1928	May 10	July 21	Aug. 1	14	Aug. 11
	1929	May 18	June 12	Aug. 3	8	Aug. 4
	1930	May 21	July 18	July 26	17	Aug. 3
	1931	June 19	July 7	July 22	41	Oct. 10
	1932	June 15	July 13	Aug. 4	35	Aug. 12

<sup>1</sup> Does not include records of autumn shipments as follows: 92 cars, Oct. 5-Nov. 8, 1929; 50 cars, Oct. 9-31, 1930; 20 cars, Oct. 15-18, 1931; 29 cars, Oct. 3-20, 1932.

TABLE 5.—Period of car-lot movement of cantaloups from specified States of districts, 1928-32—Continued

State or district	Year	Date of first car-lot shipment	First date on which as many as 5 cars were shipped	Date of peak shipment and number of cars shipped that day		Date on which shipments fell to 5 cars or less	Date of last shipment
				Date	Cars		
South Carolina.....	1928	June 30	July 7	July 14	10	July 16	Aug. 4
	1929	June 17	June 24	June 24	10	June 25	July 6
	1930	June 20	June 27	July 5	17	July 9	July 11
	1931	June 27	June 29	July 3	9	July 6	July 18
	1932	June 21	June 24	June 28	34	July 9	July 15
California, central district.....	1928	June 19	June 29	July 25	175	Aug. 21	Oct. 17
	1929	July 5	July 10	Aug. 8	94	Aug. 22	Oct. 14
	1930	June 27	July 1	July 24	91	Aug. 20	Aug. 26
	1931	June 15	June 22	July 8	142	Aug. 2	Sept. 28
	1932	June 25	June 28	July 21	80	Aug. 6	Oct. 2
North Carolina.....	1928	July 14	July 17	July 23	37	Aug. 1	Aug. 10
	1929	July 15	July 18	July 30	9	July 31	Aug. 3
	1930	July 11	July 11	July 15	4	July 23	July 23
	1931	July 10	July 11	July 18	15	July 19	Aug. 4
	1932	June 30	do.	July 15	26	July 21	July 29
Arkansas.....	1928	July 13	July 15	July 21	78	Aug. 7	Aug. 29
	1929	July 5	July 12	July 18	54	July 28	Aug. 17
	1930	July 2	July 7	July 14	18	July 20	Aug. 21
	1931	July 10	July 13	July 20	36	July 26	Do.
	1932	July 6	July 7	July 16	68	July 23	Aug. 6
New Mexico.....	1928	July 16	July 21	Aug. 9	17	Aug. 25	Aug. 31
	1929	July 10	July 10	Aug. 6	20	Aug. 21	Aug. 24
	1930	July 14	July 21	Aug. 5	30	Aug. 10	Aug. 19
	1931	do.	July 15	Aug. 6	37	do.	Aug. 16
	1932	July 15	do.	Aug. 5	43	Aug. 13	Sept. 1
Indiana.....	1928	July 28	July 29	Aug. 7	42	Aug. 19	Aug. 29
	1929	July 25	July 26	Aug. 9	25	Aug. 18	Aug. 31
	1930	July 23	July 23	July 29	36	Aug. 2	Sept. 6
	1931	do.	July 30	Aug. 3	30	Aug. 9	Sept. 5
	1932	July 18	July 18	July 23	36	July 30	Aug. 26
Maryland, Eastern Shore.....	1928	July 27	July 27	Aug. 21	66	Aug. 29	Sept. 5
	1929	July 23	July 23	Aug. 1	44	Aug. 19	Sept. 7
	1930	July 21	July 24	Aug. 11	25	Aug. 15	Sept. 15
	1931	July 25	July 26	Aug. 4	33	Aug. 17	Aug. 22
	1932	do.	July 29	Aug. 16	19	Aug. 22	Sept. 3
Delaware.....	1928	Aug. 1	Aug. 3	Aug. 8	37	Aug. 23	Aug. 29
	1929	July 30	July 31	Aug. 3	34	Aug. 20	Aug. 29
	1930	July 15	Aug. 1	Aug. 9	22	Aug. 14	Sept. 11
	1931	July 27	July 28	Aug. 1	23	Aug. 19	Aug. 26
	1932	July 29	July 30	Aug. 9	21	Aug. 17	Aug. 27
Washington.....	1928	July 23	do.	Aug. 8	18	Aug. 14	Oct. 12
	1929	July 30	Aug. 5	Aug. 12	26	Aug. 17	Oct. 7
	1930	July 26	Aug. 2	Aug. 18	21	Aug. 27	Sept. 24
	1931	July 27	July 31	Aug. 3	11	Aug. 7	Sept. 15
	1932	July 25	July 25	Aug. 8	12	Aug. 12	Sept. 14
Colorado.....	1928	Aug. 18	Aug. 20	Sept. 5	107	Sept. 30	Oct. 12
	1929	Aug. 8	Aug. 8	Sept. 4	143	Sept. 29	Oct. 6
	1930	Aug. 5	Aug. 6	Sept. 2	132	Sept. 15	Oct. 6
	1931	Aug. 11	Aug. 11	Aug. 25	92	Sept. 27	Oct. 16
	1932	Aug. 5	Aug. 8	Aug. 31	63	Sept. 23	Oct. 8

Honey Dew melons usually ripen from 3 to 4 weeks later and the season continues later than that of cantaloups from the same district (tables 5 and 6). Honey Ball, casaba, and Persian melons also do not move to market until the cantaloup season is well under way (table 7).

A picture of the competition among States or districts in time and volume of movement to market is obtained by a tabulation of the weekly shipments. The situation as to cantaloups in 1932 is shown in table 8. Truck-shipment figures are included when available. There is considerable variation from year to year in the competition among producing districts as to both volume and time of movement.

TABLE 6.—Period of car-lot movement of Honey Dew melons from specified States, or districts, 1930-32

State or district	Year	Date of first car-lot shipment	First date on which as many as 5 cars were shipped	Date of peak shipment and number of cars shipped that day		Date on which shipments fell to 5 cars or less	Date of last shipment
				Date	Cars		
California, Imperial Valley.....	1930	May 19	June 2	June 14	83	Aug. 14	Aug. 25
	1931	May 13	May 25	July 7	119	July 31	Aug. 26
	1932	May 23	May 31	July 11	100	Aug. 8	Aug. 9
Arizona.....	1930	June 10	July 25	Aug. 5	22	Aug. 7	Sept. 11
	1931	July 3	.....	July 24	3	.....	Aug. 1
	1932	July 6	.....	July 21	2	.....	Aug. 14
California, Central district.....	1930	July 23	July 29	Aug. 11	50	Aug. 31	Nov. 1
	1931	July 11	July 20	July 27	41	Aug. 2	Nov. 10
	1932	July 28	Aug. 2	Aug. 24	42	Sept. 16	Dec. 10
Northern district.....	1930	Aug. 11	Aug. 25	Sept. 8	17	Sept. 12	Oct. 16
	1931	July 25	Aug. 29	Sept. 3	9	Sept. 4	Oct. 2
	1932	Aug. 11	Aug. 15	Aug. 23	14	Aug. 28	Nov. 2
Colorado.....	1930	Aug. 23	Sept. 3	Sept. 12	68	Sept. 14	Oct. 16
	1931	Aug. 28	Aug. 30	Sept. 8	43	Oct. 4	Oct. 17
	1932	Aug. 21	do.	Sept. 9	32	Sept. 18	Oct. 11

<sup>1</sup> Does not include shipments in October and November as follows: 1930, 212 cars; 1931, 143 cars; 1932, 186 cars.

TABLE 7.—Period of car-lot movement of Honey Ball, casaba, and Persian melons from specified districts, 1930-32

## HONEY BALL MELONS

Shipping districts in California	Year	Date of first car-lot shipment	Date of peak shipment and number of cars shipped that day		Date of last shipment
			Date	Cars	
Imperial Valley.....	1930	June 7	July 29	85	Aug. 25
	1931	May 29	July 7	111	Aug. 10
	1932	May 30	July 5	80	Aug. 17
Central district.....	1930	July 22	Sept. 2	11	Oct. 3
	1931	July 23	July 30	4	Sept. 27
	1932	July 26	Sept. 3	6	Oct. 11

## CASABA MELONS

Imperial Valley.....	1930	June 17	July 17	4	Aug. 7
	1931	June 16	June 27	4	Do.
	1932	June 9	June 22	3	July 30
Central district.....	1930	July 31	Oct. 6	6	Dec. 3
	1931	July 7	July 29	3	Nov. 25
	1932	July 25	Oct. 18	5	Dec. 10

## PERSIAN MELONS

Imperial Valley.....	1930	June 21	July 3	2	July 8
	1931	June 30	July 1	0	Do.
	1932	.....	.....	.....	.....
Central district.....	1930	July 19	Sept. 5	10	Oct. 18
	1931	July 18	July 31	18	Oct. 24
	1932	Aug. 1	Aug. 23	7	Oct. 29

<sup>1</sup> Does not include shipments in September, October, and November as follows: 1930, 13 cars; 1931, 17 cars.

TABLE 8.—Car-lot shipments of cantaloups by States or districts and by weeks, 1932

State or district of origin	Shipments for week beginning—																							Total cars	
	May 1	May 8	May 15	May 22	May 29	June 5	June 12	June 19	June 26	July 3	July 10	July 17	July 24	July 31	Aug. 7	Aug. 14	Aug. 21	Aug. 28	Sept. 4	Sept. 11	Sept. 18	Sept. 25	Oct. 2		Oct. 9-Oct. 23
California, Imperial Valley.....	Cars 14	Cars 178	Cars 888	Cars 1,209	Cars 1,232	Cars 1,322	Cars 1,053	Cars 840	Cars 700	Cars 107	Cars 19	Cars 587	Cars 120	Cars 5									Cars 20	Cars 9	Cars 7,592
Arizona.....					2	50	114	259	1,070	803	11	120												4	3,020
Louisiana.....					1					13															26
Florida.....						13																			13
Texas.....							21	2		6	28	107	99	162	58	27	43	8	2	6	11	3	2		571
Georgia.....								38	32	5	1														81
South Carolina.....								19	123	70	12														224
California, central district <sup>1</sup>								1	44	92	223	476	358	190	26	23	6	1	2	12	5	1	1		1,461
North Carolina.....										3	105	62	9												180
Arkansas.....										53	323	104	51	19											541
Nevada.....										5	8	20	3	3			2	5	11	6	1				64
New Mexico.....								10	85	97	201	137	25				13	3							560
Missouri.....										3	3	6	1												14
California, southern district <sup>1</sup>										3	5														9
Indiana.....											74	116	35	10	1	3									239
Illinois.....								20	11	4		2					3								45
Virginia, Norfolk district																									6
Maryland, Eastern Shore district <sup>2</sup>																									1,741
Delaware.....																									998
Washington.....																									105
Virginia, other than Norfolk district <sup>2</sup>																									8
Kansas.....																									4
California, northern district <sup>1</sup>																									5
Maryland, other than Eastern Shore district																									3
Colorado.....																									1,765
Iowa.....																									26
Michigan <sup>3</sup>																									13
Oregon.....																									21
Idaho.....																									6
New Jersey <sup>3</sup>																									4
Utah.....																									163
Total <sup>3</sup> .....	14	178	888	1,209	1,235	1,385	1,174	1,159	1,982	1,157	1,334	1,068	951	1,241	1,298	980	740	581	371	315	132	45	58	13	19,508

<sup>1</sup> See footnote 1, table 2.<sup>2</sup> Includes shipments by motor truck.<sup>3</sup> In addition to car-lot shipments shown for Michigan, New Jersey, and some other States, there was a considerable movement by motor truck, for which records are not available.

In 1932 the Imperial Valley had little competition until the second week in June, when Arizona shipments became a considerable factor. Central California, Arkansas, Texas, and North Carolina were important sources of supply in July. New Mexico, Indiana, Maryland, and Delaware began shipping in quantity the latter part of July. Colorado was the most important late shipping State. Most of the movement from this State was in August and September.

The peak week of the 1932 marketing season was the 7-day period beginning June 26, when shipments for the entire country totaled 1,932 cars. Heavy shipments were made from Arizona and Imperial Valley in this week, and several other States contributed to the total movement. In the preceding week, 1,159 cars were shipped and in the following week, 1,157 cars. The greatest number of States, 16, were shipping during the week beginning July 31. Cantaloup shipments exceeded 100 cars per week from May 8 to September 24 (table 8).

The Honey Dew crop of the Imperial Valley does not compete seriously with that of central or northern California or Colorado. In 1932 most of the Imperial Valley Honey Dew crop had moved by the first week in August, when the shipments from the central district of California became heavy (table 9). In some seasons, however, there is somewhat more overlapping. In 1932, Honey Dews were shipped at the rate of 100 cars or more per week for about 4 months, from June 5 to October 8, excepting only the week beginning August 7, when 89 cars were shipped.

TABLE 9.—*Car-lot shipments of Honey Dew melons by States or districts and by weeks, 1932*

State or district of origin	Shipments for week beginning—												
	May 22	May 29	June 5	June 12	June 19	June 26	July 3	July 10	July 17	July 24	July 31	Aug. 7	Aug. 14
California, Imperial Valley	Cars 2	Cars 30	Cars 121	Cars 204	Cars 215	Cars 200	Cars 468	Cars 576	Cars 200	Cars 185	Cars 101	Cars 2	Cars 76
Arizona							2	3	7		1	1	1
California:													
Central district 1										5	25	82	182
Northern district 1												3	24
Texas												1	5
Colorado													
Kansas													
Total	2	30	121	204	215	200	470	579	297	190	127	89	288

State or district of origin	Shipments for week beginning—											Total cars
	Aug. 21	Aug. 28	Sept. 4	Sept. 11	Sept. 18	Sept. 25	Oct. 2	Oct. 9	Oct. 16	Oct. 23	Oct. 30-Dec. 4	
California, Imperial Valley	Cars 85	Cars	Cars	Cars	Cars	Cars	Cars	Cars 4	Cars 15	Cars 6	Cars	Cars 2,746
Arizona												15
California:												
Central district 1	174	182	133	64	51	80	65	36	34	27	34	1,174
Northern district 1	62	60	47	33	14	13	34	14	6	4	1	315
Texas	5											11
Colorado	12	33	150	149	93	143	84	13				677
Kansas					6	2	1					9
Total	338	275	330	240	164	238	184	67	55	37	35	4,946

<sup>1</sup> See footnote 1, table 2.

The movement of Honey Ball melons in 1932 exceeded 100 cars each week from June 12 to July 30 with the exception of the week beginning June 19. The peak movement was for the week beginning July 3 with 430 cars (table 10). The Imperial Valley does not have serious competition from other districts in marketing its crop of Honey Ball melons.

TABLE 10.—*Car-lot shipments of Honey Ball melons by States or districts and by weeks, 1932*

State or district of origin	Shipments for week beginning—										
	May 20	June 5	June 12	June 19	June 26	July 3	July 10	July 17	July 24	July 31	Aug. 7
California, Imperial Valley.....	Cars 4	Cars 14	Cars 108	Cars 82	Cars 263	Cars 429	Cars 357	Cars 206	Cars 121	Cars 42	Cars 17
Georgia.....						1					
Arizona.....								1	10	10	8
California: Central district <sup>1</sup> .....									4	1	2
Total.....	4	14	108	82	263	430	357	207	141	53	27

State or district of origin	Shipments for week beginning—									Total cars
	Aug. 14	Aug. 21	Aug. 28	Sept. 4	Sept. 11	Sept. 18	Sept. 25	Oct. 2	Oct. 9	
California, Imperial Valley.....	Cars 3									Cars 1,646
Georgia.....										1
Arizona.....	3	1								39
California:										
Central district <sup>1</sup> .....		5	15	18	16	2	3		3	75
Northern district <sup>1</sup> .....					1	1				3
Total.....	11	16	18	17	3	4	5	3	1	1,764

<sup>1</sup> See footnote 1, table 2.

There is considerable overlapping between the cantaloup marketing season and the Honey Dew and Honey Ball season, although the latter crops are not ready for shipment as early in the season as are cantaloups. In 1932 the largest total weekly shipments of cantaloups, Honey Ball, and Honey Dew melons respectively were in successive weeks beginning June 26.

### PREPARING THE CROP FOR MARKET

#### IMPORTANCE OF GRADE, CONDITION, AND PACK

A large part of the cantaloups which arrive on the markets each year are too immature to be palatable. As a result, many consumers are prejudiced against cantaloups and the demand is impaired. There is often a pronounced lack of uniformity in quality and condition of the melons in a crate. Some may be immature and others overripe. If the consumers could obtain cantaloups of uniformly good quality and condition, it is probable that the demand would increase notably.

Cantaloups that are immature, overripe, or otherwise defective are a source of dissatisfaction among consumers and handlers on the market. The shipment of such stock often results in severe losses

to growers and shippers. There is much room for improvement in the average quality and pack of cantaloups.

Efforts are being made, particularly in Western States, to develop better varieties for shipping and to improve the quality of melons on the markets by shipping considerable quantities that have been vine ripened and precooled. Laws have been enacted in some States providing that cantaloups must meet certain grade requirements before they can be shipped to market.

On the New York City market during 3 months of the 1932 season, cantaloups of inferior quality or poor condition were mentioned, or quoted separately at a discount, in the Federal market news reports, approximately 40 percent of the time. The discount ranged generally from 50 cents to \$1.25 per standard or jumbo crate. The range in price of good stock during most of this period was about \$2.50 to \$4 per crate. In the leading markets, vine-ripened and precooled stock frequently brought a premium of 25 cents to \$1.50 per standard or jumbo crate in 1932, over supplies that were harvested and handled under the usual methods.

A great deal of knowledge and care is necessary in so harvesting, grading, packing, and shipping cantaloups that they will arrive on the market in good condition. It is to the advantage of growers and shippers generally to build up and maintain the confidence of dealers and consumers through correct methods of preparing the crop for market.

#### HARVESTING CANTALOUPS

It is difficult to give a definite rule for determining when cantaloups are ready to be picked. The indications of the correct stage for picking vary somewhat with the variety, seasonal conditions, district where grown, method of handling and shipping, and probable time during which the fruit will not be protected by refrigeration.

Sound cantaloups that have ripened on the vines are of better flavor and texture than those that have been picked when green or semiripe. Cantaloups that are picked when immature, may eventually get soft, but the quality never approaches that of vine-ripened fruit. It has been the general practice to pick melons before they are fully ripe, so they will not be soft or overripe when they reach the retailer or consumer. In recent years, however, the practice of allowing the cantaloups to reach a "hard ripe" stage on the vines in western producing areas and precooling them before shipping has met with considerable success. These vine-ripened, precooled cantaloups have usually brought a premium on the markets. When delivery to the retailer or consumer will be made within approximately 1 day after picking, as is often the case with motor-truck shipments, the cantaloups can usually be allowed to ripen on the vines. Even in shipments to eastern markets from the West, if cantaloups are handled promptly and under the best methods, they can be allowed to reach a fairly ripe stage on the vine and still not be soft when they reach the retailer.

In picking, the growers and shippers should have in mind the desirability of having the cantaloups practically ripe when they reach the consumer. If picking is delayed too long there is the certainty of loss owing to soft and overripe stock, whereas if the cantaloups are picked too soon their poor quality is likely to cause dissatisfaction on



the part of consumers. By keeping in communication with dealers in the markets, growers and shippers can ascertain whether their shipments are arriving in good condition.

Various tests or observations aid pickers and field inspectors in selecting the melons that are ready to be picked. Some of the general indications of maturity by which pickers are guided in harvesting cantaloups include the appearance of the netting, color of the rind, condition of blossom end of the melon, and ease of separation from the vine. The grower or field man usually cuts and tastes a few melons in the field. An indication of maturity is the disappearance of the arils or coverings that surround the seeds during their development. The seeds then become slightly loosened from the jellylike substance that surrounds them.

The netting of an immature cantaloup is flat and creased on the top; this netting rounds out, hardens, and assumes a whitish color as the fruit ripens. The "crown-set" melons which are the first to mature usually develop more rounded netting than do the melons which form later on the same vine. The dull-green color of the skin which shows through the openings in the netting usually turns to a uniformly lighter shade of green and assumes a yellowish tint as the melon ripens. As the cantaloup approaches maturity, slight radial cracks known as sugar cracks appear around the blossom end which begins to soften.

A frequently used field test of maturity is the ease with which the stem separates from the melon. The "full-slip" stage indicates that the cantaloup is practically ripe. The stem can be loosened by a slight pressure of the thumb, leaving a smooth scar on the cantaloup (fig. 2). The "half-slip" stage means that full maturity has not been reached but that the stem can be loosened by pressure of the thumb leaving a scar, part of which is rough or has a piece of the stem adhering (fig. 3). There has been some tendency in recent years to allow the crown-set melons to reach or approach the full-slip stage before picking them even when they are to be shipped under ordinary methods. Experience has shown that a full-slip crown-set cantaloup will carry to market in better condition than a full-slip cantaloup of a later set.

The usual practice in harvesting has been to pick the cantaloups before they have ripened on the vine. This commercial stage is indicated by the loosening of the seeds from the jellylike substance surrounding them; by a well-rounded, white netting on at least a part of the surface of the cantaloup; by a uniform greenish ground color of the skin showing through the netting; by a slight softening at the blossom end and the appearance of sugar cracks; and by an approach to the full-slip stage for the crown-set melons, but a half-slip stage for the later set melons.

Under the practice of precooling before shipment, which has become more common in recent years, the melons are allowed to reach a more advanced stage of maturity before they are picked. These vine-ripened cantaloups should be at the full-slip stage, and prompt handling between the field and the refrigerator car is essential. The skin showing through the netting should be turning yellow, but the cantaloup should still be hard or firm, although having a noticeable characteristic odor.

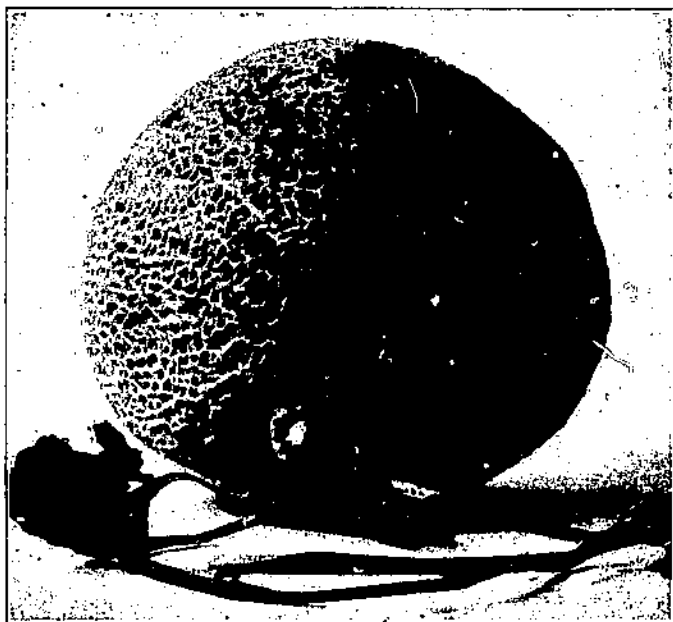


FIGURE 2.—A cantaloup that was picked at "full slip" leaving a clean, cuplike hole where the stem had been attached.

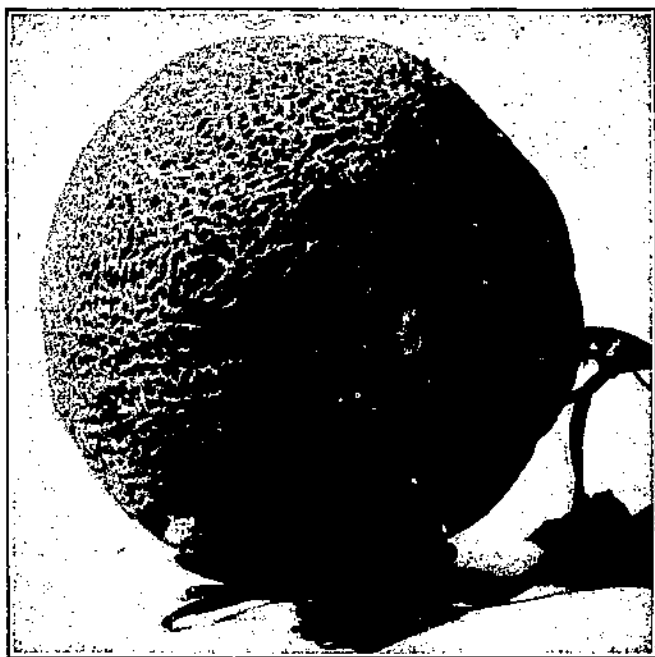


FIGURE 3.—A cantaloup picked at "half slip." Only a part of the stem slipped easily from the melon.

Cantaloups should not be cut from the vines and should not be picked when they are so immature that the stem breaks off a short distance from the melon, as is still the practice in a few districts.

In addition to the general indications of maturity, there are certain tests which are in use to determine the percentage of soluble solids in the juice. The proportion of soluble solids, mostly sugar, increases as the cantaloup matures but is materially influenced by a number of factors, such as variety, weather, condition of the vines, and whether the cantaloup is from the crown set or a later set. (For method of testing for soluble solids see p. 30.)

In many cantaloup-producing districts at the beginning and toward the end of the shipping season, workmen go through the fields every 2 or 3 days to pick the melons that are ready for shipment. During the principal part of the shipping season, in some districts, the fields are picked over practically every day (fig. 4). Rainy, cloudy, or cool



FIGURE 4.—Picking cantaloups in a western field.

weather may retard normal ripening, making advisable some change in the usual picking schedule. When cantaloups are shipped in the vine-ripened stage, the fields must be picked over every day, and in very hot weather twice a day, and grading and handling must be done rapidly. In the Imperial Valley the average field is probably picked over from 10 to 15 times in a season. In other districts, like those in Indiana, Arkansas, and the Carolinas, many fields are picked over from 3 to 10 times during the season. Many growers do much of their picking in the morning before the cantaloups have become heated, or in the evening for shipment by motor truck during the night or for packing the next day.

Cantaloups should be handled carefully in harvesting and packing to avoid bruising or other injury. In the West, picking bags are in general use. The top and bottom of the bag are fastened together with a strap so the bag can be slung over the picker's shoulder. These bags have an opening at the bottom through which the cantaloups

can be conveniently emptied into a container for hauling to the packing shed. In some districts in the East and Middle West, cantaloups are picked in hampers or baskets. In the Northwest burlap sacks are commonly used.

A general practice among pickers is to carry short sticks for parting the leaves of the vine. This saves much stooping to look for cantaloups that are ready for picking.

Standard crates, about 12 by 12 by 22½ inches, are generally used in the West in hauling the cantaloups from the field to the packing



FIG. 5. Hauling cantaloups to the packing shed in a western field.



FIG. 6. Hauling cantaloups to the packing shed in hampers in an eastern district.

shed. Some growers use a crate of heavier material and slightly different dimensions (fig. 5). The field crates are usually distributed through the field before the picking begins. Hampers and baskets are also used for this purpose in various districts (fig. 6). In some eastern districts, cantaloups are sometimes hauled in sacks or loose in the wagon or truck, but this is an undesirable practice as the melons are likely to be injured by bruising. The trucks used in hauling the cantaloups to the packing sheds in important western districts are sometimes provided with large pieces of canvas to protect the load from dust and the hot sun.

## HARVESTING HONEY DEW AND HONEY BALL MELONS

Honey dew or Honey Ball melons which are to be shipped under ordinary methods (not vine ripened and precooled) are generally considered ready for harvesting when the color of the skin has changed from a dark-green to a light-green or whitish shade, or, under some conditions, to a cream color. At this stage of maturity the melon loses its slightly rough or fuzzy feel and the skin becomes smooth. A slight softening at the blossom end is an indication of approaching maturity, but during the hottest part of the day immature melons may become slightly soft at the blossom end.

Since these appearance tests may vary somewhat under different conditions, it is desirable to cut a number of melons and observe the internal characteristics as a check against the external appearance. If the jellylike substance in which the seeds are embedded has been absorbed by the melon, a desirable stage of maturity has been attained. The test for soluble solids in the juice of the edible portion is sometimes used as a field test in determining when Honey Dew and Honey Ball melons are ready for harvest. Honey dews are usually clipped from the vines, leaving about one half inch of stem attached to the melon.

Some shipments of Honey Dew and Honey Ball are of vine-ripened fruits. Precooling of vine-ripened Honey Dew melons before shipment has not been practiced generally, but vine-ripened Honey Ball melons are frequently precooled. Honey Dew and Honey Ball melons when vine-ripened usually take on a cream or light-yellow shade. Under some conditions, however, the melons may be ripe and still retain a greenish shade. This may occur when the melons are covered with a heavy foilage or under certain conditions of soil and climate. For example, in central California the vine-ripened melons do not usually have as much of a creamy color as is common in the Imperial Valley. When Honey Dew and Honey Ball melons are vine-ripened, they have reached the full-slip stage; there is a softening at the blossom end; the ridges adjacent to the stem end are well rounded out and smooth; and the odor characteristic of a ripe melon is noticeable.

Honey Dew and Honey Ball melons are slower in maturing than cantaloups. In California, fields of these melons are usually picked over about once a week, except during hot weather when it becomes necessary to pick over the fields every 3 or 4 days. In Colorado it is the general practice to make a few pickings of Honey Dew melons that have ripened before the main part of the crop; then when the main part of the crop is ready, all the remaining melons are harvested at one picking. This, of course, results in some lack of uniformity in quality and condition. The greener melons are sometimes allowed to ripen for several days after the picking before being shipped.

In harvesting Honey Dew melons a common practice is to empty the picking bags directly into the truck bed. A wagon instead of a truck is sometimes used in hauling. A plank is frequently attached to the rear of the truck, forming an incline for the pickers' use in walking into the truck to empty their bags. Another practice is to pile the melons in the fields near the roadways ready for loading. A man on the ground usually tosses the melons to a man on the truck. When the melons are hauled, loose straw bedding should be used to prevent bruising. The load should not be deep, as this frequently results in bruising the melons at the bottom of the load.

Honey Dew melons if exposed too long when they are piled in the field may be injured by sunscald. Disturbing the foliage over a Honey Dew melon in the field and leaving it exposed, particularly if it is turned bottom side up, is likely to result in sunscald. Honey Dew melons, when loaded on trucks, should be protected from hot sun and dust by a canvas cover. In Colorado, late in the season, piles of these melons are frequently covered with vines to protect them from freezing until they can be hauled to the packing shed.

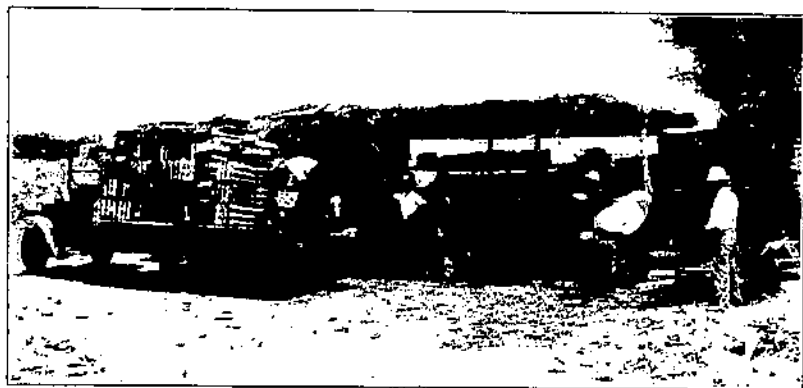


FIGURE 7. A typical packing shed in a western cantaloup field.



FIGURE 8.—Packing cantaloups in a western field shed.

Practically the same harvesting methods are used for Honey Ball melons as for cantaloups.

#### PACKING SHEDS

In the West a large part of the packing is done in open sheds located in or near the melon field (fig. 7). These temporary sheds usually are constructed by placing a roof of brush, straw, leaves, or canvas on upright poles. The shed is chiefly to shade the melons and the packers. Melons packed in these temporary sheds are known as "field-pack" melons (fig. 8).

In eastern, southern, and midwestern districts, farm buildings are often used when packing cantaloups. In some instances, packing is done in the shade of a tree or on a railway station platform.

During recent years in important western producing districts, a considerable number of central packing sheds have been constructed (fig. 9). A few of these central sheds are also in use in the eastern and midwestern districts. Western shippers who contract with growers for large acreages, growers' associations, and those who perform the packing operations under contract, generally use a central packing shed located on a railroad spur, so that the packed melons can be loaded directly on the cars. The central sheds are usually of more permanent construction than the field sheds and their output is often referred to as "shed-pack" as contrasted with field-pack stock.

When the central packing shed is used the melons are trucked directly to it in the field crates.



FIGURE 9.—Packing cantaloups in a central packing shed in a western district.

The time required for packing in central sheds is less than in field sheds, and the melons are placed under refrigeration in the car more promptly. There is some advantage in not having to haul the packed crates a considerable distance through the dust and hot sun from the field shed to the refrigerator cars. In a large central shed there is usually a more systematic arrangement of equipment, and packing and grading, which are done by an experienced crew, can be given better supervision than in field sheds, so that a more uniform pack results. When packing is done in a central plant, it is not necessary to haul the crates or crate material from the railroad to the field.

#### PACKING EQUIPMENT

When packing is done in field packing sheds or in farm buildings, the equipment usually includes a sorting and packing bin, a bench on

which the crate is placed while it is being packed, and another bench on which the packed crates are placed while the lids are nailed. Roller conveyors are sometimes used for moving the packed crates along to the ladders. The sorting and packing bins should be padded and of convenient height and slope toward the packer so that the melons will be within easy reach.

In the central packing sheds the sorting and packing bins and packing benches are a part of the equipment, and there are usually belt or roller conveyors for moving the packed crates, lidding presses to facilitate nailing on lids, and in a few instances in both western and eastern



FIGURE 10. An eastern cantaloup packing shed in which a mechanical device is used for sizing the melons.

districts, sizing machinery, although most of the sizing is done by hand (fig. 10). Vats for washing Honey Dew and Honey Ball melons are a part of the equipment in some central sheds in the West. Machines for brushing these melons as they are being dried are used in some sheds. Machines that brush cantaloups are used in a few packing houses in the eastern districts.

The size of the central shed depends on the quantity of melons to be handled through it. Some central sheds have space for 20 to 40 packers in a line.

#### PACKAGES

Slatted crates, of dimensions shown in table 11, are the packages generally used in western States in shipping cantaloups and other muskmelons. Relatively few of the pony crates or pony flats are used.



TABLE 11.—*Dimensions of western crates used in shipping cantaloups and other muskmelons*

Type or variety of melon	Name of crate	Approximate inside dimensions <sup>1</sup>	Melons usually packed per crate
		<i>Inches</i>	<i>Number</i>
Cantaloup and Honey Ball	Standard	12×12×22½	45 or 36.
	Jumbo	13×13×22½	45, 36, or 27.
	Pony	11×11×22½	54 or 45.
	Standard flat	4½×13½×22½	9, 11, 12, or 15.
	Jumbo flat	5×14½×22½	9, 12, or 15.
	Pony flat	4×12×22½	9, 12, 15, or 18.
Honey Dew <sup>2</sup>	Standard	6½×16×22½	8, 9, 11, 12, or 15.
Casaba <sup>2</sup>	Jumbo	7½×16×22½	4, 8, or 9.
Persian	Standard	8½×16×22½	5-8.
	Pony	6½×12×22½	6-10.
	Standard	7½×14×22½	5-8.
	Jumbo	8½×16×22½	4-6.
	Special Jumbo	11½×18×22½	3 or 4.

<sup>1</sup> Outside length of slats is 23½ inches.<sup>2</sup> The Honey Dew and casaba crates are sometimes used interchangeably.

In Colorado most of the cantaloup crop is shipped in standard or jumbo flat crates usually containing 9, 11, or 12 melons per crate.

Crates used in the eastern and central parts of the United States are generally known by the same names as those used in the West, yet there is considerable variation in construction and dimensions. The flat crates used in both the East and West have solid heads. The crates, other than flats in western districts, have slatted heads fabricated on triangular posts. In Michigan they have solid heads, while in Maryland, Delaware, and southeastern districts panel-end crates are used.

There are numerous variations in sizes of crates used in Maryland, Delaware, Michigan, and other Eastern and Midwestern States. In Maryland and Delaware the heads of the crates usually range as follows: 12, 13, 14, 15, or 16 inches square. The length of slats varies from 22 to 26 inches. In Michigan the dimensions of the heads of the crates commonly used are: 9, 10, 11, 12, 13, and 14 inches square, and the crates are of various lengths. The elimination of a large number of miscellaneous sizes used in eastern districts and standardization involving only a few popular sizes would facilitate quotations and improve marketing conditions. Melons packed in second-hand crates usually sell at a discount. More detail concerning sizes and construction of crates is contained in Farmers' Bulletin 1579.<sup>3</sup>

In the Eastern and Midwestern States the bushel basket, bushel hamper, and 12-quart climax basket are used in shipping considerable quantities of cantaloups.

#### GRADES

Standards for grading cantaloups, Honey Dew melons, and Honey Ball melons have been issued by the Bureau of Agricultural Economics. These standards define the grade requirements and explain the terms used. Variety, firmness, maturity, form, and netting are factors considered in grading cantaloups. Defects, such as cracks, sunburn, decay, and damage by aphids, hail, disease, or other means, are considered as grade factors. Provision is made in the grading

<sup>3</sup> EITMAN, H. A., and DAVIS, R. W. CONTAINERS USED IN SHIPPING FRUITS AND VEGETABLES. U. S. Dept. Agr. Farmers' Bull. 1579, 36 pp., illus. 1929.

standards for tolerances of stock which does not meet the grade requirements.

Requirements in the laws of some States are that shipments must meet certain minimum maturity tests, which specify the content of soluble solids in the juice of the edible portion of the melon. (For further details of the test for soluble solids, see p. 30.)

The size of melons is indicated by the size of the crate and the number of melons in the pack. The melons in a crate are supposed to be of nearly uniform size and tightly packed.

#### GRADING AND PACKING

Whether the packing is done in a central or field packing shed in western districts, the stock is usually sorted or graded as to maturity and defects as the melons are transferred by hand from the field container to the packing bin.

The cantaloups suitable for shipping under ordinary refrigeration are usually kept separate from the "ripes" as they are transferred to the packing bin. These ripe melons may be sold locally or on nearby markets or precooled for shipment. Melons that are too green or too ripe for marketing or that are otherwise defective are placed in containers as they are sorted out. Careful picking in the field facilitates the work of the sorters.

The sizing is usually done by the packer who stands at the lower side of the packing bin with the packing bench before him. The packing bench usually slopes toward the packer. The crate is, therefore, in a slanting position while being packed and the melons remain where they are placed. The packer, observing the prevailing size of the cantaloups, selects the crate of most suitable size. He chooses cantaloups of uniform size and arranges them in the crate so as to obtain a tight pack.

It is important that the size be as nearly uniform as possible. Difference in size of melons in a crate makes it difficult to obtain a tight pack and detracts from the appearance and commercial value. Retailers discriminate against a crate containing melons that are not of uniform size, because they cannot be sold readily at one price per melon. The cantaloups should be placed in rows with their longest axis lengthwise in the crate. In western districts much of the packing is done by professional packers who move from one district to another as the season progresses.

When most of the cantaloups are at the right stage of maturity and have few defects, the sorter sometimes does some of the sizing, placing the various sizes at different positions in the bin or in different bins. The final responsibility for a good pack as to both size and grade rests with the packer.

In the eastern districts, where much of the packing is done on the farm, the cantaloups are usually poured from the field container to the sorting table which often has a slatted bottom. In some instances the sorting table consists of burlap stretched over a frame. The packer grades and sizes the melons as he packs.

Two principal methods of arrangement are in use when packing in the standard and jumbo crates. One is the 45 pack, in which there are 3 layers with 3 rows in each layer and 5 melons in each row. When the 45 pack is completed, every melon on each side should touch the slats, and the crate with the cover on should bulge slightly

on all sides. Cantaloups in a uniformly sized standard 45 pack will be approximately 4 inches in diameter and slightly less than  $4\frac{1}{2}$  inches in length. The second method of arrangement is the 36 pack, in which

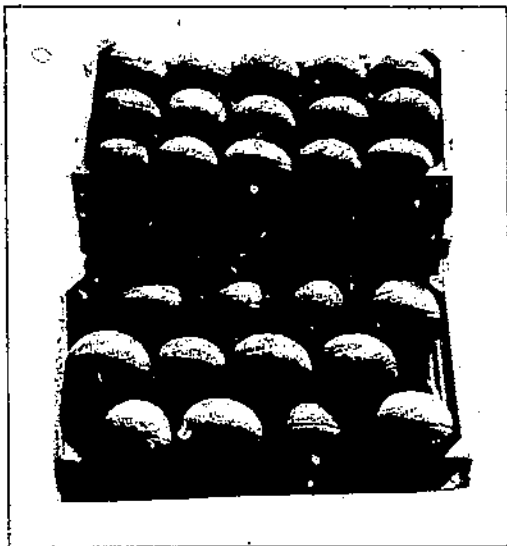


FIGURE 11.—Top view of a 45 pack and a 36 pack both in standard crates, showing different arrangement of melons in the crates. The lower pack is sometimes known as a special 36 pack.

the melons are slightly larger than in a 45 pack in a crate of the same size, and in which there are 3 layers with 3 rows in each layer and 4 melons in each row. In alternate rows and alternate layers the melons are offset as contrasted with the 45-count arrangement (fig. 11). The pony 54 pack has the same arrangement as the standard 45 except that there are 6 instead of 5 melons in a row. Generally speaking, cantaloups are not sized as uniformly in most eastern districts as in western districts. Reports from some eastern districts and the Northwest indicate that standard crates are often packed with various num-

bers of cantaloups, usually ranging from 18 to 45.

In packing flat crates an arrangement similar to that of a single layer in the larger crates is generally used. But, cantaloups that are of a long type, such as Burrell Gem, are frequently arranged in a slightly diagonal position in the rows. Cantaloups should not be turned crosswise in the row, in packing, as is occasionally done in some of the eastern producing districts.

It is important not only to have the cantaloups as nearly uniform in size as possible but also to have them fit snugly (fig. 12) so the crate

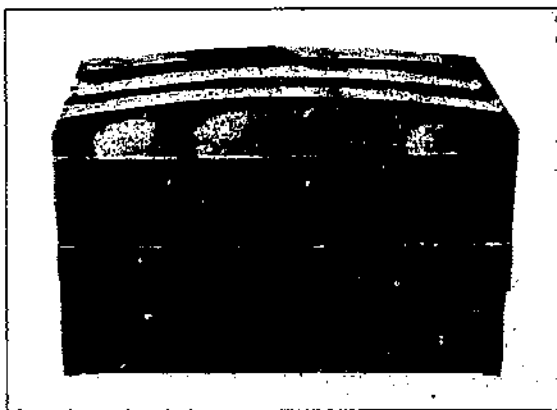


FIGURE 12.—An eastern type jumbo crate, 36 pack. In this pack, the melons in alternate layers are not offset. The pack has a satisfactory bulge.

will not be "slack packed" (fig. 13). Shipments arriving at market in a slack-packed condition with the cantaloups loose or jumbled in the crates usually sell at a considerable discount as compared with

well-packed shipments. It is also important not to have too much bulge on the pack as injury from bruising may result.

In the Imperial Valley and in Arizona most cantaloups are wrapped in tissue paper as they are packed. The wrappers frequently are pink and bear the brand or trade mark of the shipper. It is customary to pack about three melons on each side of the crate, unwrapped, as "show" melons to attract the eye of prospective buyers. In other districts, as central California, the cantaloups are mostly shipped unwrapped. In Colorado most varieties are shipped unwrapped, but the Burrell Gem, a pink-meat variety, is usually wrapped. In most eastern districts a relatively small proportion of the cantaloups are wrapped in preparing for market. Reports from Indiana indicate that less than one fourth are wrapped. Wrapping interferes somewhat with refrigeration, makes inspection more difficult, and may hide defective melons. Some shippers place small stickers, bearing their brands, on unwrapped melons.

When the crate has been packed it is passed to a workman for lidding. Cement-coated nails are often used in making and lidding crates. Crates fastened with such nails show less loss from slats coming loose in transit or in handling.

In western districts, labels showing the shipper's brand are usually pasted on the crate, which is also marked with the size of crate and number of cantaloups in the pack as: "Standard 45", "Jumbo 36", etc. In eastern districts many crates are not labeled.

When the packing is done in field sheds or farm buildings, the packed crates are placed at once in trucks to be hauled to the refrigerator car when shipment is to be by rail. When packing is in a central shed and shipment is to be made by rail the packed crates are loaded on the cars as quickly as possible.

The method of operation in packing varies considerably. In some central packing houses sizing is done by machinery, and the crates are moved along by mechanical conveyors. The lidding may be done with the aid of a lidding press.

Both Honey Ball and Honey Dew melons are packed in temporary field sheds as well as in central sheds (fig. 14). They frequently show aphid residue and dust which detracts from their appearance and makes washing desirable. This is most conveniently done in a central packing house equipped with mechanical washers having soft rotating brushes which clean the melons. The defective melons are sorted out before washing.

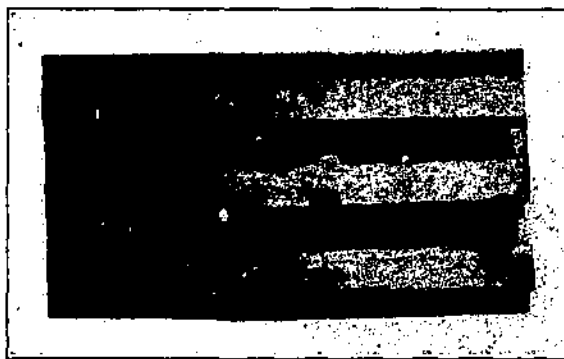


FIGURE 13.—A very askew, poorly arranged pack of cantaloups in an eastern-type crate. One cantaloup in the upper layer has a piece of stem attached, indicating its green condition. A pack of this kind will sell in the markets at a large discount in price as compared with a tight, well-graded, well-arranged pack.

If Honey Dew melons are washed, they are placed, after drying, in bins that are larger than the cantaloup packing bins. In packing the melons, excelsior is used to fill the spaces around the melons in the crate to prevent bruising; instead of excelsior some shippers have used colored strips of cellophane. Bruising is likely to result if there is much pressure on the melons from the slats and for this reason the diameter of the melons should be just sufficient to touch the top slat. In nailing on the lid slats, it is sometimes necessary to place cleats across the ends of the crates under the slats to prevent too much pressure on the melons. A slack pack of Honey Dew melons is likely to cause bruising.

Casaba and Persian melons are usually packed from wide bins and are handled in a manner somewhat similar to that used with Honey Dew (fig. 15).

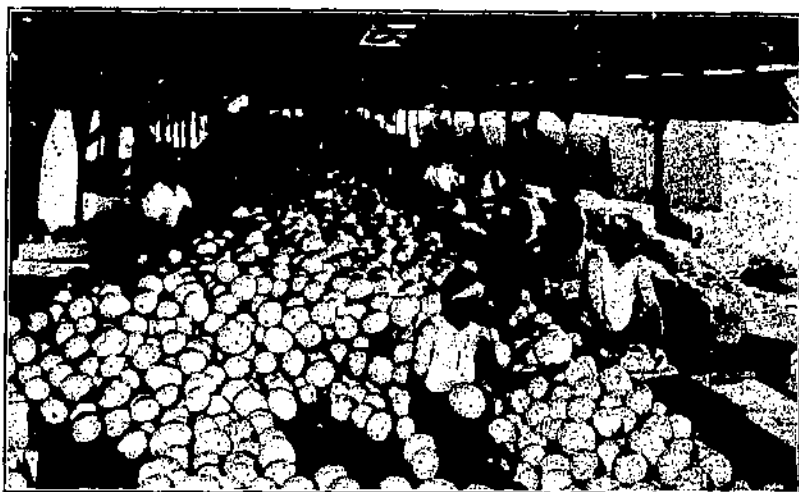


FIGURE 14.—Packing Honey Dew melons in a western packing shed. Honey Ball melons are packed much like cantaloups, either wrapped or unwrapped. The standard and jumbo crates are largely used for Honey Ball melons. Stickers with brand names are often placed on Honey Ball and Honey Dew melons.

#### LOADING

After the melons are packed the crates are segregated as to size and number of melons. They are then loaded in refrigerator cars if shipment is to be made by rail and if the packing has been done at a central shed. In some districts, particularly in Colorado, Honey Dew melons are mostly shipped under standard ventilation instead of under refrigeration, but the ripest melons are usually shipped under refrigeration.

In loading at central packing sheds, the crates are usually moved into the car on 2-wheeled trucks. The packed crates are sometimes stacked on light frames which permits the hand truck to be slipped under the entire stack.

Field-packed melons that are to be shipped by rail should be hauled to the car as soon as possible. Protection from dust and sun is conveniently provided by a tarpaulin. Many growers, however, fail to provide any protection for the melons from heat and dust. Some cantaloups are hauled to the loading station on wagons, but trucks are

better adapted to this purpose. Care should be exercised in hauling to prevent bruising the melons that are under the bulge in the crates.

In preparing the car for loading, the bunkers in each end of the car are filled with ice. The cars are equipped with floor racks to hold the bottom of the load several inches above the floor of the car and thus facilitate circulation of air. In loading the crates, spaces several inches wide, lengthwise of the car between the crates are allowed so that there will be a circulation of the cool air.



FIGURE 15.—Western packing house showing packing stand and packing bin containing casaba melons.

The large crates of cantaloups and Honey Ball melons in western districts usually are loaded on their sides three layers high in the car. The load of standard or pony crates usually is 7 rows wide whereas the load of jumbo crates is 6 rows wide. The load consists of eight stacks in each end of the car with a space a few feet wide extending across the car at the doorway. A full load of standard crates in the West usually contains 336 crates. In other districts there is considerable variation in the size of carloads. In South Carolina, for example, the usual load of standard crates is 4 layers high and 7 rows wide.

This load, when 16 stacks long, contains 448 crates. A load of about 400 standard crates is common in some districts.

Flat crates of cantaloups are usually loaded 6, 7, or 8 layers high and 6 rows wide. They are also sometimes loaded on edge 3 layers high and 15 or 16 rows wide. Loads frequently contain two or more sizes of crates.

As the standard, jumbo, or pony crates are loaded in the car, strips are usually nailed across the ends of the crates in each layer in each stack in the load. These car strips are about as long as the car is wide and are one half to 1 inch in thickness. Alternate strips in each layer should touch opposite sides of the car. They hold the load in place in transit and prevent injury to the melons in the lower layers from the weight of the load. In loading flat crates the strips are usually placed only on alternate layers (fig. 16).



FIGURE 16.—In loading this car of western flat crates of cantaloupes, car strips were used between each two layers. The spaces between the rows facilitate circulation of cool air.

In the space at the doorway, which is usually about 2 feet wide, a bracing is constructed to hold the load in place in transit. This bracing usually consists of 2- by 4-inch uprights with 1- by 4-inch boards nailed across them. Two of these gates are used, one against each part of the load. One upright on each gate should touch the ceiling of the car to help hold the load in place. Short pieces of timber are placed between the two gates to hold them in position against the crates.

When cantaloupes have been segregated as to maturity as they were packed, the crates containing the riper melons are often loaded next to the ice bunkers and in the lower layers. This part of the car has the lowest temperature.

Honey Dew crates are loaded flat. There is some variation in the arrangement of crates in the load. In one method of loading, the load is divided and center braced, with 8 stacks in each end of the car, 5 rows wide, and 6 layers high, containing 480 crates. In another arrangement there are 8 stacks in each end of the car, 5 rows wide with 2 stacks next to each bunker 7 layers high, and the remaining

12 stacks 6 layers high. This load contains 500 crates. Another arrangement is a divided load of 16 stacks, 7 layers, and 5 rows containing 560 crates.

For cantaloups, Honey Dew, and Honey Ball melons, the loads described are those used in a car with inside length of about 33 feet. Shorter cars of about 32 feet in length are usually loaded with only 15 stacks instead of 16 stacks.

When melons are trucked to market, the loads should be arranged securely and in a manner to prevent bruising of the melons. A tarpaulin can be used to advantage in protecting the load from sun, rain, or dust.

#### PRECOOLING

During recent years the practice of precooling vine-ripened cantaloups and Honey Ball melons before shipping has met with considerable success in western districts. Under this method it has been possible to place melons of better edible qualities than formerly on the eastern markets. This is indicated by the premium in price generally received for the vine-ripened, precooled stock over the shipments handled under usual methods (p. 13).

In many of the precooled shipments the temperature of the melons is reduced to 45° or 50° F. after the car is loaded and before it is started to market. This is done by drawing air through the ice-filled bunkers into the car and forcing out the air as it is warmed through contact with the melons. The time required to precool the melons is one objection to this method of handling. Salt is sometimes added to the ice to hasten cooling. It may require from 6 to 24 hours to precool the load. The expense of precooling in some western districts has been reported as from \$10 to \$25 per car.

In some instances cantaloups have been precooled by placing the packed crates in a cold room provided for this purpose at central packing plants. Shipments of Honey Dew melons are seldom precooled.

#### INSPECTION

Inspection of melons under Federal grades by the Federal-State inspection service at shipping points is optional with the shippers. Some States have laws, however, providing that shipments must meet certain requirements.

Under the Federal-State shipping-point inspection service, shippers in important districts can obtain inspection for a small charge per car. Under this service a certificate is furnished the shipper which shows the grade and type of pack of the melons and other pertinent information, such as the arrangement of the load and loader's count of the number of crates in the car. Federal inspection is also available in the large markets. During the calendar year 1932 more than 2,600 cars of cantaloups were inspected at shipping point under the Federal-State service.

In some States the hydrometer test for soluble solids in the juice of the edible portion is used as a basis in determining when the melons are sufficiently mature for shipment. There are some objections to the hydrometer test as an indicator of maturity because of the variations in the soluble solid content in the juice among mature melons of different varieties and under different field conditions. The sugar or soluble solid content of the earlier maturing cantaloups from the



crown set and of the first picking of the Honey Dew crop is higher than for later maturing melons from the same vines. This test is sometimes used as a check on the work of pickers in the field.

The legal minimum soluble solid content for Colorado shipments in 1933 was 8 percent for cantaloups and 10 percent for Honey Dew melons. Several years earlier the corresponding figures were 10 and 12 percent, respectively. The higher requirements were found to be impracticable during the latter part of the shipping seasons. In California the requirement for soluble solids in the juice of cantaloups has been 8 percent but this requirement has been changed to 9 percent effective in 1934.

The method of making the hydrometer test for soluble solids is briefly as follows: A sample is selected of a number of melons representing approximately the minimum stage of maturity in the lot to be inspected. They are cut open and the edible portion is removed with a spoon and put through a grinder. The juice is strained through a piece of cheesecloth into a vessel or cylinder. A hydrometer is then inserted in the juice and allowed to remain a few minutes until the air in the juice can escape. The percentage of soluble solids or sugar is shown by the hydrometer reading. A correction is made for the temperature of the juice.

Inspection at shipping point under standard grades tends to prevent unjustified rejection of the shipment at destination in sales made "f.o.b. usual terms." The official grades are a common language between shipper and distant buyer and as a basis for quoting prices are understood throughout the industry. The use of definite grading standards and inspection encourages better production methods among growers and more careful handling by those who are preparing the melons for shipment. Melons that are grown, graded, and packed in accordance with the best methods frequently bring a premium over melons that are poorly graded and packed.

### MARKETING METHODS

In most of the western producing districts marketing agencies, known either as shippers or distributors, largely control the sale of the crop. Some of these agencies have a permanent representative in the district with additional personnel during the shipping season. A common practice is for the marketing agencies to contract with growers. They usually advance money to the growers and furnish seed and packing material. For their services they have usually charged growers 15 percent of the "delivered at market" sale price of the shipments. Advances and costs of seeds and materials supplied are, of course, deducted from the sale price in settling with the growers.

Some of these marketing agencies are fruit and vegetable dealers in the large cities who consign shipments to their wholesale or jobbing houses or to wholesalers or jobbers in other cities. Some shipments are sold "delivered at destination", and some for cash loaded on cars at shipping point. The latter type of sale is known as a "cash-track" sale. Some sales are made on "wire order, shipping-point acceptance", in which the buyer, through telegraphic negotiations, accepts the carload f.o.b. shipping point at a specified price. A few sales are also made f.o.b. usual terms.

Independent growers in some districts sell a large part of their shipments "cash track". In Imperial Valley, Calif., in recent years, it has been estimated that about 30 percent of the rail shipments have been sold "cash track" to buyers who were in the district. The cash buyers in the producing districts are often representatives of wholesale or jobbing firms in the city markets. Some also operate independently as speculators or brokers.

In Delaware and on the Eastern Shore of Maryland, many of the cantaloups are sold at auction by the growers at the local shipping points. The farm-packed cantaloups are hauled by the growers to the auctions which are located at a number of rail shipping points. The buyers assemble and bid on the farmers' loads. Some auction sales are held in open sheds and some in the open. Local buyers, in some instances, manage the auction companies, charging the growers a small fee per package. A brokerage is also charged in some instances to city firms or others who buy through the local auctions.

After being sold at the local auctions the melons are loaded on trucks or cars and started to market. The buyers often consign their purchases to the large eastern markets. Some sales are made at shipping point and some delivered. The lack of uniformity in the pack and size of crates in eastern producing districts makes f.o.b. selling difficult.

In some eastern sections, local dealers buy field-packed cantaloups direct from the growers and load cars which are consigned or sold to city dealers. Local dealers, who in some instances are growers, often act as assembling and selling agents for other growers, charging a commission for their services. Local cooperative associations have been formed to market the crop in the Eastern Shore of Maryland and some other districts. Many growers sell their melons to trucker-peddlers for cash at the farm.

In Michigan, large quantities of cantaloups are sold at the Benton Harbor market. Dealers buy cantaloups from the growers as they are brought into the market, and ship mostly by motor truck to markets within a radius of several hundred miles. In 1932, the equivalent of about 550 cars of cantaloups were sold through the Benton Harbor market.

Disposal of cantaloups by growers and local dealers at roadside stands is of considerable importance, particularly in districts where there is a large population. A good trade can often be built up by these stand operators, if melons of good quality and condition are offered for sale, and especially if the display is attractive and if satisfactory parking facilities are provided.

In the large city markets, carloads of cantaloups or other muskmelons may be sold by the car-lot dealer in jobbing lots of approximately 10 to 50 crates to small jobbers or to large retailers. Motor-truck receipts are usually sold out in small lots by the dealer who receives them. Jobbers in the large cities and wholesalers in the smaller cities make sales direct to retailers in quantities of one crate or more. Chain stores handle some car-lot receipts in the larger markets. Car-lot brokers also aid in the distribution of melons in the city markets by acting as agents in placing available car-lot shipments in the hands of dealers or jobbers who need them.

In large markets, particularly in New York City, a considerable number of cars of cantaloups, Honey Ball, and Honey Dew melons

are sold at auction. In 1930 about 1,077 cars or 19 percent of the car-lot unloads of these melons in New York, were thus sold. In city auction sales of cantaloups and miscellaneous melons, the unit of sale is not the carload; the melons are sold to jobbers, retailers, or others in lots of various sizes, usually ranging from 20 to 40 crates.

Truck shipments of cantaloups from producing districts to markets are often delivered to a dealer to be sold. The dealer charges a commission for his services, usually 5 to 10 percent. The truckman sometimes hauls the melons to market for hire as the agent of the shipper; in other instances, the truckman buys the melons at shipping point and operates as a dealer or peddler. Some of these truck loads are sold direct to retailers or peddled to consumers.

### MARKET INFORMATION

Information from various sources is available to assist growers and shippers in marketing the crop of cantaloups and other muskmelons. Federal-State market news reports have been available during the shipping season each year in a number of the important producing districts. These daily reports have shown for the previous day, by States of origin, the number of car-lot shipments of the various classes of melons. Information on the market destination of shipments has also been included. In some districts where motor-truck shipments are important the market news reports have included records of these truck shipments obtained through the cooperation of certain State agencies.

The reports have contained statements of arrivals and supplies in the leading markets, prices in the markets, and prices in competing producing districts.

The reports of shipments and supplies in the markets are obtained by the Federal-State market news service through the cooperation of the railroads.

Federal and State agencies issue reports periodically through the season on the acreage and condition of the crop in various States. A weekly summary of car-lot shipments is issued by the Bureau of Agricultural Economics.

Trade papers, radio reports, and private reports received by shippers are also sources of supply and price information.

### MARKET OUTLETS

Western cantaloups and miscellaneous melons are distributed widely to markets in the United States and Canada. In 1931, shipments from the Imperial Valley, Calif., were made to every State, the District of Columbia, and Canada. About 340 cities received Imperial Valley shipments. A record of the destinations of 21,391 cars (more than 98 percent of the 1931 car-lot shipments) of Imperial Valley cantaloups and other muskmelons shows that about 30 percent went to markets in New York State, and that the four States of New York, Pennsylvania, Illinois, and Ohio received about 60 percent (table 12 and fig. 17).

The distribution of the Imperial Valley crop in 1931 was probably more nearly normal than in 1932 when shipments were 38 percent less than in 1931. In 1932 shipments were made to only 240 markets.

TABLE 12.—Distribution by States of destination of melon shipments from leading producing districts, reported during period of operation of market news stations, 1931

State of destination	Car-lot shipments				Motor-truck shipments of cantaloups from Delaware and Eastern Shore of Maryland
	Cantaloups and other muskmelons from Imperial Valley, Calif.	Cantaloups from Arizona	Cantaloups from Colorado	Cantaloups from Delaware and Eastern Shore of Maryland	
	Cars	Cars	Cars	Cars	Car-lot quantities
Alabama.....	56	7			
Arizona.....	13	1			
Arkansas.....	25				
California.....	861	1			
Colorado.....	182	289	3		
Connecticut.....	290	48	4	17	22
Delaware.....	1				10
District of Columbia.....	210	19	4		14
Florida.....	110	6	9	1	
Georgia.....	61	2	1		
Idaho.....	10				
Illinois.....	2,007	701	286		
Indiana.....	201	54			
Iowa.....	170	56	1		
Kansas.....	85	37	2		
Kentucky.....	91	29			
Louisiana.....	177	18	3		
Maine.....	35	10	3	0	
Maryland.....	479	55	6	1	11
Massachusetts.....	985	99	62	109	2
Michigan.....	804	142	5	14	
Minnesota.....	323	71			
Mississippi.....	6				
Missouri.....	991	292	128		
Montana.....	64	3			
Nebraska.....	163	39	7		
Nevada.....	17				
New Hampshire.....	4			4	
New Jersey.....	178	40	8	11	94
New Mexico.....	16	5	3		
New York.....	6,422	596	253	126	800
North Carolina.....	41	2			
North Dakota.....	23				
Ohio.....	1,273	262	89	14	
Oklahoma.....	79	16			
Oregon.....	194				
Pennsylvania.....	2,913	520	208	64	387
Rhode Island.....	105	18	8	20	1
South Carolina.....	12				
South Dakota.....	19	4			
Tennessee.....	154	33	1		
Texas.....	257	71	3		
Utah.....	84	1			
Vermont.....	18	6	1	2	
Virginia.....	104	7	1		
Washington.....	226				
West Virginia.....	95	30	3	1	
Wisconsin.....	252	52			
Wyoming.....	20	2	1		
Canada.....	540	125		1	
Total <sup>1</sup> .....	21,391	3,772	1,103	394	1,430

<sup>1</sup> Incomplete.<sup>2</sup> On which destinations were reported.

A record of destinations of about 85 percent of the car-lot shipments of cantaloups from Arizona in 1931 shows shipments to 38 States, the District of Columbia, and Canada (table 12 and fig. 18). About 19 percent of these car-lot shipments of Arizona cantaloups went to Illinois, which was the principal State of destination. Three States—Illinois, New York, and Pennsylvania—received about 48 percent of

the Arizona shipments according to the billings. In 1931, 188 cities were reported as destinations of Arizona shipments. In 1932, Arizona shipments of cantaloups totaled 3,020 cars and were 32 percent less

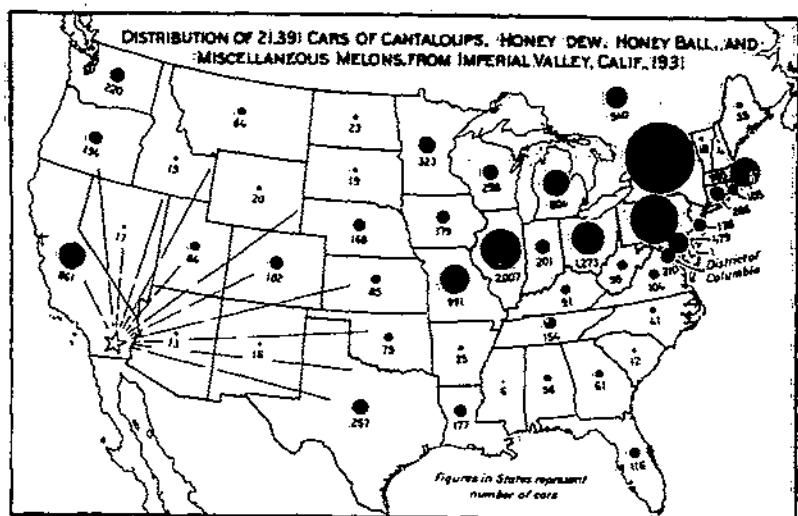


FIGURE 17.—Shipments of cantaloups and other muskmelons from the Imperial Valley, Calif., went to every State in 1931.

than the 1931 shipments and much smaller than in any year since 1926. The 1932 Arizona crop was distributed to about 140 cities in 36 States, the District of Columbia, and Canada.

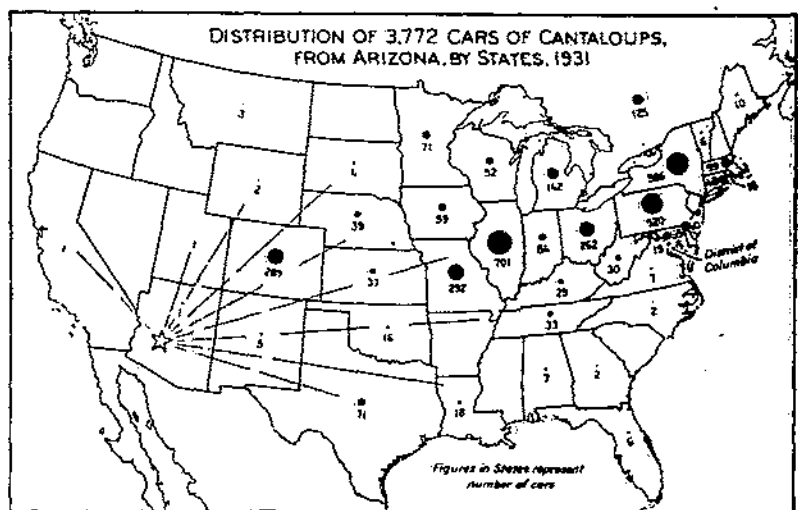


FIGURE 18.—Arizona cantaloups are marketed in a large number of States.

Colorado cantaloups in 1931, according to a record of distribution of 1,103 cars or about 60 percent of the shipments, went to 26 States and the District of Columbia (table 12 and fig. 19). The leading State used as a market outlet was Illinois, to which about 26 percent

of the cars were shipped. The next three States in importance as market outlets for Colorado shipments were New York, Pennsylvania, and Missouri. These three States included destinations of about 53 percent of the recorded shipments from Colorado.

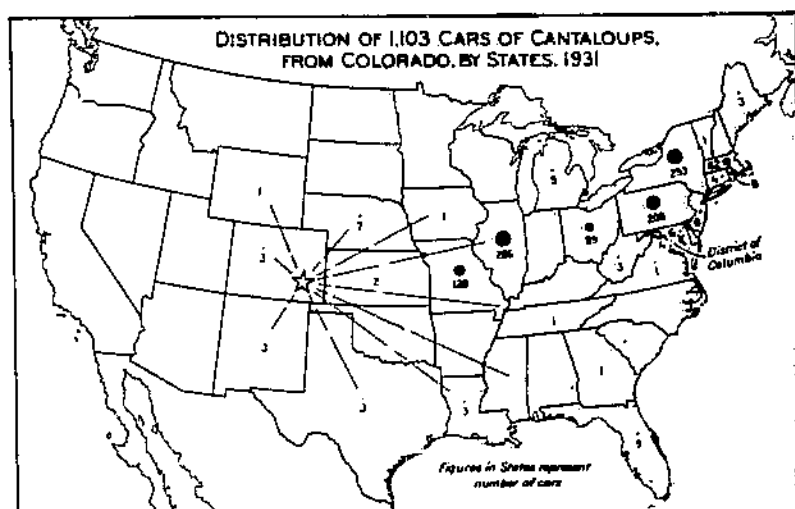


FIGURE 19.—Three States—Illinois, New York, and Pennsylvania—received more than two thirds of the shipments of Colorado cantaloups for which destinations were recorded in 1931.

The distribution of eastern cantaloups is not Nation-wide. A larger proportion of the eastern crop moves by motor-truck than is the case with the western crop.

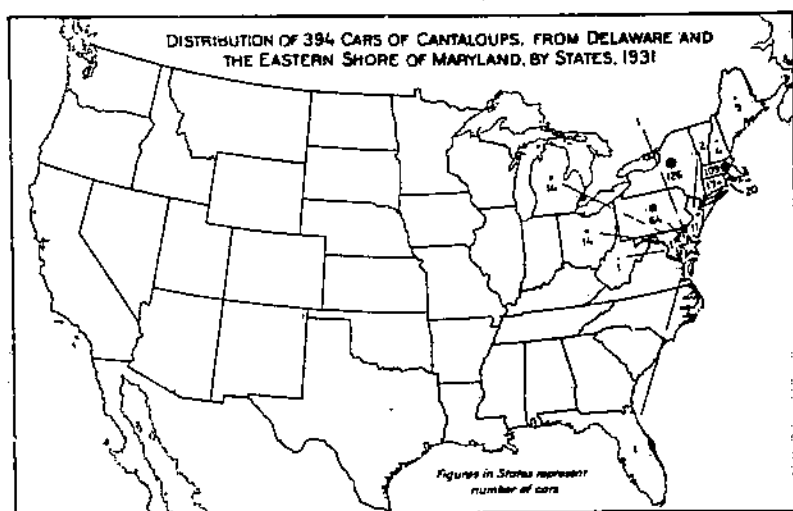


FIGURE 20.—Car-lot shipments of cantaloups from Delaware and the Eastern Shore of Maryland go largely to the Middle Atlantic and New England States.

The record of destinations of shipments of 394 cars from Delaware and the Eastern Shore of Maryland representing about two thirds of the 1931 car-lot shipments from these States shows distribution to

14 States and Canada (table 12 and fig. 20). New York and Massachusetts together received about 60 percent of the car lots for which destinations were reported. A few car-lot shipments from Delaware and the Eastern Shore of Maryland went as far west as Detroit, but most of the rail movement was to points in the region from Pittsburgh eastward.

The greater part of the movement from Delaware and the Eastern Shore of Maryland is by motor-truck. The 1931 records of destinations of the equivalent of 1,430 cars moved by truck from this district show that 8 States and the District of Columbia received these shipments. These records are somewhat incomplete, particularly as to Baltimore and Washington. Trucks going by ferry to these points were not included in the record. New York and Pennsylvania together received about 90 percent of the recorded truck movement from this district (table 12).

The market outlets for a large part of the cantaloups from Michigan, Indiana, New Jersey, and other States in the North Central and North Atlantic regions are within a few hundred miles of the producing districts. Most of the movement is by truck.

Markets for the crop from the Carolinas are chiefly in the North Atlantic region. The principal markets for Arkansas cantaloups are in the Middle West, but some shipments come to the Middle Atlantic and New England States. Cantaloups from Washington are marketed chiefly in cities in the Northwest.

Freight and refrigeration charges are important items in the cost of marketing melons and they influence the final distribution of the crop. Changes are frequently made in transportation rates, but as a general indication of these costs a tabulation of freight and refrigeration charges in effect in May 1933 from leading producing districts to New York and Chicago is given in table 13. The freight and refrigeration from Brawley, Calif., to New York was about \$1.52 per standard crate, and to Chicago about \$1.28, according to this tabulation. From Laurinburg, N.C., the charge to New York was about 62 cents as compared with 78 cents to Chicago.

TABLE 13.—*Freight and refrigeration charges on cantaloups from representative shipping points to New York and Chicago*<sup>1</sup>

Shipping point	Freight rate per 100 pounds on carloads of specified minimum weights to—		Standard refrigeration per car to—		Approximate freight and refrigeration charges per standard crate to—	
	New York	Chicago	New York	Chicago	New York	Chicago
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Brawley, Calif.....	1.75	1.46	110.00	95.00	1.52	1.28
Turlock, Calif.....	1.75	1.46	110.00	95.00	1.52	1.28
Phoenix, Ariz.....	1.75	1.46	105.00	95.00	1.50	1.28
Rocky Ford, Colo.....	1.24	.70	85.00	70.00	1.47	1.20
Mesquite, N. Mex.....	1.28	1.04	95.00	80.00	1.15	.95
Hortio, Ark.....	.63	.66	85.00	70.00	.84	.62
Salisbury, Md.....	.38	.66	55.00	82.50	.40	.60
Laurinburg, N.C.....	.605	.82	65.50	90.00	.62	.78
Blackville, S.C.....	.72	.86	69.00	90.00	.66	.81

<sup>1</sup> These rates, as of May 1933, are based on usual number of crates loaded per car, assuming a billing weight of 68 pounds for a standard crate, and 28 pounds for a standard flat crate. The minimum load in California, Arizona, Colorado, and New Mexico is 20,000 pounds, and in the other States listed, 24,000 pounds. This tabulation is presented merely to show approximate transportation charges and can have no standing in adjusting claims with the carriers.

<sup>2</sup> Charges per standard flat crate.

An analysis of the records of cantaloup receipts in 12 important markets, well scattered geographically from Boston to San Francisco, shows that in 1932 about 33 percent of the reported receipts were California rail shipments (table 14). The reported truck receipts, which were incomplete, amounted to about 39 percent of the total reported supply for the 12 cities. Rail receipts from districts other than the West amounted to only about 8 percent. There was a wide difference in the source of supply among the 12 markets. Los Angeles received 94 percent of its supply by truck, whereas little more than 1 percent of the Boston supply came by truck. About half of the total supply in these 12 markets came as rail receipts from the Western States.

TABLE 14.—Source of shipments, method of transportation, and volume of cantaloup supply in 12 markets in 1932

Market	Rail and boat unloads from—					Truck receipts <sup>1</sup>	Total supply
	California	Arizona	Colorado	Other Western States <sup>2</sup>	Eastern, Southern or Midwestern States		
	Cars	Cars	Cars	Cars	Cars	Car-lot quantities <sup>3</sup>	Car lots
Atlanta, Ga.	14	0	0	1	10	119	144
Boston, Mass.	638	172	221	78	283	2	1,394
Chicago, Ill.	935	336	229	132	194	(9)	1,820
Denver, Colo.	99	49	1	20	0	173	342
Kansas City, Mo.	123	34	60	2	65	27	301
Los Angeles, Calif.	122	0	0	0	0	1,979	2,101
New York, N. Y.	1,791	443	325	170	332	1,305	4,366
Philadelphia, Pa.	527	206	63	27	127	1,644	2,564
Pittsburgh, Pa.	406	121	207	35	154	(9)	923
St. Louis, Mo.	241	42	55	14	102	250	704
Salt Lake City, Utah	34	0	0	23	0	382	244
San Francisco, Calif.	261	4	0	0	0	420	685
Total	5,191	1,407	1,141	507	1,267	6,101	16,614
Proportion of total	Percent 33	Percent 9	Percent 8	Percent 3	Percent 8	Percent 39	Percent 100

<sup>1</sup> As here used includes New Mexico and other States west of Colorado and New Mexico, excepting California and Arizona.

<sup>2</sup> Truck receipts are mostly from producing districts within a few hundred miles of the market. The quantities are somewhat incomplete for most cities as reports of shipments direct to retailers and consumers and some shipments to wholesalers are not available.

<sup>3</sup> Includes less-than-carload lots as follows: Atlanta, 2; Los Angeles, 8; Philadelphia, 10; New York, 1; San Francisco, 5.

<sup>4</sup> Includes 1 car from Mexico at Chicago, and 3 cars from Mexico in New York.

<sup>5</sup> Reports of truck receipts not available.

Car-lot unloads of cantaloups and other muskmelons in 66 cities for which records are available totaled 23,677 cars in 1932 compared with 31,217 cars in 1931, and 31,031 cars in 1930. These figures represent 90, 85, and 86 percent, respectively, of the total United States car-lot shipments of these melons. The sources of the car-lot supply for each of the 66 cities for 1932 are shown in table 15. In 1932 the United States car-lot shipments were more than one fourth less than in 1931 and the 66 cities received a larger proportion of the shipments.

The population of the metropolitan districts of these 66 cities in 1930 totaled between 70 and 75 percent of the population in places of 2,500 or more in the United States and about 40 percent of the total United States population.



TABLE 15.—Car-lot and boat unloads of cantaloups and other muskmelons in 66 markets, 1932

Market	Shipments from Indicated State of origin																						
	Arizona	Arkansas	California	Colorado	Delaware	Florida	Georgia	Illinois	Indiana	Iowa	Louisiana	Maryland	Michigan	Nevada	New Mexico	North Carolina	South Carolina	Texas	Utah	Washington	Other domestic <sup>1</sup>	Foreign <sup>2</sup>	Total
Akron, Ohio	Cars 11	Cars 2	Cars 17	Cars 4	Cars 1	Cars	Cars	Cars	Cars 5	Cars	Cars	Cars	Cars	Cars	Cars 1	Cars	Cars	Cars 1	Cars	Cars	Cars	Cars	Cars 42
Albany, N.Y.	26	3	137	15	3							3			12			14					213
Atlanta, Ga.			40	2			2					5			1			2					52
Baltimore, Md.	44	4	296	39		2	5					9				7	18				10	4	438
Birmingham, Ala.			19	2			2								1			1					23
Boston, Mass.	175	14	1,020	267	54		1	1				109		3	63	19	27	53	8	1	8	5	1,829
Bridgeport, Conn.	19		54	10					2						3								80
Buffalo, N.Y.	44	12	222	47	16							20			24		7	7					403
Chicago, Ill.	345	52	1,256	200	1			26	57	2	3			15	104		53	12			2	1	2,217
Cincinnati, Ohio	65	20	268	110	2		3		28	2					9		1						506
Cleveland, Ohio	133	18	422	113	20		3		47	3	1	14			34	2		28				1	839
Columbus, Ohio	18	10	86	9	1				9			3			5			6					147
Dallas, Tex.			16												1			9					26
Dayton, Ohio	3	1	21	0					2						2								35
Denver, Colo.	49		106	1											20								176
Des Moines, Iowa	11	7	33												1			1					53
Detroit, Mich.	132	31	482	40	3		6		32			12			35			14				3	790
Duluth, Minn.	15		16															5					36
El Paso, Tex.			16																				16
Evansville, Ind.	3	1	7																				11
Fort Worth, Tex.			10															7					17
Grand Rapids, Mich.	11	3	48						6														68
Hartford, Conn.	26	2	139	17	2							3			2								191
Houston, Tex.			12	1											2			1					16
Indianapolis, Ind.	25	3	76	15					4						1			1					125
Jacksonville, Fla.			18	3	3							1			2			1					28
Kansas City, Mo.	36	51	153	58						1	3				2								317
Lexington, Ky.	2		12	4			1		3						1								23
Los Angeles, Calif.			160																				160
Louisville, Ky.	15		44	11											1								71
Memphis, Tenn.	2	1	41												2			3					49
Milwaukee, Wis.	54	7	116	5					3		1		13		8			7					214
Minneapolis, Minn.	53	8	157	4						3								12	2				239
Nashville, Tenn.	3	2	17	2		1	1								1								27
Newark, N.J.	64		230	61			2									5		1					363
New Haven, Conn.	31	3	48	6	1										3			3					95
New Orleans, La.	11	1	115	18							3				6		1	35					190
New York, N.Y.	486	44	5,401	583	1	3	19		2		3	18			63	75	94	74	103		5	457	7,431
Norfolk, Va.			20	1			1									1	1						24

# MARKETING CANTALOUPS AND OTHER MUSKMELONS

Oklahoma City, Okla.			14																						14
Omaha, Nebr.	20	6	81	5																					117
Peoria, Ill.	12	1	9																						23
Philadelphia, Pa.	211	5	1,261	175																					1,802
Pittsburgh, Pa.	122	12	603		33		3	11	3																1,192
Portland, Maine	16		46	8	7																				37
Portland, Oreg.			100																						188
Providence, R.I.	36	2	82	20	11																				203
Richmond, Va.			12					1																	30
Rochester, N.Y.	25	9	85		6																				109
St. Louis, Mo.	43	61	329	85						13	7														573
St. Paul, Minn.	23	4	48	1						1															81
Salt Lake City, Utah			36																						64
San Antonio, Tex.			1	1																					4
San Francisco, Calif.	4		379																						383
Seattle, Wash.	1		188																						208
Shreveport, La.			2																						2
Sioux City, Iowa	14		21																						39
Spokane, Wash.			33																						55
Springfield, Mass.	10	2	78	3	1																				107
Syracuse, N.Y.	26	6	72	11	6																				137
Tampa, Fla.	2		35	0																					51
Terre Haute, Ind.																									0
Toledo, Ohio	14		35	2					4																60
Washington, D.C.	36		307	20				3																	388
Worcester, Mass.	4		2																						7
Youngstown, Ohio	15	2	61	16																					104
Total	2,555	410	15,332	2,401	172	12	65	27	216	25	21	250	13	46	515	161	215	487	155	68	40	491	23,677		

1 Includes uploads from various States as follows: Kansas, 8; Missouri, 2; New Jersey, 4; Oregon, 8; Virginia, 13; unknown, 5.

<sup>3</sup> Total foreign unloads in terms of carloads were: Brazil, 1; Chile, 455; Mexico, 10; Portugal, 1; Spain, 24. New York City foreign unloads were: Chile, 427; Mexico, 9; Portugal, 1; Spain, 20.

New York City is by far the most important market for cantaloups and other muskmelons. In 1932, 6,974 cars of domestic melons or 27 percent of the United States car-lot shipments were unloaded in New York City. There were also 457 car lots received from foreign sources, mostly Chile.

A careful study of table 15 not only shows the source of car-lot supply of each of the 66 cities, but also, in a general way, the region into which the crop from each State is distributed. For example, the table shows that 61 percent of the reported Indiana unloads were in three cities: Chicago, Cincinnati, and Cleveland. A large part of the Indiana crop goes to markets in Illinois, Ohio, Indiana, and Michigan. Similarly 57 percent of the Arkansas unloads in the 66 cities were in 6 cities: Kansas City (Mo.), St. Louis, Chicago, Cleveland, Cincinnati, and Detroit. Markets in the region which includes these cities are the principal outlet for the Arkansas crop. However, there are considerable receipts of Arkansas cantaloups in the eastern markets. In 1932, New York City received 11 percent and Boston over 3 percent of the total Arkansas unloads in 66 markets. A large part of the Carolina shipments go to New York City and Philadelphia. In 1932 these 2 markets received 73 percent and 64 percent of the North Carolina and South Carolina unloads respectively in the 66 markets (table 15).

A study of the market distribution of cantaloups and other muskmelons shows that a larger proportion of the car-lot shipments go to the large cities than is the case for any of 15 other important fruits and vegetables. In 1930, 62 percent and in 1931, 60 percent of the car-lot shipments of cantaloups and other muskmelons went to 10 cities with metropolitan populations of more than 1,000,000. For watermelons, only 30 percent of the shipments in 1930 and 32 percent in 1931 went to these 10 large cities. For the other 14 fruits and vegetables studied, the corresponding percentages generally varied between 30 and 60 percent. The highly perishable nature of cantaloups is one explanation of the fact that they are not distributed in carloads to as small cities as are some of the other commodities. Large quantities of cantaloups and other muskmelons are distributed by truck from the large car-lot markets to smaller cities and towns in the surrounding trade territory.

Separate records of car-lot unloads of cantaloups, Honey Ball, casaba, Honey Dew, Persian melons, and mixed melons are available for a number of the larger markets. These unloads for 1932 in 23 markets are shown in table 16. New York City is the best market for miscellaneous melons, not only as to quantity used but also as to the proportion of the total supply of cantaloups and miscellaneous melons. Out of a total of 7,431 cars unloaded at New York in 1932, 3,790 or 51 percent were Honey Ball, Honey Dew, casaba, and Persian melons. Philadelphia, also, is a good market for the miscellaneous group of melons. In Chicago, cantaloups made up about 82 percent of the car-lot unloads of cantaloups and other muskmelons.

TABLE 16.—*Car-lot unloads of cantaloups, Honey Ball, casaba, Honey Dew, Persian, and mixed melons in certain markets, 1932*

Market	Cantaloups	Honey Ball melons	Casaba melons	Honey Dew melons	Persian melons	Mixed melons and other muskmelons <sup>1</sup>	Total
	Cars	Cars	Cars	Cars	Cars	Cars	Cars
Atlanta, Ga.	23	1	0	15	0	13	62
Baltimore, Md.	248	34	0	89	0	47	438
Boston, Mass.	1,392	41	39	294	1	61	1,828
Chicago, Ill.	1,820	55	3	266	13	84	2,217
Cincinnati, Ohio	451	24	0	23	1	8	508
Cleveland, Ohio	874	41	0	101	4	19	938
Dallas, Tex.	24	0	0	2	0	0	26
Denver, Colo.	189	0	0	6	1	0	176
Detroit, Mich.	650	16	0	86	2	27	790
Fort Worth, Tex.	17	0	0	0	0	0	17
Kansas City, Mo.	274	3	0	39	0	1	317
Minneapolis, Minn.	215	5	0	12	0	7	239
New Orleans, La.	156	17	0	11	0	6	190
New York, N.Y.	3,080	1,031	34	2,661	64	581	7,431
Omaha, Nebr.	106	0	0	9	0	2	117
Philadelphia, Pa.	924	294	1	523	5	125	1,802
Pittsburgh, Pa.	923	50	0	136	7	70	1,192
Portland, Ore.	177	0	0	1	0	10	188
St. Louis, Mo.	454	26	0	80	0	13	573
St. Paul, Minn.	72	3	0	5	0	1	81
Salt Lake City, Utah	62	0	0	1	0	1	64
Seattle, Wash.	180	0	2	8	0	18	208
Washington, D.C.	220	37	1	117	8	5	388
Total	12,306	1,614	80	4,485	106	1,090	19,681

<sup>1</sup> Includes cars containing 2 or more of the specified varieties or types and a few cars of miscellaneous varieties or types not listed.

#### PRICES

The prices of cantaloups and other melons are influenced by a number of factors among which are changes in the general price level, changes in volume of production from year to year in any shipping district and in competing districts, variations in time of harvesting as it affects volume of daily shipments and competition on the markets among shipping districts, average quality of the crop and legislative restrictions as to quality and condition of shipments, weather conditions, and competition from other fruits and melons.

From 1929 to 1932 melon prices trended downward in general accord with the downward movement of the general price level (table 17). For the country as a whole, there was not a wide fluctuation in the production of cantaloups and other muskmelons during this period, but rail shipments of cantaloups were somewhat lower in 1930 and 1931 than in 1928 and 1929, and the 1932 cantaloup rail shipments were about 40 percent less than the average shipments of 1928 and 1929, partly because large quantities were not marketed from some districts. The car-lot shipments of miscellaneous melons in 1930 and 1931 were greater than in 1928 and 1929, but there was a sharp decrease in shipments in 1932.

The reasons for price fluctuations are complex and no attempt is here made to explain the year-to-year changes for any State or district or the differences in price among the various States and districts.

TABLE 17.—Average seasonal price paid to growers per crate for cantaloups and miscellaneous melons, 1928-32

Group and State or district	1928	1929	1930	1931	1932
<b>Early shipping group:</b>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>
California, Imperial Valley	1.60	1.63	1.32	1.14	1.15
Florida	2.00	2.00	1.75	1.50	1.00
Texas, early district	1.20	2.00	2.25	.81	2.00
Average	1.60	1.64	1.34	1.14	1.15
<b>Second-early shipping group:</b>					
Arizona	1.34	1.25	.96	.85	.40
Arkansas	1.02	1.22	.90	.88	.45
California, other than Imperial Valley	1.06	.95	.99	.87	.62
Georgia	1.60	2.22	.80	.75	.80
Nevada, Moapa district	.80	1.30	1.70	.84	.66
North Carolina	.68	1.20	1.16	.70	.69
Oklahoma	.89	1.25	1.10	.68	.55
South Carolina	1.31	1.50	.76	.55	.80
Texas, other than early district	.50	1.16	.95	.81	.40
Average	1.13	1.10	.95	.84	.63
<b>Intermediate shipping group:</b>					
Delaware	1.00	1.15	1.50	.75	.65
Illinois	1.20	1.45	1.75	1.25	.80
Indiana	1.23	1.50	1.65	1.15	.80
Maryland	1.21	1.45	1.65	.75	.85
New Mexico	1.10	1.00	1.50	1.17	.80
Tennessee	1.05	1.50	1.60	1.35	.60
Washington	.61	.78	1.18	.75	.60
Average	1.11	1.27	1.48	.93	.81
<b>Late shipping group:</b>					
Colorado	.94	.83	1.20	.85	.70
Iowa	1.06	1.48	1.40	1.05	.50
Kansas	.92	.81	1.05	.80	.65
Michigan	1.35	1.35	1.60	1.20	1.10
Nevada, other than Moapa district	1.70	1.75	1.00	1.25	.60
New Jersey	.65	1.25	1.25	1.00	.63
Ohio		1.75	1.85	1.09	.80
Oregon		1.00	1.25	.75	.60
Utah				.85	.42
Average	1.02	.95	1.27	.94	.73
Average	1.30	1.30	1.20	1.00	.83

\* Includes Honey Dew, Honey Ball, casaba, and Persian melons but not watermelons. Prices are based on crates containing about 60 pounds.

Division of Crop and Livestock Estimates.

Table 17 shows the estimated price to growers for crates containing about 60 pounds of cantaloups and other muskmelons. In the Imperial Valley, the average seasonal price to growers for cantaloups and miscellaneous melons considered together ranged, during the 5-year period 1928-32, from \$1.63 in 1929 to \$1.14 in 1931. For the other districts of California, the range was from \$1.06 in 1928 to \$.62 in 1932. There was also a considerable range in average prices paid to growers among other States and districts and for different years in the period. For all States the range was from \$1.30 in 1928 and 1929 down to \$.83 in 1932.

Since prices of miscellaneous melons are averaged with prices of cantaloups in the districts that produce them, the table does not afford a comparison of cantaloup prices among all districts.

The Federal-State market news reports afford a means of comparing shipping-point prices in certain important districts and States (table 18). These prices, however, are not an accurate measure of the average prices received for the whole crop since, in many instances, ship-

ments were consigned or sold delivered at market and for some districts and years large quantities were not marketed. Also the prices shown in the table are on a specified size of crate and kind of pack and would not represent the shipping-point price of all melons sold.

TABLE 18.—Prices per crate of cantaloups at representative shipping districts, 1928-32, and similar prices for Honey Ball and Honey Dew melons, 1930-32

Shipping district	Type or variety and basis and unit of sale	Year and period	Price range for period	Price range first week of period	Average shipping point price for period <sup>1</sup>
			Dollars	Dollars	Dollars
California, Imperial Valley.	Cantaloups, salmon meat, standard 45s, carloads f.o.b. cash track.	1928, May 14-July 10	1.00-3.50	2.00-3.50	2.68
		1929, May 20-July 11	.90-4.50	2.40-4.50	2.03
		1930, May 11-July 5	1.00-4.25	2.50-4.25	1.84
		1931, May 6-July 7	.75-4.00	2.00-4.00	1.24
		1932, May 9-July 5	.65-3.75	2.35-3.75	1.36
	Honey Ball, standard 45s, carloads f.o.b. cash track.	1930, June 12-July 25	1.00-2.50	2.00-2.50	1.58
		1931, June 3-July 25	.75-2.50	1.75-2.50	.99
		1932, June 2-July 28	.55-2.75	2.00-2.75	.93
	Honey Dew, standard and jumbo crates, (6½-inch and 7¼ by 16 by 22¼ inches), carloads f.o.b. cash track.	1930, June 6-July 25	.75-2.00	.75-1.75	1.16
		1931, May 20-July 21	.45-2.00	.85-2.00	.60
		1932, June 1-July 18	.40-2.00	.86-2.00	.56
Arizona	Cantaloups, various varieties, standard 45s, carloads f.o.b. cash track.	1928, June 25-July 10	1.40-2.15	1.40-2.00	1.78
		1929, June 28-July 24	1.15-2.00	1.50-2.00	1.45
		1930, June 24-July 24	.90-2.25	1.50-2.25	1.40
		1931, June 25-July 13	.70-1.25	.75-1.00	.91
		1932, July 6-July 11	.80-.88	.80-.88	.83
Colorado, Rocky Ford.	Cantaloups, salmon and pink meat, standard and jumbo flats, carloads f.o.b. cash track.	1928, Aug. 27-Sept. 22	.40-1.00	1.00	.67
		1929, Aug. 19-Sept. 19	.35-.70	.40-.85	.49
		1930, Aug. 18-Sept. 13	.40-.55	.45-.55	.46
		1931, Aug. 18-Sept. 12	.30-.55	.40-.45	.39
		1932, Aug. 16-Sept. 13	.30-.40	.30-.40	.35
Maryland, Eastern Shore.	Cantaloups, salmon and pink meat, wagon loads cash to growers at auction, crates (mostly 13- and 14-inch square heads) <sup>2</sup> .	1928 <sup>3</sup>			
		1929, July 31-Aug. 23	.75-2.25	.75-2.25	1.34
		1930, July 26-Aug. 15	1.00-3.25	1.00-3.25	1.87
		1931, July 27-Aug. 13	.30-2.25	1.25-2.25	1.17
		1932 <sup>4</sup>			

<sup>1</sup> Weighted according to daily shipments, using mid point of daily shipping-point price range as daily average price. Since many shipments are not sold on a shipping-point basis and only 1 size of crate and pack is represented, this cannot be considered the average price of all shipments.

<sup>2</sup> Includes some standard 35s in 1928.

<sup>3</sup> In 1928 the quotations were on standard flats, 12s and 15s, and in 1930 sales were "f.o.b. usual terms."

<sup>4</sup> Market news reports were not issued in this district in 1928 or 1932.

<sup>5</sup> Prices from July 31 to Aug. 8, 1929, were quoted f.o.b. usual terms. Some 1931 prices were for crates with 15-inch square heads.

For certain districts, table 18 shows the range in shipping-point prices of specified sizes of crates and packs for the periods shown in the 5 years, 1928-32. The price range for the first week of the period is also shown as these early prices are usually somewhat higher than prices later in the shipping season. The average shipping-point price for the crate and pack specified are also included.

It is apparent that the relationship between cantaloup prices in different districts changes greatly from year to year. The highest average price shown for the period was \$2.03 per crate f.o.b., cash track, for salmon meats, standard 45s, in Imperial Valley in 1929. In that year the auction price to growers on the Eastern Shore of Maryland for salmon and pink meats in crates with 13- and 14-inch heads averaged \$1.34, but in 1930 the Maryland price of \$1.87 was higher than the Imperial Valley price of \$1.84.

It is the custom in some important cantaloup districts to use the 45 pack in standard crates as the basis on which cantaloup prices are established. The premium or discount on other packs and sizes of crates varies somewhat from year to year. The relationship in prices of different crates and packs of cantaloups in some western districts in recent years has been approximately as follows: The jumbo 45

pack has usually sold for 15 to 25 cents more and occasionally 50 cents more per crate than the standard 45. The jumbo 36 pack has usually sold at about the same price as the standard 45. The standard 36 has sold at 15 to 25 cents less per crate. The price of pony crates of cantaloups has usually been 70 to 75 percent of the price of standard 45s. However, when a high percentage of the crop is of small or pony size, the pony pack in some years has sold for less than half the price of the standard 45 pack. The price of flats is usually about 40 percent of the price of standard 45s.

The average of shipping-point prices of Honey Dew melons in Imperial Valley was \$1.16 in 1930 and only 56 cents in 1932. Honey Ball prices averaged considerably less than cantaloup prices.

There is usually a wide range in prices during the season in any district. For example, in Imperial Valley in 1931, the range in price of salmon meats, standard 45s, f.o.b. cash track, was \$0.75 to \$4 per crate.

Records of prices of cantaloups, Honey Dews, and Honey Ball melons in the leading markets are available in the files of the Federal Market News Service. The prices are on sales to jobbers usually in lots of 5 to 50 crates.

Table 19 shows average monthly prices for five seasons, 1928-32, in six important markets for cantaloups from a few leading producing districts. The prices shown are unweighted averages of the quoted daily prices on days when sales were reported by the market news service. During the heavy shipping period from any district, sale prices in the markets were reported for practically every market day. At the beginning and end of the shipping seasons, however, some markets reported sales on melons from a certain district for periods of several weeks when other markets did not report sales. In some instances sales were reported for a few days near the beginning or end of the season, then for several days no sales were reported. In instances when sales were reported on less than 6 market days in a month the average price is not shown.

TABLE 19.—Average monthly cantaloup prices per crate to jobbers, six cities, 1928-32<sup>1</sup>  
CALIFORNIA, SALMON MEAT, STANDARD 45s

Year and month	Hoston	New York	Philadel- phia	Pittsburgh	Chicago	St. Louis
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
1928:						
May.....	0.02	0.30	4.82	6.02	5.34	4.81
June.....	3.46	3.42	3.49	3.30	3.17	3.40
July.....	3.09	2.72	2.87	2.84	2.75	3.00
August.....	2.56			2.54	2.38	2.17
1929:						
May.....	8.10	7.00	7.75	7.68	7.02	5.11
June.....	5.00	4.82	4.78	4.84	4.20	4.48
July.....	3.16	3.04	2.90	2.89	2.81	2.84
August.....	2.82	2.48		2.56	2.43	2.64
1930:						
May.....	6.26	7.31	6.46	6.16	6.30	5.54
June.....	3.22	3.05	3.15	3.26	3.15	3.26
July.....	3.42	3.20	3.12	3.02	2.77	2.79
August.....	2.82	2.81		2.88	2.55	2.63
1931:						
May.....	4.80	5.02	4.80	4.94	4.29	4.09
June.....	2.70	2.72	2.81	2.65	2.50	2.58
July.....	2.45	2.65	2.44	2.46	2.11	2.35
August.....	2.38	2.26		2.49	1.86	
1932:						
May.....	4.58	5.55	4.52	4.75	4.20	4.06
June.....	2.72	2.74	2.81	2.63	2.50	2.70
July.....	2.46	2.31	2.36	2.24	2.05	2.18
August.....	1.91	2.02		1.91		

<sup>1</sup> Prices are unweighted averages of daily market news quotations, on stock of good quality and condition, on days when prices were reported. Does not include prices of "vine-ripened and precooled stock."

<sup>2</sup> From market news data but not from records of Division of Statistical and Historical Research.

# MARKETING CANTALOUPS AND OTHER MUSKMELONS . 45

TABLE 19.—Average monthly cantaloup prices per crate to jobbers, six cities, 1928-32<sup>1</sup>—Continued

## ARIZONA, SALMON MEAT, STANDARD 45s

Year and month	Boston	New York	Philadel- phia	Pittsburgh	Chicago	St. Louis
	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>
1928, July.....	3.09	2.64	2.78	2.88	2.53	2.76
1929, July.....	2.90	2.97	2.73	2.81	2.76	2.92
1930, July.....	2.64	2.92	2.77	2.86	2.56	2.66
1931, July.....	2.34	2.39	2.41	2.26	2.07	2.03
1932, July.....	1.86	2.01	2.31	2.09	1.85	2.02

## COLORADO, SALMON MEAT, STANDARD FLATS 12s AND 16s

1929, September.....	1.30	1.02	1.08	1.06	0.93	1.00
1929, September.....	1.03	.93	.98	.97	.79	1.87
1930:						
August.....	.89	.81	.76	.92	.79	.72
September.....	.71	.62	.63	.67	.66	.66
1931:						
August.....	.87	.81	.68	.82	.66	.62
September.....	.82	.85	.90	.73	.61	.50
1932:						
August.....	.60	.50	.....	1.56	.45	1.45
September.....	.62	.67	.69	1.63	.52	1.64

## DELAWARE AND MARYLAND, VARIOUS VARIETIES<sup>2</sup>

1928, August.....	.....	.....	.....	.....	.....	.....
1929, August.....	1.28	1.32	0.87	1.43	.....	.....
1930, August.....	1.95	1.70	1.35	1.97	.....	.....
1931, August.....	1.00	.85	.69	1.25	.....	.....
1932, August.....	.....	.....	.....	.....	.....	.....

<sup>1</sup> Prices are unweighted averages of daily market news quotations, on stock of good quality and condition.

<sup>2</sup> From market news data but not from records of Division of Statistical and Historical Research.

<sup>3</sup> August 1929—Boston, New York, Philadelphia, Pittsburgh, standard 36s and 45s; August 1930—Boston, standard 45s; New York and Philadelphia, standard 36s; and Pittsburgh, standard 36s and 45s; August 1931—New York, standard 36s; Boston, Philadelphia, and Pittsburgh, standard 36s and 45s.

<sup>4</sup> No market news reports were issued in this district in 1928 and 1932.

Compiled by Division of Statistical and Historical Research except figures indicated by footnote 2.

For the 5-year period in each of the six markets—Boston, New York, Philadelphia, Pittsburgh, Chicago, and St. Louis—the price of California cantaloups trended downward through the season from May to August.

The variations in these prices among the different cities for any month are due chiefly to differences in supply and demand. In some months, particularly at the beginning and end of the season, the average prices are based on quotations for only a short period.

On the whole, the prices of western cantaloups in the midwestern markets, Chicago and St. Louis, have averaged somewhat lower than in the eastern markets. This does not necessarily mean that returns to growers have averaged less on shipments to these markets, since transportation charges are lower.

Prices paid in the eastern markets for Delaware and Maryland cantaloups were considerably less than those paid for western cantaloups (table 19).

Table 20 shows average monthly prices in Chicago, when available in the period 1928-32, for cantaloups from Arkansas, Indiana, Michigan, and New Mexico. Prices of North Carolina cantaloups in New York and Philadelphia are also included. Average market prices of standard crates of cantaloups from these States in the 5 years, according to the tabulation, varied from 88 cents to \$2.29. A comparison



of prices in table 20 with those in table 19 shows that cantaloups from the Midwestern and Eastern States sold at considerably lower prices than western cantaloups in the large markets.

TABLE 20.—Average price per crate to jobbers for cantaloups from specified States in specified markets by months, 1928-32<sup>1</sup>

State of origin	Type and pack	Market	Month	1928	1929	1930	1931	1932
				Dollars	Dollars	Dollars	Dollars	Dollars
Arkansas.....	Salmon meat, standard 36s and 45s.	Chicago.....	July.....	1.28	2.41	2.29	1.67	1.24
			August.....			1.88	1.01	
Indiana.....	Pink meat and salmon meat, standard 36s and 45s.	Chicago.....	July.....	1.73	1.90	1.96		1.20
			August.....				1.10	1.23
Michigan.....	Crates with 12 by 12 inch heads.	Chicago.....	August.....	1.63	2.03	1.31	1.41	1.15
			September.....		2.04	1.26	1.38	1.00
New Mexico.....	Pink meat, standard flats 12s and 15s.	Chicago.....	July.....	1.25	1.00	.89	.81	1.80
			August.....		1.41		1.27	1.18
North Carolina.....	Salmon meat, standards, all sizes.	New York.....	July.....					
		Philadelphia.....	do.....	.88				.97

<sup>1</sup> Prices are unweighted averages of daily market news quotations, on stock of good quality and condition, on days when prices were reported.

<sup>2</sup> Quotations are on Osage variety only.

<sup>3</sup> Quotations are on Hearts of Gold variety only.

<sup>4</sup> Quotations are on Hearts of Gold in crates with 11- by 11-inch and 12- by 12-inch heads.

<sup>5</sup> Quotations are on Honey Rock and Hoodoo in crates with 11- by 11-inch and 12- by 12-inch heads.

<sup>6</sup> Quotations are on jumbo flats, 9s to 15s.

There has been considerable variation in the average monthly prices of Honey Dew and Honey Ball melons in the various markets. In the 5-year period, the highest average monthly price for Honey Dew melons in the six markets was in New York in June 1929 when the average was \$4.34 per crate (table 21). The highest price for Honey Ball melons in standard cantaloup crates was also in New York in June 1929 when the price averaged \$6.68 (table 22). The June prices on both Honey Dew and Honey Ball melons in the various markets were higher than the July and August prices. For Honey Dew, many of the July and August market prices during the 5-year period ranged roughly from \$1.50 to \$2.50 per crate. For Honey Ball in standard cantaloup crates, many of the July and August average prices were between \$2 and \$3.50.

TABLE 21.—Average price per standard crate to jobbers for California Honey Dew melons, six cities, by months, 1928-32<sup>1</sup>

Month and year	Boston	New York	Philadelphia	Pittsburgh	Chicago	St. Louis
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
June 1928.....	2.27	3.02	2.41	2.17	2.28	2.30
July 1928.....	1.63	1.68	1.72	1.50	1.57	1.66
August 1928.....	1.73	1.45	1.64	1.60	1.65	1.59
June 1929.....	3.32	4.34	3.93	3.33	3.16	
July 1929.....	1.64	1.68	1.73	1.73	1.74	1.70
August 1929.....	2.14	2.19	2.24	2.28	2.17	2.13
June 1930.....	2.88	3.41	3.01	2.57	2.91	2.74
July 1930.....	2.51	2.67	2.68	2.61	2.84	2.37
August 1930.....	1.43	1.67	1.53	1.53	1.21	1.57
June 1931.....	1.01	2.34	2.01	1.88	2.01	1.67
July 1931.....	1.25	1.38	1.30	1.32	1.26	1.30
August 1931.....	1.53	1.68	1.53	1.63	1.55	1.49
June 1932.....	2.28	2.52	2.42	1.83	1.69	1.78
July 1932.....	1.37	1.38	1.42	1.28	1.26	1.27
August 1932.....	1.50	1.51	1.49	1.45	1.30	1.31

<sup>1</sup> Prices are unweighted averages of daily market news quotations, on stock of good quality and condition, on days when prices were reported. Approximate dimensions of the standard crates are 6¾ by 16 by 23¾ inches.

<sup>2</sup> Includes some quotations on jumbo crates with approximate dimensions 7¾ by 16 by 23¾ inches.

TABLE 22.—Average price per crate to jobbers for California Honey Ball melons, standard 56s and 45s, six cities, by months, 1928-32<sup>1</sup>

Month and year	Boston	New York	Philadel- phia	Pittsburgh	Chicago	St. Louis
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
June 1928		4.91	4.10			
July 1928	2.82	3.34	3.22	2.40	3.00	3.08
August 1928	2.50	2.25	1.54	2.28	2.24	2.30
June 1929		6.68	5.60			
July 1929	3.14	3.14	3.27	3.17	3.10	2.97
August 1929	3.83	3.94	3.84	3.03	3.54	3.78
June 1930	4.50	5.80	4.65	4.13	4.05	
July 1930	3.24	3.62	3.44	3.52	2.96	3.14
August 1930	2.47	2.48	2.45	2.49	2.32	2.61
June 1931	2.97	4.32	3.61	3.23	3.09	3.06
July 1931	1.97	2.16	2.22	2.04	2.04	2.25
August 1931	2.03	2.07	2.01	2.06	1.75	2.55
June 1932	2.85	4.16	3.62	3.16	2.79	2.96
July 1932	2.39	2.52	2.63	2.33	2.07	2.29
August 1932		2.50	2.27	2.02	1.93	2.11

<sup>1</sup> Prices are unweighted averages of daily market news quotations, on stock of good quality and condition, on days when prices were reported.

<sup>2</sup> Mostly 45s.

<sup>3</sup> Quotations are on standard 45s only.

The average monthly price of California casaba melons in standard and jumbo crates at New York ranged during the period July to October, 1928-32 from \$1.34 to \$2.35 (table 23). For each of the years 1928, 1929, and 1930, the highest monthly price occurred in August. In 1931, the highest price was in October, and in 1932 in July.

TABLE 23.—Average price per crate to jobbers for California casaba melons, at New York City, by months, 1928-32<sup>1</sup>

Year	July	August	September	October
	Dollars	Dollars	Dollars	Dollars
1928	1.34	1.79	1.60	1.68
1929	2.22	2.35	1.71	1.83
1930	1.88	2.15	1.83	1.72
1931	1.60	1.42	1.60	1.78
1932	1.80	1.43	1.30	1.30

<sup>1</sup> Prices are unweighted averages of daily market news quotations, on days when prices were reported, for stock of good quality and condition, in standard and jumbo crates with various numbers of melons per crate.

During the principal marketing period for Persian melons, August to October in the years 1928 to 1932, the average monthly price to jobbers in New York ranged from \$1.17 to \$2.94 per standard crate. In 1928 the highest average monthly price was in October; in 1929 it was in August, and in 1931 in September. The average monthly prices of jumbo crates of Persian melons ranged from 3 to 34 cents higher than the price of standard crates and averaged 20 cents higher (table 24).

TABLE 24.—Average price per crate to jobbers for California Persian melons, at New York City, by months, 1928-32<sup>1</sup>

Year	Standard crates containing various numbers of melons <sup>2</sup>			Jumbo crates containing various numbers of melons <sup>1</sup>		
	August	September	October	August	September	October
	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>
1928.....	1.05	2.11	2.74	1.90	2.43	2.95
1929.....	2.94	1.35	1.17	3.12	1.64	1.20
1930.....	1.08	1.69	1.94	1.99	2.93	2.69
1931.....	1.65	2.02	1.78	1.76	2.14	2.02
1932.....	1.80	1.67	1.88	1.90	1.80	2.12

<sup>1</sup> Prices are unweighted averages of daily market news quotations, on stock of good quality and condition, on days when prices were reported.

<sup>2</sup> For dimensions of crates, see table 11.

### COMPETITION WITH OTHER FRUITS AND MELONS

The principal part of the marketing season for cantaloups and other muskmelons is from May through September. During this period many other fruits and watermelons are on the markets in large volume.

Average car-lot shipments by months from May to September for the period 1930-32 for 14 different melons and fruits and for mixed carloads of melons, citrus fruits, and deciduous fruits are shown in table 25.

The total average monthly car-lot shipments of these commodities in round numbers were 18,000 cars in May, 38,000 in June, 60,000 in July, 50,000 in August, and 52,000 in September. Of the May total, cantaloups made approximately one fourth, while in September cantaloups made only about 2 percent of the total. The June car-lot shipments of cantaloups were greater than in any other month. These car-lot shipment figures do not represent the total movement to market since large quantities go by truck. Beginning in July there are large quantities of cantaloups and various fruits trucked to market from some of the Eastern and Midwestern States, so that the car-lot shipment figures for July and later months are much smaller than the actual volume marketed. The figures do, however, give a general idea of the volume and kind of competition encountered in marketing cantaloups and other melons.

The principal fruits that compete with cantaloups in May are oranges, apples, and grapefruit. In June, watermelons, oranges, plums, and fresh prunes, and peaches compete strongly. In July, watermelons, peaches, oranges, pears, and apples are the leading competitors. Peaches, watermelons, pears, oranges, grapes, and apples are on the markets in heavy supply in August, and in September, grapes and apples are in heaviest supply among the fruits, followed by pears, peaches, and oranges (table 25).

TABLE 25.—*Car-lot shipments by months (May–September) of cantaloups, Honey Ball, Honey Dew, and other specified melons and competing fruits, United States, 3-year average, 1930–32*

Commodity	May	June	July	August	September
	<i>Cars</i>	<i>Cars</i>	<i>Cars</i>	<i>Cars</i>	<i>Cars</i>
Cantaloups.....	4,640	7,465	5,600	2,758	1,148
Honey Ball melons.....	2	507	1,543	251	52
Honey Dew melons.....	32	1,327	1,747	961	1,246
Casaba melons.....	0	14	26	19	20
Persian melons.....	0	2	51	153	90
Mixed melons.....	101	1,185	421	306	356
Apples.....	2,152	1,247	3,029	2,199	11,695
Cherries.....	028	958	528	34	2
Grapefruit.....	1,572	530	159	90	496
Oranges.....	7,651	5,005	5,470	4,188	4,004
Mixed citrus fruits.....	450	291	237	154	114
Grapes.....	0	193	1,252	3,096	16,044
Mixed deciduous fruits.....	114	506	1,076	1,402	840
Peaches.....	22	1,639	10,838	16,666	5,522
Pears.....	101	314	3,799	6,552	6,580
Plums and fresh prunes.....	215	1,844	1,306	1,465	1,990
Watermelons.....	401	15,215	22,236	8,610	1,211
Total.....	18,000	38,338	59,506	49,843	51,528

The Honey Ball and Honey Dew shipments are heaviest in July which is the month of the period May to September in which the car-lot movement to market of the leading fruits and melons is greatest.

Prospects are for continued strong competition among the various melons and fruits.

#### SUMMARY

The popularity and commercial importance of various varieties of cantaloups have changed rapidly during recent years. Efforts are being made to develop varieties and methods of handling which will result in improvement of the quality of melons on the markets. Many cantaloups of poor quality, due to immaturity or other causes, arrive on the markets each year. A general improvement in quality would undoubtedly increase the demand for cantaloups. Much improvement in the average quality and condition of cantaloups on the markets is possible through correct harvesting, grading, packing, and shipping methods. Prices show that cantaloups of the best quality and condition command a considerable premium over stock handled by the usual methods.

The production of miscellaneous muskmelons, particularly Honey Ball and Honey Dew, has increased rapidly in the last decade. About three fourths of the commercial crop of cantaloups and miscellaneous muskmelons is produced in three Western States: California, Arizona, and Colorado. California alone produces more than half the commercial crop.

Car-lot shipments of cantaloups in the United States approximated 30,000 cars in 1925 and 1927. There is also considerable movement to market by motor truck. The principal shipping season for cantaloups is from May to September inclusive.

The movement to market of miscellaneous muskmelons is somewhat later than that of cantaloups from the same district. For the period 1930–32 the car-lot shipments of Honey Dew, Honey Ball, and other miscellaneous muskmelons approximated one half the volume of cantaloup shipments.

Various methods of sale are used in marketing the melon crop. Large quantities of western melons are sold at shipping point f.o.b. cash track. In some districts truckers buy large quantities, and some melons are sold at roadside stands. In the city markets many of the cantaloups and miscellaneous muskmelons go through the regular wholesale and jobbing trade. In a few large cities considerable quantities are sold through the auctions.

The western crop is widely distributed throughout the United States. The eastern, southern, and midwestern crops have a more limited market distribution.

Prices vary considerably in different years and in different markets. The average price to growers per standard cantaloup crate for cantaloups and other muskmelons was estimated at \$1.30 in both 1928 and 1929, then declined each year until 1932 when the price averaged 83 cents.

There is keen competition on the markets among the various fruits and melons, and prospects are for continued strong competition.

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