Agricultural Economics Report

NUMBER 577
JULY 1994

1994 MICHIGAN LAND VALUES

By
Steven D. Hanson, Associate Professor
Brian Paterson, Graduate Research Assistant

Department of
Agricultural Economics
MICHIGAN STATE
UNIVERSITY
East Lansing

1994 MICHIGAN LAND VALUES

by

Steven D. Hanson, Associate Professor

Brian Paterson, Graduate Research Assistant

Before 1991 there were three sources of Michigan agricultural land values: the Federal Reserve Bank of Chicago district farmland survey; the USDA-ERS estimate of the value of farmland and service buildings; and the state equalized value (SEV) used for property tax purposes. Both USDA and Federal Reserve Bank surveys provide useful information regarding aggregate land values in the state. However, in many instances, users of land value information desire a more disaggragated measure of land values. The SEV is set by county assessors to 50 percent of the estimated market value of land using comparative sales studies conducted annually. SEVs are useful in determining representative land values but are handicapped by the historical sales perspective upon which the appraisals are based.

In an effort to measure disaggragated land values, surveys were conducted by Michigan State University in spring 1991, 1992 and 1993 that collected information on land values for sugar, beet land, irrigated land, and different types of corn-soybean-hay land. A similar survey was conducted in 1994 which asked for information on corn-soybean-hay sugar beet, irrigated land values and rents. The objective of the 1994 survey was to continue to provide information on disaggragated land values in Michigan. The remainder of this paper contains a discussion of the survey, the survey results, and a summary.

Survey Method

The sample consisted of members of the Farm Managers and Rural Appraisers Association, banker participants in the annual Michigan Farm Credit Conference, and county assessors in Michigan. After accounting for overlap between the three groups the total sample consisted of 442 agents: 181 lenders from the Farm Credit Conference, 173 appraisers, and 88 county assessors. A total of 91 questionnaires were returned which had land value information reported. The majority of responses were received from the southern half of the lower peninsula although 12 responses were received from the upper peninsula and northern half of the lower peninsula. This is a

reasonable correspondence between the location of respondents and the actual geographic distribution of agricultural production in the state. It should be noted that some respondents may have been reporting as a pool of individuals who received questionnaires, such as a farm credit service branch office or an appraisal group. It is also important to recognize that the survey respondents in many cases were experts on land values in their areas. These people often had access to a significant amount of land appraisal and transaction information.

The sampled agents each received a cover letter, encouraging their participation in the study, and a two page questionnaire asking for land value information and comments on land values. Respondents were promised a summary of the results of the survey. Copies of the cover letter and questionnaire used in the survey are included in the Appendix.

Information requested on the questionnaire included: the current average value of land; the current range in value; the percent change in value over the last year; the percent change in value expected over the next year; the percent change in the supply of land on the market during the last year; and the average cash rent value of land. The questionnaire requested the information be reported separately for high quality corn-soybean-hay (C-SB-H), low quality C-SB-H, sugar beet, and irrigated land as appropriate for each respondent's area. Five year average historical yields for corn, soybeans, and hay were provided on the questionnaire to help respondents distinguish between higher and lower quality land. The respondents were asked to indicate the county or counties to which their information corresponds. In addition, space was provided for comments on the impacts of urbanization and for general comments on land values in Michigan. The questionnaires were mailed in January 1994.

Survey Results for the Southern Lower Peninsula

Respondents reporting information on sugar beet and irrigated land were primarily concentrated in the southern lower peninsula while those reporting C-SB-H land information were spread across the state. In order to account for the potential large differences in soil characteristics, the C-SB-H responses were split into two groups: 1) the upper peninsula and northern lower peninsula region (Area 1 in figure 1); and 2) the southern lower peninsula region (Area 2 in figure 1).

Tables 1-4 present the land value information for the southern lower peninsula. Table 1 summarizes the responses regarding the average, high, and low prices for the four land types in the southern lower peninsula. Efforts were made to report only the value of land for use in agricultural production. When respondent information suggested the reported values reflected non-agricultural use, the values were removed from the sample. The higher quality C-SB-H land had an average price of $1,091 per acre. Lower quality C-SB-H land had an average price of $726 per acre, over $365 per acre less than the high quality land. Sugar beet land averaged $1,438 per acre and irrigated land averaged $1,259 per acre. Clearly the characteristics of land, which determine its production use, has a significant impact on its value.

The range in land values (not average value) for high quality C-SB-H land was reported to be $500 to $3,735 per acre, while low quality C-SB-H land ranged in value from $200 - $1,500 per acre. Sugar beet land ranged in value from $625 to $2,000 per acre and irrigated land values ranged from $750 to $2,000 per acre in value.

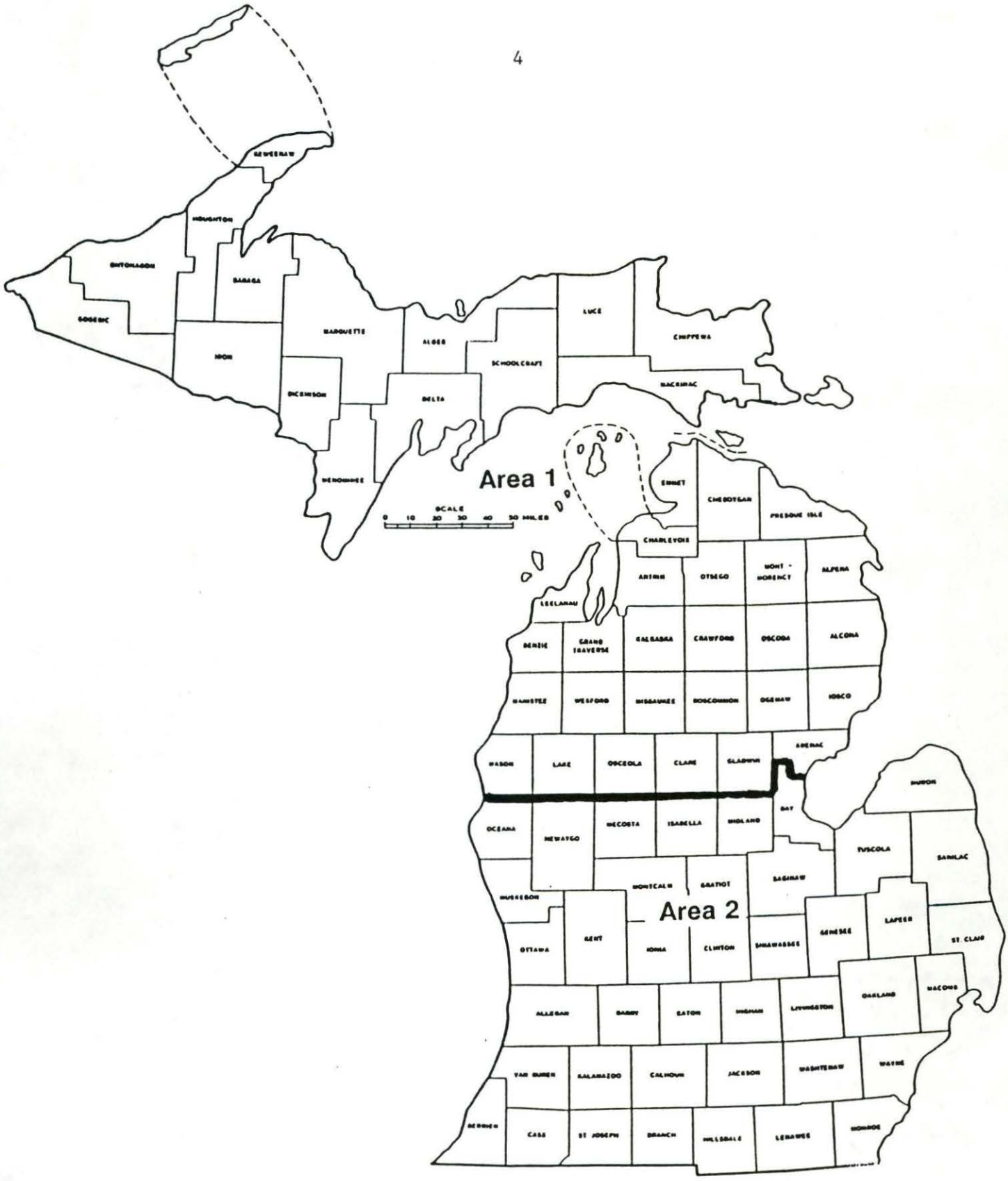

FIGURE 1. Designation of State Production Areas.

Table 1. Price Per Acre in the Southern Lower Peninsula

LAND TYPE	AVERAGE	HIGH	LOW
Corn-S.B.-Hay (above avg.)	$1,091	$3,735	$500
Corn-S.B.-Hay (below avg.)	726	1,500	200
Sugar Beet	1,438	2,000	625
Irrigated	1,259	2,000	750

Table 2 shows the percent change in value during the last 12 months and the expected increase in value during the next 12 months in the southern lower peninsula. High and low quality C-SB-H land increased in value by an average 4.6% and 4.1%, respectively, during the last year. Sugar beet land values rose by 4.8% and irrigated land values showed the strongest gains, increasing by 5.4% during the last 12 months. Land values are expected to increase over 3% during the upcoming year. High quality C-SB-H land is expected to increase by an average of 3.2% over the next year, while low quality C-SB-H land is expected to increase only 3.3%. Sugar beet land values are expected to rise 3.3% over the next year while irrigated land is expected to show an average increase of 3.5%.

Table 2. Percent Change In Value in the Southern Lower Peninsula

LAND TYPE	LAST 12 MONTHS	EXPECTED NEXT 12 MONTHS
Corn-S.B.-Hay (above avg.)	+4.61%	+3.23%
Corn-S.B.-Hay (below avg.)	+4.06	+3.32
Sugar Beet	+4.77	+3.27
Irrigated	+5.43	+3.50

Table 3 shows the percent change in the supply of land on the market during the last 12 months in the southern lower peninsula. High quality C-SB-H land on the market increased an average 2.2% and 1.9%, respectively. Sugar beet land on the market increased by 0.6%. On the other hand, the supply of irrigated land on the market declined by 0.7%, possibly contributing to the strong gains in value of irrigated land during the last year. The high quality C-SB-H land

showed the most variability in change in supply of land, exhibiting as much as a 20% decrease in the supply of land on the market in some areas and up to a 40% increase in other areas.

Table 3. Percent Change In Land Supply on the Market in the Southern Lower Peninsula

LAND TYPE	LAST 12 MONTHS
Corn-S.B.-Hay (above avg.)	+2.17%
Corn-S.B.-Hay (below avg.)	+1.91
Sugar Beet	+0.57
Irrigated	-0.67

Table 4 shows the average cash rent and value to rent multipliers for each type of land. High quality C-SB-H land had an average cash rent of $67 per acre compared to $43 per acre for low quality C-SB-H land. Sugar beet land rented for an average of $114 per acre while irrigated land rented for $131 per acre on average. The cash rent values are roughly in proportion to the corresponding values of each values of each land type.

A useful tool for making comparisons among the different sets of land values is the "value to rent ratio". Value to rent ratios were calculated by dividing average land values by the average cash rents and then averaging over each land type. The average value to rent ratio for high and low quality C-SB-H land was 16 and 17 respectively. Sugar beet land showed a value to rent ratio of 13 while irrigated land had a ratio of 10.

Value to rent ratios are a direct function of the future cash flows the land is expected to generate. Higher expected future cash flows are "capitalized" into the value of the land today, increasing its value relative to the current years cash flow. In other words, higher expected future cash flows translate into higher value to rent ratios. The relatively high value to rent ratios for C-SB-H land thus suggest three possible situations: 1) the market actually anticipates that the cash flows for C-SB-H production will grow at a faster rate than sugar beets and irrigated land; 2) the C-SB-H land may be switched to alternative production with higher expected cash flows, e.g. sugar

beets, in the future; or 3) non-farm uses of the land in the future may provide higher cash flows than those expected from C-SB-H production.

Table 4. Cash Rent And Value Multiplier in the Southern Lower Peninsula

LAND TYPE	AVERAGE CASH RENT	AVERAGE VALUE/RENT RATIO
Corn-S.B.-Hay (above avg.)	$67	16
Corn-S.B.-Hay (below avg.)	43	17
Sugar Beet	114	13
Irrigated	131	10

Note: Average value to rent ratios were calculated using only the questionnaires with completed responses to both the average value and average rent per acre questions.

Tables 5-8 show the information for C-SB-H land in the upper peninsula and northern lower peninsula. It should be emphasized that the total number of responses reported in these regions was only 12. Table 5 reports the average price per acre. High quality C-SB-H land averaged $486 per acre while low quality C-SB-H land averaged $400 per acre. As expected the average values per acre in the upper peninsula and northern lower peninsula are significantly below those reported for the southern lower peninsula. The difference between average value of high and low quality C-SB-H land in the upper peninsula and northern lower peninsula was around $86 per acre, about one-fourth the difference in the southern lower peninsula.

Table 5. Price Per Acre in the Upper Peninsula and Northern Lower Peninsula

LAND TYPE	AVERAGE	HIGH	LOW
Corn-S.B.-Hay (above avg.)	$ 468	$ 548	$ 362
Corn-S.B.-Hay (below avg.)	400	415	332

Table 6 shows high and low quality C-SB-H land in the upper peninsula and northern lower peninsula increased in value 7% and 6.3% during the last year, significantly above the values reported for the southern lower peninsula. High quality C-SB-H land is expected to increase in

value by 4.3% during the next 12 months, while a 4.5% increase is expected for the lower quality C-SB-H land, again above the expected increases for the southern lower peninsula.

Table 6. Percent Change In Value in the Upper Peninsula and Northern Lower Peninsula

LAND TYPE	LAST 12 MONTHS	EXPECTED NEXT 12 MONTHS
Corn-S.B.-Hay (above avg.)	+7.00%	+4.33%
Corn-S.B.-Hay (below avg.)	+6.33	+4.50

Table 7 contains the estimated percentage change in supply of C-SB-H land on the market in the upper peninsula and northern lower peninsula. High quality and low quality land supply increased 9.7% and 17.5%, respectively, during the last 12 months. The expected change in supply of C-SB-H land on the market in the upper peninsula and northern lower peninsula were significantly above values reported for the southern lower peninsula.

Table 7. Percent Change In Land Supply on the Market in the Upper Peninsula and Northern Lower Peninsula

LAND TYPE	LAST 12 MONTHS
Corn-S.B.-Hay (above avg.)	+ 9.67%
Corn-S.B.-Hay (below avg.)	+17.50

Table 8 shows the cash rent and value to rent ratio for high and low quality C-SB-H land in the upper peninsula and northern lower peninsula. High quality C-SB-H land had an average cash rent of $23.33 per acre while the average cash rent for low quality C-SB-H land was $19 per acre, significantly below the values reported for the southern lower peninsula. The value to rent ratios for high and low quality C-SB-H land were 21.7 and 25.2, respectively. These values suggested high growth rates in expected cash flows for C-SB-H production or the anticipation of some more profitable future use of the land.

Table 8. Cash Rent And Value Multiplier in the Upper Peninsula and Northern Lower Peninsula

LAND TYPE	AVERAGE CASH RENT	AVERAGE VALUE/RENT
Corn-S.B.-Hay (above avg.)	$23	20
Corn-S.B.-Hay (below avg.)	19	21

Urbanization

Encroaching urbanization is having a major impact in many areas across the state and causing great concern in the agricultural sector. Survey respondents were asked what impact urbanization is having on land values. The responses varied across the state from no impact to considerable appreciation in farm land values. The respondents indicate there is an increasing number of farms being split into smaller parcels and sold for residential building and that this activity is wide spread in the Southern Lower Peninsula. Many areas that are impacted by urbanization are seeing significant increases in the nonagricultural-use value of the land. Below average farmland is now selling for more than above average farmland in some areas. In one rural community located outside an urban center in south central Michigan, 10 acre parcels are selling for between $40,000 and $60,000. The respondents indicate that in some areas farmland prices are being bid up to prices well above what cash rents can support and that this is removing farmland from production as well as decreasing the number of full time farms.

The rest of the lower peninsula and the upper peninsula are seeing relatively little impact except for a few areas in the northwest part of the Lower Peninsula. In this area, two large farms were split into parcels ranging from 10 to 150 acres and sold at auction to buyers who, in some cases, planned to develop subdivisions on the land. There are also large tracks of land being developed for people who are re-locating or retiring to the Northwest Lower Peninsula area.

Appraisers, bankers and assessors feel urbanization is a major factor influencing land values in many areas across the state. Respondents felt urbanization makes land more expensive for

farming in some areas. One "positive" aspect of urbanization was the feeling that urbanization will help support land price in the event of a declining agricultural market.

General Comments

Respondents were also asked to provide general comments on land values in their area and the state of Michigan. The main thrust of the comments seemed to be that land prices for agricultural use are realizing moderate value increases. In addition, rural residential and recreational influences are having increasingly strong impacts on land values in many areas.

A number of other general themes persisted in the respondents' comments. Higher optimism about commodity prices and farm returns are expected for irrigated and high quality land. These factors, as well as low interest rates, are allowing farmers to consider expanding their land holdings. In some areas urbanization pressures are bidding farms away and decreasing supply of below average farmland. PA 116 continues to hold down land values in a number of areas by limiting the land to agricultural uses. In many areas, the number of tillable acres transferred was high during the last year. The non-tillable and recreation land markets were also generally active and selling at a premium.

Conclusions

The Michigan land value survey was conducted for a fourth consecutive year. The primary purpose of the study is to provide information on diseggragated agricultural land values in Michigan. Land values were strong across the state and increased approximately 4% during 1993. Higher farm incomes last year are also expected to contribute to increasing land values during the upcoming year. The land market was active during the year with a relatively large number of transactions.

Non agricultural pressures from residential and recreational influences are having an increasing impact on the value and use of agricultural land in the state.

APPENDIX

February 1994

address~

Dear salutation~:

Enclosed is the annual land value survey for Michigan farmland. Land values are an important indicator of the economic strength of the economy. To help provide this information, we are asking you to take a few minutes and give us your estimates on the value and rental rates of farmland used to grow corn, soybeans, hay, and/or sugarbeets in your area. We will send a survey summary to all those who respond to the questionnaire.

While your participation in the survey is purely voluntary, we do value your opinion and would appreciate a prompt response. Your participation will be strictly confidential and you will remain anonymous on the report of the survey findings. You indicate your voluntary agreement to participate by completing and returning the questionnaire. Thanks for your help.

If you have any questions, please call Kelsey (517) 353-4520 or Hanson (517) 353-1870.

Sincerely,

Mike Kelsey,
Professor

Steve Hanson,
Associate Professor

rmg

Enclosure

FARM LAND VALUE QUESTIONNAIRE
January 1994

Make the best estimates you can for your area.

Indicate which county or counties you are reporting on._____

Above Average and Below Average refers to land you expect to produce yields above or below the state average respectively. Five year averages (1988-92) for corn, soybeans and hay in Michigan are:

	Average Yield/Acre
Corn	103 bu.
Soybeans	35 bu.
Hay	3.24 tons

Type of Land	Current Average Value	Current Range in Value		Percent Change in Value (Indicate + or -)		Percent Change in the Supply of Land on the Market in Last 12 Months Indicate + or -	Average Cash Rent
		High	Low	Last 12 Months	Expected in Next 12 Months		
	$/acre	$/acre	$/acre	% Change	% Change	% Change	$/acre
A. Corn-S.B.-Hay Above Average							
Below Average							
B. Sugar Beet (if applicable)							
C. Irrigated (if applicable)							

(over)

Please comment on the impact that urbanization is having on the land market in your area and Michigan:

_____

_____

_____

General Comments on Land Values in your area and Michigan:

_____

_____

_____

Would you like a summary of the survey results?

Yes ☐
No ☐

If you are interested in a copy of the survey results, please provide your name, correct address and telephone number.

Address:

_____ Phone:_____.

_____

_____