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DAIRY TRENDS IN MICHIGAN

1978



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COVER: The cover photograph was taken on the Larry & Gloria Crandall Dairy Farm, Battle Creek, Michigan, courtesy of Michigan Milk Producers Association.

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TABLE OF CONTENTS

	Page
Introduction	3
I State Totals and Averages: Leading Dairy States	
Number of Commercial Dairy Farms	4
Number of Milk Cows	5
Total Milk Production	6
Dairy Products Cash Marketings	7
Dairy Products Sales Percentage of Total Marketings	8
Milk Production Per Cow	9
Milk Price Per Cwt.	10
Dairy Product Sales Per Cow	11
Concentrates Fed Per Cwt. Milk	12
Concentrate Ration Value Per Cwt.	12
Milk Feed Price Ratio	13
Dairy Farm Characteristics	13
Summary of Recent Trends	14
II Michigan Dairy Data	
Milk Cows and Value of Milk Cows	16
Milk Cows and Production of Milk and Milkfat	16
Number of Milk Cows on Farms by Month	16
Milk Production Per Cow by Month	17
Total Milk Produced on Farms by Month	17
Monthly Prices Rec'd for All Milk Sold Wholesale	17
Milk Cow Prices Rec'd, Mid Month	18
Milk Used and Marketed by Producers	18
Milk and Cream Marketed by Producers: Quantity, Price and Cash Receipts ...	18
Marketings, Income, and Value of Milk Production	19
Manufactured Dairy Products	19
III Michigan District and County Dairy Data	
Dairying in Michigan Counties	20
Upper Peninsula, District 1	21
Northwest, District 2	22
Northeast, District 3	23
West Central, District 4	24
Central, District 5	25
East Central, District 6	26
Southwest, District 7	27
South Central, District 8	28
Southeast, District 9	29
Dairy Farms, Cows & Milk Production in District Counties	30
Land Area and Cropland by District	33
Dairy Farms, Cows & Milk Production by District	33
Dairy Herd Sizes in Michigan	33
Ranking of Michigan Counties by Total Milk Produced	34
Map, Location of Michigan Dairy Farms	36

INTRODUCTION

Michigan dairy farming has undergone dramatic improvement over the past three decades. Foremost among these is the significant gain in average production per cow. Michigan now ranks second among the eight leading dairy states in this regard and is now an important source of breeding stock. Changes in feeding, housing, milking systems, and other technology have also occurred. Sophisticated management of this highly complex type of farming is perhaps the most significant change.

Dairy trends in Michigan is the result of a joint effort between the Michigan Agricultural Reporting Service and the Michigan State University Cooperative Extension Service. The publication contains agricultural statistics relative to the dairy industry which can be useful in making management decisions. The first section compares Michigan dairy statistics and trends with those of seven other leading dairy states. Section two consists of state dairy data, while the third section presents Michigan dairy statistics by county and district.

The primary source of statistical data presented in this publication was provided by the Federal-State Michigan Agricultural Reporting Service. This agency is the primary data collection and reporting organization, in Michigan, for both the U.S. Department of Agriculture and the Michigan Department of Agriculture. M.A.R.S. is responsible for state, district, and county crop and livestock estimates and related statistical data. Special recognition is due to Arvin Budge and Steve Pscodna who provided primary data base support, on the dairy industry and who developed a new county estimates data series for milk cow numbers, milk production per cow, and total milk produced.

Those who have worked on this publication hope that it will be of value to dairy farmers and others involved in all phases of the dairy industry in showing where the industry has been in the past and which direction it will take in the future.

DAIRY TRENDS IN MICHIGAN LEADING DAIRY STATES AND U.S.

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STATE TOTALS

Number of Commercial Dairy Farms

The number of commercial dairy farms in the U.S. declined from over 600,000 in 1950 to slightly less than 200,000 in 1974, according to census data (Table 1). (The definition of "commercial", however, was changed during this period, including a smaller percentage of all farms in recent years, and therefore magnifying the decrease.) Disregarding this definitional difference, there was a decline of 67% in 24 years in the number of commercial dairy farms, or an average decrease of 2.8% a year. The decline has been slower in the last 10 years.

The rate of decrease in dairy farm numbers, as an average for the eight states has been slightly slower than that for the U.S. This is further indicated by the percentage of U. S. Dairy farms found in the eight states -- which increased from 60% in 1950 to 66% in 1974.

To assist in providing a view of Michigan's future prospects in dairying a comparison is being made between Michigan's long-term trends (generally 1950 to date) and the current situation in dairying with that of the seven other leading dairy states. The leading dairy states, with which Michigan is compared, are based on the 1978 total milk production and are in order of production for that year: Wisconsin, California, New York, Minnesota, Pennsylvania, Michigan, Ohio and Iowa. In that year these states produced 60% of the U. S. total milk production.

The discussion is divided into two general sections -- the first being directed toward a comparison of Michigan with the other leading states in state totals (such as, number of dairy farms, number of cows, etc.), and the second, to state averages (such as, milk production per cow, milk price and dairy sales per cow and per farm).

Michigan's rate of decrease in dairy farms was the fastest of any of the eight states, there being only 20% as many in 1974 as 1950. Our state had 7.6% of the dairy farms in the U.S. in 1950, 4.8% in 1969 and 4.4% in 1974. Wisconsin has by far the largest number of dairy farms.

Table 1. NUMBER OF COMMERCIAL DAIRY FARMS* IN LEADING DAIRY STATES: CENSUS YEARS

Census Year	Wisc.	Calif.	N.Y.	Minn.	Pa.	MICH.	Ohio	Iowa	Total	U.S. Total
A-Actual No.										
1974	46,951	3,046	17,247	22,966	15,661	8,530	8,877	6,616	129,894	196,057
1969	55,499	3,872	21,711	30,744	19,162	12,586	12,670	9,274	165,518	260,956
1964	71,754	5,571	30,841	39,848	26,025	19,299	17,025	12,615	222,978	349,244
1959	86,368	8,046	39,072	43,203	31,831	24,673	22,021	11,343	266,557	428,293
1954	107,010	12,396	49,182	49,541	38,295	37,466	25,751	8,503	328,144	548,763
1950	116,529	13,466	55,169	50,118	43,541	45,800	32,556	7,907	365,086	602,093

Sources: State "Census of Agriculture" reports for various years or "U.S. Census of Agriculture General Report" (for number of farms by type).

*Data are comparable between states, but not completely comparable over time, as "commercial" definition changed (1964 to 1974 are comparable and 1950 to 1959 are roughly comparable, but differ from 1964-74).

**NUMBER OF MILK COWS IN LEADING DAIRY STATES:
SELECTED YEARS**

Number of Milk Cows

The number of milk cows in the U.S. declined from approximately 22 million in 1950 to slightly over 11 million in 1974, some 51% of 1950 vs 33% for the number of dairy farms (indicating more cows per farm in recent years). (Table 2). There was 4 percentage points decline from 1950 to 1955, 17 from 1955 to 1960, 15 from 1960 to 1965, 20 from 1965 to 1970, but only 10 from 1970 to 1978.

The percentage of the U.S. milk cows in the eight leading states increased from 43% in 1950, 49% by 1960, 53% by 1965, 55% by 1970 and 58% by 1978.

Trends in cow numbers in the eight individual states varied considerably over this period. The eight states had 67% as many milk cows in 1978 as in 1950 (vs 49 for the entire U.S.), and this percentage varied from 109% for California, 84% for Wisconsin, 79% for Pennsylvania, 70% for New York, 62% for Minnesota, 47% for Michigan, 41% for Ohio to a low of 34% for Iowa. Michigan's percentage of the total U.S. herd has been relatively constant, being 3.9% in 1950, 3.7% in 1960, 3.6% in 1970 and around that figure or slightly more since then. The actual number of milk cows in Michigan decreased only slightly since 1970 -- from 433,000 to 403,000 for 1978.

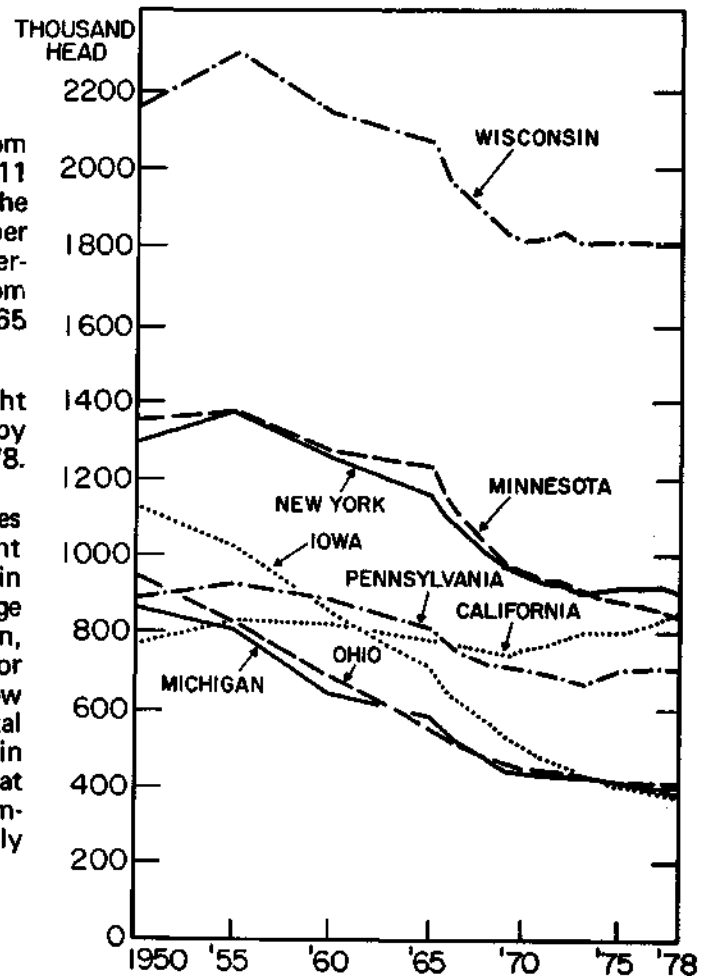


Table 2. NUMBER OF MILK COWS* IN LEADING DAIRY STATES: **SELECTED YEARS

Year	Wisc.	Calif.	N.Y.	Minn.	Pa.	MICH.	Ohio	Iowa	Total	U.S. Total
	(thousands)									
1978	1,811	846	906	837	700	403	384	377	6,264	10,848
1977	1,802	827	914	866	703	403	400	386	6,301	10,984
1976	1,807	811	912	870	706	405	397	392	6,300	11,055
1975	1,812	800	917	884	699	411	400	401	6,324	11,143
1974	1,801	797	905	890	687	418	407	407	6,312	11,230
1973	1,810	792	903	911	669	423	421	425	6,353	11,413
1972	1,831	778	920	932	684	427	436	454	6,462	11,700
1971	1,822	763	935	942	694	430	441	474	6,501	11,839
1970	1,814	755	950	949	705	433	446	497	6,549	12,000
1965	2,075	783	1,164	1,232	806	585	555	718	7,918	14,953
1960	2,150	824	1,248	1,265	884	641	687	851	8,550	17,515
1955	2,302	840	1,372	1,378	930	809	834	1,022	9,487	21,044
1950	2,160	777	1,300	1,349	891	863	945	1,124	9,409	21,944

Sources: "Milk" or "Milk Production," Economics, Statistics, and Cooperative Services, USDA, various issues.

*Average for the year.

**Order of states based on total milk production in 1977.

**TOTAL MILK PRODUCTION IN LEADING DAIRY STATES:
SELECTED YEARS**

Total Milk Production

U.S. milk production totaled about 117 billion pounds in 1950 rising to approximately 123 billion in 1955, 1960 and 1965 then declining to 117 billion in 1970 (Table 3). In the '70s, production ranged from 115 to 120 billion pounds until 1977 and 1978 when it was around 122 or 123 billion. Thus, in spite of the decrease in the number of dairy farms and milk cows since 1950, total output of milk has remained relatively constant.

The accompanying graph shows that milk production trends by states since 1950 varied considerably. If one compares 1978 production with that in 1950, one will find California at 198% (of 1950), Wisconsin - 144%, Pennsylvania - 140%, New York - 119%, Minnesota - 113%, Michigan - 88%, Ohio - 81% and Iowa - 65%. The total production of the eight states in 1978 stood at 122% of 1950, while the U.S. was only 105%. Thus, the eight states now have a larger share of U.S. production, due mainly to the greater production in Wisconsin, California, and Pennsylvania, in spite of decreases in three states.

Michigan's total milk production varied a relatively small amount in the five-year intervals from 1950 to 1965, being in the range of 5.2 to 5.5 billion pounds. There was, however, a sharp drop from 5.5 billion pounds in 1965 to 4.6 billion in 1970, falling to a low of 4.35 billion in 1974, then recovering to 4.8 billion in 1978.

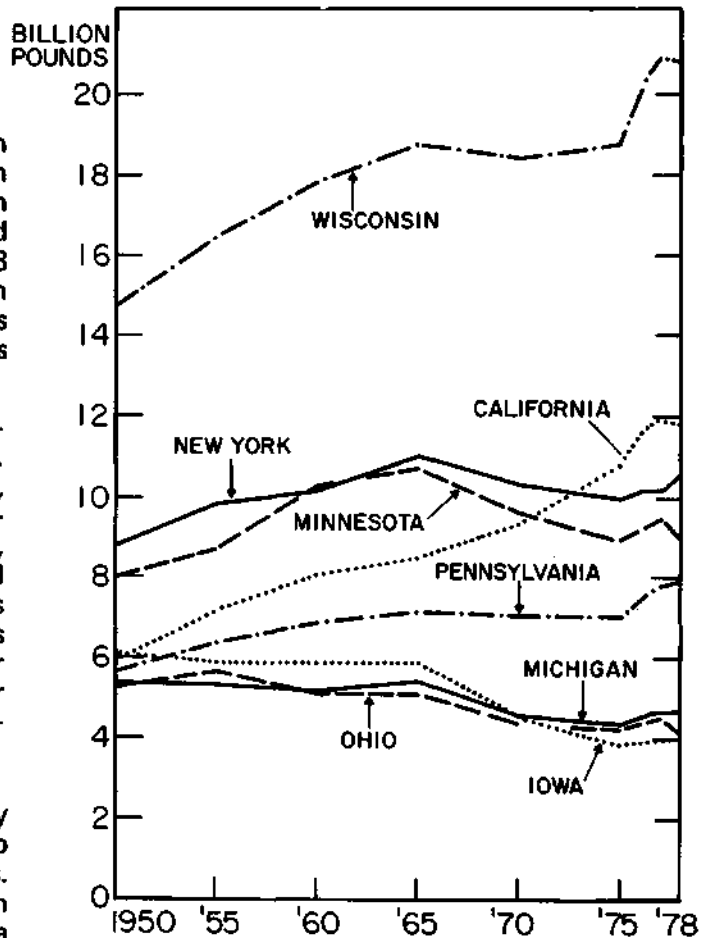


Table 3. TOTAL MILK PRODUCTION IN LEADING DAIRY STATES: SELECTED YEARS

Year	Wisc.	Calif.	N.Y.	Minn.	Pa.	MICH.	Ohio	Iowa	Total	U.S. Total
	(million pounds)									
1978	21,252	11,867	10,493	9,089	7,881	4,793	4,275	4,034	73,684	121,928
1977	21,041	11,968	10,224	9,483	7,791	4,761	4,455	4,030	73,753	122,957
1976	20,296	11,583	10,198	9,239	7,507	4,620	4,503	3,954	71,898	120,269
1975	18,900	10,853	9,964	8,946	7,140	4,411	4,259	3,893	68,366	115,334
1974	18,713	10,592	9,822	9,382	6,980	4,350	4,221	4,025	68,085	115,586
1973	18,442	10,332	9,728	9,271	6,718	4,636	4,267	4,180	67,574	115,491
1972	19,228	10,400	10,306	9,580	7,031	4,966	4,573	4,400	70,482	120,025
1971	18,848	9,710	10,431	9,618	7,155	4,796	4,488	4,577	69,623	118,566
1970	18,435	9,457	10,341	9,636	7,124	4,602	4,420	4,670	68,685	117,007
1965	18,841	8,480	11,040	10,731	7,206	5,528	5,200	5,945	72,971	124,173
1960	17,780	8,059	10,171	10,272	6,878	5,173	5,125	5,940	69,398	123,109
1955	16,482	7,241	9,824	8,833	6,411	5,396	5,738	5,958	65,883	122,945
1950	14,796	5,991	8,853	8,067	5,631	5,420	5,273	6,171	60,202	116,602

Sources: "Milk" or "Milk Production," Economics, Statistics, and Cooperative Services, USDA, various issues.

**CASH RECEIPTS FROM DAIRY PRODUCT MARKETINGS
IN LEADING DAIRY STATES: SELECTED YEARS**
Dairy Products Cash Marketings

Cash receipts from marketings of dairy products in the U.S. rose from \$3.7 billion in 1950 to \$4.2 for 1955, \$4.8 for 1960 and \$5.0 billion in 1965. They increased to \$6.5 billion in 1970, to \$9.9 for 1975 and \$12.7 for 1978 (Table 4). In the earlier years dairy product marketings accounted for 13 or 14% of U.S. farm marketings. From 1970 to 1978, dairy product's share varied from 12.9% in 1970 and 1971 to 9.3 in 1973 (11.5 in 1978) due largely to the large variation in marketings of other products.

Dairy product marketings for the eight states in 1950 amounted to 52% of the U.S. total. By 1960, it had increased to 55% then to 57% in 1970 and 59% in 1978. All these percentages were quite close to the percentages of total U.S. milk production. The increase among the eight states from 1950 to 1978 varied greatly -- California's and Wisconsin's 1978 dairy product marketings were approximately five times those of 1950; Minnesota and Pennsylvania around four times greater; New York and Michigan three times, and Iowa and Ohio around 2.5 times 1950 marketings.

Michigan's share of U.S. dairy marketings has declined from 4.5% in 1950 to 4.2% in 1960, to 4.0% in 1970 and 3.9% in 1978. Michigan's percentage of U.S. dairy income has been almost exactly the same as the percentage of milk production discussed earlier (this implies that Michigan's milk price was close to the U.S. average).

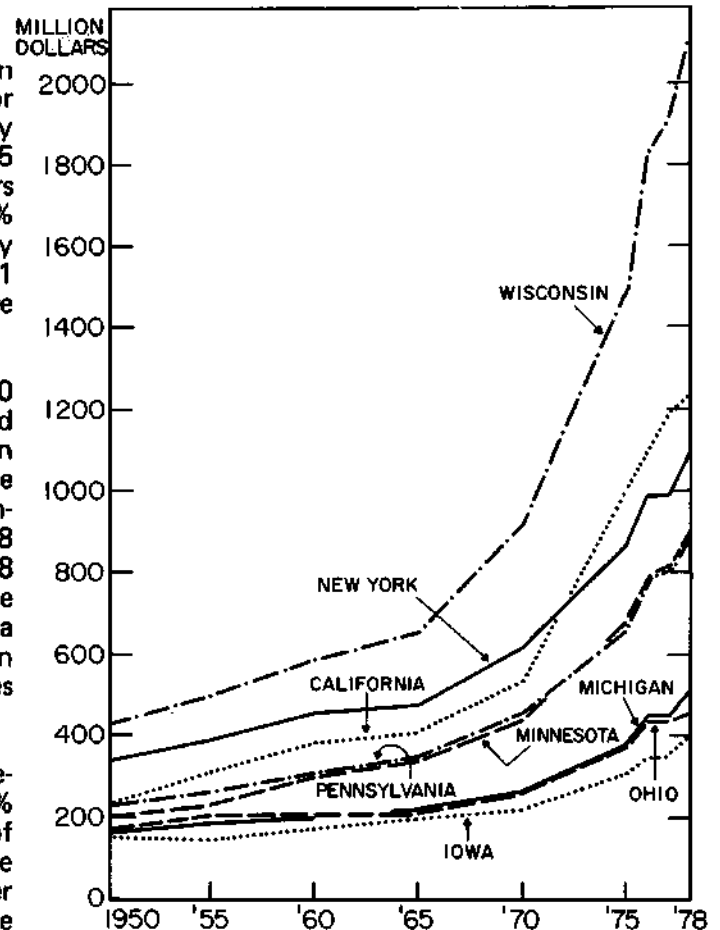


Table 4. CASH RECEIPTS FROM DAIRY PRODUCT MARKETINGS IN LEADING DAIRY STATES: SELECTED YEARS

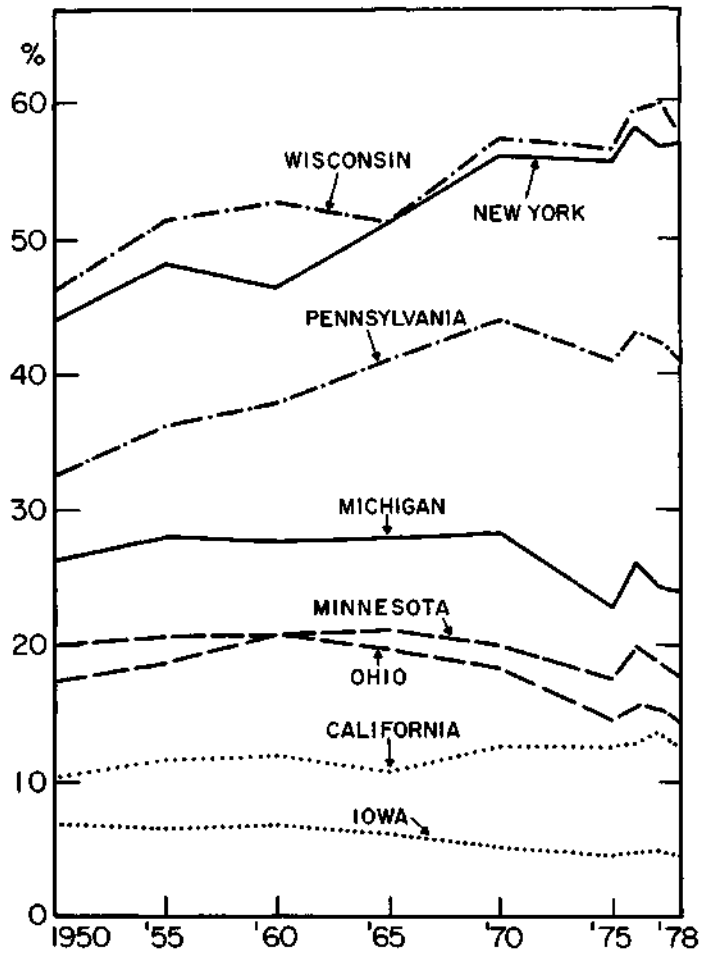
Year	Wisc.	Calif.	N.Y.	Minn.	Pa.	MICH.	Ohio	Iowa	Total	U.S. Total
	(million dollars)									
1978	2,128	1,229	1,086	880	878	497	449	395	7,542	12,722
1977	1,890	1,182	981	817	809	452	428	353	6,912	11,752
1976	1,810	1,089	987	785	780	448	437	345	6,681	11,429
1975	1,500	997	860	675	662	376	372	304	5,746	9,922
1974	1,394	894	812	667	620	354	356	290	5,387	9,454
1973	1,201	693	704	570	526	325	309	262	4,590	8,090
1972	1,035	608	647	479	473	300	282	225	4,049	7,145
1971	970	561	632	462	462	279	268	224	3,858	6,812
1970	916	534	613	443	456	261	256	221	3,700	6,527
1965	646	403	478	342	343	223	217	193	2,845	5,037
1960	586	382	447	299	309	201	209	170	2,603	4,760
1955	503	313	387	235	268	182	206	144	2,238	4,212
1950	435	237	343	206	228	168	178	149	1,944	3,719

Sources: "Milk Production, Disposition and Income," Economics, Statistics, and Cooperative Services, USDA, various issues.

Dairy Products Sales Percentage of Total Marketings

The percentage that dairy products sales were of total farm marketings was calculated for each of the eight states by five-year intervals from 1950 to 1975, then annually to 1978. The results are presented on the accompanying graph. This could be used to warrant calling Wisconsin and New York "dairy states", -- both now close to getting 60% of their income from dairy products. (These figures do not include income from calves and cull cows.) Michigan occupies a central position with 25-30% from dairy products, while in Minnesota, Ohio, California and Iowa, dairy products provide a smaller percentage of total farm income.

DAIRY PRODUCT SALES AS PERCENTAGE OF TOTAL MARKETINGS IN LEADING DAIRY STATES



STATE AVERAGES

Milk Production Per Cow

One of the most important factors affecting the economic position of dairy farming in a state is milk production per cow. Average production per cow in the U.S. has increased from 5,314 pounds in 1950 to 11,240 pounds in 1978, or an annual average increase of 212 pounds (Table 5). Annual increase in the first five-year interval (1950 to 1955) was about one-half the 28 year average; followed by 237 pounds annually in the next five, 255 pounds during 1960 to 1965, and 289 pounds during 1965 to 1970, but from 1970 to 1975 the rate dropped to 120 pounds due to a decrease or very small increases from 1972 to 1975 when feed/milk price relationships were unfavorable. From 1975 to 1978 the average rate has been nearly 300 pounds per year.

Average milk production per cow for each of the eight states is shown in Table 5. The increase in the weighted average of the eight states was about 13% slower than the national average (188 pounds per year vs 212 for the U.S.). Among the eight states, California not only started higher in average production per cow in 1950 (7,710 pounds), but also showed the greatest increase -- 6,317 pounds to 14,027 for 1978. Increases for the 28 years ranged from California's down to 4,772 pounds for New York. Michigan's increase of 5,613 pounds ranked us second among the eight states.

Michigan's milk production per cow has been above the national average every year during this 28 years -- usually close to 1,000 pounds, but has varied greatly in recent years. For instance, in 1965 our production per cow was 1,145 pounds above the U.S. average, 877 pounds in 1970 and 382 pounds in 1975 (114 pounds in 1974), but has recovered to 653 pounds above in 1978 (at 11,893 per cow). Incidentally the top five states in milk per cow in 1978 were all out west -- Washington, California, New Mexico, Arizona, and Nevada.

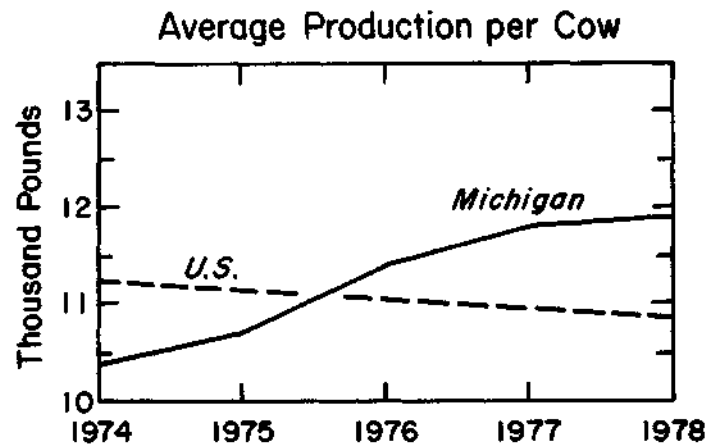


Table 5. MILK PRODUCTION PER COW IN LEADING DAIRY STATES: SELECTED YEARS

Year	Wisc.	Calif.	N.Y.	Minn.	Pa.	MICH.	Ohio	Iowa	Average	U.S. Average
	(pounds)									
1978	11,735	14,027	11,582	10,859	11,259	11,893	11,133	10,700	11,649	11,240
1977	11,676	14,472	11,186	10,950	11,083	11,814	11,138	10,440	11,595	11,181
1976	11,232	14,282	11,182	10,523	10,633	11,407	11,343	10,087	11,412	10,879
1975	10,430	13,566	10,866	10,120	10,215	10,732	10,648	9,708	10,811	10,350
1974	10,390	13,295	10,853	10,542	10,160	10,407	10,371	9,889	10,787	10,293
1973	10,189	13,045	10,773	10,177	10,042	10,960	10,135	9,835	10,637	10,119
1972	10,500	13,368	11,202	10,279	10,279	11,630	10,489	9,692	10,907	10,259
1971	10,345	12,726	11,156	10,210	10,310	11,153	10,177	9,656	10,710	10,015
1970	10,163	12,526	10,885	10,154	10,105	10,628	9,910	9,396	10,488	9,751
1965	9,080	10,830	9,485	8,710	8,940	9,450	9,370	8,280	9,216	8,305
1960	8,270	9,780	8,150	8,120	7,780	8,070	7,460	6,980	8,117	7,029
1955	7,160	8,620	7,160	6,400	6,820	6,670	6,880	5,830	6,945	5,842
1950	6,850	7,710	6,810	5,980	6,320	6,280	5,580	5,490	6,398	5,314

Sources: "Milk" or "Milk Production," Economics, Statistics, and Cooperative Services, USDA, various issues.

Milk Price

U.S. Farmers' receipts for dairy products sold averaged about \$4.00 per cwt. milk for 1950, 1955, 1960 and 1965, rising to \$5.78 for 1970 then on upward to \$10.67 per cwt. for 1978 (Table 6). Milk prices as an average for the eight states have been about 20¢ per cwt. below the U.S. average in the '70s. Average milk prices for the eight states in 1978 were \$6.69/cwt. higher than 1950 -- Michigan's increase was \$7.11 (2nd among the eight). Among the eight states, Pennsylvania usually had the highest prices, with Minnesota and Wisconsin the lowest and Michigan generally slightly above the eight-state average.

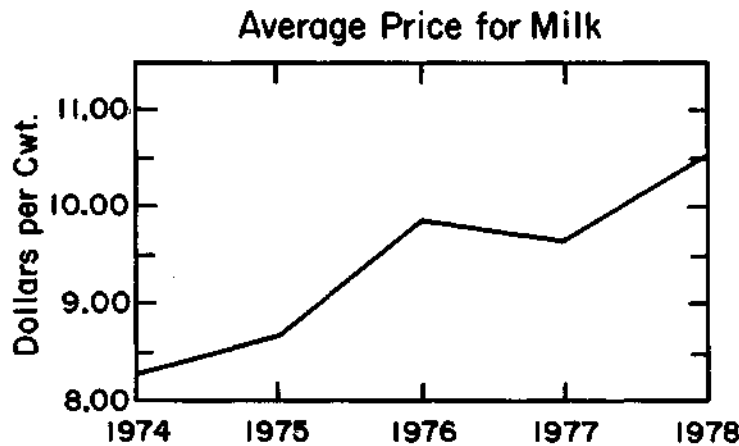


Table 6. PRICE RECEIVED/CWT. MILK* IN LEADING DAIRY STATES: SELECTED YEARS

Year	Wisc.	Calif.	N.Y.	Minn.	Pa.	MICH.	Ohio	Iowa	Average	U.S. Average
(dollars)										
1978	10.26	10.43	10.58	9.86	11.29	10.56	10.74	10.10	10.48	10.67
1977	9.21	9.95	9.82	8.81	10.55	9.68	9.84	9.06	9.60	9.80
1976	9.16	9.48	9.91	8.70	10.57	9.87	9.92	9.03	9.53	9.74
1975	8.18	9.27	8.83	7.75	9.45	8.68	8.97	8.14	8.64	8.84
1974	7.68	8.52	8.46	7.30	9.07	8.26	8.67	7.50	8.14	8.41
1973	6.72	6.77	7.39	6.34	8.00	7.19	7.46	6.53	7.00	7.21
1972	5.55	5.90	6.41	5.16	6.87	6.17	6.36	5.32	5.92	6.13
1971	5.31	5.85	6.19	4.95	6.60	5.95	6.15	5.11	5.72	5.93
1970	5.13	5.71	6.06	4.74	6.57	5.81	6.00	4.93	5.59	5.78
1965	3.56	4.85	4.45	3.30	4.91	4.17	4.35	3.42	4.10	4.26
1960	3.48	4.87	4.56	3.07	4.79	4.13	4.29	3.11	4.06	4.18
1955	3.24	4.51	4.17	2.83	4.55	3.64	3.90	2.71	3.85	3.88
1950	3.15	4.19	4.15	2.78	4.45	3.45	3.80	2.74	3.79	3.75

Sources: "Milk" and "Milk Production," Economics, Statistics, and Cooperative Services, USDA, various issues.

*Received for milk and cream.

Dairy Product Sales Per Cow*

State trends in dairy product sales per cow summarize the changes in milk production per cow and price received for the milk. U.S. average cash receipts per cow rose from \$169 in 1950 to \$1,173 in 1978 -- an increase of \$1,004 vs \$997 for the eight states and \$1,039 for Michigan (Table 7).

Average dairy product sales per cow for the three years 1976-78 ranged from \$1,408 for California to \$948 for Iowa, with an eight-state average of \$1,120 (\$1,093 for U.S.). Michigan's average at \$1,152 ranked third following Pennsylvania at \$1,170. So on the basis of income per cow, Michigan dairymen should be competitive, provided they don't have higher costs than dairymen in other states.

Table 7. DAIRY PRODUCT SALES PER COW* IN LEADING DAIRY STATES: SELECTED YEARS

Year	Wisc.	Calif.	N.Y.	Minn.	Pa.	MICH.	Ohio	Iowa	Average	U.S. Average
	(dollars)									
1978	1,175	1,453	1,199	1,051	1,254	1,233	1,169	1,048	1,204	1,173
1977	1,049	1,429	1,073	943	1,151	1,122	1,070	915	1,097	1,070
1976	1,002	1,343	1,084	902	1,105	1,106	1,100	880	1,060	1,034
1975	828	1,246	934	764	947	916	930	759	907	890
1974	774	1,122	897	749	903	874	874	713	853	842
1973	664	875	780	626	796	769	734	617	722	709
1972	565	782	703	514	692	701	648	495	627	611
1971	532	735	676	490	666	649	607	473	593	575
1970	505	707	645	467	647	603	574	444	565	544
1965	311	515	411	278	425	381	391	269	359	337
1960	272	464	358	237	349	313	304	200	304	272
1955	218	373	282	170	288	225	247	141	236	200
1950	202	305	264	153	256	194	188	133	207	169

Sources: Calculated from data in "Milk Production, Disposition and Income" and "Milk," Economics, Statistics, and Cooperative Services, USDA, various issues.

*Cash receipts for sales of milk and cream.

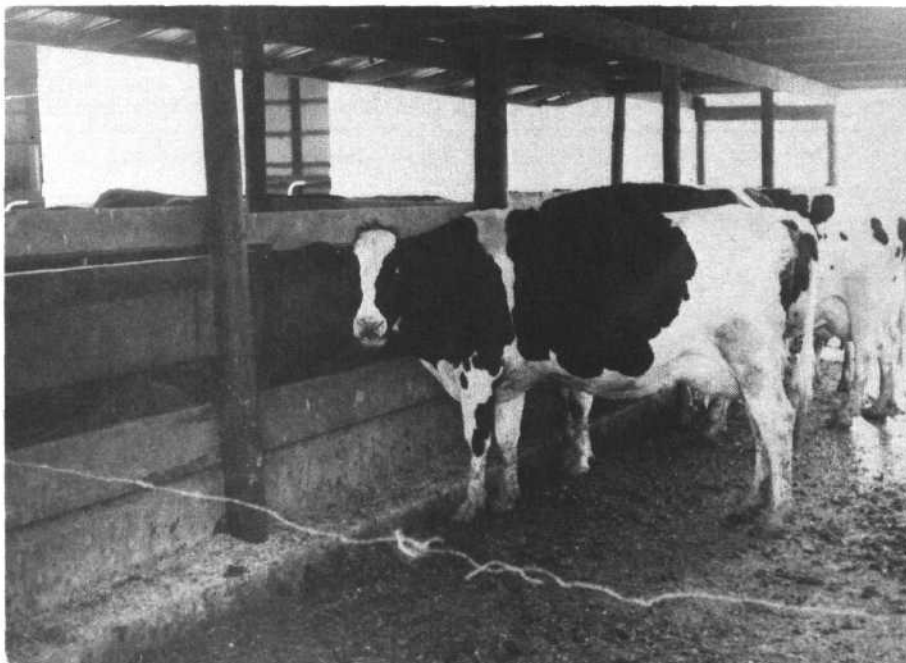


Table 8. CONCENTRATES FED/CWT. MILK IN LEADING DAIRY STATES: SELECTED YEARS

Year	Wisc.	Calif.	N.Y.	Minn.	Pa.	MICH.	Ohio	Iowa	Average	U.S. Average
Pounds										
1978	38	43	36	41	42	43	43	47	42	43
1977	37	41	36	39	42	39	42	46	40	42
1976	38	38	36	41	43	42	43	47	41	42
1975	37	38	35	43	39	43	40	50	41	42
1974	38	40	36	39	43	42	47	51	42	42
1973	40	40	39	42	43	42	45	48	42	43
1972	38	40	36	41	42	39	43	47	41	43
1971	41	37	38	41	45	42	42	45	41	42
1970	40	36	39	41	44	41	43	44	41	42
1965	33	29	35	35	40	36	38	38	36	37
1960	29	26	30	30	33	31	33	34	31	32
1955	25	23	30	27	34	29	31	32	29	30
1950	26	24	30	27	35	30	32	35	30	31

Sources: "U.S. Agricultural Statistics," USDA, and "Milk Production," ESCS, USDA (various issues of both).

Concentrates Fed Per Cwt. Milk

According to reports published by the USDA, the amount of grain and other concentrates fed per cwt. of milk produced has been increasing -- from 31 pounds in 1950 to 43 pounds in 1978, with all of the increase occurring prior to 1970. There has not been a reduction in forages fed. Thus, one might hazard the opinion that milk cows are now being fed concentrates to nearer their maximum potential in milk production.

Trends in the eight states have followed the same general pattern as that for the U.S., although there was considerable variation among the states every year with some consistently higher or lower than the others. For instance, in California less concentrates per cwt. milk were usually fed than in the other states, while Iowa was generally among the top in amount fed, with Michigan concentrate consumption about the U.S. average.

Concentrate Ration Value Per Cwt.

The value of 100 pounds of dairy concentrate ration in the U.S. for 1974-78 was more than double that of 1950, '55, '60 and '65 (\$6.21 vs about \$3.00), having risen sharply from 1972 to 1974, with the five years 1974-78 essentially the same, at about \$6.20 (Table 9). The eight-state average has been about the same as the national average being just a few cents lower most years. However, there was considerable spread among the eight states -- generally between \$1.10 and \$1.50, except in 1975 and 1976 when the difference was about half that. Out of the 13 years shown, the New York value was highest in all but three. On the other hand, Iowa's value was the lowest in seven years, with Minnesota the other six years. Michigan's dairy concentrate values have been just slightly below the eight-state average (about 3%) and about 5% below the national average. Thus, Michigan dairymen have had a slight advantage on concentrate cost.

Table 9. CONCENTRATE RATION VALUE/CWT. IN LEADING DAIRY STATES: SELECTED YEARS

Year	Wisc.	Calif.	N.Y.	Minn.	Pa.	MICH.	Ohio	Iowa	Average	U.S. Average
Dollars										
1978	5.65	5.90	6.67	5.38	6.72	5.76	6.28	5.73	6.01	6.07
1977	5.93	5.98	6.83	5.60	6.85	5.81	6.37	5.70	6.13	6.20
1976	5.96	6.34	6.61	6.02	6.50	6.04	6.21	5.95	6.20	6.31
1975	5.97	6.33	6.40	5.96	6.34	6.20	6.39	6.08	6.21	6.25
1974	5.81	6.41	6.73	5.68	6.53	6.09	6.33	5.81	6.17	6.23
1973	4.42	4.64	5.49	4.12	5.58	4.60	5.30	4.30	4.81	4.88
1972	3.27	3.62	4.16	3.14	4.00	3.39	3.52	2.84	3.49	3.52
1971	3.22	3.53	4.06	2.97	3.85	3.29	3.50	2.81	3.40	3.44
1970	3.15	3.33	3.83	2.89	3.68	3.16	3.19	2.73	3.24	3.28
1965	2.82	3.20	3.58	2.66	3.42	2.97	2.94	2.37	3.00	3.02
1960	2.67	3.31	3.48	2.27	3.32	2.67	2.74	2.25	2.84	2.88
1955	2.91	3.41	3.56	2.46	3.49	3.01	2.91	2.69	3.06	3.10
1950	2.93	3.25	3.58	2.58	3.54	3.01	2.91	2.47	3.03	3.08

Source: "Milk Production," ESCS, USDA (various issues).

Milk/Feed Price Ratio

This term refers to the pounds of concentrate ration equal in value to one pound of milk at the farm. The U.S. average in 1950 and 1955 was about 1.25 pounds, rising to approximately 1.40 for 1960 and 1965 (Table 10). The price ratio was approximately 1.70 for 1970, '71 and '72, but fell to 1.46 and 1.34 for 1973 and '74 respectively, then back up to 1.75 for 1978 (the most favorable price ratio during the entire period). Average figures for the eight states

have been close to the U.S. average. Among the states, however, there usually has been a fairly wide spread -- for instance, in 1970 New York's ratio was 1.56 pounds vs 1.87 for Ohio. As an average for the years 1960, '65, '70 and '75, Ohio had the most favorable ratio at 1.58 pounds, Michigan followed at 1.56 -- the eight-state average was 1.48 and the U.S. average 1.50. Thus, our milk/feed price ratio was about 5% more favorable than the U.S. average due to the lower concentrate value.

Table 10. MILK/FEED PRICE RATIO IN LEADING DAIRY STATES: SELECTED YEARS

Year	Wisc.	Calif.	N.Y.	Minn.	Pa.	MICH.	Ohio	Iowa	Average	U.S. Average
	Pounds*									
1978	1.82	1.73	1.57	1.83	1.65	1.82	1.70	1.76	1.74	1.75
1977	1.55	1.63	1.43	1.57	1.52	1.66	1.54	1.59	1.56	1.57
1976	1.54	1.46	1.49	1.45	1.60	1.63	1.59	1.52	1.54	1.53
1975	1.37	1.43	1.37	1.30	1.46	1.40	1.40	1.41	1.39	1.40
1974	1.32	1.28	1.25	1.29	1.36	1.35	1.36	1.30	1.31	1.34
1973	1.52	1.39	1.33	1.54	1.41	1.51	1.40	1.54	1.46	1.46
1972	1.69	1.55	1.52	1.64	1.69	1.82	1.80	1.90	1.70	1.72
1971	1.65	1.57	1.51	1.67	1.68	1.81	1.75	1.84	1.68	1.70
1970	1.63	1.61	1.56	1.65	1.74	1.84	1.87	1.68	1.70	1.74
1965	1.26	1.41	1.24	1.27	1.40	1.44	1.48	1.50	1.38	1.40
1960	1.32	1.36	1.25	1.46	1.43	1.57	1.58	1.54	1.44	1.45
1955**										1.28
1950**										1.25

Source: "Milk Production," ESCS, USDA (generally April or May issues).

* Pounds concentrate ration equal in value to one pound milk at the farm.

** Individual State data not available.

Dairy Farm Characteristics

Now we look at "per farm averages" for an understanding of how dairy farms, as an average, compare in the eight leading states. Table 11 presents not only various dairy farms characteristics but repeats the number of dairy farms (at least 50% of total sales from dairy products and cattle and calves as reported in the 1974 and 1964 Census of Agriculture).

Various measures of size and production are presented, with average acres per farm being the first -- where the U.S. 1974 average was 276 acres or 43 more than 1964. This compares with 256 and 44 acres increase as an eight-state average. In 1974, Michigan's dairy farm average acres of 287 ranked second only to New York; having increased 67 acres from 1964 -- the most of any of the eight.

The average number of cows per commercial dairy farm (economic classes 1-5) in the U.S. in 1974 was 48, or 30% more than in 1964. The eight-state average was 44 cows, or 47% over 1964. California dairy farms had five times more cows per farm as an average (245) than any of the other eight states. Michigan's 42-cow average in 1974 ranked third in the eight and the increase from 1964 at 68% was the highest percentage increase of any of the group except California at 96%.

Total milk production per farm averaged 489 thousand pounds (or 1,300 pounds/day) in 1974 for the U.S. or 65% more than 10 years previously. The 1974 average for the eight states in 1974 was about four percent under the U.S. average, but a faster percentage increase. Michigan's 1974 average of 436

thousand pounds was about seven percent under the eight-state average, but followed an 83% increase from 1964 -- second only to California's 146% increase. California, with large herds and high production per cow, averaged over 3.3 million pounds annual milk output per farm in 1974.

Dairy product sales per farm (milk production times price) gives another measure of size of the dairy enterprise per farm. Average U.S. milk price in 1974 at \$8.41/cwt. was \$4.23 above the 1964 price. The eight-state average in 1974 at \$8.14 also was double the 1964 average and Michigan's \$8.26 likewise was about double the 1964 average of \$4.21. Thus, receipts from sales of dairy products per farm in 1974 would be double 1964 due to price alone. Actually, with greater milk production per farm, dairy product receipts per farm for the U.S. in 1974 was practically three times that of 1964 (196% increase). The eight-state average was even more -- 225% increase, and Michigan's 259% increase from 1964 was second high among the eight. In actual dollars, Michigan's 1975 average dairy product sales were \$35,018 per farm -- third among the eight states.

SUMMARY OF RECENT TRENDS

From 1964 to 1974 Michigan had a 56% decrease in the number of dairy farms compared with 44% nationally and approximately the same as an average for the top eight dairy states. As to change in the average number of milk cows from 1970 to 1978, Michigan showed a decrease of seven percent vs 10% for the U.S. and four percent for the eight states.

Milk production per cow increased sharply from 1950 to 1970 in all top dairy states, but 1975 averages were generally only slightly higher. From 1975 to 1978 Michigan's average increased from 10,732 to 11,893 pounds per cow -- faster than either the U.S. or the eight-state average, with the 1978 figure 653 pounds above the national average.

Total milk production in Michigan in 1978 was four percent above 1970. This was the same as for the U.S. but lower than the seven percent for the eight states.

The price of milk has moved sharply upward in the 70s (as have costs). Michigan's milk price has generally been close to the eight-state average, which usually runs about 20¢/cwt. below the U.S. average.

With increasing milk production per cow and rising milk prices, dairy product sales per cow have risen rapidly -- doubling from 1970 to 1978 in both

Michigan and nationally. Michigan's average dairy sales per cow in 1978 ranked third among the eight states.

Total sales per commercial dairy farm, including calves, cull cows and other farm products, averaged about \$49,000 for the U.S. in 1974. The eight-state average was nearly \$45,000, with Michigan about the same. Michigan's percentage increase from 1964 was second only to California.

The final comments relate not to state averages for all farms or herds, but to those farms with sales of \$40,000 or more (economic class I). In 1974, 40% of the commercial dairy farms in the U.S. were in this category, compared with 36% for the eight-state average. In Michigan, 41% were of this level of gross income and the state ranked fourth in the eight. Two-thirds of Michigan's dairy cows were on these 3,495 farms in 1974. Calculated net returns on these farms that year averaged \$23,500 vs \$6,500 for those with less than \$40,000 gross. The class I farms were twice as large (410 vs 202 acres), had three times as many cows (68 vs 24), and dairy product sales averaged about \$62,500 vs \$15,800.

The percentage of total farm marketings provided by dairy products in Michigan declined from 28% in 1970 to around 25% in the last three years. Decreases in that same period were shown in Ohio, Iowa, Minnesota and Pennsylvania. In Wisconsin, New York and California dairy sales became a slightly larger percentage of the total.

Trends in concentrates fed per hundredweight of milk produced were rather sharply upward from 1950 to 1970, but have leveled off since. Michigan's figure has generally been close to the U.S. average. Concentrate value per hundred was relatively constant from 1950 to 1972, but rose rapidly afterward. Michigan's value has usually been about five percent below the U.S. average. As a consequence our milk/feed price ratio has been about five percent better than the national average.

As to dairy farm characteristics -- Michigan's dairy farm average acreage was exceeded only by that of New York among the top eight dairy states, due mainly to the rapid increase from 1964 to 1974; our 42 cow average for dairy farms in 1974 ranked third among the eight states; Michigan's average annual milk production of 436,000 pounds on its dairy farms was exceeded by only California and New York among the top eight states, after our increase of 83% from 1964 to 1974; and our average total sales of all products per farm in 1974 was approximately the eight-state average and eight percent below the U.S. average.

Table 11. DAIRY FARM CHARACTERISTICS AND CHANGES IN LEADING DAIRY STATES, 1964 AND 1974 (Class 1-5 farms)

Item	Year	Unit	Wisc.	Calif.	N.Y.	Minn.	Pa.	MICH.	Ohio	Iowa	Average	U.S. Average
No. of Farms	1974	No.	46,951	3,046	17,247	22,966	15,661	8,530	8,877	6,616	126,894	196,057
	1964	No.	71,754	5,571	30,841	39,898	26,025	19,299	17,025	12,615	223,028	349,244
	Decrease	%	35	45	44	42	40	56	48	48	43	44
Size of Farms Acres/Farm	1974	A.	229	280	320	252	227	287	232	224	256	276
	1964	A.	194	221	261	227	194	220	194	200	212	233
	Increase	A.	35	59	59	25	33	67	38	24	44	43
No. Cows	1974	No.	36	245	50	30	41	42	37	36	44	48
	1964	No.	27	125	35	23	28	25	24	25	30	37
	Increase	%	33	96	43	30	46	68	54	44	47	30
Total Milk Production*	1974	Th. Lb.	369	3,318	546	318	412	436	385	359	468	489
	1964	Th. Lb.	250	1,350	321	212	238	238	212	198	268	296
	Increase	%	48	146	69	50	73	83	82	81	75	65
Dairy Product Sales	1974	\$	26,217	252,659	43,289	21,558	34,793	35,018	30,134	24,592	38,282	39,147
	1964	\$	8,050	65,338	14,114	6,280	11,958	9,747	9,498	7,697	10,774	13,227
	Increase	%	226	287	207	243	190	259	217	219	255	196
Total Sales	1974	\$	32,660	285,194	49,678	30,833	42,813	44,877	40,926	40,357	44,530	48,923
	1964	\$	10,797	74,260	16,378	9,862	14,882	13,617	13,551	14,047	14,382	14,593
	Increase	%	202	284	203	213	188	230	202	187	210	235
% of Farms in Class 1	1974	%	27.5	82.5	49.1	25.4	41.5	41.0	38.6	40.3	36.5	39.8
	1964	%	.7	50.5	4.5	.4	3.0	2.9	2.8	1.7	3.1	2.0
	Increase	% Pts.	26.8	32.0	44.6	25.0	38.5	38.1	35.8	38.6	33.4	37.8
% of Cows on Class 1 Farms	1974	%	44.3	97.7	68.1	41.0	60.5	65.9	61.4	58.4	60.0	66.2
	1964	%	2.3	83.5	12.2	1.5	8.3	9.4	8.4	4.2	14.0	10.7
	Increase	% Pts.	42.0	14.2	55.9	39.5	52.2	56.5	53.0	54.2	46.0	55.5

Sources of Data: U.S. and State "Census of Agriculture," USDC, "Milk Production, Disposition and Income" and "Agricultural Statistics," USDA.

*Based upon average milk production per cow on all farms and thus is probably somewhat under actual.

MICHIGAN DAIRY DATA

Table 12. MILK COWS AND VALUE OF MILK COWS, MICHIGAN 1970-78

Year	Milk Cows			Heifers 500 Lbs. and Over Being Kept for Milk Cow Replacement
	Number	Annual Average Price Per Head	Total Value	
	1,000 Head	Dollars	1,000 Dollars	1,000 Head
1978	403	665	268,000	184
1977	403	535	215,610	171
1976	405	520	210,600	158
1975	411	441	181,250	170
1974	418	518	216,520	181
1973	423	500	211,500	177
1972	427	428	182,760	175
1971	430	386	165,980	166
1970	433	363	157,180	132

Table 13. MILK COWS AND PRODUCTION OF MILK AND MILKFAT, MICHIGAN 1970-78

Year	Milk Cow Farms	Number of Milk Cows 1/	Production of Milk And Milkfat 2/				
			Per Milk Cow		Percentage of Fat In all Milk Produced	Total	
			Milk	Milkfat		Milk	Milkfat
	Thousands		Pounds		Percent	Mil. Lbs.	
1978	10,000	403	11,893	439	3.69	4,793	177
1977	10,500	403	11,814	436	3.69	4,761	176
1976	11,000	405	11,407	421	3.69	4,620	170
1975	12,000	411	10,732	398	3.71	4,411	164
1974	13,000	418	10,407	386	3.71	4,350	161
1973	14,000	423	10,960	401	3.66	4,636	170
1972	16,000	427	11,630	431	3.71	4,966	184
1971	17,500	430	11,153	407	3.65	4,796	175
1970	18,500	433	10,628	389	3.66	4,602	168

1/ Average number during year, excluding heifers not yet fresh.
 2/ Excludes milk sucked by calves.

Table 14. NUMBER OF MILK COWS ON FARMS BY MONTH, SELECTED YEARS, MICHIGAN 1970-78

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Thousands											
1978	402	402	400	402	405	403	404	404	408	406	403	402
1977	403	401	401	402	402	401	403	402	405	403	404	404
1976	407	406	406	406	405	405	404	405	405	404	404	405
1975	415	414	413	412	411	411	410	411	410	409	408	408
1974	420	419	418	418	419	420	420	420	417	417	416	416
1973	421	422	423	422	422	423	424	424	423	424	423	421
1972	430	431	431	429	427	428	426	427	425	426	425	422
1971	431	431	431	431	430	430	430	430	430	430	430	430
1970	435	435	434	434	434	433	433	433	432	432	431	431

Table 15. MILK PRODUCTION PER COW BY MONTH, SELECTED YEARS, MICHIGAN 1970-78

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Pounds											
1978	980	900	1,010	990	1,030	1,010	1,020	1,010	980	1,005	965	980
1977	970	890	985	975	1,030	1,010	1,010	1,020	995	1,010	960	970
1976	915	875	955	945	995	975	970	980	955	965	920	950
1975	895	820	910	900	940	925	905	895	880	895	865	905
1974	855	785	890	870	920	905	880	875	865	870	820	860
1973	870	860	945	940	995	955	920	925	900	905	855	895
1972	955	900	965	950	1,025	1,010	995	1,000	985	985	895	955
1971	865	810	910	910	975	980	960	980	945	975	910	930
1970	870	795	900	895	960	935	905	875	885	895	835	875

Table 16. TOTAL MILK PRODUCED ON FARMS BY MONTH, SELECTED YEARS, MICHIGAN 1970-78

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Million Pounds											
1978	394	362	404	398	417	407	412	408	400	408	389	394
1977	391	357	395	392	414	405	407	410	403	407	388	392
1976	372	355	388	384	403	395	392	397	387	390	372	385
1975	371	339	376	371	386	380	371	368	361	366	353	369
1974	359	329	372	364	385	380	370	368	361	363	341	358
1973	366	363	400	397	420	404	390	392	381	384	362	377
1972	411	388	416	408	438	432	424	427	419	420	380	403
1971	373	349	392	392	419	421	413	421	406	419	391	400
1970	378	346	391	388	417	405	392	379	382	387	360	377

Table 17. MONTHLY PRICES REC'D FOR ALL MILK SOLD WHOLESAL, SELECTED YEARS, MICH. 1970-78

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Dollars Per 100 Pounds											
1978	10.10	10.20	10.20	10.20	10.10	10.10	10.00	10.20	10.50	11.20	11.40	11.70
1977	9.85	9.70	9.55	9.55	9.45	9.40	9.45	9.45	9.70	9.85	9.95	10.10
1976	10.40	10.30	10.20	9.70	9.40	9.25	9.55	9.70	9.90	10.10	10.00	9.90
1975	7.88	7.83	7.91	8.10	8.10	8.00	8.05	8.35	9.00	9.50	9.80	10.10
1974	8.60	8.80	9.05	9.00	8.58	7.96	7.69	7.57	7.51	7.75	8.06	8.05
1973	6.55	6.60	6.70	6.55	6.55	6.60	6.60	7.10	7.70	8.20	8.55	8.60
1972	6.20	6.25	6.20	6.05	6.05	5.90	5.90	6.00	6.15	6.30	6.55	6.50
1971	6.10	6.10	6.10	6.05	5.85	5.70	5.75	5.75	5.90	5.95	6.10	6.15
1970	5.90	5.80	5.70	5.75	5.60	5.55	5.55	5.60	5.75	6.05	6.10	6.15

Table 18. MILK COWS: PRICES REC'D BY MICHIGAN FARMERS 15th OF EACH MONTH, MICH. 1970-78

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Dollars Per Head											
1978	515	530	550	580	610	650	670	690	730	780	820	850
1977	510	520	530	535	570	575	555	550	550	530	505	495
1976	465	490	500	520	530	530	540	535	545	540	535	515
1975	410	405	420	435	435	460	465	450	450	445	455	460
1974	540	550	560	540	530	530	520	535	505	485	460	460
1973	440	450	445	490	480	510	495	560	530	535	525	540
1972	395	410	415	425	425	425	435	445	440	440	440	435
1971	365	375	390	390	390	390	380	370	390	395	400	395
1970	360	360	365	360	360	350	360	355	375	375	375	365

Table 19. MILK USED AND MARKETED BY PRODUCERS, MICHIGAN 1970-78

Year	Milk Used Where Produced			Milk Marketed By Producers			
	Fed to Calves 1/	Used For Milk Cream and Butter	Total	Sold to Plants and Dealers 2/		Sold Directly to Consumers 3/	Total
				As Whole Milk	As Separated Cream		
	Million Pounds						
1978	62	27	89	4,675	3	26	4,704
1977	62	29	91	4,625	19	26	4,670
1976	57	28	85	4,490	20	25	4,535
1975	50	26	76	4,280	30	25	4,335
1974	39	26	65	4,235	30	20	4,285
1973	68	42	110	4,485	32	9	4,526
1972	70	44	114	4,810	32	10	4,852
1971	70	35	105	4,635	44	12	4,691
1970	70	40	110	4,460	21	11	4,492

1/ Excludes milk sucked by calves. 2/ Includes milk produced by dealers' own herds.

3/ Sales directly to consumers by producers who sell only milk from their own herds. Also includes milk produced by institutional herds.

Table 20. MILK AND CREAM MKTD. BY PRODUCERS: QNTY., PRICE AND CASH RECEIPTS, MICH. 1970-78

Year	Milk Sold To Plants And Dealers			Cream Sold To Plants And Dealers			Milk Sold Directly To Consumers		
	Quantity	Price Per 100 Lbs.	Cash Receipts	Quantity Milkfat	Price Per Lb. Fat	Cash Receipts	Quantity	Price Per Quart	Cash Receipts
	Mil. Lbs.	Dollars	1,000 Dol.	1,000 Lbs.	Ct.	1,000 Dol.	1,000 Qts.	Ct.	1,000 Dol.
1978	4,675	10.50	490,875	113	90	102	12,093	47.0	5,684
1977	4,625	9.65	446,313	716	105	752	12,093	43.0	5,200
1976	4,490	9.85	442,265	754	100	754	11,628	41.0	4,767
1975	4,280	8.56	370,220	1,137	96	1,092	11,628	43.0	5,000
1974	4,235	8.25	349,388	1,140	74	844	9,302	39.0	3,628
1973	4,485	7.20	322,920	1,197	78	934	4,186	38.0	1,591
1972	4,810	6.18	297,258	1,213	71	861	4,651	30.0	1,395
1971	4,635	5.96	276,246	1,646	71	1,169	5,581	26.5	1,479
1970	4,460	5.81	259,126	785	70	550	5,116	26.5	1,356

Table 21. MARKETINGS, INCOME, AND VALUE OF MILK PRODUCTION, MICHIGAN 1970-78.

Year	Combined Marketings of Milk and Cream				Used For Milk Cream and Butter Where Produced		Gross Producer Income 3/	Value of Milk Produced 2/ 4/
	Milk Utilized	Average Returns 1/		Cash Receipts From Marketings	Utilized	Value 2/		
		Per 100 Pounds Milk	Per Pound Milkfat					
	Mil. Lbs.	Dollars		1,000 Dol.	Mil. Lbs.		1,000 Dollars	
1978	4,704	10.56	2.86	496,661	27	2,851	499,512	506,141
1977	4,670	9.68	2.62	452,265	29	2,807	455,072	460,865
1976	4,535	9.87	2.67	447,786	28	2,764	450,550	455,994
1975	4,335	8.68	2.34	376,314	26	2,257	378,571	382,875
1974	4,285	8.26	2.23	353,857	26	2,148	356,005	359,310
1973	4,526	7.19	1.96	325,445	42	3,020	328,465	333,328
1972	4,852	6.17	1.66	299,514	44	2,715	302,229	306,402
1971	4,691	5.95	1.63	278,894	35	2,083	280,977	285,362
1970	4,492	5.81	1.59	261,032	40	2,324	263,356	267,376

1/ Cash receipts divided by milk for milkfat represented in combined marketings.

2/ Valued at average returns per 100 pounds of milk in combined marketings of milk and cream.

3/ Cash receipts from marketings of milk and cream plus value of milk used for home consumption and producer-churned butter.

4/ Includes value of milk fed to calves.

Table 22. MANUFACTURED DAIRY PRODUCTS: PRODUCTION OF SELECTED PRODUCTS, MICHIGAN & U.S.

Product	Michigan			United States		
	1978	1977	1976	1978	1977	1976
	Thousand Pounds					
BUTTER	28,455	34,791	27,953	994,290	1,085,595	978,631
CHEESE						
American	20,796	19,046	18,431	2,074,202	2,043,063	2,048,828
Cheddar	1/	1/	1/	1,505,522	1,517,541	1,524,052
Other American	1/	1/	1/	568,680	525,522	524,776
Italian	1/	1/	1/	875,310	793,489	747,405
All Other Types	1/	1/	1/	44,194	44,388	44,376
COTTAGE CHEESE						
Curd	35,161	35,054	34,398	688,399	684,481	711,141
Creamed	53,582	55,878	55,774	870,529	877,978	874,605
Low Fat	1,356	1,267	1,184	153,139	139,007	135,364
CONDENSED MILK						
Sweetened, Bulk						
Whole	1/	1/	1/	80,678	78,240	89,207
Skim	1/	1/	1/	44,634	63,738	51,939
Unsweetened, Bulk						
Whole	1/	1/	1/	144,742	166,113	181,421
Skim				717,209	782,555	720,988
EVAPORATED & CONDENSED						
Whole Milk, Case Goods	66,386	150,940	82,560	787,866	818,927	932,123
DRY MILK						
Non-Fat for Human Food	48,469	49,274	41,985	920,422	1,106,619	926,183
Dry Skim for Animal Feed	1/	1/	503	6,488	7,884	5,915
	Thousand Gallons					
FROZEN PRODUCTS & MIXES						
Ice Cream	34,909	34,692	34,372	815,360	809,849	818,241
Ice Milk	12,948	12,895	13,689	310,063	307,949	286,176
Milk Sherbet	1,717	2,087	1,911	48,034	49,783	49,589
Ice Cream Mix	17,905	17,122	18,084	418,025	412,350	420,159
Ice Milk Mix	8,280	8,277	8,714	192,229	190,559	178,971
Milk Sherbet Mix	1,112	1,268	1,328	31,926	32,389	32,435

1/ Not Published

DAIRYING in MICHIGAN COUNTIES

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Michigan has a great diversity of agriculture and dairying is an important part of that industry. As the accompanying graph shows, the cash farm receipts for dairy products and cattle were over 500 million dollars in 1978. The dairy industry is a stable, positive contributor to the Michigan economy.

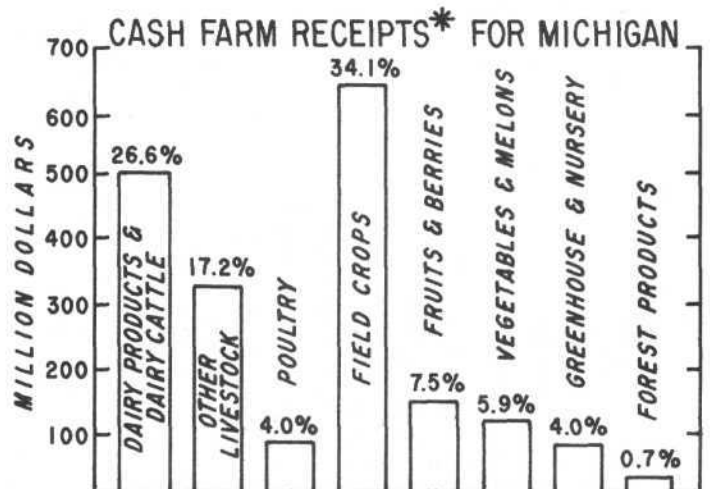
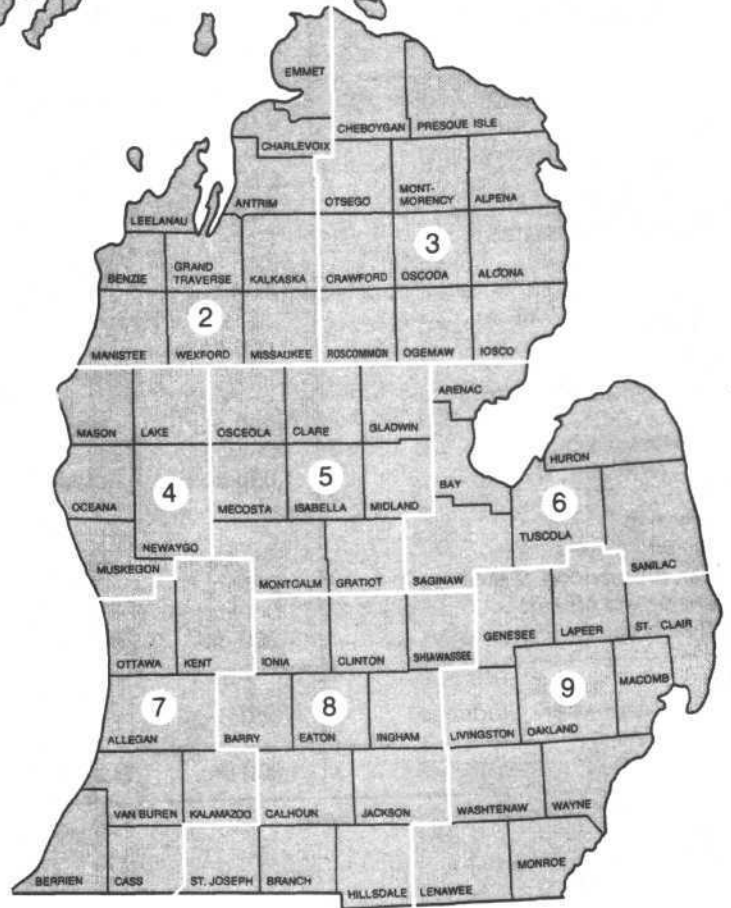
Dairy farms are widely dispersed throughout Michigan and dairying is an important part of the economy of most of the counties in Michigan. The dairy industry can best be understood by observing its relationship to the local environment. Michigan dairy farmers are first, crop producers. They produce corn, alfalfa and similar crops and then market these crops through the dairy cow. The end result is a pleasing and highly nutritious human food.

The state is divided into 9 crop reporting districts. The districts can be advantageously used to examine the dairy industry in greater depth. The district and county data afford the opportunity to better understand the characteristics of the various areas of Michigan and relate dairying to the agricultural diversity that exists.

Crop Reporting Districts

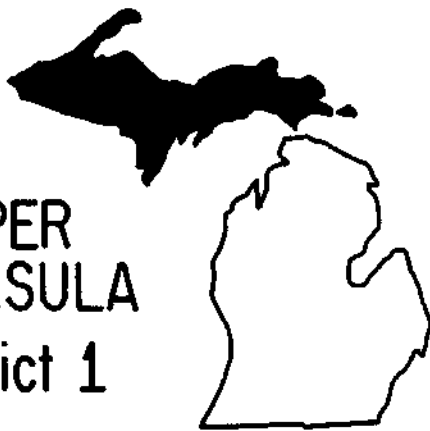
The state is divided into 9 crop reporting districts. The purpose of division is to make easier comparisons of agricultural progress. The crop reporting districts are numbered from north to south with district 1 in the U.P. to district 9 in the southeast. Each district has within itself more homogeneous agriculture than does the state as a whole. Different soil types, fertility, precipitation, and length of growing season make each district unique.

- | | |
|-------------------|-----------------|
| 1 Upper Peninsula | 6 East Central |
| 2 Northwest | 7 Southwest |
| 3 Northeast | 8 South Central |
| 4 West Central | 9 Southeast |
| 5 Central | |



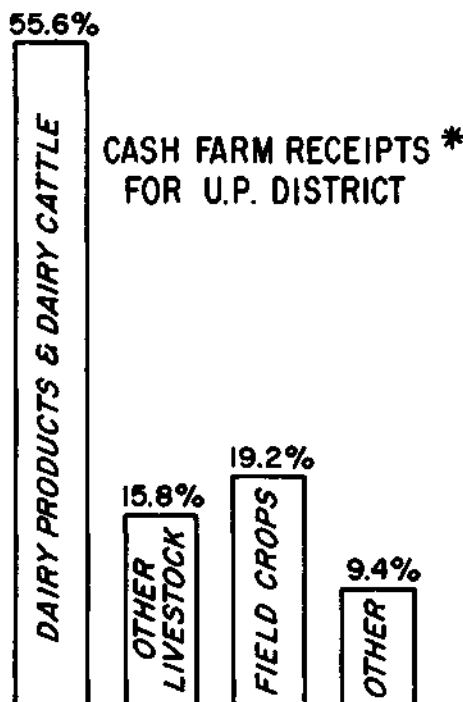
Bureau of Economic Analysis, Regional Economic Information System, 1977.
*Dairy cattle sales estimate based on Telfarm data. Business Analysis Summary for Specialized Michigan Dairy Farms, 1977.

UPPER PENINSULA District 1



The Upper Peninsula accounts for 29% of the land area of Michigan but contains less than 5.5% of the farmland in the state. Of the 10.5 million acres in the U.P. less than 300,000 are in actual cropland.

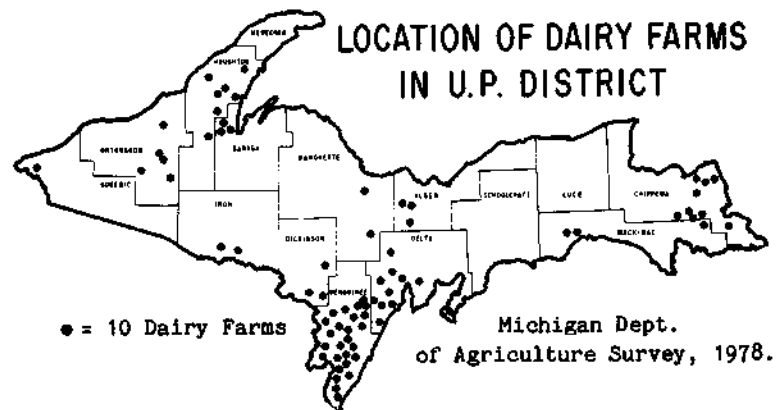
Dairy farming is the primary agricultural industry in the Upper Peninsula of Michigan with over 55% of cash farm receipts coming from the sale of dairy products and cattle. Field crops and livestock other than dairy together make up another 35% of the cash farm receipts while forest product sales from farms accounts for 5% of the cash farm receipts for the U.P. Poultry, fruit, berries, vegetables, greenhouse and nursery production are of relatively minor importance to U.P. agriculture and contribute 4.4% of the total cash farm receipts.



Bureau of Economic Analysis, Regional Economic Information System, 1977.

*Dairy cattle sales estimate based on Telfarm data. Business Analysis Summary for Specialized Michigan Dairy Farms, 1977.

Dairy farming is thinly dispersed throughout the Upper Peninsula with concentrations of dairy farms located where the soil will support crop production at an economical level. The greatest concentration of dairying is in the south central section of the U.P. Fifty-one percent of the dairy farms are located in central and southern Menominee County, western Delta and the southeast corner of Dickinson County and are responsible for 56% of the milk production from the U.P. Several other distinct production areas are notable such as around Calumet and Chassell in Houghton County, Engadine in Mackinac County and Pickford and Sault Ste. Marie in Chippewa County. Two U.P. counties, Luce and Keweenaw, have no dairy herds.



A 1978 Michigan Department of Agriculture survey found 21,000 dairy cows on 780 dairy farms producing 230.3 million pounds of milk valued at 23.4 million dollars. The average dairy farm in the U.P. consisted of 27 cows producing 295,000 pounds of milk valued at \$30,000. Over 47% of the farms had less than 25 cows of which 40 had less than 10 cows. Another 37.9% of the dairy farmers kept between 25 and 49 cows while 12.7% had herd sizes ranging from 50 to 99 cows. Two percent of the dairy farms were over 100 cows. The characteristic dairy herd in the U.P. is less than 50 cows and is housed in a stanchion barn.

DAIRY HERD SIZES IN U.P. DISTRICT

Dairy Cows per Farm	Farms		Cows	
	Number	%	Number	%
Less than 25	369	47.4	4,790	22.8
25 to 49	296	37.9	8,960	42.6
50 to 99	99	12.7	5,600	26.7
100 to 199	16	2.0	1,650	7.9
200 and over	--	--	--	--

Michigan Dept. of Agriculture Survey, 1978.

NORTHWEST District 2

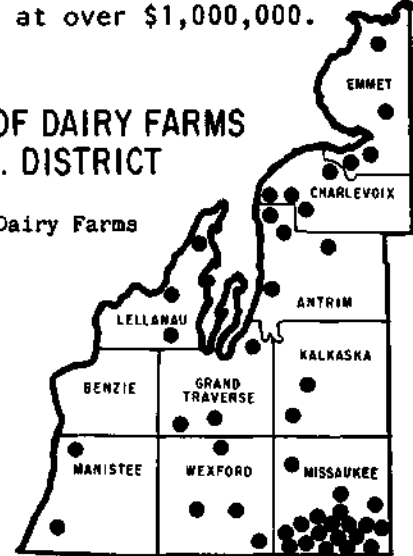


Fruit production predominates the agriculture in the more western and southern portions of the Northwest district and accounts for over 46% of the cash farm receipts. Leelanau, Grand Traverse, Antrim, Manistee and Benzie Counties generated over 99% of the income from the sale of fruit crops for the district. A unique combination of climatic and soil conditions are responsible for the competitive advantage for fruit production in the region. The sale of dairy products and cattle contributed 25% of the cash farm income for the district. Field crops and livestock other than dairy make up another 20% of these receipts. Poultry accounts for 3.3% and vegetables, forestry products, greenhouse and nursery sales combine for 5.6% of the cash farm receipts in the Northwest.

Dairying is dispersed throughout the Northwest district with a particularly heavy concentration of dairy farms in southern Missaukee County. The dairy herds located within approximately 12 miles of McBain and Falmouth in Missaukee County produce 47% of the milk from the district. Likewise those grouped around East Jordan in Charlevoix County and Ellsworth in Antrim County produce another 20% of the milk. The dairy herds in Wexford, Emmet, Grand Traverse and Leelanau are such that each county produces in excess of 10 million pounds of milk per year valued at over \$1,000,000.

LOCATION OF DAIRY FARMS IN N.W. DISTRICT

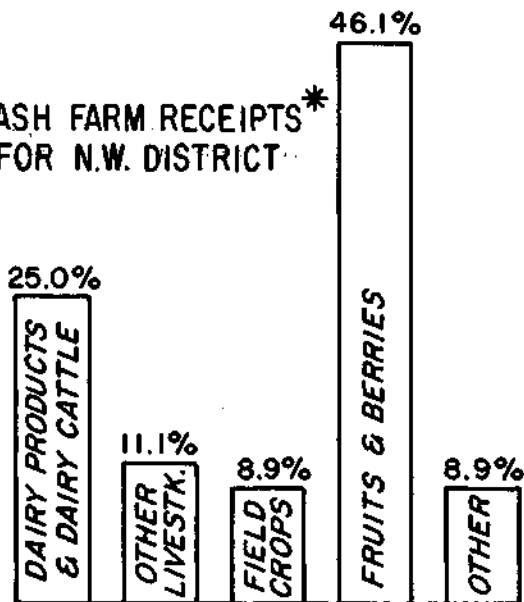
● = 10 Dairy Farms



Michigan Dept. of Agriculture Survey, 1978.

The 1978 survey by the Michigan Department of Agriculture recorded 460 dairy farms in the Northwest district producing 195.9 million pounds of milk from 15,700 cows with a value of slightly less than 20.5 million dollars. There was a 34 cow average for the herds in the district with an average value of milk production of \$44,500. The range in herd size was such that 36.3% of the farms had less than 25 cows, 38.3% had between 25 and 49 cows and 20.0% between 50 and 99 cows. Twenty-five of the herds (5.4%) had over 100 cows. Sixty-nine percent of the cows in the district were in herds ranging from 25 to 99 cows.

CASH FARM RECEIPTS* FOR N.W. DISTRICT



The 301,500 acres of cropland in the Northwest district constitutes 10% of the total land area. The amount of cropland varies from over 61,000 acres in Missaukee County to 7,700 acres in Kalkaska County. And from 18% of the total land area in Leelanau County to 2% in Kalkaska.

DAIRY HERD SIZES IN N.W. DISTRICT

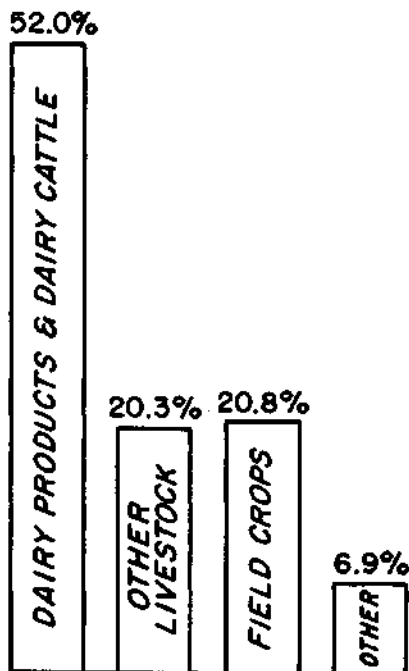
Dairy Cows per Farm	Farms		Cows	
	Number	%	Number	%
Less than 25	167	36.3	2,180	13.9
25 to 49	176	38.3	5,320	33.9
50 to 99	92	20.0	5,450	34.7
100 to 199	25	5.4	2,750	17.5
200 and over	--	--	--	--

NORTHEAST District 3



The 11 counties that make up the Northeast district have a total land area of over 4.1 million acres of which 6.6% is cropland. The counties vary from those like Alpena, Ogemaw and Presque Isle which each have about 12% of the total land area as cropland to Crawford and Roscommon with less than 1% of the county area as cropland.

Dairy farming is the primary agricultural industry in the Northeast district with 52% of the cash farm receipts coming from the sale of dairy products and cattle. Both livestock other than dairy and field crops each contribute slightly over 20% of the cash farm receipts for the district.

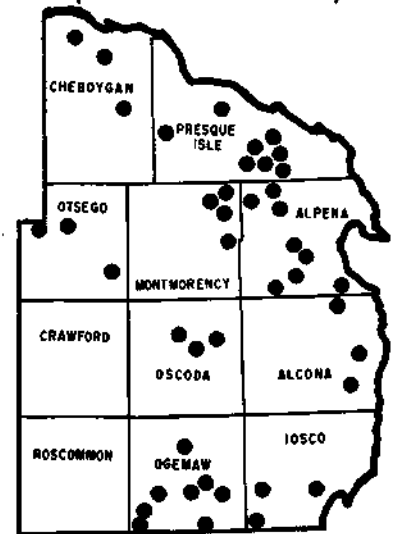


CASH FARM RECEIPTS* IN N.E. DISTRICT

Dairy farms are generally located where the soil is capable of supporting economical crop production. The grouping of dairy farms in the NE district reinforces this concept. Ogemaw is the leading dairy county in the district as measured by total milk production. The farms in Ogemaw are primarily in the southern half of the county and are a part of the dairy farm concentration which includes those in southern Iosco and those throughout Arenac County of the East Central district. A second notable grouping of dairy farms occurs near the concurrent of Presque Isle, Alpena and Montmorency Counties and forms the largest producing area in the NE district with about 58 million pounds of milk produced annually in the area.

LOCATION OF DAIRY FARMS IN N.E. DISTRICT

● = 10 Dairy Farms



Michigan Dept. of Agriculture Survey, 1978.

The Michigan Department of Agriculture survey of 1978 reported 440 dairy farms in the NE district. These farmers maintained 15,500 cows that produced 183 million pounds of milk at a value of almost 19.3 million dollars. The average dairy herd consisted of 35 cows producing about 416,000 pounds of milk valued at \$43,800. The largest group of dairy farmers kept less than 25 cows. These 187 dairy farmers averaged slightly over 14 cows each. Another 155 farmers maintained herds between 25 and 49 cows while 70 dairy farmers had herds of over 50 but less than 99 cows. There were 28 herds in the district that were larger than 100 cows.

DAIRY HERD SIZES IN N.E. DISTRICT

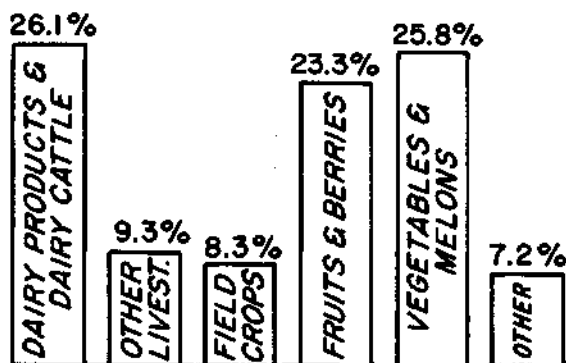
Dairy Cows per Farm	Farms		Cows	
	Number	%	Number	%
Less than 25	187	42.5	2,690	17.4
25 to 49	155	35.2	4,960	32.0
50 to 99	70	15.9	4,570	29.5
100 to 199	28	6.4	3,280	21.1
200 and over	--	--	--	--

WEST CENTRAL District 4



The West Central district has a total land area of 1.9 million acres of which nearly 300,000 acres are cropland. Oceana County has 24% of its total area as cropland where as Lake County has only 3.6% of the land available for crop production. The remaining three counties have between 16% and 20% of the land area as cropland.

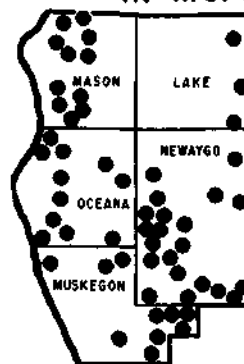
Dairying, fruit and vegetable crops are of nearly equal importance in generating cash farm receipts in the West Central district and each are about 25% of the total. Variation exists between the counties both in the quantity of agricultural production and in the sources of cash farm receipts. Oceana and Newaygo Counties are each responsible for about 30% of the cash farm receipts produced in the district, Muskegon for 22%, Mason for 16% and Lake for less than 2%. Fruit is an important crop for those counties bordering Lake Michigan and vegetable production contributes heavily in Oceana, Newaygo and Muskegon Counties and to a lesser extent in Mason County.



CASH FARM RECEIPTS* IN W.C. DISTRICT

Dairy farms lie in two major belts within the W.C. district. The first starts at the eastern edge of Muskegon County and runs northerly through western Newaygo County on into east central Oceana County. The second concentration begins in the northwest corner of Muskegon County and extends north through Oceana and Mason Counties.

LOCATION OF DAIRY FARMS IN W.C. DISTRICT



● = 10 Dairy Farms

Michigan Dept. of Agriculture Survey, 1978.

A total of 550 dairy farms were reported by the 1978 survey of the Michigan Department of Agriculture. These dairy farms kept 18,800 dairy cows producing over 218 million pounds of milk valued at nearly 23 million dollars. The average dairy farm in the W.C. district had 34 cows with production valued at \$41,700. Nearly 70% of the cows were maintained on the 308 farms keeping between 25 and 99 cows. The 220 dairy farms with less than 25 cows averaged slightly over 14 cows per farm. Twenty-two dairy farmers had over 100 cows and one of these exceeded 200 cows.

DAIRY HERD SIZES IN W.C. DISTRICT

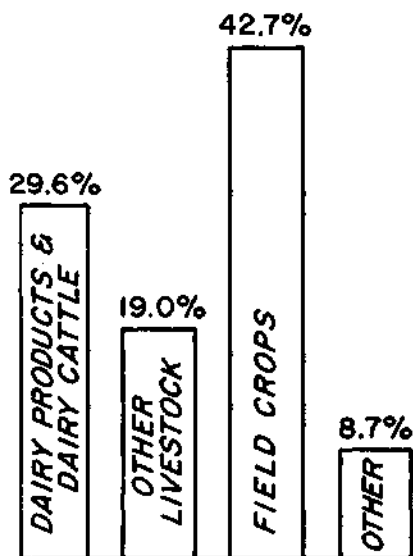
Dairy Cows per Farm	Farms		Cows	
	Number	%	Number	%
Less than 25	220	40.0	3,150	16.8
25 to 49	182	33.1	5,560	29.6
50 to 99	126	23.0	7,390	39.2
100 to 199	21	3.7	2,360	12.6
200 and over	1	.2	340	1.8

CENTRAL District 5



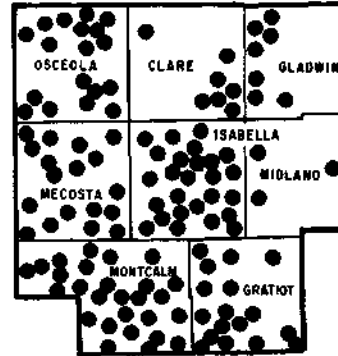
The Central district can best be described as a field crop and livestock production area. Field crops contribute 42.7% of the cash farm receipts, dairy products and dairy cattle sales furnish 29.6% and livestock other than dairy another 19%. Vegetable crops and poultry sales each contribute 3.5% of the cash farm receipts. Fruit crops, greenhouse sales, nursery and forest products are of relatively minor importance to the Central district.

There are 2.9 million acres in the Central district of which 30% are cropland. The highest percent of tillable land is in Gratiot County where 63% of the total land area is in crop production. Isabella and Montcalm Counties each have approximately 40% of the land area in cropland while Gladwin has 16%, Clare at 12% and the remaining counties have 20% of their land area in cropland.



CASH FARM RECEIPTS* IN CENTRAL DISTRICT

Dairy herds are generally dispersed throughout Osceola, Mecosta, Isabella and Montcalm Counties and the western and southern edge of Gratiot County. As soils improve in quality cash crop farming replaces dairying at an increasing rate. Such is the case in northeast Gratiot County and southern Midland County. Dairy herds in Clare and Gladwin Counties are located in a band starting in the southeast corner of Clare and extending northeast through Gladwin. The location of herds is the direct result of soils capable of supporting the economical production of crops.



LOCATION OF DAIRY FARMS IN CENTRAL DISTRICT

● = 10 Dairy Farms

Michigan Dept. of Agriculture Survey, 1978.

The Michigan Department of Agriculture survey of 1978 reported 1,200 dairy farms in the Central district. Isabella with 10,900 cows and 122.8 million pounds of milk per year is the leading dairy county in the district. Montcalm with smaller herds reported a slightly greater number of dairy farmers. The 45,600 dairy cows in the Central district produced 530.9 million pounds of milk valued at 55.8 million dollars. The average herd of 38 cows produced 440,000 pounds of milk valued at \$46,500.

The breakdown of herds by size indicates approximately 1/3 of the farms were in each of the two smaller categories. Herds between 50 and 99 cows accounted for 23% of the total dairy farms in the district. There were 93 herds over 100 cows with 2 of these exceeding 200 cows. Fifty-one percent of the cows in the district were in herds with 50 cows or more.

DAIRY HERD SIZES IN CENTRAL DISTRICT

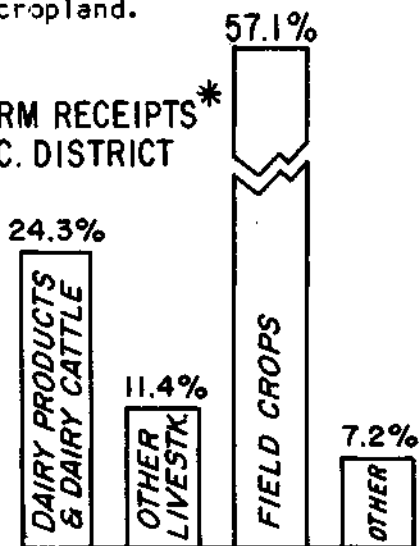
Dairy Cows per Farm	Farms		Cows	
	Number	%	Number	%
Less than 25	400	33.3	5,140	11.3
25 to 49	431	35.9	13,310	29.2
50 to 99	276	23.0	16,470	36.1
100 to 199	91	7.6	10,210	22.4
200 and over	2	.2	470	1.0

EAST CENTRAL District 6



The East Central district surrounds the Saginaw Bay and encompasses 2.7 million acres with over 54% of the area as cropland. The district includes the "Thumb" with the greatest concentration of dairy farms in Michigan as well as the rich "Saginaw Valley" with a high percent of cash crop farming. Each of the counties in the district with the exception of Arenac County (at 25%) has over 50% of the land area in crop production. In Huron County 67% of the land area is cropland.

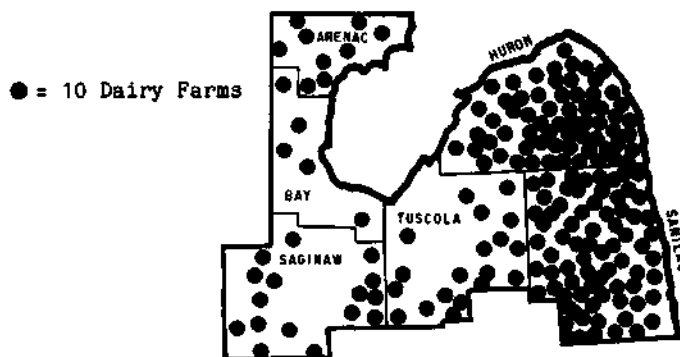
CASH FARM RECEIPTS* FOR E.C. DISTRICT



Field crop sales are the greatest contributor of cash farm receipts in the E.C. district and make up 57% of the total. Planted crop acreage in 1978 included approximately 30% to corn, 25% to dry beans, 25% in hay crops, 12% to soybeans and 6% each in sugarbeets, wheat and small grains. Dairy products and dairy cattle account for 24.3% of the cash farm receipts for the district while those for livestock other than dairy are 11.4%. Poultry sales account for 3.5% of the cash farm receipts and vegetable crops for another 2.5%. Fruit, greenhouse sales, nursery and forest products are of relative minor importance.

Sanilac and Huron Counties are the number one and two dairy counties in Michigan and together contribute 72% of the dairy receipts for the E.C. district. Likewise sizeable dairy industries exist in Tuscola, Saginaw and Arenac Counties. The 1978 survey by the Michigan Department of Agriculture recorded 740 dairy farms in Sanilac County and another 640 in Huron County. These dairy farmers housed 50,400 cows and produced milk valued at 67 million dollars.

LOCATION OF DAIRY FARMS IN E.C. DISTRICT



Michigan Dept. of Agriculture Survey, 1978.

The 1,870 dairy farmers in the East Central district maintained 69,500 cows and produced 862.5 million pounds of milk valued at 90.6 million dollars. The average dairy herd was 37 cows and produced milk valued at \$48,450. There were 598 herds with less than 25 cows. They represented 32% of the dairy farmers in the district. Another 39.8% of the dairy farms kept between 25 to 49 cows while 22.3% of the farms were between 50 and 99 cows. A total of 110 dairy herds were 100 or more cows in size with 10 of these having 200 or more dairy cows.

DAIRY HERD SIZES IN E.C. DISTRICT

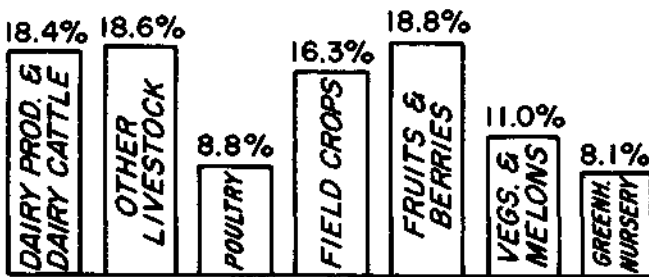
Dairy Cows per Farm	Farms		Cows	
	Number	%	Number	%
Less than 25	598	32.0	8,380	12.1
25 to 49	744	39.8	22,810	32.8
50 to 99	418	22.3	24,840	35.7
100 to 199	100	5.4	11,250	16.2
200 and over	10	.5	2,220	3.2

SOUTHWEST District 7



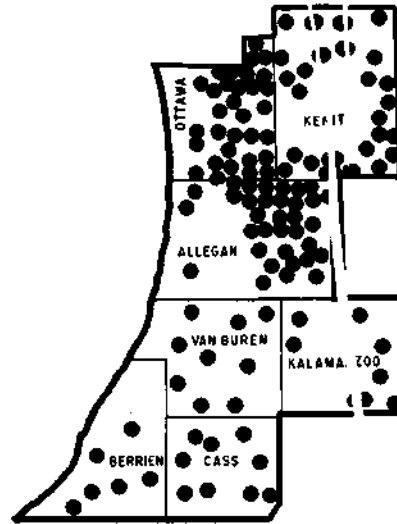
The Southwest district is the most diverse agricultural sector of Michigan. Dairy product and cattle sales, livestock other than dairy, fruit and berry crops and field crops are all comparable as sources of cash farm receipts. Each contributes between 16% and 19% of the total. Vegetable crops account for 11% of total receipts while poultry and greenhouse and nursery sales each contribute about 8% of the total cash farm receipts for the district. Berrien, Van Buren, Kent and to a lesser extent Ottawa and Allegan are major fruit counties. Likewise each is a major vegetable producing area. Kalamazoo and Ottawa Counties have sizeable greenhouse and nursery industries while Ottawa and Allegan are the leading poultry producing counties in Michigan.

CASH FARM RECEIPTS* FOR S.W. DISTRICT



The Southwest district encompasses a land area of nearly 2.9 million acres with 38% or 1.1 million acres as cropland. The percent of cropland varies between 31% for Kent County to 46% for Cass County.

Ottawa, Allegan and Kent Counties are among the top seven dairy counties in Michigan. A heavy concentration of dairy herds exists in eastern Allegan, the greater part of Ottawa and that part of Kent County not occupied by the City of Grand Rapids. Dairy herds are dispersed to a lesser extent throughout the remaining four counties in the Southwest district.



LOCATION OF DAIRY FARMS IN S.W. DISTRICT

Michigan Dept. of Agriculture Survey, 1978.

The 1978 survey by the Michigan Department of Agriculture reported 1,230 dairy farms in the SW district. These farms housed 54,700 cows producing 653.4 million pounds of milk valued at 69.5 million dollars. Herd sizes were somewhat larger than those in the districts to the north. The average herd had 44 dairy cows producing 530,000 pounds of milk with a value of \$56,500. The breakdown by herd size indicates that 76.3% of the herds to be over 25 cows. There were 104 dairy herds or 8.4% over 100 cows with 14 of these exceeding 200 cows.

DAIRY HERD SIZES IN S.W. DISTRICT

Dairy Cows per Farm	Farms		Cows	
	Number	%	Number	%
Less than 25	292	23.7	4,260	7.8
25 to 49	457	37.3	14,500	26.5
50 to 99	377	30.6	22,340	40.8
100 to 199	90	7.3	10,400	19.0
200 and over	14	1.1	3,200	5.9

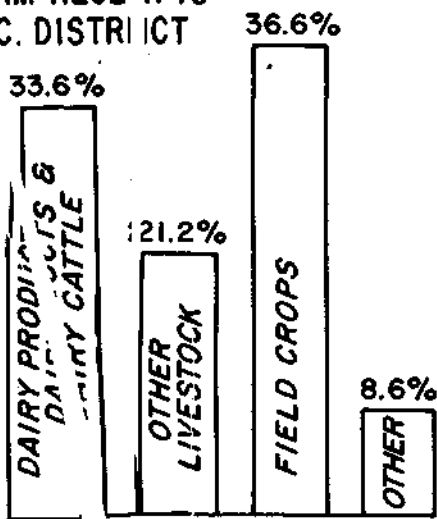
SOUTH CENTRAL District 8



Dairying is generally dispersed throughout the South Central district. The accompanying map indicates the location of herds in the district. Those areas devoid of dairy farms are in many instances metropolitan areas such as Lansing, Jackson and Battle Creek. In other cases such as with western Barry County the soil is poorly equipped to support economical crop production.

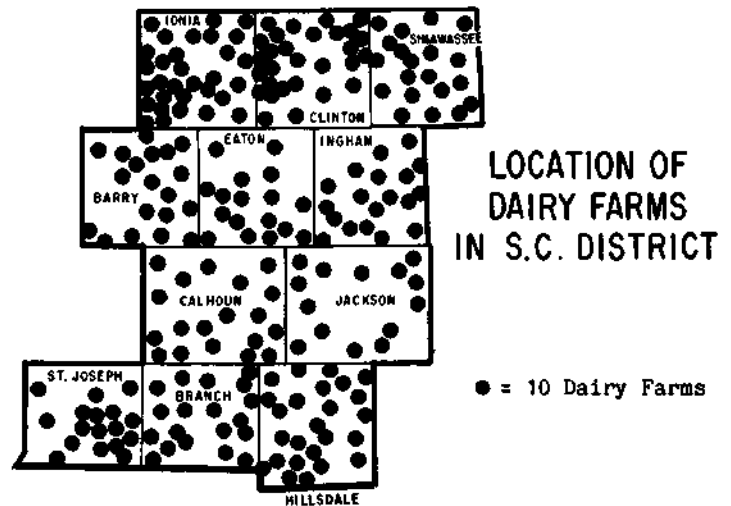
The cash farm receipts for the South Central district were generated by the sale of field crops (36.6% of the total), dairy products and dairy cattle (33.6%) and the sale of livestock other than dairy (21.2%). The remaining 8.6% of cash farm receipts came from poultry, greenhouse and nursery sales, fruit, vegetables and forest products.

CASH FARM RECEIPTS * FOR S. C. DISTRICT



The district has a land area of over 4 million acres with 49% or 2 million acres of cropland. The percent in cropland ranges from 37% for Barry and Jackson Counties to 57% for Branch, Clinton and Shiawassee Counties.

Herd sizes in the S.C. district tend to be larger than those in the districts to the north. Both Ingham and Jackson carry a herd size which averages over 60 cows and in both counties over 17% of the herds exceed 100 cows. On the other end of the scale St. Joseph and Branch Counties have an average herd size closer to 30 cows. The average herd for the South Central district was 45 cows with a production of 535,200 pounds of milk valued at \$56,650.



Michigan Dept. of Agriculture Survey, 1978.

The Michigan Department of Agriculture survey of 1978 reported 2,270 dairy farms in the South Central district. These farms housed 103,000 dairy cows and produced 1.2 billion pounds of milk per year valued at 128.6 million dollars. Clinton County of the S.C. district is the third ranking Michigan county in milk production. Ionia, Ingham and Hillsdale Counties have dairy industries of sufficient size to place them among the top 10 counties in Michigan for total milk production. Each of the counties in the district has a strong dairy industry.

DAIRY HERD SIZES IN S.C. DISTRICT

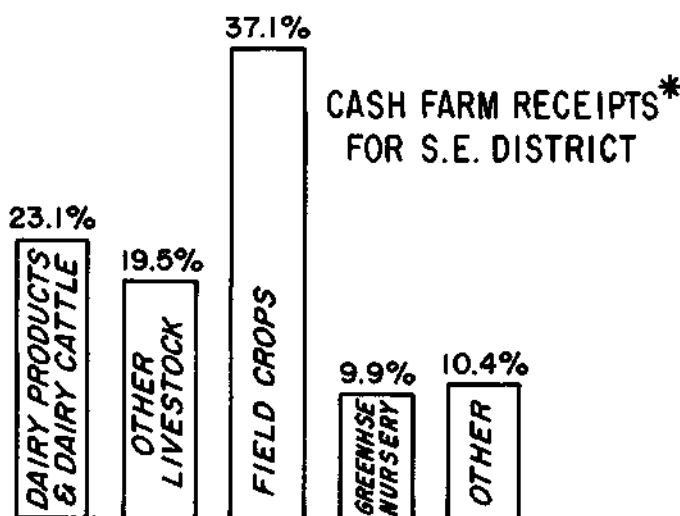
Dairy Cows per Farm	Farms		Cows	
	Number	%	Number	%
Less than 25	701	30.9	8,910	8.7
25 to 49	735	32.4	23,900	23.2
50 to 99	581	25.6	35,330	34.3
100 to 199	229	10.1	27,170	26.4
200 and over	24	1.0	7,690	7.4

SOUTHEAST District 9



The metropolitan corridor extending from Detroit in Wayne County to Flint in Genesee County has pushed dairy farms out of much of the Southeast district. An examination of the accompanying map shows a concentration of dairy farms in northern and eastern Lapeer County, St. Clair County and northeast Macomb County. Another concentration occurs on the west sides of Livingston, Washtenaw and Lenawee Counties. The sparsity of dairy farms in Monroe and eastern Lenawee Counties is more a function of highly productive soils and cash crop farming than metropolitan pressure.

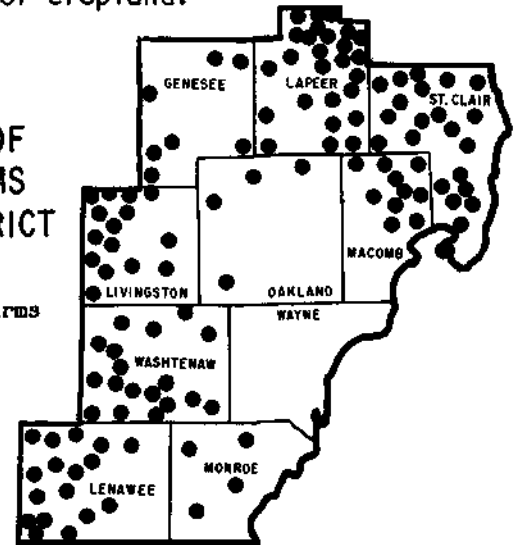
Field crops contribute 37.1% of the cash farm receipts for the SE district. Dairy product and cattle sales furnish 23.1% of the total, while livestock other than dairy accounts for 19.5% of the cash farm receipts. Greenhouse and nursery products are higher for this district than any other with 9.9% of the total. The remaining cash farm receipts come from vegetable crops (5.9%), poultry (2.2%), fruit (2%) and forest products (0.3%).



The SE district has a land area of 4.2 million acres of which 1/3 is cropland. Detroit accounts for the small percent of cropland (8%) in Wayne County. The relatively small percentage of cropland in Oakland (11%), Macomb (23%), Livingston (27%), Genesee (29%), Washtenaw (38%) and Lapeer (40%) Counties is in large part due to the urban pressure for land use. Both Monroe County (57%) and Lenawee County (67%) have a high percent of cropland.

LOCATION OF DAIRY FARMS IN S. E. DISTRICT

● = 10 Dairy Farms



Michigan Dept. of Agriculture Survey, 1978.

The 1978 survey by the Michigan Department of Agriculture reported 1,200 dairy farms with 59,200 cows producing 702.8 million pounds of milk valued at 75.5 million dollars. The herd size is larger for this district than any other with 49 cows producing milk valued at \$62,900. The breakdown by herd size showed 298 farms with less than 25 cows, 461 farms reporting between 25 and 49 cows and 331 dairy farms between 50 and 99 cows. There were 110 herds over 100 cows and 12 of these exceeded 200 cows.

DAIRY HERD SIZES IN S.E. DISTRICT

Dairy Cows per Farm	Farms		Cows	
	Number	%	Number	%
Less than 25	298	24.9	5,250	8.9
25 to 49	461	38.4	16,250	27.4
50 to 99	331	27.5	22,240	37.6
100 to 199	98	8.2	11,690	19.7
200 and over	12	1.0	3,770	6.4

DAIRY FARMS, COWS & MILK PRODUCTION IN DISTRICT COUNTIES, 1978.

COUNTY & DISTRICT	Number of Farms	Number of Cows	Cows per Farm	Total Milk Produced	Value of Production
				(000) lbs.	(000) \$
ALGER	33	1,000	30	11,000	1,140
BARAGA	29	600	21	6,900	695
CHIPPEWA	110	2,800	25	29,700	2,980
DELTA	105	2,800	27	31,100	3,110
DICKINSON	32	1,100	34	12,400	1,270
GOGEBIC	14	300	21	3,200	323
HOUGHTON	77	1,500	19	15,500	1,600
IRON	19	300	16	3,100	323
KEWEENAW	--	--	--	--	--
LUCE	--	--	--	--	--
MACKINAC	34	1,200	35	13,800	1,420
MARQUETTE	18	600	33	7,000	722
MENOMINEE	260	7,800	30	85,000	8,700
ONTONAGON	45	900	20	10,500	1,010
SCHOOLCRAFT	4	100	25	1,100	107
<u>UPPER PENINSULA</u>	780	21,000	27	230,300	23,400
ANTRIM	39	1,600	41	20,100	2,080
BENZIE	4	200	50	2,400	244
CHARLEVOIX	44	1,700	39	18,900	1,960
EMMET	41	1,300	32	15,500	1,510
GRAND TRAVERSE	34	1,100	32	14,300	1,490
KALKASKA	18	500	28	5,200	535
LEELANAU	33	800	24	10,200	1,050
MANISTEE	17	300	18	3,100	311
MISSAUKEE	185	6,700	36	89,500	9,530
WEXFORD	45	1,500	33	16,700	1,750
<u>NORTHWEST</u>	460	15,700	34	195,900	20,460
ALCONA	28	900	32	10,200	1,080
ALPENA	84	2,700	32	33,300	3,530
CHEBOYGAN	30	1,200	40	14,900	1,520
CRAWFORD	--	--	--	--	--
IOSCO	34	1,200	35	14,100	1,480
MONTMORENCY	35	1,400	40	14,900	1,620
OGEMAW	81	3,800	47	46,900	4,977
OSCODA	31	1,100	35	13,000	1,370
OTSEGO	34	800	24	9,400	963
PRESQUE ISLE	83	2,400	29	27,200	2,750
ROSCOMMON	--	--	--	--	--
<u>NORTHEAST</u>	440	15,500	35	183,900	19,290

Michigan Dept. of Agriculture Survey, 1978, Michigan Agricultural Reporting Service and Market Milk Administrators.

DAIRY FARMS, COWS AND MILK PRODUCTION IN DISTRICT COUNTIES, 1978.

COUNTY & DISTRICT	Number of Farms	Number of Cows	Cows per Farm	Total Milk Produced (000) lbs.	Value of Production (000) \$
LAKE	26	700	27	7,500	770
MASON	110	3,900	35	45,400	4,700
MUSKEGON	99	4,200	42	48,500	5,160
NEWAYGO	210	7,300	35	85,600	9,060
OCEANA	105	2,700	26	31,300	3,250
<u>WEST CENTRAL</u>	550	18,800	34	218,300	22,940
CLARE	65	2,800	43	33,100	3,480
GLADWIN	70	2,100	30	24,500	2,560
GRATIOT	170	7,100	42	86,800	9,200
ISABELLA	255	10,900	43	122,800	12,920
MECOSTA	175	5,400	31	64,000	6,630
MIDLAND	25	1,000	40	10,800	1,120
MONTCALM	265	9,100	34	105,000	11,070
OSCEOLA	175	7,200	41	83,900	8,830
<u>CENTRAL</u>	1,200	45,600	38	530,900	55,810
ARENAC	89	3,700	42	38,300	4,020
BAY	51	1,900	37	21,800	2,300
HURON	640	19,600	31	246,600	25,300
SAGINAW	160	5,700	36	70,500	7,520
SANILAC	740	30,800	42	394,100	41,750
TUSCOLA	190	7,800	41	91,200	9,710
<u>EAST CENTRAL</u>	1,870	69,500	37	862,500	90,600

Michigan Dept. of Agriculture Survey, 1978, Michigan Agricultural Reporting Service and Market Milk Administrators.

DAIRY FARMS, COWS AND MILK PRODUCTION IN DISTRICT COUNTIES, 1978.

COUNTY & DISTRICT	Number of Farms	Number of Cows	Cows per Farm	Total Milk Produced (000) lbs.	Value of Production (000) \$
ALLEGAN	335	15,200	45	181,500	19,330
BERRIEN	63	2,600	41	30,300	3,230
CASS	89	3,600	40	38,700	4,030
KALAMAZOO	70	4,400	63	51,900	5,460
KENT	260	12,600	48	155,900	16,720
OTTAWA	320	13,100	41	160,400	17,190
VAN BUREN	93	3,200	34	34,700	3,590
<u>SOUTHWEST</u>	1,230	54,700	44	653,400	69,500
BARRY	190	8,200	43	100,400	10,590
BRANCH	185	6,200	34	70,600	7,240
CALHOUN	180	8,400	47	96,600	10,220
CLINTON	190	15,000	52	186,400	19,821
EATON	170	6,100	36	67,300	7,170
HILLSDALE	250	10,700	43	129,800	13,300
INGHAM	190	11,700	62	139,100	15,000
IONIA	310	13,800	45	159,200	17,110
JACKSON	140	8,500	61	96,600	10,370
ST. JOSEPH	170	5,200	31	60,400	6,150
SHIAWASSEE	195	9,200	47	108,600	11,630
<u>SOUTH CENTRAL</u>	2,170	103,000	47	1,215,000	128,601
GENESEE	70	4,400	63	55,700	5,950
LAPEER	255	12,300	48	150,500	16,220
LENAWEE	165	8,700	53	107,200	11,330
LIVINGSTON	145	7,700	53	90,800	9,820
MACOMB	95	3,900	41	45,400	4,890
MONROE	41	1,900	46	21,700	2,310
OAKLAND	40	1,700	43	19,800	2,150
ST. CLAIR	205	8,200	40	88,900	9,510
WASHTENAW	180	10,100	56	119,400	12,940
WAYNE	4	300	75	3,400	370
<u>SOUTHEAST</u>	1,200	59,200	49	702,800	75,490

Michigan Dept. of Agriculture Survey, 1978, Michigan Agricultural Reporting Service and Market Milk Administrators.

DISTRICT SUMMARIES

Dairy Trends In Michigan

LAND AREA AND CROPLAND IN MICHIGAN CROP REPORTING DISTRICTS

DISTRICT	Land Area		Cropland		
	(000) acres	Percent of State	(000) acres	Percent of District	Percent of State
UPPER PENINSULA	10,525	28.9	297	2.8	3.7
NORTHWEST	3,017	8.3	302	10.0	3.8
NORTHEAST	4,130	11.4	274	11.6	3.4
WEST CENTRAL	1,886	5.2	300	15.9	3.7
CENTRAL	2,934	8.1	874	29.8	10.9
EAST CENTRAL	2,703	7.4	1,468	54.3	18.3
SOUTHWEST	2,868	7.9	1,081	37.7	13.5
SOUTH CENTRAL	4,089	11.2	2,004	49.0	25.0
SOUTHEAST	4,210	11.6	1,406	33.4	17.6
STATE TOTALS	36,362	--	8,006	--	--

1974 Census of Agriculture.

DAIRY FARMS, COWS & MILK PRODUCTION IN MICHIGAN CROP REPORTING DISTRICTS, 1978

DISTRICTS	Dairy Farms		Dairy Cows		Cows per Total Milk Farm	Cows Produced	Value of Production
	Number	%	Number	%			
UPPER PENINSULA	780	7.8	21,000	5.2	27	230,300	23,400
NORHTWEST	460	4.6	15,700	3.9	34	195,900	20,460
NORTHEAST	440	4.4	15,500	3.8	34	183,900	19,290
WEST CENTRAL	550	5.5	18,800	4.7	34	218,300	22,940
CENTRAL	1,200	12.0	45,600	11.3	38	530,900	55,810
EAST CENTRAL	1,870	18.7	69,500	17.2	37	862,500	90,600
SOUTHWEST	1,230	12.3	54,700	13.6	44	653,400	69,550
SOUTH CENTRAL	2,270	22.7	103,000	25.6	45	1,215,000	128,601
SOUTHEAST	1,200	12.0	59,200	14.7	49	702,800	75,490
MICHIGAN	10,000	--	403,000	--	40	4,793,000	506,141

Michigan Dept. of Agriculture Survey, 1978, Michigan Agriculture Reporting Service, Market Milk Administrators.

DAIRY HERD SIZES IN MICHIGAN

Dairy Cows per Farm	Farms		Cows	
	Number	%	Number	%
Less than 25	3,232	32.3	44,750	11.1
25 to 49	3,637	36.4	115,570	28.7
49 to 99	2,370	23.7	114,230	35.8
100 to 199	698	7.0	80,760	20.0
200 and over	63	.6	17,690	4.4
Total	10,000	--	403,000	--

Michigan Dept. of Agriculture Survey, 1978.

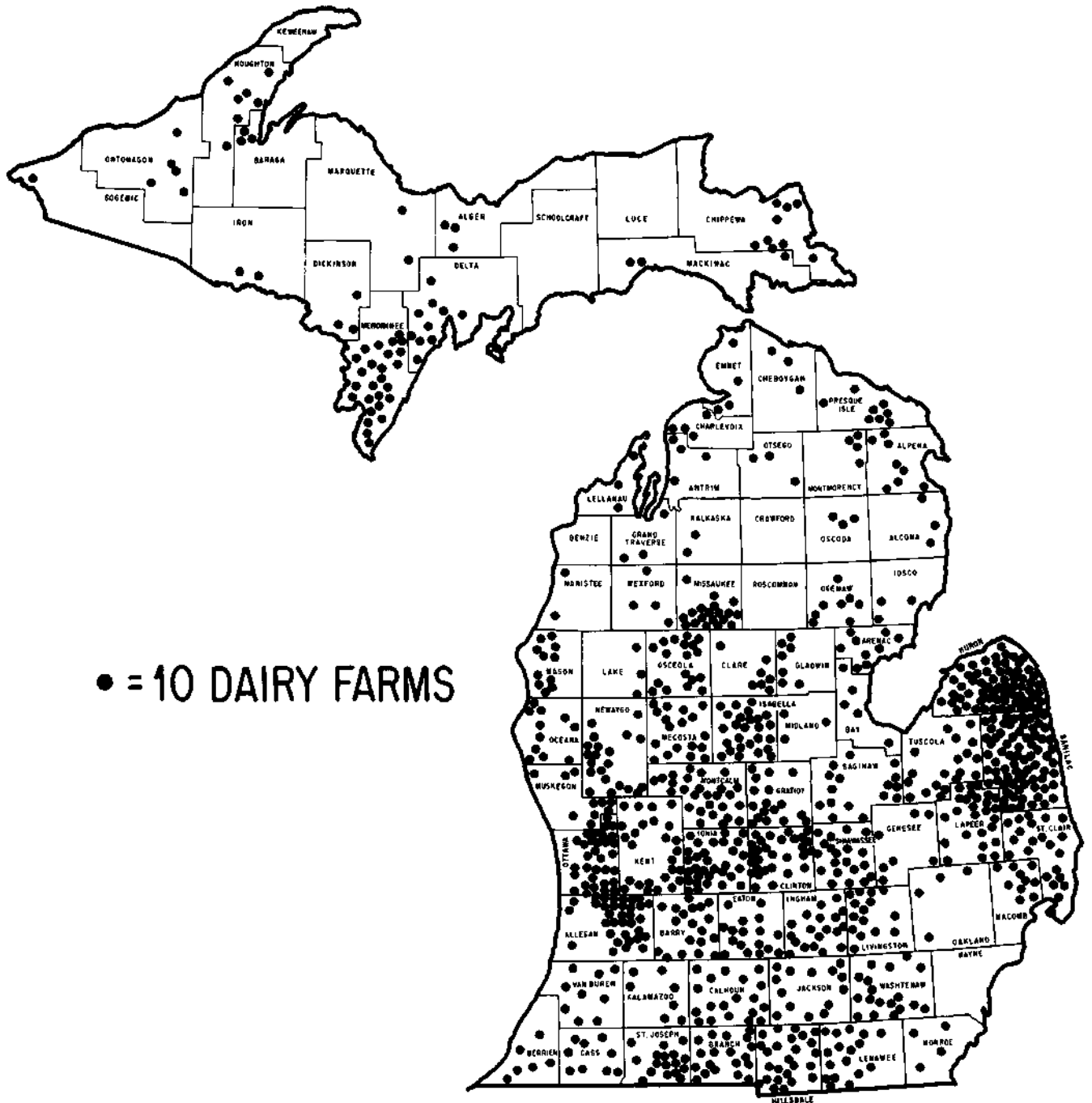
RANKING OF MICHIGAN COUNTIES BY TOTAL MILK PRODUCED, 1978

Rank	County	Total Milk Produced (000) lbs.	Number of Farms	Number of Cows	Cows per Farm	Milk per Cow lbs.	Value of Production (000) \$
1	Sanilac	394,100	740	30,800	42	12,795	41,750
2	Huron	246,600	640	19,600	31	12,582	25,300
3	Clinton	186,400	290	15,000	52	12,427	19,821
4	Allegan	181,500	335	15,200	45	11,941	19,330
5	Ottawa	160,400	320	13,100	41	12,244	17,190
6	Ionia	159,200	310	13,800	45	11,536	17,110
7	Kent	155,900	260	12,600	48	12,373	16,720
8	Lapeer	150,500	255	12,300	48	12,236	16,220
9	Ingham	139,100	190	11,700	62	11,889	15,000
10	Hillsdale	129,800	250	10,700	43	12,131	13,330
11	Isabella	122,800	255	10,900	43	11,266	12,920
12	Washtenaw	119,400	180	10,100	56	11,822	12,940
13	Shiawassee	108,600	195	9,200	47	11,804	11,630
14	Lenawee	107,200	165	8,700	53	12,322	11,330
15	Montcalm	105,000	265	9,100	34	11,538	11,070
16	Barry	100,400	190	8,200	43	12,244	10,590
17	Calhoun	96,600	180	8,400	47	11,500	10,220
18	Jackson	96,600	140	8,500	61	11,365	10,370
19	Tuscola	91,200	190	7,800	41	11,692	9,710
20	Livingston	90,800	145	7,700	53	11,792	9,820
21	Missaukee	89,500	185	6,700	36	13,358	9,530
22	St. Clair	88,900	250	8,200	40	10,841	9,510
23	Gratiot	86,800	170	7,100	42	12,225	9,200
24	Newaygo	85,670	210	7,300	35	11,736	9,060
25	Menominee	85,000	260	7,800	30	10,897	8,700
26	Osceola	83,900	175	7,200	41	11,653	8,830
27	Branch	70,600	185	6,200	34	11,387	7,240
28	Saginaw	70,500	160	5,700	36	12,368	7,520
29	Eaton	67,300	170	6,100	36	11,033	7,170
30	Mecosta	64,000	175	5,400	31	11,852	6,630
31	St. Joseph	60,400	170	5,200	31	11,615	6,150
32	Genesee	55,700	70	4,400	63	12,659	5,950
33	Kalamazoo	51,900	70	4,400	63	11,795	5,460
34	Muskegon	48,500	99	4,200	42	11,548	5,160
35	Ogemaw	46,900	81	3,800	47	12,345	4,977
36	Mason	45,400	110	3,900	35	11,641	4,700
37	Macomb	45,400	95	3,900	41	11,641	4,890
38	Cass	38,700	89	3,600	40	10,750	4,030
39	Arenac	38,300	89	3,700	42	10,351	4,020
40	Van Buren	34,700	93	3,200	34	10,844	3,590
41	Oceana	31,300	105	2,700	26	11,593	3,250
42	Alpena	33,300	84	2,700	32	12,333	3,530
43	Delta	31,100	105	2,800	27	11,107	3,110
44	Clare	33,100	65	2,800	43	11,821	3,480
45	Berrien	30,300	63	2,600	41	11,654	3,230

46	Chippewa	29,700	110	2,800	25	10,607	2,980
47	Presque Isle	27,200	83	2,400	29	11,333	2,750
48	Gladwin	24,500	70	2,100	30	11,667	2,560
49	Bay	21,800	51	1,900	37	11,474	2,300
50	Monroe	21,700	41	1,900	46	11,421	2,310
51	Antrim	20,100	39	1,600	41	12,563	2,080
52	Oakland	19,800	40	1,700	43	11,647	2,150
53	Charlevoix	18,900	44	1,700	39	11,118	1,960
54	Wexford	16,700	45	1,500	33	11,133	1,750
55	Houghton	15,500	77	1,500	19	10,333	1,600
56	Emmet	15,500	41	1,300	32	11,923	1,510
57	Montmorency	14,900	35	1,400	40	10,643	1,620
58	Cheboygan	14,900	30	1,200	40	12,417	1,520
59	Grand Traverse	14,300	34	1,100	32	13,000	1,490
60	Iosco	14,100	34	1,200	35	11,750	1,480
61	Mackinac	13,800	34	1,200	35	11,500	1,420
62	Oscoda	13,000	31	1,100	35	11,818	1,370
63	Dickinson	12,400	32	1,100	34	11,273	1,270
64	Alger	11,000	33	1,000	30	11,000	1,140
65	Midland	10,800	25	1,000	40	10,800	1,120
66	Ontonagon	10,500	45	900	20	11,667	1,010
67	Alcona	10,200	28	900	32	10,200	1,080
68	Leelanau	10,200	13	800	24	10,200	1,050
69	Otsego	9,400	34	800	24	11,737	963
70	Lake	7,500	26	700	27	10,714	770
71	Marquette	7,000	18	600	33	11,667	722
72	Baraga	6,900	29	600	21	11,500	695
73	Kalkaska	5,200	18	500	28	10,400	535
74	Wayne	3,400	4	300	75	11,333	370
75	Gogebic	3,200	14	300	21	10,667	323
76	Manistee	3,100	17	300	18	10,333	311
77	Iron	3,100	19	300	16	10,333	323
78	Benzie	2,400	4	200	50	12,000	244
79	Schoolcraft	1,100	4	100	25	11,000	107
80	Crawford	--	--	--	--	--	--
81	Keweenaw	--	--	--	--	--	--
82	Luce	--	--	--	--	--	--
83	Roscommon	--	--	--	--	--	--

Michigan Dept. of Agriculture Survey, 1978, Michigan Agricultural Reporting Service and Market Milk Administrators.

LOCATION of MICHIGAN DAIRY FARMS



Michigan Dept. of Agriculture Survey, 1978.

MICHIGAN STATE UNIVERSITY



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