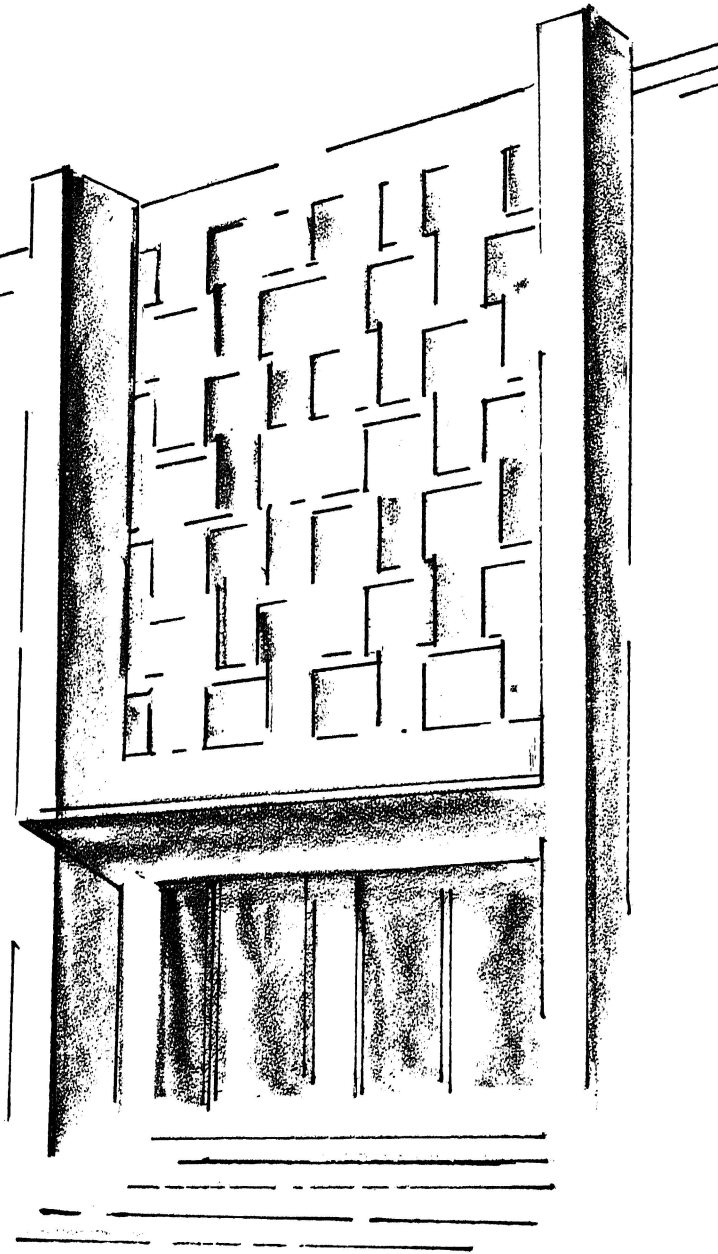


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Farm Sales
and
Class 1
Utilization
of
Grade A
Milk
in
Missouri
1961-1965



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FARM SALES AND CLASS I UTILIZATION OF GRADE A MILK IN MISSOURI 1961-1965

Stephen F. Whitted

INTRODUCTION

This report provides a record for the years 1961-1965 of:

1. Grade milk sold by Missouri producers.
2. Fluid milk consumed in Missouri, (Class I).
3. Grade A milk shipped into and out of Missouri.

Many readers can obtain the information they desire from Tables I and IV where the facts are summarized.

These data are not available from any other source. Most of them were furnished by the Milk Market Administrator offices in Kansas City and St. Louis and are audited figures. Over 90 percent of the volume of milk involved was represented by these audited figures. Since the major Missouri markets are interstate, it requires a great amount of work to obtain the data on a state basis. Many special tabulations were made by the cooperating offices.

Handlers not regulated by a Federal Marketing Order are designated as non-regulated. However, they are licensed by the Missouri State Department of Agriculture. Also, they are regulated by the appropriate health authorities.

When making interpretations from these data, it should be kept in mind that they present sales of Grade A milk from farms rather than production of Grade A milk on farms.

FARM SALES AND CLASS I USE

Table I shows a summary of the farm sales of Grade A milk and Class I use of milk in Missouri, 1961-1965. Since 1961, farm sales have remained near 1.2 billion pounds each year. However, purchases of bottled milk by Missouri residents have increased each year. The excess of production over consumption in fluid form declined from nearly 200 million pounds in 1961 to less than 40 million pounds in 1965. This excess is only about 3 percent of fluid sales, hardly an

adequate reserve. Even when we compare Missouri farm sales to state handlers with their Class I sales in Missouri, there is only a 10 percent reserve. Basically, Missouri producers are not supplying their own market.

Tables II and III present more detailed information on sales of Grade A milk by Missouri producers and Class I distribution in Missouri by Missouri handlers. The Ozarks market is the only one to show a sizable increase in purchases from Missouri producers. Non-regulated handlers held their own until 1964 and 1965. Several of the larger have become regulated due to their increasing sales into Federal Order Market Areas. Attrition of the smaller ones has not been so marked in the last few years.

MILK SHIPMENTS ACROSS THE STATE BOUNDARIES

There are three major ways in which milk crosses the state line (Table IV). Producers residing in one state ship their milk to a market in another state. A handler packages milk in one state and sells it to consumers in another. Milk is received by a handler from producers in his state and sold to a handler in another state for packaging purposes.

Many producers are associated directly with a market located in another state and in the records of that market are listed as regular producers. This is one of the more important ways in which milk crosses the state line. This type of movement is shown as item "A" under outshipments and shipments into Missouri.

Handlers in one state package milk and sell it to consumers in another. This also is one of the major ways in which milk crosses the state line. It is shown as item "B".

Handlers also receive milk from producers in their state and sell it to other handlers in another state, item "C".

In every year of the study period, more milk was shipped into Missouri than was shipped out. In fact, every year net inshipments were greater than in the preceding year. These net inshipments increased from 222 million pounds in 1961 to almost 312 million pounds in 1965.

Sales by Missouri producers to handlers in other states declined during the study period, while Missouri handlers substantially increased their sales of packaged milk in out-of-state markets. Large volume Class I sales by Missouri handlers in other states varied from year to year but tended to increase.

The major portion of milk shipped into the state was received by handlers from regular producers in other states. This increased from 359 million pounds in 1961 to 452 million pounds in 1965. Out-of-state handlers also increased their sales of packaged milk in Missouri from 99 million pounds in 1961 to 174 million pounds in 1965. Large volume Class I sales by out-of-state handlers to Missouri handlers varied from year to year but have tended to decline. However, in every year they were larger than similar sales by Missouri handlers to markets in other states.

The one item which consistently increased throughout the study period for both outshipments and inshipments was sales of packaged milk across the state line. With fluid milk processing and packaging plants increasing in size and enlarging their distribution areas, this likely will continue to be true.

Large volume sales by a handler in one state to one in another state tend to be variable. Often this type of shipment is to supplement the regular supply in the purchasing market so does not conform to a regular pattern.

GRADE A MILK SOLD OUT OF THE STATE

Tables V, VI, and VII contain more information on the three methods by which Grade A milk produced on Missouri farms is sold outside of the state. The amount of milk received by markets in other states directly from Missouri producers is shown in Table V. This has decreased during the study period. Deliveries to Illinois handlers increased while those to Kansas decreased. Oklahoma and Texas markets were the largest purchasers early in the period but fell off in 1965. Illinois, Kansas, and Texas provided the most important markets for milk received directly from Missouri farms.

The distribution of packaged milk in other states by Missouri handlers increased from 1961 to 1965 (Table VI). St. Louis handlers moved the largest quantity of milk in this manner with most of their sales in Illinois. Kansas City handlers were a close second in 1965 with most of their sales in Kansas. Sales in Illinois declined slightly during the period while those to Kansas increased substantially. Some sales were made in distant markets but these were not a significant part of the total. St. Louis, Ozarks, Kansas City, and Neosho Valley handlers increased their sales to out-of-state markets.

Large volume Class I sales to out-of-state handlers also increased (Table VII). Practically all of these sales were made by handlers in the St. Louis and Ozarks markets. Since these purchases often are made to supplement the regular supply of a market, they tend to be variable. Both markets, however, did show an increase.

GRADE A MILK SHIPPED INTO MISSOURI

Tables VIII, IX, and X present data on the three methods by which Grade A milk moved into Missouri. Receipts of milk by Missouri handlers from out-of-state producers increased from 359 million pounds in 1961 to 452 million pounds in 1965 (Table VIII). The greatest volume of milk was represented by receipts from Illinois producers. Kansas producers furnished the next largest volume to Missouri handlers. Of course, Illinois and Kansas producers are associated with our two largest markets which sit astride the state line. In 1965, approximately 10 percent of these receipts came from Iowa, Minnesota, and Wisconsin producers.

Out-of-state handlers increased their sales of packaged products in Missouri

from 99 million pounds in 1961 to 174 million pounds in 1965 (Table IX). However, in no year did their Missouri sales amount to as much as Missouri handlers' sales in other states. Sales in Missouri by out-of-state handlers increased at a more rapid rate (75 percent) than Missouri sales to other states (40 percent). Kansas handlers sold the greatest volume into Missouri, with Illinois handlers furnishing the next largest amount. Illinois handlers increased their sales in Missouri most rapidly, more than doubling from 1961 to 1965.

Receipts of Grade A milk by Missouri handlers from out-of-state markets varied from year to year but decreased in both 1964 and 1965 (Table X). Nearly half of these shipments have come from Iowa markets. Illinois markets also have contributed sizable amounts. Minnesota and Wisconsin were not important sources for this type of supply until 1964 and 1965.

NUMBER OF GRADE A PRODUCERS IN MISSOURI

Table XI shows the number of Grade A milk producers in Missouri. The total has declined since 1961, as has the number on each of the major markets except Ozarks. Since total sales have held quite steady, this indicates once more that the output per farm is increasing in Missouri as it is elsewhere.

VALUE OF GRADE A MILK SOLD BY MISSOURI FARMERS

Table XII presents estimates of the value of Grade A milk sold by Missouri farmers. These estimates are quite conservative. This is evident from the price assumptions shown in the Table footnote. Quantities sold were taken from other Tables in this report. The total value of Grade A milk sold from Missouri farms has remained near \$50 million during each of the study years.

SUMMARY

Until recent years, more Grade A milk was produced in Missouri than was needed to meet the demand for consumption in fluid form. This was not true in 1965, as the excess production over consumption was not enough for ordinary market reserves. Total Grade A production in Missouri has remained quite stable during the study period but Class I sales in the state have increased.

Each year milk moves both into and out of the state but in shipments have increased more rapidly than outshipments. This has progressed to the point that Missouri producers are no longer completely supplying their home market.

TABLE I
TOTAL GRADE A MILK SOLD BY MISSOURI PRODUCERS AND
TOTAL CLASS I SALES IN MISSOURI

	1961 pounds	1962 pounds	1963 pounds	1964 pounds	1965 pounds
I Sold by Missouri Producers:					
1. Received by Pooled and Non-regulated Handlers Located in Missouri	1,106,601,309	1,120,143,471	1,111,965,190	1,112,435,421	1,123,810,769
2. Received by Markets Located in Other States	<u>126,234,799</u>	<u>107,841,988</u>	<u>110,507,263</u>	<u>112,446,113</u>	<u>106,675,539</u>
	1,232,936,108	1,227,985,459	1,222,472,453	1,224,881,534	1,230,486,308
II Class I Sales in Missouri:					
1. By Missouri Handlers	941,245,368	959,827,477	990,366,018	1,001,680,068	1,018,550,340
2. By Out-of-State Handlers	<u>98,691,147</u>	<u>118,953,819</u>	<u>146,602,634</u>	<u>153,662,880</u>	<u>173,742,950</u>
	1,039,936,515	1,078,781,296	1,136,968,652	1,155,342,948	1,192,293,290
III Excess	192,999,593	149,204,163	85,503,801	69,538,586	38,193,018

TABLE II
 GRADE A MILK RECEIVED BY POOLED* AND NON-REGULATED HANDLERS
 LOCATED IN MISSOURI FROM MISSOURI PRODUCERS

MARKET	1961 pounds	1962 pounds	1963 pounds	1964 pounds	1965 pounds
St. Louis	390,119,445	384,961,946	387,481,374	375,484,058	392,349,039
Ozarks	206,233,358	240,102,554	237,711,086	247,121,280	266,702,082
Kansas City	299,680,312	286,441,033	285,929,679	295,514,218	286,711,571
St. Joseph and Neosho Valley	125,427,870	124,654,151	114,340,233	122,885,539	120,781,495
Non-regulated handlers	<u>85,140,324</u>	<u>83,983,787</u>	<u>86,502,818</u>	<u>71,430,326</u>	<u>57,266,582</u>
Total	1,106,601,309	1,120,143,471	1,111,965,190	1,112,435,421	1,123,810,769

*This includes Missouri handlers pooled in Federal Orders of which all or a portion of the marketing area is in Missouri.

TABLE III
 CLASS I DISTRIBUTION OF PACKAGED PRODUCTS IN MISSOURI
 BY MISSOURI HANDLERS

MARKET	1961 pounds	1962 pounds	1963 pounds	1964 pounds	1965 pounds
St. Louis	441,478,257	461,803,649	470,785,289	474,531,541	501,493,674
Ozarks	103,717,886	108,888,034	121,281,408	131,734,582	138,102,076
Kansas City	227,633,341	224,847,739	226,901,668	232,964,184	238,893,109
St. Joseph and Neosho Valley	100,798,765	96,055,518	101,112,995	99,364,864	94,415,121
Non-regulated Handlers	<u>67,617,119</u>	<u>68,232,537</u>	<u>70,284,658</u>	<u>63,084,897</u>	<u>45,646,360</u>
Total	941,245,368	959,827,477	990,366,018	1,001,680,068	1,018,550,340

TABLE IV
SHIPMENTS OF GRADE A MILK INTO AND OUT OF MISSOURI

	1961 pounds	1962 pounds	1963 pounds	1964 pounds	1965 pounds
I Missouri Outshipments:					
A. Received by Handlers in Other States from Missouri Producers	126,334,799	107,841,988	110,507,263	112,446,113	106,675,539
B. Class I Distribution of Packaged Products in Other States by Missouri Handlers	158,037,703	173,702,898	180,711,126	191,188,958	220,887,167
C. Class I Bulk Sales to Out-of-State Handlers	<u>9,157,293</u>	<u>19,413,074</u>	<u>38,910,793</u>	<u>25,767,378</u>	<u>32,087,161</u>
TOTAL	293,529,795	300,957,960	330,129,182	329,402,449	359,649,867
II Shipments into Missouri:					
A. Regular Producers in Other States	359,211,879	414,000,440	409,485,117	432,238,109	452,465,216
B. Class I Distribution of Packaged Products in Missouri by Handlers Located in Other States	98,691,147	118,953,819	146,602,634	153,662,880	173,742,950
C. Receipts from Out-of-State Markets	<u>57,910,521</u>	<u>54,233,556</u>	<u>60,891,849</u>	<u>48,791,908</u>	<u>45,277,239</u>
TOTAL	515,813,547	587,187,815	616,979,600	634,692,897	671,485,405
III Net Inshipments:	222,283,752	286,229,855	286,850,418	305,290,448	311,835,538

TABLE V
 GRADE A MILK RECEIVED BY MARKETS LOCATED IN OTHER
 STATES FROM MISSOURI PRODUCERS

STATE	1961 pounds	1962 pounds	1963 pounds	1964 pounds	1965 pounds
Arkansas	9,742,279	9,882,777	8,794,229	6,930,355	3,037,871
Illinois	21,885,990	28,824,374	25,013,616	33,361,151	44,284,345
Iowa and Nebraska	1,914,612	160,249	1,134,030	-	-
Kansas	36,946,012	23,839,921	23,054,072	27,800,064	29,081,305
Oklahoma and Texas	55,845,906	44,397,533	52,410,009	43,189,062	28,308,363
Kentucky and Tennessee	<u>-</u>	<u>737,134</u>	<u>101,307</u>	<u>1,165,481</u>	<u>1,963,655</u>
TOTAL	126,334,799	107,841,988	110,507,263	112,446,113	106,675,539

TABLE VI
CLASS I DISTRIBUTION OF PACKAGED PRODUCTS IN OTHER
STATES BY MISSOURI HANDLERS

Market Shipping	State Receiving	1961 pounds	1962 pounds	1963 pounds	1964 pounds	1965 pounds
St. Louis	Illinois	82,305,424	74,806,403	73,329,204	78,047,860	79,146,971
	other states*	<u>2,293,380</u>	<u>3,101,973</u>	<u>5,311,277</u>	<u>6,647,651</u>	<u>8,028,823</u>
		84,598,804	77,908,376	78,640,481	84,695,511	87,175,794
Ozarks	Ark., Kan., Okla.	19,268,017	20,519,092	25,453,775	26,109,312	32,845,749
Kansas City	Kansas	34,420,885	43,961,882	43,505,618	54,476,990	66,533,871
	Iowa and Oklahoma	<u>645,167</u>	<u>3,704,653</u>	<u>3,667,921</u>	<u>3,963,911</u>	<u>4,172,324</u>
		35,066,052	47,666,535	47,173,539	58,440,901	70,706,195
St. Joseph	Iowa, Kansas, Neb.	14,261,645	16,918,935	16,903,026	21,943,234**	30,159,429**
Neosho Valley	Kansas and Oklahoma	<u>4,843,185</u>	<u>10,689,960</u>	<u>12,540,305</u>	<u>**</u>	<u>**</u>
TOTAL		158,037,703	173,702,898	180,711,126	191,188,958	220,887,167

*During the period of this study, St. Louis handlers have sold packaged products in Arkansas, Florida, Indiana, Kentucky, and Tennessee. In 1965, they sold in Arkansas and Tennessee.

**Combined with St. Joseph to avoid revealing confidential information. During 1964, Neosho Valley handlers sold in Oklahoma; during 1965 in Kansas and Oklahoma.

TABLE VII
CLASS I SALES BY MISSOURI HANDLERS TO OUT-OF-STATE HANDLERS

Market Shipping	1961 pounds	1962 pounds	1963 pounds	1964 pounds	1965 pounds
St. Louis*	156,853	2,417,054	17,287,956	8,764,542	4,599,114
Ozarks**	9,000,440	16,996,020	21,622,837	17,002,836	27,488,047
Kansas City	-	-	-	-	-
St. Joseph	-	-	-	-	***
Neosho Valley	-	-	-	-	-
TOTAL	9,157,293	19,413,074	38,910,793	25,767,378	32,087,161

*During the study period St. Louis handlers sold to markets in Arkansas, Florida, Illinois, Kentucky, Louisiana, Mississippi, and Tennessee. During 1964, they sold to Arkansas, Illinois, and Louisiana; during 1965 to Arkansas, Illinois, and Tennessee.

**During the study period Ozarks handlers sold to markets in Arkansas, Florida, Illinois, Kansas, Louisiana, Oklahoma, Tennessee, and Texas. During 1964, they sold to Arkansas and Texas; during 1965 to Illinois and Texas.

***Combined with Ozarks to avoid revealing confidential information.

TABLE VIII
 GRADE A MILK RECEIVED BY MISSOURI HANDLERS FROM REGULAR
 PRODUCERS IN OTHER STATES

Market Receiving	State Shipping	1961 pounds	1962 pounds	1963 pounds	1964 pounds	1965 pounds
St. Louis	Illinois	269,640,471	297,947,424	302,942,617	311,458,913	314,202,022
	Iowa and Wisc.	<u>22,661,602</u>	<u>24,635,852</u>	<u>21,131,957</u>	<u>27,432,159</u>	<u>33,639,934</u>
		292,302,073	322,583,276	324,074,574	338,891,072	347,841,956
Ozarks		-	-	-	-	-
Kansas City	Kansas	44,265,627	56,667,375	51,175,482	52,875,238	63,701,905
	Iowa	10,193,502	7,529,232	8,129,439	9,404,687	8,031,979
	Minnesota	7,004,877	5,415,763	5,730,588	6,060,798	5,954,743
	Nebraska	-	-	-	<u>1,056,336</u>	<u>2,908,131</u>
		61,464,006	69,612,370	65,035,509	69,397,059	80,596,758
St. Joseph	Kansas	3,901,120	4,093,456	4,641,635	4,632,557	21,468,445*
	Iowa	<u>1,544,680</u>	<u>1,797,802</u>	<u>2,268,914</u>	<u>2,620,436</u>	<u>2,558,057</u>
		5,445,800	5,891,258	6,910,549	7,252,993	24,026,502
Neosho Valley	Kansas, and Okla.	-	<u>15,913,536</u>	<u>13,464,485</u>	<u>16,696,985</u>	*
TOTAL		359,211,879	414,000,440	409,485,117	432,238,109	452,465,216

*Combined with St. Joseph to avoid revealing confidential information.

TABLE IX
 CLASS I DISTRIBUTION OF PACKAGED PRODUCTS IN MISSOURI BY HANDLERS
 LOCATED IN OTHER STATES

STATE	1961 pounds	1962 pounds	1963 pounds	1964 pounds	1965 pounds
Arkansas, Kentucky, and Tennessee	15,844,285	17,453,019	18,978,594	23,259,998	27,528,896
Illinois	23,018,355	29,822,178	48,984,856	48,259,696	57,109,370
Iowa and Nebraska	14,417,654	22,312,090	16,739,420	15,542,431	17,298,836
Kansas	<u>45,410,853</u>	<u>49,366,532</u>	<u>61,899,764</u>	<u>66,600,755</u>	<u>71,805,848</u>
TOTAL	98,691,147	118,953,819	146,602,634	153,662,880	173,742,950

TABLE X
RECEIPTS OF GRADE A MILK BY MISSOURI HANDLERS FROM OUT-OF-STATE MARKETS

Market Receiving	State Shipping	1961 pounds	1962 pounds	1963 pounds	1964 pounds	1965 pounds
St. Louis	Iowa	33,867,846	30,516,438	38,721,516	21,116,263	20,644,056*
	Illinois	18,405,596	14,234,727	8,494,957	14,843,357	18,577,717
	Wisconsin	<u>719,434</u>	<u>653,500</u>	<u>969,950</u>	<u>4,698,925</u>	<u>*</u>
		52,992,876	45,404,665	48,186,423	40,658,545	39,221,773
Ozarks		-	-	-	-	-
Kansas City	Illinois	-	-	40,050	-	-
	Iowa	-	178,360	-	183,660	**
	Kansas	-	-	1,457,860	1,391,750	2,658,331**
	Minnesota	-	-	67,620	433,940	891,824***
	Wisconsin	<u>-</u>	<u>-</u>	<u>-</u>	<u>180,920</u>	<u>***</u>
	-	178,360	1,565,530	2,190,270	3,550,155	
St. Joseph	Iowa	-	1,145,805	1,226,535	319,110	-
	Kansas	4,766,900	7,504,726	9,730,631	1,465,486	-
	Minnesota	-	-	45,580	78,450	-
	Wisconsin	<u>-</u>	<u>-</u>	<u>137,150</u>	<u>-</u>	<u>-</u>
	4,766,900	8,650,531	11,139,896	1,863,046	-	
Neosho Valley						
Non-Regulated	Kansas	150,745	-	-	-	-
	Illinois	<u>-</u>	<u>-</u>	<u>-</u>	<u>4,080,047</u>	<u>2,505,311</u>
TOTAL		57,910,521	54,233,556	60,891,849	48,791,908	45,277,239

*Iowa and Wisconsin combined for 1965 to avoid revealing confidential information.

**Kansas and Iowa combined for 1965 to avoid revealing confidential information.

***Minnesota and Wisconsin combined for 1965 to avoid revealing confidential information.

TABLE XI
NUMBER OF GRADE A MILK PRODUCERS IN MISSOURI

Market or State Receiving Milk	1961	1962	1963	1964	1965
	Number of Producers				
St. Louis	1,612*	1,485*	1,339*	1,332*	1,181*
Kansas City	1,160*	969*	899*	867*	836*
Ozarks	1,031	970	949	918	1,019
St. Joseph	329	286	283	272	268
Neosho Valley	177	83	77	70	73
Non-regulated Handlers in Missouri	135	166	148	162	130
Texas	142	99	210	145	60
Oklahoma	38	35	29	24	25
Arkansas	24	24	18	26	13
Illinois	9	9	7	46	83
Iowa and Nebraska	6	9	9	-	-
Kentucky and Tennessee	-	4	1	6	3
TOTAL	4,663	4,139	3,969	3,868	3,691

*Some of these producers ship to plants in the out-of-state portion of the market.

TABLE XII
ESTIMATED VALUE OF GRADE A MILK SOLD BY MISSOURI FARMERS*

Market	1961	1962	1963	1964	1965
St. Louis	\$16,228,968	\$15,167,501	\$15,499,255	\$15,432,395	\$16,552,719
Ozarks	8,001,854	8,715,723	8,961,708	9,588,306	10,668,083
Kansas City	11,957,244	11,600,862	11,637,338	12,293,391	12,213,913
St. Joseph and Neosho Valley	5,110,471	5,110,820	4,762,271	5,023,620	5,017,331
Non-regulated Handlers	3,431,155	3,367,750	3,529,315	2,935,786	2,410,923
Out-of-State Markets	<u>4,964,957</u>	<u>3,961,391</u>	<u>4,221,377</u>	<u>4,419,132</u>	<u>4,320,359</u>
TOTAL	\$49,694,649	\$47,924,047	\$48,611,264	\$49,692,630	\$51,183,328

*These estimates are based on the average blend price for 3.5% milk in each of the markets. Premiums are not included. The value of milk sold to non-regulated handlers was estimated by using the Missouri average blend price plus 5 cents. Out-of-state sales were estimated using Ozarks blend price plus 5 cents.