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The Changing Scene in Michigan Agriculture
Michigan State University Extension Service
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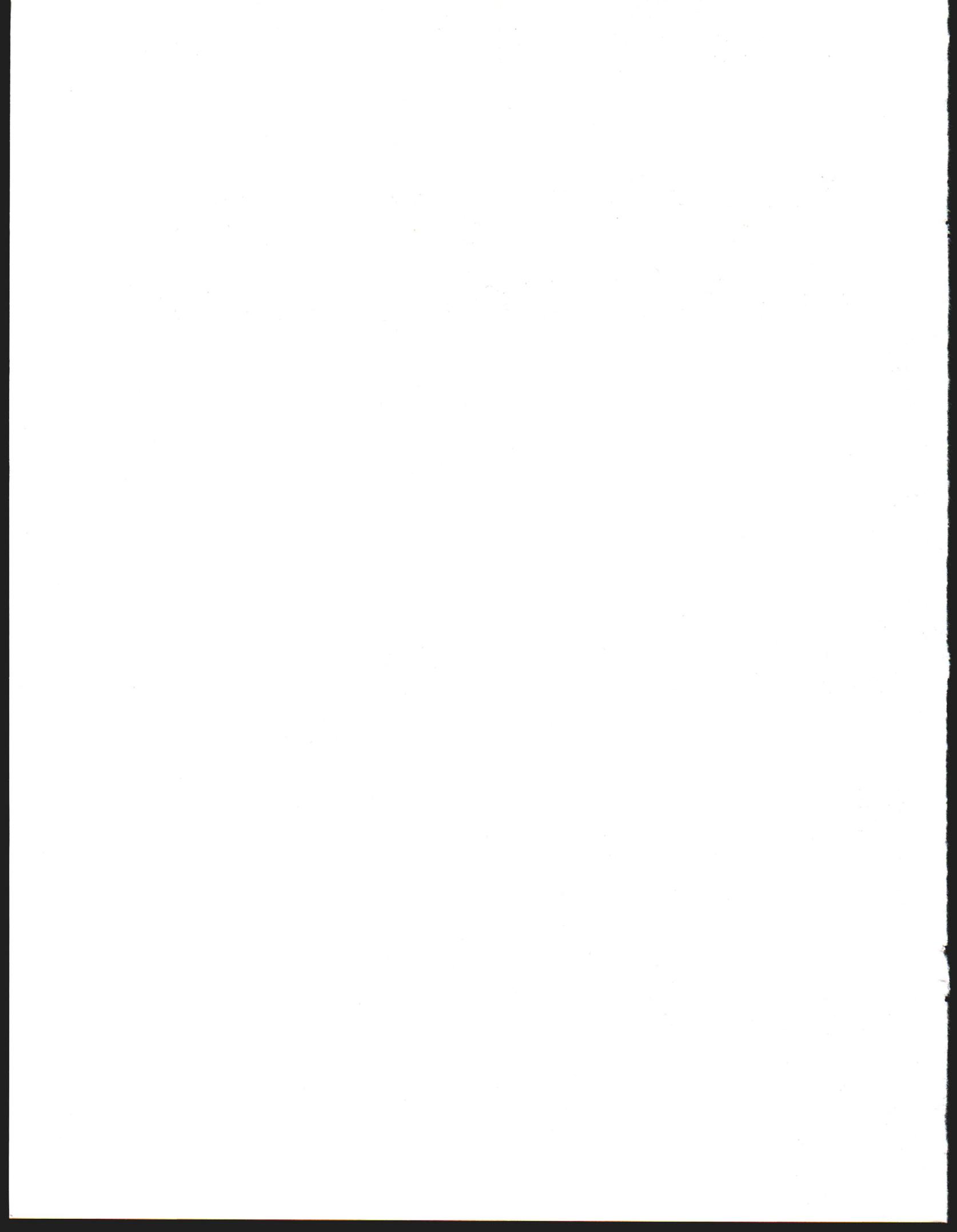
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The Changing Scene in Michigan Agriculture

Cooperative Extension Service
Michigan State University



The Changing Scene in Michigan Agriculture

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Contents

I. INTRODUCTION	1	III. DISTRICT CHANGES AND RECENT COUNTY DATA	23
II. LONG-TERM STATE TRENDS	2	A. Crops	23
A. Highlights	2	B. Livestock	32
B. General	3	C. Farm and Farmer Characteristics	36
C. Crops	6	D. County Figures (Appendix)	46
D. Livestock	10		
E. Economic Aspects	15		

I Introduction

PURPOSES OF THE PUBLICATION

The purposes of this publication are threefold: 1) to show the physical and economic changes in Michigan agriculture for the past 25 years or more, with frequent comparisons with U. S. averages; 2) to portray changes in crop and livestock production and in the economic aspects of agriculture for the nine crop reporting districts within the state in the past decade; and 3) to indicate, using Michigan county maps, the variations in the intensity of production of crops and livestock and differences in farm and farmer characteristics by counties. All of this has been done to show important changes that have taken place so the reader can better appraise the future.

ACKNOWLEDGEMENTS

This publication would not have been possible without the wholehearted encouragement and planning as-

sistance of the late Denio A. Caul, Assistant to the Director of Extension, and for the interest and financial support of Harold M. Riley, Chairman of the Department of Agricultural Economics. The graphs and maps were prepared by Daniel A. Dueweke, as part of his graduate program in the Department of Geography, from data supplied by the author. The isometric map projections were adapted from the "Atlas of Michigan." Personnel of the Michigan Crop Reporting Service were very cooperative in supplying data, especially Steve J. Pscodna. The author also wishes to express appreciation to David L. Watt, agricultural economist with USDA for help with census tapes and programming and to those who provided photographs, as well as to the reviewers, John N. Ferris of the Department of Agricultural Economics and George T. Stachwick, Associate Program Director for Agriculture and Marketing Extension.

II Long-Term State Trends

A. HIGHLIGHTS

1. The number of farms in Michigan declined over 50% from 1950 to 1978!

2. Average farm size rose from 111 to 158 acres from 1950 to 1978 vs. 227 to 400 for U.S. Our gross income per farm was 82% of U.S. in 1950 and 65% in 1977. However, our dairy farms are larger.

3. Land in farms decreased about one-third during this time!

4. Cropland acreage decreased about one-fifth.

5. Michigan crop yields, as a result of improved technology, increased 3.4% annually during 1950-54 to 1960-64, but only 1.3% annually during 1960-64 to 1970-74! National figures were 3.2% and 1.7% respectively.

6. Changes in the production of crops for 1950-54 to 1970-74 was greatest in soybeans (six times greater), corn and sugar beet production doubled, while hay was down 15% and oats down 60%.

7. Total production of all crops increased 20% from 1950-54 to 1960-64, fell 6% for 1965-69, rose 8% for 1970-74 and 10% more for 1975-76.

8. Milk cow numbers declined over 50% from 1950-54 to 1970-74, while the number of beef cows tripled. (There are now half as many beef as milk cows.) The number of cattle fattened doubled, but poultry and sheep numbers declined and hogs remained about the same.

9. Milk production per cow in Michigan increased 225 pounds a year from 1950-54 to 1970-74, and our state generally averaged 600 to 800 pounds per cow above the national average. In total milk production Michigan usually ranked sixth.

10. Total livestock production, by five-year periods, showed a slow downward trend from 109% for 1950-54 to 101% for 1970-74. Michigan's share of the U.S. total declined from 2.15% for 1952-54 to 1.86% for 1970-74, a drop of about one-sixth.

11. Total production of crops and livestock in Michigan, measured by index numbers, has varied little in five-year averages, ranging from 101 for 1950-54 to a high of 108 for 1960-64, then back to 104 for 1970-74. This is in spite of the reduction in land in farms and reduced number of milk cows.

12. There has been increased specialization in farm production and an increase in the number of large farms and their share of total production. In 1974, the 15% of the farms with \$40,000 sales and over pro-

duced 62% of the total agricultural output. Average output per farm doubled for 1950-54 to 1970-74.

13. Farmland prices increased gradually from 1950 to 1970, but have "taken off" since then. Average prices per acre in Michigan rose from \$326 in 1970 to \$860 in 1978! The present value of a medium to large farm can easily amount to a quarter to a half million dollars!

14. In addition, extensive mechanization has occurred, often with large machines. Present machinery investment per farm can run from \$50,000 to \$100,000 on larger farms. Capital requirements for farming have skyrocketed!

15. The total labor input to operate Michigan farms in 1978 is estimated to be only one-third that of 1950. Output per man has been increasing at 6% a year, or twice that in manufacturing! Farmers' investment per man is about twice as much as industry.

16. Prices paid and farm production expenses have increased rapidly in the 70s. Prices paid have doubled since 1967. Total farm production expenses in Michigan increased 3.5% annually from 1950 to 1970 and 10.6% annually from 1970 to 1977!

17. Prices received for farm products in Michigan did not change much from 1950 to 1972 — with five-year averages being 95, 85, 85, then 98 (1965-69). From 1972 to 1973 they rose 119 to 166, then peaked at 195 for 1974. The 1975-77 average was 183.

18. Farm marketings for the state increased from around \$700 million in 1950-54 (and the next two five-year periods) to \$1.2 billion for 1970-74 and \$1.7 billion in 1975-77. Even so, our share of U.S. farm marketings fell from 2.50% in 1950-54 to 1.82% for 1970-74, a decline of one-fourth.

19. Average annual net earnings per farm for the state, by five-year periods, ranged from less than \$2,000 to a high of \$4,735 for 1970-74. (The peak year was 1973). (This was the return for the farmer's labor, that of his family, interest on his equity in the business and management). Earnings, expressed in constant dollars, in 1976 were only slightly higher than 1950-54, in spite of having double the output per farm, three times the output per man and about 10 times the capital investment per farm of 1950-54!

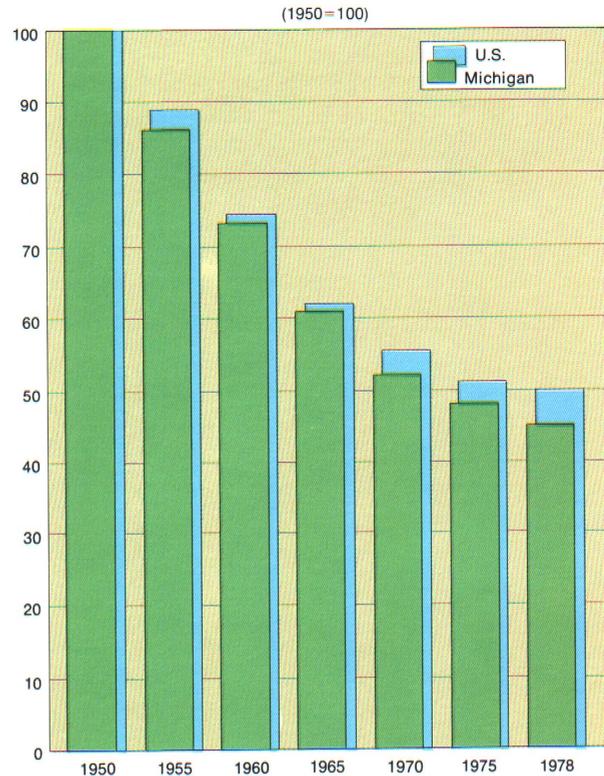
20. Work off the farm for wages is done by over one-half of Michigan's farmers to supplement farm earnings. These wages of the farmer and his family, if averaged over all farms, amounted to around \$5,550 per farm in 1974, according to the Census.

B. GENERAL TRENDS

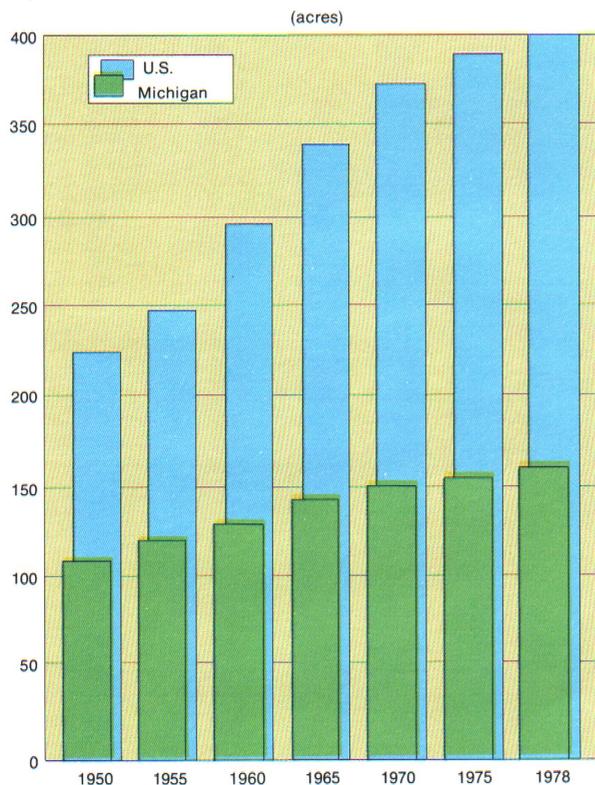
Trends and changes in a) number of farms, b) size of farms, c) total land in farms and d) the amount of harvested cropland in Michigan compared with the U.S. are discussed in this section.

As to **NUMBER OF FARMS** — there were 161,000 in Michigan in 1950, according to the Statistical Reporting Service of the U.S.D.A. There was a decline of 23,000 from 1950 to 1955, followed by 20,000 each of the next two 5-year periods, 14,000 from 1965 to 1970, 8,000 from 1970 to 1975 and at about the same annual rate since, to 72,000 on Jan. 1, 1978, or 45% of 1950 (see chart). The decline in the first 20 years was about 14% for each 5 years, or nearly 3% a year. Since 1970 the decline has averaged about 2%. Michigan's decline was faster than the U.S. average from 1950 to 1955, but has been about the same since, with the 1978 number 45% of 1950.

NUMBER OF FARMS— MICHIGAN AND U.S.



SIZE OF FARMS— MICHIGAN AND U.S.

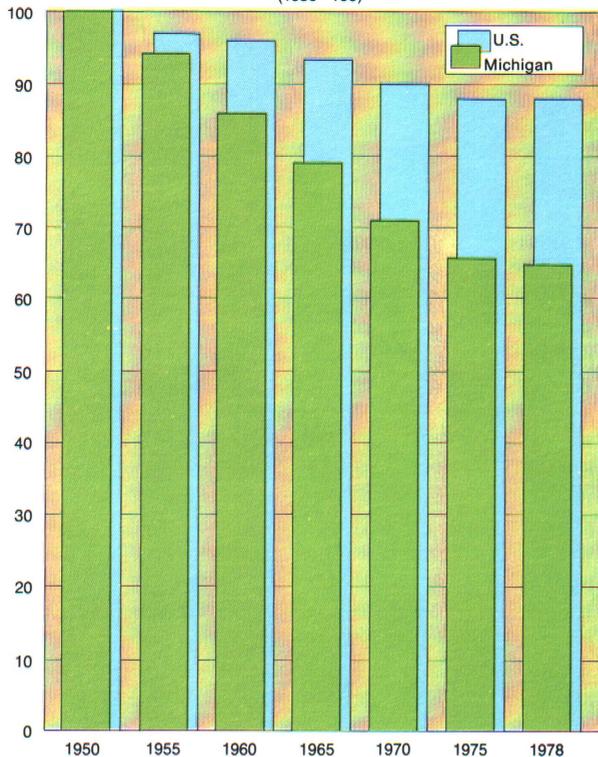


The average **SIZE OF ALL FARMS** in Michigan in 1950 was 111 acres, rising by 1978 to 158 acres, according to the USDA, for an increase of 47 acres, or 42%. Comparable figures for the U.S. were 227 to 400 acres, for an increase of 173 acres, or 76%. Michigan farms were about 50% as large as the U.S. average in 1950 and 40% in 1978. By another measure of size, gross income per farm, Michigan farms were 82% of the U.S. average in 1950-54 and 65% in 1977.

Michigan has a lot of small farms and part-time farmers which tends to lower per farm averages. According to Census reports on farms with sales over \$2,500, which eliminates part of these at least, our 20,091 **cash-grain** farms had 66% of the average sales per farm for this type of farm in Ohio, Indiana, Wisconsin and Minnesota in 1974. Our 7,279 **livestock** farms had 86% of the average sales per farm for this type farm for these four states. However, our 8,530 **dairy** farms had 21% higher average sales per farm than the four states, 30% higher dairy sales and 21% more cows per farm (43 vs. 35) — also 8% higher dairy sales per cow.

Michigan farms are becoming increasingly **specialized**. The average acreage of individual crops per farm rose from 28 to 42 acres (50%) and the number of livestock per farm with livestock increased 75%.

TOTAL LAND IN FARMS— MICHIGAN AND U.S.
(1950=100)



LAND IN FARMS in Michigan has declined from 17.9 million acres (100% on the chart) in 1950, to 11.9 million in 1975, a decrease of 6 million acres, or 34%. Percentage decreases by 5-year periods ranged from 5.6 for 1950-55 to 10.0 for 1965-70, and averaged about 8.0 per 5-year period, or 1.6% a year. Total land in farms in the U.S. decreased only 12% during this period, or about one-third the Michigan rate. (Loss from 1975 to 1978 was small for both Michigan and the U.S.)

A study of the change by states indicates that from 1950 to 1964, the 4 Northern Plains states, 8 Mountain states and 3 Pacific states all showed an increase in land in farms averaging 2.4%, 7.1%, and 3.0%, respectively, while Michigan lost 21% of its farmland. From 1964 to 1978, 6 states in various regions showed small increases, while the U.S. showed a loss of 3.4%, and Michigan a loss of 16%. Although Michigan's 28-year loss was similar to that of 11 Northeastern, 5 Appalachian, and 4 Southeastern states, it was nearly double that of Ohio and Wisconsin, was 3 times that of Indiana and 5 times that of Minnesota. It is speculated that urban developments, increasing work off farm and marginal agricultural conditions were important factors in Michigan's decline of land in farms.

CROPLAND WITH HARVESTED CROPS in Michigan amounted to 8.0 million acres in 1950 (on the chart this acreage equals 100). By 1970 our cropland harvested acreage reached its low point of 5.6 million acres, or 70% of 1950 (Table 1). With the removal of government acreage controls and price changes, Michigan's harvested crop acreage in 1977 was about 6.8 million acres or 15% below 1950. Thus, our present harvested crop acreage shows about one-half the 34 percentage decline shown in land in farms.

U.S. trends were similar, but with less decline. In fact, in 1970 the U.S. decline was only 16% from 1950, about one-half ours, with a rapid upturn since, so that the 1977 acreage was only 2% below 1950, compared with Michigan's 15% below. This 15 percentage points difference on the 8 million acreage base amounts to 1.2 million acres we don't have in crops that we would have if our percentage change had equaled the national average. Obviously, some Michigan farmers had better economic alternatives than putting in crops.

CROPLAND HARVESTED— MICHIGAN AND U.S.
(1950=100)

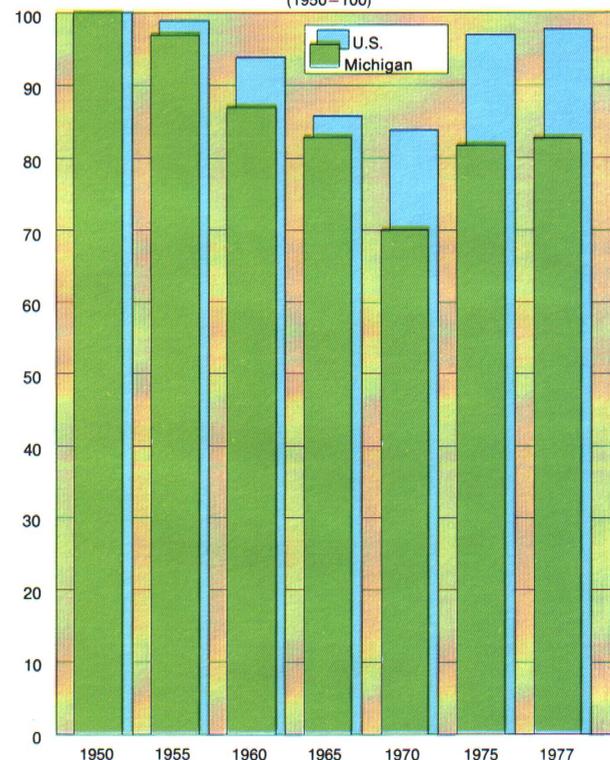


Table 1. Harvested Acreage of Major Michigan Crops, 1950-77

Year	All Corn	Winter Wheat	Oats	Tame Hay	Soy- beans	Dry Beans	Sugar Beets	Potatoes	Veg- etables	Orch- ards	All Crops
(thousand acres)											
1950	1,585	1,141	1,347	2,473	114	420	98	85	117	174*	8,026
1951	1,664	1,232	1,387	2,422	120	378	53	64	147	170*	8,015
1952	1,664	1,429	1,401	2,354	92	329	49	61	142	167*	8,021
1953	1,801	1,515	1,247	2,344	108	372	48	65	152	163*	8,124
1954	1,927	1,030	1,272	2,322	149	413	64	59	132	160*	7,769
1950-54 Av.	1,729	1,269	1,331	2,383	121	382	62	67	138	167*	8,011
1955	1,985	948	1,297	2,165	138	504	60	57	131	160*	7,778
1956	1,965	1,043	1,025	2,161	206	499	63	51	125	160*	7,589
1957	1,788	991	1,035	2,002	246	474	70	47	130	160*	7,249
1958	1,806	1,090	1,035	1,913	278	536	71	48	120	160*	7,333
1959	2,023	1,112	890	1,887	236	509	74	49	112	160*	7,295
1955-59 Av.	1,913	1,037	1,056	2,026	221	504	68	50	124	160	7,449
1960	2,063	1,068	712	1,833	221	525	68	46	112	158	7,000
1961	1,795	1,111	847	1,751	285	541	72	48	123	153	6,893
1962	1,777	911	762	1,786	342	573	66	45	111	151	6,717
1963	1,901	1,039	739	1,786	321	584	78	46	113	149	6,905
1964	1,939	966	665	1,798	331	613	85	42	107	147	6,841
1960-64 Av.	1,895	1,019	745	1,791	300	567	74	45	113	152	6,870
1965	1,920	802	552	1,777	440	650	69	48	102	148	6,636
1966	1,770	762	563	1,650	480	637	76	48	99	150	6,360
1967	1,760	1,120	462	1,520	509	495	72	44	108	152	6,358
1968	1,630	885	559	1,450	463	580	90	40	96	154	6,085
1969	1,590	628	458	1,350	514	640	93	40	103	156	5,734
1965-69 Av.	1,734	839	519	1,549	481	600	80	44	102	152	6,235
1970	1,711	480	467	1,350	500	575	90	45	103	158	5,600
1971	2,228	495	415	1,340	500	570	83	45	102	159	6,035
1972	2,040	535	320	1,310	524	605	87	40	104	160	5,814
1973	2,075	568	330	1,360	693	560	87	40	118	155	6,269
1974	2,262	940	350	1,240	630	575	80	42	115	155	6,590
1970-74 Av.	2,063	604	376	1,320	569	577	85	42	108	157	6,062
1975	2,500	900	370	1,325	610	520	91	36	111	153	6,683
1976	2,650	870	385	1,290	565	545	91	42	112	149	6,793
1977	2,660	825	340	1,300	720	480	86	40	109	142	6,771

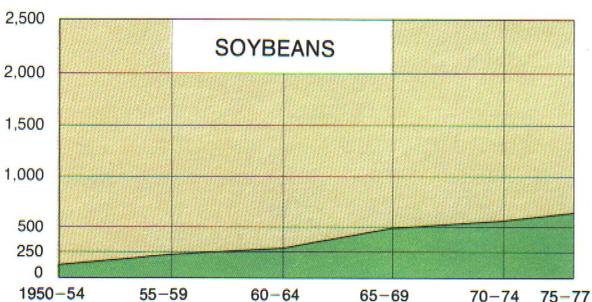
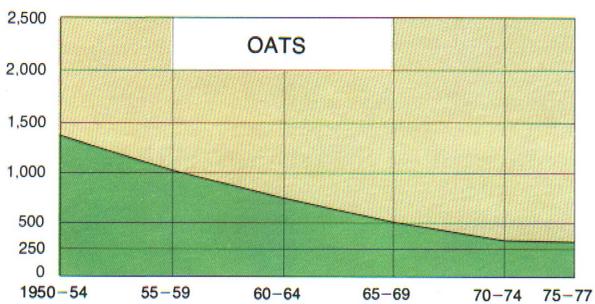
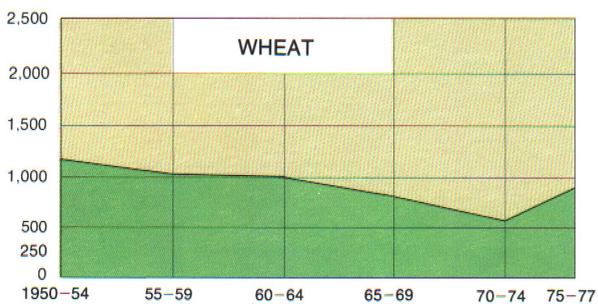
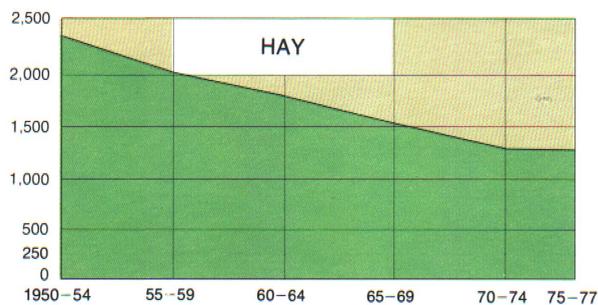
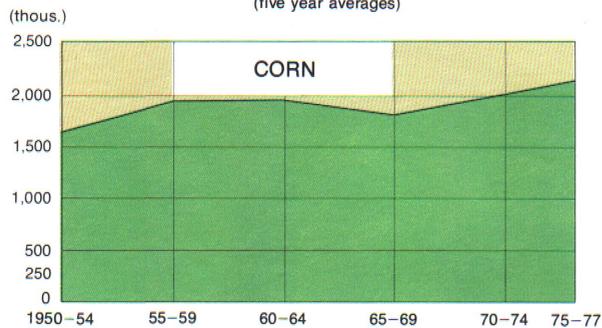
Sources: "Michigan Agricultural Statistics" and "Crop Production Annual Summaries", SRS, USDA.

*Estimate.



CROPS WITH MOST CHANGE IN HARVESTED
ACREAGE, 1950-1977

(five year averages)



C. CROP TRENDS

The **HARVESTED ACREAGE** of Michigan's major crops is shown annually, along with 5-year averages, from 1950 through 1977 in Table 1. The five crops with the most change in harvested acreage during this period are shown graphically through five-year averages.

Corn—The harvested acreage of corn for grain and silage rose from 1,729,000 for 1950-54 to 2,063,000 for 1970-74. Since 1975 the acreage has been running considerably higher and averaged 2,600,000 for the years 1975-77 (these are revised figures received since the graph was made). Corn occupied 22% of total harvested acreage during 1950-54, rising to 34% for 1970-74 and 39% in 1977.

Hay—The acreage of hay in the state declined more than any other crop, going from 2,383,000 acres for 1950-54 to 1,320,000 during 1970-74, thus showing a drop of over a million acres. As a share of total acreage in harvested crops, it fell from 30 to 22%.

Wheat—Wheat acreage has fluctuated widely during these 28 years. For 1950-54 an average of 1,269,000 acres was harvested, with a high year of approximately 1,500,000 acres. Acreage fell in the early 70s to less than 500,000 but 1970-74 averaged 604,000 with 940,000 acres harvested in 1974. Wheat's share of total harvested acreage fell from about 16% for 1950-54 to 10% for 1970-74.

Oats—There was a sizeable decline in oat acreage during this period, dropping from an average of 1,331,000 acres during 1950-54 to 376,000 for 1970-74—a drop of nearly a million acres. In the first five-year period oats occupied nearly 17% of the total crop acreage, compared with 6% in the 1970-74 period.

Soybeans—Soybeans in the 1950-54 period were a relatively unimportant crop occupying only 121,000 acres in the state. By 1970-74 this had increased to 569,000 acres and was 720,000 in 1977. The percentage of the total harvested acreage devoted to this crop rose from 1.5 to 9.5% in 1970-74.

Dry Beans—The acreage of this crop is not shown graphically. Its increase was from 382,000 to 577,000 for the two periods, but the percentage of the total crop acreage doubled from 4.8 to 9.6. Incidentally, Michigan ranks number one in the production of this crop.

Five-year average **CROP YIELDS PER ACRE** from 1950 to 1974 with three-year averages for 1975-77 for important crops in Michigan are presented graphically on this page, including U.S. yields for the same crops. (Because it is difficult to read the actual yields from the graphs, figures are presented in the discussion.)

Corn occupies over one-third of Michigan cropland so the trend in its yield is very important. Corn yields have been increasing, both in Michigan and nationally. During 1950-54 our average yield was 44 bushels per acre compared with the U.S. average of 39 bushels. By 1970-74, Michigan yield had increased to 75 bushels vs. a national average of 84 bushels. In other words, the 20-year increase nationally was 45 bushels per acre compared with 31 in Michigan. Corn yields in the last 10 years in Michigan have increased little and for the U.S. less than half the 20-year rate.

Oat yields in Michigan have consistently averaged three or four bushels per acre more than the national average. During 1950-54 Michigan oat yields averaged 37 bushels and showed an increase of 16 bushels by 1970-74, while comparable figures for the U.S. were 34 and 17, respectively.

Wheat yields per acre have averaged more than the U.S. winter wheat yield every five-year period from 1950 to 1974. For 1950-54 Michigan's average yield was 27 bushels vs. 19 for the U.S. Comparable figures for the U.S. were 19 and 33 bushels, respectively. Thus, the 20-year yield increase was 11 bushels for Michigan vs. 14 for the U.S. Our wheat yield has shown no upward trend for the past 10 years, but the U.S. wheat yield has.

Soybean yields in Michigan increased from 20 bushels for 1950-54 to nearly 24 for 1970-74, while the U.S. rose from 20 to 26 in the same period. Michigan annual yields in the past decade have fluctuated widely but shown no trend upward, while the national average does.

Hay yields in Michigan have increased from 1.5 tons per acre to 2.3 for 1970-74 (over 50%) while the U.S. yield rose from 1.4 to 2.1 tons.

Dry bean yields (not shown) are a cause for concern as the 1970-74 average yield was 232 pounds per acre less than the 1,310 pounds for 1960-64, while in Ontario, Canada, they increased from 1,190 pounds to 1,390 pounds!

Sugar beet yields (also not shown) increased from 11.3 to 18.4 tons, or 65% in this 20 years!

YIELD PER ACRE OF MAJOR CROPS—
MICHIGAN AND U.S.
(five year averages)

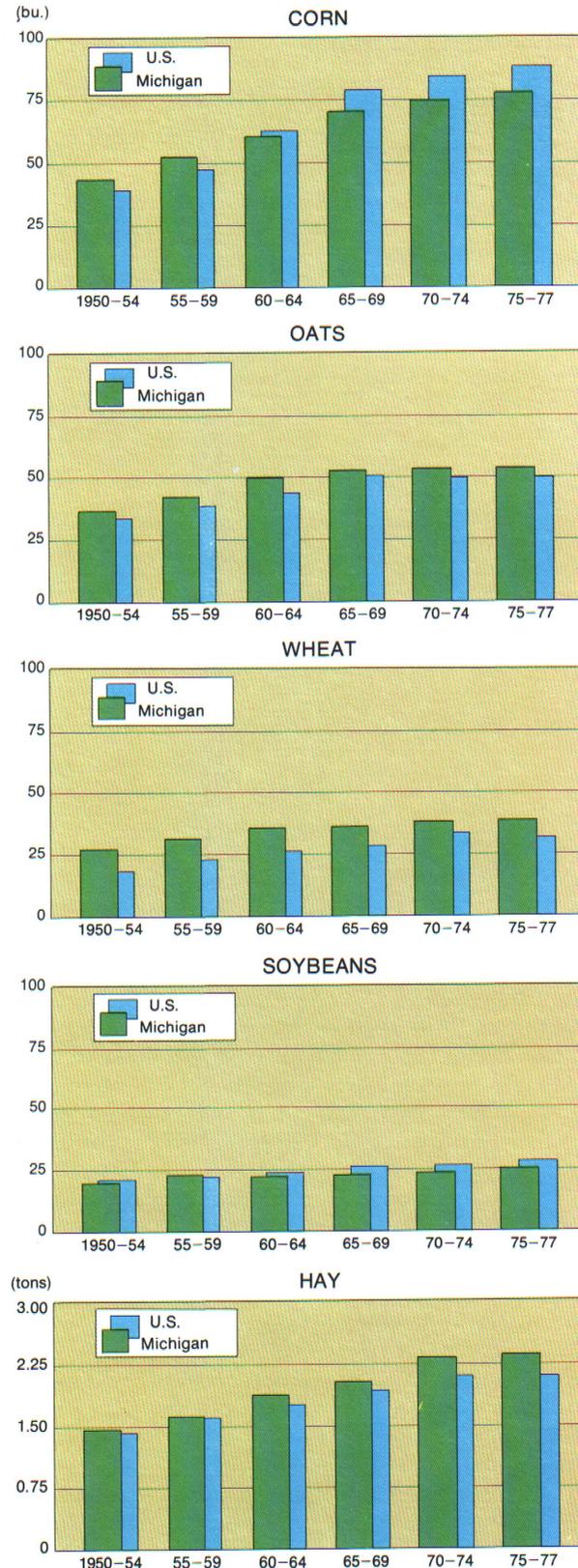


Table 2. Total Production of Major Michigan Crops, 1950-77 (in thousands)

Year	Corn (grain) (bu)	Winter Wheat (bu)	Oats (bu)	Tame Hay (tons)	Soy- beans (bu)	Dry Beans (cwt)	Sugar Beets (tons)	Potatoes (bu)	Fruit (index) ('67-68=100)
1950	46,527	29,666	50,512	3,499	2,280	3,312	1,020	15,288	N.A.
1951	55,650	30,800	53,400	3,837	2,460	4,022	605	11,497	"
1952	68,326	36,440	46,233	3,495	1,748	3,474	527	11,328	"
1953	68,034	43,935	42,398	3,670	2,052	3,750	570	12,182	"
1954	72,588	29,870	47,700	3,654	3,129	3,295	771	12,043	"
1950-54 Av.	62,227	34,142	48,049	3,631	2,334	3,571	699	12,468	N.A.
1955	77,033	27,966	57,068	3,314	3,036	4,536	885	9,225	N.A.
1956	84,099	31,290	34,850	3,578	4,326	5,389	696	12,985	"
1957	72,600	28,739	40,882	3,334	5,412	3,508	907	10,425	"
1958	81,312	41,420	52,785	2,933	6,394	5,226	1,112	13,797	"
1959	98,268	35,584	37,825	3,488	5,782	6,413	1,299	12,240	"
1955-59 Av.	82,662	33,000	50,820	3,329	4,990	5,014	980	11,734	N.A.
1960	90,288	33,642	36,312	3,379	4,420	6,248	943	12,392	123
1961	96,030	39,996	38,962	3,214	7,410	7,358	1,178	15,406	139
1962	87,066	30,063	38,862	3,278	7,695	7,392	1,081	14,648	139
1963	95,552	39,482	37,689	3,283	6,741	8,585	1,175	12,867	94
1964	92,580	38,640	34,248	3,627	7,448	7,601	1,386	13,222	190
1960-64 Av.	92,302	36,365	37,215	3,356	6,783	7,437	1,153	13,708	137
1965	90,341	26,466	28,704	3,309	9,680	6,175	1,136	14,943	152
1966	94,269	30,480	24,772	3,454	10,800	8,026	1,172	14,760	103
1967	91,455	40,320	24,486	3,300	10,180	5,346	1,256	14,913	89
1968	96,216	31,860	32,981	3,379	12,038	6,264	1,708	14,112	108
1969	93,684	25,120	26,016	3,207	11,822	8,064	1,504	14,660	138
1965-69 Av.	93,193	30,849	27,392	3,330	10,904	6,775	1,355	14,678	118
1970	115,749	18,720	27,086	3,281	13,250	6,153	1,913	17,580	122
1971	119,370	17,820	19,505	2,677	10,250	5,643	1,415	15,850	132
1972	142,926	21,400	17,600	3,067	13,624	7,139	1,638	16,070	138
1973	133,510	19,880	16,500	3,394	16,632	5,320	1,524	14,400	82
1974	110,410	37,600	19,250	2,906	13,230	6,902	1,364	16,543	128
1970-74 Av.	124,393	23,084	20,388	3,065	13,397	6,231	1,571	16,089	120
1975	167,200	34,200	20,720	3,335	15,860	4,732	1,755	13,460	139
1976	153,870	33,060	19,635	3,060	11,583	5,450	1,540	16,037	72
1977	191,250	33,000	18,700	2,855	20,880	5,520	1,796	17,072	103

Sources: "Michigan Agricultural Statistics" and "Crop Production Annual Summaries", SRS, USDA.

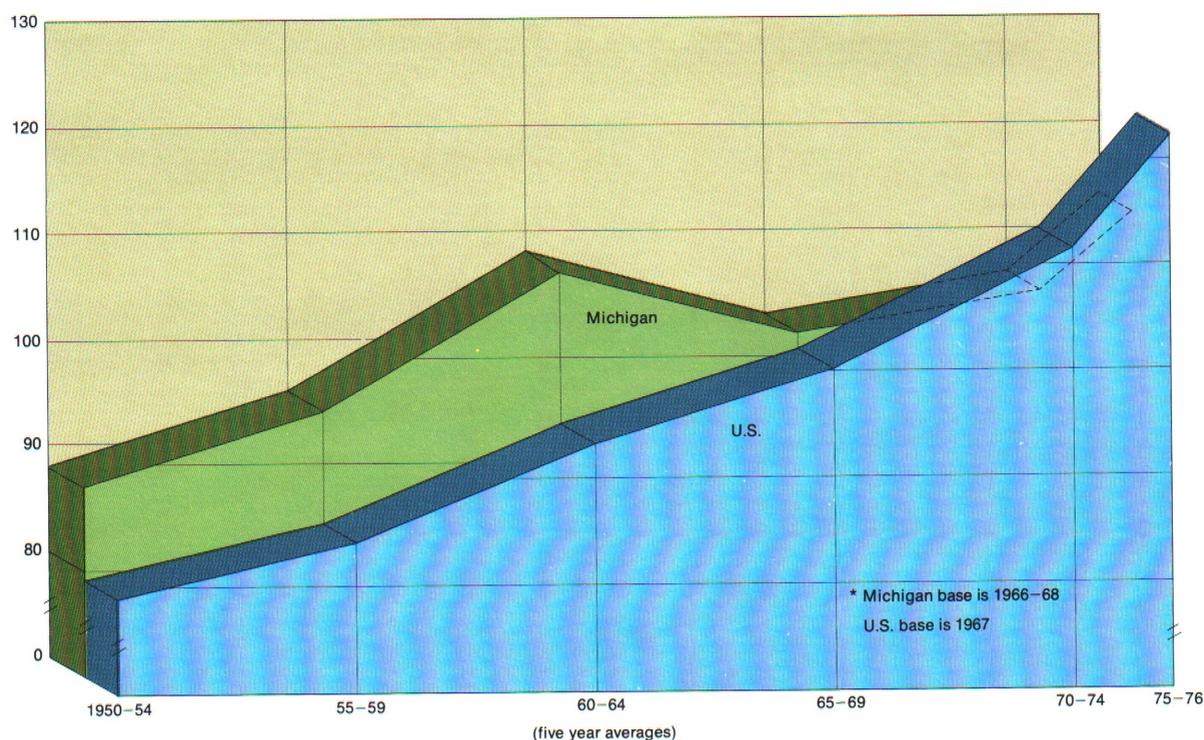
CROP YIELD INDEX — A crop yield index, combining the yields of all major crops of a state or nation into one figure, based on the importance of the crops and expressed as a percentage of a base year or years, is often used. The U.S.D.A. publishes such a figure for the nation and the author has calculated one for Michigan. From 1950-54 to 1960-64, Michigan's average annual rate of increase in the yields of its 10 major crops was 3.4% compared with the national figure of 3.2%. For the decade of 1960-64 to 1970-74 the respective figures were 1.3 and 1.7%. Extending to 1975-77 would change the rates little as the increase has been leveling off.

Some possible reasons for Michigan's slower increase than the U.S. in the past decade may be one or more of the following: possibly more of our good land has been taken up by suburban developments than in most states; we have more part-time farmers than all but a few states, with probably fewer improved cultural practices used by them; Michigan farmers applied increased amounts of fertilizer earlier than in corn belt states, so got the increase in yields earlier; Michigan's livestock herd has been decreasing, making for less manure and forage crops, resulting in less organic matter and poorer soil structure. Our cash-crop farmers often have rotations which return

little organic matter causing soil compaction; Michigan has a shorter growing season; fewer sunlight hours for maximum plant growth and yield; there may not have been enough basic research and variety development for Michigan conditions; and irrigation has been used more extensively in some states than in Michigan.



TOTAL CROP PRODUCTION INDEX* – MICHIGAN AND U.S.



Let us now look at the changes in **TOTAL CROP PRODUCTION** (Table 2) of the major crops in the state in the 20 years 1950-54 to 1970-74 (or the combined effect of acreage and yield changes just discussed). **Soybean** production in 1970-74, mainly as a result of acreage increase, was six times that in 1950-54. During 1974-76 it was responsible for 7% of total crop value of 1,133 million dollars. **Sugar beet** production more than doubled in this period, due to a large yield increase and some acreage increase. Beets make up over 4% of total crop value. **Corn** production has doubled (in 1977 was 3 times 1950-54) as a result of both acreage and yield increase. During 1974-76 it accounted for 36% of total crop value. **Dry bean** production during 1970-74 was about 70% greater than during 1950-54 but acreage was twice as much (15% under 1960-64). Dry beans make up nearly 9% of the value of all crops.

Potato output in the state, even with a reduction of a third in acreage, was about 30% higher in 1970-74. Potatoes provided 3.6% of total crop value during 1974-76. **Hay** production was about 15% less during the last five years than 20 years earlier. The value of hay was about 12% of all crops. **Wheat** production has fluctuated widely. Production during 1970-74 was

a third less than 20 years earlier. The value of the wheat crop during 1974-76 was about 11% of the total. **Oat** production during this 20-year period declined about 60%, due to a marked reduction in acreage and in spite of an increase in yield. The value of oats accounts for about 3% of the crop total. These eight crops accounted for 85% of Michigan's crop production during 1974-76.

A **crop production index** covering all Michigan crops, except vegetables, is computed by the Michigan Crop Reporting Service and one for the U.S. is prepared by the U.S.D.A. (see above). The Michigan index is based on 1966-68 production, while the U.S. is based on 1967. Our total crop production was higher during 1950-54 relative to the base than the U.S. and increased faster to 1960-64 when it was 108, or 20% above 1950-54. It fell some from then to 1965-69 (to 102% of 1966-68), then rose to 110 for 1970-74 and 121 for 1975-76 (revised figures). On the other hand, U.S. total crop output has a long continuing upward trend. From 1965 to 1969 our output has just about kept pace with the national trend. Michigan's 20% increase in harvested crop acreage from the 5.6 million acres of 1970 to about 6.8 million for 1976 and 1977 was a higher percentage increase than for the nation as a whole.

Table 3. Number of Major Kinds of Livestock in Michigan, January 1, 1950-77

Year	All Cattle & Calves	Milk Cows	Beef Cows	Cattle on Feed	Hogs & Pigs	Sheep & Lambs	All Chickens	Turkeys (Hens)
	(thousands)							
1950	1,781	945	39	90	835	425	11,529	77
51	1,799	936	49	86	902	413	10,608	81
52	1,853	917	57	99	956	443	11,215	85
53	1,983	926	81	109	746	458	10,656	88
54	1,983	926	87	114	619	421	10,922	79
1950-54 Av.	1,880	930	63	100	812	432	10,986	82
1955	1,943	907	91	97	693	424	10,546	73
56	1,885	889	96	107	783	409	10,402	66
57	1,791	853	103	109	736	404	10,612	65
58	1,684	785	94	98	692	399	8,762	56
59	1,684	722	103	110	789	415	9,328	76
1955-59 Av.	1,797	831	97	104	739	410	9,930	67
1960	1,701	715	109	133	797	407	8,443	67
61	1,735	701	116	129	741	382	7,855	92
62	1,787	708	118	144	778	373	7,915	80
63	1,787	694	123	163	895	343	7,530	91
64	1,787	673	128	173	832	321	8,063	78
1960-64 Av.	1,759	698	119	148	809	365	7,961	82
1965	1,769	653	136	178	724	314	8,554	84
66	1,663	614	136	173	652	303	8,284	83
67	1,547	558	136	185	659	288	9,006	98
68	1,485	525	140	187	606	274	8,443	89
69	1,470	492	159	200	618	271	8,043	78
1965-69 Av.	1,587	568	141	185	652	290	8,466	86
1970	1,500	470	177	210	697	264	8,088	89
71	1,560	431	187	225	870	255	8,086	87
72	1,576	430	194	230	766	222	8,490	70
73	1,576	422	196	245	720	221	8,148	70
74	1,550	420	206	220	727	177	7,818	65
1970-74 Av.	1,552	435	192	226	756	228	8,126	76
1975	1,580	415	205	200	715	147	7,805	45
76	1,550	407	208	210	700	138	8,142	62
77	1,570	405	239	215	720	149	6,729	55
78	1,470	404	196	200	640	138	7,959	52

Sources: "Michigan Agricultural Statistics" and various USDA publications.

D. LIVESTOCK TRENDS

Until recently, livestock and livestock products accounted for a little over one-half total cash farm marketings in Michigan, so livestock trends are important in the changing scene in agriculture. These trends will be discussed in four parts: a) changes and trends in numbers of livestock on hand January 1 since 1950; b) production rates per head for cows, hens and sows; c) the total annual production of livestock and livestock products over the 28-year period; and d) the combined total livestock output, measured by a total livestock production index.



CHANGES IN NUMBER OF LIVESTOCK — Information on this topic is presented graphically on this page through 5-year averages for the livestock with the most change, and with annual data in Table 3 on the preceding page.

The change in number of **all chickens** is shown in the first graph, as the decrease in actual number was large. The number of all chickens on hand declined from about 11 million during 1950-54 to roughly 8 million for 1960-64 (25% lower), and remained at approximately that number for the two following five-year periods. The number on January 1978 also was approximately 8 million.

The trend in **milk cow** numbers is very important, as dairy income from milk, calves and cull cows has been about one-third of our total cash marketings and six-tenths of the livestock income. Milk cow numbers decreased about 100,000 from 1950-54 to 1955-59, 133,000 in the next five years, 130,000 in the next and 133,000 from 1965-69 to 1970-74, when the five-year average was 435,000 — a decrease of over 50% from 1950-54. The number has been slightly over 400,000 for 1975-78 and Michigan ranks around sixth among states in milk cow numbers.

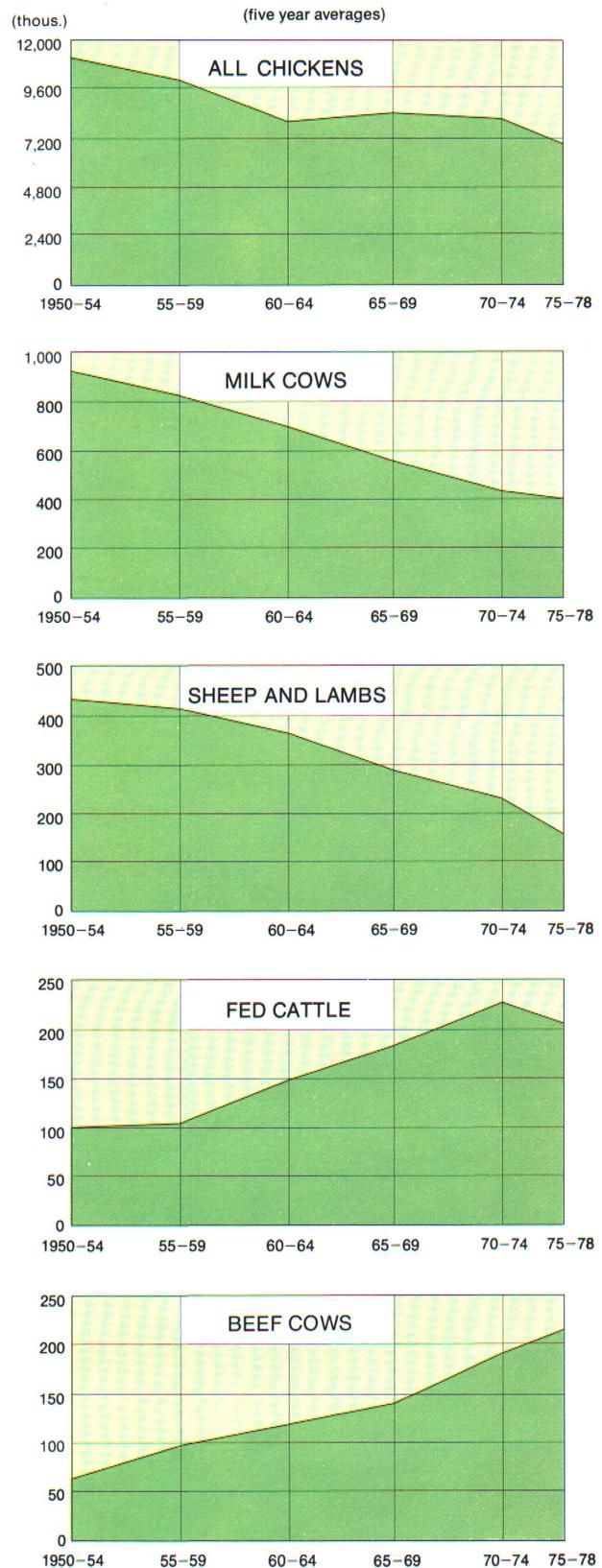
Sheep and lamb numbers have never been really large in Michigan, and have been decreasing through this 28-year period. The rate of decrease has been relatively rapid in the last decade, with the 1970-74 number approximately one-half the 432,000 of 1950-54. The decrease has been relatively rapid in the 70s.

The number of **hogs and pigs** on hand January 1 showed cyclical changes, but only a relatively small long-term downward trend (so not graphed).

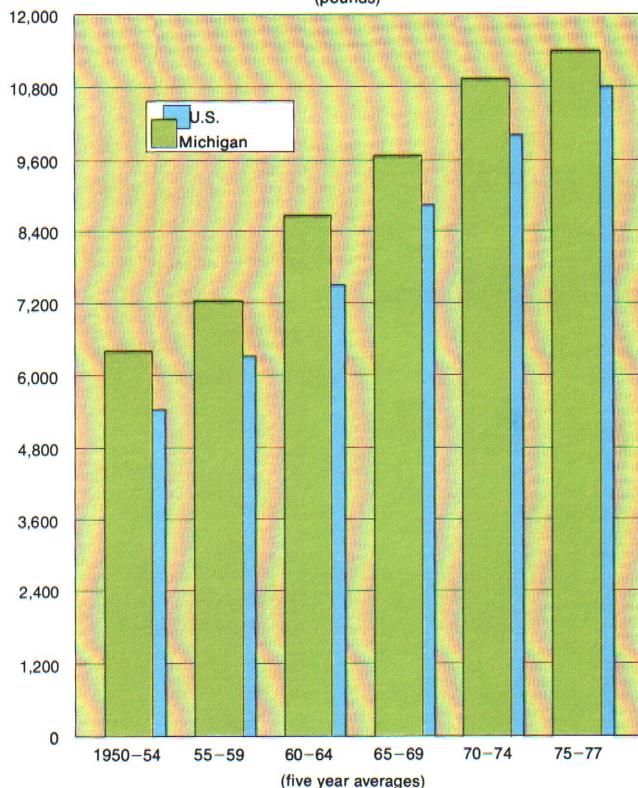
The number of **cattle on feed** on January 1 in the state after averaging about 100,000 for 1950-54 and 1955-59 has been increasing approximately 40,000 every five years to 226,000 for 1970-74. The number for 1975 to 1978 has been about 10% less than that.

Beef cow numbers also have been increasing, starting with 63,000 for 1950-54, and averaging 192,000, or three times as many for 1970-74. The January 1 average for the four years 1975-78 was about 210,000, or slightly over half the number of dairy cows.

MICHIGAN LIVESTOCK WITH MOST CHANGE IN NUMBERS, 1950-1978



MILK PRODUCTION PER COW — MICHIGAN AND U.S.
(pounds)



PRODUCTION RATES PER HEAD — Not only is the number of head of livestock in the state important but so is the production per head.

Milk production per cow is particularly relevant in this state where there are so many dairy cows. Michigan historically has had a higher milk production per cow than the national average (see chart). During 1950-54 our average at 6,420 pounds per cow was 976 pounds higher (18%), 911 pounds higher for the next five years, 1,177 pounds higher the next five, 829 pounds higher the next five and 866 pounds higher for 1970-74, when our average was 10,956 pounds of milk per cow. In 1973 Michigan's average production dropped sharply (when feed prices were very high) and we were only 114 pounds above the U.S. average, but we have recovered to 11,814 pounds per cow for 1977, some 600 pounds, or 5%, above the national average.

Michigan milk production per cow increased from 8,700 pounds to 10,956 pounds during the decade from 1960-64 to 1970-74, for an increase of 2,256 pounds, or 225 pounds annually. During this 10-year period state average increases for the top five dairy states were as follows: Wisconsin — 1,723 pounds, California — 2,706 pounds, New York — 2,344 pounds, Minnesota — 2,051 pounds, and Pennsylvania — 2,076 pounds. Among all states, Michigan ranked 10th in milk per cow in 1960, 9th in 1970, 22nd in 1974 after our sharp decrease and 5th in 1977 after our recovery.



Egg production per hen rose rapidly from 1950 (and earlier), averaging 188 eggs for 1950-54, 199 for the next five years, 216 for the next five, 227 for the next five and 229 for 1970-74, for an average increase of 2 eggs per year. The rate of increase in Michigan has been slow since 1965 but the U.S. rate continued to rise. Compared with the national average, Michigan was above in the 60s and early 70s, but the U.S. average has caught up with us. The averages for 1975 and 1976 were the same at 232 and 235, respectively.

Pigs saved per litter have not shown the rapid increase of milk per cow and eggs per hen. Michigan's average was 6.9 pigs per litter for 1950-54, followed by five-year averages of 7.2, 7.4, 7.5, and 7.4 for 1970-74, for an increase of half a pig in 20 years. The respective figures for the U.S. were 6.6, 7.0, 7.1, 7.3, and 7.2 for 1970-74, with averages somewhat below Michigan, with about the same increase. Data show no upward trend in the past 10 years for either Michigan or the U.S.

Table 4. Total Production of Livestock and Livestock Products in Michigan, 1950-77

Year	Milk	Cattle & Calves	Hogs	Sheep & Lambs	Eggs	Chickens	Turkeys	Commercial Broilers
		(million pounds)			(mil)		(thousand birds)	
1950	5,420	399	293	21	1,600	15,473	910	2,211
1951	5,300	422	315	21	1,563	15,118	956	3,095
1952	5,396	452	304	21	1,601	13,975	1,092	3,528
1953	5,506	474	264	23	1,607	13,868	1,115	4,339
1954	5,423	470	271	21	1,674	14,031	1,170	4,252
1950-54 Av.	5,409	443	289	21	1,609	14,493	1,049	3,485
1955	5,396	472	284	24	1,690	10,887	960	4,252
1956	5,365	450	266	22	1,666	10,843	1,086	4,900
1957	5,291	406	237	21	1,638	7,457	1,368	4,300
1958	5,216	389	246	23	1,566	8,776	1,151	4,700
1959	5,090	436	274	22	1,570	5,948	1,245	3,600
1955-59 Av.	5,272	431	261	22	1,626	8,782	1,162	4,350
1960	5,173	441	253	21	1,439	4,335	1,254	3,200
1961	5,297	454	256	20	1,394	5,119	1,409	3,100
1962	5,606	467	266	21	1,385	4,418	1,091	2,790
1963	5,589	468	268	21	1,362	4,631	1,254	2,567
1964	5,758	471	258	20	1,468	4,815	1,195	2,002
1960-64 Av.	5,485	460	260	21	1,410	4,584	1,241	2,732
1965	5,528	520	216	16	1,543	4,185	1,196	1,882
1966	5,061	497	210	17	1,567	4,907	1,192	1,882
1967	4,706	468	227	14	1,620	4,253	1,162	941
1968	4,598	443	219	13	1,508	4,340	1,353	518
1969	4,592	438	228	13	1,464	4,380	887	777
1965-69 Av.	4,897	473	220	15	1,540	4,413	1,158	1,200
1970	4,602	468	270	14	1,450	4,730	1,050	699
1971	4,796	485	289	13	1,505	5,200	1,001	1,085
1972	4,966	488	256	11	1,523	4,625	1,089	566
1973	4,636	491	252	9	1,539	4,830	1,088	557
1974	4,350	449	248	9	1,412	5,030	971	577
1970-74 Av.	4,670	476	263	11	1,486	4,883	1,040	697
1975	4,411	476	208	8	1,467	5,100	700	510
1976	4,620	490	247	7	1,520	4,600	1,170	756
1977	4,761	514	238	8	1,530	4,400	1,212	871

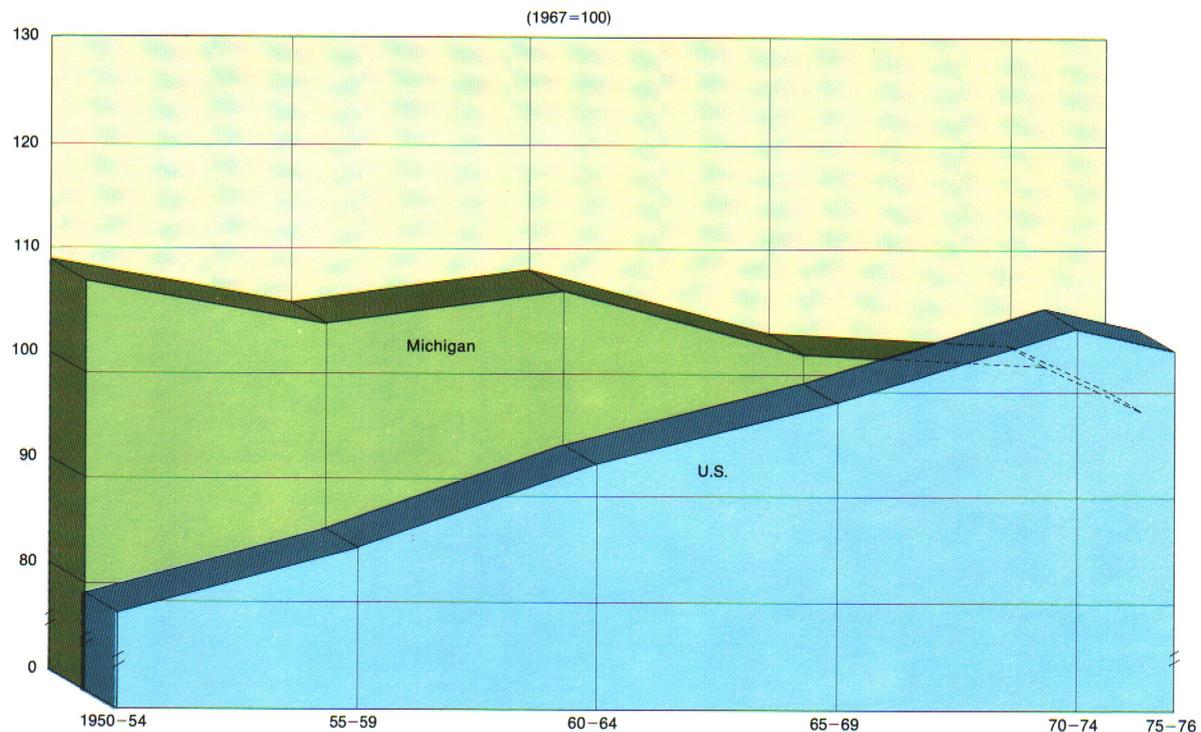
Sources: "Michigan Agricultural Statistics" and various USDA publications.

TOTAL PRODUCTION OF LIVESTOCK AND PRODUCTS—This topic summarizes the combined effects of change in number of head of animals and production per head (Table 4). **Milk** production in Michigan reached its peak in 1964 and the 1960-64 average at 5.5 million pounds was slightly above 1950-54. Production declined sharply after 1964 to 4.7 million pounds in 1967, and it has remained relatively close to that for the past 10 years. **Cattle and calf** production increased 3.8% from 1950-54 to 1960-64 and 3.0% the following 10 years. This hides two opposing trends — a decrease in dairy cattle and increase in beef cattle.

Hog production averaged 289 million pounds during 1950-54, dropping to about 260 million for the

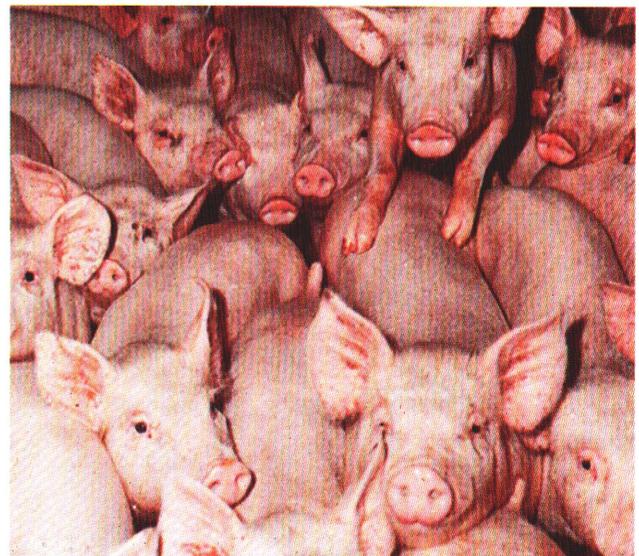
next two five-year periods, then down to 220 million for 1965-69, with a recovery to 263 million for 1970-74. **Sheep and lamb** production has never been very great in Michigan, averaging 21 or 22 million pounds for 1950-54 and the next two five-year periods. Then it started declining, and averaged 11 million for 1970-74 and less since then. **Egg** production averaged about the same for the first two five-year periods at 1.6 billion, then declined to 1.4 billion for 1960-64 and has remained at that level or a little higher since. The production of **chickens** declined sharply during this period — from about 14 million birds in the first five years to about five million for 1970-74. **Broiler** production also declined sharply, while **turkeys** produced has remained relatively constant.

TOTAL LIVESTOCK PRODUCTION INDEX— MICHIGAN AND U.S.

**TOTAL LIVESTOCK PRODUCTION INDEX —**

The author has computed this index by taking into consideration the level of production of all the items shown in Table 4 and weighted each product by its relative importance in livestock cash marketings. The U.S.D.A. publishes a similar index. The production of different livestock products in Michigan followed different patterns, but Michigan's total livestock output was relatively constant from 1950-54 to 1960-64, reaching a peak of 112 in 1964 (when milk production peaked). There has been a slow downward trend since 1960-64, with an index of 102 for 1965-69 and 101 for 1970-74. The index was low in 1974 due mainly to low milk production and in 1975 for the same reason, plus low hog output.

Michigan's total livestock output trend appears unfavorable when contrasted with the U.S., which increased during this period, mainly because of a sharp upward trend in beef cattle plus a rapid increase in broiler production and some increase in egg production from 1950 to 1970. Michigan's share of the U.S. total "livestock production units" averaged 2.15% for 1952-54. Following the decrease to 1967, it has shown no downward trend for the past 10 years, ranging from 1.82 to 1.94% and averaging 1.86%.



E. TRENDS IN ECONOMIC ASPECTS OF MICHIGAN AGRICULTURE

Now we turn to trends in the economic aspects of Michigan agriculture, looking first at *inputs* — their price, efficiency in use, and production expenses; then at *output* — the prices received for products and cash farm marketings; distribution of farms by amount of income; and finally, net farm income and income from work off farm.

FARM REAL ESTATE VALUES — The value of farmland and buildings represents one of the large inputs for the owner-operator or even the part-owner. According to U.S.D.A. figures, Michigan's average farm real estate values increased from about \$100 per acre in 1950 to \$326 in 1970. And from 1970 to 1975 on up to \$553, an increase of \$227 per acre, and from February 1, 1975 to 1978 up to \$860 per acre, or \$534 above 1970 — over eight times that of 1950! On a per farm basis, the increase has been from about \$11,000 for the value of the average 110-acre farm of 1950 to approximately \$138,000 in 1978 for the average 160-acre farm, and about \$350,000 for a 400-acre farm.

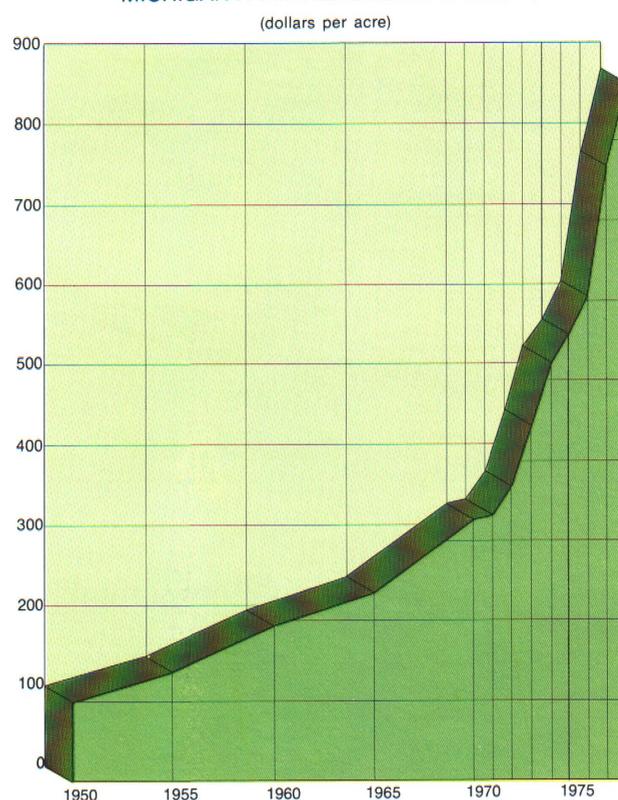
This is one of the very significant changes in Michigan agriculture and obviously has some dramatic impacts. Farmland prices in Michigan from 1960 to 1977 have increased $2\frac{1}{2}$ times as fast as inflation (consumer prices). If prices received for products are at least fairly strong in the future, farmland prices will probably continue to rise.

For the farmer quitting farming or retiring, he can sell his farm and reap capital gains that may be in excess of his net farm income while the farm was owned. On the other hand, if he expects to continue farming, the increase is only book value (unless he borrows on the increase) and may be partially responsible for higher taxes.

Present land values make it even more difficult for the young farmer to become an owner or part-owner. With high interest rates, the annual principal and interest payments can easily cause cash-flow problems.

Some Michigan farm families have eased the financial strain by doing off-farm work.

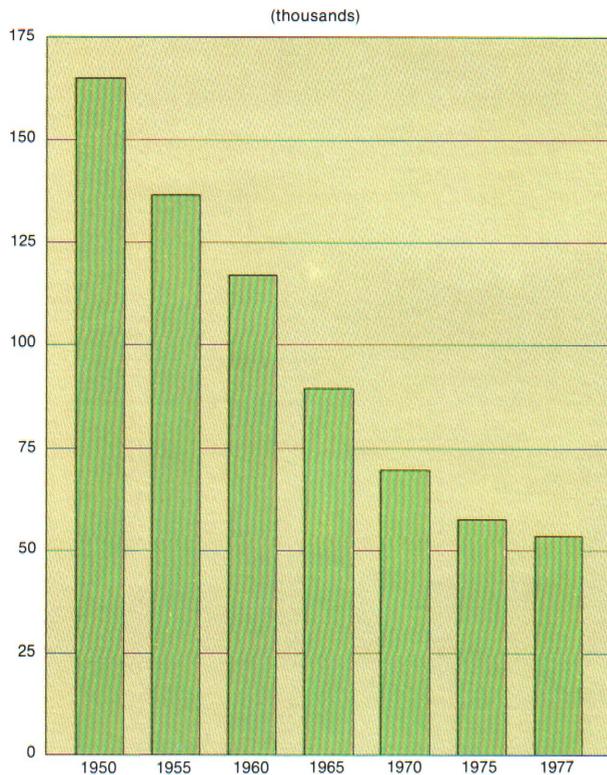
MICHIGAN FARM REAL ESTATE VALUES



FARM MACHINERY INVESTMENT — Information is hard to come by, but we know that machinery cost has become high. The 1974 Census of Agriculture shows a per farm machinery book value of \$21,225. Farmers keeping records in cooperation with the Agricultural Economics Department, with farms of about 500 acres, had a farm machinery book value of approximately \$66,000 per farm in 1977, with a total charge for depreciation, repairs, fuel, etc., of over \$29,000 for the year.



CALCULATED FULL-TIME MAN-EQUIVALENT*



* Equals a man working full time for a year on a farm.

PRICES PAID BY FARMERS IN U.S. — The index of prices paid by farmers for commodities bought, services, interest, taxes and wage rates, used in farm production is computed by the U.S.D.A. as an average for the entire country, but is not available by states. Thus we have to use national data to indicate changes in prices (see chart).

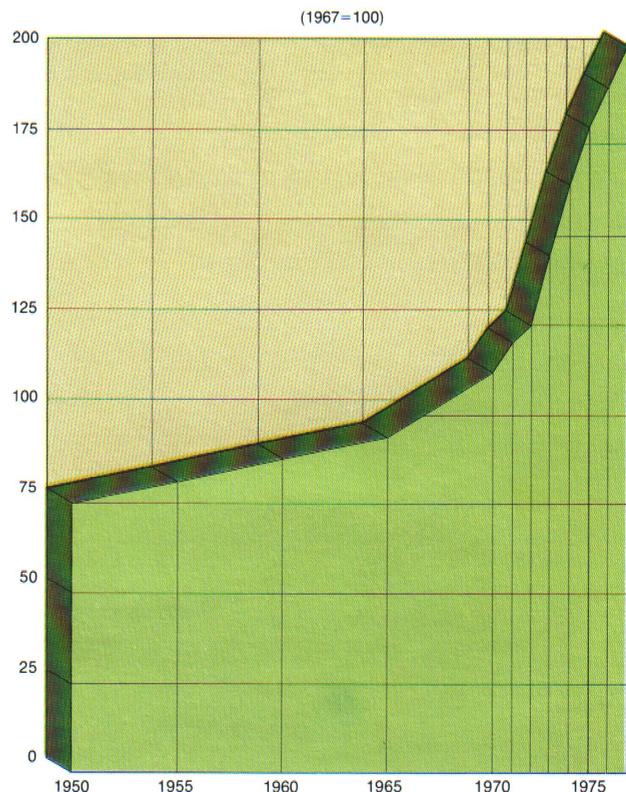
The average annual rate of change in prices paid from 1950 to 1965 averaged about 1.6%. Then the rate rose to 3.8% for 1965 to 1970, and from 1970 to 1977, it ranged from 4.2 to 15.2%, averaging 8.7% for the seven years, and was only slightly less for the last three years of that period.

A study of price changes in the major components of the index from the 1967 base to 1976 shows that interest on farm mortgages per acre increased the most, being 3 times as high in 1976. This was followed by seed prices at 2.4 times, with prices of machinery, fuel, building materials, and wages, all more than double 1967. Feed and fertilizer prices and real estate taxes all were only slightly less than double. The index of all items, with 1967 = 100, was 180 for 1975, 191 for 1976 and 202 for 1977. Farm real estate prices (not in the index) for Michigan on February 1, 1978, stood at 287% of 1967.

FARM LABOR INPUT — Labor is another sizeable input in the operation of Michigan farms. The exact amount is somewhat difficult to ascertain with many farmers working off farms, having family help part of the time and hiring various amounts at other times. The author has taken all the data available and converted it to full-time man-equivalents (see chart). Based on these calculations, 165,000 full-time man-equivalents were spent on Michigan farms in the year of 1950. In the next 20 years this declined to 70,000, or less than half 20 years earlier. Since 1970 the rate of decrease has slowed, but even so, the 1977 input was calculated to be only 54,000 — one-third that of 1950!

Output per full-time man-equivalent, measured in dollars of cash farm marketings at 1967 prices, increased in Michigan from 1950 to 1975 at an average annual rate of 6%, twice that in manufacturing industries for the U.S.! Many factors were responsible for this increase, including the use of more and larger machinery and equipment (twice the tractor horsepower); larger farms, fields and herds; more fertilizer, better crop varieties; greater use of herbicides and pesticides, and with greater investment and better management.

PRICES PAID BY FARMERS IN U.S.*

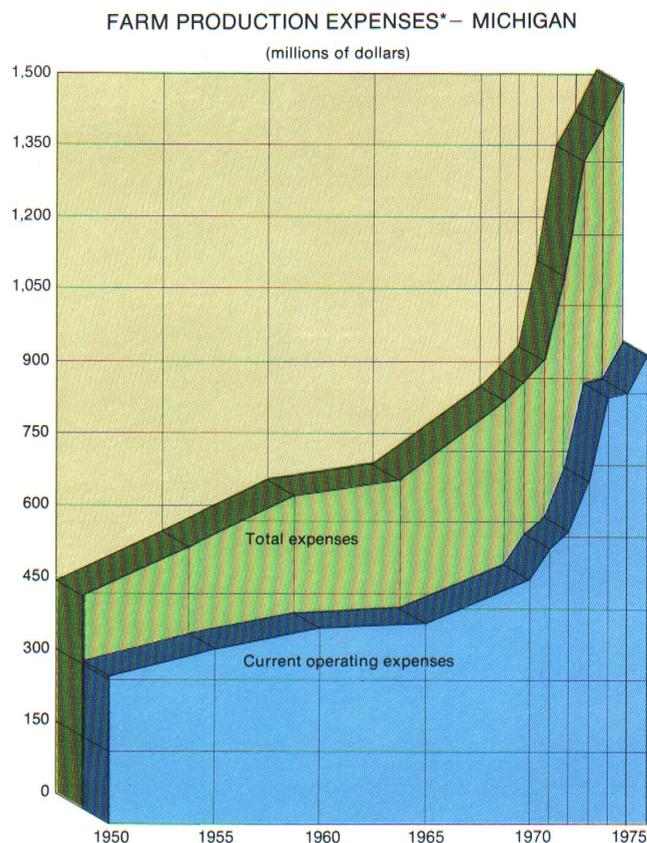


*Includes commodities and services, interest, taxes, and wage rates.

FARM PRODUCTION EXPENSES IN MICHIGAN— Total production expenses of all farmers in Michigan increased from about \$440 million in 1950 to about \$665 million in 1965 and to about \$840 million in 1970 (see chart). Then the rate of increase speeded up, and by 1976 the total had risen to \$1.513 billion! The increase of \$673 million in these six years was 70% greater than in the 20 years from 1950 to 1970!

Current operating expenses rose about \$200 million in the first 20 years vs. \$466 million from 1970 to 1976. The balance of the expenses, mainly the so-called "fixed expenses," rose about \$200 million from 1950 to \$329 million in 1970, and another \$200 million from 1970 to 1976. Bear in mind that Michigan crop acreage in 1970-74 was 25% less than 1950-54, but total agricultural output about the same.

Annual percentages should provide deeper insight into these increases. Total expenses increased 3.5% a year from 1950 to 1970 and 10.6% annually from 1970 to 1976. Current operating expenses increased 2.7% a year in the first 20 years and 11.7% from 1970 to 1976, while the fixed expenses increased 5.3% and 8.8% annually for the two periods. Details on farm production expenses every five years from 1950 to 1970, then annually are presented in Table 5.



*Does not include interest on farmer's equity in the business, nor any charge for labor of family and operator, or any management charge.

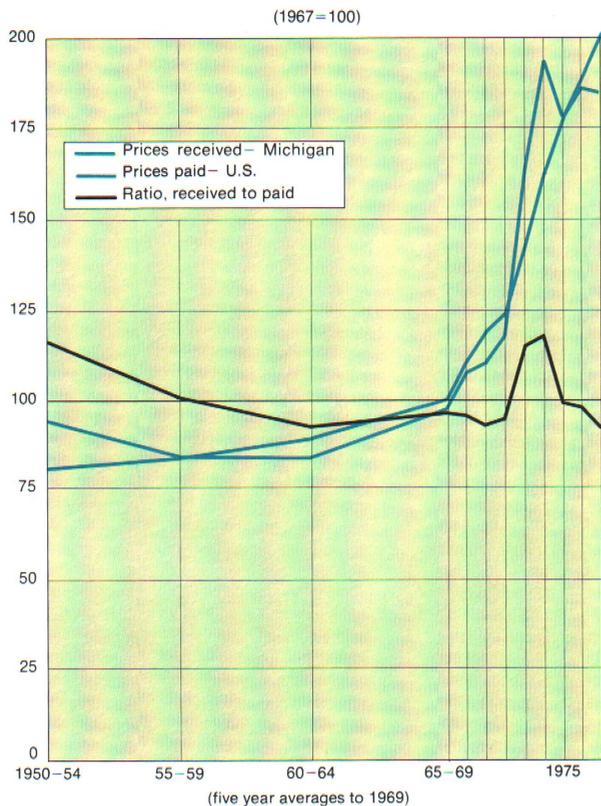
Table 5. Farm Production Expenses, Michigan (by 5-Year Intervals 1950-70 then Annually)

Year	Current Operating Expense								Depreciation on Farm Capital	Taxes on Farm Property	Interest on Mortgage	Net Rent to Landlords	Total Production Expenses*
	Feed	Live-Stock	Fertilizer and Lime	Seeds	Repairs & Maintenance	Labor Hired	Misc.	Total					
	(million dollars)												
1950	59.8	13.8	25.9	14.4	89.2	58.3	48.6	310.0	92.0	15.6	7.6	15.0	440.2
1955	67.3	19.0	38.1	16.0	110.6	49.8	63.2	364.0	132.6	24.4	10.7	8.4	540.1
1960	75.4	20.6	36.7	14.1	118.3	59.9	85.2	410.1	151.3	36.7	16.9	6.5	621.6
1965	80.9	16.2	43.2	17.9	111.1	53.5	96.4	419.2	159.4	48.1	28.8	9.0	664.5
1970	88.5	26.6	52.8	20.2	140.6	66.4	114.4	509.5	203.0	79.2	42.5	4.5	838.7
1971	94.2	22.9	77.6	28.7	116.6	98.2	157.7	595.9	214.3	88.5	45.4	.3	944.4
1972	93.9	24.0	71.9	31.2	114.1	105.0	167.0	607.1	211.3	69.4	47.4	9.1	944.3
1973	141.2	33.1	74.7	43.8	127.9	110.3	185.4	716.4	244.6	78.6	55.4	22.5	1117.5
1974	165.3	32.3	147.1	59.7	156.9	126.0	201.3	888.6	289.7	91.1	67.1	19.4	1355.9
1975	147.1	30.7	147.0	58.8	171.2	116.0	229.2	899.9	324.0	105.2	79.6	12.3	1421.0
1976	168.3	29.7	154.1	65.1	184.5	124.7	249.8	976.2	336.0	117.2	89.1	-5.6	1512.9
1977													

Sources: Latest "State Farm Income Situation" reports and "Farm Income State Estimates" issues, ERS, USDA.

*Does not include interest on farmer's equity in the business, nor any charge for labor of family and operator or any management charge.

INDEX OF PRICES RECEIVED AND PAID BY FARMERS, AND RATIO



INDEXES OF PRICES RECEIVED, PAID AND RATIO

We now move from consideration of inputs, to outputs — prices received and cash marketings of crops and livestock. During 1950-54 prices received for farm products in Michigan had an average index of 95 (1967 = 100). For the next two five-year periods the index was about 85, rising to nearly 100 for 1965-69 and 140 for 1970-74 (see chart). A sharp rise took place from 1972 to 1973 (119 to 166); the index peaked at 195 in 1974. The annual index was 179 for 1975, 187 for 1976 and 186 for 1977.

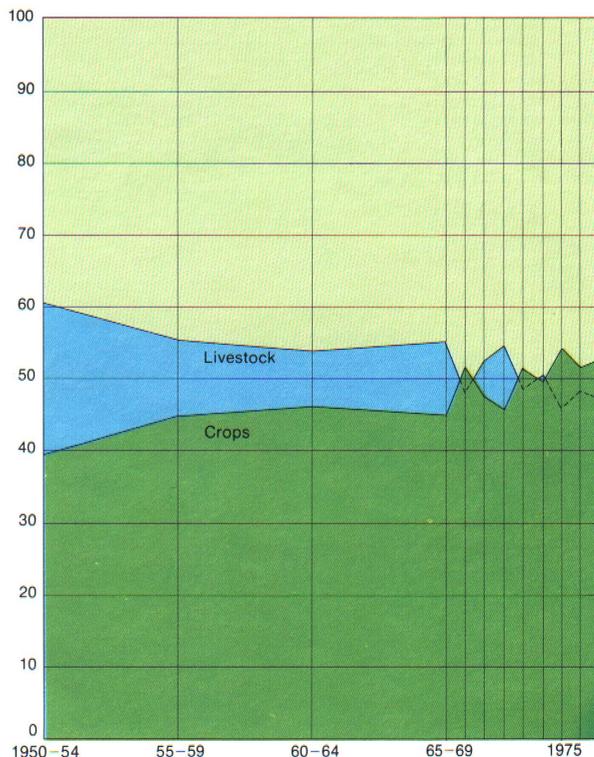
The indexes of prices paid are presented again in this chart to better show the ratio of prices received to paid and indicate the relationship relative to 1967 prices. The ratio of prices received to paid was favorable during 1950-54 when it averaged 117, dropping to 101 for 1955-1959, then 93 for 1960-64, 97 for 1965-69 and 105 for 1970-74. This last period is above 100 due to the 115 for 1973 and 118 for 1974. Prices paid had not risen as rapidly as those received, but have since and the ratio is back below 100 — i.e. not as favorable as 1967.

PERCENT OF MARKETINGS FROM CROPS AND LIVESTOCK

The relative importance of crops and livestock in the total agricultural output of Michigan is of interest. This was measured by converting the cash marketings of each at current prices to marketings in constant prices (at 1967 levels). The accompanying chart shows that for 1950-54 livestock made up of 60% of total cash farm marketings and crops 40%. For 1955-59 this had changed to 55 and 45%, respectively, and was essentially the same for both 1960-64 and 1965-69.

As evident from the chart, annual percentages varied considerably, but the 1970-74 5-year average had changed to approximately 50-50. If one averages 1975-77 the livestock share had fallen to 47% and the crops risen to 53%, indicating a long-term trend for a decrease in the livestock share of the total and an increase in the crop share. The indexes of total crop production (p. 9) and total livestock production (p. 14) show the same long term trends.

PERCENT OF MARKETINGS FROM CROPS AND LIVESTOCK



CASH FARM MARKETINGS — Cash marketings of livestock and crops and the total are shown in the graph, with details in Table 6. **Livestock** marketings averaged around \$400 million for 1950-54, 1955-59, and 1960-64; then \$465 million for 1965-69 (livestock price index at 100 was about 10% above 1950-54); \$598 million for 1970-74 (price index 136) and about \$820 million for both 1976 and 1977, with the price index around 180 (1967 = 100).

Crop marketings averaged \$272 million for 1950-54 (crop price index 95), increasing to \$387 million for 1965-69 (same prices as 1950-54), then to \$617 million for 1970-74 (price index 145) and to around \$900 million for 1975-77 (price index about 190).

Total farm marketings averaged around \$700 or \$800 million for the four five-year periods (1950-69), rising to \$1.2 billion for 1970-74, and to around \$1.7 billion for 1975-77. (Prices received during 1975-77 were nearly double 1950-54.) Michigan's share of U.S. farm marketings, at 1967 prices, declined from 2.50% in 1950-54 to 1.82% in 1970-74 or a decrease of one-fourth.

Of the nearly \$400 million increase in livestock marketings from 1950-54 to 1976, nearly \$260 million was increased dairy products income (milk price rose from \$4.05 to \$9.08). Some \$85 million was increased cattle and calf sales, about \$50 million in hogs (prices doubled), with the balance from eggs, chickens, sheep, lambs, wool, etc.

Of the approximately \$670 million increase in crops from 1950-54 to 1976, some \$225 million was from corn alone (\$20 million to \$245)! Incidentally, the price of corn was \$1.52 a bushel in 1950-54 and \$2.38 in 1976.

CASH FARM MARKETINGS IN MICHIGAN

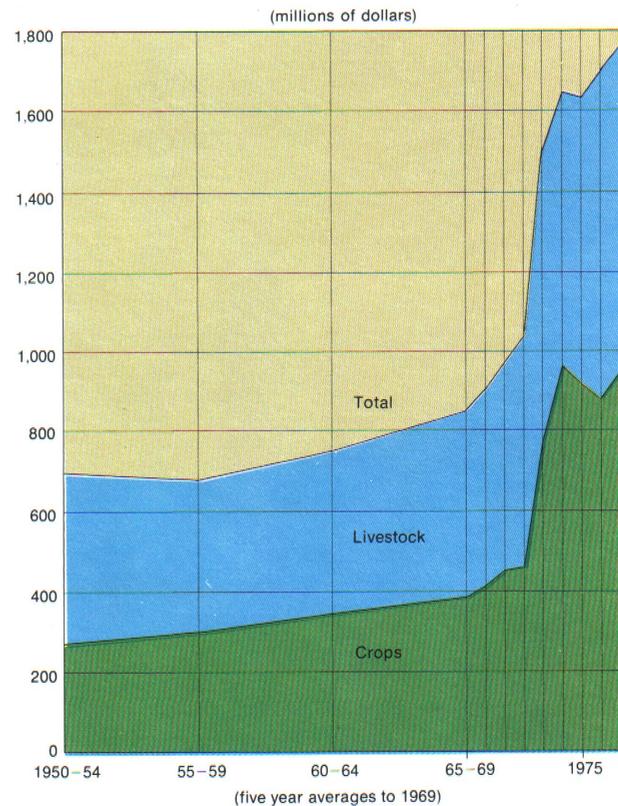
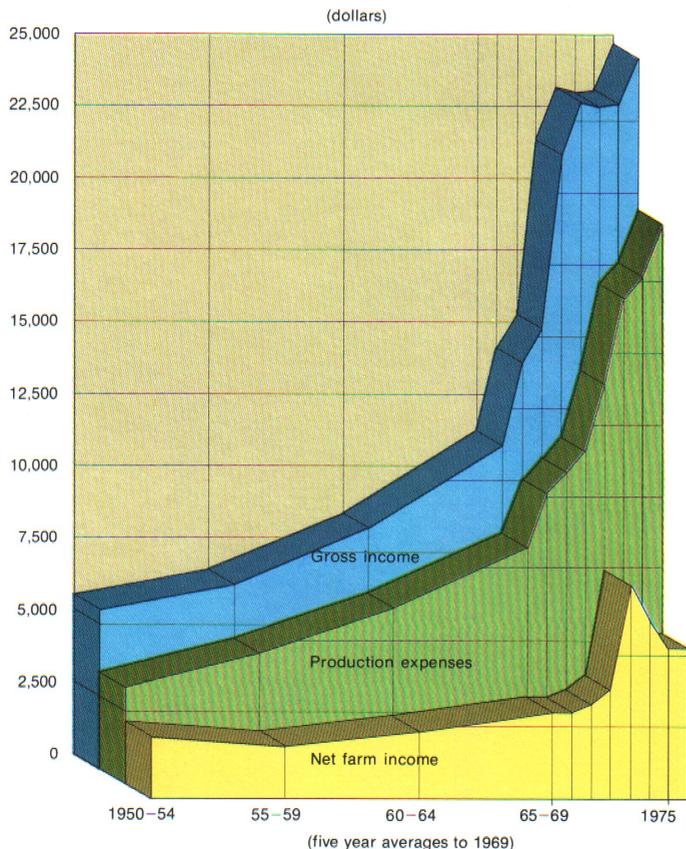


Table 6. Cash Farm Marketings of Major Products, Michigan (5-Year Averages) 1950-74 and Annually 1970-1977

	Crops							Livestock & Products					Total All Products
	All	Corn	Wheat	Dry Beans	Soy Beans	Fruits	Vegetables	All	Dairy Products	Cattle & Calves	Hogs	Eggs	
	(million dollars)												
1950-54	272	20	54	26	5	49	39	425	189	94	52	51	697
1955-59	299	40	54	32	9	60	35	382	188	84	39	44	681
1960-64	347	43	57	45	15	69	43	404	213	90	39	35	751
1965-69	387	47	37	49	26	77	56	465	238	113	46	42	852
1970-74	617	114	50	81	52	92	75	598	304	153	73	46	1215
70	413	63	24	48	28	58	76	494	261	118	55	41	907
71	455	76	22	67	38	78	62	519	279	130	55	34	974
72	458	71	32	58	30	76	69	581	300	156	69	36	1039
73	791	145	71	134	68	98	89	709	325	194	97	63	1500
74	964	216	95	99	101	131	94	688	354	169	87	54	1652
75	912	203	128	129	66	96	84	718	376	163	105	49	1630
76	885	245	94	86	76	96	94	816	447	179	105	57	1701
77	983							841					1824

Sources: "Michigan Agricultural Statistics" and "State Farm Income Statistics", ERS, USDA.

GROSS INCOME, EXPENSES, AND NET INCOME
PER FARM IN MICHIGAN



REALIZED GROSS INCOME, EXPENSES, AND NET PER FARM — The term "realized gross income" differs from cash marketings as it includes the estimated rental value of the farm dwelling, the farm value of produce used and government payments. The chart and table on this page, in effect, summarize the effects of all the changes and trends in crop and livestock production, size of farm, prices paid and received on farm earnings.

Realized gross income per farm doubled from approximately \$5,500 for 1950-54 to \$11,265 for 1965-69, rising rapidly in the 70s to approximately \$23,000 in 1974, with little further increase through 1976.

Production expenses for 1950-54 averaged only \$3,342 (61% of income) leaving \$2,165 net return (net to pay for interest on the farmer's equity in the business, for the labor of himself and family and his management). By 1965-69 average expenses per farm had risen to \$8,235 (73% of income), leaving \$3,030 for the annual net income per farm (only \$865 more than 15 years earlier). Expenses rose rapidly, although not as rapidly as income from 1970 to 1973, so that 1973 showed the highest *net income* of any year, at \$7,408 per farm. Expenses continued to rise (79% of income in 1976), thus the net declined to approximately \$5,300 for 1975 and 1976.

The purchasing power of that net income at 1967 is shown in the last column of the table. Farmers' *real income* from their farming operations ranged during four five-year periods (1950-69) from \$2,249 annually to \$3,000, rising to \$3,614 for 1970-74, with \$5,566 for the high year of 1973, falling back in 1975 and 1976 to about \$3,200, just a little more than 20 years ago. The low earnings were in spite of a doubling of the output per farm in the state from 1950-54 to 1970-74, tripling output per man and having 10 times the investment!

Table 7. Gross Farm Income, Production Expenses and Realized Net Income, Michigan 1950-76

Years	State Totals				Per Farm Averages			
	Gross Income	Production Expenses*	Net Farm Income	% Expenses of Income	Gross Income	Production Expenses*	Net Farm Income**	
							At Current Prices	Adjusted to 1967 Prices***
	(Million Dollars)		(%)		(Dollars)			
1950-54	833	508	325	61	5,507	3,342	2,165	2,776
1955-59	835	571	244	71	6,365	4,478	1,887	2,249
1960-64	919	663	256	72	8,386	6,053	2,333	2,571
1965-69	1,033	754	279	73	11,265	8,235	3,030	3,000
1970-74	1,411	1,028	383	73	17,396	12,661	4,735	3,614
70	1,101	848	253	77	13,105	10,093	3,012	2,590
71	1,155	885	270	77	14,089	10,798	3,291	2,713
72	1,239	936	303	76	15,301	11,556	3,745	2,989
73	1,705	1,113	592	65	21,316	13,908	7,408	5,566
74	1,854	1,356	498	73	23,168	16,949	6,219	4,211
75	1,845	1,421	424	77	23,066	17,762	5,304	3,290
76	1,926	1,513	413	79	24,686	19,396	5,290	3,103
77								

Sources: 1960-76 from "State Farm Income Statistics" Supp. to Statistics of Bul. 576 Sept. 1977, and prior to that from latest issues of "Farm Income Situation," both from ERS, USDA.

*Does not include interest on farmer's equity in the business, any charge for labor of farmer or family nor any management charge.

**The net farm income is the return for the items listed above.

***Adjusted by the consumer price index.

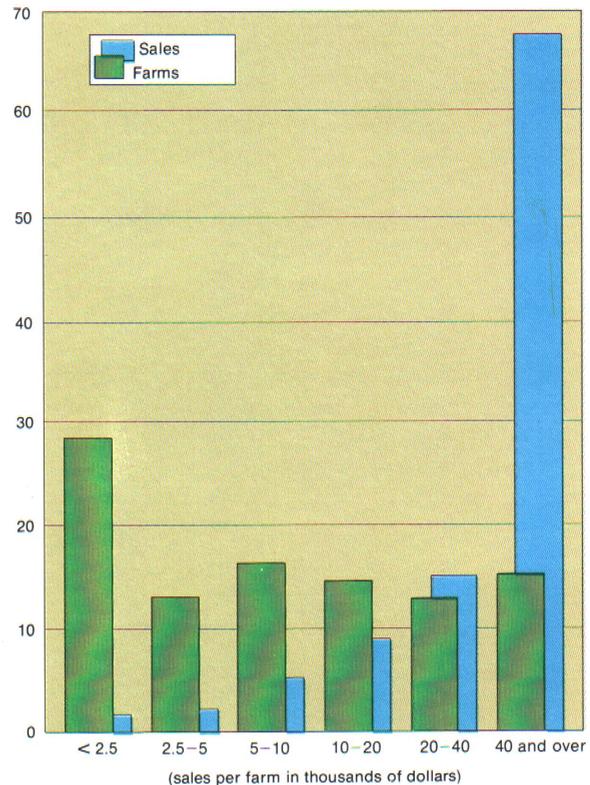
PERCENT OF FARMS AND SALES BY INCOME PER FARM — Previously the discussion has been on averages per farm, but everyone knows that the size of farms and the total sales of individual farms vary considerably. In the Census of Agriculture the farms are put in six groups according to sales per farm, and the 1974 data for Michigan showing percent of all farms and percent of total sales by groups are presented in the accompanying graph.

Farms with sales \$1,000 to \$2,499 made up about 30% of Michigan's total of 64,094 farms, but sales from these farms accounted for less than 2% of the total of \$1.5 billion sales reported. Each of the five higher income groups (economic classes of varying range in income) contained 12% to 15% of the total number of farms. Note that in economic class 1, the 9,657 farms with sales of \$40,000 and over, comprised only 15% of all farms, but accounted for 67% of all sales. If one includes the 7,828 farms in class 2 (\$20,000 to \$39,999 sales), then the two classes amounted to 27% of the farms and 82% of total sales. Obviously, farms in class 1, with average sales of \$104,000 in 1974, had much better chances of profits than those in class 2, with \$28,500, and so on down the line. In fact, not many farms with less than \$20,000 sales would show a profit.

WORK OFF FARM BY FARMERS — As indicated previously, many Michigan farms are small, have relatively low total farm product sales and low net income. This probably is a major reason why 46% of the 64,000 farmers indicated that farming was not their principal occupation in 1974, and that 54% worked off the farm, plus 25% of their families. About two-thirds of the operators of the farms with \$2,500-\$4,999 sales worked off the farm (average 136 days) and 20% of those with sales of \$40,000 and over (average 26 days). Even 50% of those with sales of \$10,000 to \$19,999 worked off farm (average 100 days).

Michigan farmers worked off farm in 1974 for a total of nearly 7 million days — an average of 109 days for all farmers, or 203 days per farmer for the 34,350 doing such work. It is estimated that the farmers' families worked off farm for a total of about 1.6 million days.

PERCENT OF FARMS AND SALES ACCORDING TO INCOME PER FARM IN MICHIGAN, 1974



Wages received from work off farm in 1974 by the farmer and his family was estimated to total \$356 million, or about \$5,550 per farm family in the state. Average farm income per farm in 1974 for wages for the farmer and the family, interest on his equity in the farm business, and for his management was about \$6,200 (\$5,300 in 1976). Thus, total farm family income for the work by farmer and family, plus all the other inputs, including an estimated average investment of about \$150,000, averaged \$11,750 for 1974 (\$10,850 in 1976, if off farm income was the same as 1974). Nationally, per capita income of the farm population from all sources was two-thirds that of the non-farm population for 1960-69, and 85% for 1970-77 (82% in 1977).

Sources of Data

Most of the data for the graphs, maps and tables were taken from federal or state publications (see list).

Michigan and U.S.

Michigan Department of Agriculture Crop Reporting Service and USDA Cooperating. "Michigan Agricultural Statistics," various issues.

U.S. Department of Agriculture (USDA). "Agricultural Statistics," various issues.

USDA, Economic Research Service. "Balance Sheet of the Farming Sector, 1977," Agr. Information Bul. No. 411.

USDA, Economic Research Service. "Changes in Farm Production and Efficiency," Sta. Bul. 581.

USDA, Economic Research Service. "Farm Real Estate Market Developments," various issues.

USDA, Economic Research Service. "Farm Income Statistics," Sta. Bul. 576, 557 and 547 and previous "Farm Income Situation" reports.

USDA, Economic Research Service. "State Farm Income Statistics," Supp. to Sta. Bul. 576, 557, 547 and previous "Farm Income" Supplements.

USDA, Economics, Statistics, and Cooperative Service (formerly Econ. Research Service). "Agricultural Outlook," various issues.

USDA, Statistical Reporting Service. "Crop Production—Annual Summary," various issues.

USDA, Statistical Reporting Service. "Number of Farms and Land in Farms," various issues.

USDA, Statistical Reporting Service. "Milk Production, Disposition, Income," various issues.

USDC, Department of Commerce, Bureau of the Census. "1974 Census of Agriculture," for Michigan, and U.S. summary reports. Also previous reports.

Ferris, John N. and Karl T. Wright, "The Status of Michigan Agriculture, 1976," MSU Agr. Econ. Report No. 229.

Wright, Karl T. "Manning Michigan Farms," Rural Manpower Center Report No. 15, Mich. State Univ.

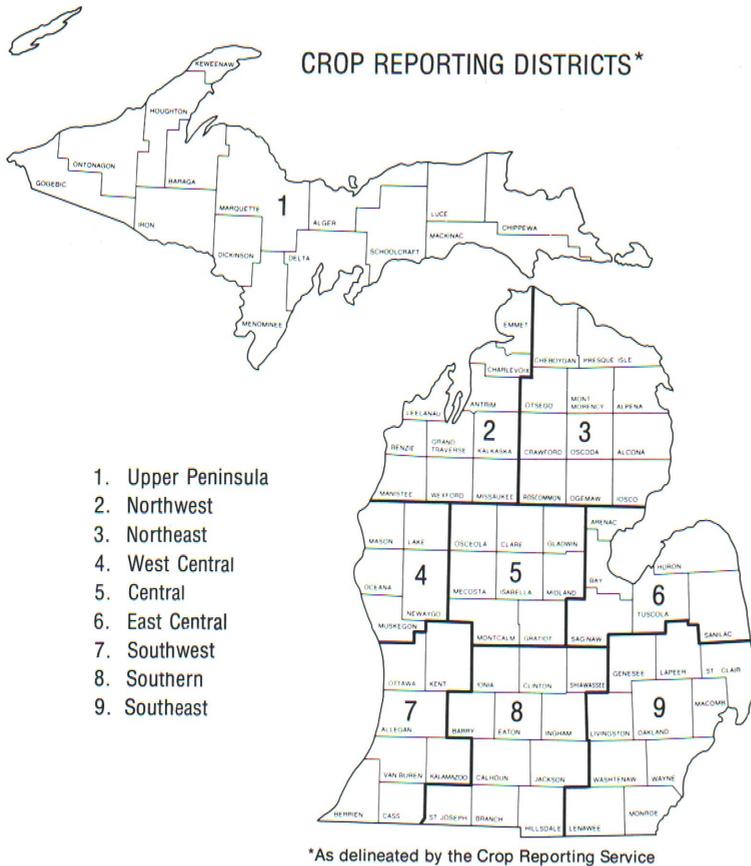
Michigan Districts and Counties

Michigan Department of Agriculture Crop Reporting Service. "Michigan County Statistics on Livestock, Poultry and Dairy, 1965-73." Also "Michigan County Statistics on Field Crops, 1959-72."

Michigan Department of Agriculture Crop Reporting Service and USDA Cooperating. "Michigan Agricultural Statistics," various issues.

U.S. Department of Commerce, Bureau of the Census. "1974 Census of Agriculture, Michigan" for county data.

III Ten-Year District Changes and Recent County Data

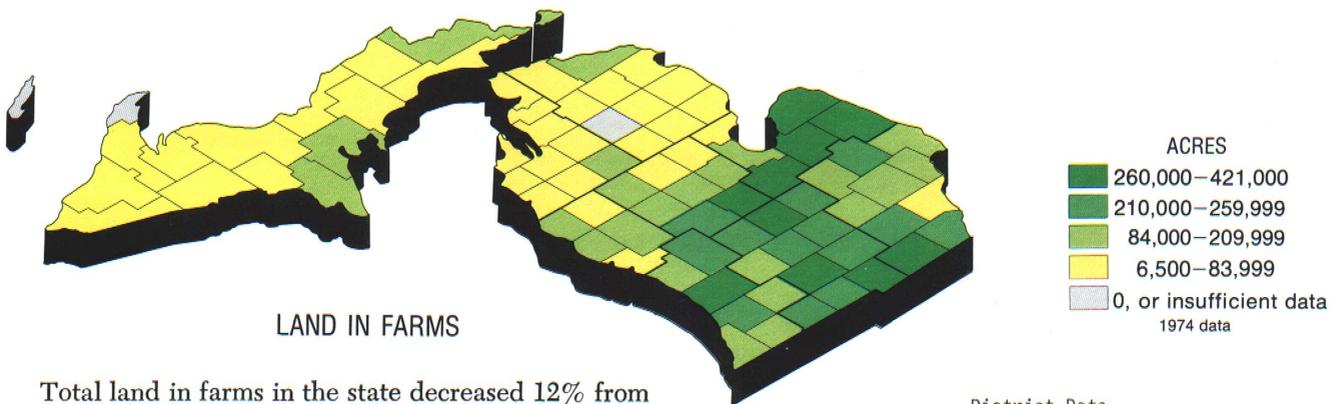


A. CROP PRODUCTION

This section is devoted to objectives two and three listed on the first page — to show 10-year changes in Michigan agriculture by districts, and to indicate on a county basis, the location and magnitude of production of crops and livestock and various economic measures of agriculture.

The districts being used in the 10-year comparison are the same as those delineated by the Michigan Crop Reporting Service (see map). When information was available from them, the 10 years covered in the "District Data" table are 1967, 1972 and 1977, and when not available, Census of Agriculture data for 1964, 1969 and 1974 were used.

Individual counties on the following maps are shaded in four colors, with the darker colors indicating those with the most acres of crops or number of livestock, etc. Unless otherwise noted, the dark green counties on all maps contain at least 30% of the state total, the medium green counties contain the next 30%, the light-green counties the remaining 10%. (Exact figures for all counties are generally shown in tables in the text or the appendix.)

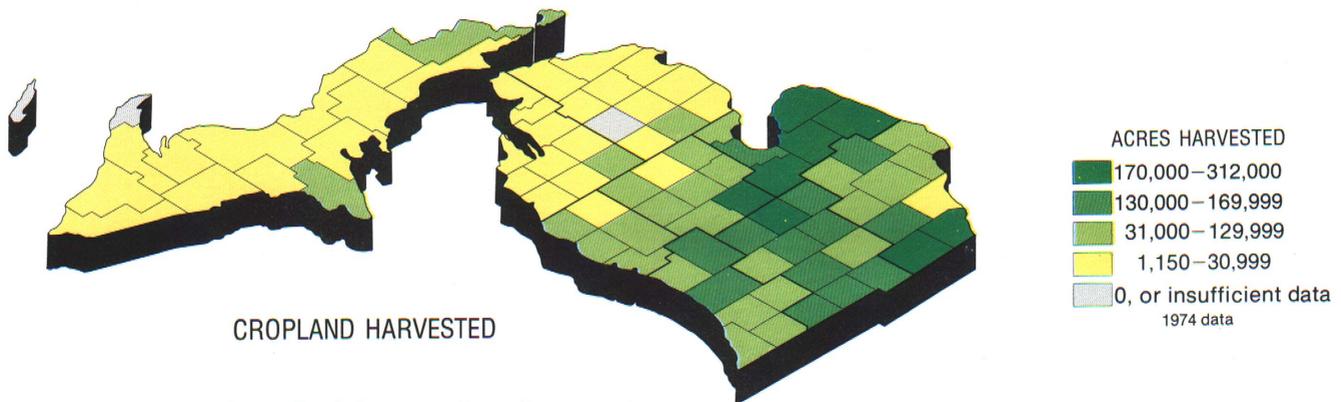


LAND IN FARMS

Total land in farms in the state decreased 12% from 1964 to 1969 and 9% from then to 1974, according to Census of Agriculture. Percentage decreases were higher in the U.P., Northwest and Northeast crop reporting districts (note heavier district lines), but the loss in actual acres was not more than some southern districts. Southwestern and Southern Michigan had the lowest 10-year percentage loss. Southeast Michigan had the largest acreage loss.

It took 10 counties with 260 to 421 thousand acres of land in farms individually to equal at least 30% of the state total. These counties in order of their acreage were: Sanilac, Huron, Lenawee, Tuscola, Saginaw, Gratiot, Calhoun, Hillsdale, Clinton, and Allegan. (These figures were affected by county size.)

District	District Data			% Change	
	1964	1969	1974	1st 5 yr	2nd 5 yr
	(thousand acres)				
UP	867	667	579	-23	-13
NW	799	625	507	-22	-19
NE	734	565	480	-23	-15
WC	560	481	448	-14	-7
Cent	1570	1348	1209	-14	-10
EC	2025	1871	1748	-8	-7
SO	1652	1526	1436	-8	-6
SE	3085	2841	2663	-8	-6
State	13599	11901	10832	-12	-9

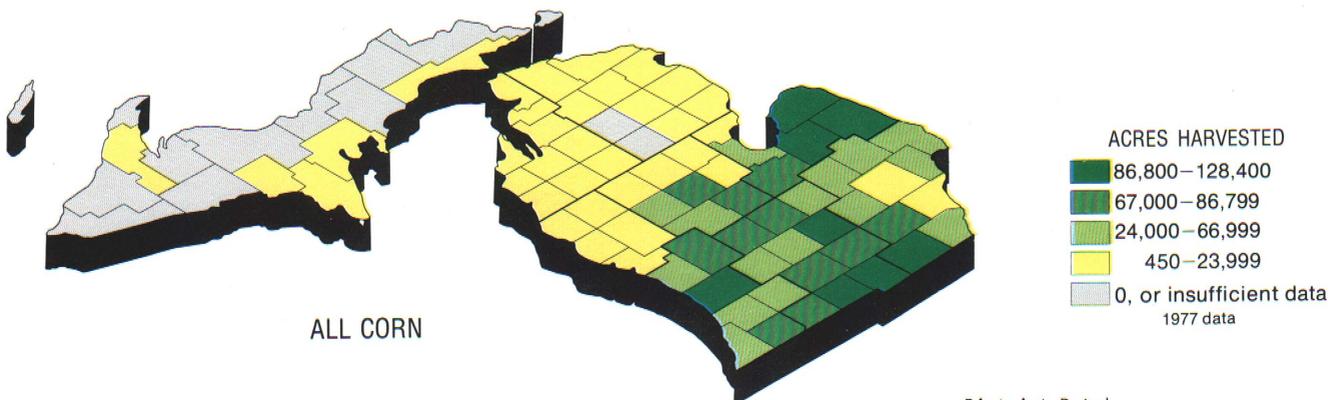


CROPLAND HARVESTED

Total acreage of cropland harvested in the state in 1969, when the down trend had about reached its low point, was 18% less than 1964, according to the Census. The 1974 acreage was 15% greater than in 1969. All crop reporting districts had decreases from 1964 to 1969, ranging from 11% in the East Central district, to 27% in the Northeast district. All districts, except the U.P., showed increases from 1969 to 1974 ranging from 5% for the Northwest district to 24% in the Southern district. In general, the larger percentage increases were in the southern half of the lower peninsula.

Eight counties having from 170 to 312 thousand acres had 30% of the state's harvested cropland, and in order of acres were: Huron, Sanilac, Lenawee, Saginaw, Tuscola, Gratiot, Monroe and Clinton.

District	District Data			% Change	
	1964	1969	1974	1st 5 yr	2nd 5 yr
(thousand acres)					
UP	246	187	183	-24	-2
NW	221	184	194	-17	+5
NE	210	154	164	-27	+6
WC	213	182	205	-15	+13
Cent	746	608	676	-18	+11
EC	1331	1183	1288	-11	+9
SW	832	708	838	-15	+18
SO	1627	1297	1605	-20	+24
SE	1312	999	1165	-24	+16
State	6738	5502	6318	-18	+15



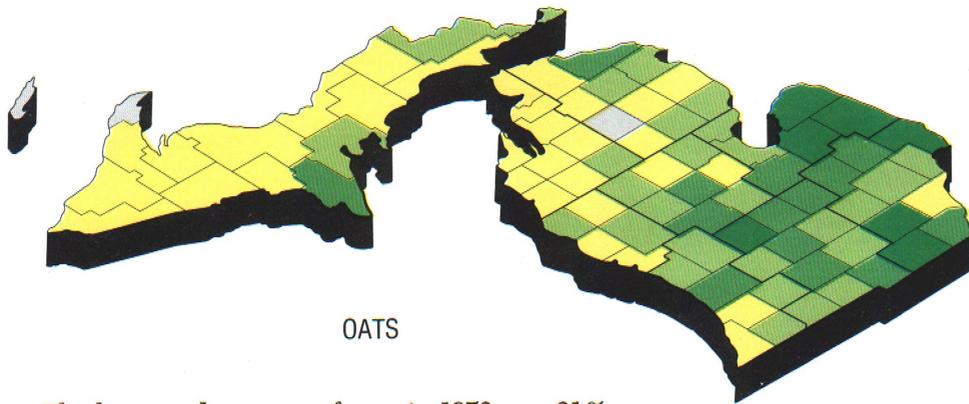
ALL CORN

The total planted acreage of corn for grain and silage increased 18% from 1967 to 1972, according to the Crop Reporting Service, followed by a 28% increase from 1972 to 1977, an increase in 10 years of nearly a million acres! In the first five years all districts had increases, and nearly all had large percentage increases in the last five years. Especially large acreage increases took place in the Southern and East Central districts.

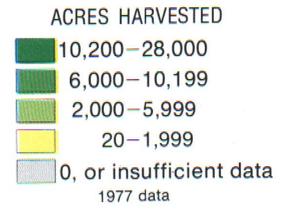
Eight counties with 86,800 to 128,400 acres had 30% of the state's 1977 2.7 million planted acres of corn, and were: Lenawee, Huron, Sanilac, Branch, Tuscola, Allegan, Hillsdale and Ingham. Tuscola and Ingham had especially sharp increases.

District	District Data*			% Change	
	1967	1972	1977	1st 5 yr	2nd 5 yr
(thousand acres)					
UP	8.2	9.5	19.2	+16	+102
NW	29.5	32.5	45.6	+10	+40
NE	19.3	25.5	32.1	+32	+26
WC	42.3	56.0	72.5	+32	+29
Cent	194.8	234.5	293.2	+20	+25
EC	256.5	338.0	455.5	+32	+35
SW	269.6	313.0	450.2	+16	+44
SO	573.6	703.0	836.7	+23	+19
SE	396.3	408.0	515.0	+3	+26
State	1790.1	2120.0	2720.0	+18	+28

*Planted acreage (harvested N.A.)



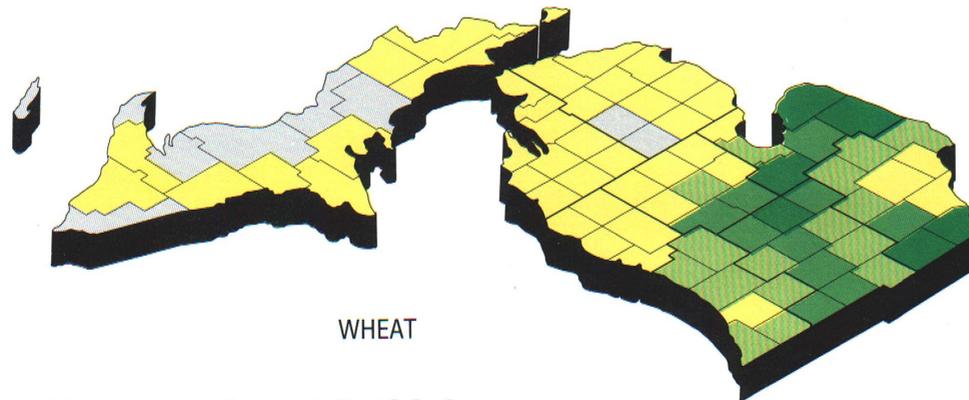
OATS



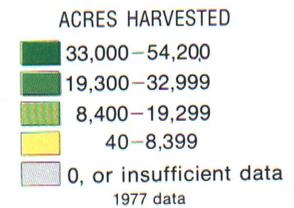
The harvested acreage of oats in 1972 was 31%, or 140,000 acres, less than 1967, but by 1977 the state acreage had increased a little. All districts showed decreases in the first five years, except the Central district, and in two districts around 50%. Acreage trends in the last five years among districts were mixed — some plus, some minus, but actual acreage change was minor.

In this case seven counties had 30% of the state's acreage, with acreages ranging from 10,200 to 28,000. Those counties were: Sanilac, Huron, Ionia, Washtenaw, Lenawee, Tuscola, and St. Clair. These are the same as five years earlier, except that St. Clair replaced Calhoun, and the order was somewhat different.

District	District Data			% Change	
	1967	1972	1977	1st 5 yr	2nd 5 yr
	(thousand acres)				
UP	42.0	31.0	28.0	-26	-10
NW	16.0	10.5	10.0	-34	-5
NE	23.0	19.0	26.0	-17	+37
WC	10.0	7.5	8.0	-25	+7
Cent	30.0	35.0	34.0	+17	-3
EC	98.0	80.0	67.0	-18	-16
SW	46.0	24.0	27.0	-48	+13
SO	110.0	54.0	74.0	-51	+37
SE	87.0	59.0	66.0	-32	+12
State	462.0	320.0	340.0	-31	+6



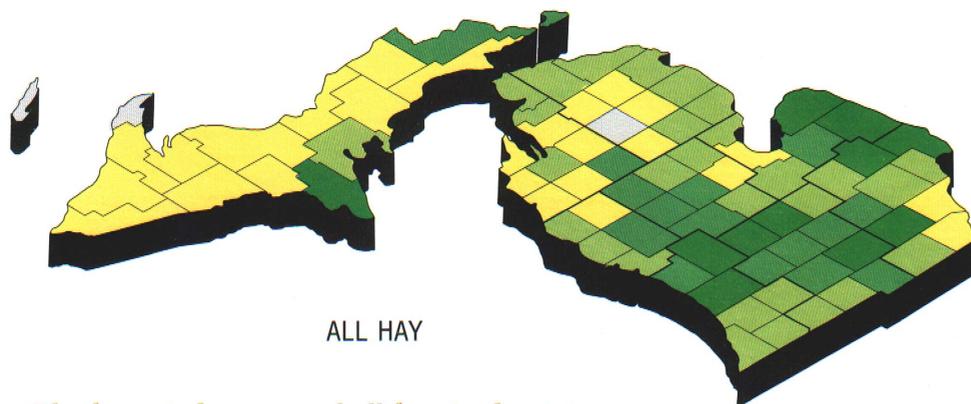
WHEAT



Wheat acreage has varied widely from year to year, and as it happens, 1967 at 1,112,000 acres was the highest year since 1953 (see Table 1). As a result, the 1972 acreage, which while not quite the lowest, showed a decline of over 50%. On the other hand, 1977 at 825,000 harvested acres was about 50% higher than 1972. Percentage changes by districts showed relatively little differences the first five years, with somewhat more differences in the second.

It took only six counties to equal 30% of the state acreage in 1977, with harvested acreages ranging from 33,000 to 54,200. Those six were: Lenawee, Sanilac, Huron, Saginaw, Monroe and Clinton. Eight counties shown in white had no wheat.

District	District Data			% Change	
	1967	1972	1977	1st 5 yr	2nd 5 yr
	(thousand acres)				
UP	1.2	.3	1.7	--	--
NW	6.8	3.2	5.0	-53	+56
NE	18.0	4.0	6.8	-77	+70
WC	20.0	8.0	16.5	-60	+106
Cent	115.0	52.0	88.0	-55	+69
EC	255.0	110.0	182.0	-57	+65
SW	135.0	62.0	83.0	-54	+34
SO	344.0	177.5	255.0	-48	+44
SE	225.0	118.0	187.0	-48	+58
State	1120.0	535.0	825.0	-52	+54



ALL HAY

ACRES HARVESTED

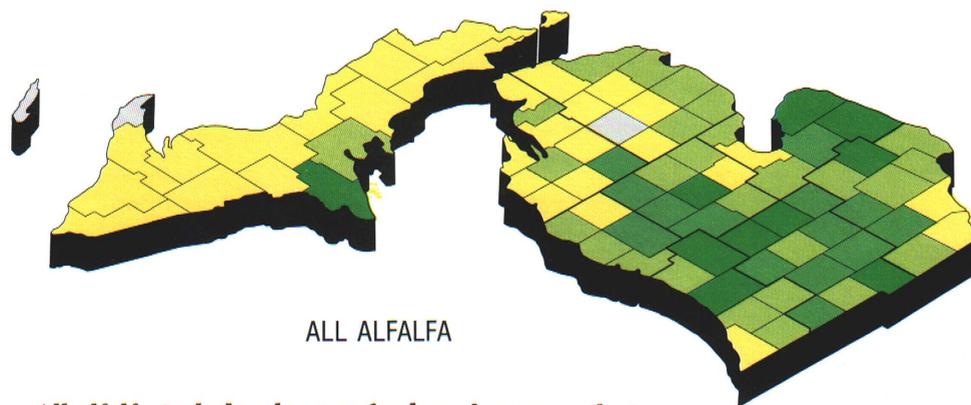
- 29,000-77,600
- 21,500-28,999
- 9,000-21,499
- 1,000-8,999
- 0, or insufficient data

1974 data

The harvested acreage of all hay in the state was 25% less in 1969 than in 1964, according to the Census of Agriculture, and practically the same in 1974 as in 1969. Percentage decreases by districts for the first five years ranged from 15% decrease for the West Central district to 30% for Southeast district. Changes in the second five years were small for all districts.

The production of hay is widespread, with all counties reporting some, and it took 11 counties to equal at least 30% of the state's 1,359,000 acres in 1974. The top 11 were: Sanilac, Huron, Lapeer, Kent, Allegan, Clinton, Washtenaw, Jackson, Ionia, Menominee and St. Clair, in that order. (See Table A-1 for acreage in all counties.)

District	District Data			% Change	
	1964	1969	1974	1st 5 yr	2nd 5 yr
	(thousand acres)				
UP	180.3	134.0	130.1	-26	-3
NW	110.2	85.7	90.4	-22	+5
NE	131.6	98.2	99.7	-25	+2
WC	82.1	69.7	70.0	-15	0
Cent	203.4	151.3	156.3	-26	+3
EC	238.2	179.6	174.5	-25	-3
SW	184.2	151.8	163.5	-18	+8
SO	388.9	289.5	277.8	-26	-4
SE	308.4	215.5	196.8	-30	-9
State	1827.3	1375.3	1359.1	-25	-1



ALL ALFALFA

ACRES HARVESTED

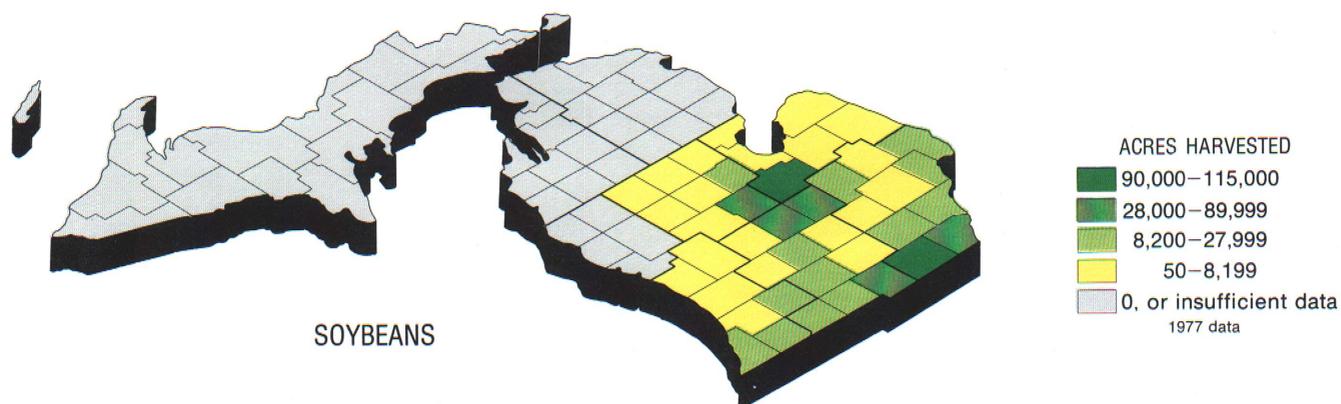
- 22,500-63,500
- 16,500-22,499
- 6,800-16,499
- 160-6,799
- 0, or insufficient data

1977 data

All alfalfa includes that cut for hay, for grass silage and green chop; and as reported in the Census, alfalfa made up two-thirds of all hay. The 1969 acreage was a fourth less than 1964, the same as all hay, but that for 1974 was up six percent. The percentage change from 1964 to 1969 by districts varied considerably (see district table). The same was true for the following five years.

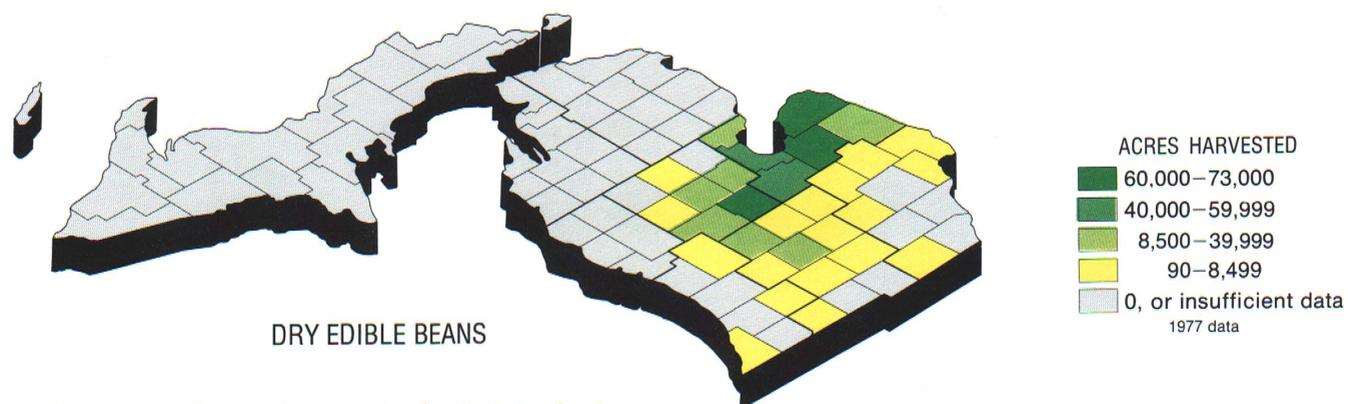
Alfalfa production also is widespread over the state and it took 10 counties to total 30% of the state's 963,000 acres in 1974. These counties had from 22,500 to 63,500 acres and were: Sanilac, Huron, Lapeer, Kent, Allegan, Clinton, Ionia, Isabella, Hillsdale and Menominee.

District	District Data			% Change	
	1964	1969	1974	1st 5 yr	2nd 5 yr
	(thousand acres)				
UP	50.8	51.0	58.0	0	+14
NW	63.9	55.7	65.8	-13	+18
NE	74.7	62.7	66.6	-16	+6
WC	51.3	46.7	49.9	-9	+7
Cent	142.3	98.0	113.8	-31	+16
EC	186.4	128.3	139.5	-31	+9
SW	121.8	102.2	112.9	-16	+10
SO	299.4	216.0	215.5	-28	0
SE	220.5	148.1	140.6	-33	-5
State	1211.1	908.7	962.6	-25	+6

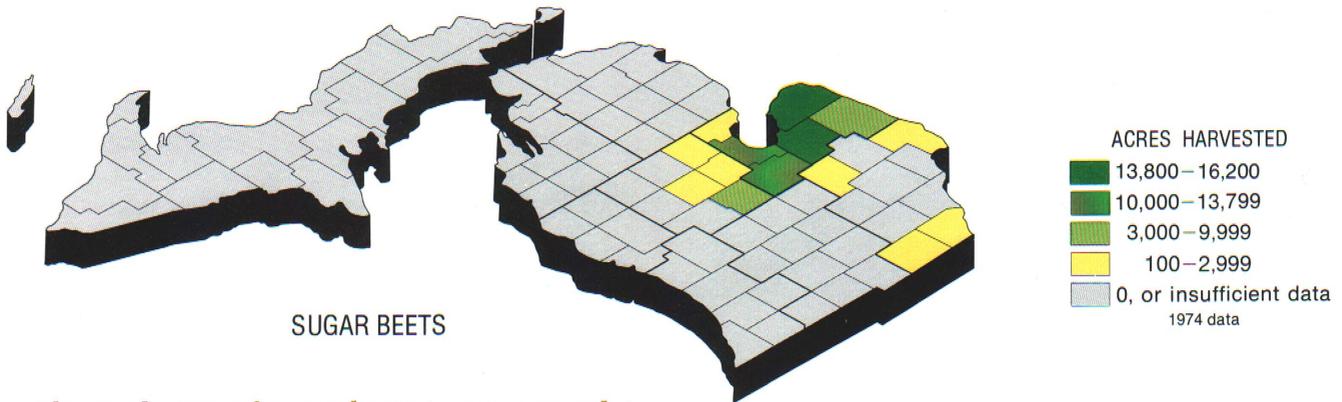


The acreage change in soybeans from 1967 to 1972 and 1977 for the state and districts may not be indicative of decade trends, as there have been considerable year-to-year differences. The year 1967 was relatively high and it might be thought that 1977's 720,000 acres was high (see Table 1 acreages), but 1978 planted acreage is reported at 820,000. At any rate the 1977 acreage was about 200,000, or nearly 40%, higher than 1972, with large increases in the East Central and Southern districts. In 1977, the Southern and Southeastern districts grew 460,000 of the state's 720,000 acres. Saginaw and Lenawee grew 30% of the state's acreage in 1977! Saginaw's acreage alone increased from 42,000 to 115,000 from 1972 to 1977.

District	District Data			% Change	
	1967	1972	1977	1st 5 yr	2nd 5 yr
	(thousand acres)				
UP	--	--	.4	--	--
NW	--	.3	.5	--	--
NE	.3	.25	.6	--	--
WC	.2	.25	1.0	--	--
Cent	36.5	31.9	63.0	-13	+97
EC	53.5	55.3	144.0	+3	+160
SW	33.5	41.0	51.5	+22	+26
SO	165.0	165.0	204.0	0	+24
SE	220.0	230.0	255.0	+5	+11
State	509.0	524.0	720.0	+3	+37

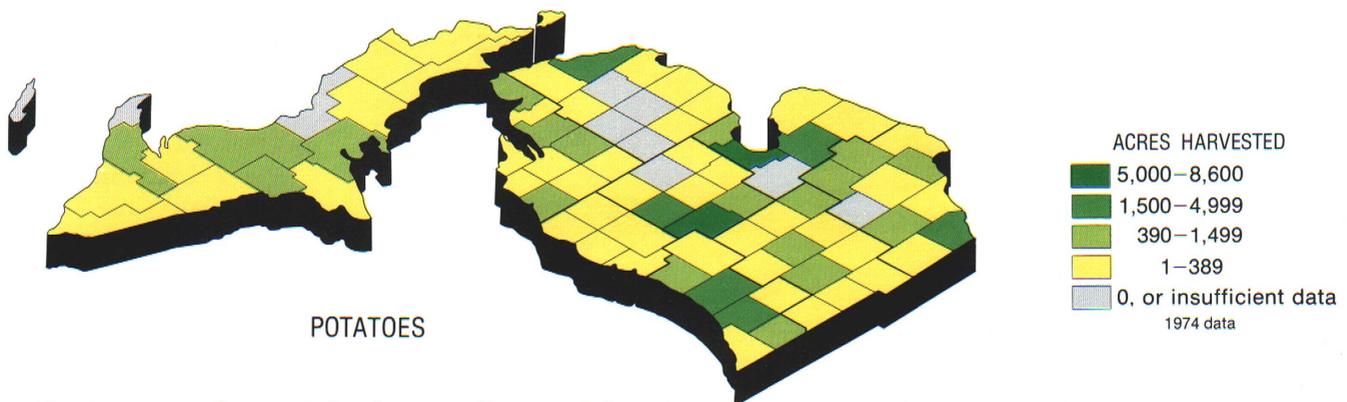


The state ranks number one in the U.S. in dry bean acreage and production. No table showing district acreages and state totals is included as the acreage over the ten years shows no trend. Also, the production of dry beans (largely navy beans) is relatively concentrated. In the degree of concentration and location of production, Tuscola and Huron together did not have quite 30% of the state's 480,000 acres in 1977, but if you add Gratiot county, these three had 42% of the state total. Adding Saginaw and Bay county acreage gives a total of 308,000 acres, or 64% of the state total. These same five counties were the top group in 1969, but the acreage was higher and the order different (Huron, Tuscola, Saginaw, Gratiot, and Bay).

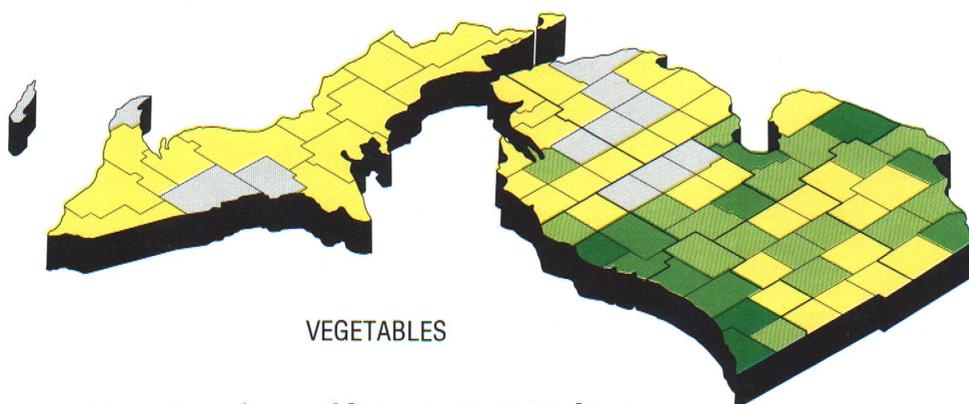


The production of sugar beets is concentrated in even fewer counties than dry beans, so again there is no "district" table. State acreage has varied relatively little from year to year in the past decade — with a high of 93,000 in 1969 to a low of 83,000 in 1971, according to Crop Reporting Service.

The two counties of Tuscola and Huron had about 40% of the state's acreage in 1974, and adding Bay and Saginaw resulted in over 60% of the total. Only 12 counties reported more than 100 acres that year. The same four counties were tops in both 1969 and 1974 but were in a different order.

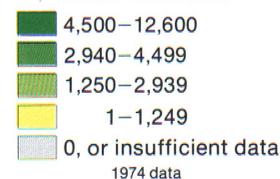


Potato acreage has varied only a small amount during the past decade, generally around 40,000, although 1975 was only 36,000 and 1970 and 1971 were 45,000. Census county data for 1974 show that Montcalm and Bay counties had one-third of the total acreage of summer and fall potatoes. The six widely scattered counties of Monroe, Presque Isle, Allegan, Van Buren, Tuscola and Mecosta had enough acreage, when added to that of the first two, to make 60% of the state total. While only eight counties accounted for 60%, a total of 38 counties had 100 acres or more. (See Appendix Table A-1 for that data.) Compared with five years earlier, Montcalm has about the same acreage; Bay, one third less (2,500 acres); Monroe, about the same; Presque Isle and Allegan, a little more.



VEGETABLES

ACRES HARVESTED

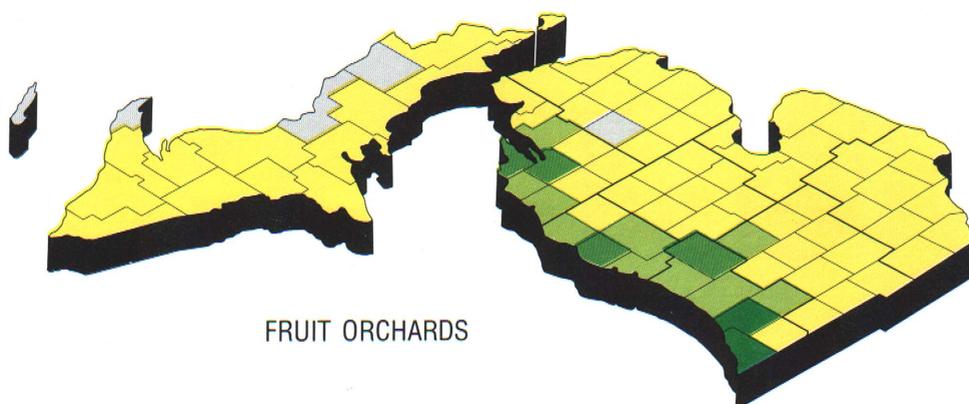


A great variety of vegetables is grown in Michigan. Cucumbers for pickles were most important with approximately 27,000 harvested acres in 1974, followed by asparagus with 17,000 acres, sweet corn over 11,000 acres, and onions about 7,000 acres. Total vegetable acreage in 1974 amounted to 107,000 — essentially the same as in both 1969 and 1964, according to the Census.

Van Buren County had the largest total vegetable acreage in 1974 at 12,600, followed by Berrien, Oceana and Sanilac at 4,500 to make up over 30% of the state's total. Eight more rather widely scattered counties accounted for the next 30%. Some 45 counties had 100 acres or more of vegetables.

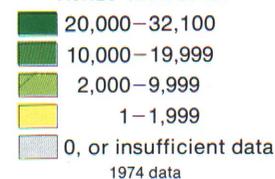
District Data

District	1964	1969	1974	% Change	
				1st 5 yr	2nd 5 yr
(thousand acres)					
UP	.9	.9	.1	--	--
NW	2.7	3.8	3.8	--	0
NE	.1	.4	.2	--	--
WC	10.8	13.8	18.9	+27	+37
Cent	7.8	6.4	7.0	-18	+9
EC	16.7	15.6	13.5	-6	-13
SW	26.4	26.8	35.6	+2	+33
SO	12.3	10.2	10.2	-17	0
SE	24.4	22.8	17.5	-7	-23
State	102.1	100.7	106.8	-1	+6



FRUIT ORCHARDS

ACRES HARVESTED

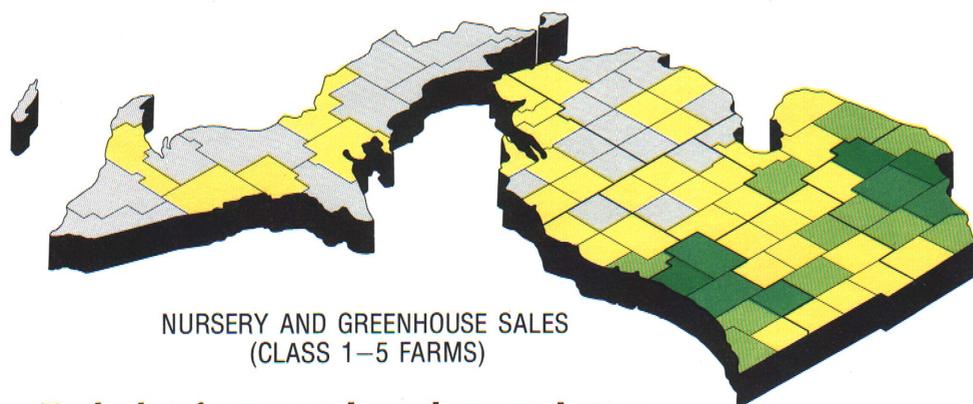


According to Census data, there was a slight decrease in land in orchards from 1964 to 1969 and a considerable decline by 1974. (The Crop Reporting Service reports indicate little acreage change.) The Southwest district has a major portion of our orchard acreage, followed by the Northwest and West Central districts.

Two counties — Berrien and Van Buren — had one-third of our state total orchard acreage, and four more — Oceana, Kent, Grand Traverse and Leelanau — had enough to account for two-thirds of the total. The top six counties were the same as in 1969 and in the same order, except the last two changed places.

District Data

District	1964	1969	1974	% Change	
				1st 5 yr	2nd 5 yr
(thousand acres)					
UP	.4	.2	.2	--	--
NW	42.3	41.8	39.0	-1	-7
NE	1.2	1.0	.7	--	--
WC	29.6	29.3	27.3	-1	-7
Cent	2.0	1.8	2.0	-10	+11
EC	2.1	1.6	1.2	--	--
SW	101.4	99.6	85.4	-2	-14
SO	8.5	7.3	5.5	-14	-25
SE	11.5	8.4	6.4	-27	-24
State	199.0	191.0	167.7	-4	-22



NURSERY AND GREENHOUSE SALES
(CLASS 1-5 FARMS)

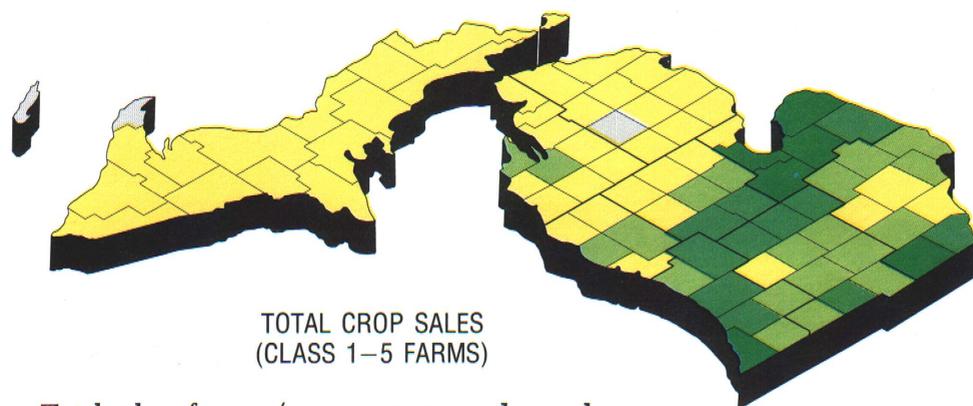
Total sales of nursery and greenhouse products on class 1-5 farms (sales over \$2,500) increased from about \$27 million in 1964 to \$37 million in 1969, or 38%, according to the Census of Agriculture. Increases were particularly high in the Southeast district of the state. By 1974, total sales had jumped 89%, to over \$70 million (about 10% of all crops). From 1969 to 1974 the sales more than doubled in the Southwest district and Southeast districts. Sales in these two districts accounted for 80% of the state total in 1974.

Ottawa was the leading county, followed by Macomb and Lapeer. These three counties had 30% of the state's total sales in 1974, five more had the next 30%, 11 the third 30%, 40 the remaining 10%.

District Data (Class 1-5 Farms)

District	1964	1969	1974	% Change	
				1st 5 yr	2nd 5 yr
(thousand dollars)					
UP	538	13	169	--	--
NW	479	395	689	-18	+74
NE	86	5	295	--	--
WC	783	803	1294	+3	+61
Cent	397	225	735	--	--
EC	985	1518	2444	+54	+61
SW	9605	12677	27723	+32	+119
SO	2711	3237	6326	+19	+95
SE	11242	17081	29964	+52	+75
State*	26826	37017	70145	+38	+89

*May not add due to omission of counties with small sales.



TOTAL CROP SALES
(CLASS 1-5 FARMS)

Total sales of crops (except nursery and greenhouse products and forest products, listed separately in the Census) declined 10% from \$367 million for 1964 to \$330 million for 1969. Changes by districts ranged from a marked decrease in the U.P. to a modest increase in the West Central district. From 1969 to 1974 crop sales rose 126%, or \$415 million. The increase by districts varied widely, from 200% for the East Central and Southern to only 52% for the Southwest. The increase in dollar value was greatest in the East Central district. (See Table 8 for sales by counties for crop groups.)

District Data (Class 1-5 Farms)

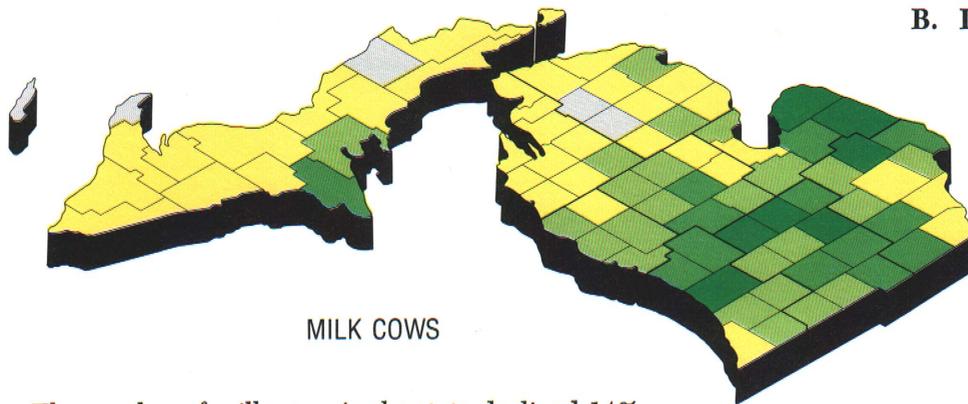
District	1964*	1969	1974	% Change	
				1st 5 yr	2nd 5 yr
(million dollars)					
UP	5.1	3.2	7.2	-37	+125
NW	16.8	16.9	35.7	+1	+111
NE	4.5	3.5	6.7	-23	+91
WC	15.2	17.8	34.4	+17	+93
Cent	37.2	29.9	77.6	-20	+160
EC	82.2	66.6	200.9	-19	+202
SW	78.9	81.1	122.9	+3	+52
SO	59.9	45.7	137.9	-24	+202
SE	67.9	65.3	121.2	-4	+86
State	366.7	330.0	744.5	-10	+126

*For all farms. Not available for Classes 1-5 by counties. (Class 1-5 was 7% less than all farms.)

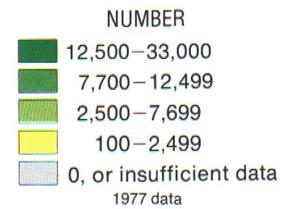
Table 8. Crop Sales by Groups for Counties and Crop Reporting Districts, 1974 (thous. dol.)
Class 1-5 Farms

County & District	All Products	All Crops	Grains	Field Seeds	Other Field Crops	Vegetables	Fruits	Nursery & GH Prod.	Forest Prod.
U.P. Total	29,138	7,713	977	1,932	4,048	23	171	159	351
Alger	978	164	10	110	0	0	24	1	18
Baraga	431	34	1	25	0	7	0	-	7
Chippewa	2,865	488	91	389	0	0	7	0	0
Delta	4,618	1,289	310	248	469	7	32	55	167
Dickinson	3,638	2,248	89	90	1,997	0	0	30	41
Gogebic	393	30	0	28	1	0	0	0	1
Houghton	2,124	770	38	95	467	5	87	67	11
Iron	1,223	824	49	73	670	0	0	6	26
Luce	411	113	25	40	0	0	2	0	0
Mackinac	1,043	106	10	71	5	0	0	-	20
Marquette	987	412	3	53	356	0	1	0	0
Menominee	9,016	888	322	527	22	2	14	0	0
Ontonagon	1,037	159	23	96	0	0	2	-	38
Schoolcraft	374	181	6	87	61	2	2	-	22
N.W. Total	59,449	36,859	2,272	2,355	2,165	1,069	27,813	689	496
Antrim	7,588	4,833	305	193	925	37	3,290	56	27
Benzie	3,458	2,573	34	93	0	17	2,429	0	0
Charlevoix	2,894	603	169	264	9	23	77	28	33
Emmet	2,521	975	140	174	421	36	45	130	30
Grand Traverse	12,061	10,240	405	219	3	271	9,244	16	81
Kalkaska	1,078	603	122	97	384	0	0	0	0
Leelanau	12,758	10,203	196	251	35	110	9,554	17	39
Manistee	5,373	4,594	281	94	291	402	3,148	258	121
Missaukee	9,036	1,536	465	811	97	14	6	-	143
Wexford	2,682	699	155	159	0	159	20	184	22
N.E. Total	25,734	7,133	2,005	2,222	1,831	67	562	295	94
Alcona	1,999	391	122	237	6	9	1	3	12
Alpena	4,166	839	328	250	11	35	204	-	12
Cheboygan	2,062	878	75	154	17	5	308	284	35
Iosco	2,958	649	270	345	3	11	6	-	14
Montmorency	1,530	251	154	92	1	0	0	-	3
Ogemaw	4,864	961	397	490	0	4	0	4	10
Oscoda	1,595	115	16	91	1	2	0	4	1
Otsego	1,313	524	55	201	261	0	0	-	7
Presque Isle	5,160	2,493	585	343	1,531	0	34	0	0
Roscommon	87	32	3	19	0	1	9	0	0
W.C. Total	59,811	36,405	4,217	1,660	456	12,286	15,025	1,294	696
Lake	774	194	74	80	2	29	0	-	9
Mason	9,871	5,405	1,236	353	0	0	2,554	338	153
Muskegon	12,852	7,659	944	348	66	2,587	2,995	686	33
Newago	17,681	8,578	1,270	540	342	5,153	1,169	82	23
Oceana	18,633	14,569	693	339	46	4,517	8,307	188	478
Cent. Total	145,979	78,693	52,881	3,776	15,688	3,472	1,284	735	339
Clare	4,692	981	321	0	0	0	0	124	17
Gladwin	4,674	1,826	1,444	235	131	16	0	0	0
Gratiot	47,165	31,765	25,540	540	3,663	1,647	35	326	14
Isabella	26,581	9,312	7,671	996	87	356	118	54	30
Mecosta	13,219	5,326	1,783	688	1,858	852	145	0	0
Midland	11,307	8,140	6,527	153	1,186	151	68	42	14
Montcalm	30,168	19,970	9,199	545	8,487	450	882	145	262
Osceola	8,173	1,373	396	619	276	0	36	44	2
E.C. Total	307,153	203,446	133,774	5,882	54,422	5,615	1,204	2,444	107
Arenac	9,520	5,591	3,068	248	1,642	626	7	0	0
Bay	34,642	32,181	16,241	160	13,319	1,885	38	536	3
Huron	80,588	42,663	30,611	1,901	10,083	3	3	49	14
Saginaw	58,899	49,602	34,748	545	11,844	954	646	827	38
Sanilac	59,479	25,351	16,958	2,126	3,629	1,400	192	1,018	28
Tuscola	64,025	48,058	32,148	902	13,905	747	318	14	24
S.W. Total	279,036	151,653	36,348	4,282	3,861	24,786	53,661	27,723	995
Allegan	55,404	22,669	6,486	970	1,508	3,549	5,038	4,752	367
Berrien	41,380	35,065	5,836	302	120	7,040	18,451	3,302	15
Cass	26,796	9,936	6,605	541	239	1,248	1,095	163	46
Kalamazoo	25,941	12,315	5,881	450	37	322	964	4,650	12
Kent	40,994	23,354	4,735	932	522	3,968	8,923	4,209	64
Ottawa	51,906	21,887	3,193	579	448	3,554	5,172	8,501	441
Van Buren	36,615	26,427	3,612	508	987	5,105	14,018	2,146	50
SO. Total	305,571	144,831	117,458	7,583	2,892	6,616	3,329	6,306	649
Barry	17,425	6,310	4,673	780	61	457	148	55	136
Branch	27,269	14,815	13,205	509	97	39	297	642	26
Calhoun	29,628	13,559	10,224	528	434	825	198	1,299	51
Clinton	35,497	15,128	12,815	905	726	249	169	214	50
Eaton	23,843	14,314	11,578	629	414	1,058	51	537	46
Hillsdale	30,365	13,731	12,159	964	29	35	327	173	45
Ingham	30,657	14,194	9,642	657	131	1,571	320	1,831	43
Ionia	33,719	15,044	10,759	818	55	1,688	1,253	369	101
Jackson	23,220	9,147	7,259	532	57	446	359	418	77
St. Joseph	25,352	12,430	10,541	712	334	142	151	513	37
Shiawassee	28,596	16,159	14,603	549	554	106	56	255	37
S.E. Total	255,774	151,479	91,958	6,177	6,281	11,681	5,105	29,972	307
Genesee	19,942	9,618	7,187	656	407	189	670	448	60
Lapeer	34,268	17,168	5,763	1,335	868	2,735	762	5,681	25
Lenawee	56,078	35,269	32,323	821	701	834	441	139	11
Livingston	15,081	5,272	2,911	648	2	308	80	1,299	24
Macomb	19,582	14,397	3,518	300	371	2,408	1,346	6,449	6
Monroe	36,000	29,898	22,200	213	2,466	2,172	222	2,603	21
Oakland	12,249	8,481	1,406	675	5	163	533	5,647	53
St. Clair	25,370	10,670	6,934	762	645	1,020	228	1,037	44
Washtenaw	27,985	12,331	7,891	724	810	865	586	1,397	58
Wayne	9,219	8,375	1,825	43	6	987	237	5,272	5
State Total	1,467,704	819,394	441,892	36,210	91,746	66,555	108,166	70,145	4,680

B. LIVESTOCK PRODUCTION



MILK COWS



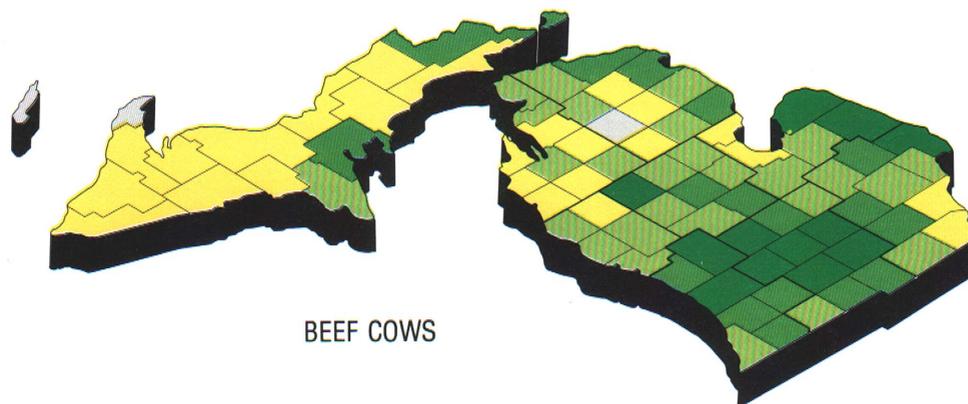
The number of milk cows in the state declined 14% from 1967 to 1972, with the rate ranging from 19% in the U.P. and the Northeast district, down to 10% in the Southwest. The state rate of decrease from 1972 to 1977 was 5%, with the same two districts having the fastest decrease as from 1967 to 1972. Southeast Michigan has a rapid decrease in both periods. Only slight decreases occurred in other districts.

Seven counties had 30% of the state's milk cows in 1977: Sanilac, Huron, Clinton, Allegan, Ingham, Lapeer and Ionia. (The same seven as in 1972, except Ingham replaced Kent.) Twelve more had the next 30%. (See Appendix Table A-2 for all counties.)

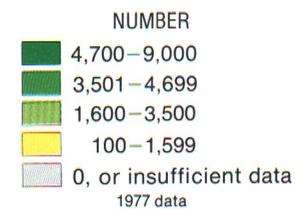
District Data (Number Jan. 1)

District	1967*	1972*	1977	% Change	
				1st 5 yr	2nd 5 yr
(thousand head)					
UP	29.7	24.1	21.0	-19	-13
NW	18.4	16.2	15.0	-12	-7
NE	19.9	16.2	14.0	-19	-13
WC	21.8	19.0	18.0	-13	-5
Cent	53.0	44.3	44.0	-16	-1
EC	88.0	75.9	73.0	-14	-4
SW	60.6	54.6	53.0	-10	-3
SO	122.1	106.3	105.0	-13	-1
SE	85.5	70.4	62.0	-18	-12
State	499.0	427.0	405.0	-14	-5

*Annual average.



BEEF COWS

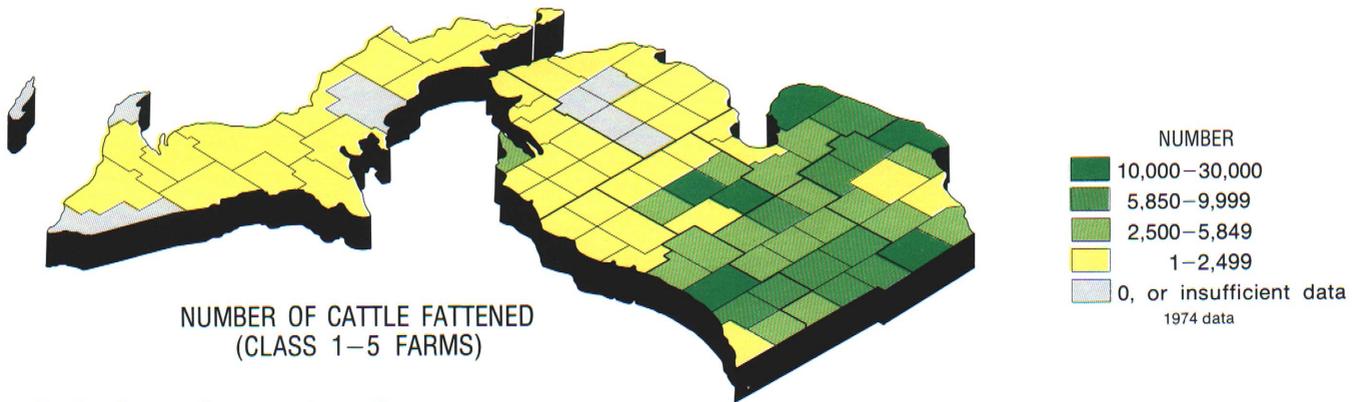


Beef cow numbers by counties were not available in 1967, so no district comparison can be made for 1967 to 1972. From 1972 to 1977 there was a statewide increase of 23%. Among districts this varied from 2% in the East Central to 46% in the Southwest. In terms of increase in actual number, the Southern district led with an increase of 12,000 head.

It took 12 counties to account for 30% of the state's beef cows and these were rather widely scattered over lower Michigan (see map). The top six counties were: Jackson, Kent, Calhoun, Huron, Ingham and Sanilac, having from 9,000 down to 6,000 head. From 1972, Kent and Ingham came in the top six and Ionia and Washtenaw fell below. Beef cow herds were reported in all but two counties in 1977.

District Data (Number Jan. 1)

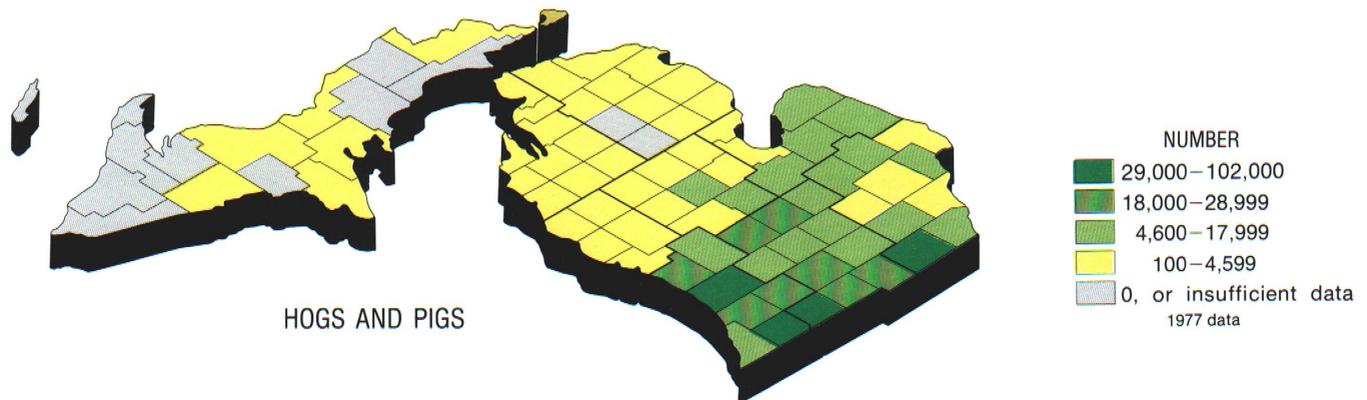
District	1967	1972	1977	% Change	
				1st 5 yr	2nd 5 yr
(thousand head)					
UP	N.A.	16.2	21.0	N.A.	+30
NW	N.A.	12.5	14.0	N.A.	+12
NE	N.A.	23.4	25.0	N.A.	+7
WC	N.A.	7.6	11.0	N.A.	+45
Cent	N.A.	21.3	27.0	N.A.	+27
EC	N.A.	20.5	21.0	N.A.	+2
SW	N.A.	21.2	31.0	N.A.	+46
SO	N.A.	45.9	58.0	N.A.	+26
SE	N.A.	25.4	31.0	N.A.	+22
State	N.A.	194.0	239.0	N.A.	+23



Cattle fattened on grain and concentrates, as reported in the Census, declined from 285,000 in 1964 to 275,000 in 1969 to 260,000 in 1974 (although a change in Census definition of a farm in 1974 might have had some effect). Changes, by districts, were relatively small from 1964 to 1969, even though two districts had high percentage increases, the actual numbers were small. From 1969 to 1974, five districts showed increases and four decreases. The decrease in the Southeast district was sizeable.

Six counties had 30% of the cattle fattened, and they were Huron, Lenawee, Isabella, Allegan, St. Clair and Gratiot — widely scattered counties. Ten counties had the next 30%, and all but five counties in the state had some cattle fattening.

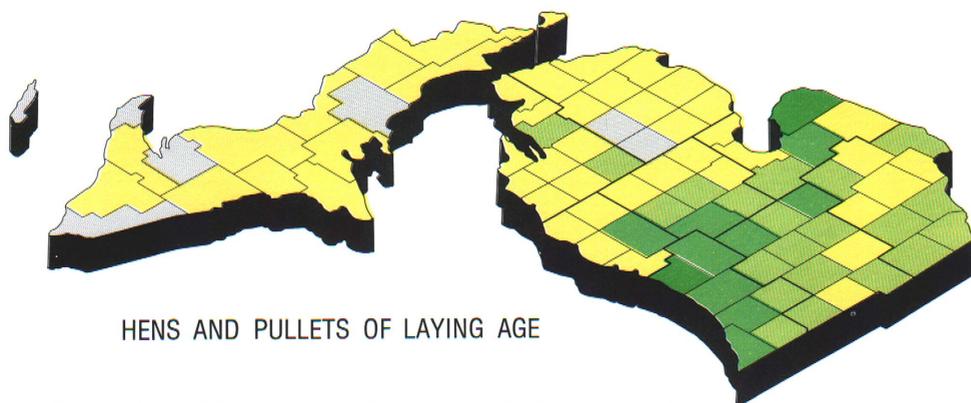
District	District Data (Class 1-5 Farms)				
	1964	1969	1974	% Change	
				1st 5 yr	2nd 5 yr
	(thousand head)				
UP	1.6	.8	1.0	--	--
NW	4.3	5.7	6.3	+32	+11
NE	3.9	5.6	3.7	+44	-33
WC	5.9	6.2	6.8	+5	+10
Cent	35.6	32.6	36.1	-8	+11
EC	41.5	38.1	46.9	+8	+23
SW	34.0	36.1	39.5	+6	+9
SO	73.3	68.8	60.4	-6	-12
SE	84.6	81.0	59.0	-4	-27
State	284.7	274.9	259.7	-3	-6



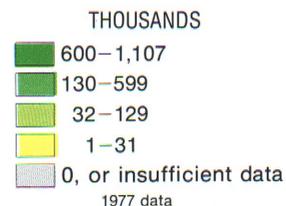
The number of hogs and pigs on hand June 1 rose from 604,000 head in 1967 to 720,000 in 1972, according to the Crop Reporting Service. All districts showed increases — ranging from 26% for Southwest (about 45,000) to 6% for the Northeast. From 1972 to 1977 there was a state decrease of 80,000 head, or 11%. In this period six districts had decreases, topped in actual number by the Southeast district, while three had increases, but only one sizeably — 25,000 head in the Southwest district.

Hog production was quite concentrated with Cass County alone having almost one-sixth of the state's total in 1977 and three others — Allegan, Lenawee and St. Joe — making 30%. Eight more counties had the next 30% — so 12 counties had 60% of all hogs.

District	District Data (Number June 1)				
	1967	1972	1977	% Change	
				1st 5 yr	2nd 5 yr
	(thousand head)				
UP	1.8	2.0	2.3	+11	+15
NW	10.8	12.9	7.4	+19	-43
NE	5.2	5.5	6.3	+6	+15
WC	8.8	10.0	9.5	+14	-5
Cent	40.8	44.9	36.5	+10	-19
EC	41.6	49.5	42.0	+19	-15
SW	179.5	225.3	250.0	+26	+11
SO	219.7	257.2	202.0	+17	-21
SE	95.8	112.7	84.0	+18	-25
State	604.0	720.0	640.0	+19	-11



HENS AND PULLETS OF LAYING AGE

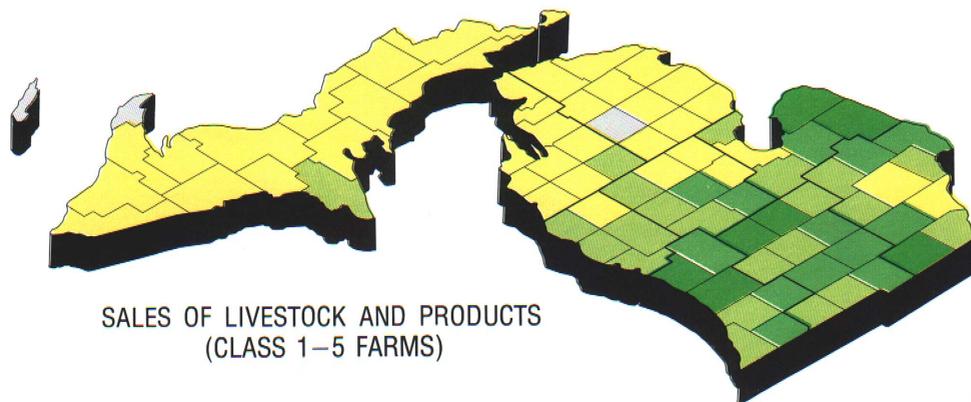
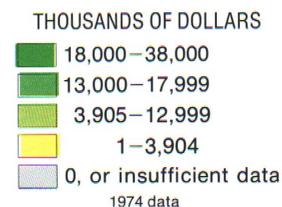


The number of hens and pullets on hand December 1 in the state declined 6% from 1967 to 1972, as reported by the Crop Reporting Service. Decreases expressed in percentages were generally higher in the northern districts. In actual numbers, each of the three districts across the bottom of the state went down 80 to 90 thousand head for most of the state decrease. From 1972 to 1977 the state number declined 5%, but there were extremely wide variations in changes among districts! The most significant was a large decrease in the Southeast.

Allegan and Huron counties had nearly two million birds, or 30% of the state total in 1977. These same two counties were tops in 1972, but then they had about 1.4 million birds, or 21% of the total.

District Data (Number Dec. 1)

District	1967	1972	1977	% Change	
				1st 5 yr	2nd 5 yr
(thousand head)					
UP	162	145	103	-10	-29
NW	410	395	232	-4	-41
NE	132	118	72	-11	-39
WC	276	265	271	-4	+2
Cent	393	320	478	-19	+49
EC	1278	1268	1215	-1	-4
SW	2007	1923	2185	-4	+14
SO	1237	1145	1202	-7	+5
SE	1120	1029	542	-8	-47
State	7015	6608	6300	-6	-5

SALES OF LIVESTOCK AND PRODUCTS
(CLASS 1-5 FARMS)

Total sales of livestock and livestock products rose from \$400 million in 1964 to \$462 million in 1969, or 16%, based on Census data. Increases by districts ranged from 3% for the U.P. to 32% in the Southwest, which jumped \$20 million, due mainly to hog income. Total sales in 1974 were \$648 million, or up 40%. District increases ranged from 21% in Southeast district to 59% in the Southwest. Dollar amounts were greatest in the Southern and Southwest districts.

Seven counties were responsible for 30% of livestock income in 1974: Huron, Sanilac, Allegan, Ottawa, Lenawee, Clinton and Ionia. (See Table 9 for details.) These same seven led in 1969, and in the same order, except Sanilac slightly exceeded Huron.

District Data (Class 1-5 Farms)

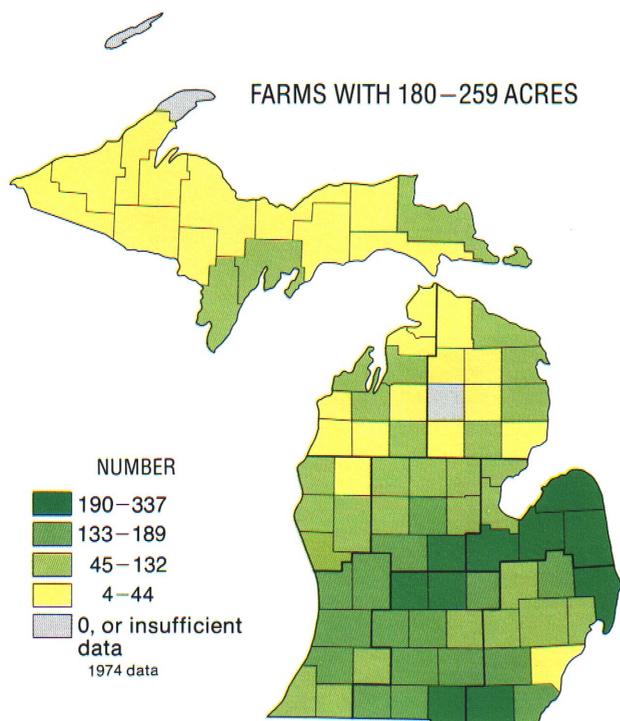
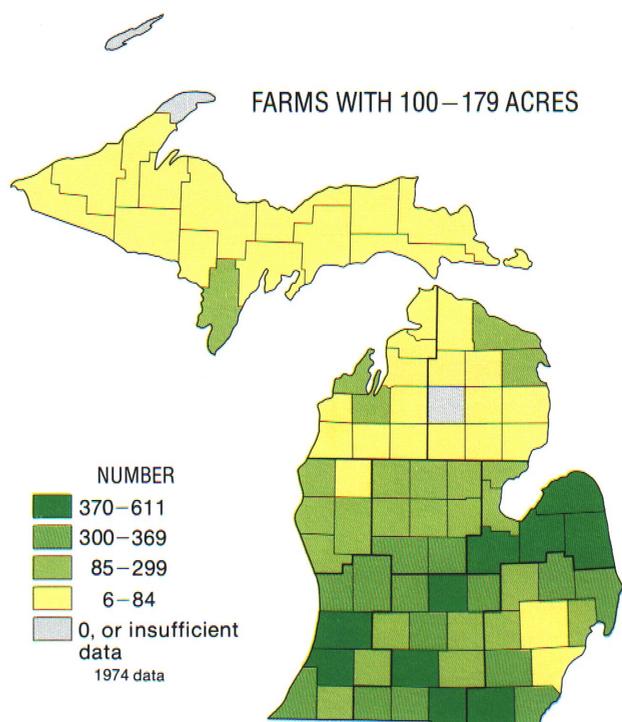
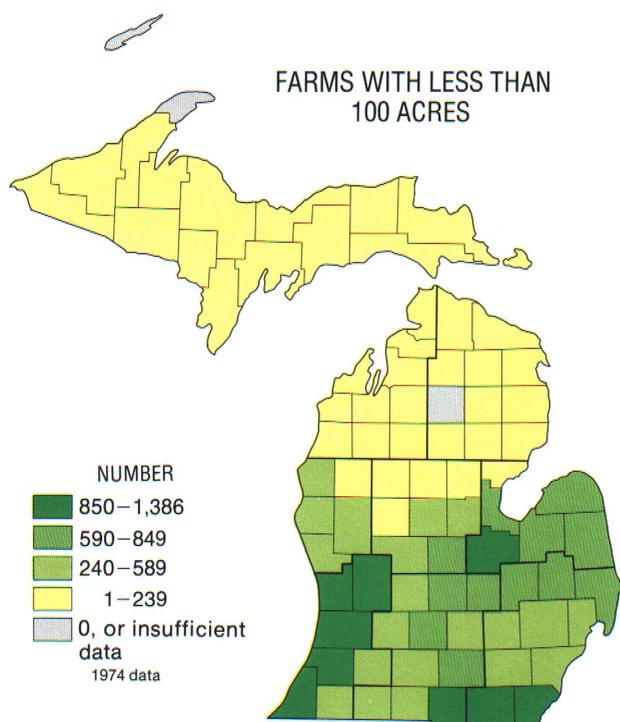
District	1964*	1969	1974	% Change	
				1st 5 yr	2nd 5 yr
(million dollars)					
UP	15.1	15.6	20.5	+3	+31
NW	13.8	17.5	22.3	+27	+27
NE	12.8	14.1	18.4	+10	+30
WC	13.4	16.1	23.4	+19	+45
Cent	41.2	43.4	67.2	+5	+55
EC	61.4	69.1	103.7	+13	+50
SW	60.5	80.1	127.4	+32	+59
SO	101.8	120.3	160.7	+18	+34
SE	79.8	86.1	104.3	+8	+21
State	399.8	462.3	647.9	+16	+40

*For all farms. Not available for Classes 1-5 by counties. (Class 1-5 livestock 4% less than all farms.)

Table 9. Livestock Product Sales by Groups for Counties and Crop Reporting Districts, 1974 (thous. dol.)
Class 1-5 Farms

County & District	All Livestock & Products	Dairy Products	Poultry & Eggs	Cattle & Calves	Hogs & Pigs	Sheep & Wool	Other
U.P. Total	20,782	14,061	965	3,578	81	42	2,006
Alger	804	611	0	134	6	4	0
Baraga	390	314	1	75	0	0	0
Chippewa	2,300	1,553	135	570	4	27	12
Delta	3,329	1,761	112	618	22	0	816
Dickinson	1,390	1,080	8	135	0	0	167
Gogebic	299	227	0	72	0	0	0
Houghton	1,355	972	223	158	1	1	0
Iron	400	216	65	90	4	0	25
Luce	204	0	63	132	7	0	1
Mackinac	937	747	6	172	0	0	11
Marquette	458	369	8	74	4	0	4
Menominee	7,845	5,609	215	1,030	31	2	959
Ontonagon	879	532	128	206	1	2	9
Schoolcraft	192	70	1	112	1	6	2
N.W. Total	22,285	12,328	2,441	5,818	1,032	33	533
Antrim	2,756	989	941	724	30	2	70
Benzie	646	126	3	247	253	0	17
Charlevoix	2,291	1,481	230	488	5	0	0
Emmet	1,545	1,031	148	336	17	1	13
Grand Traverse	1,821	784	175	721	42	2	97
Kalkaska	409	199	108	87	0	0	0
Leelanau	2,555	605	314	1,482	99	0	55
Manistee	779	198	300	205	28	9	40
Missaukee	7,500	5,748	84	1,112	515	16	25
Wexford	1,983	1,167	138	416	43	3	216
N.E. Total	18,425	11,554	537	5,489	475	102	203
Alcona	1,608	580	215	750	10	16	38
Alpena	3,326	2,079	221	826	184	10	7
Cheboygan	1,184	779	0	351	28	2	23
Iosco	2,309	981	2	1,060	195	21	51
Montmorency	1,278	975	19	262	4	19	0
Ogemaw	3,903	2,916	1	871	33	23	60
Oscoda	1,480	1,041	40	336	0	7	0
Otsego	789	550	0	231	7	1	0
Presque Isle	2,520	1,653	39	788	14	3	24
Roscommon	28	0	0	14	0	0	0
W.C. Total	23,403	13,788	2,605	5,740	910	106	257
Lake	579	379	42	135	23	0	1
Mason	4,465	2,936	184	1,179	131	14	21
Muskegon	5,193	3,025	194	1,650	265	1	59
Newago	9,102	5,390	1,878	1,316	311	66	142
Oceana	4,064	2,058	307	1,460	180	25	34
Cent. Total	67,213	33,536	5,903	23,204	4,065	227	176
Clare	3,711	2,135	10	1,274	206	67	19
Gladwin	2,821	1,645	23	930	185	24	14
Gratiot	15,400	5,175	3,070	5,806	1,285	35	29
Isabella	17,269	7,668	1,000	7,109	1,412	11	69
Mecosta	7,848	4,017	555	3,048	203	18	6
Midland	3,166	882	7	1,957	220	0	0
Montcalm	10,198	6,728	1,092	1,959	345	39	34
Osceola	6,800	5,286	146	1,121	209	33	5
E.C. Total	103,683	56,219	11,906	30,466	4,203	126	761
Arenac	3,906	2,682	96	743	383	1	1
Bay	2,462	1,149	172	867	82	0	191
Huron	37,924	13,708	6,405	16,541	1,121	4	144
Saginaw	9,297	5,177	517	2,610	709	45	238
Sanilac	34,128	26,662	288	6,299	750	37	92
Tuscola	15,966	6,841	4,428	3,406	1,158	39	95
S.W. Total	127,383	43,034	30,838	24,981	27,193	269	1,067
Allegan	32,735	11,795	9,088	6,387	5,296	65	104
Berrien	6,315	2,130	1,356	1,104	1,684	3	38
Cass	16,860	2,901	1,107	2,348	10,109	99	297
Kalamazoo	13,625	3,563	1,921	4,890	2,803	35	414
Kent	17,640	10,547	1,262	4,369	1,341	42	77
Ottawa	30,019	9,752	14,399	2,665	3,128	12	63
Van Buren	10,189	2,346	1,705	3,218	2,832	13	74
SO Total	160,739	83,269	9,631	43,793	21,187	1,531	1,331
Barry	11,114	6,433	1,050	2,405	1,104	80	42
Branch	12,454	4,645	301	4,146	3,051	268	43
Calhoun	16,068	6,960	667	5,935	2,313	171	23
Clinton	20,368	12,325	316	5,369	2,055	151	153
Eaton	9,529	4,624	393	3,036	1,262	194	21
Hillsdale	16,635	8,807	1,348	4,091	2,238	72	79
Ingham	16,463	10,506	381	3,507	1,529	113	427
Ionia	18,676	10,350	1,894	4,376	1,821	139	96
Jackson	14,073	6,948	98	5,542	1,094	205	186
St. Joseph	12,921	4,394	1,330	3,185	3,850	91	72
Shiawassee	12,438	7,277	1,853	2,201	870	47	189
S.E. Total	104,297	47,423	6,776	38,375	8,595	1,286	1,842
Genesee	10,323	3,586	675	5,326	359	45	333
Lapeer	17,100	10,389	201	5,522	626	20	341
Lenawee	20,810	6,739	1,863	7,780	3,954	200	273
Livingston	9,809	6,236	29	3,011	296	109	128
Macomb	5,184	2,730	222	1,755	328	17	133
Monroe	6,103	1,159	740	3,014	1,082	34	75
Oakland	3,767	1,623	285	1,376	192	29	262
St. Clair	14,700	6,517	1,843	5,877	345	23	94
Washtenaw	15,657	8,242	645	4,460	1,345	806	160
Wayne	844	202	273	254	68	3	43
State Total	648,310	315,216	71,658	181,456	67,801	3,818	8,360

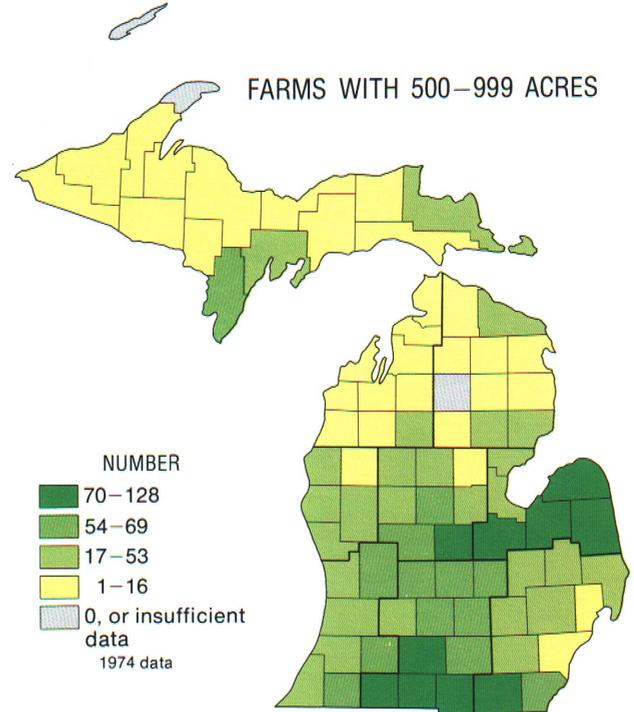
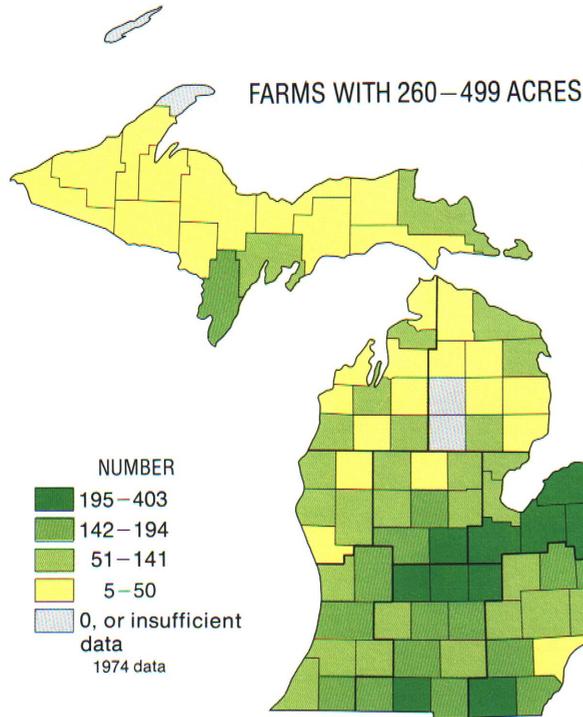
C. FARM AND FARMER CHARACTERISTICS



The number of farms of *less than 100 acres* was reported by the Census to be nearly 44,000 in 1964, 36,000 in 1969 and 29,599 in 1974 (the 1974 definition of a farm, i.e. requiring \$1,000 sales, cut the total number about 4,900). Farms of this size made up 47% of all in 1964 and 46% in 1969 and 1974. The 9 counties each with over 850 farms, or 30% of the state total: Berrien, Allegan, Ottawa, Van Buren, Saginaw, Monroe, Lenawee, Kent and Hillsdale.

Farms of *100 to 179 acres* dropped from approximately 24,000 in 1964, to 20,000 in 1969 and 14,989 in 1974. They made up 26% of all farms in 1964 and 1969 and 23% in 1974. Ten counties each with 370 to 611 farms of this size (30% of the state total) were: Huron, Sanilac, Saginaw, Lenawee, Allegan, Clinton, Tuscola, Hillsdale, Calhoun and Van Buren (see also the map showing total number of farms, page 38 or Table A-2).

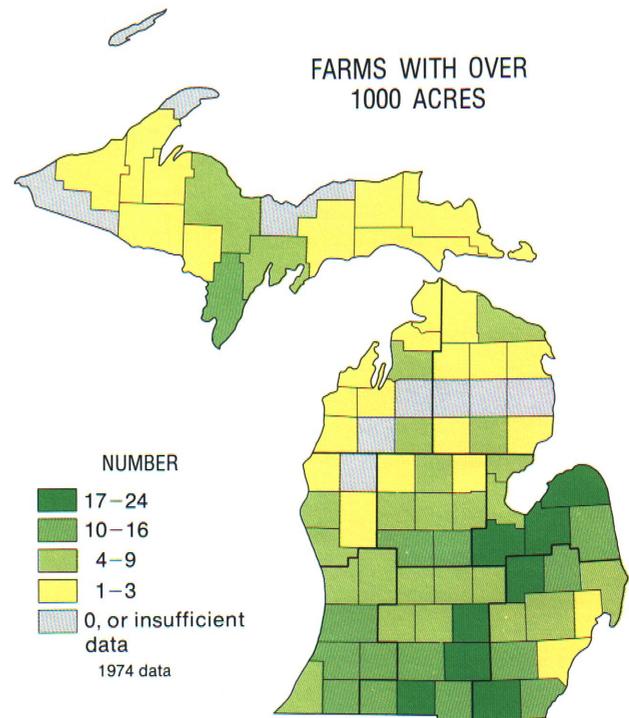
Over 12,000 farms had *180 to 259 acres* in 1964, nearly 10,000 in 1969 and 7,756 in 1974, or 13% of all farms in both 1964 and 1969 and 12% in 1974. The 10 counties with 190 to 337 farms, or 30% of the state total: Sanilac, Huron, Lenawee, Tuscola, Clinton, Saginaw, Gratiot, Hillsdale, St. Clair and Ionia.

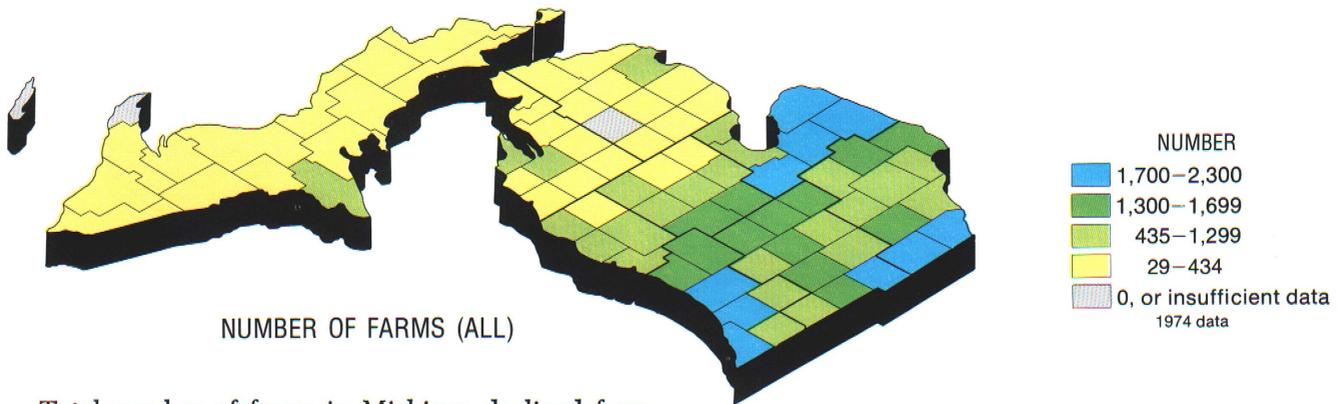


Farms of 260 to 499 acres declined from about 10,500 in 1964 to 9,300 in 1969 and 8,322 in 1974. Farms of this acreage made up 11% of all farms in 1964, 12% in 1969 and 13% in 1974. The 10 counties having 30% of the state's farms of this size each had from 195 to 403 such farms, and were as follows: Sanilac, Huron, Tuscola, Lenawee, Gratiot, Saginaw, Ionia, Shiawassee, Clinton and Branch.

The number of farms of 500 to 999 acres in size have been increasing from 2,129 in 1964 to 2,248 in 1969 and 2,880 in 1974. These farms constituted 2.3%, 2.9% and 4.5%, respectively, in the three years. Ten widely scattered counties again had a total of 30% of all farms this size. These counties each had from 70 to 128 such farms and were: Lenawee, Huron, Sanilac, Calhoun, Tuscola, Gratiot, St. Joseph, Saginaw, Branch and Hillsdale.

Farms of 1,000 acres or more also have increased in number — 223 in 1964, to 328 in 1969 and 548 in 1974. The percentage of all farms was still small — 0.2%, 0.4% and 0.8%, respectively. Eight counties each with 17 to 24 such large farms making up the 30% group were: Saginaw, Huron, Jackson, Lenawee, Branch, Genesee, Ingham and Tuscola.

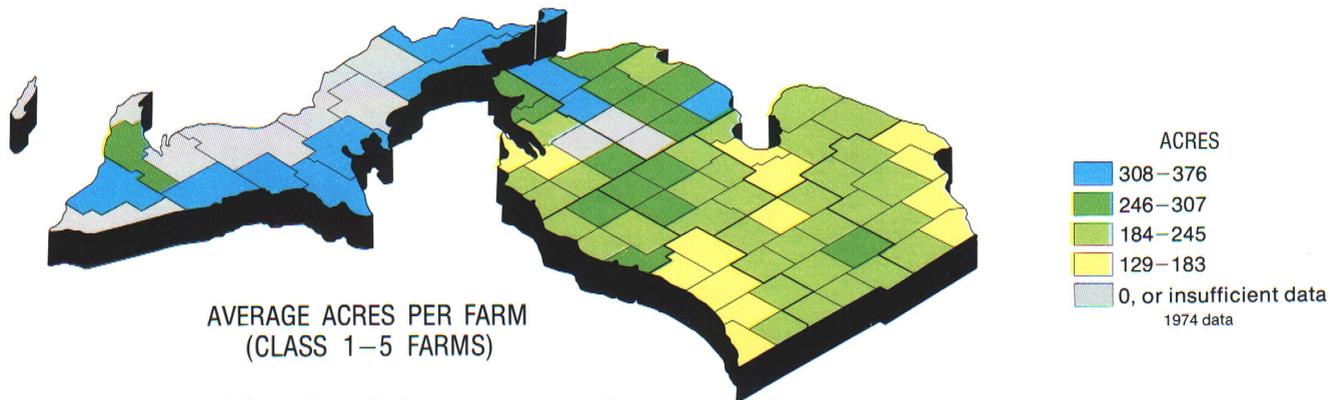




Total number of farms in Michigan declined from approximately 93,500 in 1964 to about 78,000 in 1969, or 17%. Rates of decrease among districts ranged from 35% for the U.P. then generally downward as one goes south to 10% for the Southern district — the exception to this was the Southeast district with 19% decrease. Data for 1969 and 1974, because of a definition change affecting the number of small farms, are not entirely comparable, therefore, percentage changes are not very meaningful.

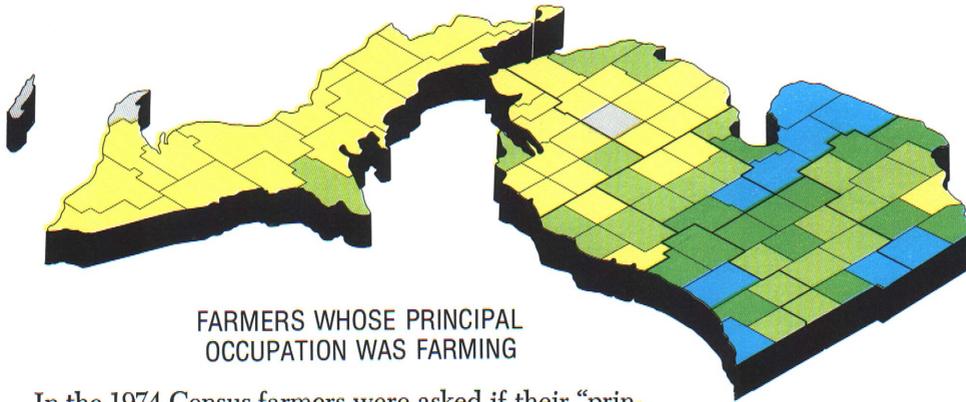
In 1974, 10 counties had 30% of the state's farms ranging from 1,700 to 2,300 farms. These counties in order of total number of farms were: Sanilac, Huron, Lenawee, Saginaw, Allegan, Berrien, Tuscola, Hillsdale, Monroe and Van Buren.

District	District Data			% Change	
	1964	1969	1974	1st 5 yr	2nd 5 yr
	(number)				
UP	4153	2700	2168	-35	-20
NW	4551	3514	2683	-23	-24
NE	3641	2634	2186	-28	-17
WC	4100	3214	2721	-22	-15
Cent	9477	7988	6484	-16	-19
EC	14083	12012	9910	-15	-17
SW	15365	13176	11032	-14	-16
SO	20081	18144	15214	-10	-11
SE	18021	14554	11685	-19	-20
State	93504	77946	64083	-17	-18



Average size of farm for all farms, as reported in the Census, rose from 145 acres in 1964 to 153 in 1969, or 6%. Farms were largest (in total acres) in the U.P. and increased in size the most. From 1969 to 1974, with the farm definition change, farm size rose to an average of 169 acres, but if one considers only farms with sales of \$2,500 and over, the average size changed from 207 acres in 1969 to 205 in 1974. The latter are the figures used for shading the individual counties. On this basis, the counties with the largest farms are in the U.P. and northern lower peninsula (counties with under 50 farms or no data are white).

District	District Data			% Change	
	1964	1969	1974	1st 5 yr	2nd 5 yr
	(acres)				
UP	209	247	267	+18	+8
NW	176	178	189	+1	+6
NE	202	215	220	+6	+2
WC	137	150	165	+9	+10
Cent	166	169	186	+2	+10
EC	144	156	176	+8	+13
SW	108	116	130	+7	+12
SO	154	157	175	+2	+11
SE	128	136	151	+6	+11
State	145	153	169	+6	+10

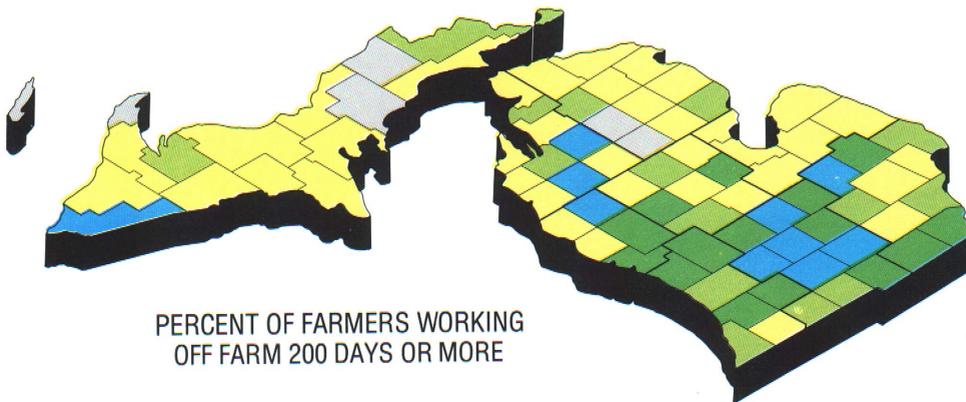


FARMERS WHOSE PRINCIPAL OCCUPATION WAS FARMING

NUMBER

- 875 - 1,650
- 675 - 874
- 230 - 674
- 10 - 299
- 0, or insufficient data
1974 data

In the 1974 Census farmers were asked if their "principal occupation was farming or other." Of the 63,602 responding, 34,438, or 54%, said farming and 46% other. Nine counties had 30% of those who said they were primarily farmers. Huron county topped the list with 1,632, followed by Sanilac, Saginaw, Tuscola, Allegan, Lenawee, Berrien, Gratiot and Hillsdale at 882. These counties are generally considered productive agricultural counties. The next group, consisting of 14 counties in the southern half of the lower peninsula, had from 675 to 874 farmers whose main occupation was farming.

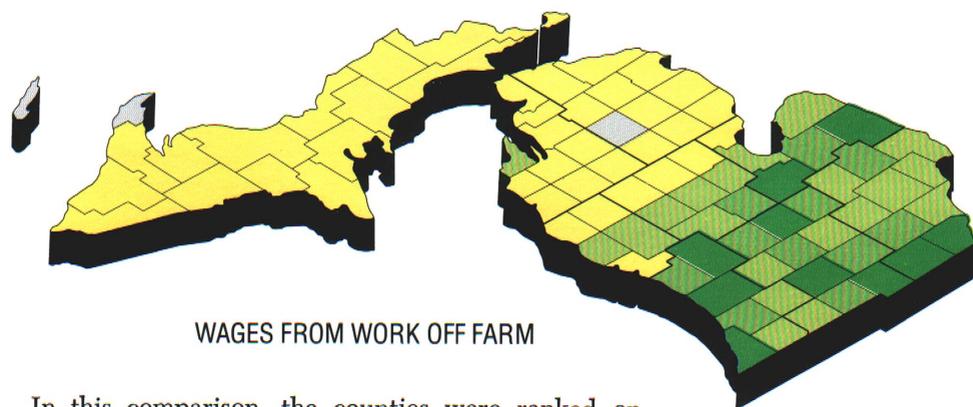


PERCENT OF FARMERS WORKING OFF FARM 200 DAYS OR MORE

PERCENT

- 44.0 - 52.4
- 41.0 - 43.9
- 38.2 - 40.9
- 16.1 - 38.1
- 0, or insufficient data
1974 data

These farmers working off farm 200 days or more averaged about 245 days, or full-time at such work and, therefore, are the opposite of the preceding group. (In this case the number of counties in each group is based on an interval set by the author, as the usual basis did not work.) From 44% to over 52% of the farmers worked off farm in the top 10 counties, compared with a 38% state average. These counties were widespread over the state, with the county list in order as follows: Kalkaska, Barry, Calhoun, Genesee, Jackson, Lake, Clinton, Eaton, Wexford and Gogebic. Eight of these ten counties were in the lowest group in average total income per farm (page 42) as expected. (See Table A-3 for data for all counties.)

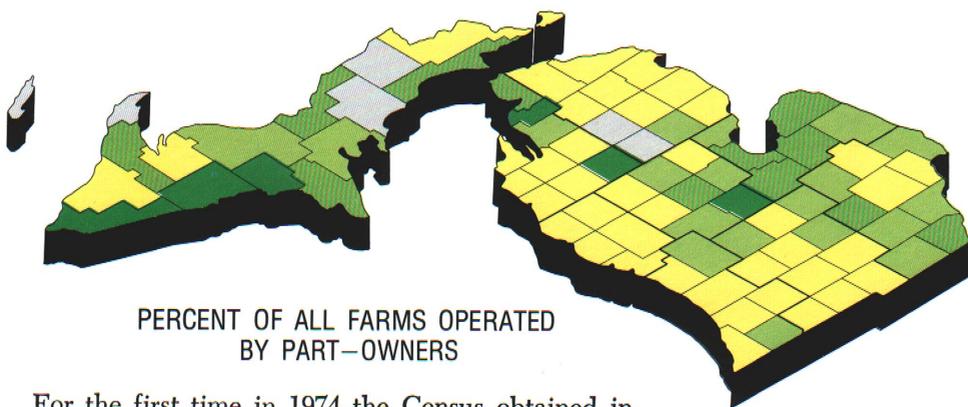


WAGES FROM WORK OFF FARM

THOUSANDS OF DOLLARS

- 5,800-9,200
- 4,500-5,799
- 1,500-4,499
- 40-1,499
- 0, or insufficient data
1974 data

In this comparison, the counties were ranked on the basis of the total wages from off farm work by the farmer and his family and, therefore, differs some from the preceding map. (Such data were not collected in 1969.) Over \$212 million was received by farmers with over \$2,500 sales for such work in 1974. Ten counties accounting for 30% of this total and having from \$5.8 to \$9.2 million such income were: Lenawee, Saginaw, Monroe, Clinton, Hillsdale, Berrien, Allegan, Calhoun, Sanilac and Kent. Most of these counties have fairly good off farm work opportunities. Total wage income of farmers in a county is dependent upon the number of the farmers and their families having such work, the number of days worked and the wage rate.

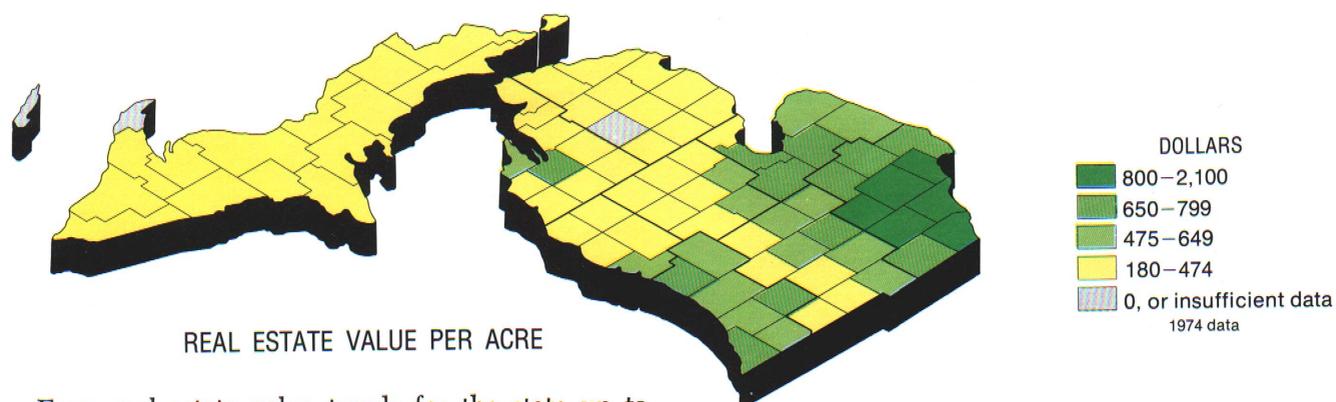


PERCENT OF ALL FARMS OPERATED BY PART-OWNERS

PERCENT

- 35.0-44.1
- 31.0-34.9
- 28.0-30.9
- 17.2-27.9
- 0, or insufficient data
1974 data

For the first time in 1974 the Census obtained information on ownership of the farms operated and reported the following: 42,867 full-owners, 17,973 part-owners (own part and rent part) and 3,254 tenants. In this case also, the author had to set up group intervals around the state average of 28%. Six counties having from 35% to over 44% part-owners were: Gogebic, Iron, Missaukee, Charlevoix, Dickinson, and Gratiot. Note that all were in the U.P. or northern Michigan, except Gratiot. Twelve counties had from 31.0% to 34.9%, 19 from 28.0% to 30.9% and 41 below 28%.

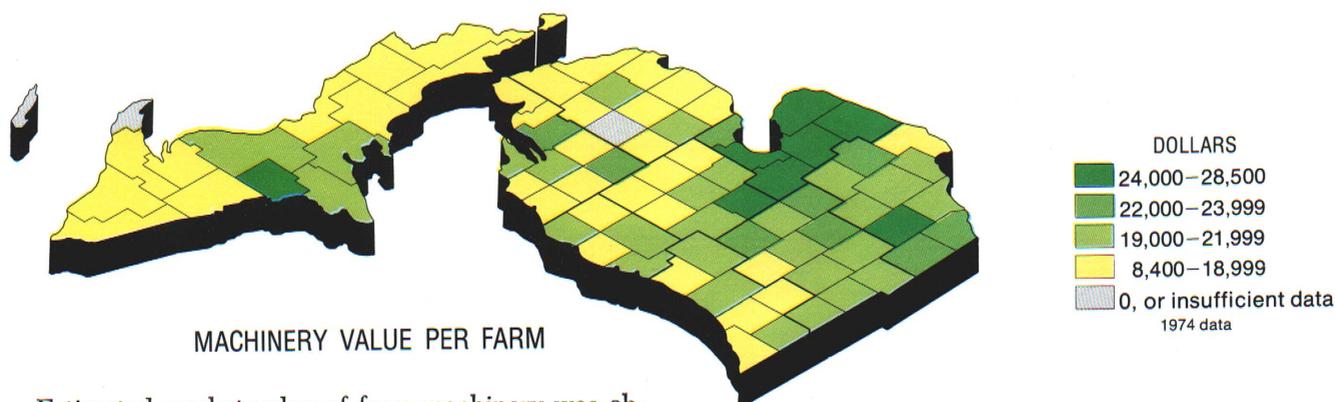


REAL ESTATE VALUE PER ACRE

Farm real estate value trends for the state up to February 1, 1978, were discussed on page 15. County and district data to 1974, from the Census, are presented here. Percentage changes from 1964 to 1969, by districts, varied from 35% to 93% and averaged 40%, while comparable data for 1969 to 1974 were from 57% to 131% with a state average of 70%. Actual dollar values in 1974 ranged from \$217 per acre for the U.P. to \$1,029 for Southeast Michigan. The six counties having land and buildings values of 50% above the state average of \$533 per acre in 1974 were: Wayne (\$2,100), Oakland, Macomb, Monroe, Livingston and Washtenaw (\$860) — all in the Detroit metropolitan area. Twelve counties had values 20% to 49% above state average, or \$650 to \$799 per acre.

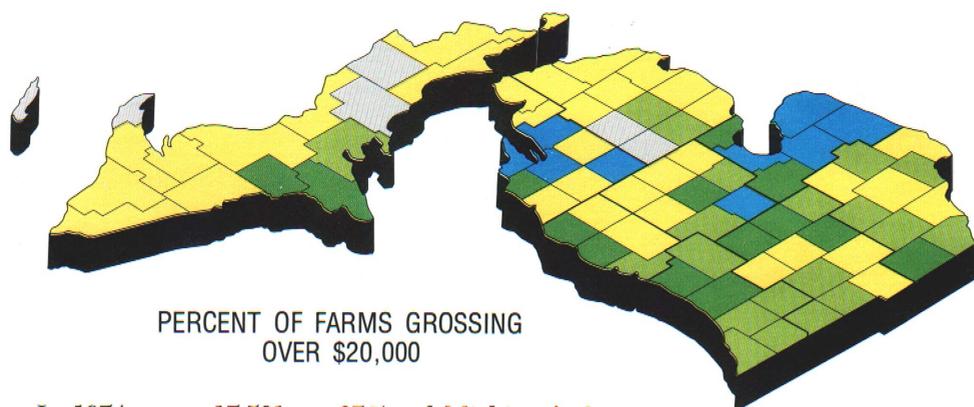
District	District Data*				
	1964	1969	1974	% Change	
				1st 5 yr	2nd 5 yr
	(dollars per acre)				
UP	68	94	217	+38	+131
NW	124	217	415	+93	+91
NE	116	149	315	+33	+111
WC	153	219	381	+43	+74
Cent	160	215	383	+34	+78
EC	283	352	579	+24	+64
SW	298	386	644	+30	+67
SO	223	301	504	+35	+67
SE	430	656	1029	+53	+57
State	233	326	553	+40	+70

*Simple average of county averages. State is weighted average.

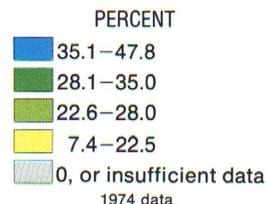


MACHINERY VALUE PER FARM

Estimated market value of farm machinery was obtained in both the 1969 and 1974 Census. County averages per farm for 1974 seem low as only eight counties had averages of over \$24,000, compared with a state average of \$21,225, when in 1978 one can easily spend twice that for a tractor. Those eight counties were: Huron, Tuscola, Saginaw, Sanilac, Bay, Gratiot, Dickinson (potato farms) and Washtenaw, in that order. Nine counties had averages of \$22,000 to \$23,999, 28 from \$19,000 to \$21,999 and 36 less than that. In 1974, Michigan farmers had nearly 140,000 wheel tractors, about 3,700 crawler tractors and nearly 15,000 grain and bean combines. Average value of machinery per farm in 1974 was considerably over twice that of 1969.

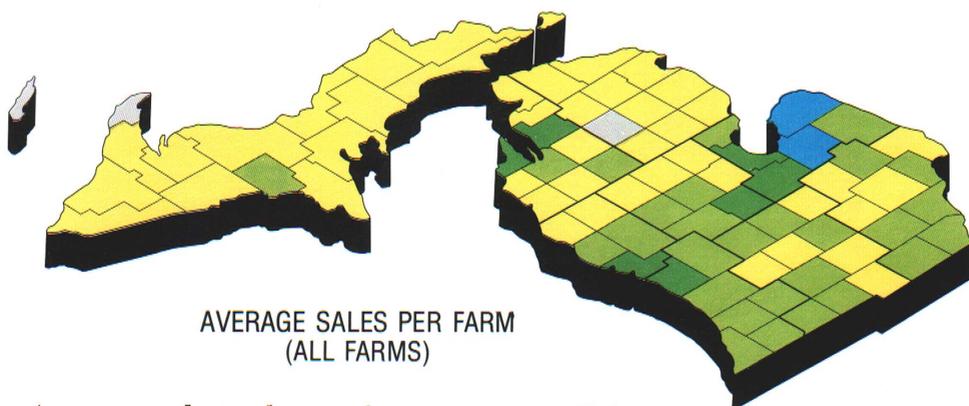


PERCENT OF FARMS GROSSING OVER \$20,000

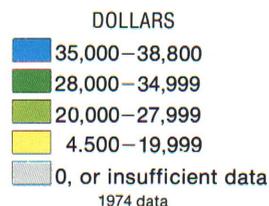


In 1974, some 17,501, or 27%, of Michigan's farms grossed \$20,000 and over, a minimum of that needed for much net return. These farms produced 82% of total sales. The number of such farms by districts was: U.P. — 435, NW — 804, NE — 337, WC — 698, Cent. — 1,747, EC — 3,840, SW — 2,969, SO — 3,713 and SE — 2,958. Percentages by districts ranged from 15% in the Northeast to 39% for East Central. From 1969 to 1974 the East Central district showed the greatest increase. In the top nine counties from 35.1% to 47.8% of the farms grossed \$20,000 in 1974. These counties, which represent a variety of products, from top down were: Huron, Tuscola, Missaukee, Leelanau, Gratiot, Sanilac, Antrim, Grand Traverse and Bay.

District	District Data			% Points Change	
	1964	1969	1974	1st 5 yr	2nd 5 yr
	(percent)				
UP	3.1	9.0	20.1	+5.9	+11.1
NW	7.9	14.9	30.0	+7.0	+15.1
NE	3.4	9.1	15.4	+5.7	+6.3
WC	8.1	14.5	25.7	+6.4	+11.2
Cent	9.8	12.5	26.9	+2.7	+14.4
EC	13.9	17.6	38.8	+3.7	+21.2
SW	11.2	17.2	26.9	+6.0	+9.7
SO	10.1	13.5	24.4	+3.4	+10.9
SE	10.3	14.6	25.3	+4.3	+10.7
State	10.1	14.7	27.3	+4.6	+12.6

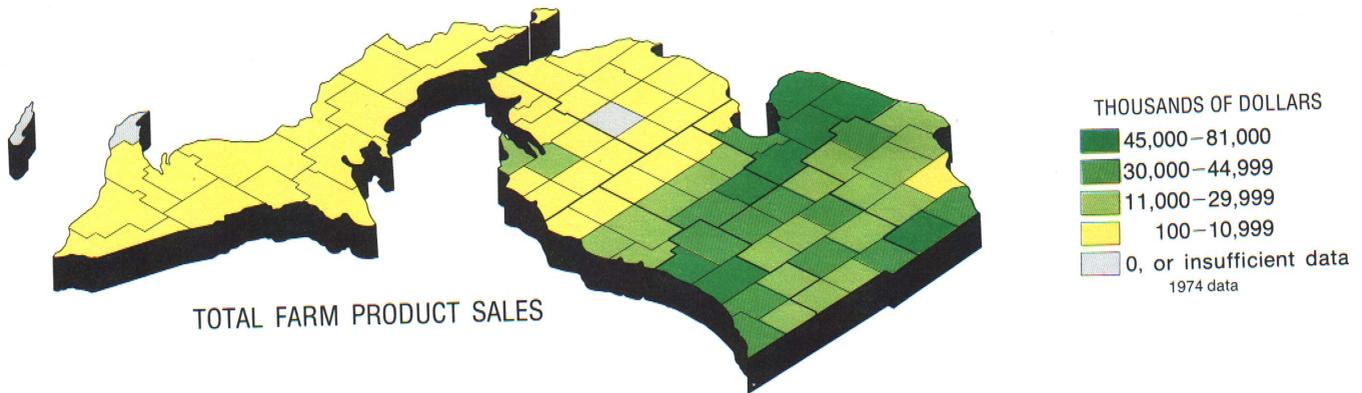


AVERAGE SALES PER FARM (ALL FARMS)



Average product sales per farm are presented for Class 1-5 farms in the district table, as these data are comparable. Sales from such farms increased 34% (about \$4,600), from 1964 to 1969 (prices +24%) with districts varying from 22% to over 40%. From 1969 to 1974 average sales per farm rose 75% (over \$13,000) with prices up 87%. In the East Central district, average sales per farm increased 120%, while there were three districts with only a little over 50% increase. Two counties had sales per farm of 50% over the average of all farms of \$23,270 in 1974 and seven more from 20% to 49% over. The top nine in order were: Huron, Tuscola, Ottawa, Antrim, Gratiot, Leelanau, Saginaw, Muskegon and Bay. These counties differ considerably from the 1969 top counties.

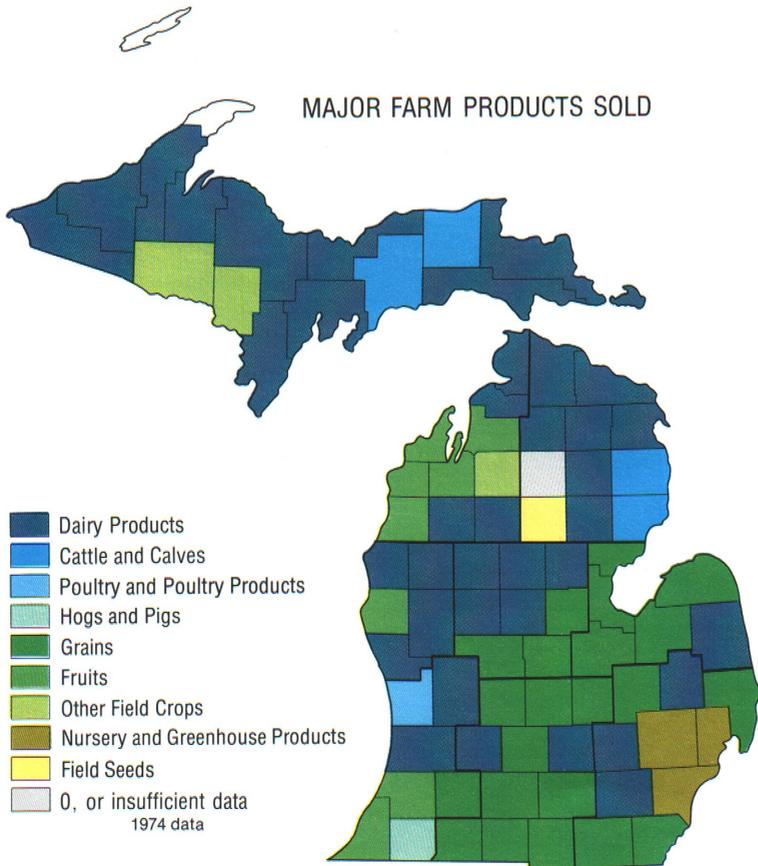
District	District Data for Classes 1-5 Farms			% Change	
	1964	1969	1974	1st 5 yr	2nd 5 yr
	(dollars)				
UP	8893	12314	21347	+38	+73
NW	13009	17887	33511	+37	+87
NE	8960	12768	19659	+42	+54
WC	13465	19251	33753	+43	+75
Cent	12913	16308	30981	+26	+90
EC	13759	16835	36993	+22	+120
SW	15553	21740	36079	+40	+66
SO	12780	17259	27111	+35	+57
SE	14164	19515	30449	+38	+56
State	13433	18030	31468	+34	+75



TOTAL FARM PRODUCT SALES

Total sales of farm products in the state rose approximately \$60 million from 1964 to 1969, or 8%, according to the Census, even though prices received were up 24%. Changes by districts ranged from a 25% increase to a small decrease. From 1969 to 1974, when prices increased 87%, total sales of farm products rose from \$829 to \$1,491 million, or 80%. Increases among districts ranged from 121% for East Central to 40% for the Northeast. Eight counties produced 30% of the state's total sales in 1974. Huron easily topped the list with nearly \$81 million, followed by Tuscola, Sanilac, Saginaw, Lenawee, Allegan, Ottawa and Gratiot, about the same counties as in 1969. (See Table A-3). The top 20 counties produced 60% of the state total.

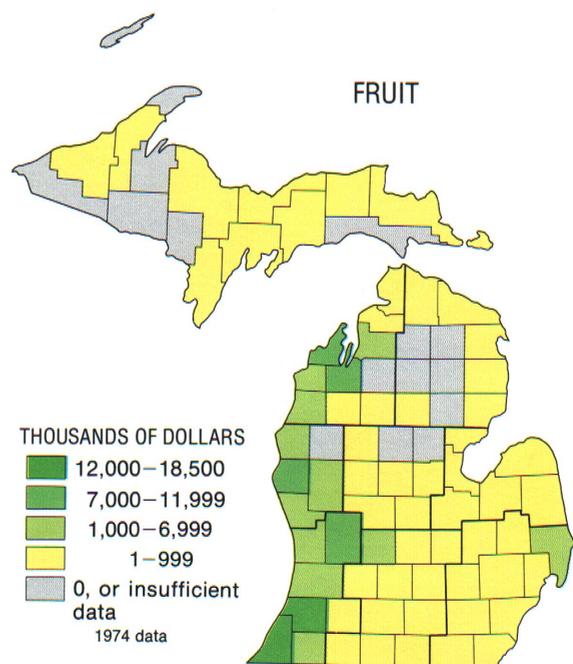
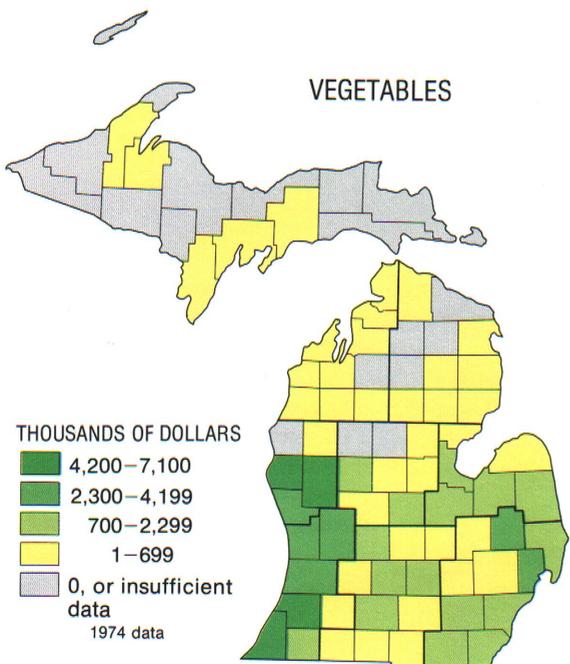
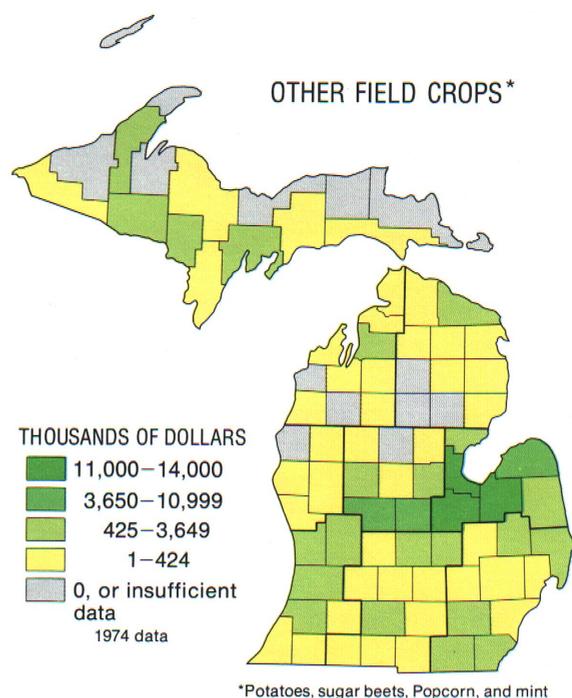
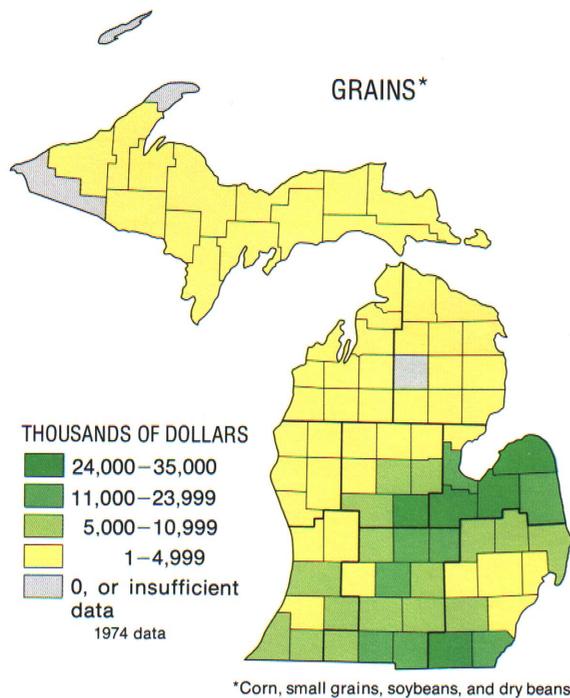
District	District Data			% Change	
	1964	1969	1974	1st 5 yr	2nd 5 yr
	(million dollars)				
UP	20.2	20.3	30.2	0	+49
NW	30.6	36.4	60.4	+19	+66
NE	17.2	19.1	26.8	+11	+40
WC	28.6	35.7	60.9	+25	+71
Cent	78.3	77.0	148.0	-2	+92
EC	143.6	140.0	309.2	-2	+121
SW	138.7	167.8	283.7	+21	+69
SO	161.7	175.4	312.4	+8	+78
SE	147.4	157.7	259.8	+7	+65
State	766.3	829.4	1491.4	+8	+80



MAJOR FARM PRODUCTS SOLD

In the accompanying map each county is shaded according to the farm product which provided the most income in 1974. Dairy products were the leading source in 38 counties, widely scattered over the state (Table 9 shows livestock sales). Sales of grains (corn, small grains, soybeans and drybeans) were the main source of income in 22 counties, mainly in the Saginaw Bay area and Central and Southern Michigan (Table 8 shows crop sales). Fruit sales were dominant in eight counties along Lake Michigan from Berrien to Antrim County.

Cattle and calf sales, including both beef and dairy cattle, were the main source of income in four counties (Iosco, Alcona, Luce and Schoolcraft). Sales of "other field crops" (sugar beets, potatoes, popcorn and mint) were the most important in three counties: Dickinson, Iron and Kalkaska (potato sales). Nursery and greenhouse product sales were dominant in three counties near Detroit—Macomb (\$6.5 million), Oakland (\$5.6 million) and Wayne (\$5.3 million). Poultry was the main income in Ottawa; hogs in Cass and field seeds in Roscommon.

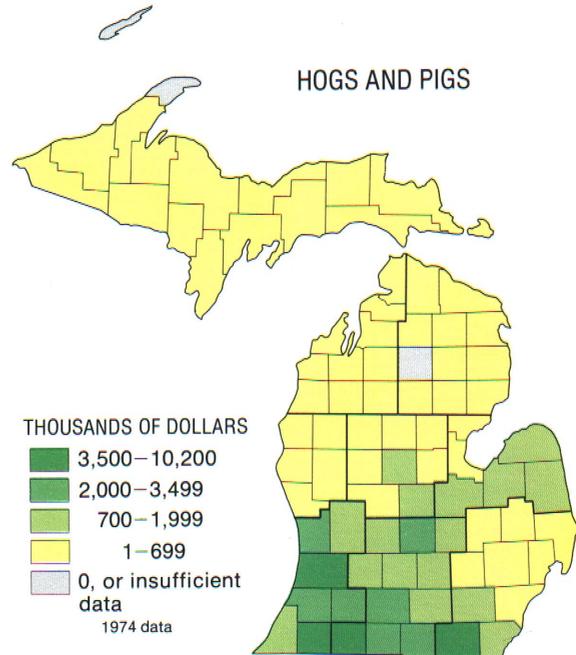
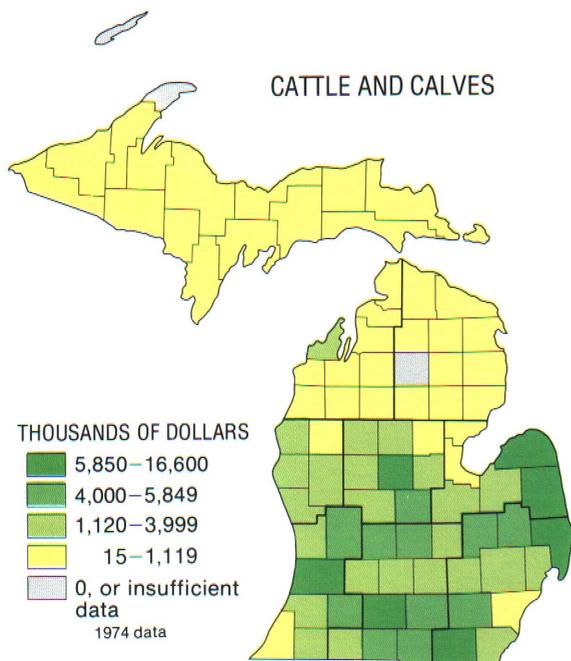
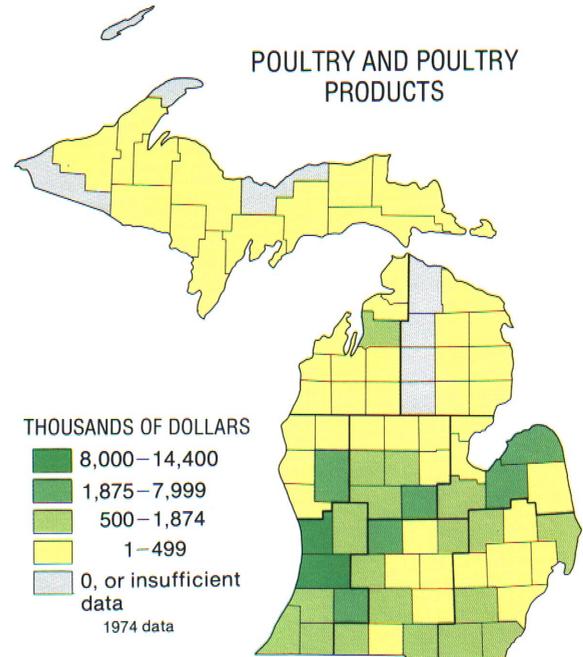
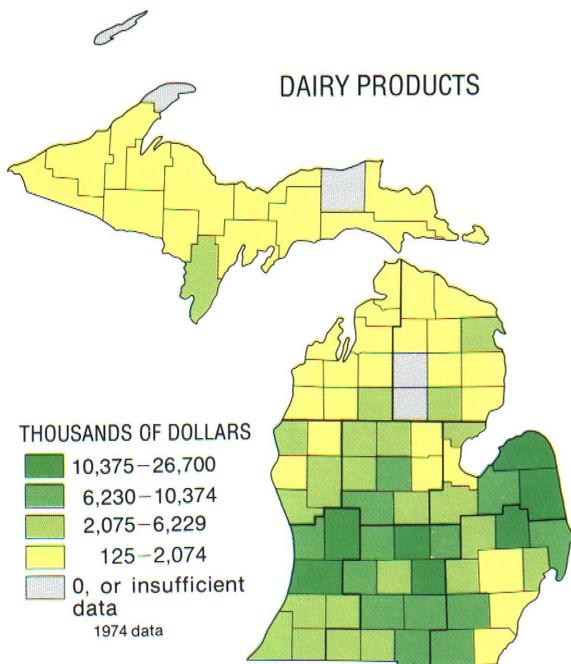


Grain Sold — Grain sales in 1974 totaled \$442 million. Five counties produced 30% of that — Saginaw (\$35 million), Lenawee, Tuscola, Huron and Gratiot. Eight counties had the next 30%.

Other Field Crops — In 1974 sales of these totaled \$92 million. Three counties in order of sales, Tuscola, Bay and Saginaw, accounted for 30%, and three more the next 30% (Huron, Montcalm, Gratiot).

Vegetables — Sales of vegetables in 1974 totaled about \$67 million. The four counties of Berrien, Newaygo, Van Buren and Oceana accounted for 30%. Six others the next 30%.

Fruit — Total fruit sales in 1974 came to \$108 million. Two counties, Berrien and Van Buren, produced 30% of that total, and Leelanau, Grand Traverse and Kent the next 30%.



Dairy Products—Dairy product sales in 1974 amounted to \$315 million. Sanilac County led with \$27 million, then Huron, Clinton, Allegan, Kent, Ingham and Lapeer for 30%, plus 13 others for 60%.

Poultry and Poultry Products—Poultry sales were \$72 million in 1974. Ottawa at \$14 million and Allegan at \$9 million were 30% of this. Five widely scattered counties produced the next 30%.

Cattle and Calves—Beef and dairy cattle sales totaled \$181 million in 1974. Huron led the top seven with nearly \$17 million, then Lenawee, Isabella, Allegan, Sanilac, Calhoun and St. Clair.

Hogs and Pigs—Four counties sold 30% of the \$68 million hog sales in 1974. Cass County led with \$10 million, followed by Allegan, Lenawee and St. Joseph, plus seven others for 60%.

Table A-1. County and Crop Reporting District Data for Acreages in Farms, Cropland and Specified Crops, Michigan (1977 or *1974)

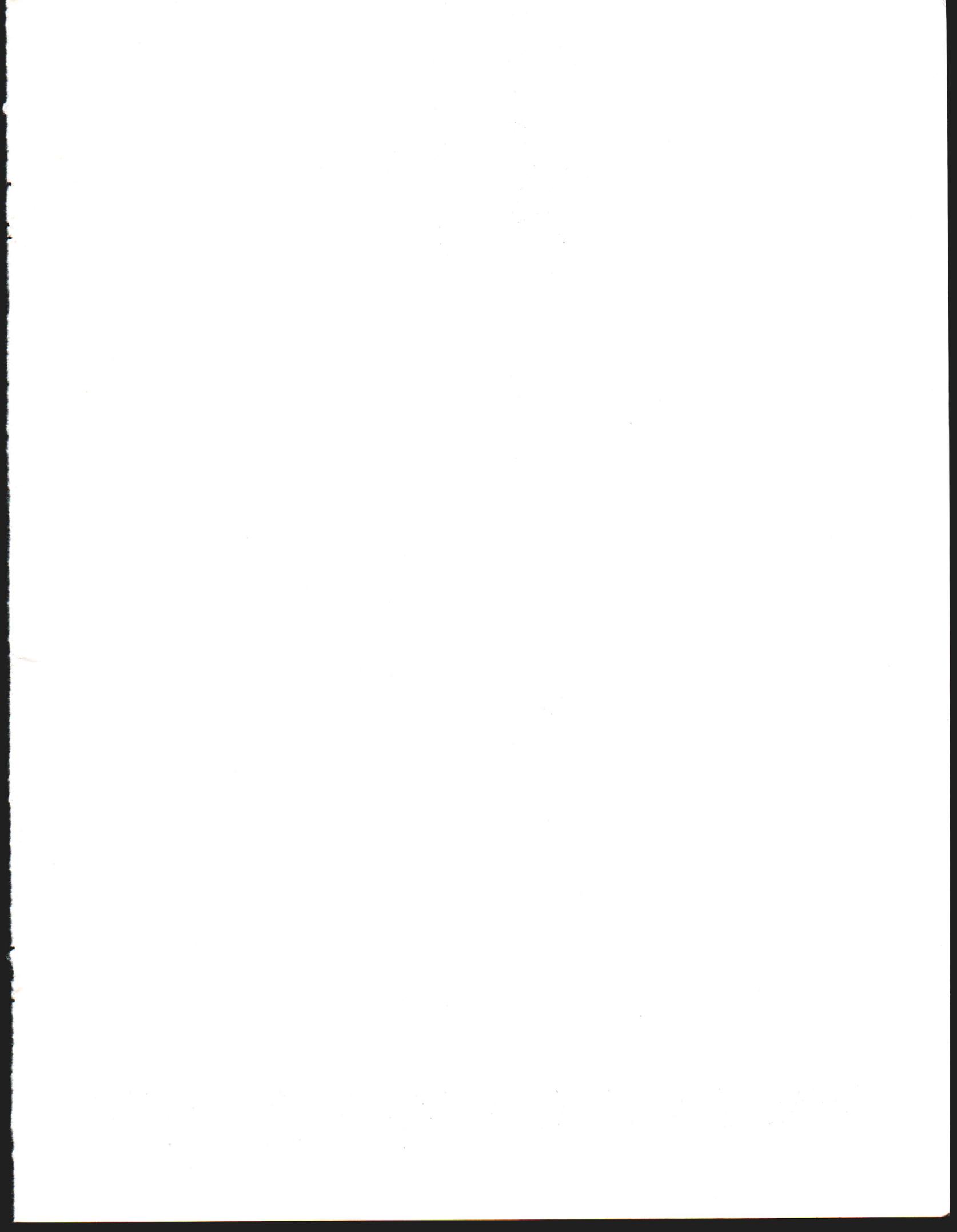
County and District	Land in Farms*	Cropland Harvested*	Crop Acreages Harvested										
			All Corn	Oats	Wheat	All Hay*	All Alfalfa*	Soybeans	Dry Beans	Sugar Beets*	Potatoes*	Vegetables*	Fruit Orchards*
District 1 Total	578,809	182,032	18,700	28,000	1,700	130,083	57,956	400	1,000	--	3,545	136	179
Alger	19,155	6,426	--	890	--	5,395	3,562	--	--	--	--	1	--
Baraga	16,633	3,635	--	540	--	3,103	609	--	--	--	4	11	1
Chippewa	83,530	34,508	--	5,840	700	27,911	5,102	--	--	--	5	10	24
Delta	91,893	25,372	2,740	4,440	120	16,753	9,572	--	--	--	585	14	44
Dickinson	39,343	12,483	1,490	1,390	40	8,064	5,453	--	--	--	1,398	--	2
Gogebic	8,743	2,801	--	280	--	2,496	168	--	--	--	3	4	4
Houghton	40,832	11,688	460	1,950	110	8,513	3,053	--	--	--	523	45	56
Iron	22,363	5,958	--	980	40	4,317	341	--	--	--	373	--	1
Keweenaw	--	--	--	--	--	--	--	--	--	--	--	--	--
Luce	11,621	2,412	--	705	40	1,408	1,163	--	--	--	90	23	--
Mackinac	23,487	8,134	540	1,400	50	6,155	2,284	--	--	--	7	3	2
Marquette	24,761	5,680	--	845	10	4,216	1,199	--	--	--	421	10	17
Menominee	144,844	48,773	12,260	6,690	490	29,814	22,947	--	--	--	55	8	19
Ontonagon	37,105	9,635	--	1,360	100	8,204	1,327	--	--	--	2	2	7
Schoolcraft	14,499	4,567	--	690	--	3,734	1,176	--	--	--	79	5	2
District 2 Total	506,816	193,840	42,320	10,000	5,000	90,423	65,839	500	800	--	2,632	3,835	39,005
Antrim	45,352	19,654	5,300	1,105	390	7,681	6,133	--	--	--	980	76	4,484
Benzie	33,051	7,711	1,280	20	40	2,084	1,435	--	--	--	1	20	4,361
Charlevoix	44,036	15,623	4,100	860	230	10,101	7,260	--	--	--	16	70	168
Emmet	33,821	14,539	3,360	1,325	190	9,462	6,685	--	--	--	16	70	168
Grand Traverse	64,876	30,430	5,930	630	1,090	9,189	6,984	--	--	--	545	52	36
Kalkaska	12,065	4,419	1,270	50	100	2,559	1,839	--	--	--	10	1,505	12,552
Leelanau	70,373	26,788	4,490	820	370	8,175	6,126	--	--	--	395	--	3
Manistee	55,675	16,806	1,840	435	800	5,791	3,463	--	--	--	55	212	12,458
Missaukee	86,501	43,399	12,090	4,000	1,240	26,520	19,464	--	--	--	433	962	4,912
Wexford	42,888	14,481	2,660	755	550	8,861	6,450	--	--	--	188	29	1
District 3 Total	479,241	163,544	29,800	26,000	6,800	99,677	66,624	600	4,200	--	2,543	177	732
Alcona	50,624	15,923	1,540	1,980	930	12,069	8,435	--	--	--	5	11	24
Alpena	80,646	27,681	4,580	4,470	1,750	16,317	9,457	--	--	--	42	81	44
Cheboygan	46,527	13,182	1,800	1,630	80	9,226	5,316	--	--	--	29	18	531
Crawford	--	--	--	70	--	--	--	--	--	--	--	--	--
Iosco	57,190	19,198	5,390	2,190	1,180	10,500	7,012	--	--	--	2	29	16
Montmorency	24,500	9,684	2,030	3,230	350	5,301	3,388	--	--	--	--	--	1
Ogemaw	70,449	30,765	8,290	3,600	1,620	18,361	14,617	--	--	--	49	22	28
Oscoda	20,827	7,145	1,830	410	40	4,734	3,892	--	--	--	--	7	3
Otsego	35,308	9,909	1,560	1,000	170	6,725	4,981	--	--	--	371	4	2
Presque Isle	86,633	28,894	2,740	7,340	670	15,428	9,121	--	--	--	2,045	--	53
Roscommon	6,537	1,163	--	80	10	1,016	405	--	--	--	--	5	30
District 4 Total	447,714	205,775	69,600	8,000	16,500	70,039	49,906	1,000	400	--	361	18,875	27,320
Lake	23,429	6,366	1,330	550	400	4,359	2,529	--	--	--	4	17	23
Mason	89,911	43,296	12,780	2,270	5,300	14,704	11,579	--	--	--	31	2,503	5,506
Muskegon	81,648	42,928	19,490	1,980	3,030	13,296	8,431	--	--	--	12	2,945	3,327
Newaygo	127,166	59,049	23,920	2,400	4,190	24,758	18,169	--	--	--	220	4,327	2,033
Oceana	125,560	54,136	12,080	800	3,580	12,922	9,198	--	--	--	94	9,083	16,431
District 5 Total	1,210,094	676,742	289,200	34,000	88,000	156,253	113,816	63,000	117,000	5,645	10,948	6,976	2,097
Clare	75,730	25,778	11,310	1,800	1,490	14,044	10,248	50	--	--	--	--	24
Gladwin	76,461	34,818	14,840	4,860	3,530	14,584	7,722	970	1,980	160	2	--	2
Gratiot	281,624	205,697	83,190	4,540	25,800	13,318	11,073	41,400	60,900	3,545	562	3,269	20
Isabella	204,407	124,475	70,330	8,140	17,400	28,590	23,329	3,530	16,450	108	5	675	87
Mecosta	126,297	54,081	24,860	2,600	4,590	23,717	18,281	80	1,670	--	1,520	1,436	503
Midland	88,253	58,326	21,330	1,700	8,350	5,756	2,969	13,750	15,900	1,832	107	312	114
Montcalm	240,034	128,427	50,470	6,860	25,000	27,407	21,042	3,170	20,100	--	8,543	1,284	1,331
Osceola	117,288	45,140	12,870	3,500	1,840	28,837	19,152	50	--	--	209	--	16
District 6 Total	1,748,855	1,289,502	428,400	67,000	182,000	174,456	139,471	144,000	290,000	64,367	7,839	13,461	1,219
Arenac	81,854	45,321	12,430	3,100	4,000	10,196	7,555	2,450	8,500	1,789	760	1,676	37
Bay	166,836	133,200	30,400	2,620	19,200	4,784	2,798	6,050	49,300	13,610	5,135	3,563	39
Huron	410,442	312,304	119,150	15,000	44,400	44,011	35,666	6,150	69,300	13,770	65	14	57
Saginaw	332,874	255,145	70,430	8,080	36,900	13,850	11,175	115,000	57,100	13,482	282	1,976	382
Sanilac	421,441	288,463	99,840	27,850	45,800	77,594	63,461	8,000	33,600	5,476	8	4,883	408
Tuscola	335,408	255,069	96,150	10,350	31,700	24,021	18,816	6,350	72,200	16,240	1,589	1,349	296
District 7 Total	1,436,043	836,728	446,800	27,000	83,000	163,515	112,886	51,500	1,900	--	5,362	35,628	85,304
Allegan	259,515	155,774	95,440	6,330	12,800	38,662	26,909	970	--	--	1,936	4,025	7,511
Berrien	196,077	121,558	41,740	1,650	10,300	9,333	6,052	19,800	240	--	119	10,050	32,033
Cass	196,264	110,956	72,320	3,200	12,100	18,126	13,682	16,350	--	--	804	2,615	1,840
Kalamazoo	170,617	98,121	64,510	3,920	18,000	14,917	10,824	8,650	90	--	74	360	2,116
Kent	226,408	133,154	68,620	5,730	13,200	39,245	29,583	400	1,570	--	384	2,939	13,907
Ottawa	174,445	103,613	56,260	4,720	9,200	26,657	15,653	80	--	--	451	3,084	4,300
Van Buren	212,717	113,552	47,910	1,450	7,400	16,575	10,183	5,250	--	--	1,594	12,555	3,172
District 8 Total	2,662,515	1,605,930	827,000	74,000	255,000	277,840	215,462	204,000	51,000	--	2,220	10,222	5,465
Barry	184,667	94,348	44,250	4,660	15,000	26,994	19,653	1,220	1,680	--	53	860	269
Branch	247,539	154,929	97,790	3,600	19,400	15,225	11,267	25,500	--	--	2	141	392
Calhoun	270,564	151,043	86,780	8,830	26,300	25,560	19,752	8,450	90	--	681	1,586	373
Clinton	262,158	172,393	69,650	6,640	34,600	31,806	26,329	35,900	8,300	--	167	521	345
Eaton	238,527	143,512	62,010	6,270	30,800	21,557	14,286	9,650	19,150	--	396	1,436	169
Hillsdale	267,212	166,987	95,420	6,640	19,000	28,573	23,280	29,500	--	--	13	98	265
Ingham	227,488	137,695	86,860	5,500	17,700	25,533	20,102	7,850	1,890	--	77	1,321	408
Ionia	250,863	153,848	69,690	14,950	31,400	30,400	24,257	4,870	10,900	--	96	2,646	2,180
Jackson	245,344	126,472	82,220	4,700	11,700	30,723	22,425	2,360	160	--	119	862	633
St. Joseph	226,013	141,328	79,020	2,060	23,700	20,335	16,909	26,200	330	--	9	457	249
Shiawassee	242,140	163,375	53,310	10,150	25,400	21,134	17,202	52,500	8,500	--	607	294	182
District 9 Total	1,760,392	1,163,313	508,200	66,000	187,000	196,766	140,628	255,000	13,700	2,796	5,736	17,509	6,432
Genesee	149,318	99,441	41,680	6,030	18,200	16,884	12,296	16,150	1,100	64	607	484	864
Lapeer	223,737	130,958	65,360	9,100	15,000	41,650							

Table A-2. County and Crop Reporting District Data for Livestock Numbers, Number Farms by Size and Average Size, Michigan (1977 or *1974)

County and District	Livestock Numbers 1977 (*1974)						Number of Farms (All) 1974					Av. A. per Farm (All)*	
	Milk Cows	Beef Cows	Cattle Fattened*	Hogs & Pigs	Hens & Pullets	Sheep & Lambs	Total	< 100 A	100 - 259 A	260 - 499 A	500 & Over		% Grossing \$20,000+
District 1 Total	21,000	21,000	961	2,300	103,000	2,200	2,168	434	953	536	245	20	267
Alger	800	700	27	200	6,700	200	81	21	32	20	8	20	236
Baraga	600	500	15	--	200	--	86	30	42	8	6	9	193
Chippewa	2,400	3,600	205	200	14,300	1,200	320	52	155	81	32	13	261
Delta	2,700	4,300	147	500	13,000	--	317	64	128	76	49	24	290
Dickinson	1,400	1,000	15	--	1,700	--	143	32	57	36	18	31	275
Gogebic	300	400	--	--	100	--	59	25	28	5	1	10	148
Houghton	1,700	400	24	--	21,100	200	206	61	100	33	12	15	198
Iron	300	1,200	19	100	3,800	--	83	19	35	20	9	12	269
Keweenaw	--	--	--	250	200	--	--	--	--	--	--	--	--
Luce	--	500	10	--	8,100	100	29	1	13	10	5	--*	--*
Mackinac	1,200	1,300	19	--	1,400	100	86	14	38	29	5	21	273
Marquette	600	700	10	300	1,900	--	80	16	31	23	9	17	310
Menominee	8,000	3,500	465	500	22,700	200	488	71	201	147	68	29	297
Ontonagon	900	1,500	5	--	7,700	--	147	15	81	40	11	9	252
Schoolcraft	100	1,400	--	--	100	200	43	13	12	8	10	12	337
District 2 Total	15,000	14,000	6,341	7,400	232,000	2,600	2,683	964	1,124	457	138	30	189
Antrim	1,300	1,500	1,204	850	54,400	100	250	79	115	36	20	36	214
Benzie	200	1,000	252	1,700	600	200	177	70	76	18	13	29	187
Charlevoix	2,000	2,000	196	400	29,000	300	219	68	90	53	8	18	201
Emmet	1,200	2,400	80	150	9,500	250	200	63	76	46	15	19	220
Grand Traverse	1,000	1,700	901	900	33,000	100	443	222	153	52	16	36	146
Kalkaska	400	100	146	300	18,200	--	63	15	35	10	3	19	192
Leelanau	800	1,300	2,707	800	19,300	100	441	166	213	48	14	39	160
Manistee	400	1,200	187	600	15,900	300	300	119	117	53	11	18	186
Missaukee	6,300	1,800	473	1,400	35,700	800	358	84	150	98	26	40	242
Wexford	1,400	1,000	195	300	16,400	400	232	78	99	43	12	17	185
District 3 Total	14,000	25,000	3,695	6,300	72,000	4,900	2,186	584	1,024	428	150	15	220
Alcona	700	3,100	179	250	22,800	1,000	254	77	116	47	14	9	199
Alpena	2,600	4,300	424	1,700	32,100	500	487	172	229	71	15	12	166
Cheboygan	1,000	3,200	129	400	700	300	178	35	76	50	17	12	261
Crawford	--	--	--	--	100	--	--	--	--	--	--	--	--
Iosco	1,000	3,600	1,358	1,900	900	600	225	59	103	42	21	14	254
Montmorency	1,200	1,400	--	200	2,400	600	108	27	49	23	9	22	227
Ogemaw	3,600	2,300	609	800	1,000	1,300	304	94	121	59	30	23	232
Oscoda	1,100	900	324	300	5,200	350	87	16	43	21	7	28	239
Otsego	700	1,900	--	200	800	--	132	19	71	32	10	13	267
Presque Isle	2,100	4,100	672	500	5,600	200	388	78	203	83	24	16	223
Roscommon	--	200	--	--	400	--	23	7	13	--	3	--*	284
District 4 Total	18,000	11,000	6,816	9,500	271,000	3,200	2,721	1,288	1,010	302	121	26	165
Lake	800	1,300	64	300	4,000	150	122	38	61	15	8	7	192
Mason	4,200	1,800	1,592	1,400	34,000	800	532	242	201	54	35	28	169
Muskegon	4,100	1,600	2,071	2,000	29,000	150	465	256	139	48	22	25	176
Newaygo	6,400	2,800	1,067	3,500	172,000	1,500	823	373	319	106	25	23	155
Oceana	2,500	3,500	2,022	2,300	32,000	600	779	379	290	79	31	30	161
District 5 Total	44,000	27,000	36,060	36,500	478,000	9,500	6,484	2,489	2,582	1,013	400	27	186
Clare	3,000	3,000	1,176	2,100	1,600	2,700	346	119	145	50	32	18	219
Gladwin	2,100	3,200	906	1,900	2,700	1,200	434	160	192	69	13	15	176
Gratiot	6,500	3,500	10,337	12,000	124,000	1,000	1,553	649	557	249	98	37	181
Isabella	10,500	4,500	12,220	10,000	95,000	600	1,074	397	433	166	78	32	190
Mecosta	5,500	3,400	4,799	2,500	42,000	1,000	633	206	289	115	33	20	200
Midland	1,100	1,700	3,803	1,900	3,000	500	580	301	200	52	27	23	152
Montcalm	8,300	2,900	2,403	4,400	185,000	1,300	1,310	520	521	189	80	25	183
Osceola	7,000	4,800	416	1,700	29,300	1,200	554	137	255	123	39	22	212
District 6 Total	73,000	21,000	46,864	42,000	1,215,000	3,900	9,910	4,130	3,800	1,462	518	39	176
Arenac	4,000	1,300	883	3,500	9,500	--	436	153	188	73	22	32	188
Bay	1,900	1,100	1,433	1,400	12,300	--	1,244	689	400	113	42	35	134
Huron	20,000	7,000	29,959	12,500	855,000	400	2,088	673	1,036	353	126	48	197
Saginaw	6,300	2,400	3,954	6,600	45,000	800	2,044	1,025	679	238	102	34	163
Sanilac	33,000	6,000	5,852	7,500	20,600	1,400	2,300	835	947	403	115	37	183
Tuscola	7,800	3,200	4,783	8,500	272,000	1,200	1,798	755	650	282	111	40	178
District 7 Total	53,000	31,000	39,518	250,000	2,185,000	11,300	11,032	6,584	3,153	893	402	27	130
Allegan	14,200	4,800	10,653	44,000	411,000	2,700	2,044	1,179	639	175	51	29	127
Berrien	2,400	1,900	1,737	17,000	133,000	300	1,959	1,386	405	120	48	25	100
Cass	3,900	4,600	3,794	102,000	67,000	3,200	1,107	516	370	142	79	27	177
Kalamazoo	4,700	3,700	7,595	20,000	75,000	2,400	1,003	533	289	108	73	25	170
Kent	12,100	7,900	5,594	14,000	240,000	1,500	1,603	895	381	153	74	27	141
Ottawa	12,500	4,500	3,423	26,000	1,107,000	700	1,616	1,047	355	85	29	32	108
Van Buren	3,200	3,600	6,722	27,000	152,000	500	1,700	1,028	514	110	48	23	125
District 8 Total	105,000	58,000	60,225	202,000	1,202,000	51,000	15,214	6,872	5,497	1,944	901	24	175
Barry	7,500	5,500	2,858	12,000	97,500	4,300	1,092	471	429	135	57	20	169
Branch	6,400	4,100	6,401	24,000	30,000	6,100	1,310	558	464	195	93	25	189
Calhoun	9,000	7,000	9,884	20,000	68,000	3,500	1,417	579	534	191	113	23	191
Clinton	15,500	4,500	7,101	18,000	51,000	5,300	1,645	714	671	198	62	28	159
Eaton	5,900	5,900	3,856	14,000	82,000	6,300	1,558	790	517	177	74	20	153
Hillsdale	11,000	4,000	6,211	22,000	127,000	2,900	1,719	851	605	180	83	21	155
Ingham	14,000	6,000	4,078	15,000	65,000	4,000	1,198	583	368	162	85	29	190
Ionia	12,500	5,000	4,881	22,000	241,000	2,500	1,380	561	535	203	81	31	182
Jackson	9,000	9,000	8,725	11,000	32,000	8,000	1,250	597	429	141	83	19	196
St. Joseph	5,700	3,500	3,674	29,000	104,000	5,300	1,169	463	448	159	99	27	193
Shiawassee	8,500	3,500	2,556	11,000	304,000	2,800	1,476	705	497	203	71	34	164
District 9 Total	62,000	31,000	58,905	84,000	542,000	49,400	11,685	6,250	3,597	1,286	552	25	151
Genesee	4,700	2,900	7,933	4,600	60,700	1,800	1,015	608	269	86	52	19	147
Lapeer	13,500	4,500	6,493	7,500	14,100	1,800	1,405	722	450	164	69	25	159
Lenawee	9,000	3,000	14,175	32,000	126,000	7,200	2,056	919	719	268	150	33	181
Livingston	7,300	4,200	4,112	4,500	5,000	3,800	790	353	269	111	57	23	178
Macomb	4,000	2,100	2,608	4,600	18,300	80							

Table A-3. County and Crop Reporting District Data for Nonfarm Income, Farm Product Sales and Farm Expenses, Michigan, 1974

County and District	% Farmers Working Off Farm 200+ Days	Nonfarm Income		% Farmers Nonfarm Income > Farm Sales	Farm Product Sales			Farm Production Expenses (All Farms)				
		Total Off Farm Wages	(All Sources)		Total (All Farms)	Average/Farm		Total	Livestock & Poultry Purchased	Feed Purchased	Fertilizer Purchased	Hired Labor
						All Farms	Class 1-5 Farms					
District 1 Total	32	\$ 4,118	\$ 6,247	45	\$ 30,238	\$13,947	\$21,347	\$ 22,469	\$ 1,172	\$ 5,452	\$ 1,578	\$ 1,739
Alger	37	134	194	51	1,120	13,832	19,957	829	41	272	29	99
Baraga	41	122	232	51	470	5,466	10,023	376	19	109	9	30
Chippewa	40	957	1,392	57	3,005	9,390	14,618	2,459	189	595	111	136
Delta	28	627	962	42	4,753	14,993	22,639	3,275	144	892	259	240
Dickinson	36	239	434	45	3,704	25,902	44,361	2,531	42	318	235	299
Gogebic	44	40	64	53	427	7,236	15,108	325	12	111	12	8
Houghton	27	243	391	47	2,221	10,780	18,798	1,546	82	464	101	131
Iron	31	192	349	59	1,257	15,145	22,657	800	29	104	54	80
Keweenaw	--	--	--	--	--	--	--	--	--	--	--	--
Luce	41*	92	146	69	417	14,367	21,638	376	41	62	26	62
Mackinac	27	262	300	41	1,081	12,572	19,313	843	96	175	42	26
Marquette	28	67	120	40	1,136	14,196	26,688	988	28	177	82	139
Menominee	28	736	1,087	32	9,142	18,733	24,301	6,776	279	1,910	531	408
Ontonagon	33	240	391	44	1,113	7,573	11,527	995	120	224	36	54
Schoolcraft	56*	167	212	56	392	9,106	13,834	350	50	39	51	27
District 2 Total	35	6,868	10,948	43	60,438	22,526	33,511	43,770	3,153	5,582	3,215	6,026
Antrim	33	624	967	34	7,656	30,623	39,727	5,507	321	860	445	655
Benzie	32	412	686	45	3,518	19,878	33,248	2,669	149	225	194	605
Charlevoix	38	459	705	52	3,005	13,720	23,725	2,347	189	485	200	170
Emmet	34	294	541	55	2,611	13,057	22,708	2,044	139	394	173	173
Grand Traverse	39	1,383	2,325	42	12,207	27,556	38,659	8,069	306	335	574	1,412
Kalkaska	29	156	228	56	1,103	17,515	37,173	934	125	242	81	103
Leelanau	52	1,672	2,637	34	12,877	29,200	38,778	9,109	857	595	598	1,404
Manistee	38	636	1,043	52	5,495	18,315	29,851	4,858	128	372	351	1,066
Missaukee	23	568	921	31	9,177	25,634	33,100	6,247	763	1,599	467	323
Wexford	44	664	895	58	2,789	12,021	21,807	1,986	176	475	132	115
District 3 Total	33	4,511	7,227	49	26,766	12,444	19,659	21,752	2,425	3,669	1,747	1,398
Alcona	36	543	905	52	2,128	8,376	14,175	1,942	438	423	74	83
Alpena	36	1,069	1,599	58	4,453	9,143	16,532	4,037	567	822	227	140
Cheboygan	37	551	943	62	2,142	12,034	20,020	1,943	168	300	117	333
Crawford	--	--	--	--	--	--	--	--	--	--	--	--
Tosco	38	530	779	49	3,046	13,538	20,545	2,562	365	384	240	125
Montmorency	21	133	270	42	1,574	14,578	20,958	1,314	110	298	84	73
Ogemaw	24	495	891	36	4,988	16,407	24,320	3,547	307	576	316	195
Oscoda	16	167	217	41	1,619	18,605	25,719	1,117	82	270	89	25
Otsego	39	304	464	51	1,372	10,394	15,097	999	91	142	91	36
Presque Isle	31	668	1,063	41	5,341	13,766	21,771	4,144	271	430	507	369
Roscommon	39*	51	96	78	103	4,487	8,733	147	26	24	2	19
District 4 Total	38	\$ 7,303	\$11,011	47	\$ 60,886	\$22,376	\$33,753	\$ 46,137	\$ 3,758	\$ 5,151	\$ 4,002	\$ 7,170
Lake	45	319	368	61	835	6,841	12,893	604	40	128	33	39
Mason	37	1,207	2,172	40	10,070	18,929	26,896	7,249	565	804	803	687
Muskegon	42	1,037	1,675	55	13,097	28,166	48,866	10,477	1,064	1,066	892	1,926
Newaygo	42	2,000	2,978	51	18,018	21,893	34,266	14,095	1,357	2,253	985	1,811
Oceana	34	2,740	3,818	41	18,866	24,219	32,921	13,712	732	900	1,289	2,707
District 5 Total	37	19,609	28,464	42	147,991	22,824	30,981	102,491	13,043	12,946	13,630	5,227
Clare	39	849	1,178	50	4,817	13,921	22,344	4,309	781	723	256	276
Gladwin	36	1,089	1,620	50	4,890	11,268	17,636	3,634	479	462	476	109
Gratiot	34	5,291	7,592	32	47,421	30,535	35,409	29,484	3,782	3,247	4,724	1,058
Isabella	36	3,351	4,978	40	26,868	25,017	31,948	19,751	3,706	3,118	2,132	966
Mecosta	43	1,527	2,280	52	13,457	21,258	33,381	9,636	1,232	1,473	947	612
Midland	44	2,216	3,274	46	11,499	19,826	27,577	7,952	1,264	449	1,407	243
Montcalm	38	4,109	6,011	44	30,600	23,359	32,162	21,329	1,138	1,896	3,277	1,732
Osceola	34	1,177	1,531	47	8,439	15,233	24,842	6,396	661	1,578	411	231
District 6 Total	31	29,576	44,344	30	309,173	31,198	36,993	197,813	15,725	20,949	33,921	9,060
Arenac	37	1,072	1,634	38	9,667	22,172	29,473	6,672	452	751	1,064	352
Bay	34	4,431	6,604	34	34,879	28,038	33,150	21,289	428	406	4,512	1,338
Huron	20	4,082	6,636	19	80,907	38,749	44,134	55,649	8,656	8,649	8,409	1,858
Saginaw	37	8,456	12,385	34	59,242	28,983	33,034	33,404	1,309	1,854	6,321	1,853
Sanilac	29	5,912	9,041	31	59,994	26,084	31,638	40,294	2,407	4,935	6,294	1,779
Tuscola	34	5,623	8,044	33	64,484	35,864	44,278	40,505	2,473	4,354	7,321	1,880
District 7 Total	41	36,977	54,770	46	283,684	25,715	36,079	226,689	20,219	41,813	18,314	30,741
Allegan	39	6,253	9,287	44	56,140	27,466	38,105	45,202	5,606	10,089	3,451	5,063
Berrien	40	6,321	9,809	48	42,310	21,598	30,607	33,981	781	2,135	3,311	6,776
Cass	40	3,971	5,863	47	27,168	24,542	33,454	21,748	1,703	6,315	2,308	1,337
Kalamazoo	43	3,477	5,317	51	26,735	26,655	37,981	21,487	3,417	3,522	2,041	2,004
Kent	41	5,800	8,259	47	41,571	25,933	37,098	30,959	2,574	3,339	2,441	4,857
Ottawa	42	5,455	7,682	40	52,424	32,441	43,582	41,157	4,090	12,714	2,046	4,873
Van Buren	42	5,700	8,553	50	37,336	21,962	31,895	32,155	2,048	3,699	2,716	5,831
District 8 Total	43	58,484	83,443	46	312,420	20,535	27,111	237,313	23,060	35,421	31,760	13,542
Barry	46	4,106	5,796	53	17,864	16,359	24,474	14,112	1,406	2,808	1,695	723
Branch	39	4,928	6,876	40	27,643	21,102	26,475	20,746	2,492	2,713	3,124	816
Calhoun	46	5,949	8,389	49	30,105	21,246	29,075	24,188	3,010	3,457	3,373	1,506
Clinton	45	7,373	10,769	43	35,889	21,817	26,391	25,417	2,268	4,350	3,417	1,201
Eaton	45	5,738	8,128	49	24,485	15,716	22,346	18,942	1,547	2,160	2,991	748
Hillsdale	44	6,740	9,260	46	30,896	17,973	23,340	23,208	2,432	3,970	2,967	986
Ingham	41	4,442	6,750	48	32,528	27,152	36,540	24,736	1,547	3,426	3,079	2,263
Ionia	41	5,186	7,177	41	34,111	24,718	30,963	24,449	2,145	3,779	2,842	1,675
Jackson	45	4,730	6,718	57	24,201	19,361	28,456	21,334	2,824	2,674	2,395	1,819
St. Joseph	37	3,914	5,707	39	25,683	21,970	27,860	19,210	1,876	3,440	2,877	787
Shiawassee	41	5,378	7,873	41	29,015	19,658	25,018	20,971	1,513	2,644	3,000	1,018
District 9 Total	40	\$44,756	\$69,022	48	\$259,780	\$22,232	\$30,449	\$198,108	\$22,792	\$19,771	\$23,448	\$17,097
Genesee	46	4,191	6,690	57	20,371	20,070	29,241	15,983	2,915	1,614	2,066	1,002
Lapeer	42	4,754	7,515	52	34,869	24,817	38,160	25,190	2,909	2,534	2,298	3,037
Lenawee	42	9,194	13,037	40	56,524	27,492	32,718	41,056	5,387	4,431	6,142	1,510
Livingston	40	2,827	4,209	54	15,458	19,567	28,835	12,921	1,409	1,641	1,395	1,110
Macomb	32	2,657	4,615	46	19,887	22,807	31,635	14,320	1,037	971	1,274	2,627
Monroe	41	7,386										



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