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The
Market and Price
For
Idaho Fresh Prunes

by

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Fresh Prune Market Steady for Past 30 Years¹

It has been assumed in the fresh Italian prune industry that the decline of home canning has greatly decreased the market for prunes. Statistics, however, do not bear this out. It is true that per capita consumption has been decreasing . . . each individual is eating fewer plums and prunes . . . but there are more people to eat them. Table 1 shows the per capita consumption of fresh prunes and plums² from 1931 through 1960. Per capita consumption decreased from 2.7 pounds to less than 2 pounds during this period. Figure 1 presents these data graphically.

Table 2 presents carlot shipments of Northwest prunes and plums, of which plums are practically negligible, for the years 1931 through 1960. Figure 2 presents these data graphically. The trend line does not demonstrate any appreciable change. Except for the unusually high shipments during World War II and the immediate postwar period, which was an unusual marketing situation, the total shipments of prunes remain relatively the same.

The data show a drastic reduction in Oregon's shipments from 1956 on; the reason for this was the very severe fall freeze of 1955 which nearly wiped out 100 per cent of Oregon's prune orchards and had serious effects in both Washington and Idaho. As Oregon supplied approximately 25 per cent of the prunes it would be expected that total shipments would drop more than 25 per cent but this did not occur probably because of the widespread use of "stick-em" (hormone) sprays starting in 1955 which held a higher percentage of the fruit on the trees to maturity. It can only be conjectured how large a supply of fresh prunes there would have been on the market in these years if a large portion of the prune production areas had not been destroyed by frost. Oregon orchards have been replanted to a considerable extent and will be increasing to shipments in the coming few years.

¹Data in this and the following section are from the USDA Agricultural Marketing Service and Washington State Department of Agriculture report entitled **Marketing Northwestern Fresh Prunes** for the years 1950 through 1960. Data includes President plums as well as prunes but the plums are a minor part of total shipments. Shipments are supposed to be all shipments made, but previous to 1954 truck shipments were not reported which makes the reported figures before then lower than actual. The unloads reported are for 100 markets and account for approximately 85 per cent of all shipments.

²**Consumption of Food in the U.S. 1909-1952** and its supplement for 1961, by the USDA.

TABLE 1: Per capita consumption* fresh prunes and plums 1931 to 1957.

Year	Pounds	Year	Pounds
1931	2.7	1946	2.7
1932	2.8	1947	2.2
1933	2.3	1948	2.1
1934	2.9	1949	2.4
1935	2.5	1950	1.8
1936	2.6	1951	2.3
1937	2.6	1952	1.7
1938	2.6	1953	2.0
1939	2.7	1954	1.6
1940	2.5	1955	1.9
1941	2.3	1956	1.9
1942	2.4	1957	1.6
1943	2.1	1958	1.2
1944	2.7	1959	1.7
1945	2.3	1960	1.3

*Calculated by an on-the-farm basis, not packed basis.

Source: **Consumption of Food in the U.S. 1909-1952**, USDA and its supplement for 1960.

Idaho Prune Production Climbs Steadily

While the total shipments of fresh prunes for the past 30 years have remained relatively constant shipments from Idaho have increased appreciably. Prior to 1956, Idaho averaged 1,326 cars per year; from 1956 through 1960 she averaged 1,464 cars (table 2). Prior to 1956 Idaho shipped approximately 47 per cent of the fresh prunes; since then, she has shipped 64 per cent. Whether Idaho maintains this position in view of the increased plantings in Oregon remains to be seen.

Figure 2 portrays graphically the relationship of carlot shipments from Idaho to the total of Northwest prunes. Figure 3 shows the percentage variation from the 30-year average for Idaho and total Northwest shipments of prunes. Idaho shipments follow the direction of change of Northwest shipments but in many years differ in intensity.

Where Idaho and Northwest Prunes Are Sold¹

Data from 1955 to 1959 are considered in this and succeeding sections describing the market for prunes.

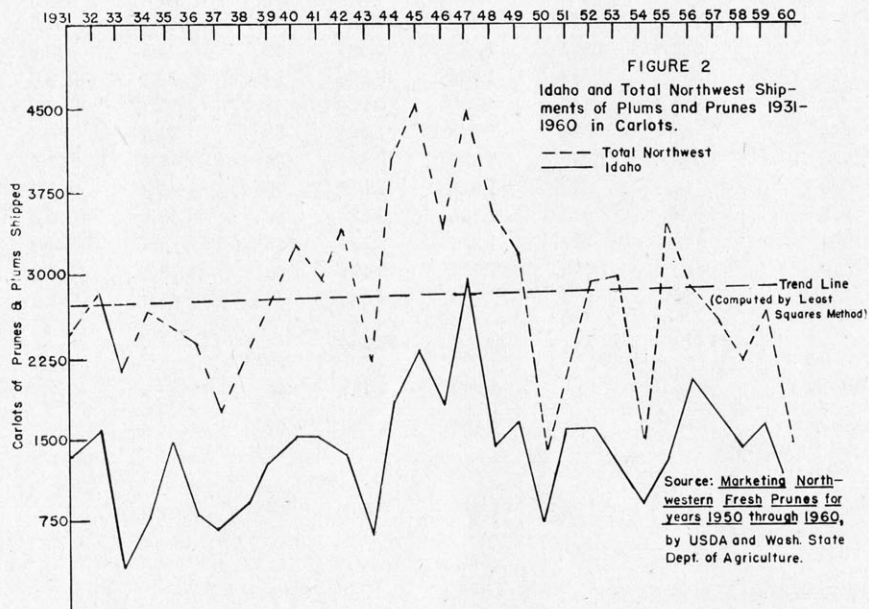
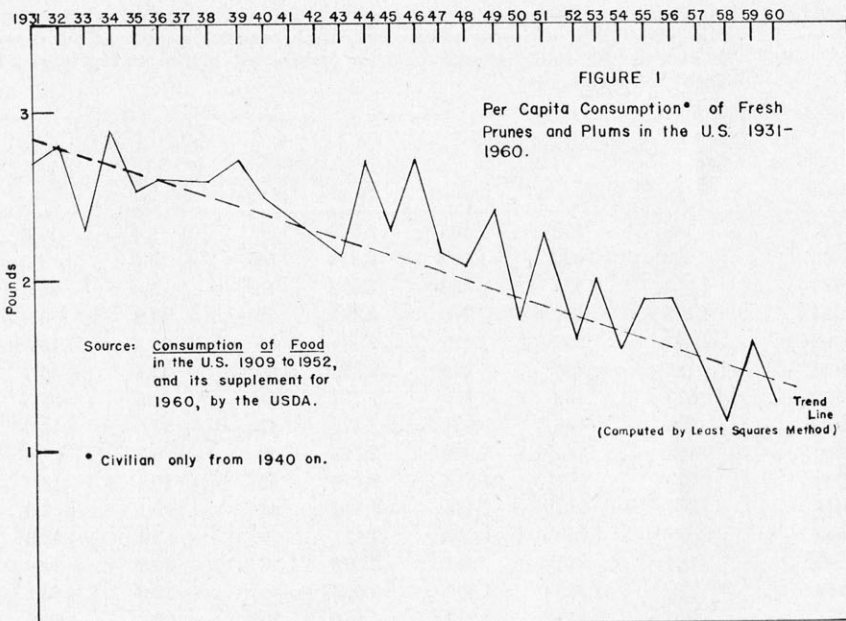
¹ Data presented in this section are taken from the reports, **Marketing Northwestern Fresh Prunes**, and from a survey of shippers. Shipping point data was furnished by all shippers as 100 per cent of shipments, but when compared with shipment data in the publication above proved to be only 59 per cent to 80 per cent (see table 4) of shipments. The difference could be accounted for partially by the fact that only number one's are considered here, while some number two's are shipped, by the fact that only prunes are considered here, while the United States Department of Agriculture data includes plums, and by incomplete listings by shippers.

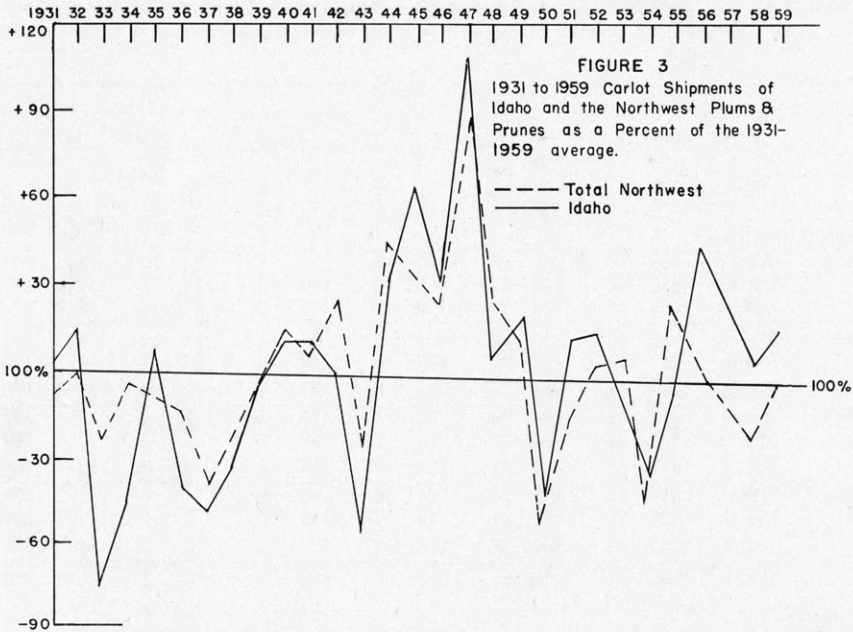
TABLE 2: Yearly carlot shipments, average carlot shipments, Idaho's shipments as a percentage of total shipments, and percentage variation from the average for 1931 through 1959 for Northwest plums and prunes by states.

Year	Carlot Shipments				Idaho as a per cent of total	Percentage difference of Idaho— from Idaho average	Percentage difference of total from total average
	Oregon	Washington	Idaho	Total			
1931	748	338	1,403	2,489	56	+ 2.4	-10.8
1932	703	538	1,577	2,818	56	+ 15.1	+ 1.0
1933	1,013	726	339	2,078	16	- 75.3	-25.5
1934	1,102	809	770	2,681	29	- 43.8	- 3.9
1935	443	596	1,458	2,497	58	+ 6.4	-10.5
1936	764	736	852	2,352	36	- 37.8	-15.7
1937	577	432	705	1,714	41	- 48.5	-38.5
1938	698	651	924	2,273	41	- 32.6	-18.5
1939	762	715	1,284	2,761	47	- 6.3	- 1.0
1940	1,092	574	1,512	3,178	48	+ 10.4	+13.9
1941	869	565	1,494	2,928	51	+ 9.1	+ 5.0
1942	1,027	1,052	1,338	3,417	39	- 2.3	+22.5
1943	788	718	591	2,097	28	- 56.9	-24.8
1944	908	1,312	1,772	3,992	44	+ 29.3	+43.1
1945	1,208	1,033	2,243	4,484	50	+ 63.7	+60.8
1946	908	755	1,748	3,411	51	+ 27.6	+22.3
1947	853	806	2,860	4,519	63	+108.8	+62.0
1948	1,377	716	1,440	3,533	41	+ 5.1	+26.7
1949	1,060	449	1,633	3,142	52	+ 19.2	+12.7
1950	193	463	692	1,348	51	- 49.5	-51.7
1951	363	357	1,531	2,251	68	+ 11.8	-19.3
1952	815	493	1,558	2,866	54	+ 13.7	+ 2.8
1953	938	748	1,270	2,956	43	- 7.3	+ 6.0
*1954	85	520	879	1,484	59	- 35.8	-46.8
*1955	1,058	1,090	1,283	3,431	37	- 6.4	+23.0
*1956	14	829	1,975	2,818	70	+ 44.2	+ 1.0
*1957	4	896	1,631	2,531	64	+ 19.1	- 9.2
*1958	2	797	1,376	2,175	63	+ 0.4	-22.0
*1959	2	1,060	1,582	2,644	60	+ 15.5	- 5.2
*1960	38	543	755	1,336	57	- 44.0	-51.2
	20,412	21,317	40,475	82,204			
Average	680	711	1,349	2,740	49		
Average	814	688	1,326	2,828	47		
'31 through '55							
Average	12	825	1,464	2,301	63		
'56 through '60							

* Includes truck shipments.

Source: **Marketing Northwestern Fresh Prunes for Years 1950 through 1960** by the USDA and Washington State Department of Agriculture.





The 9 Northeast states, with 26 per cent of the population, account for about 50 per cent of car unloads of Northwest prunes; unloads of both Washington and Idaho are in about the same proportion. The North Central states, with 29 per cent of the population, account for about 30 per cent of unloads. Both of these figures are slightly high because in both of these geographic areas there are transshipping points for prunes moving into the South, but it is doubtful if a significantly large number of prunes move out of either of these areas to the South.

The South, with 31 per cent of the population, accounts for only 8 per cent of unloads.

The West, with 13 per cent of the population, also accounts for 8 per cent of unloads. The remaining, approximately 2 per cent, move into Canada.

Table 3 (and figure 4) presents these data. There is little difference between Washington and Idaho in the percentage of each one's shipments going into the four sections of the country.

A different picture than this, however, is presented when studying the primary destinations of prunes when they leave Idaho. (No shipper data is available from Washington shippers). Table 4 (and figure 4) lists the primary destination of carlot shipments according to the records of shippers. According to the primary destination, only about 36 per cent of Idaho prunes are dispatched to the Northeast, while 45 per cent are sent to the North Central states; but about 53 per cent are unloaded in the Northeast, 17 percentage points more than are dispatched to there,

TABLE 3: Car unloads and percentages of Idaho and Washington plums and prunes by section of country 1956 through 1959 and the four-year average.

		UNLOADS											
		NORTHEAST		NORTH CENTRAL		SOUTH		WEST		CANADA		TOTAL	
YEAR	ITEM	Carlots	Per-centage	Carlots	Per-centage	Carlots	Per-centage	Carlots	Per-centage	Carlots	Per-centage	Carlots	Per-centage
1956	Wash	259	44	206	34	43	7	28	5	62	10	598	100
	Idaho	830	47	572	33	155	9	170	10	18	1	1745	100
	Total	1089	46	778	34	198	8	198	8	80	4	2343	100
1957	Wash.	344	49	229	33	51	7	29	4	49	7	702	100
	Idaho	767	52	406	28	150	10	128	8	20	2	1471	100
	Total	1111	51	635	29	201	9	157	7	69	4	2173	100
1958	Wash.	319	57	169	30	32	6	19	3	25	4	564	100
	Idaho	722	57	350	27	89	7	90	7	22	2	1273	100
	Total	1041	57	519	28	121	7	109	5	47	3	1837	100
1959	Wash.	373	49	195	26	73	10	46	6	71	9	758	100
	Idaho	827	57	401	27	95	7	113	8	2	1	1438	100
	Total	1200	55	596	27	168	8	159	7	73	3	2196	100
Total		4441	52	2528	30	688	8	623	7	269	3	8548	100
Four-year average Total unloads		1110	52	632	30	172	8	158	7	67	3	2137	100
Four-year average Washington unloads		1295	50	799	31	199	7	122	5	207	7	2622	100
Four-year average Idaho unloads		3146	53	1729	29	489	8	501	8	62	2	5927	100

SOURCE: **Marketing Northwestern Fresh Prunes** for years 1956 through 1959 by USDA and Washington State Department of Agriculture.

and only 29 per cent, 16 percentage points less, are unloaded in the North Central states. These figures are an indication of the number of cars that are sent rolling without a buyer; they are given a primary destination somewhere in the Midwest, such as Chicago, St. Louis, Kansas City, or Omaha, without having a final buyer. If the car is not sold by the time it reaches its primary destination, it is sent rolling further East, most likely to New York or Philadelphia. These data indicate at least 15 per cent to 20 per cent of the total Idaho prune crop is sent out as "rollers," but a larger portion undoubtedly is sent as rollers that are dispatched with primary destination in the same region where they are sold are not indicated in this way. Cars can be "rolled" either by a shipper or by a speculator who buys prunes in Idaho and sells them while enroute. Rollers contribute greatly to market and price instability, particularly when they constitute such a large portion of

TABLE 4: Primary destination in carlots and percentages of Idaho prune shipments by sections of the country and compared to total shipments '56 through '59.*

YEAR	ITEM	NORTH-EAST		SOUTH CENTRAL		SOUTH		WEST		CANADA		TOTAL	
		Carlots	Per centage	Carlots	Per centage	Carlots	Per centage	Carlots	Per centage	Carlots	Per centage	Carlots	Per centage
1956	Idaho Reprt'd	416	35	575	49	81	7	76	7	21	2	1169	100
	Total Ship'd											1975	
	Reprt'd as % of ship'ts												59%
1957	Idaho Reprt'd	436	38	506	44	96	8	97	8	23	2	1158	100
	Total Ship'd											1631	
	Reprt'd as % of shipm'ts												71%
1958	Idaho Reprt'd	388	36	416	39	86	8	133	12	48	5	1071	100
	Total Ship'd											1376	
	Reprt'd as % of shipm'ts												78%
1959	Idaho reprt'd	436	35	594	47	117	9	105	8	6	1	1258	100
	Total ship'd											1582	
	Reprt'd as % of shipm'ts												80%
	Totals	1676	36	2091	45	380	8	411	9	98	2	4656	
												6564	
													71%

*Total shipment figures include President plums, number 2's and combination grades, shipper data does not.

SOURCE: Shippers' records and **Marketing Northwestern Fresh Prunes** for years 1956 through 1959 by USDA and Washington State Department of Agriculture.

total shipments. Buyers in terminal markets hesitate to buy F.O.B. when they know there are rollers available, particularly if the terminal market is a railroad diversion point or the end-of-the-line because such markets receive all rollers that are unsold in-transit and can easily become distress merchandise that must be sold at any cost or be lost; thus, when rollers are available they are a threat to price stability in any market to which they can be diverted and buyers in these markets tend to hold off F.O.B. purchases.

FIGURE 4

Comparison of primary destination and final unloading points for Idaho prunes 1956 through 1959 for the four geographic areas of the U.S. and Canada.

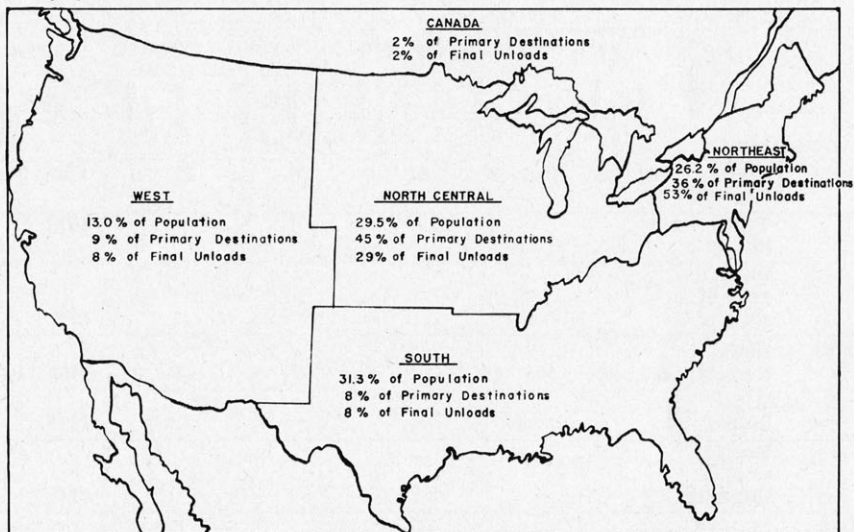
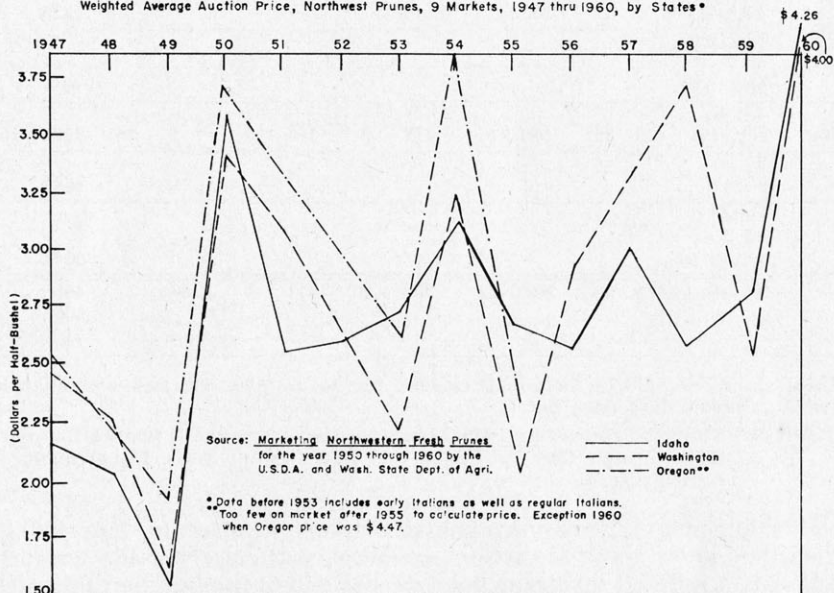


FIGURE 5
Weighted Average Auction Price, Northwest Prunes, 9 Markets, 1947 thru 1960, by States*



Comparative Prices of Northwest Prunes¹

Figure 5 presents the weighted average auction prices of Washington, Oregon, and Idaho prunes in nine eastern auction markets for the years

¹ Op cit. page 11.

1947 through 1959. No price data is recorded for Oregon past 1955 as too few prunes have been on the market.

Prior to 1955, Oregon enjoyed a higher average price in the eastern auction markets than either Idaho or Washington. The Idaho price was above the Washington price about half of the years shown. Since 1955, except for 1959 and 1960, Washington prunes have received a higher price in the auction markets, but too few years are involved to make any definitive conclusions on the relationships between Idaho and Washington prune prices.

Eastern Auction Prices for Prunes

The price in the New York Auction is highly important in setting prices for prunes nationwide. Idaho growers and shippers, as well as receivers in other markets, look to the New York auction more than to other source for price leadership. However, only a minor portion of the crop moves through auctions in general, and/or through the New York auction, although it is by far the most important. Table 5 presents the volume of prunes moved through the 9 eastern fruit auctions, 1956 through 1960; table 6 presents the volume moving through the New York Auction, about 11 per cent of total shipments.

TABLE 5: Volume of Idaho prunes and plums moved through the nine eastern* fruit auctions 1956 through 1959.

Year	Number of half-bu. auctioned	Number of cars (896 half-bu. per car)	Total car shipments for year	No. auctioned as per cent of total
1956	276,262	308	1975	16%
1957	270,849	302	1631	19%
1958	252,642	282	1376	20%
1959	257,458	287	1582	18%
1960	142,791	159	755	21%

*New York, Chicago, St. Louis, Philadelphia, Detroit, Cleveland, Cincinnati, Boston, Pittsburgh. Baltimore included in 1956 data.

SOURCE: **Marketing Northwestern Fresh Prunes** for 1956 through 1960 by the USDA and Washington State Department of Agriculture.

TABLE 6: Volume of Idaho prunes and plums moved through New York Auction 1956 through 1959.

Year	Number of half-bu. auctioned	Number of cars (896 half-bu. per car)	Total shipments for year	No. auctioned as per cent of total
1956	160,605	179	1975	9%
1957	160,255	178	1631	11%
1958	135,860	152	1376	11%
1959	165,832	185	1582	12%
1960	103,219	115	755	15%

SOURCE: **Marketing Northwestern Fresh Prunes** for 1956 through 1960 by the USDA and Washington State Department of Agriculture.

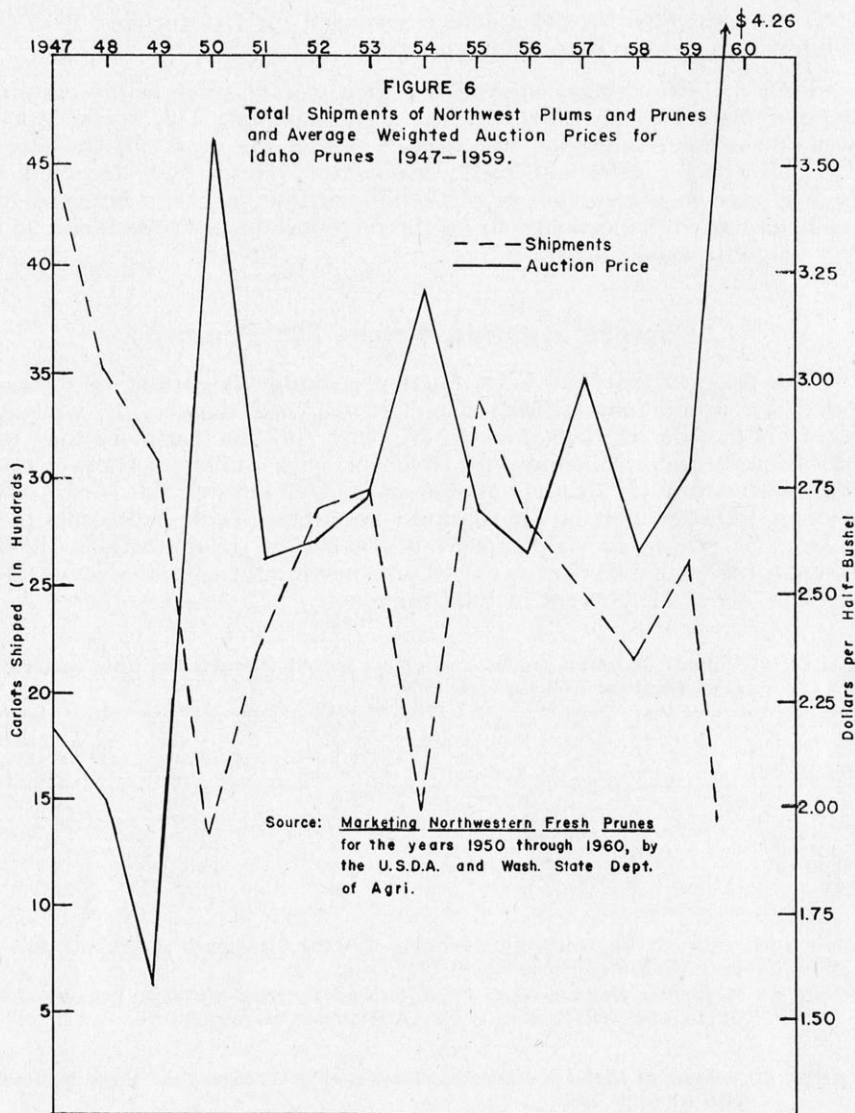
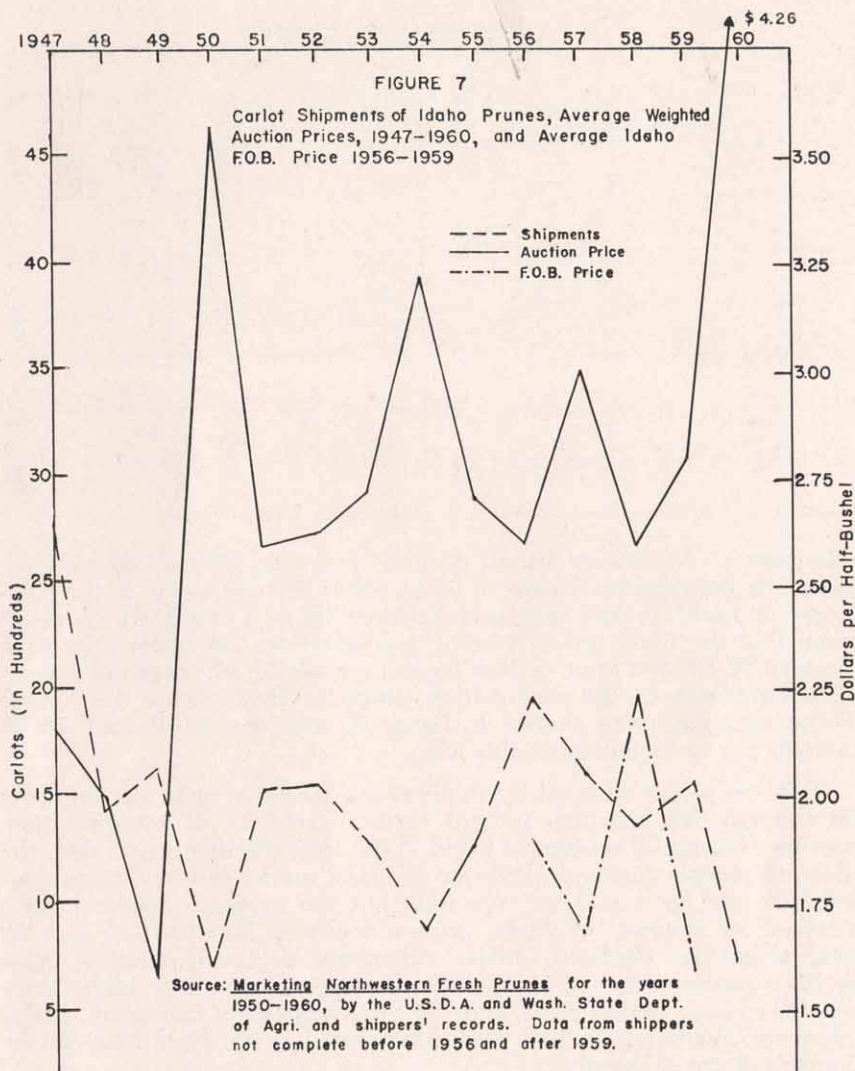


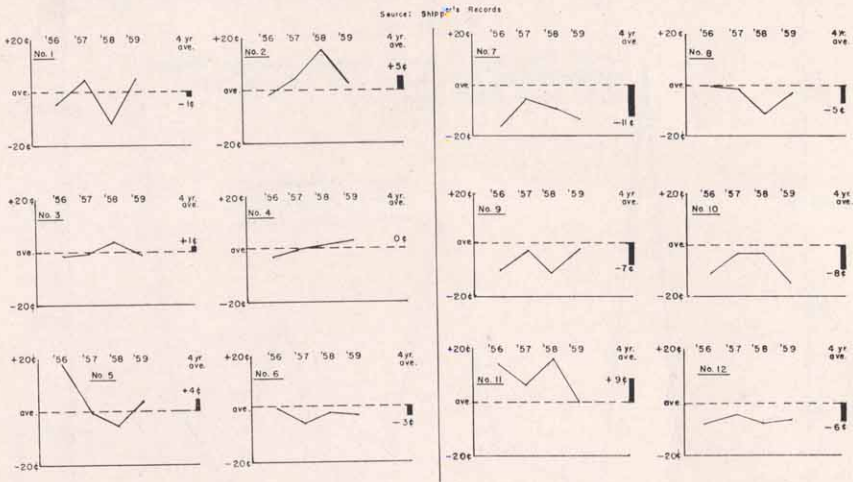
Figure 6 shows the relationship between the total shipments of Northwest prunes and the average price for Idaho prunes in the nine eastern auction markets. While the data show some high prices for low shipments, and vice versa, this pattern doesn't hold true at all times, as would be expected. Total shipments dropped from '47 to '49, and price dropped, too. The number of shipments advanced from '51 to '52 and from '52 to '53 and price advanced also. From '55 to '56 and from '57 to '58 and from '58 to '59 price also moved in the same direction as shipments. For 7 of the 13 years of price changes presented, price did not move in the opposite direction of supply, but in the same direction,



which contradicts a simple concept of high-production-low-price, low-production-high-price. The data seem to show that, for a large change in production, the expected change in direction of price takes place but that for smaller changes it doesn't; such factors as quality of fruit, competitive fruits on the market and weather may have more effect. Figure 7 shows the relationship between Idaho shipments and Idaho weighted average auction prices for the same years as figure 6 and shows what shippers reported receiving for the years '56 through '59.

The same general pattern holds true here except that some of the irregularity of figure 6 can be explained. For example, while the total

FIGURE 6
 Individual Shipper's Weighted Average Price Deviation from the Weighted Average Price of All Shippers of Idaho Prunes 1956 thru 1959



shipments of Northwest prunes declined between '48 and '49 with the seemingly inexplicable decline in Idaho prices accompanying it, the shipments of Idaho prunes increased between these 2 years, which could mean that the Idaho price is more dependent on the Idaho crop than the total Northwest crop, or that buyers are taking advantage of incomplete knowledge on the part of Idaho shippers. However, of the 7 years of the irregular price change in figure 6, only the '48-'49 and '55-'56 changes can be explained in this way.

Data on prices received by shippers are available only for the years '56 through '59, but they present further problems of interpretation. Between '56 and '57 (in figures 6 and 7) the total shipments declined; the Idaho shipments declined; the price of Idaho prunes in the auction market increased (as would be expected); but the average weighted price received by shippers of Idaho prunes declined. Between '57 and '58 total shipments declined; Idaho shipments declined; auction price declined (rather than increased); but the price received by Idaho shippers increased. Between '58 and '59 total shipments increased; Idaho shipments increased; auction price increased; but the price received by shippers dropped sharply.

The really surprising phenomenon from '56 on is that the prices received by shippers do not reflect the prices of prunes in the auction markets which are presumed to set the price. The prices received by shippers move in the opposite direction from the prices on the auction markets; when the price at the auction is up, the price to shippers is down rather than up.

Figure 8 presents the prices received for the years '56 through '59 by the 12 Idaho prune shippers in terms of cents above or below the average price for each year.

For example, the shipper designated as No. 1 (it has no relation to

the shipper designated as No. 1 elsewhere) in 1956 received on the average 4 cents per half bushel less for his shipments than the average price for all Idaho prunes; in 1957 he received 5 cents more than the average; in '58, 12 cents less, and in '59, 6 cents more. Averaging his prices for the 4 years, he received 1 cent per half-bushel less than the average price. The shipper designated as No. 2 received for the 4 years 5 cents per unit more; shipper designated as No. 4 received just exactly the average for the 4-year period, but varied a few cents up or down in each individual year.

The data show that some shippers get consistently less than average price for their shipments, some get consistently more. Statistical analysis of the coefficient of variation shows that, in this 4-year period, the variation from the average was less in the year when the auction price was higher than when it was lower (compare with figure 7).

Farm Income From Prunes

One further aspect of this study of the market for Idaho prunes is the farm income that has resulted from the prune crop. Table 7 presents this for the 10-year period, 1951 through 1960. It will be noted that, except for 1956 which was unusual because of the freeze in late 1955, the total income to farmers was inversely related to the carlot shipped; fewer shipments meant more total farm income in most instances.

TABLE 7: Income to Farmers in Idaho from Prunes, 1951 through 1960.

Year	Northeast Carlot Shipments	Idaho Carlot Shipments	Idaho as % of total Shipments	Income per ½ bu. to Idaho Grower*	Total Income
1951	2251	1531	68%	\$.88	\$1,185,606.00
1952	2866	1558	54%	.78	1,185,606.00
1953	2956	1270	43%	.83	927,608.00
1954	1484	879	59%	2.00	1,547,040.00
1955	3431	1283	37%	.60	677,424.00
1956	2818	1975	70%	1.14	1,981,320.00
1957	2531	1631	64%	.70	1,004,696.00
1958	2175	1376	63%	1.21	1,465,164.00
1959	2644	1582	60%	.65	904,904.00
1960	1336	755	57%	2.30	1,580,215.00

*Average F.O.B. price for year, less packing, selling and tax charges.

SOURCE: Idaho-Oregon Prune Marketing Committee unpublished data.

Summary

Despite a steadily declining per capita consumption of fresh Italian prunes the total market for them has remained relatively the same.

Since 1955 Idaho has produced approximately 65 per cent of the total Northwest crop; before 1955 it produced only 50 per cent. Whether Idaho retains this advantage depends on whether the Oregon prune-producing area that was frozen out in 1955 comes back into production as strongly as it was previously.

There is evidence that a considerably large percentage of the Idaho crop is sent out as "rollers;" normally "rollers" contribute greatly to an unstable market and price situation.

The New York Auction which is a major factor in F.O.B. price determination handles a very small percentage of the total number of prunes marketed.

Factors other than supply and demand are a major determinant in the price of prunes as price does not move in an inverse ratio to changes in supply.

Total farm income from prunes to Idaho producers has been greater in years with fewer carlots shipped than in years with more carlots shipped.

Acknowledgments

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