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Minnesota Farm Real Estate Sales: 1990-2012

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Abstract

This report is a summary of the data contained on the farmland sales portion of the Minnesota Land Economics (MLE) web site (http://landeconomics.umn.edu) as of August 1, 2013. It is formally reissued each year, as new sales data become available.

The present document consists largely of graphs and tables summarizing sales over the past twenty-three years. It provides averages at the multi-county region and at the statewide levels of aggregation. Individual transaction data are available for downloading and analysis at the MLE web site.

An electronic version of the current report in fully navigable portable document format (pdf) is also available: http://purl.umn.edu/154198 .

Minnesota Farm Real Estate Sales: 1990-2012

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What's New?

We now have over 56,000 sales in the MLE database, covering the period October 1, 1989 - September 30, 2012. In all, these transactions cover over 6.2 million acres.

Minnesota farmland prices, whether near the Twin Cities or in seemingly the most "rural" of areas, have always been affected by factors other than agricultural. While more highly productive cropland will still sell for more than will nearby less productive land, all lands are also desired for other reasons: recreation, retirement, investment, development. This results in some parcels selling for far more than we might expect if we simply focused on their farm income potential.

Overview

This document consists largely of graphs and tables summarizing Minnesota farm real estate sales over the past two decades. The goal is to give you some pictures of the data without imposing too much interpretation on you. It's my job to present the numbers; it's your job to decide what they mean.

If you want to get right to work, jump to <u>The Charts</u>. Otherwise, read along to find out how the numbers that underlie the graphs and tables were derived.

This report provides averages at the multi-county region and at the statewide levels of aggregation. All the transaction data summarized here are available for downloading and analysis at Minnesota Land Economics (MLE) web site. The data in this document are consistent with the MLE database on August 1, 2013.

The MLE site is constantly changing as new data are made available, new analyses are completed, and errors are found and (hopefully) remedied. Please check back periodically to find out what's new. As always, corrections and new data mean slightly different summary statistics and charts from year to year in these summary reports. That's why I give it all to you fresh each year.

This report is also available as a <u>printable document</u>. Questions, comments, corrections, concerns should be directed to the author.

Introduction

Economists commonly look to sales data to help understand land markets. In our language, we use observations of what some properties sold for (*prices*) to form expectations—to make a prediction—about how much other properties might sell for in the future (*values*).

Why might we care? I've heard three types of reasons. First, we're a score-keeping society. We want to know "how we're doing," and we've decided to accept the average price of farmland as one indicator of the general level of prosperity in rural America. If the price of land goes up, then people in the country must be doing better. It's the rustic

counterpart of our infatuation with the Dow Jones Index—the Dow goes up and we all celebrate, because "the economy" is somehow better. Both notions are largely unsupported by either economic science or common sense, but both are deeply embedded in the public psyche.

A second reason for tracking land price average is to decide if "Land" is a good investment strategy, compared to, say, utility stocks. I capitalize the word here to dramatize the difference between a piece of land, as in "the forty acres across the road," and Land as a class of assets. The average price of a set of land sales is felt by some analysts to be a useful indicator of how well investment in Land will perform.

A third use of average price data is to forecast a potential transaction price on an individual parcel. Two types of information might help here. If you know little or nothing about how much the parcel might fetch, you might decide to use the average price of parcels in the vicinity as the starting point of negotiation. Or, if you think you know what the parcel was worth last year, then you might use new knowledge about the movement of average prices to update your valuation. Either way, you use summary data for the entire market to help you with the valuation of an individual property.

Here is not the place for me to challenge any of these rationales. Nor will I provide my own estimates of what land will sell for or whether I think average prices will rise or fall. I can tell you with great confidence what *did* happen in the state's many land markets. It's up to you to figure out what *will* happen.

The Data

Most of the data used in the graphs and tables on this site come from annual Minnesota Department of Revenue compilations of property transactions reported by county auditors. When a Minnesota property is sold, the transaction details must be recorded at the county courthouse on a form called a certificate of real estate value, or CREV. On it, the seller attests that such-and-such a property was sold to so-and-so on a certain date for a specific price. Other information about the property (its size, intended use, soil characteristics, prior year's estimated market value) is often entered on the CREV as well.

Sales prices here are analyzed on a per-acre basis; the price includes not just land but also associated improvements, including structures. (Most years, well over three-quarters of the sales are for "bare land" only.) Sales with per-acre prices above \$15,000 are excluded from the analysis. (They're not really "agricultural" sales, even though a few may be classified as such by local tax officials.) On many charts, (a few) higher priced sales are excluded for clarity.

All properties in the study were previously classified as "agricultural" for tax purposes and were not intended, according to the buyer and agreed upon by local tax officials, to be converted from agriculture. I define "agricultural properties" as all those that were assigned (by the county assessor) as classes 5, 15, and 25 for pre-2009 sales and 31, 32, and 37 for post-2009 sales. Since 2009, the state has also added new property classes that reflect "mixed" uses, principally agriculture and woodland. Many sales that formerly would have been assigned to the 5, 15, 25 classes now are assigned to classes 47, 48, and 50. I assign these sales to "agriculture" status if they contained more than 50% tillable land.

The most recent reporting year covers the period January 1 through September 30 only, because of the way the data is collected by the Department of Revenue. As a consequence, the remainder of the current year is not reported until the next sales study. So, for example, year 2012 sales that occurred in October, November, or December won't be available until the Spring 2014 study.

All these transactions can be analyzed or downloaded through the Minnesota Land Economics (MLE) web site.

Before a price enters the MLE data base, it passes through an series of filters and adjustments designed to make comparison among transactions more meaningful and more reliable. A first step is to ensure that the numbers are correct. There is always the chance that simple recording errors are made. Next, local or state officials remove any sale not deemed "arms-length," because it was sold, for example, to a member of the seller's immediate family.

After this filtering, sales prices are adjusted to make comparison among sales more appropriate. First, to expunge the

effects of inflation, sales prices are deflated by an officially reported rate to January of the reported year. This "adjustment for time," which has been relatively minor in years (like the past decade) where inflation has been low, is done by the Department of Revenue.

A second price adjustment, "for terms," is also made by the Department of Revenue where appropriate. Not all farm real estate sales are for the full title by warranty deed. Some are made through a contract for deed, an arrangement that allows the buyer to pay a certain amount now and other amounts at stated intervals. Until the final payment is made, the property title remains in the possession of the seller—even though the land has been "sold." Because the agreed-upon payment schedule is entered on the CREV, the Department can calculate a present value of the initial and subsequent payments. This becomes the official recorded sales price for the transaction.

Adjustments don't end with a time- and terms-adjusted sales price. In most cases, users of the data are interested in per-acre prices, not per-parcel prices. That means some chosen total price must be divided by some total acreage. But which price? Which acres? Should we use the total price or should we first subtract out the value of buildings, personal property, ancillary property, or machinery to get closer to the "true" land price? Should we use all the land in the property, or just cropland?

In this report, I mostly use the median price—although I also report other averages (see below)—the halfway point in the distribution of time- and terms-adjusted total sales prices, minus the value of personal property, divided by the entire acreage of the parcel. Because I do not attempt to strip out the value of buildings and other "improvements"—such building data are unreliable—it's best to speak of the numbers here as referring to markets in "farm real estate", not in "farmland" per se.

The graphs and tables included on this site (see <u>The Charts</u>) array the sales at the region or statewide levels only. The region boundaries used here are USDA agricultural statistics reporting districts. Here's a <u>map of the district boundaries</u>. The particular county grouping has problems, as would any such combination. For example, the Red River Valley, with its two worlds-apart farm real estate markets, is lumped into a single reporting area. And the Twin Cities metropolitan area is split among three regions. You can create your own aggregations and do your own analysis by going to <u>Minnesota Land Economics</u>. If you need a clean copy of any of the charts for publication, please <u>contact the author</u>.

How I calculate "average" prices

If there is any single story to be stressed from this analysis it is that use of a single number as "the" price of land for any area—county, region, state—can be misleading. There is a huge range in farm real estate prices throughout Minnesota. Reliance upon the movement of any single number like the mean may mislead more than it informs. All that we actually observe are the recorded prices of hundreds of individual parcels, of varying characteristics, scattered throughout the state.

For some asset markets, year to year price movements can be measured from repeated readings of the same property or the same asset. But in land sales studies, each observed transaction is for a different piece of land: we rarely see the same parcel sell more than once in a number of years (even several decades). We opportunistically use observed sales as what statisticians sometimes call a "sample of convenience," a sample from which to infer the average price of *all* land, sold and unsold combined, for that year.

If observed sales happen to be of properties that disproportionately represent one end of the (unknown) range of prices for all parcels, then the sample's average may mislead us. The wider the actual range and the fewer the number of observed sales, the more likely it is that such a disproportionate and hence misleading sample may be "drawn."

Do the observed sales analyzed here provide sufficient information for us to describe the distribution of—and to make predictions about—the value of all farmland parcels? There are two potential problems: not very many sales and not very representative sales.

For any level of aggregation, three different averages, single numbers that are intended to capture the flavor of the whole distribution, can be calculated:

- (1) The *transaction mean* is obtained by dividing the sum of all per-acre sales prices by the number of properties sold. This might be thought of as "the average parcel price."
- (2) The *median*, the price at which half of the transactions are higher and half are lower, can be thought of as the "middle price."
- (3) The *size-adjusted mean* (which I called the "area mean" in earlier publications) is the quotient of total dollar sales in an area divided by the total acreage sold in the same area. This final average can be thought of as the price of a "typical" acre.

We'd like a way to calculate an average from observed sales that best reflects the real but unobserved prices of all the other land in the area. At the region or state level, the median is a pretty good average: there are enough observations to leave us feeling comfortable that annual movements in this single number is a reasonable indicator of what's happening in that area. But at a county level, say, the median might be based on too few observations. We'd like to base our calculations on samples for which the range of (unknown) prices is small enough and for which the number of observations is large enough that we can feel comfortable that our observations are representative and that calculated statistics like the mean are useful.

For the <u>price summary tables</u>, I first assigned a weight to each county based upon its relative proportion (the average of 1999-2001 proportions) of the state's total farmland. Then I multiplied each county's weight by its average price so that sales from counties where there is more farmland are given more emphasis in the creation of a region or statewide average price. The size- and location-adjusted mean price for a region or the state is simply the sum of these weighted county prices. This procedure reduces the chance that in any given year a dramatic increase in the number of sales from an area with, for example, relatively low land values, will unrealistically pull down the region average for that year.

For comparison, I provide three kinds of average prices in the price summary tables. But there is greater knowledge to be gained by examining the statewide <u>price distributions</u> and the region-level <u>box plots</u> that I've prepared for you. For these, I show only the median prices, thus ensuring consistency in presentation. The importance of location is illustrated by the not-surprising finding that average land prices in different parts of the state <u>move differently</u> over time. I've also tested the argument that more productive land sells at a higher price, through graphs that <u>compare selling price to agricultural productivity</u>. (Productivity is measure by the CER, in older sales, and by the new CPI in newer sales. Details are avaible in the Soils Data section of <u>Minnesota Land Economics</u>.

For all this, and much much more, check out <u>The Charts</u>.

Land market dynamics

When owners are ready to sell farmland (or when buyers are ready to make an offer), how do they decide where to start the bidding? Both often start with the property's annual tax statement, which contains the assessor's estimate of what it is worth. Under Minnesota law, this estimate is for the full market value, the price the assessor expects the property to fetch if it went onto the market. How did the assessor come up with that estimate? By combining knowledge of local economic conditions with records of previous neighboring land sales, often obtained from University studies such as this one.

But buyers and sellers usually don't stop here. They frequently hire a professional appraiser to evaluate the property in much greater detail than can the assessor, who must assign a value to each of several thousand properties each year. Appraisers combine an examination of local market conditions and the characteristics of the property itself into a professional judgment of what the property might sell for. Many times appraisers will do an income analysis as well—something that assessors are not permitted to do. This method values the property using its long-term earning potential.

So assessors, appraisers, analysts, buyers, and sellers all rely, at least in part, upon previous sales in the vicinity to decide on the value, the anticipated selling price, of a particular property. But these (few) nearby sales were themselves made at prices strongly influenced by the judgments of these same (few) assessors, appraisers, and analysts,

based on the evidence of previous sales prices that they themselves were influential in determining in the first place.

The local farm real estate market is small, and it is circular. The market we think we observe from a distance is really one that we "make" ourselves, not a collection of independent decisions made by anonymous buyers and sellers.

The average price for a region that I report is just a compilation of the sales that originated in scores of small "markets." Anecdotal evidence suggests that almost all bidders for farmland in Minnesota are neighbors. Very rarely does a new farmer enter the community by buying a whole farm, and even more rarely do outside investors buy into a community for farming purposes. As a result, a typical farmland property up for sale probably sees at most two or three legitimate offers. This is not a market in the the usual sense: few of the usual features of markets beloved of economists can be expected to hold. (This generality may be becoming a little tenuous.

Compilations such as those presented here can be used to infer economic conditions common to all local markets, but we should not fool ourselves into thinking that land is a commodity, that it has a single price, or that there are very many participants and local land markets.

And in conclusion...

I hope you're not completely sated with the limited analysis I've put up on this site. I encourage you to try your own hand at land market analysis. If you need an unadjusted transaction mean or area mean, or if you need some other level of aggregation such as a county, or if you'd like to try some fancier market analysis, go directly to Minnesota Land Economics and roll your own.

The Figures

- a. USDA estimates of statewide farm real estate value, 1950-present
- b. Three "independent" estimates of statewide farm real estate value, 1990-present
- c. Farm real estate sales summaries, 1990-present, by region and statewide:

State North West North Central North East West Central Central East Central South West South Central South East

d. Histograms of statewide farm real estate sales prices, by year:

1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 selected year comparison

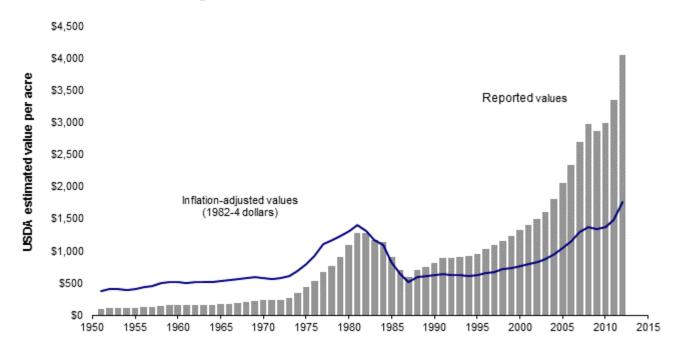
- e. Box plots of farm real estate sales prices, 1990-present, by region:
- State North West West Central Central East Central South West South Central South East
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- g. Histograms of statewide farm real estate sales parcel sizes, by year: 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012
- h. Relationship of statewide farm real estate sales prices to land productivity, by year:
- <u>1990</u> <u>1991</u> <u>1992</u> <u>1993</u> <u>1994</u> <u>1995</u> <u>1996</u> <u>1997</u> <u>1998</u> <u>1999</u> <u>2000</u> <u>2001</u> <u>2002</u> <u>2003</u> <u>2004</u> <u>2005</u> <u>2006</u> <u>2007</u> <u>2008</u> <u>2009</u> <u>2010</u> <u>2011</u> <u>2012</u>
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- j. Minnesota farmland sales through September: 1990 to present
- k. Minnesota farmland sales contribution by region: 1990 to present

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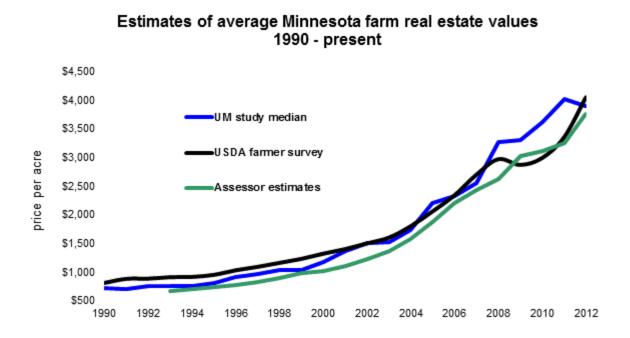
Minnesota farmland values

This chart is based on a series maintained by the Minnesota Agricultural Statistics Service office. Each summer the USDA reports an estimated average price of farmland plus buildings for each state, as of January 1 of that year. The data come from a sample of land parcels throughout the country, conducted earlier in the year. Owners of land within each sampled parcel are asked what they think their land is worth (its "expected sales price", or "value," in our terms). Their responses are aggregated to give a statistically valid average for the entire state. The USDA approach can ensure that the state average is a valid summary of the individual owners' valuations, but it cannot, of course, ensure that individual owners really know what their land is worth in the first place.

Average USDA estimated Minnesota farm real estate values



Here are estimates of average farm real estate value drawn from three different sources of data. One line shows price according to an annual USDA survey of property owners; another is the average (mean) of local property tax assessors' assignment of property values for tax purposes; the third is the median sales price from the UM study. Preliminary EMVs are available at Minnesota Land Economics in July of the noted year, USDA state-level estimates are available in August of the reported year, and the University's final sales report is published in the late Spring of the next year.



Original data from Department of Revenue compilations of Certificates of Real Estate Value, further adjusted by that agency and by the author, as described on the sales study site linked at the top.

State North West North Central North East West Central Central East Central South West South Central South East

State

| | | | Pe | er-Acre Sales Price | |
|------|-----------------|------------|-----------------|-----------------------------|--------|
| | Number of Sales | Acres Sold | Unweighted Mean | Size/Location Weighted Mean | Median |
| 1990 | 3,158 | 377,057 | 777 | 706 | 711 |
| 1991 | 2,635 | 312,855 | 788 | 756 | 693 |
| 1992 | 2,763 | 309,168 | 859 | 797 | 755 |
| 1993 | 2,688 | 293,450 | 905 | 837 | 750 |
| 1994 | 2,834 | 317,186 | 916 | 869 | 762 |
| 1995 | 2,560 | 267,904 | 951 | 886 | 804 |
| 1996 | 2,818 | 305,336 | 1,091 | 971 | 917 |
| 1997 | 2,877 | 328,413 | 1,134 | 1,068 | 966 |
| 1998 | 2,613 | 287,878 | 1,245 | 1,151 | 1,026 |
| 1999 | 2,327 | 252,163 | 1,279 | 1,233 | 1,036 |
| 2000 | 2,341 | 264,576 | 1,417 | 1,280 | 1,181 |
| 2001 | 2,283 | 255,302 | 1,609 | 1,475 | 1,372 |
| 2002 | 2,321 | 256,276 | 1,745 | 1,624 | 1,500 |
| 2003 | 2,391 | 261,490 | 1,917 | 1,803 | 1,521 |
| 2004 | 2,810 | 314,121 | 2,095 | 2,019 | 1,739 |
| 2005 | 2,677 | 279,938 | 2,584 | 2,442 | 2,195 |
| 2006 | 2,451 | 264,056 | 2,560 | 2,583 | 2,325 |
| 2007 | 2,429 | 272,216 | 2,723 | 2,710 | 2,550 |
| 2008 | 2,577 | 307,462 | 3,284 | 3,105 | 3,265 |
| 2009 | 1,502 | 166,075 | 3,325 | 3,067 | 3,300 |
| 2010 | 1,882 | 220,405 | 3,563 | 3,323 | 3,620 |
| 2011 | 1,901 | 218,726 | 4,123 | 3,879 | 4,016 |
| 2012 | 1,372 | 151,097 | 4,156 | 4,114 | 3,900 |
| | 56,210 | 6,283,150 | | | |

Original data from Department of Revenue compilations of Certificates of Real Estate Value, further adjusted by that agency and by the author, as described on the sales study site linked at the top. Data for the most recent year are for the first nine months only.

<u>State North West North Central North East West Central Central East Central South West South Central South East</u>

North West

| CSt | Per-Acre Sales Price | | | | |
|------|----------------------|------------|-----------------|-----------------------------|--------|
| | Number of Sales | Acres Sold | Unweighted Mean | Size/Location Weighted Mean | Median |
| 1990 | 358 | 54,878 | 471 | 465 | 383 |
| 1991 | 357 | 52,716 | 448 | 427 | 350 |
| 1992 | 358 | 51,108 | 517 | 498 | 428 |
| 1993 | 333 | 44,112 | 568 | 488 | 435 |
| 1994 | 343 | 50,368 | 536 | 482 | 405 |
| 1995 | 286 | 38,593 | 527 | 500 | 374 |
| 1996 | 332 | 51,312 | 551 | 491 | 391 |
| 1997 | 353 | 52,315 | 551 | 496 | 438 |
| 1998 | 327 | 51,442 | 548 | 488 | 405 |
| 1999 | 294 | 42,627 | 594 | 542 | 437 |
| 2000 | 293 | 49,398 | 622 | 519 | 475 |
| 2001 | 315 | 53,267 | 647 | 559 | 444 |
| 2002 | 342 | 56,492 | 647 | 605 | 554 |
| 2003 | 406 | 69,240 | 656 | 636 | 553 |
| 2004 | 537 | 89,110 | 822 | 752 | 682 |
| 2005 | 455 | 69,906 | 988 | 917 | 861 |
| 2006 | 448 | 64,105 | 1,100 | 976 | 940 |
| 2007 | 465 | 69,769 | 1,159 | 1,047 | 954 |
| 2008 | 465 | 78,995 | 1,352 | 1,296 | 1,109 |
| 2009 | 285 | 45,183 | 1,467 | 1,429 | 1,250 |
| 2010 | 382 | 62,371 | 1,506 | 1,485 | 1,208 |
| 2011 | 374 | 66,731 | 1,542 | 1,696 | 1,208 |
| 2012 | 284 | 45,149 | 1,850 | 1,977 | 1,355 |
| | 8,392 | 1,309,187 | | | |

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<u>State North West North Central North East West Central Central East Central South West South Central South East</u>

North Central

| | Per-Acre Sales Price | | | | |
|------|----------------------|------------|-----------------|-----------------------------|--------|
| | Number of Sales | Acres Sold | Unweighted Mean | Size/Location Weighted Mean | Median |
| 1990 | 133 | 18,073 | 279 | 225 | 196 |
| 1991 | 159 | 19,707 | 327 | 257 | 208 |
| 1992 | 121 | 15,227 | 342 | 294 | 220 |
| 1993 | 169 | 21,826 | 364 | 292 | 243 |
| 1994 | 169 | 21,005 | 368 | 307 | 277 |
| 1995 | 124 | 16,298 | 396 | 314 | 269 |
| 1996 | 103 | 12,648 | 476 | 414 | 331 |
| 1997 | 92 | 12,462 | 459 | 408 | 340 |
| 1998 | 72 | 10,253 | 546 | 415 | 424 |
| 1999 | 106 | 13,276 | 649 | 523 | 463 |
| 2000 | 125 | 15,332 | 811 | 698 | 686 |
| 2001 | 83 | 11,771 | 736 | 632 | 588 |
| 2002 | 73 | 8,477 | 921 | 777 | 782 |
| 2003 | 91 | 8,990 | 1,147 | 1,016 | 955 |
| 2004 | 135 | 11,654 | 1,274 | 1,162 | 1,080 |
| 2005 | 141 | 13,527 | 1,748 | 1,424 | 1,492 |
| 2006 | 124 | 12,488 | 1,761 | 1,466 | 1,440 |
| 2007 | 83 | 9,769 | 1,601 | 1,640 | 1,337 |
| 2008 | 60 | 6,234 | 1,819 | 1,502 | 1,523 |
| 2009 | 16 | 1,996 | 2,193 | 1,484 | 2,291 |
| 2010 | 27 | 2,830 | 1,397 | 1,355 | 1,225 |
| 2011 | 28 | 2,455 | 1,653 | 1,259 | 1,202 |
| 2012 | 30 | 4,653 | 1,615 | 1,316 | 1,009 |
| | 2,264 | 270,951 | | | |

Original data from Department of Revenue compilations of Certificates of Real Estate Value, further adjusted by that agency and by the author, as described on the sales study site linked at the top. Data for the most recent year are for the first nine months only.

<u>State North West North Central North East West Central Central East Central South West South Central South East</u>

North East

| Per-Acre Sales Price | | | | |
|----------------------|--|---|--|--|
| Number of Sales | Acres Sold | Unweighted Mean | Size/Location Weighted Mean | Median |
| 10 | 1,218 | 442 | 303 | 297 |
| 15 | 1,616 | 319 | 272 | 193 |
| 19 | 1,731 | 319 | 289 | 235 |
| 17 | 1,451 | 279 | 278 | 250 |
| 12 | 1,408 | 610 | 370 | 324 |
| 7 | 770 | 344 | 272 | 222 |
| 17 | 1,686 | 462 | 465 | 394 |
| 12 | 1,171 | 741 | 721 | 563 |
| 23 | 2,191 | 784 | 567 | 567 |
| 23 | 2,038 | 587 | 545 | 422 |
| 14 | 1,393 | 652 | 617 | 516 |
| 11 | 796 | 1,349 | 1,120 | 1,141 |
| 14 | 992 | 1,073 | 947 | 801 |
| 14 | 822 | 1,140 | 945 | 654 |
| 22 | 1,750 | 1,111 | 961 | 905 |
| 27 | 2,258 | 1,469 | 1,228 | 994 |
| 24 | 1,948 | 2,019 | 1,887 | 1,419 |
| 17 | 1,166 | 1,468 | 1,373 | 1,160 |
| 8 | 454 | 1,881 | 1,789 | 1,403 |
| 3 | 262 | 2,321 | 1,161 | 2,125 |
| 3 | 160 | 1,168 | 1,327 | 850 |
| 1 | 74 | 965 | 940 | 965 |
| 3 | 189 | 2,158 | 1,697 | 1,024 |
| 316 | 27,544 | | | |
| | 10 15 19 17 12 7 17 12 23 23 14 11 14 14 22 27 24 17 8 3 3 | 10 1,218 15 1,616 19 1,731 17 1,451 12 1,408 7 770 17 1,686 12 1,171 23 2,191 23 2,038 14 1,393 11 796 14 992 14 822 22 1,750 27 2,258 24 1,948 17 1,166 8 454 3 262 3 160 1 74 3 189 | Number of Sales Acres Sold Unweighted Mean 10 1,218 442 15 1,616 319 19 1,731 319 17 1,451 279 12 1,408 610 7 770 344 17 1,686 462 12 1,171 741 23 2,191 784 23 2,038 587 14 1,393 652 11 796 1,349 14 992 1,073 14 822 1,140 22 1,750 1,111 27 2,258 1,469 24 1,948 2,019 17 1,166 1,468 8 454 1,881 3 262 2,321 3 160 1,168 1 74 965 3 189 2,158 | Number of Sales Acres Sold Unweighted Mean Size/Location Weighted Mean 10 1,218 442 303 15 1,616 319 272 19 1,731 319 289 17 1,451 279 278 12 1,408 610 370 7 770 344 272 17 1,686 462 465 12 1,171 741 721 23 2,191 784 567 23 2,038 587 545 14 1,393 652 617 11 796 1,349 1,120 14 822 1,140 945 22 1,750 1,111 961 27 2,258 1,469 1,228 24 1,948 2,019 1,887 17 1,166 1,468 1,373 8 454 1,881 1,789 |

Original data from Department of Revenue compilations of Certificates of Real Estate Value, further adjusted by that agency and by the author, as described on the sales study site linked at the top. Data for the most recent year are for the first nine months only.

State North West North Central North East West Central Central East Central South West South Central South East

West Central

| ziitiai | Per-Acre Sales Price | | | | |
|---------|----------------------|------------|-----------------|-----------------------------|--------|
| | Number of Sales | Acres Sold | Unweighted Mean | Size/Location Weighted Mean | Median |
| 1990 | 405 | 54,956 | 590 | 577 | 546 |
| 1991 | 373 | 54,233 | 609 | 616 | 588 |
| 1992 | 408 | 53,662 | 664 | 666 | 608 |
| 1993 | 327 | 43,029 | 648 | 663 | 594 |
| 1994 | 330 | 43,654 | 721 | 733 | 640 |
| 1995 | 297 | 37,409 | 677 | 714 | 622 |
| 1996 | 379 | 46,288 | 784 | 767 | 744 |
| 1997 | 455 | 57,502 | 846 | 839 | 728 |
| 1998 | 440 | 52,094 | 852 | 876 | 800 |
| 1999 | 374 | 44,126 | 973 | 975 | 886 |
| 2000 | 376 | 47,111 | 1,063 | 985 | 939 |
| 2001 | 356 | 44,741 | 1,119 | 1,035 | 1,019 |
| 2002 | 328 | 41,092 | 1,181 | 1,124 | 1,073 |
| 2003 | 383 | 42,363 | 1,429 | 1,301 | 1,242 |
| 2004 | 450 | 51,629 | 1,602 | 1,512 | 1,463 |
| 2005 | 398 | 42,306 | 1,980 | 1,916 | 1,830 |
| 2006 | 418 | 48,374 | 2,112 | 1,995 | 1,982 |
| 2007 | 400 | 47,958 | 2,394 | 2,269 | 2,172 |
| 2008 | 421 | 57,489 | 2,733 | 2,677 | 2,716 |
| 2009 | 245 | 28,387 | 2,734 | 2,630 | 2,822 |
| 2010 | 333 | 42,916 | 3,177 | 3,033 | 3,100 |
| 2011 | 315 | 37,367 | 3,452 | 3,583 | 3,503 |
| 2012 | 240 | 27,331 | 3,551 | 3,683 | 3,390 |
| | 8,451 | 1,046,017 | | | |
| | | | | | |

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<u>State North West North Central North East West Central Central East Central South West South Central South East</u>

Central

| | | | Pe | er-Acre Sales Price | |
|------|-----------------|------------|-----------------|--------------------------------|--------|
| | Number of Sales | Acres Sold | Unweighted Mean | Size/Location Weighted Mean | Median |
| 1990 | 703 | 71,209 | 842 | 794 | 771 |
| 1991 | 478 | 50,147 | 888 | 851 | 787 |
| 1992 | 571 | 55,488 | 907 | 870 | 788 |
| 1993 | 605 | 55,658 | 1,043 | 984 | 800 |
| 1994 | 613 | 59,048 | 971 | 967 | 750 |
| 1995 | 572 | 50,054 | 1,023 | 1,067 | 820 |
| 1996 | 623 | 59,702 | 1,092 | 1,114 | 861 |
| 1997 | 585 | 59,608 | 1,216 | 1,381 | 948 |
| 1998 | 537 | 51,594 | 1,272 | 1,357 | 989 |
| 1999 | 516 | 49,289 | 1,365 | 1,586 | 1,000 |
| 2000 | 510 | 50,152 | 1,707 | 1,686 | 1,314 |
| 2001 | 517 | 43,651 | 2,020 | 1,919 | 1,488 |
| 2002 | 531 | 45,960 | 2,061 | 2,327 | 1,690 |
| 2003 | 550 | 46,577 | 2,474 | 2,508 | 1,780 |
| 2004 | 595 | 54,477 | 2,640 | 2,802 | 2,085 |
| 2005 | 555 | 46,627 | 3,394 | 3,516 | 2,736 |
| 2006 | 470 | 39,359 | 3,327 | 3,789 | 2,854 |
| 2007 | 451 | 38,482 | 3,313 | 3,529 | 2,887 |
| 2008 | 480 | 45,717 | 3,766 | 3,854 | 3,799 |
| 2009 | 272 | 23,584 | 3,869 | 3,783 | 3,863 |
| 2010 | 328 | 28,841 | 4,041 | 3,964 | 4,161 |
| 2011 | 388 | 33,332 | 4,407 | 4,334 | 4,269 |
| 2012 | 272 | 23,194 | 4,178 | 4,391 | 3,767 |
| | 11,722 | 1,081,750 | | | |

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<u>State North West North Central North East West Central Central East Central South West South Central South East</u>

East Central

| ппа | Per-Acre Sales Price | | | | |
|------|----------------------|------------|-----------------|--------------------------------|--------|
| | Number of Sales | Acres Sold | Unweighted Mean | Size/Location Weighted Mean | Median |
| 1990 | 300 | 28,493 | 581 | 520 | 409 |
| 1991 | 291 | 24,886 | 603 | 668 | 400 |
| 1992 | 333 | 28,457 | 753 | 697 | 438 |
| 1993 | 392 | 33,467 | 803 | 704 | 496 |
| 1994 | 459 | 39,813 | 797 | 820 | 500 |
| 1995 | 409 | 33,721 | 884 | 816 | 594 |
| 1996 | 404 | 33,323 | 1,316 | 1,253 | 765 |
| 1997 | 339 | 31,612 | 1,199 | 1,194 | 744 |
| 1998 | 296 | 22,457 | 1,400 | 1,553 | 924 |
| 1999 | 281 | 20,216 | 1,578 | 1,698 | 1,000 |
| 2000 | 213 | 14,784 | 1,767 | 1,865 | 1,178 |
| 2001 | 196 | 14,025 | 2,122 | 2,536 | 1,542 |
| 2002 | 166 | 11,288 | 2,976 | 2,856 | 2,124 |
| 2003 | 216 | 14,510 | 2,959 | 3,196 | 2,031 |
| 2004 | 212 | 14,338 | 2,916 | 2,522 | 2,161 |
| 2005 | 259 | 16,095 | 3,602 | 3,610 | 2,560 |
| 2006 | 171 | 11,159 | 3,363 | 3,696 | 2,424 |
| 2007 | 121 | 8,769 | 3,656 | 3,686 | 2,583 |
| 2008 | 106 | 7,920 | 3,372 | 3,386 | 2,797 |
| 2009 | 44 | 3,066 | 3,295 | 2,681 | 2,454 |
| 2010 | 51 | 3,119 | 3,604 | 2,938 | 2,750 |
| 2011 | 73 | 4,880 | 2,667 | 2,086 | 1,957 |
| 2012 | 52 | 3,448 | 2,993 | 2,806 | 2,515 |
| | 5,384 | 423,846 | | | |

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<u>State North West North Central North East West Central Central East Central South West South Central South East</u>

South West

| | | | Р | er-Acre Sales Price | |
|------|-----------------|------------|-----------------|-----------------------------|--------|
| | Number of Sales | Acres Sold | Unweighted Mean | Size/Location Weighted Mean | Median |
| 1990 | 408 | 50,724 | 942 | 922 | 972 |
| 1991 | 341 | 39,986 | 1,052 | 1,003 | 1,050 |
| 1992 | 271 | 31,962 | 1,114 | 1,073 | 1,106 |
| 1993 | 252 | 29,072 | 1,180 | 1,085 | 1,150 |
| 1994 | 274 | 36,494 | 1,106 | 1,086 | 1,135 |
| 1995 | 238 | 30,760 | 1,118 | 1,122 | 1,116 |
| 1996 | 332 | 38,969 | 1,176 | 1,108 | 1,177 |
| 1997 | 366 | 47,481 | 1,230 | 1,181 | 1,276 |
| 1998 | 296 | 36,931 | 1,373 | 1,344 | 1,354 |
| 1999 | 236 | 32,239 | 1,319 | 1,276 | 1,334 |
| 2000 | 285 | 34,192 | 1,424 | 1,358 | 1,438 |
| 2001 | 281 | 32,202 | 1,511 | 1,501 | 1,558 |
| 2002 | 298 | 37,400 | 1,577 | 1,585 | 1,608 |
| 2003 | 250 | 30,446 | 1,707 | 1,703 | 1,733 |
| 2004 | 295 | 35,355 | 2,010 | 2,003 | 2,049 |
| 2005 | 294 | 35,915 | 2,326 | 2,356 | 2,371 |
| 2006 | 303 | 36,208 | 2,526 | 2,515 | 2,585 |
| 2007 | 331 | 39,180 | 3,011 | 2,966 | 2,972 |
| 2008 | 376 | 46,077 | 3,929 | 3,864 | 3,982 |
| 2009 | 226 | 25,898 | 3,846 | 3,881 | 4,000 |
| 2010 | 266 | 34,315 | 4,514 | 4,402 | 4,620 |
| 2011 | 204 | 24,116 | 6,088 | 5,963 | 6,077 |
| 2012 | 146 | 17,392 | 6,162 | 6,107 | 6,602 |
| | 6,569 | 803,315 | | | |

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State North West North Central North East West Central Central East Central South West South Central South East

South Central

| entrai | | | Р | er-Acre Sales Price | |
|--------|-----------------|------------|-----------------|-----------------------------|--------|
| | Number of Sales | Acres Sold | Unweighted Mean | Size/Location Weighted Mean | Median |
| 1990 | 412 | 41,337 | 1,174 | 1,148 | 1,157 |
| 1991 | 306 | 30,448 | 1,242 | 1,238 | 1,255 |
| 1992 | 347 | 33,951 | 1,292 | 1,228 | 1,286 |
| 1993 | 288 | 26,554 | 1,399 | 1,339 | 1,400 |
| 1994 | 329 | 31,959 | 1,419 | 1,377 | 1,389 |
| 1995 | 314 | 27,643 | 1,417 | 1,348 | 1,364 |
| 1996 | 361 | 32,081 | 1,578 | 1,558 | 1,563 |
| 1997 | 391 | 36,950 | 1,652 | 1,667 | 1,667 |
| 1998 | 334 | 29,929 | 1,961 | 1,848 | 1,865 |
| 1999 | 268 | 25,646 | 1,944 | 1,872 | 1,847 |
| 2000 | 275 | 25,244 | 1,891 | 1,807 | 1,828 |
| 2001 | 301 | 30,925 | 2,103 | 2,069 | 2,047 |
| 2002 | 331 | 29,634 | 2,181 | 2,185 | 2,049 |
| 2003 | 253 | 26,362 | 2,419 | 2,370 | 2,213 |
| 2004 | 316 | 32,207 | 2,795 | 2,905 | 2,592 |
| 2005 | 312 | 28,527 | 3,386 | 3,196 | 3,050 |
| 2006 | 294 | 28,525 | 3,262 | 3,343 | 3,096 |
| 2007 | 340 | 35,010 | 3,448 | 3,577 | 3,431 |
| 2008 | 443 | 41,293 | 4,401 | 4,412 | 4,460 |
| 2009 | 254 | 23,982 | 4,311 | 4,310 | 4,369 |
| 2010 | 294 | 25,963 | 4,827 | 4,833 | 4,877 |
| 2011 | 302 | 27,790 | 5,967 | 6,012 | 5,929 |
| 2012 | 211 | 18,085 | 6,220 | 6,480 | 6,266 |
| | 7,276 | 690,045 | | | |
| | | | | | |

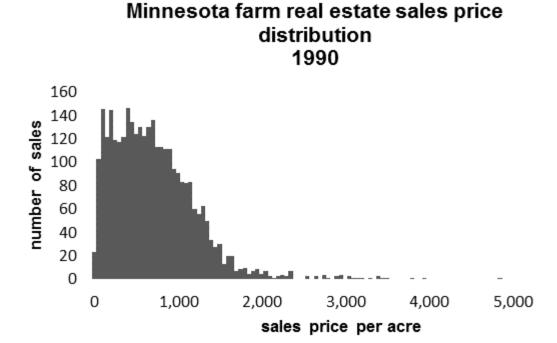
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State North West North Central North East West Central Central East Central South West South Central South East

South East

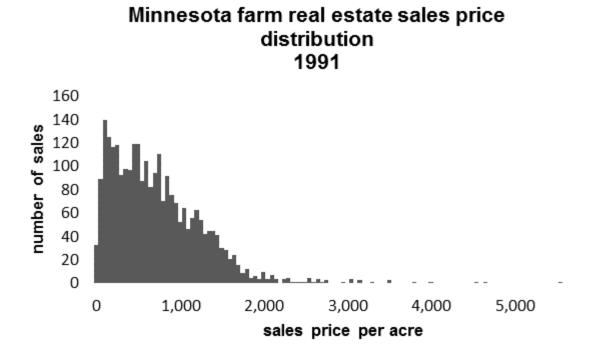
| ast | | | P | er-Acre Sales Price | |
|------|-----------------|------------|-----------------|--------------------------------|--------|
| | Number of Sales | Acres Sold | Unweighted Mean | Size/Location Weighted Mean | Median |
| 1990 | 429 | 56,169 | 863 | 805 | 806 |
| 1991 | 315 | 39,116 | 933 | 899 | 851 |
| 1992 | 335 | 37,582 | 1,047 | 942 | 960 |
| 1993 | 305 | 38,281 | 1,047 | 1,016 | 943 |
| 1994 | 305 | 33,437 | 1,223 | 1,120 | 1,026 |
| 1995 | 313 | 32,656 | 1,195 | 1,111 | 1,023 |
| 1996 | 267 | 29,327 | 1,372 | 1,240 | 1,199 |
| 1997 | 284 | 29,312 | 1,473 | 1,413 | 1,272 |
| 1998 | 288 | 30,987 | 1,680 | 1,601 | 1,398 |
| 1999 | 229 | 22,706 | 1,638 | 1,663 | 1,467 |
| 2000 | 250 | 26,970 | 1,806 | 1,798 | 1,629 |
| 2001 | 223 | 23,924 | 2,137 | 2,236 | 1,786 |
| 2002 | 238 | 24,941 | 2,430 | 2,293 | 2,000 |
| 2003 | 228 | 22,180 | 2,674 | 2,714 | 2,194 |
| 2004 | 248 | 23,601 | 3,475 | 3,121 | 2,702 |
| 2005 | 236 | 24,777 | 3,549 | 3,510 | 2,948 |
| 2006 | 199 | 21,890 | 3,861 | 3,712 | 2,958 |
| 2007 | 221 | 22,113 | 3,867 | 3,941 | 3,567 |
| 2008 | 218 | 23,283 | 4,435 | 4,250 | 4,000 |
| 2009 | 157 | 13,717 | 4,478 | 4,387 | 4,100 |
| 2010 | 198 | 19,889 | 4,559 | 4,448 | 4,296 |
| 2011 | 216 | 21,981 | 5,451 | 5,274 | 5,386 |
| 2012 | 134 | 11,656 | 5,715 | 5,507 | 5,591 |
| | 5,836 | 630,495 | | | |

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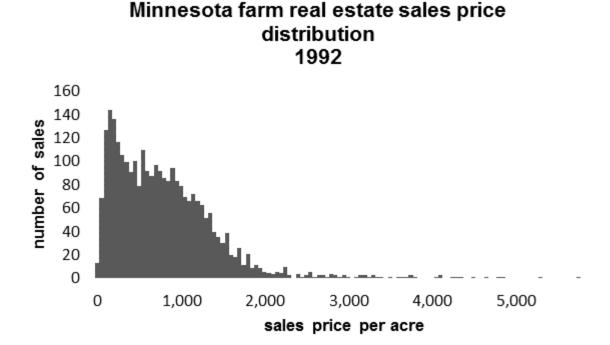
These graphs show the distribution of statewide sales prices over the years. Each vertical bar shwos the number of transactions in that price range. The higher the bar, the more sales were observed in that range. A few over-\$6,000 sales were dropped for consistency.

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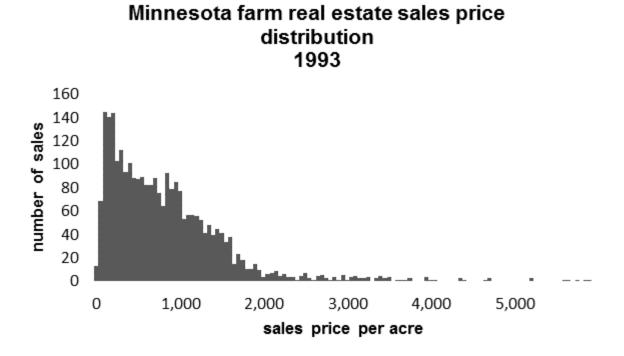
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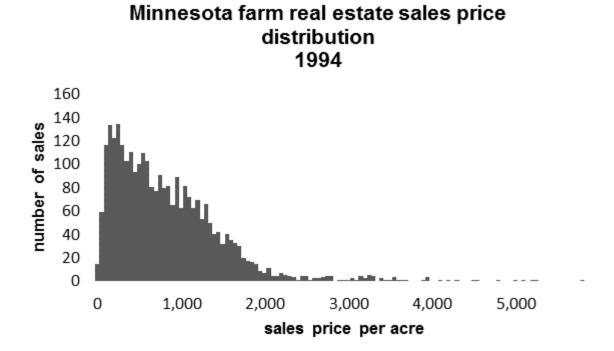
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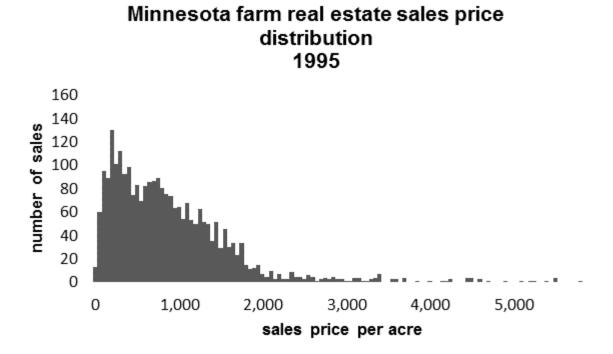
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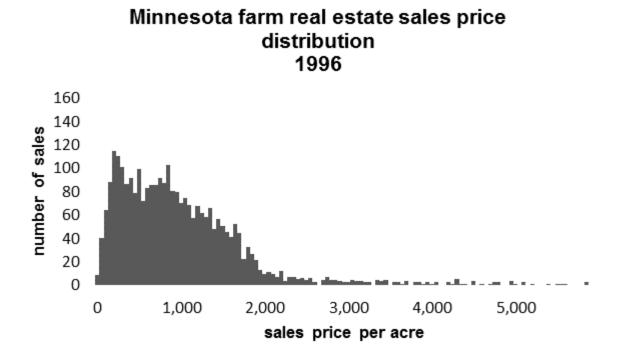
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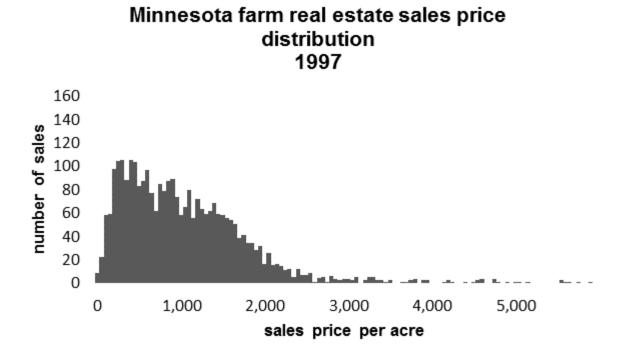
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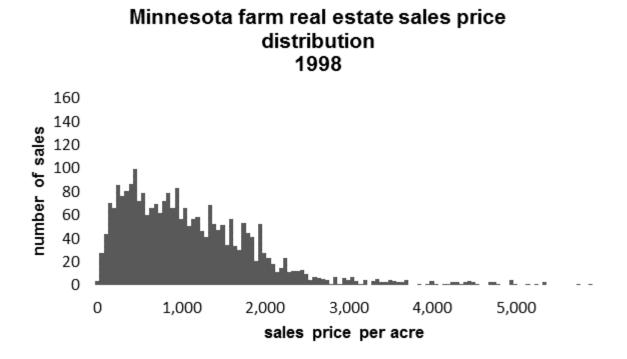
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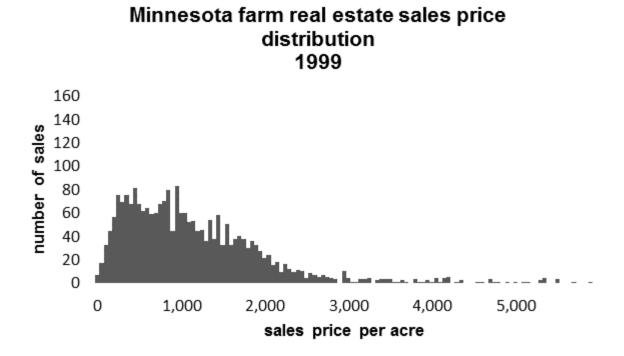
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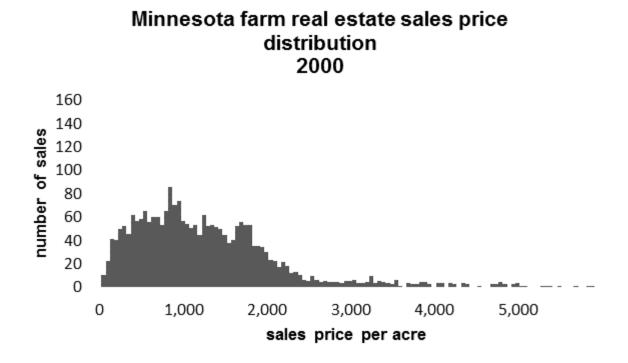
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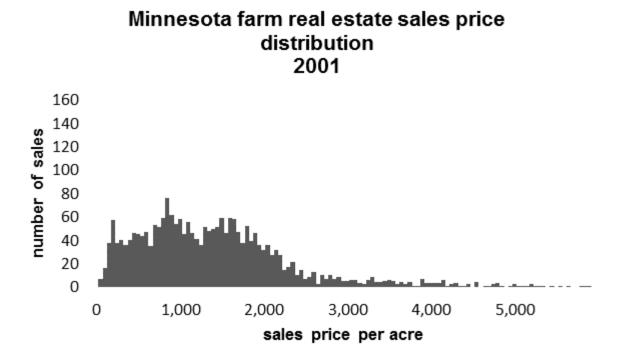
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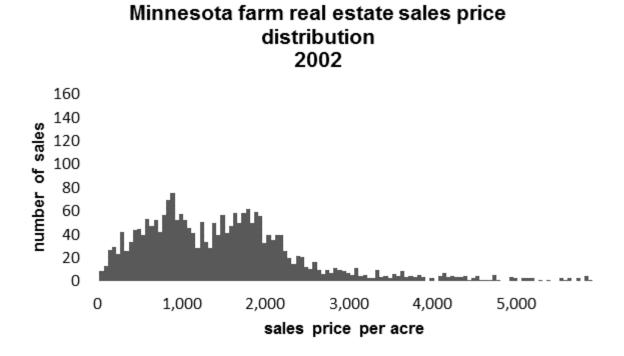
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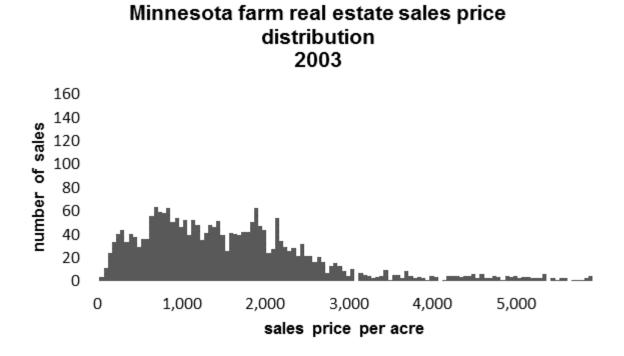
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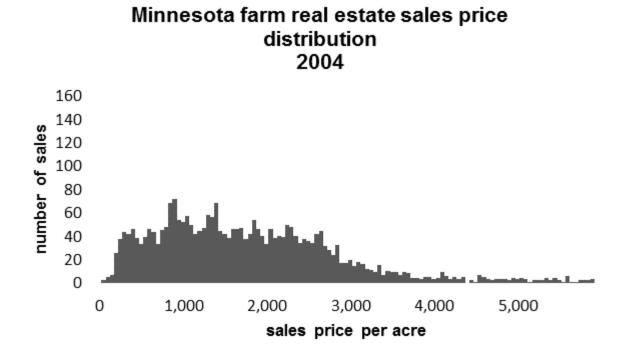
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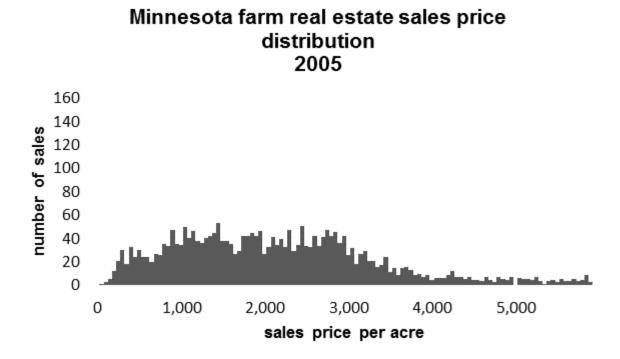
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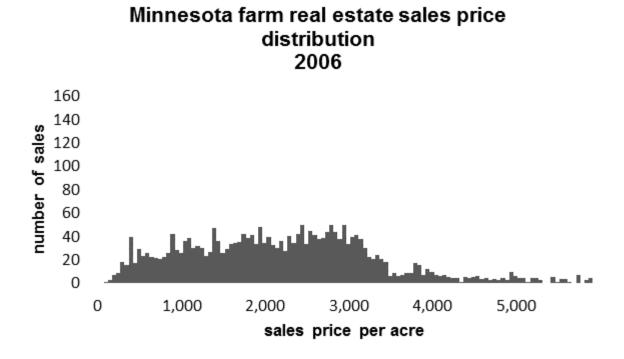
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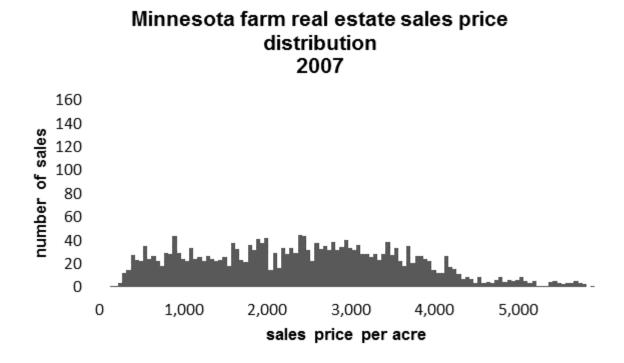
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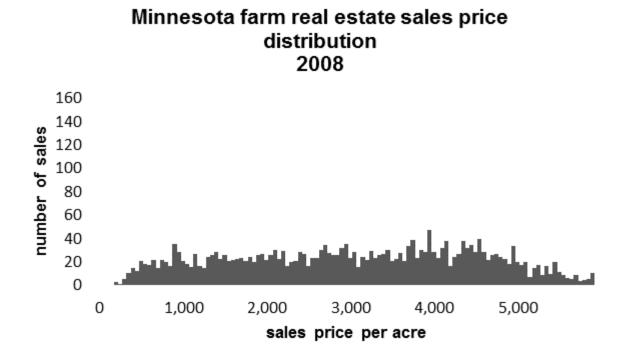
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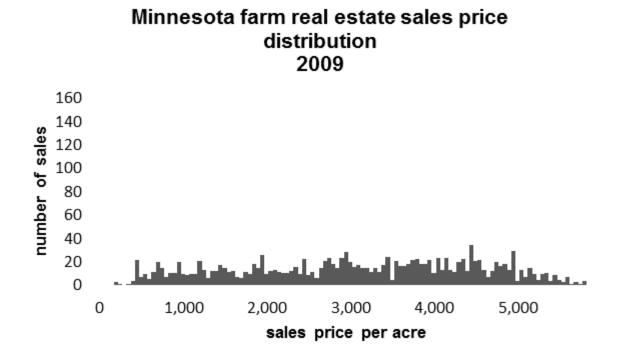
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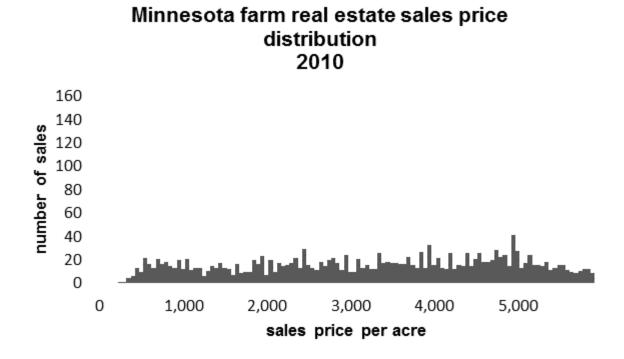
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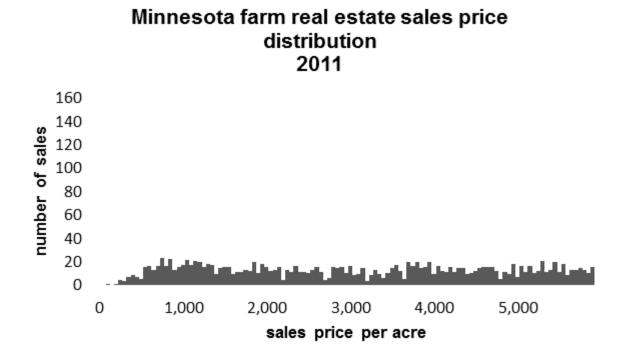
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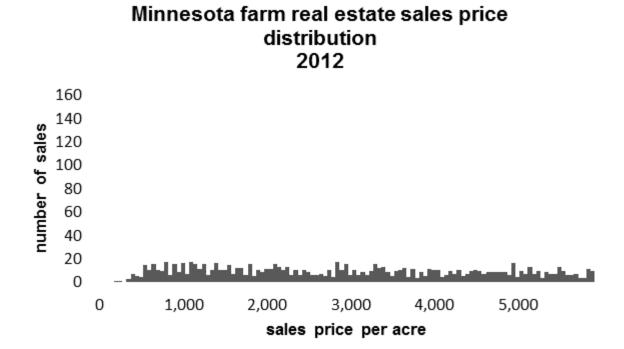
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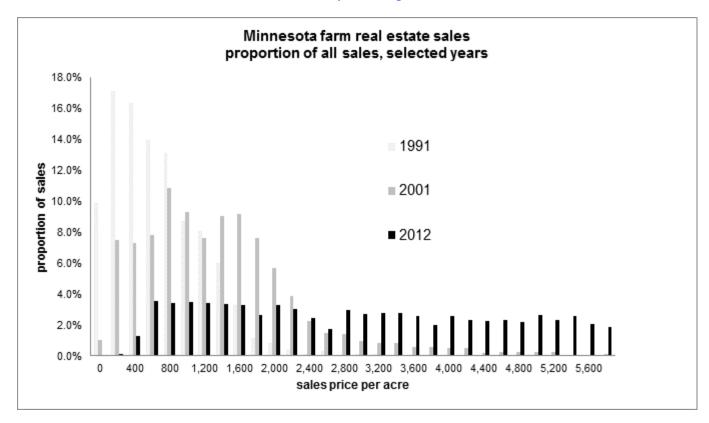
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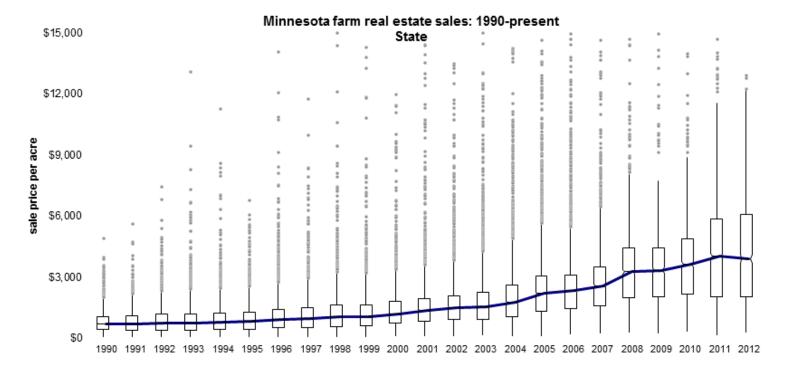
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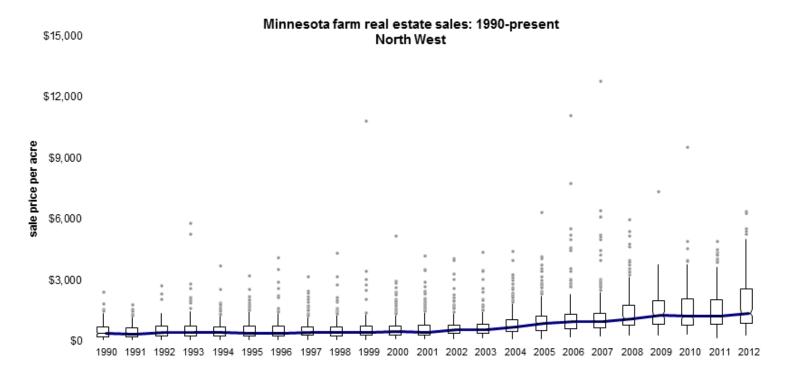
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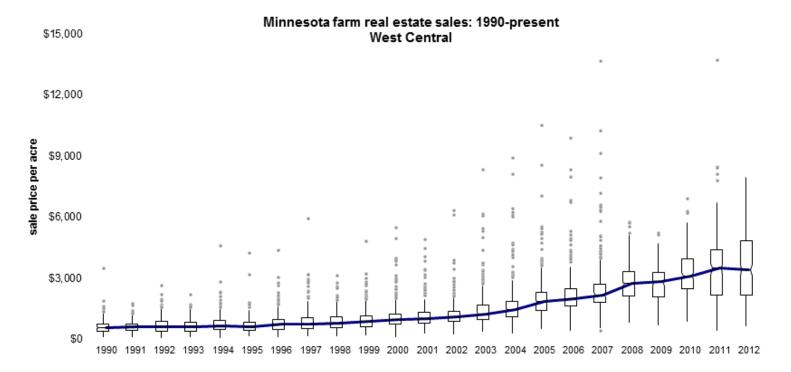
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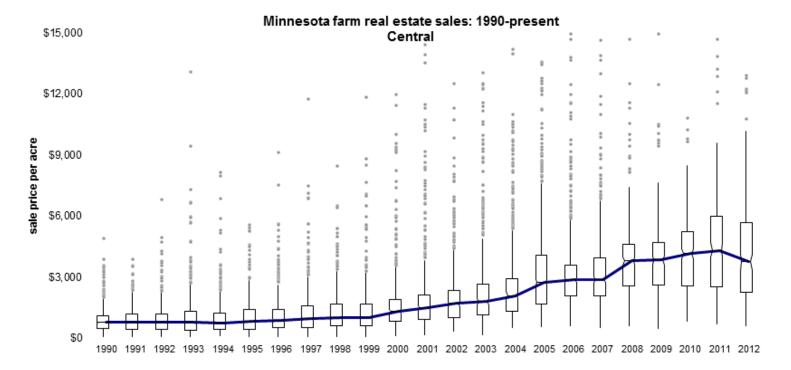
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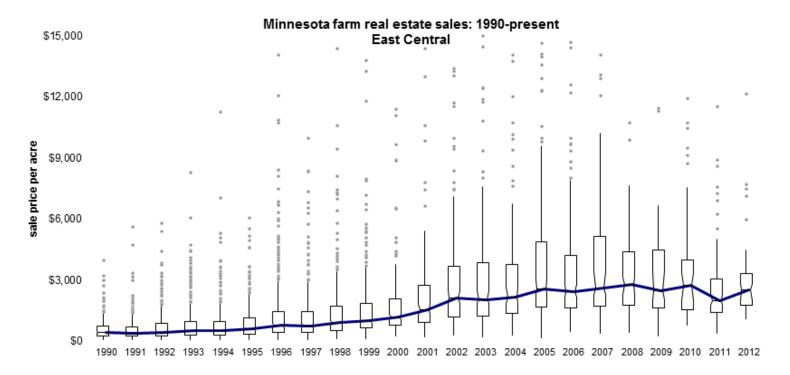
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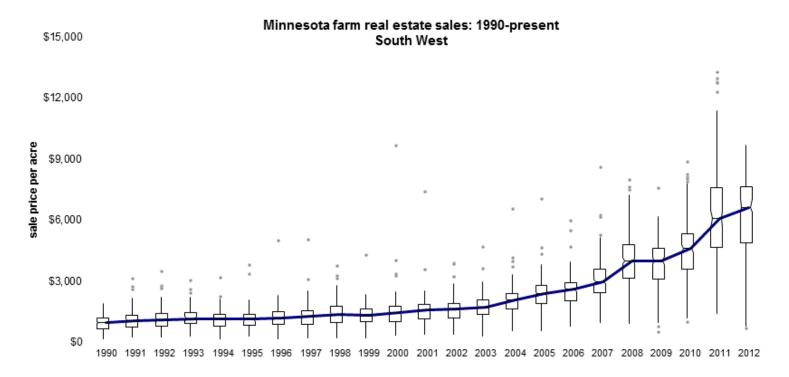
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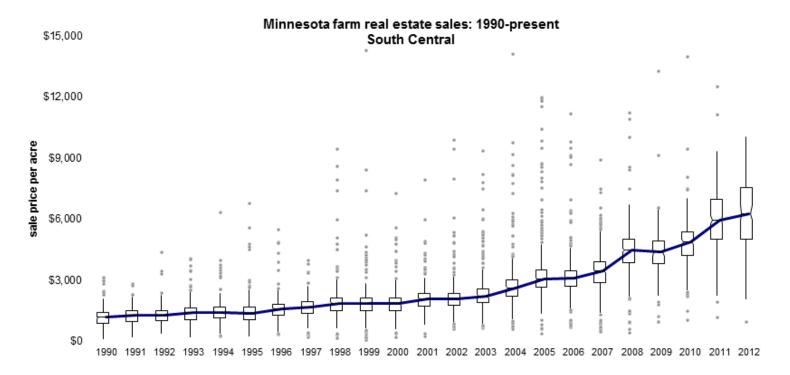
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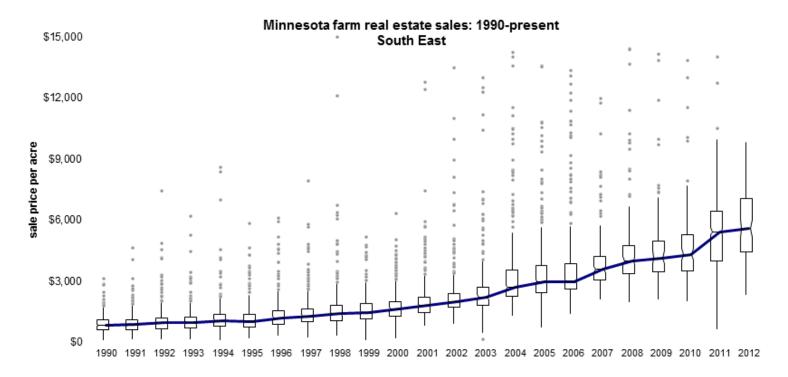
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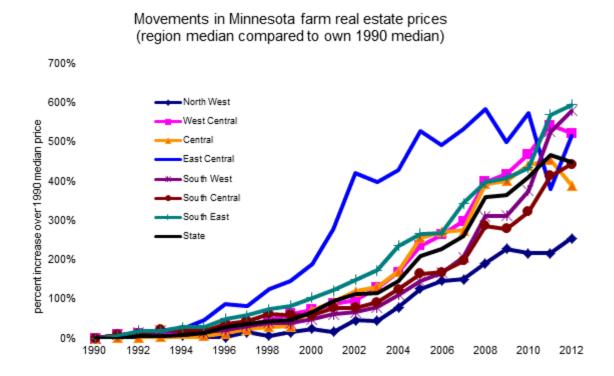
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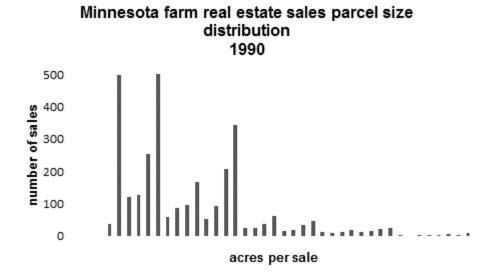
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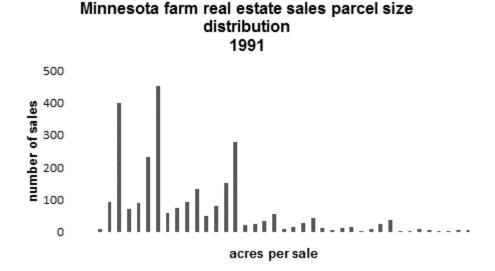
This chart shows each region's median annual price divided by its 1990 median price. This permits us to examine relative price movements without being distracted by differing price levels. So, for example, the Southwest and Southeast region median prices increased nearly six-fold since 1990.

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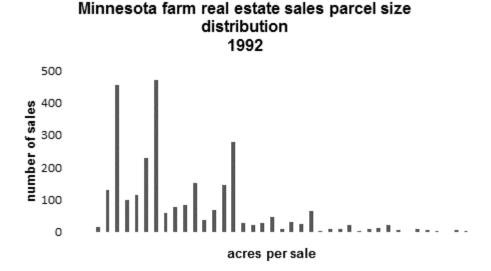
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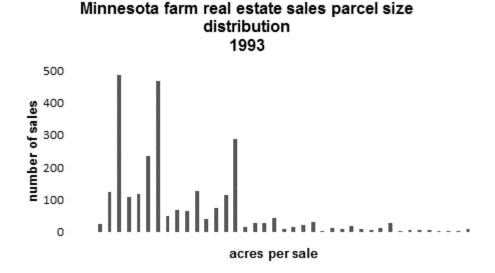
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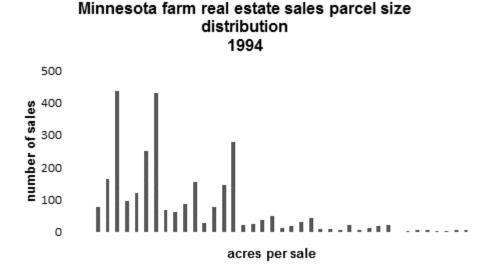
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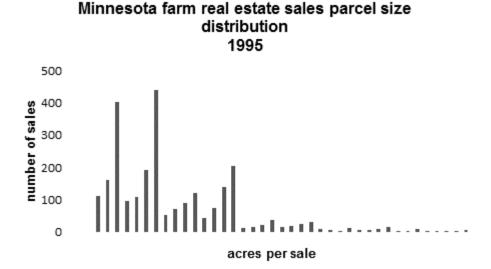
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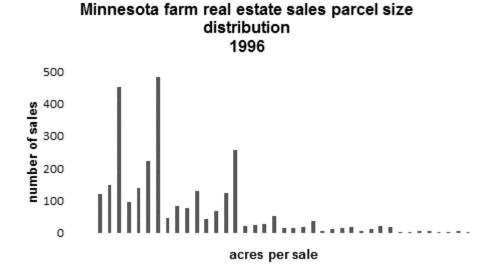
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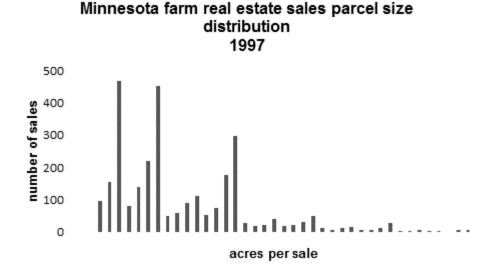
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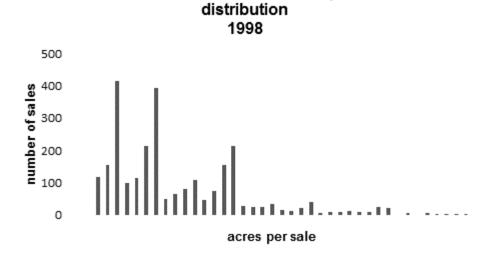
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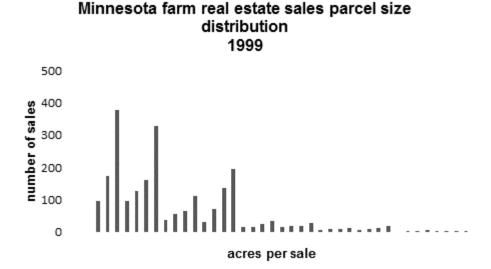


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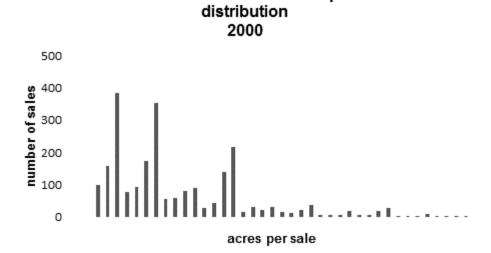
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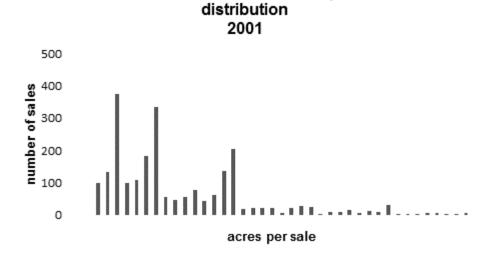
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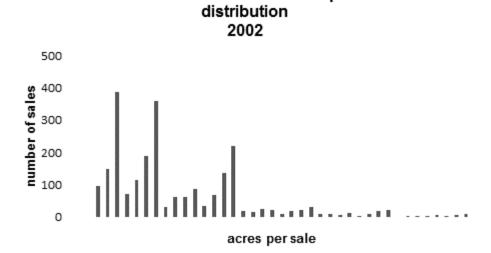
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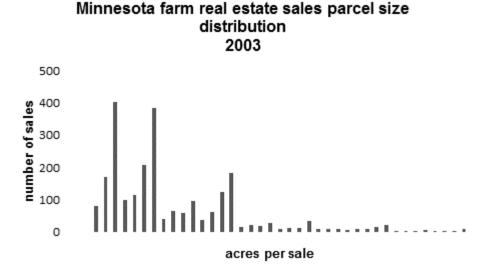
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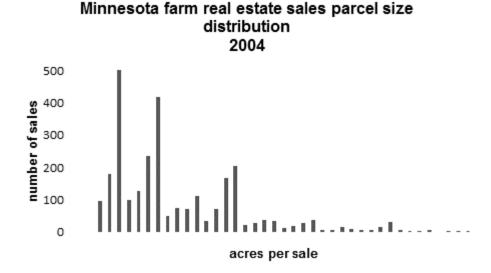
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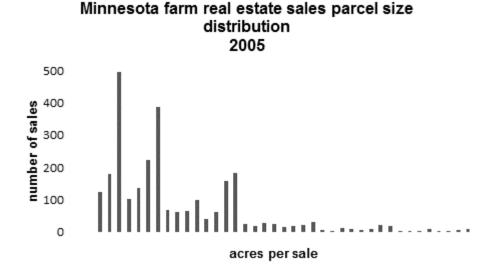
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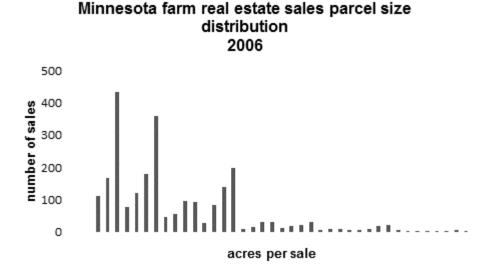
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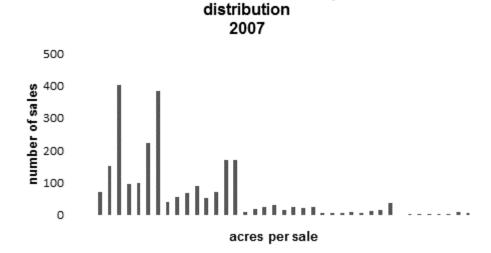
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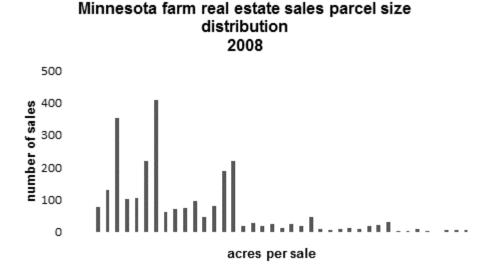
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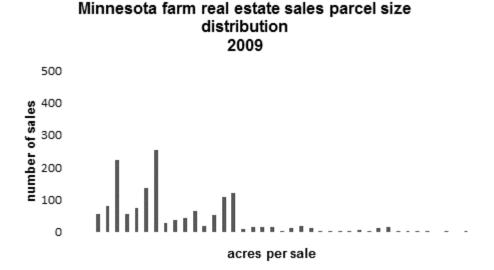
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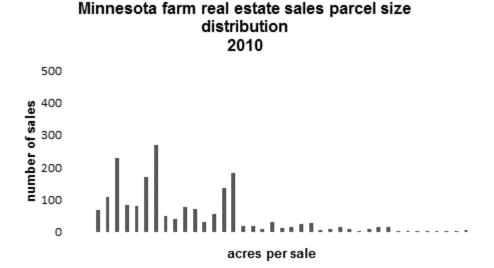
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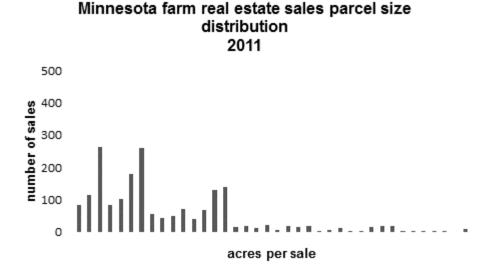
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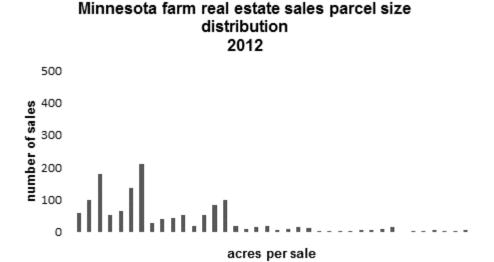
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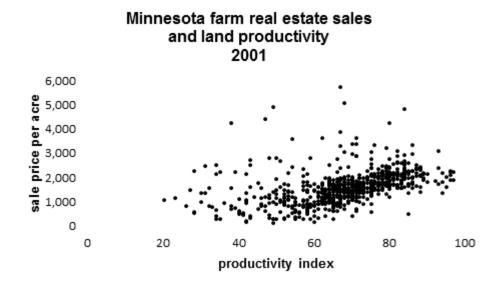


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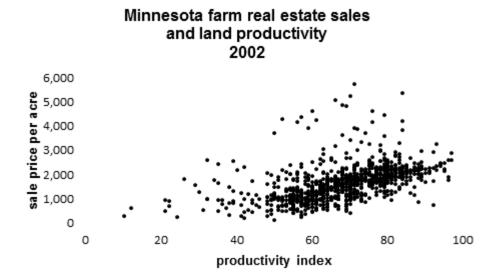


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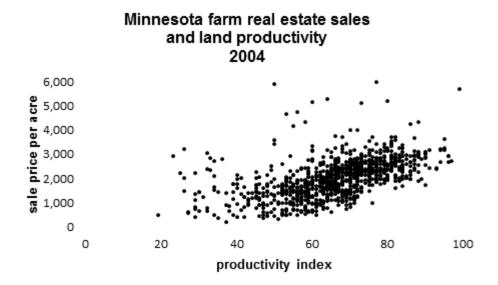
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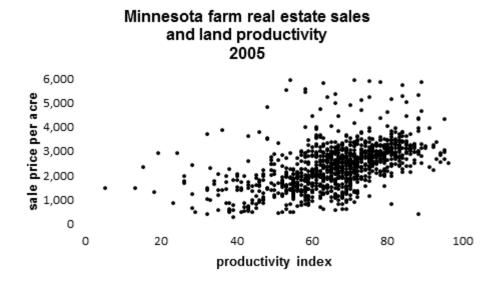
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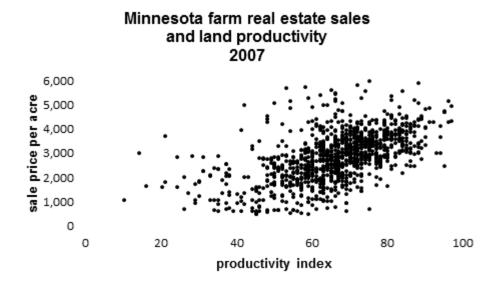
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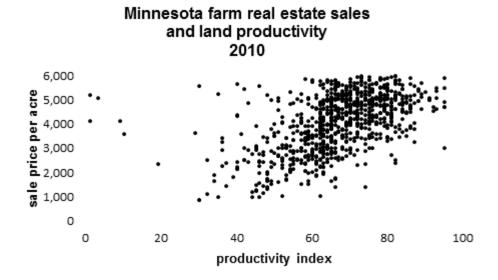
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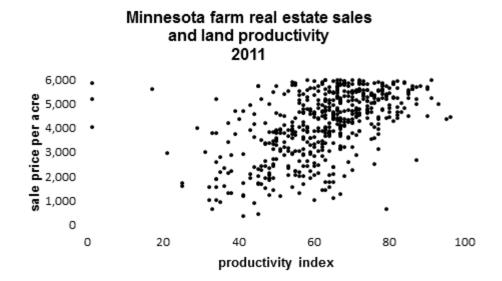
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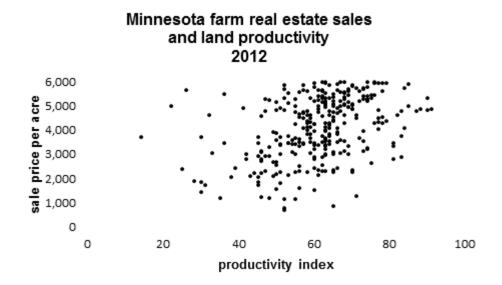


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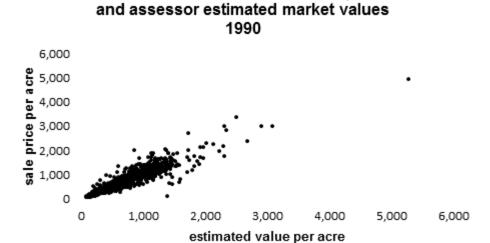
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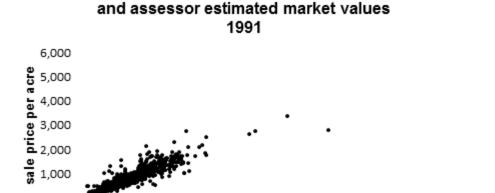


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Minnesota farm real estate sales prices

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3,000

estimated value per acre

4,000

Minnesota farm real estate sales prices

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5,000

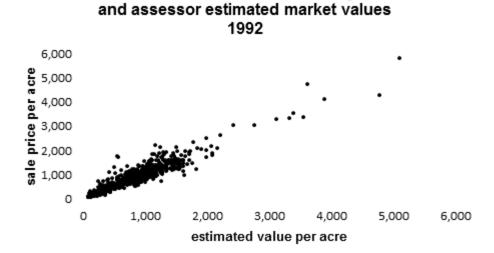
6,000

Prepared by <u>Steven J. Taff</u>
Department of Applied Economics
University of Minnesota

1,000

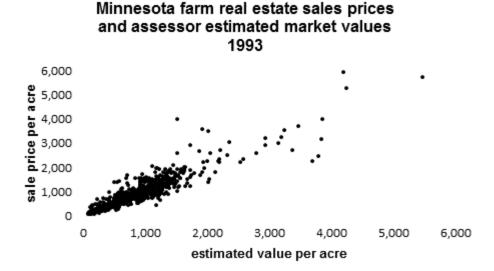
2,000

0 0



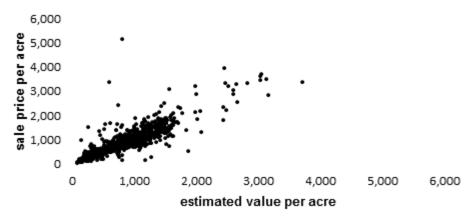
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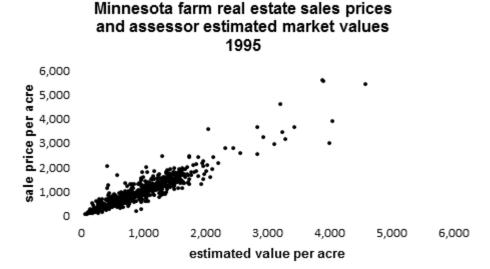


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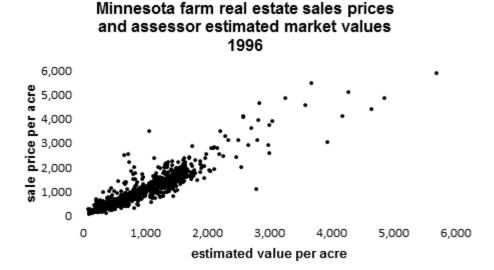
Minnesota farm real estate sales prices and assessor estimated market values 1994



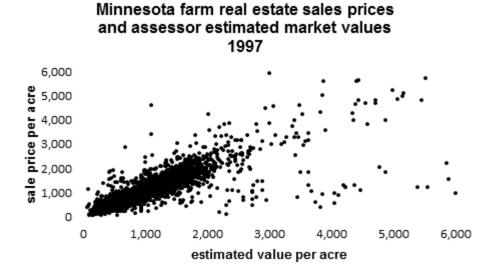
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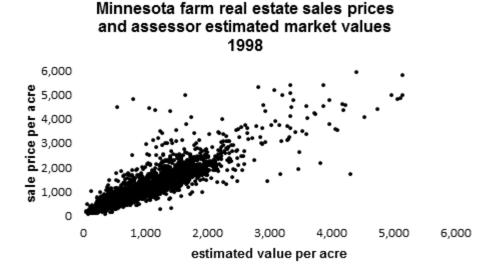
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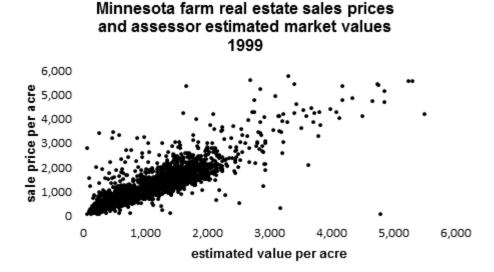
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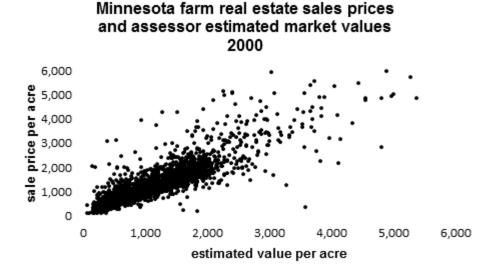
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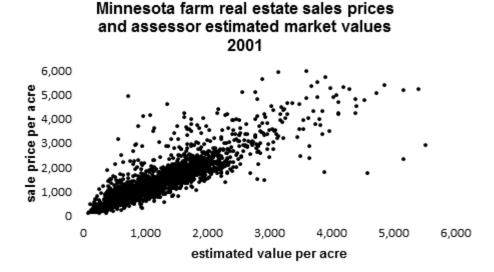
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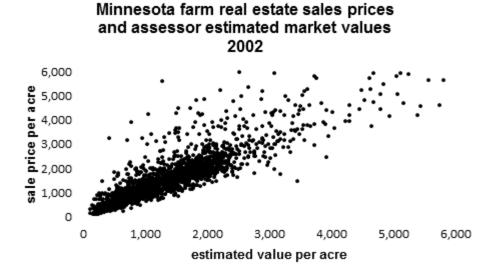
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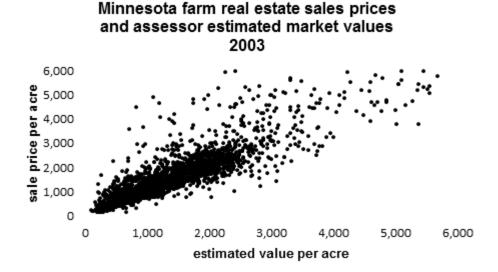


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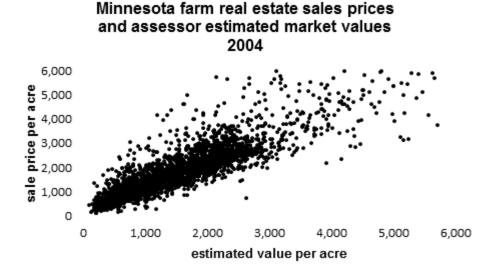
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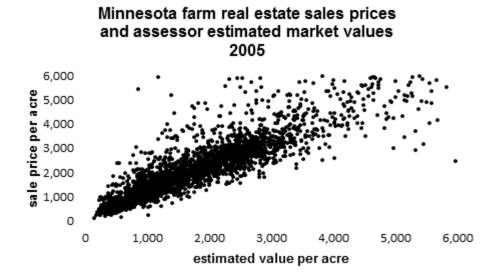
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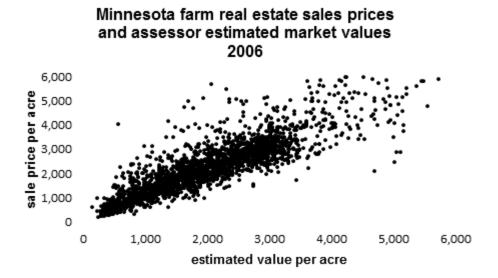
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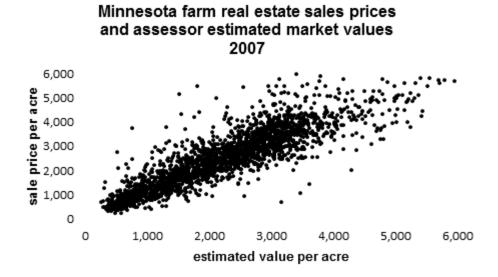
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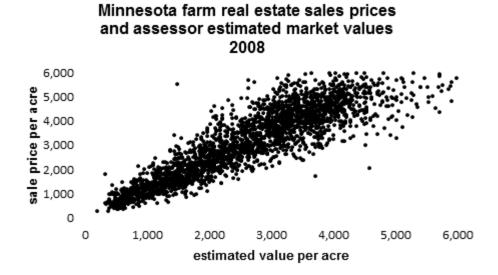
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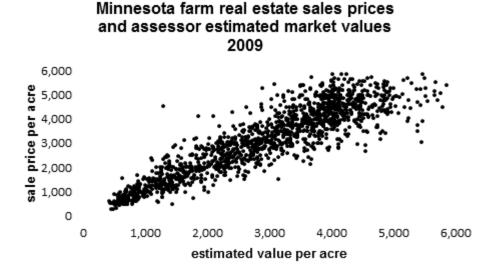
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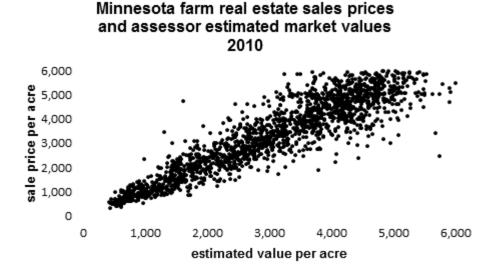
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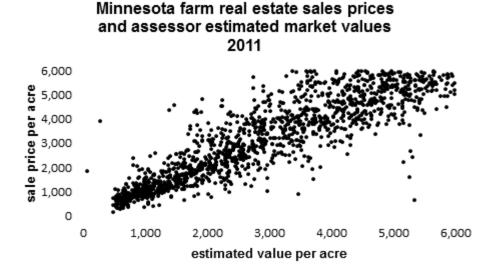


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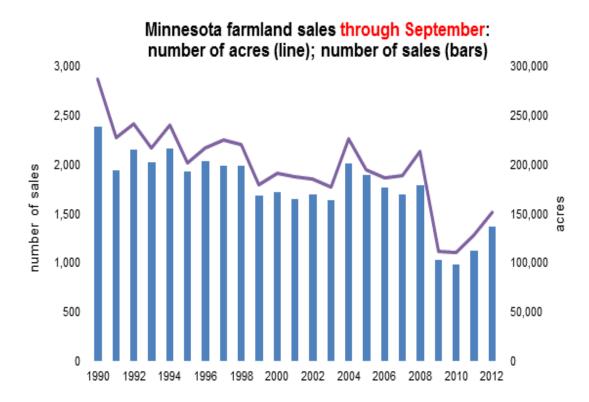
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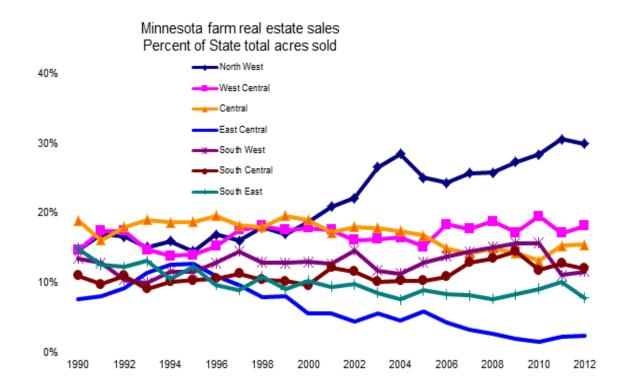
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The University of Minnesota farmland sales data is drawn from Department of Revenue reports covering a October-September "sales year." In this study, we report on a calendar year basis, so we place sales from the first three months of the current sales year into the previous calendar year. Consequently, the current calendar year data is based only upon the first nine months of sales for that year. So, for example, the 2012 data is based upon sales for January-September 2012. Sales occurring in the final three months of 2012 will be added to 2012 only when that data becomes available in 2014.

This chart shows comparable nine-month transaction volumes over the years. Year-to-year fluctuations have been reasonably modest--until 2009.



This chart shows the relative contribution of each region's sales to the statewide average. Note expecially that more and more of the state total comes from the relatively lower-priced North West region; the reverse is the case with the East Central region. Together, these trends have the effect of dampening increases in the statewide average price, shown elsewhere.



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