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Michigan State University
Department of Agricultural, Food, and Resource Economics

Report No. 644
November 2013

# 2013 MICHIGAN LAND VALUES and Leasing Rates 

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# 2013 MICHIGAN LAND VALUES 

## and

## LEASING RATES

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## 2013 MICHIGAN LAND VALUES

Land prices and expected changes in land prices are topics of interest to many. There are several sources of information on Michigan farmland values. The Federal Reserve Bank of Chicago reports quarterly farmland values for each state in its district based on a survey of lenders. However, Michigan farmland sales transactions are sporadically reported due to insufficient survey response. The USDA estimates the value of farmland and service buildings annually for every state based on a survey of farmers. Both of these surveys provide useful information on aggregate farmland values in the state. For land value information to be useful for individual decision-making, a more disaggregated measure of land values based on land type, location, and use is desired.

Michigan State University (MSU) has collected information on land values since 1991 by mail survey. Responses via internet were also added in 2013. The goal of the MSU study is to provide information on the value of land based on agricultural and non-agricultural use. The survey also collects information on leasing rates and practices in the state. This report contains the results for the MSU land value survey conducted in spring of 2013.

## Survey Methods

The survey sample consists of members of the Farm Managers and Rural Appraisers Association, Michigan Agricultural Lenders, County Equalization Directors in Michigan, and members of the Farm Bureau Advisory Committees on feed grains, oil seeds, wheat, dry beans and sugar beets. After accounting for overlap between the different groups, the total sample consisted of 550 potential respondents. A total of 204 questionnaires were returned with useable information. In order to account for potentially large differences in soil and climate characteristics, information is reported separately for different regions of the state. Results are reported for two halves of the state, the southern-lower peninsula and the upper and northern-lower peninsula, which are split at a line running from Oceana

County across to Bay County as shown in Figure 1. There were 153 responses received from the southern half of the Lower Peninsula (Area 2 in Figure 1). The remaining 51 responses were received from the Upper and Northern Lower Peninsula (Area 1 in Figure 1). This is a reasonable correspondence between the location of respondents and the geographic distribution of agricultural production in the state. Figure 1 shows the distribution of respondents by county and Figure 2 shows the total number of responses by the Agricultural Statistics District in the state. Results are also reported for the nine Agricultural Statistics Districts across the state (Figure 2). The results for Districts 1 through 4 were combined because of a low number of responses in that region. In addition, results are only reported for each question when at least five responses were received for a reporting area.

It should be noted that some respondents were reporting for a group of individuals who received the questionnaire, such as a Farm Credit Service branch 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 respondents often had access to a significant amount of land appraisal, transaction, and leasing information.

Each sample member received a cover letter encouraging their participation in the study and a two-page questionnaire asking for information on farmland. A summary of the survey results is provided to the respondents upon request. The questionnaire was mailed in March of 2013. A postage paid return envelope was provided to minimize the cost to respondents. A follow-up letter asking for participation in the survey and a second copy of the questionnaire was sent to non-respondents approximately four weeks after the original questionnaire was sent. Copies of the questionnaire used in the survey are included in the Appendix.

Respondents were requested to provide the current agricultural-use value of the farmland, the change in value during the last year, the expected change in value during the next year, and the cash rental rate for their geographic area. In addition, information on the non-agricultural-use value of farmland was requested. Estimates on agricultural-use values for farmland were reported separately for tiled (nonirrigated) field crops, non-tiled field crops, fruit, sugar beets, and irrigated land. Price data on non-
agricultural use land values were collected for residential, commercial, and recreational development. The respondents were also asked to indicate the county or counties to which their information corresponds. In addition, an opportunity was provided for each respondent to rank the major agricultural factors influencing land values and cash rents. Similarly, a ranking was requested of the major factors influencing land values in rural areas for land that appears destined to transition to non-agricultural uses.

Efforts were made to report only the value of land in its agricultural production use. However, it is difficult to separate out non-agricultural influences on land prices, so the agricultural-use values will certainly display some non-agricultural-use impacts. The magnitude of these influences varies across local regions in state. The influences of non-agricultural factors on farmland values are addressed in more detail later in the report.


Figure1. Farmland Value Survey Responses
Ag Statistics Districts North
Central
East Central
Southwest South Central D8 Southeast Total D9

| Number |
| :--- |
| 38 |
| 23 |
| 41 |
| 29 |
| 46 |
| 27 |
| 204 |



Figure2. Agricultural Statistics Districts and Number of Respondents

## Agricultural-Use Farmland Values

## Average Farmland Values

Average agricultural farmland values are reported in Table 1 for different regions in the state. In the Southern Lower Peninsula, the average value of tiled field cropland was $\$ 4,843$ per acre while nontiled field cropland averaged \$4,089 per acre. In the Upper and Northern Lower Peninsula tiled and nontiled field crop land averaged $\$ 2,138$ and $\$ 1,832$ per acre, respectively.

Table 1 Michigan Average Agricultural Land Values, 2013

| Region | Land Use |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | Field Crop <br> Tiled | Field Crop <br> Non-Tiled | Sugar <br> Beet | Irrigated | Fruit <br> Trees |
|  | $\$ /$ acre |  |  |  |  |
| Michigan | 4,429 | 3,702 | 6,204 | 5,294 | 7,761 |
| Southern Lower <br> Peninsula | 4,843 | 4,089 | 6,576 | 5,613 | 7,950 |
| Upper \& Northern <br> Lower Peninsula | 2,138 | 1,832 | 3,417 | 2,561 | 6,250 |
| Districts 1-4 | 2,369 | 2,018 | $\mathrm{~N} / \mathrm{A}$ | 3,405 | 7,643 |
| District 5 | 3,985 | 3,313 | 5,733 | 4,410 | $\mathrm{~N} / \mathrm{A}$ |
| District 6 | 5,592 | 4,515 | 6,518 | 7,050 | $\mathrm{~N} / \mathrm{A}$ |
| District 7 | 5,060 | 4,548 | $\mathrm{~N} / \mathrm{A}$ | 6,122 | 8,571 |
| District 8 | 4,177 | 3,585 | $\mathrm{~N} / \mathrm{A}$ | 5,254 | 6,550 |
| District 9 | 4,489 | 3,872 | 6,750 | 5,417 | $\mathrm{~N} / \mathrm{A}$ |

Note: Results were only reported when a minimum of five responses were received.

For land producing grains, soybeans, and other field crops, Agricultural Statistics Districts 6 and 7 in Southern Michigan had the highest agricultural land values. District 6 in the southwest had the highest average values for field cropland tiled $\$ 5,592$ per acre and District 7 was the next highest for field
cropland tiled at \$5,060 per acre. Values in these areas appear to be the highest in the state and probably reflect the influence of agricultural demand. The South Central (D8) and Central (D5) Districts had somewhat lower average values for tiled cropland ranging from $\$ 3,985$ to $\$ 4,177$ per acre and values ranging from \$3,313 to \$3,585 per acre for non-tiled cropland. Both district values increased over 2012 reported values.

Land that produces higher valued crops can support a higher investment cost. Fruit and sugar beets are commodities produced in Michigan that historically tended to generate both a higher gross and higher net income per acre. The highest priced agricultural land in Michigan produces fruit and is located in proximity to Lake Michigan. This land planted to fruit trees is highly valued not only because of its earnings potential from the harvested fruit but also because of non-agricultural demand due to its location (e.g., view and access to Lake Michigan). Land values reported for fruit tree acres averaged $\$ 7,761$ per acre across Michigan. This was an increase of $\$ 867$ per acre over the 2012 Michigan Land Survey value of $\$ 6,894$ per acre. The highest value reported for fruit tree acreage in 2013 was $\$ 8,571$ per acre in the Southwest District (D7).

Land that can support sugar beets in its crop rotation averaged \$6,204 per acre in 2013, a $34.5 \%$ increase over the 2012 value of $\$ 4,610$. The sugar beet production is concentrated in the East Central and South East Districts. Irrigated land value in 2013 averaged $\$ 5,294$ per acre in the state, a $12.2 \%$ increase over the 2012 value. Most responses on irrigated land values came from East Central, Southwest and Southeast Michigan. Most responses on fruit land values came from District 2, 4, and 7, North and Southwest Districts of Michigan. Fruit tree land in the North (D1-D4) averaged \$7,643 per acre and Southwest District (D7) averaged $\$ 8,571$ per acre, these acres are typically used for cherries, apples, and peach production.

## Change in Farmland Values

The changes in Michigan farmland values during the last 12 months along with the expected changes during the next 12 months are displayed in Table 2. In the Southern Lower Peninsula, field cropland
values increased in 2013 from the levels observed in 2012 for tiled land and non-tiled land, $12.4 \%$ and $10.7 \%$, respectively. In the Upper and Northern Lower Peninsula, land values for field crops increased 6.1\% for tiled land, and $5.1 \%$ for non-tiled land. Districts (D7) reported the lowest rate increases in value for field cropland tiled land of 5.9\% and non-tiled of 4.8\%.

Table 2 Percentage Change in Michigan Farmland Value, 2013

| Regions | Type of Land Use |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Field Crop Tiled |  | Field Crop <br> Non-Tiled |  | Sugar Beet |  | Irrigated |  | Tree Fruit |  |
|  | $\begin{aligned} & \text { Last } \\ & \text { Year } \end{aligned}$ | Expected Next Year | $\begin{aligned} & \text { Last } \\ & \text { Year } \end{aligned}$ | Expected Next Year | $\begin{aligned} & \hline \text { Last } \\ & \text { Year } \end{aligned}$ | Expected Next Year | $\begin{aligned} & \text { Last } \\ & \text { Year } \end{aligned}$ | Expected Next Year | $\begin{aligned} & \text { Last } \\ & \text { Year } \end{aligned}$ | Expected Next Year |
|  | \% Change |  |  |  |  |  |  |  |  |  |
| Michigan | 11.3 | 4.0 | 9.8 | 3.9 | 16.5 | 3.9 | 10.9 | 4.9 | 10.8 | 7.7 |
| Southern Lower Peninsula | 12.4 | 4.0 | 10.7 | 4.0 | 18.1 | 4.3 | 11.1 | 5.2 | 11.2 | 10.8 |
| Upper and Northern Lower Peninsula | 5.1 | 3.7 | 5.1 | 3.2 | 5.2 | 1.4 | 9.5 | 3.0 | N/A | N/A |
| District 1-4 | 8.7 | 7.2 | 7.3 | 3.9 | N/A | N/A | 14.6 | 5.2 | N/A | N/A |
| District 5 | 13.5 | 4.4 | 12.4 | 4.8 | 21.9 | 4.6 | 9.6 | 4.8 | N/A | N/A |
| District 6 | 15.4 | 3.3 | 13.8 | 3.5 | 14.8 | 3.5 | 12.7 | 1.6 | N/A | N/A |
| District 7 | 5.9 | 1.8 | 4.8 | 2.1 | N/A | N/A | 7.4 | 3.3 | 6.2 | 3.0 |
| District 8 | 8.3 | 4.4 | 6.3 | 3.6 | 10.0 | 5.1 | 12.6 | 7.2 | N/A | N/A |
| District 9 | 11.8 | 3.6 | 11.4 | 5.1 | 22.5 | 5.1 | 8.0 | 5.0 | N/A | N/A |

Note: Results were only reported when a minimum of five responses were received.

For the previous five years, the Southern Lower Peninsula has the highest annual rate of increase in land values, averaging 5.46\%.

Expectations on changes in Michigan farmland values indicate that land should increase in value in 2014 over the 2013 values. The largest expectations on changes in percentage land value were for District (D1-D4) at 7.2\% for tiled and District (D9) at $5.1 \%$ for non-tiled. Field crop tiled land values in

Michigan are expected to increase by $4.0 \%$ tiled cropland and $3.9 \%$ for non-tiled cropland. The Central District (D5) is expected to increase by $4.4 \%$ of tiled cropland and $4.8 \%$ for non-tiled cropland. Overall, Michigan irrigated land values increased $10.9 \%$ and are expected to increase $4.9 \%$ during the upcoming year. District (D1-D4) irrigated land values have the largest increase in value of $14.6 \%$ over last year and are expected to increase in value for next year by $5.2 \%$. Districts (D6) irrigated land values increased $12.7 \%$ with an expected 2014 land value increase of $2.6 \%$. Michigan sugar beet land values increased by $16.5 \%$ in 2013 and are expected to increase about $3.9 \%$ in 2014.

## Farmland Leasing

Leasing or renting of land provides an alternative method for farmers to gain control of land. Table 3 reports land leasing activity in Michigan and indicates that $56.5 \%$ of crop acres were controlled by lease. Cash leasing was the predominant form of land rental with $81.2 \%$ of leased land in Michigan controlled by cash rental arrangements.

## Crop Acres Leased

In the Southern Lower Peninsula, an estimated $76.2 \%$ of field crop acres were controlled by leases, while $65.2 \%$ of the cropland in the Upper and Northern Lower Peninsula was leased. The highest amount of leasing occurred in the Southeast District (D9) where $80.1 \%$ of the cropland is leased. As with the entire state, cash rent was the predominant leasing arrangement in all reporting districts of Michigan.

Farms featuring fruit production appeared to be an exception to heavy use of leasing for agricultural crops. One possible explanation for this difference is the long term investment required for production of tree fruit. Renting provides flexibility in control of the land for both the lessee and lessor. This flexibility is not an advantage for someone considering an investment in, for example, orchards or vineyards which require several years of cash outflow before generating sales. Because tree fruit is a long-term investment, leasing arrangements depend upon the age of the trees and expectation for maintenance.

Table 3 Characteristics of Leased Farmland in Michigan, 2013

| Region | Crop Acres <br> Leased |  |
| :--- | :---: | :---: |
|  | Land Leased Under <br> Cash Lease |  |
| Michigan | 66.9 | 87.5 |
| Southern Lower Peninsula | 76.2 | 86.2 |
| Upper and Northern <br> Lower Peninsula | 65.2 | 86.1 |
| Districts 1-4 | 72.9 | 94.6 |
| District 5 | 61.1 | 83.3 |
| District 6 | 60.2 | 82.7 |
| District 7 | 68.3 | 90.4 |
| District 8 | 65.8 | 80.3 |
| District 9 | 80.1 | 80.5 |

Note: Results were only reported when a minimum of five responses were received.

## Cash Rent Levels

Cash rental arrangements provide the opportunity for a landowner to receive a fixed payment from a tenant for control of the land. Cash rental amounts and their relationship to land values are shown in Table 4. Cash rents in the Southern Lower Peninsula averaged $\$ 164$ per acre for tiled cropland and averaged $\$ 121$ for non-tiled cropland. In the Upper and Northern Lower Peninsula, tiled field cropland rented for an average of $\$ 85$ per acre and non-tiled cropland rented for an average of $\$ 57$ per acre. The highest rent levels for field cropland were found in the East Central (D6) where tiled land commanded an average cash rent of $\$ 186$ per acre. Sugar beet land in Michigan rented for an average of $\$ 239$ per acre, and irrigated cropland rented for $\$ 233$ per acre. The Michigan cash rent value for tiled field cropland of $\$ 154$ per acre for the state is an increase of $\$ 15$ per acre from the previous year. Average cash rental rates for Michigan cropland were up for sugar beet acres by $\$ 50$ per acre and average rental rates for non-tiled
land were up $\$ 11$ per acre from last year. The reported rental rates for 2013 indicate that rates increased for all land use types over last year.

Table 4 Average Cash Rent and Value Multipliers for Michigan Agricultural Land Use, 2013

| Region | Type of Land Use |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Field Crop Tiled |  | Field Crop Non- <br> Tiled |  | Sugar Beet |  | Irrigated |  |
|  | Rent <br> (\$/acre) | Value/ <br> Rent | Rent <br> (\$/acre) | Value/ <br> Rent | Rent <br> (\$/acre) | Value/ <br> Rent | Rent <br> (\$/acre) | Value/ <br> Rent |
| Michigan | 154 | 33 | 110 | 36 | 239 | 27 | 233 | 25 |
| Southern Lower <br> Peninsula | 164 | 32 | 121 | 35 | 251 | 27 | 239 | 25 |
| Upper and <br> Northern Lower <br> Peninsula | 85 | 38 | 57 | 41 | 138 | 29 | 164 | 31 |
| District 1-4 | 112 | 38 | 64 | 40 | N/A | N/A | 146 | 36 |
| District 5 | 126 | 37 | 92 | 39 | 183 | 33 | 208 | 26 |
| District 6 | 186 | 32 | 131 | 36 | 257 | 26 | 265 | 26 |
| District 7 | 150 | 36 | 125 | 39 | N/A | N/A | 224 | 28 |
| District 8 | 158 | 27 | 113 | 33 | N/A | N/A | 259 | 21 |
| District 9 | 165 | 30 | 122 | 34 | 266 | 25 | 265 | 21 |

Note: Results were only reported when a minimum of five responses were received.

## Land Value-to-Rent Multiplier

The value-to-rent ratios presented in Table 4 were calculated by dividing the land value reported by the corresponding cash rent value reported by each respondent. The value-to-rent ratio for tiled field crops was 32 (i.e., land price was 32 times the rental rate) in the Southern Lower Peninsula. Southern Lower Peninsula sugar beet land had a value-to-rent ratio of 27, while irrigated land's value-to-rent ratio was 25. In the Upper and Northern Lower Peninsula the ratio for field cropland tiled was 38 . These value-to-rent ratios in Michigan changed little from 2012 levels.

The current price of land is a direct function of expected future cash flows. Expected future cash flows are "capitalized" into the price of the land today, increasing or decreasing its value relative to the current year's cash flow. In other words, higher expected future cash flows translate into higher value-torent ratios and lower expected cash flows translate into lower value-to-rent ratios. As speculation and expectations change about future cash flows, the resultant value-to-rent ratio changes. The value-to-rent ratio calculation and movement is analogous to the price/earnings ratio in equity stocks and funds traded on national exchanges. There are four possible situations for the value-to-rent ratios to change: 1) the market anticipates that future cash flows will grow at a faster rate than for alternative land parcels located in other areas and/or used for lower valued purposes; 2) the land may be switched to alternative uses with higher expected cash flows in the future; 3) non-farm uses of the land in the future may provide higher cash flows than those expected from current land use; or 4) the market views the future cash flows to be less risky than the cash flows from alternative land locations and is therefore willing to pay a higher price. When agricultural land is being transitioned out of agriculture and/or its ownership is changed, land values may increase but agricultural rental values may not increase proportionately as long as the acreage is used for agricultural purposes. The highest cash rents per acre in Michigan tended to be associated with higher projected incomes per acre (e.g., from irrigated acres producing higher valued crops and/or higher yields) but also tended to have the lowest value-to-rent ratios.

## Non-Agricultural-Use Values of Farmland

The value of farmland for development purposes are summarized in Table 5. In most cases, these values were significantly above the agricultural-use value of the land and therefore tended to exert upward pressure on surrounding farmland values. The average value of farmland being converted to residential development was $\$ 6,949$ per acre in the Southern Lower Peninsula and $\$ 2,424$ per acre in the Upper and Northern Lower Peninsula. The highest residential development values were found in the Southwest (D7) where the average value was $\$ 8,982$ per acre.

Table 5 Non-Agricultural-Use Value of Undeveloped Land in Michigan, 2013

| Region | Type of Land Use |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | Residential | Commercial/Industrial | Recreational |  |  |
|  | \$/acre |  |  |  |  |
| Michigan | 6,201 | 16,088 | 3,157 |  |  |
| Southern Lower <br> Peninsula | 6,949 | 18,081 | 3,139 |  |  |
| Upper and Northern <br> Lower Peninsula | 2,424 | 6,404 | 3,255 |  |  |
| Districts 1-4 | 2,333 | 7,263 | 1,791 |  |  |
| District 5 | 5,150 | 19,727 | 3,814 |  |  |
| District 6 | 6,885 | 17,607 | 3,218 |  |  |
| District 7 | 8,982 | 18,029 | 3,338 |  |  |
| District 8 | 5,113 | 22,010 | 3,425 |  |  |
| District 9 | 8,489 |  |  |  |  |

Note: Results were reported when a minimum of five responses were received.

The value of farmland being converted to commercial use was $\$ 18,081$ per acre in the Southern Lower Peninsula and \$6,404 per acre in the Upper and Northern Lower Peninsula. The average value for farmland that was converted to commercial use was $\$ 16,088$ per acre for the state of Michigan. However, the variance in these estimates was quite high.

The recreational development value of farmland averaged \$3,139 per acre in the Southern Lower Peninsula and $\$ 3,255$ per acre in the Upper and Northern Lower Peninsula. The highest average value for recreational development land was in the East Central (D6) where land for recreational development
averaged $\$ 3,807$ per acre. These reported price data on recreational values were also skewed by a few extremely high values attributed to the unique amenities of a particular parcel of land.

## Factors Influencing Land Values and Rents in Michigan

The survey also elicited opinions about the major factors driving land values. Respondents were provided the opportunity to indicate their perception of the importance of some agricultural-related factors that influenced farmland values and cash rents. Factors including farm expansion, government programs, interest rates, and prices of agricultural commodities were rated on a scale from one to five with one being "Not Important" and five being "Very Important." The mean ratings are presented in Table 6. For Southern Michigan, Grain Prices, Expansion by Farmers, and Low Interest Rates were the highest-ranking items at 4.7, 4.6 and 4.2, respectively. Next in order of importance were Milk Prices and Livestock Prices with rating scores of 3.7 and 3.5, respectively. Livestock prices that impact land price will vary by the predominant livestock in the reporting area. As commodity prices change cash flow also changes which affect demand for agricultural land. Expansion by farmers suggests the strategy of lowering costs of production by exploiting the concept of economies of size (i.e., costs decrease as the fixed costs of controlling capital inputs, such as machinery, are spread over more acres) or the need for more land to support a possible expansion of the management team associated with the expansion. With lower interest rates, it is easier to manage the debt often associated with land purchases.

Table 6 Rating Importance of Agricultural Factors Affecting Value of Michigan Farmland, 2013

| Regions | Expansion by <br> farmers | Government Programs |  |  |  |  |  |  |  | Prices |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Current <br> Farm Bill | Int. <br> Rates | Fruit | Grain | Livestock | Milk |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Michigan | 4.5 | 2.3 | 2.4 | 4.1 | 2.4 | 4.6 | 3.6 | 3.7 |  |  |  |  |  |  |
| Southern Lower | 4.6 | 2.2 | 2.4 | 4.2 | 2.5 | 4.7 | 3.5 | 3.7 |  |  |  |  |  |  |
| Upper \& North <br> Lower | 4.3 | 2.7 | 2.8 | 3.7 | 1.7 | 4.1 | 3.8 | 3.9 |  |  |  |  |  |  |
| District 1-4 | 4.1 | 2.8 | 2.8 | 3.4 | 2.5 | 4.0 | 3.8 | 3.9 |  |  |  |  |  |  |
| District 5 | 4.5 | 2.2 | 2.2 | 4.3 | 1.6 | 4.6 | 3.6 | 3.8 |  |  |  |  |  |  |
| District 6 | 4.9 | 1.8 | 2.0 | 4.4 | 1.6 | 4.9 | 3.7 | 4.1 |  |  |  |  |  |  |
| District 7 | 4.3 | 2.5 | 2.7 | 4.2 | 3.8 | 4.7 | 3.7 | 3.7 |  |  |  |  |  |  |
| District 8 | 4.4 | 2.3 | 2.6 | 4.1 | 2.4 | 4.7 | 3.7 | 3.9 |  |  |  |  |  |  |
| District 9 | 4.7 | 2.4 | 2.4 | 4.0 | 2.1 | 4.8 | 2.9 | 2.9 |  |  |  |  |  |  |

Note: Response scale ranges from one to five with one designating not important and five designating very important.
*CRP -- Conservation Reserve Program

For the Upper and the Northern Lower Peninsula, the two highest agricultural related factors influencing land prices were Expansion by Farmers and Grain Prices with a score of 4.3 and a 4.1, respectively.

Assessing the importance of non-agricultural factors upon land values in rural areas for land that appears destined to transition from ownership by farmers was addressed with the final set of survey questions. Many factors not related to agriculture can influence the value of agricultural land. Table 7 summarizes the non-agricultural factors influencing land values for land in rural areas that appears to be transitioning out of agriculture.

Table 7 Rating of Non-Agricultural Factors Affecting Value of Michigan Farmland, 2013

| Regions | Fishing <br> Access | Hunting <br> Access | Home <br> Sites | Interest <br> Rate | Development | Small <br> Farms | Wood <br> Lots | Water <br> Access |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Michigan | 2.4 | 3.5 | 3.0 | 3.9 | 1.7 | 2.8 | 2.9 | 3.0 |
| Southern Lower <br> Peninsula | 2.4 | 3.4 | 3.0 | 3.9 | 1.6 | 2.8 | 2.8 | 2.9 |
| Upper \&N. <br> Lower Peninsula | 2.7 | 3.7 | 3.0 | 3.7 | 1.8 | 2.8 | 3.2 | 3.3 |
| District 1-4 | 3.1 | 3.8 | 3.3 | 3.4 | 1.8 | 2.9 | 3.5 | 3.7 |
| District 5 | 2.1 | 3.6 | 2.9 | 4.1 | 1.6 | 2.8 | 2.6 | 2.6 |
| District 6 | 1.9 | 3.0 | 2.4 | 4.1 | 1.3 | 2.6 | 2.4 | 2.3 |
| District 7 | 2.6 | 3.1 | 3.4 | 3.7 | 1.8 | 2.8 | 3.2 | 3.1 |
| District 8 | 2.5 | 3.5 | 3.1 | 4.0 | 1.6 | 2.8 | 2.9 | 3.0 |
| District 9 | 2.5 | 3.8 | 3.1 | 4.1 | 1.8 | 3.1 | 3.0 | 3.0 |

Note: Response scale ranged from one (not important) to five (very important).

The most important non-agricultural factor influencing Michigan statewide land values were interest rates. For the Southern Lower Peninsula, Interest Rates ranked the highest at 3.9. The second most important item at 3.4 was Hunting Access. For the Upper and the Northern Lower Peninsula, the highest ranked non-agricultural factor influencing land values were Interest Rates and Hunting Access, scoring 3.7 and 3.7 , respectively. Interest rates impact land values, as rates decline the cost of borrowed funds for land purchases decreases. The opportunity to hunt and to capture the outdoor experience is apparently highly valued by a significant portion of the Michigan population.

Percentage change in land value from 1991-2013 are displayed in Table 8. These percentage changes are related to Southern Lower Peninsula region reported for Field Crop Tiled, Field Crop Nontiled, Sugar Beet and Irrigated cropland. There has been a general increase in all values except for 2009 following the world-wide financial crisis when all reported values were negative.

Table 8 Percentage Change in Land Value from 1991-2013 in the Southern Lower Peninsula

| Year | Land Type |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Field Crop Tiled ${ }^{1}$ | Field Crop <br> Non tiled | Sugar Beet | Irrigated |
|  | \% Change |  |  |  |
| 1991 | 5.0 | 3.0 | 9.0 | -- |
| 1992 | 2.5 | 1.6 | 3.0 | 3.4 |
| 1993 | 2.0 | 1.4 | 1.9 | 3.6 |
| 1994 | 4.6 | 4.1 | 4.8 | 5.4 |
| 1995 | 4.3 | 3.3 | 6.2 | 2.8 |
| 1996 | 8.1 | 6.8 | 8.4 | 7.3 |
| 1997 | 8.4 | 8.1 | 5.3 | 10.0 |
| 1998 | 10.2 | 10.2 | 5.9 | 12.7 |
| 1999 | 7.0 | 7.5 | 2.3 | 9.2 |
| 2000 | 8.8 | 7.8 | 2.3 | 7.1 |
| 2001 | 7.4 | 6.8 | -0.4 | 4.8 |
| 2002 | 4.2 | 3.9 | 2.3 | 6.5 |
| 2003 | 3.7 | 3.6 | 2.4 | 4.5 |
| 2004 | 8.9 | 9.3 | 7.9 | 9.8 |
| 2005 | 5.4 | 4.9 | 7.9 | 5.4 |
| 2006 | 5.7 | 6.0 | 4.9 | 5.8 |
| 2007 | 8.7 | 8.2 | 9.6 | 9.1 |
| 2008 | 8.9 | 8.8 | 9.9 | 9.5 |
| 2009 | -0.6 | -1.2 | -1.2 | -0.2 |
| 2010 | 0.2 | 0.0 | 4.4 | 1.1 |
| 2011 | 6.4 | 6.8 | 9.9 | 6.0 |
| 2012 | 7.8 | 6.8 | 9.5 | 9.6 |
| 2013 | 12.4 | 10.7 | 18.1 | 11.1 |
| Average | 6.1 | 5.6 | 5.8 | 6.6 |

${ }^{1}$ Beginning with the 1998 Survey, the question on agriculture land values and cash rents referred to
"Field-crop tiled" and "Field-crop non-tiled". Previously the similar categories were referred to as Corn-Soybean-Cropland - above average and below average.

## Conclusions

Farmland values in Michigan overall increased in 2013 over 2012 values. In fact, 21 of the last 22 years have shown growth in land values. Field Cropland Tiled values increased by 11.3\%, Sugar beet land values increased by $16.5 \%$, irrigated land values increased by $10.9 \%$ and tree fruit values increased by $10.8 \%$ for last year.

Rental rates in the Southern Lower Peninsula averaged \$164 per acre for tiled ground and \$121 per acre for non-tiled ground, an increase of $\$ 19$ for tiled and increase of $\$ 10$ for non-tiled ground over 2012. In addition, sugar beet acreage rented for $\$ 251$ per acre, an increase of $\$ 57$ per acre over 2012, while irrigated land averaged $\$ 239$ per acre, an increase of $\$ 10$ per acre from the 2012 rate.

Land values relative to cash rents were highest in Districts (D1-D4) and Central (D5). In Districts (D1-D4), the value-to-rent ratios were 38 and 40 for tiled and non-tiled land respectively, while the value-to-rent ratios for Central (D5) were 37 for tiled land and 39 for non-tiled land. The value-to-rent ratios for most of the regions in the state are closer to 29.3. The 29.3 value-to-rent ratio implies a gross current return to investment of 3.4 percent per year. A higher value to rent ratio suggests a lower annual current return to investment.

Michigan farmland values in 2013 increased and land rental rates also increased in 2013. The direction of Michigan agricultural land prices suggests a continuing upward trend. Grain production and price after 2012 drought have responded with increased supply and downward pressure on price. Economic conditions at the end of 2013 suggest the earnings for field crops should be good. Interest rates also impact land values. The "prime rate" charged by banks again held constant at 3.25 \% in 2013. With commodity prices high and good yields, resulting in high farm income, Federal Reserve keeping interest rates low (money supply high) and a weak dollar, our commodities on the world market are viewed cheap, high demand for US commodities. Add all of these combinations with revenue crop insurance and farmland price should remain good to strong.

The Michigan economy has a diversified structure with tourism and agriculture/food industries vying closely for the number one ranking and with manufacturing following closely behind. It has been
noted that land in rural areas is valued not only for its agricultural productivity but for other amenities that are valued by non-agricultural interests. Concern for year 2014 and beyond is whether the financial performance from agriculture can sustain the current land prices. In the past, non-agricultural demand has held farmland values high but this non-agricultural demand can be an effective influence only if Michigan unemployment levels decline and incomes increase.

## Appendix <br> FARM LAND VALUE QUESTIONNAIRE <br> March 2013

Report your best estimates. Complete only the sections applicable to your area.
Indicate which county or counties you are reporting on: $\qquad$

## 1. Agricultural-Use Value

| Type of Land | Current <br> average Value | Percent Change in Value <br> (Indicate + or -) | Average Cash <br> Rent |
| :--- | :--- | :--- | :--- |
|  |  | Last <br> 12 Months | Expected <br> in Next <br> 12 Months |
|  |  | \% change | \% change |$|$| \$/acre |
| :--- |
| A. Non-Irrigated Field Crop <br> 1.Tiled for drainage |
| 2.Not tiled |

2. Non Agricultural-Use Value

|  |  | Current Range in Value |
| :--- | :--- | :--- |
|  | Current <br> Average <br> Value \$/acre | High |
| \$/acre |  |  |$\quad$ Low | \$/acre |
| :--- |

*Land in agricultural use where its value is influenced by residential, commercial, recreational development pressure.

## 3. Land Rental Agreements

Land rental is often cash rent or share but it is increasingly common for agricultural producers to use a base rent plus a bonus that is either cash or a share of price or revenue. Please fill in values applicable to your area for these contract types.

|  | Rental Rates |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Base or Average Cash Rent (\$/acre) | Cash Bonus (\$/acre) | Bonus share of price above base (\%) | Bonus share of revenue above base (\%) | Crop Share (\%) | Percent of Land Rented/ Leased with this contract |
| A. Cash rent without bonus |  |  |  |  |  |  |
| B. Cash Rent with bonus |  |  |  |  |  |  |
| C. Share rent |  |  |  |  |  |  |

6. What are the major agricultural factors influencing farm land values and cash rents in your area? Indicate your assessment of the situation by circling the appropriate number on the scale below.

| Not Important |  |  | Neutral |  | Very Important |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A. Expansion by Farmers | 1 | 2 | 3 | 4 | 5 |
| B. Government Programs: <br> 1. Conservation Reserve | 1 | 2 | 3 | 4 | 5 |
| 2. Farm Bill of 2008 (DCP and MILC Programs) | 1 | 2 | 3 | 4 | 5 |
| C. Interest Rates | 1 | 2 | 3 | 4 | 5 |
| D. Product \|Prices: <br> 1. Fruit | 1 | 2 | 3 | 4 | 5 |
| 2. Grain | 1 | 2 | 3 | 4 | 5 |
| 3. Livestock | 1 | 2 | 3 | 4 | 5 |
| 4. Milk | 1 | 2 | 3 | 4 | 5 |
| E. Other: (please list) |  |  |  |  |  |
|  | 1 | 2 | 3 | 4 | 5 |
|  | 1 | 2 | 3 | 4 | 5 |

7. What are the major non-agricultural factors influencing land values in rural areas for land that appears destined to transition from ownership by farmers?

|  | Not <br> Important |  | Neutral |  | Very <br> Important |
| :--- | :--- | :--- | :--- | :--- | :--- |
| A. Fishing Access | 1 | 2 | 3 | 4 | 5 |
| B. Hunting Access | 1 | 2 | 3 | 4 | 5 |
| C. Home Building Sites | 1 | 2 | 3 | 4 | 5 |
| D. Interest Rates | 1 | 2 | 3 | 4 | 5 |
| E. Mall \& Shopping Develop. | 1 | 2 | 3 | 4 | 5 |
| F. Ranchettes (10 ac or so) | 1 | 2 | 3 | 4 | 5 |
| G. Timber and Woodlots | 1 | 2 | 3 | 4 | 5 |
| H. Water for Recreation | 1 | 2 | 3 | 4 | 5 |
| I. Other: (please list) |  |  |  |  |  |
|  | 1 | 2 | 3 | 4 | 5 |

8. Please provide other general comments you have about land values and rents in your area.
