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A descriptive analysis of the grade A dairy industry in Mississippi

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A Descriptive Analysis of the

Grade A Dairy Industry In Mississippi

MISSISSIPPI STATE UNIVERSITY
AGRICULTURAL EXPERIMENT STATION

HENRY H. LEVECK, Director

STATE COLLEGE

MISSISSIPPI

MISSISSIPPI STATE UNIVERSITY
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A Descriptive Analysis of the Grade A Dairy Industry In Mississippi

By

VERNER G. HURT, A. D. SEALE, JR., and PHILLIP R. H. HARDY

Introduction

The supply-consumption balance of Grade A milk differs between geographic areas in Mississippi. While these differences between areas are generally recognized, information relative to the amount of Grade A milk produced and consumed in the various areas of the state is not common knowledge. Such information is a prerequisite to establishment and operation of effective policies and programs for the Grade A dairy industry in Mississippi.

This report presents a summary of data collected as a part of an overall study of the effect of location of production and processing facilities and of distribution patterns on the efficiency of fluid milk marketing in the South. Described herein are (1) Grade A production patterns and marketing facilities in the counties and geographic areas of Mississippi, and (2) Utilization and sales of Grade A milk in geographic areas of Mississippi.

Data pertaining to the number and size of dairy herds from which Grade A milk was sold and the average production per cow were obtained in cooperation with the Federal-State Crop and Livestock Reporting Service from a survey of Grade A dairies in Mississippi. Data on supplies, utilization and sales of fluid milk were obtained through the cooperation of fluid milk processors and distributors, state and private institutions, and the State Superintendent of Schools.

The Location of Production and of Milk Assembly Points

Geographic Areas: Mississippi has been divided into six geographic areas for the following analysis. The grouping of data by these six geographic areas prevents consideration of the supply-consumption balance by counties.

However, such grouping was necessary to prevent disclosure of sales and utilization information for particular firms. Consequently, the imbalance between production and consumption indicated for a specific area may either understate or overstate the situation on a county basis.

The concentration of non-farm population was the primary factor considered in establishing the six geographic areas indicated by Roman numerals in Figure 1. However, a restriction that at least five bottling plants must be located within each area was imposed. Estimates of non-farm and total population for each geographic area are shown in Appendix Table 1.

Grade A Dairy Herds: On January 1, 1957, there were 4,198 dairy herds in Mississippi from which milk meeting Grade A requirements was sold, Table 1. The largest concentration of dairies was in southwest Mississippi, Area V. Counties with the largest numbers of herds were Walthall, with 327; Amite, with 306; and Pike, with 256; Appendix Table 2. One or more Grade A herds were reported for each county in the state except for Tunica, Quitman and Sharkey.

These herds contained nearly 145 thousand cows, or an average of 35 head per herd. Although southwest Mississippi had a much greater number of both herds and cows than did other areas, herds in that area were smaller than in most others. Herds were largest in Area I, northwest Mississippi, where they averaged 49 cows per dairy. In fact, Grade A dairy farmers in DeSoto County alone reported 11,981 cows, a number greater than that reported for any other Mississippi county, Appendix Table 2.

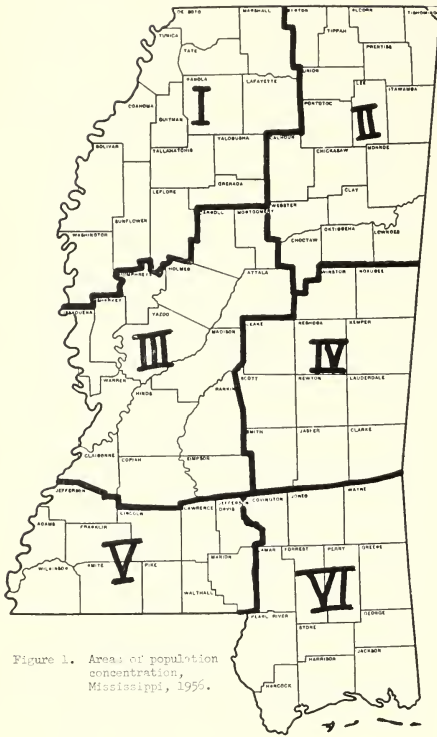


Figure 1. Areas of population concentration, Mississippi, 1956.

Average production per cow did not differ very much between areas. The average for the state was 4,507 pounds, Table 1.

Milk Assembly Points: The number of milk assembly points within areas ranged from 8 in Area IV to 20 in Area VI. The number of assembly points by types within each area are summarized in Table 2.

Production, Utilization and Sales of Grade A Milk

Farm Production and Sales: During the period July 1, 1956—June 30, 1957 approximately 653 million pounds of Grade A milk were produced in Mississippi. Summaries of farmer reports indicated that about 3 percent of the total production was used on the farm. This factor was applied to the estimated total production in each area to obtain an estimate of the total volume sold—633 million pounds. About 85 percent of this volume was sold to plants located in Mississippi and 15 percent was sold directly to plants outside of Mississippi.

Production and sales by farmers in

Table 1. Number of Grade A herds, estimated number of Grade A milk cows,* average number of cows per herd, and average annual production per cow, by geographic areas: Mississippi, January 1, 1957.

Geographic areas	Number of Grade A herds ^o	Estimated number of Grade A milk cows ^o	Average number of cows per herd	Average annual production per cow ^o
		Number		
Area I	483	23,751	49	4,546
Area II	851	28,341	33	4,457
Area III	369	13,312	36	4,474
Area IV	480	17,253	36	4,616
Area V	1,301	40,253	31	4,565
Area VI	708	21,715	31	4,353
Total	4,198	144,900	35	4,507

Source: Mississippi Crop and Livestock Reporting Service survey data.

^o Includes heifers two years old and over.

^{oo} Data for counties with three Grade A dairies or fewer included in state total only.

^{ooo} July 1956 - June 1957 average.

Table 2. Number of assembly points by geographic areas: Mississippi, July 1956 - June 1957.

Assembly points	Geographic areas						Total
	I	II	III	IV	V	VI	
	Number						
Bottling plants	9	13	7	5	8	9	51
Producer-distributors	3	1	2	1	—	8	15
Receiving stations	—	5	1	2	4	1	13
Institutions	1	—	6	—	1	2	10
Total	13	19	16	8	13	20	89

Area V accounted for about 28 percent of the total for the state while Area III accounted for only 9 percent of the total. Estimated quantities produced and sold by farmers by areas are summarized in Table 3. Estimated production by areas, by counties, and by months are summarized in Appendix Tables 3-8.

Plant Receipts and Utilization: Fluid milk plants in Mississippi obtain most of their fluid milk supplies from producers in their area. Occasionally it is necessary for plants to obtain supplementary supplies from other plants. In this report "other sources" are classified as plants within Mississippi, plants outside of Mississippi and plants for which the location was not ascertained.

During the period July 1956—June 1957, fluid milk plants in Mississippi received about 605 million pounds of milk, Table 4. Approximately 43 million pounds of this total were sold as

fluid milk to other plants located within the state. The latter quantity was counted twice since it was received by two different plants. More than 60 percent of the plant receipts in each area came directly from producers. A relatively small percentage of supplies in any area came from out-of-state plants.

Most of the milk received by plants is processed into fluid products, manufactured products such as ice cream, cottage cheese, etc. or sold as bulk milk to other plants. A considerable part of the milk sold as bulk milk was reported by receiving stations; however, most plants sell some milk, especially during the spring months, as bulk milk. About 86 percent of the total milk used by plants in Area I was processed into bottled products while only 13 percent was used for this purpose in Area V. Slightly less than one-half of the milk used by all plants in

Table 3. Estimated total Grade A milk production and farm sales, by geographic areas: Mississippi, July 1956 - June 1957.

Geographic areas	Milk production on Grade A dairy farms	Percent of state total	Milk sold by farmers
	000 pounds	Percent	000 pounds
Area I	107,964	16.53	104,725
Area II	126,324	19.34	122,534
Area III	59,553	9.12	57,766
Area IV	79,643	12.20	77,254
Area V	183,756	28.14	178,243
Area VI	94,525	14.47	91,689
Unclassified*	1,307	0.20	1,269
Total	653,072	100.00	633,480

Source: Mississippi Crop and Livestock Reporting Service survey data.

*Data from counties with three Grade A dairies or fewer are not included in area totals.

Table 4. Plant receipts of milk, by source of supply, by geographic areas: Mississippi, July 1956 - June 1957.

Source of supply	Geographic areas						State
	I	II	III	IV	V	VI	
	Thousand pounds						
Producers	39,939	121,714	78,492	67,757	137,897	94,582	540,381
Other sources:							
Plants within Mississippi	18,881	4,631	2,950	3,468	3,421	9,531	42,882
Plants outside Mississippi	5,483	1,039	71	35	1,056	359	8,543
Location not ascertained	1,146	1,521	5,916	832	431	3,056	12,902
Total receipts	65,449	128,905	87,429	72,092	142,805	108,028	604,708
	Percent						
Producers	61.0	94.4	89.8	94.0	96.6	87.6	89.4
Other sources:							
Plants within Mississippi	28.8	3.6	3.4	4.8	2.4	8.8	7.1
Plants outside Mississippi	8.4	.8	.1	.6	.7	.8	1.4
Location not ascertained	1.8	1.2	6.7	1.2	.3	2.8	2.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*Less than .05 percent.

the state was bottled. Approximately one-half was sold as bulk milk. Bulk milk accounted for about 83 percent of the total utilization in Area V and only 6 percent in Area I, Table 5.

Products and Containers: Homogenized milk accounted for 70-80 percent of the total volume of fluid products sold by plants located in each of the areas, Table 6. Non-homogenized milk, buttermilk and flavored milk accounted for most of the remainder. These four products accounted for about 97

percent of the total volume of fluid products for the state.

More than half of the fluid milk sold was packaged in quart containers, Table 7. This relationship held in all areas except Area I and III. In the latter areas, the popularity of half-gallon containers reduced somewhat the lead held by sales in quarts. Sales in half-pint containers were greater in Area VI, the Gulf Coast Area, than in any other area.

Table 5. Plant utilization of milk, by type of product, by geographic areas: Mississippi, July 1956 - June 1957.

Type of products	Geographic areas						State
	I	II	III	IV	V	VI	
	Thousand pounds						
Fluid products	55,415	42,721	57,138	35,389	19,213	69,437	279,313
Manufactured products	5,501	1,898	9,621	562	5,020	6,652	29,254
Bulk milk	3,663	83,546	19,663	35,227	120,301	30,322	292,722
Total utilization	64,579	128,165	86,422	71,178	144,534	106,411	601,289
	Percent						
Fluid products	85.8	33.3	66.1	49.7	13.4	65.2	46.4
Manufactured products	8.5	1.5	11.1	.8	3.4	6.3	4.9
Bulk milk	5.7	65.2	22.8	49.5	83.2	28.5	48.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 6. Percentage distribution of fluid milk sales, by type of product, by geographic areas: Mississippi, July 1956 - June 1957.

Type of product	Geographic areas*						State
	I	II	III	IV	V	VI	
	Percent						
Homogenized milk	78.0	79.2	78.9	74.7	71.6	73.2	75.9
Non-homogenized milk	2.6	1.0	3.2	4.0	11.2	8.7	4.7
Skim milk	0.6	0.2	1.0	1.1	0.4	1.5	0.9
Buttermilk	11.2	11.4	9.5	12.0	8.0	4.6	9.1
Flavored milk	7.8	7.6	5.2	6.5	6.6	9.9	7.5
Flavored milk drink**	0.6	—	0.6	0.1	0.8	0.4	0.4
Half & Half (Light)	0.7	0.1	1.1	0.9	0.8	1.2	0.9
Medium cream	—	0.1	0.2	0.2	0.1	0.3	0.2
Heavy cream	0.3	0.3	0.3	0.3	0.4	0.1	0.3
Other***	0.2	0.1	—	0.2	0.1	0.1	0.1
	Thousand pounds						
Total	55,415	42,721	57,138	35,389	19,213	69,437	279,313

*Denotes location of plant.

**Flavored milk drink containing less than 3.5 percent butterfat.

***Includes sour cream and egg-nog.

Table 7. Percentage distribution of fluid milk sales, by size of container, by geographic areas: Mississippi, July 1956 - June 1957.

Size of containers	Geographic areas*						State
	I	II	III	IV	V	VI	
	Percent						
Gallons**	1.2	2.2	2.4	3.6	2.8	3.8	2.6
Half-gallons	35.6	20.0	32.8	25.0	12.2	9.4	22.2
Quarts	45.0	59.4	46.6	57.2	67.4	61.8	56.0
Pints	1.2	0.2	1.6	1.8	0.6	1.2	1.0
Third-quarts	—	0.4	0.4	0.2	—	—	0.2
Half-pints	17.0	17.8	16.2	12.2	17.0	23.8	18.0
	Thousand pounds						
Total	55,415	42,721	57,138	35,389	19,213	69,437	279,313

*Denotes location of plants.

**Dispenser milk.

Ice cream and ice cream mixes accounted for more than 90 percent of the manufactured products in each area when butter and condensed milk were omitted. Data for the latter two products could not be shown because of the limited number of plants engaged in production. Cottage cheese accounted for less than 8 percent of the manufactured products in each of the areas. Container sizes for manufactured products were not obtained in the survey.

Sales of Fluid Milk: About 300 million pounds in fluid milk equivalents were sold as fluid milk and manufactured products by plants in Mississippi to consumers and retail establishments in Mississippi. Approximately 27 percent of this volume was sold in Geographic Area VI and 23 percent in Geographic Area III. Sales in Area V accounted for less than 10 percent of the market.

Annual per capita sales, based on total population of the state, were 142 pounds, Table 8. Fluid products made up about 92 percent of the volume and manufactured products 8 percent. Sales per person varied widely between areas, ranging from 101 pounds in Area I to 226 pounds in Area VI. These data are not to be construed as estimates of per capita consumption of dairy products: two important components are missing. First, the data do not include quantities sold by out-of-state plants directly to consumers or

retailers in Mississippi. Secondly, the milk products consumed by many farm families are not purchased through commercial channels, but are home-produced.

Sales per non-farm person averaged 276 pounds for the state, and ranged from 241 pounds in Area III to 322 pounds in Area II. With total sales quantity given, area sales per non-farm person would be expected to vary inversely to the proportions of non-farm residents in the areas. That they did not do so indicates differences in the proportions of rural residents that purchased milk products through commercial channels.

Effects of Urbanization on Fluid Product Sales: According to the Department of Sociology and Rural Life, Mississippi State University, the total population for Mississippi in 1975 will be about the same as in 1956. Consequently, the dairy industry of Mississippi can expect little if any increase in sales of fluid milk products in Mississippi unless there is an increase in sales per capita. Indications are that the population shift from farm to non-farm in Mississippi is increasing per capita sales.

Regression techniques were used to estimate the effect of urbanization on fluid product sales. The dependent variable was sales per person in each geographic area (Table 8), and the independent variable was the percent of total population in each geographic

Table 8. Volume of fluid and manufactured products sold by all Mississippi plants in each of the geographic areas of Mississippi, July 1956 - June 1957.

Description of sales	Unit	Geographic areas*						Total
		I	II	III	IV	V	VI	
Total sales into each area:								
Fluid products	000 lbs.	46,486.9	42,399.9	60,555.2	23,537.6	24,510.8	73,495.3	275,985.7
Mfg. products	000 lbs.	4,974.2	2,206.4	7,785.0	1,617.9	1,293.5	6,349.3	24,266.3
Total	000 lbs.	51,461.1	44,605.3	68,340.2	30,155.5	25,804.3	79,344.6	300,212.0
Sales per person:								
Fluid products	lb.	91.3	129.9	125.6	123.4	117.6	208.1	130.8
Mfg. products	lb.	9.8	6.8	16.1	7.0	6.2	8.0	11.5
Total	lb.	101.1	136.7	141.7	130.4	123.8	226.1	142.3
Sales per non-farm person:								
Fluid products	lb.	245.2	306.2	213.3	278.8	232.2	272.9	253.4
Mfg. products	lb.	26.2	15.9	27.4	15.8	12.3	23.6	22.2
Total	lb.	271.4	322.1	240.7	294.6	244.5	296.5	275.6

* Denotes the location of consumers or retail establishments to which products were sold.

area that was non-farm (Appendix Table 1). Results of this analysis indicated that a shift of 1 percent of the total population from farm to non-farm would result in an increase in sales of fluid products per person of 2.5 pounds per year. The percent of the total population that was non-farm explained 81 percent of the variation in sales per person. If the trend from farm to non-farm continues, by 1975 there would be an additional shift from farm to non-farm of 8 percent. This shift in population would increase total fluid product sales in the state by 40 million pounds by 1975. This would be an increase in total fluid product sales of about 14 percent from 1956-1957 to 1975.

Supply-Consumption Balance of Grade A Milk: Producers of Grade A milk in Mississippi sold approximately twice as much milk to plants and dealers as was resold as processed fluid milk and manufactured products to consumers in the state by these plants and dealers during the period July 1, 1956—June 30, 1957, Table 9. In all areas except Area III, producers sales of raw milk exceeded sales of processed products. The ratios of producer sales to plant sales varied widely between areas. A greater imbalance between areas except for Area III would be evidenced if sales of fluid products only were compared with sales of producer milk.

The differences in the supply-consumption balances of Grade A milk between areas of the state may result in conflicting interests with respect to

policies and programs for the dairy industry in Mississippi.

Programs designed to facilitate shipments of milk into an area may be most desirable for areas with a low ratio of production to sales of fluid and manufactured products. For areas where there is an approximate balance, policies and programs excluding in-shipments of Grade A milk may be favored. However, when the balance for the entire state is considered, policies and programs designed to impede or restrict movements of Grade A milk within the state or between states may be harmful. If retaliatory policies and programs were developed by neighboring states, the following of restrictive policies could result in irreparable damage to and chaotic conditions in the Grade A Dairy Industry of Mississippi.

Summary and Conclusions

The purpose of this report was to describe (1) the location of production and marketing facilities, and (2) the supplies, utilization and sales for Grade A milk by geographic areas in Mississippi. Data were collected from producers, processors and distributors of Grade A milk and from governmental agencies in the state.

The state was delineated into six geographic areas based primarily on the concentration of non-farm population. On January 1, 1957, there were 4,198 dairy herds producing milk meeting Grade A requirements in Mississippi. The largest concentration of

Table 9. Supply-consumption balance for Grade A milk by geographic areas: Mississippi, July 1, 1956 - June 30 1957.

Area	Milk sold by farmers	Sales of fluid and manufacturing products	Difference	Milk sold/sales of fluid and manufacturing products
	000 pounds	000 pounds	000 pounds	Percent
I	104,725	51,461	53,264	204
II	122,534	44,605	77,929	275
III	57,766	63,340	(10,574)	84
IV	77,254	30,156	47,098	256
V	178,243	25,804	152,439	691
VI	91,689	79,845	11,844	115
Unclassified ^a	1,269	—	—	—
Total	633,480	300,211	333,269	211.0

^aSales by farmers in counties with three Grade A dairies or fewer not included in area totals.

herds and the largest number of cows was in southwest Mississippi, Area V. However, the average number of cows per herd in Area V was the same as or smaller than the average size of herds in other areas.

Average production per cow in herds meeting Grade A requirements during the 12 month period beginning July 1, 1956 ranged from 4,353 pounds in Area VI to 4,616 pounds in Area IV. Average production for the state was 4,507 pounds.

The primary source of fluid milk supplies for fluid milk plants in Mississippi was from regular producers. Receipts from plants located outside of Mississippi accounted for a relatively small percentage of the total receipts by plants in each area. Fluid products accounted for 46 percent of total plant utilization; manufactured products, 5 percent; and bulk milk, 49 percent during the period. About 96 percent of the volume of fluid milk products sold was packaged in half-gallon, quart, and half-pint containers.

A relatively stable total population

is expected in Mississippi for the next 10-15 years. However, the percentage of the total population classified as non-farm will probably increase. Based on the expected increase in the non-farm segment of the population, increases in the total amount of fluid and manufactured products purchased through commercial channels would be expected.

The supply-consumption balance for Grade A milk differed between areas. Sales of Grade A raw milk to processors by producers by areas ranged from 84 to 691 percent of the sales of fluid and manufactured products by processors and distributors.

Overall, approximately twice as much Grade A milk was produced in Mississippi as was consumed within the state. Consequently, policies and programs developed by interests in Mississippi which restrict or impede movements of Grade A milk within the state or between states could harm the Mississippi industry, particularly if retaliatory measures were adopted in other areas.

APPENDIX TABLES

Appendix Table 1. Estimated non-farm and total population, by geographic areas: Mississippi, July 1, 1956.

Geographic areas	Non-farm population		Percent non-farm is of total	Total population	
	Area total	Percent of total		Area total	Percent of total
	Number	Percent	Percent	Number	Percent
Area I	189,621	17.4	37.2	509,100	24.1
Area II	138,488	12.7	42.4	326,400	15.5
Area III	283,844	26.1	58.9	482,100	22.8
Area IV	192,367	9.4	44.3	231,200	11.0
Area V	105,549	9.7	50.6	208,500	9.9
Area VI	269,295	24.7	76.3	353,100	16.7
State	1,089,164	100.0	51.6	2,110,400	100.0

Source: Adapted from Saunders, J. V. D., et al., Sociology and Rural Life Series No. 6, State College, Mississippi, November, 1957.

Appendix Table 2. Number of Grade A herds and estimated number of cows in Grade A herds, by counties, Mississippi, January 1, 1957.

County	Number of Grade A herds	Estimated number of cows ^a	County	Number of Grade A herds	Estimated number of cows ^a
Area I			Rankin	61	3,060
Bolivar	26	939	Sharkey	**	**
Coahoma	4	228	Simpson	57	2,209
DeSoto	220	11,981	Warren	12	672
Grenada	**	**	Yazoo	11	187
Lafayette	8	415	Area IV		
Leflore	6	147	Clarke	12	362
Marshall	42	2,262	Jasper	31	823
Panola	14	758	Kemper	12	452
Quitman	**	**	Lauderdale	10	411
Sunflower	35	1,011	Leake	14	479
Tallahatchie	8	244	Neshoba	69	2,613
Tate	89	4,439	Newton	199	6,233
Junica	**	**	Noxubee	73	3,591
Washington	17	707	Scott	9	506
Yalobusha	14	620	Smith	22	535
Area II			Winston	29	1,248
Alcorn	58	1,427	Area V		
Benton	6	152	Adams	6	387
Calhoun	42	1,075	Amite	306	9,634
Chickasaw	63	1,813	Franklin	17	451
Choctaw	**	**	Jefferson	**	**
Clay	53	1,857	Jefferson Davis	24	574
Itawamba	23	582	Lawrence	34	937
Lee	111	3,142	Lincoln	179	6,115
Lowndes	71	3,499	Marion	152	4,273
Monroe	50	1,747	Pike	256	7,321
Oktibbeha	117	5,995	Walthall	327	10,561
Pontotoc	89	2,606	Wilkinson	**	**
Pretiss	38	956	Area VI		
Tippah	14	358	Covington	25	680
Tishomingo	15	311	Forrest	63	2,551
Union	71	1,705	George	34	915
Webster	30	1,116	Greene	9	315
Area III			Hancock	89	2,702
Attala	29	845	Harrison	46	1,122
Carroll	7	231	Jackson	24	838
Claiborne	**	**	Jones	96	3,888
Copiah	90	2,793	Lamar	33	934
Hinds	21	736	Pearl River	199	5,360
Holmes	5	235	Perry	6	175
Humphreys	8	133	Stone	67	1,831
Issaquena	10	298	Wayne	17	404
Madison	44	1,563			
Montgomery	14	350			

Source: Mississippi Crop and Livestock Reporting Service.

^aIncludes heifers two years old and older.

**Three Grade A dairies or fewer.

Appendix Table 3. Estimated production of Grade A milk, by counties, by months: Geographic Area I, Mississippi, July 1956 - June 1957.

Geographic area	Months												Total
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
Area I	Thousand pounds												
Bolivar	355	350	345	346	345	362	407	386	469	506	516	448	4,835
Coahoma	97	95	94	94	94	99	112	107	128	135	131	114	1,300
DeSoto	4,218	4,131	4,049	4,088	4,107	4,336	4,447	4,226	4,711	5,023	5,213	4,813	53,362
Grenada*	146	143	140	141	142	150	156	143	160	171	175	146	1,813
Lafayette	54	53	52	49	47	49	55	53	59	70	72	64	677
Marshall	851	834	817	825	829	875	904	858	957	991	1,019	941	10,701
Panola	283	248	243	245	246	260	271	260	272	291	302	278	3,169
Quitman**	404	399	394	374	352	369	420	408	455	508	516	462	5,061
Sunflower	70	69	69	69	69	72	80	79	97	105	110	100	989
Tallahatchie	1,564	1,532	1,502	1,516	1,523	1,608	1,648	1,570	1,739	1,864	1,933	1,784	19,783
Tunica**	301	297	293	278	262	275	316	306	342	363	371	329	3,733
Washington	200	196	192	194	195	206	207	199	221	240	254	237	2,541
Yalobusha	8,513	8,347	8,190	8,219	8,211	8,661	9,023	8,595	9,610	10,267	10,612	9,716	107,964
Total													

Appendix Table 4. Estimated production of Grade A milk, by counties, by months: Geographic Area II, Mississippi, July 1956 - June 1957.

Geographic area	Months												Total
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
Area II	Thousand pounds												
Alcorn	448	442	436	443	442	463	472	472	527	555	557	505	5,762
Benton	54	53	53	53	53	56	57	55	60	65	67	62	687
Calhoun	354	347	340	343	345	364	374	353	396	425	433	398	4,482
Chickasaw	626	622	617	619	610	635	652	602	683	744	791	696	7,873
Choctaw**	671	666	661	663	653	681	698	663	731	801	842	730	8,460
Clay	212	209	206	210	209	219	225	224	249	258	260	238	2,719
Itawamba	1,157	1,142	1,127	1,145	1,142	1,198	1,243	1,226	1,354	1,398	1,400	1,253	14,785
Lee	1,272	1,262	1,254	1,257	1,238	1,290	1,325	1,297	1,389	1,518	1,620	1,405	16,057
Lowndes	571	567	563	565	556	579	588	549	622	662	743	666	7,261
Monroe	2,058	2,043	2,029	2,034	2,003	2,087	2,138	1,987	2,214	2,430	2,587	2,334	25,941
Okfuskeha	886	874	862	876	874	917	940	945	1,054	1,093	1,100	1,002	11,423
Pontotoc	342	337	333	338	337	354	365	359	400	416	420	384	4,365
Pentstemon	197	195	193	195	195	201	208	199	222	237	242	215	2,444
Tippan	115	114	112	114	114	119	122	122	136	142	144	130	1,484
Union	677	667	659	669	668	700	741	711	786	786	786	700	8,550
Webster	379	380	369	370	376	394	403	377	420	455	464	437	4,824
Total													

Source: Based on Grade A dairy survey data collected by the Mississippi Crop and Livestock Reporting Service, Mississippi Department of Agriculture and Commerce, Statistics Division, Jackson, Mississippi, in cooperation with Agricultural Economics Department, Mississippi Agricultural Experiment Station, State College, Mississippi, January 1, 1957 - June 30, 1957.

*Counties having three Grade A dairies or fewer are included in the state totals only.

**None reported.

Appendix Table 5. Estimated production of Grade A milk, by counties, by months: Geographic Area III, Mississippi, July 1956 - June 1957.

Geographic area	Months												Total
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
Area III	318	319	310	311	315	331	338	315	359	396	404	382	4,098
Attala	64	65	63	63	64	67	69	65	74	82	73	71	820
Carroll	—	—	—	—	—	—	—	—	—	—	—	—	—
Claiborne	987	974	954	957	954	1,001	1,023	958	1,090	1,152	1,163	1,075	12,288
Copiah	264	261	255	256	256	268	274	258	291	305	281	281	3,274
Hinds	79	80	77	78	79	83	84	79	88	96	99	88	1,010
Holmes	41	40	40	38	35	37	42	42	47	61	62	58	543
Humphreys	132	130	128	121	115	121	140	131	145	157	161	139	1,621
Issaquena	587	589	572	573	582	610	625	592	649	702	714	650	7,435
Madison	98	98	95	95	97	101	104	97	104	115	120	114	1,238
Montgomery	1,139	1,143	1,108	1,111	1,127	1,183	1,215	1,128	1,256	1,336	1,344	1,259	14,349
Rankin	—	—	—	—	—	—	—	—	—	—	—	—	—
Sharkey ^a	777	762	753	754	756	798	822	775	860	882	893	833	9,665
Simpson	194	192	188	188	188	197	198	189	213	231	239	235	2,452
Warren	59	59	58	55	52	54	59	59	66	79	82	78	760
Yazoo	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	4,739	4,712	4,601	4,601	4,620	4,851	4,993	4,678	5,242	5,594	5,659	5,263	59,553

Appendix Table 6. Estimated production of Grade A milk, by counties, by months: Geographic Area IV, Mississippi, July 1956 - June 1957.

Geographic area	Months												Total
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
Area IV	148	146	145	145	145	151	156	149	166	173	168	151	1,843
Clarke	314	309	308	308	307	320	330	310	350	367	345	304	3,872
Jasper	182	181	180	180	178	185	192	173	178	192	200	177	2,198
Kemper	162	160	159	159	158	165	170	163	183	203	190	170	2,042
Leauderdale	137	137	133	133	136	142	146	137	154	172	178	168	1,773
Leake	960	952	946	949	934	973	996	925	1,039	1,139	1,203	1,043	12,059
Neshoba	2,560	2,525	2,517	2,510	2,506	2,614	2,697	2,562	2,865	2,951	2,762	2,481	31,580
Newton	1,185	1,177	1,169	1,172	1,154	1,203	1,228	1,150	1,289	1,432	1,524	1,378	15,061
Noxubee	134	135	130	131	133	140	142	132	146	152	166	165	1,611
Scott	169	165	163	164	163	173	179	170	190	186	180	180	2,154
Smith	404	401	399	400	394	410	420	389	437	486	530	480	5,150
Winston	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	6,375	6,308	6,269	6,271	6,230	6,496	6,676	6,280	7,021	7,497	7,493	6,727	79,643

Source: Based on Grade A dairy survey data collected by the Mississippi Crop and Livestock Reporting Service, Mississippi Department of Agriculture and Commerce, Statistics Division, Jackson, Mississippi, in cooperation with Agricultural Economics Department, Mississippi Agricultural Experiment Station, State College, Mississippi, January 1, 1957 - June 30, 1957.

^aCounties having three Grade A dairies or fewer are included in the state totals only.

^{a2}None reported.

Appendix Table 7. Estimated production of Grade A milk, by counties, by months: Geographic Area V, Mississippi, July 1956 - June 1957.

Geographic area	Months												Total
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
Area V	117	115	113	113	112	118	121	115	128	135	161	148	1,496
Adams	3,675	3,624	3,553	3,562	3,554	3,727	3,829	3,560	3,946	4,073	4,032	3,645	44,780
Amite	136	134	131	132	131	138	142	134	145	151	150	146	1,670
Franklin	187	184	181	182	182	192	196	188	209	212	214	202	2,329
Jefferson	291	286	282	283	284	299	306	288	330	351	360	360	3,706
Lawrence	2,339	2,307	2,262	2,268	2,263	2,373	2,431	2,312	2,612	2,738	2,690	2,463	29,058
Lynch	1,605	1,575	1,554	1,559	1,563	1,647	1,700	1,584	1,744	1,787	1,763	1,578	19,659
Marion	2,464	2,418	2,386	2,393	2,399	2,529	2,603	2,453	2,723	2,786	2,791	2,688	30,633
Pike	4,110	4,033	3,980	3,992	4,002	4,218	4,356	4,083	4,453	4,577	4,490	4,089	50,425
Walnhall	—	—	—	—	—	—	—	—	—	—	—	—	—
Wilkinson	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	14,924	14,676	14,442	14,484	14,490	15,241	15,684	14,719	16,330	16,810	16,651	15,305	183,756

*Counties having three Grade A dairies or fewer are included in the state totals only.

Appendix Table 8. Estimated production of Grade A milk, by counties, by months: Geographic Area VI, Mississippi, July 1956 - June 1957.

Geographic area	Months												Total
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
Area VI	276	271	267	268	269	283	290	274	304	310	313	297	3,422
Covington	1,049	1,035	1,032	1,029	1,027	1,072	1,104	1,059	1,187	1,235	1,165	1,045	13,029
Forrest	268	264	263	262	262	284	301	294	330	348	341	310	3,639
George	101	100	100	99	99	103	106	104	116	123	122	111	1,284
Greene	840	828	826	824	822	856	880	862	958	1,021	1,017	925	10,656
Hancock	339	334	333	332	332	346	356	348	398	407	406	371	4,302
Harrison	258	255	254	253	254	264	271	260	284	301	294	272	3,219
Jackson	1,482	1,462	1,458	1,454	1,451	1,514	1,559	1,490	1,676	1,751	1,651	1,476	18,424
Jones	345	338	335	335	335	354	377	329	365	371	369	346	4,186
Lamar	1,751	1,727	1,721	1,716	1,714	1,788	1,840	1,785	2,005	2,102	2,122	1,960	22,231
Pearl River	83	82	82	81	81	85	87	82	91	88	83	74	999
Perry	57	549	547	546	545	568	591	543	596	623	630	582	6,877
Stone	187	185	184	183	183	191	197	187	204	204	192	173	2,233
Wayne	7,556	7,450	7,422	7,403	7,393	7,720	7,959	7,617	8,474	8,884	8,705	7,942	94,525
Total	106	104	101	102	103	107	109	103	119	123	121	109	1,307
Other counties*	52,162	51,447	50,768	50,904	50,792	53,263	54,925	51,996	57,964	61,105	61,608	56,138	653,072
State Total	7.98	7.88	7.77	7.79	7.78	8.16	8.41	7.96	8.88	9.36	9.43	8.60	100.0

Source: Based on Grade A dairy survey data collected by the Mississippi Crop and Livestock Reporting Service, Mississippi Department of Agriculture and Commerce, Statistics Division, Jackson, Mississippi, in cooperation with Agricultural Economics Department, Mississippi Agricultural Experiment Station, State College, Mississippi, January 1, 1957 - June 30, 1957.

*Estimated production for all counties with three Grade A dairies or fewer.

Appendix Table 9. Estimated volume of Grade A milk sold*, by producers, by geographic areas, by months: Mississippi, July 1956 - June 1957.

Month	Geographic areas						Total
	I	II	III	IV	V	VI	
	Pounds						
July	8,258	9,651	4,597	6,184	14,476	7,329	50,597
August	8,097	9,555	4,571	6,119	14,236	7,227	49,904
September	7,944	9,451	4,463	6,081	14,009	7,199	49,245
October	7,972	9,529	4,463	6,083	14,049	7,181	49,377
November	7,965	9,453	4,481	6,043	14,055	7,171	49,268
December	8,401	9,881	4,705	6,301	14,784	7,488	51,665
January	8,752	10,167	4,843	6,476	15,213	7,720	53,277
February	8,337	9,704	4,538	6,092	14,277	7,388	50,436
March	9,322	10,833	5,085	6,810	15,840	8,220	56,225
April	9,959	11,572	5,426	7,272	16,306	8,617	59,272
May	10,294	11,996	5,489	7,268	16,151	8,444	59,760
June	9,425	10,744	5,105	6,525	14,846	7,704	54,454
Total	104,725	122,534	57,766	77,254	178,243	91,689	633,480**

*It is estimated from Grade A dairy survey reports that approximately 97 percent of the total Grade A milk production was sold to fluid milk handlers.

**Includes 1,267 thousand pounds sold by counties that reported less than four dairies and not included in the area totals.