

# Texas Wholesale Citrus Industry

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## Summary

Studies of the wholesale citrus industry were conducted by personal interviews with personnel of 79 firms in 21 cities over the State from December 1957 through May 1958.

Texas wholesalers of fresh citrus service an area with a population of about 10 million. The firms in the industry have been in operation an average of 28 years. Family and nonfamily partnerships account for 46 percent of the firms.

Ninety-five percent of the firms use telephones for purchasing citrus and 59 percent use them for selling. In 1954, 37 percent of citrus was purchased through brokers and in 1957, 55 percent. Fifty-four of the 79 firms in the survey purchased all of their fruit for delivery by truck.

The percentage of loss on fruit from the time it was received until it was sold averaged 3 percent.

Fifty-seven percent of the firms indicated that they purchased citrus by a specified number of cartons rather than by the carload or half load.

The Lower Rio Grande Valley supplies 76 percent of the grapefruit used in Texas. Most citrus purchases are made on the basis of price, quality, consumer demand and supply.

The average stock on hand in cartons was 263 for grapefruit, 440 for oranges and 256 for other citrus. The average turnover period for all firms for all citrus was 5 days. Ruby red grapefruit accounted for 78 percent of the grapefruit volume. The use of the 40-pound cardboard container has increased from less than 10 percent in 1954 to 69 percent for grapefruit and 67 percent for oranges in 1958. Twenty-seven percent of the firms serve less than 100 customers, 27 percent from 100 to 250 and 30 percent serve more than 500. Seventy-one percent of the firms deliver six times a week. Wholesalers provide retailers with advertising, pricing and training for personnel.

Information, education and promotion in cooperation with the growers and shippers on packing, labeling and use of high-quality fruit were considered the most important action that could be taken in the industry.

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### COVER PHOTO

*An aerial view of the San Antonio Terminal Produce Market.*

# Texas Wholesale Citrus Industry

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THE MARKET AREA SERVED BY TEXAS WHOLESALEERS of fresh citrus includes Texas and parts of the surrounding states. The population served in this area is approximately 10 million—9¼ million in Texas and ¾ million in the neighboring states. In 1957, 260 carloads of fresh citrus were unloaded in eight major Texas cities. This raises the question of how and why California and Florida production competes successfully with that of Texas.

Previous research was done with shippers in the Lower Rio Grande Valley to determine packing and shipping costs and price relationships. Work also was done to ascertain the types of grapefruit available in Texas stores and the sales response to pink and white grapefruit offered in bulk and bags at varying prices.

This report presents marketing research in the area between the shippers and retailers. The objectives of this study are to determine 1) competing sources of supply, 2) area service from each wholesale center, 3) quality, sizes, containers and transportation methods preferred by wholesalers, 4) the point at which the decision is made as to what type of citrus to buy and 5) suggestions and recommendations of wholesalers.

## Procedure

Personal interviews with personnel of 79 firms in 21 cities over the State were conducted from December 1957 through May 1958. These 21 cities included Abilene, Austin, Beaumont, Brownsville, Bryan, Corpus Christi, Dallas, El Paso, Fort Worth, Galveston, Houston, Lubbock, Lufkin, San Antonio, Midland, Odessa, Port Arthur, Texarkana, Tyler, Waco and Wichita Falls. The 79 firms represented 21 percent of the 375 listed in "The Packer Fresh Fruit and Vegetable Industry Yearbook for 1957." Only those firms with facilities to hold fruit were selected for study. The data obtained from these schedules were compared to data from a mail questionnaire survey of citrus wholesalers that was conducted in 1954. The firms in the 1954 sample were in the same general area as those in the 1958 sample.

## General Information Concerning Firms

About 56 percent of the firms had been in operation over 17 years and 4 percent over 57 years. Seventy-three percent of the firms were started

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after 1920. The average age was 28 years. This indicated the firms studied are old established businesses and have experienced operators.

Type of ownership is related to size of firms in this industry. Only 17 percent of the firms are individually owned, which indicates that most of the firms are fairly large. Partnerships are the predominate type of ownership.

Family and nonfamily partnership accounted for 46 percent of the firms studied; corporations were next with 37 percent of the ownership. National organization may be important in relation to the total value of business in Texas, but they made up only 1 percent of the sample. Several firms have changed from family to partnership or individually owned corporations in recent years.

Sixty-two percent of the firms rent their facilities either fully or partially. The rest own all their facilities. Firms on the Houston and San Antonio terminal markets must rent their facilities. Most of the firms, however, own stock in the market itself.

Sixty-three of the 79 firms interviewed had a wholesale outlet in only one city. Four firms had outlets in two cities, 5 firms had three outlets, 1 firm had four outlets, 1 firm had five outlets and 5 firms had six outlets. These 16 firms can be considered as chain wholesale operations. Sixty-one of the firms were not associated with retail outlets. Three firms were associated with one retail outlet and 15 firms had two or more retail outlets and can be considered as retail chain operators.

## Wholesale Operations

The method of placing purchase orders by wholesalers is very important to the citrus industry. Table 1 shows that the telephone plays an important part in the operation of wholesale cit-

TABLE 1. NUMBER AND PERCENTAGE OF TEXAS WHOLESALE FIRMS USING VARIOUS MEANS OF COMMUNICATION IN BUYING AND SELLING CITRUS.

Method	Purchases		Sales	
	Number firms	Percent firms	Number firms	Percent firms
Mail	0	0	0	0
Telephone	75	95	42	59
Wire	11	14	2	3
Personal contact	6	7	57	80
Standing order	0	0	0	0
Trucker	1	1	0	0

TABLE 2. NUMBER OF FIRMS, VOLUME AND PERCENTAGE OF TOTAL VOLUME PURCHASED THROUGH VARIOUS TYPES OF AGENCIES

Purchases from	Type of citrus	Number firms	Volume, cartons	Total volume, percent	
				1958	1954
Broker	Grapefruit	64	684,550	43	
	Oranges	64	1,405,138	52	
	Other	64	924,400	80	
	Total		3,014,088	55.0	37
Auction market	Grapefruit	1	975	1	
	Oranges	1	15,600	1	
	Other	1	4,680	1	
	Total		21,255	0.4	
Packer	Grapefruit	46	898,725	56	
	Oranges	46	1,271,062	47	
	Other	24	213,020	18	
	Total		2,382,807	43.5	49
Trucker	Grapefruit	1	2,400		
	Oranges	1	2,400	1	
	Other	1	1,800		
	Total		6,600	0.1	
Other sources	Grapefruit	4	12,215	1	
	Oranges	4	23,005	1	
	Other	4	17,125	2	
	Total		52,345	1.0	14

rus firms. Ninety-five percent of the firms use telephones for purchasing and 59 percent use them for selling. Of next importance in purchases is the leased-wire used by 14 percent of the firms. Personal contact is the most important method of selling. Sales either at the dock or through salesmen are made by 80 percent of the firms. Several firms use more than one method of sale. The use of these rapid means of communication is indicative of the speed and flexibility of operating in the wholesale citrus business. They do not use or depend upon methods such as mail and standing orders for the purchase and sale of citrus.

Fifty-five percent of the total volume of citrus is purchased through a broker and 43 percent through packers, Table 2. The data for both 1954 and 1958 show change in the method of purchas-

TABLE 3. PERCENTAGE OF FIRMS ESTIMATING VOLUME OF LOSS ON ARRIVAL AND IN STORAGE

Amount of loss	Firms reporting estimated loss		
	On arrival by		In storage
	Rail	Truck	
	Percent		
0	22.6	16.9	2.6
Slight <sup>1</sup>	34.0	30.1	9.1
.25			2.6
.50		9.6	7.8
1.00	32.1	26.0	16.9
2.00	11.3	11.9	14.2
2.50			1.3
3.00		2.7	9.1
4.00			5.2
5.00		1.4	23.4
10.00		1.4	7.8

<sup>1</sup>If "slight" or "negligible" is considered equal to .5 percent, the average loss is 3.0 percent for storage.

TABLE 4. TOTAL AND AVERAGE VOLUME PER FIRM FOR A YEAR

Types of citrus	Total volume, cartons	Average volume per firm, cartons	Total, percent	
			1958	1954
Grapefruit	1,598,865	20,498	29	24
Oranges	2,717,205	34,395	50	63
Other	1,161,025	15,277	21	13
Total	5,477,095	69,330	100	100

ing. In 1954 only 37 percent was purchased through a broker, while 49 percent was purchased from packers and 14 through other sources. For grapefruit, 56 percent are direct purchases and only 43 percent are bought through brokers. With oranges, 52 percent are bought through a broker and 47 percent direct; with other citrus 80 percent through brokers and 18 percent direct. The reason for this varying percentage is that most Texas grapefruit and oranges are bought directly, while California fruit, mainly other citrus and oranges, is purchased through a broker. Florida fruit is bought both direct and through brokers.

Since World War II, the truck has assumed major importance as a method of transportation in the fresh citrus industry. Fifty-four of the firms, or 69 percent, purchase all of their fruit for delivery by truck. No firms receive all of their fruit by rail. On the average, 5 percent of the purchases arrive by rail and 95 percent arrive by truck. These data show no change from 1954 data which also indicate that 95 percent arrived by truck and 5 percent by rail. Most of the rail shipments came from California.

The percent of loss on arrival by rail ranges upward to 2 percent while that by truck ranges up to about 10 percent. This difference probably can be accounted for by lack of proper loading and refrigeration and origin of fruit. The percent of loss on fruit from the time it is received until it is sold averages 3 percent, Table 3.

Only one firm purchased exclusively straight loads of one type of citrus; the rest purchased

TABLE 5. TYPICAL UNIT OF PURCHASE OF GRAPEFRUIT, ORANGES AND OTHER CITRUS

Units	Grapefruit	Oranges	Other citrus
	Percent, by firms		
Carload	4.9	4.7	3.8
Truckload	14.6	22.3	15.4
Half load (truck or rail)	26.8	25.9	19.2
Cartons (40-pound cardboard)	53.7	47.1	61.6
	Distribution of 40-pound cardboard cartons purchased		
Number	Percent, by firms		
1-49	18.6	5.1	14.9
50-99	11.7	5.1	8.5
100-149	20.9	23.1	27.7
150-199	13.9	10.3	14.9
200-299	18.6	15.3	19.2
300-399	11.7	10.3	4.2
400-499	2.3	10.3	6.4
500-600	2.3	20.5	4.2



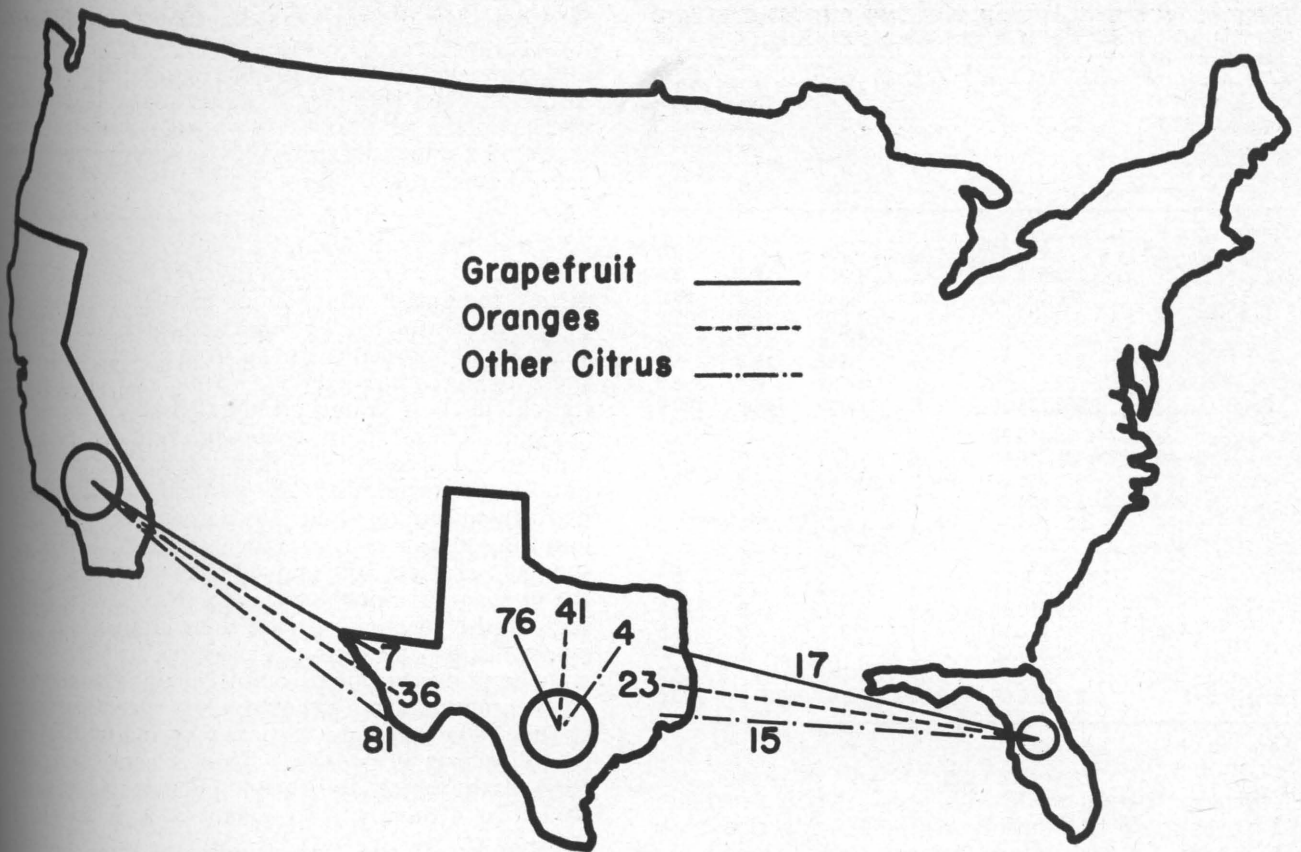


Figure 1. The source and distribution of citrus purchased by Texas citrus wholesalers by types.

mixed loads of citrus. Thirty-six of the firms purchased mixed citrus and vegetables in the same load while 40 firms did not. The shipments of citrus and vegetables in the same car or truck can cause grapefruit or oranges to deteriorate, since the conditions needed for citrus are different from those needed for vegetables. Also loss may be caused by the shifting of various sized containers within a car.

Twenty-nine percent of the cartons handled were grapefruit, 50 percent oranges and 21 percent other citrus. The 1954 data indicate purchases were 24 percent grapefruit, 63 percent oranges and 13 percent other citrus as indicated in Table 4. This is fairly consistent with the present data since there was a shortage of grapefruit in 1954 because of the lack of Texas production. The average volume per firm ranged from 34,395 cartons of oranges to 15,277 cartons of other citrus which are predominately lemons.

Fifty-four percent of the firms purchased grapefruit by a specified number of cartons, Table 5. Only a part of a car or truck received contained citrus. Several firms indicated that they purchased truckloads at one time and half-loads at other times. Half of the firms purchased oranges by specified number of cartons and 63 percent purchased other citrus by a certain number of cartons. On the firms buying by specific number of cartons, 47 percent bought grapefruit, 29 percent bought oranges and 53 percent

bought other citrus in units of less than 300 cartons.

The Lower Rio Grande Valley is the primary source of grapefruit for the Texas marketing area — supplying 76 percent of the grapefruit used in Texas. Florida ships in 17 percent and California 7 percent of the grapefruit used in Texas, Figure 1. Texas ranks first with 41 percent of the oranges, California is second with 36 percent and Florida is third with 23 percent of the oranges. California is the primary source

TABLE 6. VOLUME AND PERCENTAGE OF PURCHASES OF DIFFERENT TYPES OF CITRUS

Type of citrus	Type	Firms, percent	Volume, cartons	Total volume, percent	
				1958	1954
Grapefruit	White	86	331,810	20.8	67.9
	Pink	8	6,300	.4	12.5
	Ruby Red	100	1,260,755	78.8	19.6
	Total		1,598,865	100.0	100.0
Oranges	Early-season	97	711,826	26.0	23.6
	Mid-season	99	1,280,002	47.0	34.4
	Late-season	99	718,877	27.0	42.0
	Total		2,710,705	100.0	100.0
Other citrus	Lemons	100	927,329	81.8	
	Limes	66	46,907	4.1	
	Tangerines	89	154,803	13.7	
	Other	8	4,236	.4	
	Total		1,133,275	100.0	

TABLE 7. PERCENTAGE OF VARIOUS SIZE GRAPEFRUIT AND ORANGES PURCHASED BY WHOLESALE FIRMS

Type of citrus	Size	Volume	Total volume, percent	Average volume per firm	Average volume per firm, percent		
					1958	1954	
Grapefruit	36					.3	
	46	5,275.00	.4	73	.4	9.6	
	54	123,314.00	9.5	1,713	9.5	8.6	
	64	262,080.00	20.1	3,640	20.1	20.0	
	70	234,398.00	18.0	3,255	18.0	22.2	
	80	412,317.25	31.6	5,726	31.6	28.6	
	96	208,270.75	16.0	2,892	16.0	5.7	
	112	57,510.00	4.4	799	4.4	5.0	
Total		1,303,165.00	100.0	18,098	100.0	100.0	
Oranges	Large	416.00	.1	6	.1	.3	
	96	95,320.00	.2	64	.2	1.4	
	126	611,365.00	4.2	1,342	4.2	5.2	
	150	597,794.00	27.1	8,608	27.1	17.7	
	176	349,835.00	26.5	8,417	26.5	30.6	
	200	32,600.00	15.5	4,926	15.5	21.0	
	216	125,690.00	1.4	459	1.4	1.2	
	220	382,080.00	5.6	1,770	5.6	4.7	
	252	14,990.00	16.9	5,380	16.9	13.7	
	288	5,500.00	.7	211	.7	1.5	
	324	37,840.00	.2	77	.2		
	Bulk	37,840.00	1.7	533	1.7	2.7	
	Total		2,258,005.00	100.0	31,793	100.0	100.0

<sup>1</sup>Less than 1/2 of .1 percent.

of other citrus (mainly lemons) which is about 81 percent of the supply while Florida provides 15 percent, consisting mainly of tangerines. Limes which are not covered in this study originate mainly in Mexico and Cuba. Most purchases of citrus are made on the basis of price, quality, consumer demand and supply.

Quality was mentioned by 39 percent of the firms, price by 34 percent, consumer demand by 30 percent, supply by 21 percent, convenience by 12 percent and size by 8 percent. Other factors included storability, habit, container and reputation of the wholesaler.

The usual stock of various types of citrus kept on hand is 36 cartons of grapefruit for 36 percent of the firms. Thirty percent of the firms keep 100 to 200 cartons of grapefruit on hand. Forty-three percent indicated that they maintain

TABLE 8. VOLUME AND PERCENTAGE OF VARIOUS GRADES OF ORANGES AND GRAPEFRUIT PURCHASED

Type of citrus	Grade	Volume	Total volume percent, 1958	Average volume per firm	Total volume percent, 1954
Grapefruit	Fancy	138,350	9	1,797	8
	U.S. No. 1	1,174,400	74	15,252	50
	U.S. No. 2	157,775	10	2,049	22
	Combination	117,340	7	1,524	20
	Total	1,587,865	100	20,622	100
Oranges	Fancy	304,700	11	3,857	3
	U.S. No. 1	2,149,320	79	27,206	74
	U.S. No. 2	214,870	8	2,720	6
	Combination	48,315	2	612	17
	Total	2,717,205	100	34,395	100

an inventory of less than 350 cartons of oranges, and 42 percent indicated that they keep less than 100 cartons of other citrus on hand, while 30 percent indicated the normal stock of 100 to 200 cartons of other citrus. The average stock on hand was 263 for grapefruit, 440 for oranges and 256 for other citrus.

The average wholesaler turnover per year was 79 times for grapefruit, 82 times for oranges and 70 times for other citrus. Fifty percent of the firms indicated that their annual turnover of grapefruit was between 50 and 74 times a year. Fifty-eight percent of the firms indicated that their oranges turned this often and 66 percent indicated their other citrus turned in a similar period. These firms rotate their stock between 5 days and 7 days. Twenty percent of the firms handling grapefruit, 18 percent of the firms handling oranges and 19 percent of the firms handling other citrus indicated that their stock turned between 100 and 124 times a year or on the average of about twice a week. Several firms indicated that they rotated their citrus stock four or five times a week. These are usually people who handle very small quantities and purchase a small amount from other dealers when they need citrus. The average turnover period of all firms for all citrus is 5 days. This is consistent with 1954 data which indicated an average turnover period of 4 days.

Nearly all the firms indicated they handled citrus the year around. Only three firms indicated they do not handle citrus on a year round basis.

The volume and percent of purchases of different varieties of citrus are presented in Table 6. Ruby Red was the main variety of grapefruit, accounting for 78 percent of the volume of grapefruit. Forty-seven percent of the volume of oranges was of the midseason variety. Lemons accounted for 82 percent of other citrus with tangerines accounting for 14 percent of other citrus and limes only 4 percent. There has been a large increase in the volume of Ruby Red grapefruit handled since 1954 when 68 percent of the grapefruit was of the white varieties. This change has come about because of the greatly increased production of Ruby Red in Florida and the heavy replanting with red varieties in Texas after the freeze in 1951.

Citrus fruit size is commonly referred to by the number of fruit which is packed in a box. In this report sizes were based on the standard box (1 3/5 bushel which weighs 80 pounds). Most fruit is now packed in 40-pound cardboard containers so only half of the number of fruit indicated by size on the box is packed in this smaller container. Table 7 indicates the percentage of various sized grapefruit purchased. Eighty-five percent of the grapefruit ranges between 64's and 80's. Most of the smaller size—that is, 80's and smaller—were handled in bags. The most popular sizes in oranges were 150's, 27 percent, 176's, 27 percent and 200's, 16 percent.



Data from 1954 also show that the most popular sizes of grapefruit were 64's to 80's and the most popular sizes of oranges were 150's to 200's. As in the case of grapefruit, a large number of small oranges were handled in bags. Various wholesalers made some very interesting and important comments concerning sizes of fruit. One of the comments was that small sizes were very hard to move. Texas sizing was severely criticized by three wholesalers. They indicated that their reason for purchasing the smaller sizes was lower price and for use in 5-pound bags as specials. Comments indicated that Texas sizes were substantially different from those of Florida and California. Texas fruit was more often at the margin of size limits. Wholesalers indicated that the 176 and 200 sizes were more difficult to obtain since they were more popular.

Only 17 percent of the fruit purchased was not No. 1 or Fancy; with oranges only 10 percent of the fruit was not No. 1 or Fancy, Table 8. Several of the dealers complained about being unable to get enough high grade fruit. Specifically mentioned for quality labels were California Sun-kist oranges and Florida Indian River grapefruit. Also mentioned was Texas Ruby Red grapefruit. A comparison of present data with 1954 data shows there is a large increase in the purchase of high quality fruit. This trend should benefit the entire fresh fruit industry.

Table 9 indicates that 69 percent of the grapefruit and 67 percent of the oranges were purchased in a 40-pound cardboard carton. This container was used for a relatively small proportion of the crop 4 years ago. Wholesalers like it because it makes for ease of handling. Also the 5-pound bags usually are shipped in a similar container as a master container. This has reduced loss and increased ease of handling. The percent of sales of grapefruit, oranges and other citrus by type of container is roughly the same as the percent of purchases by type of container. The only change is a little increase in the number of 5-pound bags. Also other citrus is sometimes sold in dozen lots.

## Relations with Retailers

The citrus wholesaler operates between the shipper and the retailer, depending on the shipper for his purchases and the retailer for his sales. For this reason there is an interdependence among the three levels in the citrus industry. Each needs the other in order to provide the consumer with the product he desires.

Of the 71 interviewed firms, 27 percent serve less than 100 retail outlets, 27 percent between 100 and 250 retail outlets, 17 percent between 250 and 500 outlets and 29 percent serve 500 or more retail outlets. Fifty-six non-chain firms serve an average of 346 stores, while chain firms serve an average of 131 stores. One of the more important questions of citrus wholesalers is the number of stores that they serve. Most of the firms

which did not answer this question were terminal wholesalers servicing primarily from the dock—truckers coming in from other areas. The 71 firms which answered this question served 21,323 retail outlets or an average of 300 retail outlets

TABLE 9. ORANGES AND GRAPEFRUIT PURCHASED AND SOLD IN VARIOUS TYPES OF CONTAINERS

Type of citrus	Container	Purchased		Sold		
		Volume	Total volume, percent	Volume	Total volume, percent	
					1958	1954
Grapefruit	5-pound bags	268,354	19	278,127	22.5	22.9
	8-pound bags	450		76,050	6.1	3.0
	20-pound bags	1,125		1,125	.1	
	1 2/5 bruce box	6,750		6,750	.6	
	4/5 bruce box	151,675	11	24,375	2.0	8.0
	40-pound cardboard carton	950,991	69	847,821	68.5	7.7
	Bulk	8,320	1			4.1
	Pound			1,785	.1	
	Dozen			892	.1	
	1 3/5 bruce box					54.3
	Total	1,387,665	100	1,236,925	100.0	100.0
Oranges	5-pound bags	575,735	22	606,830	27.0	21.4
	8-pound bags			127,980	5.7	12.3
	20-pound bags	675	1	675	1	
	1 2/5 bushel, wire-bound	7,170		900	.1	37.8
	1/2 bruce box	3,000		3,000	.1	
	4/5 bruce box	254,675	10	32,375	1.5	2.9
	40-pound cardboard carton	1,723,330	67	465,125	65.4	7.3
	Bulk	7,150				6.6
	Pound			1,980	.1	
	Dozen		1	2,460	.1	
	1 3/5 nailed box					11.7
Total	2,562,705	100	2,240,325	100.0	100.0	
Other citrus	5-pound bags			175	1	
	1/2 bruce box			525	1	
	40-pound cardboard carton			930,430	97.2	
	Pound			1,680	.2	
	Dozen			23,915	2.6	
Total			929,725	100.0		

<sup>1</sup>Less than .1 percent.

per firm. Figure 2 indicates the area serviced from each of the cities in which firms were interviewed. Houston, Dallas, Lubbock, El Paso, Fort Worth and San Antonio are the major markets in Texas. The towns circled with solid lines are those which serve a small local area which in some cases extends into other states: Louisiana, Oklahoma and Arkansas. The cities circled (Houston, Dallas, Fort Worth, Lubbock and El

Paso) with dotted lines are larger and more important centers, which serve generally as supply centers for those towns circled with solid lines. There is a large amount of over-lapping between various areas. San Antonio which is circled with a dash line is a true terminal market serving truckers and others from all over the Midwest. Within Texas it serves as a market for all wholesalers.

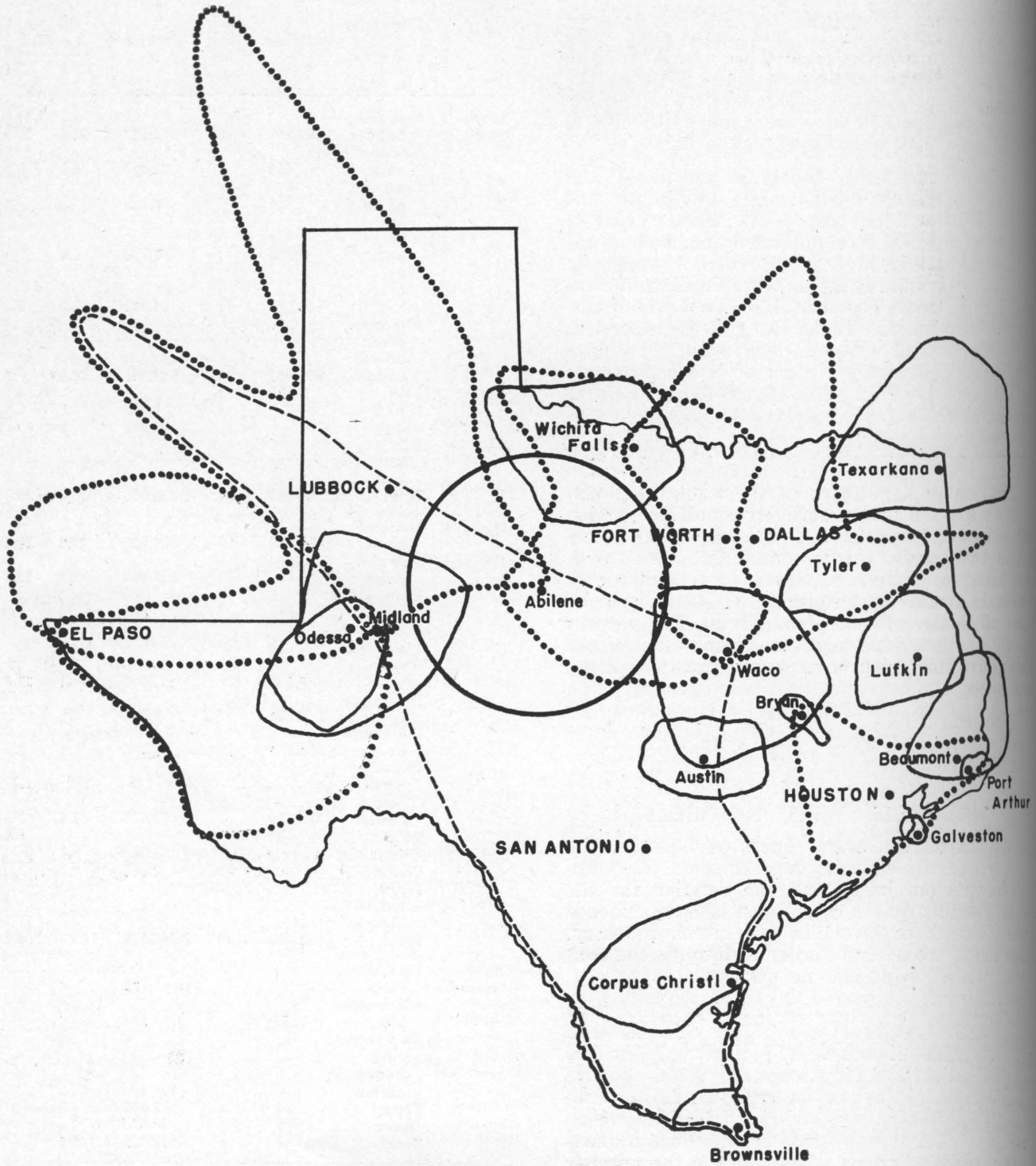


Figure 2. Areas serviced by citrus wholesalers in indicated cities.



TABLE 10. MINIMUM NUMBER OF UNITS OF GRAPEFRUIT, ORANGES AND OTHER CITRUS SOLD TO RETAIL STORES

Types of citrus	Number of units	5-pound bag		8-pound bag		10-pound bag		1 2/5 bushel		40-pound carton		Pound		Dozen		
		Num-ber	Per-cent	Num-ber	Per-cent	Num-ber	Per-cent	Num-ber	Per-cent	Num-ber	Per-cent	Num-ber	Per-cent	Num-ber	Per-cent	
Grapefruit	.5									1	1.4	2	100.0			
	1.0	25	38.5					1	100.0	70	98.6			5	100.0	
	3.0	1	1.5													
	5.0	1	1.5													
	6.0	12	18.5	1	100.0											
	8.0	1	1.5													
	10.0	2	3.1													
	12.0	3	4.6													
	1/2 master container	1	1.5													
	Master container	19	29.3													
Total		65	100.0	1	100.0			1	100.0	71	100.0	2	100.0	5	100.0	
Average			5.6		6.0				1.0		1.0		1.0		1.0	
Oranges	.5	25	39.1					1	100.0							
	1.0															
	2.0															
	3.0	1	1.6													
	5.0	1	1.6													
	6.0	12	18.7													
	8.0	1	1.6													
	12.0	4	6.3													
	20.0	1	1.6													
	1/2 master container	1	1.6													
Master container	18	28.1														
Total		64	100.0					1	100.0	70	100.0	2	100.0	5	100.0	
Average			6.3						1.0		1.0		1.0		1.0	
Other citrus	1	8	100.0			2	100.0			42	100.0	3	100.0	23	85.2	
	3													1	3.7	
	5													3	11.1	
	Total		8	100.0			2	100.0			42	100.0	3	100.0	27	100.0
Average			1.0			1.0				1.0		1.0		1.0		

Fifty-two (71 percent) of the wholesalers deliver on a six times a week basis. Nine of the firms deliver 7 days a week and 3 of the firms deliver twice daily. Seventy-four firms indicated the basis on which customers are served by wholesale firms. Six of the firms service their home city only. Thirty-three of the firms service all of their customers on the same basis. Thirty-five firms deliver on a city-rural and distance basis.

Wholesale firms have found it necessary to provide many additional services to retail stores in order to compete with the growth of the chain retailer. Three firms provide containers; advertising is provided by 21 firms. Pricing, training personnel, furnishing of specials and financing and remodeling aids are provided by other firms.

The minimum unit that a wholesale firm will sell is indicated in Table 10. One-fourth of the firms will sell one 5-pound bag of oranges or grapefruit. Sixty-eight and 80 percent, respectively, will sell 40-pound cartons only. All of the wholesalers who indicated that they sold in less than unit lots, less than a master container of bagged fruit, pound lots or dozen lots, stated that they preferred not to do so. It was necessary for retailers with slow turnovers to break units on citrus to secure an entire order for them to sell in small lots.

The reasons reported for loss or unsalable fruit are shown in Table 11. For grapefruit, de-

cay was mentioned by 79 percent and appearance by 18 percent as the major factors. Decay was also the major factor in oranges with 78 percent and appearance, 19 percent.

Fifty-five firms did no advertising. Twenty-one did some advertising and used radio, television, newspaper and other types of advertising including billboards, movies and magazines. Firms with retail outlets did most of the advertising. Trade magazines and newspapers are the primary media used by those wholesale firms that advertise.

Twenty-seven percent of the firms indicated that their retail customers never specify the va-

TABLE 11. NUMBER AND PERCENTAGE OF FIRMS REPORTING VARIOUS REASONS FOR UNSALABLE FRUIT RETURNED FROM RETAIL OUTLETS

Reasons	Grapefruit	Oranges	Other citrus
Appearance	17.8	19.2	18.3
Decay	78.1	78.1	77.5
Maturity	2.7	2.7	2.8
Inability to sell	4.1	4.1	4.2
Old fruit	2.7	2.7	2.8
Overcooking in coloring	2.7	2.7	2.8
Size	1.4	1.4	1.4
Weather	1.4	1.4	1.4
Bruising	1.4	1.4	1.4
Retailer not rotating stock	1.4	1.4	1.4
Pithy	1.4	1.4	1.4

riety of grapefruit. Also, 29 percent of the firms specified that their retail customers would not accept grapefruit from another area and 33 percent indicated that they would never accept grapefruit of another variety than what they ordered. This would indicate that to some extent the retailer is carrying back to the wholesaler the consumers preference for various types of citrus. Many wholesalers and retailers have worked together for a long period with the result that the retailer knows what to expect from the wholesaler. The retailer does not have to specify origin or variety of the citrus he orders because the wholesaler through years of servicing him knows exactly what the retailer wants.

## Industry Growth and Problems

Citrus wholesalers are concerned with the conditions and problems of both the retailer and the shipper. When asked what information and research they considered necessary to improve their service and reduce cost, 16 firms indicated that an exchange of information, education and promotion with the growers and shippers on packing, labeling and using a standard carton would be useful. The wholesalers are vitally concerned with the problems of the shippers and growers and are interested in securing better fruit at a more reasonable cost.

Nine firms indicated that inspection and control by a state commission were necessary.

These wholesalers felt that poor quality fruit should not be moved out of the production area; several cited that Florida and California have been eminently successful in this effort. Twenty-one indicated that there should be an improvement in the quality of fruit on the market. Other positive suggestions included stopping the sale of No. 3 fruit and changing the regulations regarding sizing and grading, particularly to make these rules more stringent.

A better sugar acid ratio in the fruit required before picking was mentioned as an opportunity to increase quality. Several wholesalers mentioned that containers could be improved, particularly the ventilation of the master containers used for bags.

Several firms indicated that the market and crop information available was not sufficient. The major problem mentioned by the firms included lack of quality, poor grading, lack of appearance and deterioration problems with the early and late-season fruit. They also mentioned that because fruit is produced in so many different sizes, enough of any one size is never available. However, they feel that smaller sizes are sometimes pushed off on them by the shipper.

The Texas Agricultural Experiment Station is working on many of these problems. Work has been done on shipping to determine the effects an various cartons. A great deal of work has been done on consumer acceptance of various fruits, particularly grapefruit. A current study is concerned with the problems of deterioration of fruit from the grove to the consumer.

As a solution to the problem concerning the loss of the demand for citrus, frozen concentrates were mentioned most frequently. The wholesalers felt that the ease of use and cheapness of frozen concentrates had cut a large slice out of the fresh fruit industry. However, most felt that effective advertising would increase the demand for citrus.

In most instances the wholesaler was not willing to do the advertising himself. He felt that if the shipper and grower would provide information and provide the advertising, there could be an increase in demand. Twenty-seven of the firms saw no possibility of increasing the demand for citrus. The independent wholesalers felt that the chain stores had cut very seriously into their businesses. One firm in particular mentioned that they had lost an entire area when a chain store began operations there.

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