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# Comparison of 'Organic' and 'Conventional' Grains and Soybean Prices in the Northern Great Plains and Upper Midwest: 1995 through 2003

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**'Organic' and 'Conventional' Grain and Soybean  
Prices in the Northern Great Plains  
and Upper Midwest:  
1995 through 2003**

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# **‘Organic’ and ‘Conventional’ Grain and Soybean Prices in the Northern Great Plains and Upper Midwest: 1995 through 2003**

## **Introduction and Overview**

Price premiums for organic crops drew the attention of an increasing number of farmers throughout the 1990s. Premiums contributed to the expansion of U.S. farmland managed under organic farming systems during that time period. Expansion of organic farming systems continued at least through 2001.

According to the U.S. Department of Agriculture (USDA) Economic Research Service’s most recent data on organic farming systems, U.S. farmers and ranchers added almost one million acres of certified organic farmland between 1997 and 2001, an increase of 74 percent. Over that same time frame, certified organic cropland increased by 53 percent<sup>1</sup>. The USDA implemented national organic standards for organic production and processing in October 2002, which could facilitate further growth in the organic farming sector.

As part of the sustainable agriculture research program in the Economics Department at South Dakota State University (SDSU), ‘organic’ and ‘conventional’ crop prices have been compared for nearly a decade. This pamphlet serves as an update of price comparisons through 2003 and a final conclusion of the price series comparison, which we will no longer continue. The pamphlet also contains brief reference to another source of organic price data (see the appendix). The information in this pamphlet should be of use to farmers and others considering management changes and investments related to organic agriculture, as well as to policy makers.

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<sup>1</sup> C. Greene and A. Kremen. *U.S. Organic Farming in 2000-2001: Adoption of Certified Systems*. Washington, DC: U.S. Department of Agriculture, Economic Research Service Agr. Info. Bul. 780, February 2003.

## Data Sources

Our data on organic prices come from the **Organic Business News Organic Commodity Prices**, through Hotline Printing and Publishing<sup>2</sup>. Weekly highs and lows for a variety of organic crops products are reported. For each of the grain (and soybean) commodities, prices are reported simply for the U.S. as a whole, and not by State or region. We have these data for the third week of each month since 1995. For each commodity, the midpoints between the highs and the lows in those third weeks were calculated and used for our monthly observations. The following four crops that are included in organic farming systems in South Dakota and other parts of the Northern Great Plains and Upper Midwest were singled out: corn, soybeans, spring wheat, and oats. Monthly and annual average prices for these four crops are reported.

A limitation of the Organic Business News price data is that only ranges are available. From the 'highs' and 'lows' provided, we compute 'midpoints'. The 'midpoints', which are not the same as averages, may not provide the most accurate representation of organic prices received by the majority of farmers. Weighted average prices, computed on the basis of quantities sold at different prices in any given time period, would give a more accurate picture of organic price patterns. However, that kind of data is not presently available for grains and soybeans.

'Conventional' cash prices in this pamphlet are reported for both South Dakota and the U.S. These are monthly prices reported by the USDA's National Agricultural Statistics Service. The annual averages that we computed are simple (unweighted) averages based on the monthly figures for each calendar year.

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<sup>2</sup> Altmonte Springs, Florida.

## **Price Comparisons**

Yearly average organic and conventional prices for corn, soybeans, spring wheat, and oats—and comparisons in the form of ratios—are shown in Table 1. For cases in which organic price quotes were not available every month, the ratio calculations include only the comparable months for the prices of conventionally grown crops. The monthly prices for each crop are shown in Figures 1 through 5.

**Corn:** The average organic corn price from 1995 through 2003 ranged from a low of \$3.01/bu in 2001 to a high of \$5.06/bu in 1996 (Table 1). The average organic corn price was on the decline from 1997 through 2001. The 2002 organic corn price marked the first increase in the organic corn price since 1996, and the increase continued through 2003. The 2003 organic corn price of \$4.84/bu was \$1.83/bu higher than the 2001 price, and it was the second highest price in the time series. From Figure 1, we can see that during mid-2002 the monthly organic corn price increased significantly, to the highest levels since 1997. Prices have since leveled off, but 2003 prices remained relatively high. The U.S. price for conventional corn ranged from \$1.86 to \$3.55/bu over the 9-year period, while the South Dakota (SD) conventional price ranged from \$1.61 to \$3.49/bu (Table 1). Organic and conventional corn prices rose in late-2002 and remained relatively high in 2003.

The organic-to-SD or U.S. cash price ratios for corn have ranged from 1.35 in 1995 to 2.32 in 1999 (Table 1). The annual organic-to-SD ratio was always higher than the organic-to-U.S. ratio, and most of the ratios increased from year to year through 1999. The ratio of organic-to-SD conventional cash price of corn in 2003 (2.29) was the second highest ratio in the 9-year period. The 2003 ratio of organic-to-U.S. conventional cash prices of corn of 2.13 was the

highest ratio in the time series; 2003 was the first year that the organic-to-U.S. conventional corn cash price ratio was greater than 2.

**Soybeans:** The annual organic soybean price ranged from a low of \$12.29/bu in 2001 and 2002 to a high of \$17.89/bu in 1998 (Table 1). After 1998, the annual average organic soybean price did not increase again until 2003. The 2003 organic soybean price of \$12.79/bu was \$.50/bu higher than the 2002 price. In Figure 2, we can see that monthly organic soybean prices surged in mid-2003. We can also note the increase in conventional soybean prices in 2003. Both the 2003 annual average U.S. and SD cash prices for conventional soybeans increased significantly over the 2002 prices.

When compared to the other crops, organic soybean price ratios have generally been the highest (Table 1). However, with the substantial increase in conventional prices and only moderate increases in organic prices in 2003, the ratios declined some from recent previous years. The 1996 price ratios were the only ratios less than 2 in the price series. In 1998 and 1999, the ratios were greater than 3.0. The 2003 organic-to-SD and organic-to-U.S. conventional soybean price ratios were second to the lowest levels in the soybean price series. The year 2003 was the second consecutive year that the organic-to-conventional soybean price ratios declined.

The organic soybean prices reported in Table 1 are for the Clear Hilum type, on a cleaned basis. Some farmers in climatically suited areas grow the Vinton variety of Clear Hilum soybeans, which generally commands an even higher price premium. The Vinton variety of organic soybeans is a high-protein soybean desired by Japanese organic tofu manufacturers. The Vintons, however, usually have lower yields than do other Clear Hilum varieties. The annual organic Vinton soybean price has ranged from a low of \$15.63/bu in 2000 to a high of \$21.08 in 1998. Most recently, the 2003 average Vinton soybean price was \$15.81/bu, which was a

decrease of \$1.65/bu from the 2002 average price. The monthly Vinton soybean prices can be seen in Figure 3.

**Spring Wheat:** The annual organic spring wheat price ranged from \$5.49/bu to \$7.67/bu in the 9-year price series (Table 1). The low was recorded in 1999, while the high was recorded in 1996. The organic spring wheat prices from 1998 through 2002 remained relatively stable, within the mid-\$5.00/bu range. The 2003 annual organic spring wheat price of \$6.09/bu was \$.55/bu higher than the 2002 price. In Figure 4, we can see that during the first half of 2003 monthly organic spring wheat prices surged well above previous monthly prices. This marked the first time organic spring wheat had been greater than \$6/bu since 1998. The SD and U.S. conventional spring wheat prices also rose during 2003, recording averages of \$3.55/bu and \$3.59/bu, respectively.

Organic spring wheat prices ratios were generally increasing from 1995 through 2000. The highest ratios were in 2000, the only year in which the spring wheat price ratios were greater than 2. The 2001 and 2002 organic-to-conventional ratios both reflected declines from the previous year. The 2003 organic spring wheat price ratio increased for both the U.S. and the SD organic-to-conventional comparisons.

**Oats:** The annual organic oats price ranged from a low of \$1.97/bu in 1995 to a high of \$4.57 in 2003 (Table 1). Organic oats prices increased significantly in 2002 and 2003. The increases in monthly organic oats prices in 2002 and 2003 are illustrated in Figure 5. The 2003 organic oats price was \$1.03 higher than the 2002 annual price. The U.S. and SD conventional oats prices, however, did not experience the same type of price increase. The 2003 conventional oats price marked the first time since 1999 that the annual average price declined.

Before 2003, the organic-to-SD or U.S. cash price ratios for oats had ranged from a low of 1.28 in 1995 to a high of 1.94 in 1998 (Table 1). The 2003 organic oats price ratios were greater than 2 for the first time in the price series. The 2003 organic-to-U.S. conventional cash price ratio was 2.69, while the organic-to-SD conventional cash price ratio was 2.66.

### **Summary**

Organic crop prices from 1995 to 2003 for the commodities presented here exhibited both increases and decreases. Except for Vinton soybeans, 2003 average organic prices were all greater than the 2002 prices. The organic prices for corn, soybeans, and spring wheat were generally the highest toward the beginning of the price series (from 1996 to 1998) and at the end (2003), while organic oats reported highs in 2002 and 2003, at the end of the price series.

Organic crop prices may continue to rise and fall based on increases or decreases in organic farmland and the strength of consumer demand. U.S. organic farmland increased significantly from 1997 to 2001. Increases in certified organic farmland are expected to continue in the U.S.



Table 1. Comparison of Organic and Conventional Prices

Crop Commodity, and Year	Prices (\$/bu)			Price Ratios**	
	Organic- Farm*	Conv- SD Cash	Conv- US Cash	Organic-Farm/ SD Cash	Organic-Farm/ US Cash
Corn, 1995	3.46	2.38	2.56	1.45	1.35
Corn, 1996	5.06	3.49	3.55	1.45	1.43
Corn, 1997	4.50	2.30	2.60	1.96	1.73
Corn, 1998	4.16	1.90	2.21	2.19	1.88
Corn, 1999	3.74	1.61	1.89	2.32	1.98
Corn, 2000	3.51	1.61	1.86	2.18	1.89
Corn, 2001	3.01	1.65	1.89	1.82	1.59
Corn, 2002	3.96	1.96	2.13	2.02	1.86
Corn, 2003	4.84	2.11	2.27	2.29	2.13
Soybeans, 1995	12.52	5.53	5.85	2.26	2.14
Soybeans, 1996	13.41	6.89	7.23	1.95	1.85
Soybeans, 1997	17.80	7.10	7.40	2.51	2.41
Soybeans, 1998	17.89	5.54	5.92	3.23	3.02
Soybeans, 1999	14.50	4.31	4.57	3.36	3.17
Soybeans, 2000	13.02	4.45	4.73	2.93	2.75
Soybeans, 2001	12.29	4.18	4.43	2.94	2.77
Soybeans, 2002	12.29	4.69	4.93	2.62	2.49
Soybeans, 2003	12.79	5.92	6.09	2.16	2.10
Spring Wheat, 1995	6.09	4.17	3.95	1.46	1.54
Spring Wheat, 1996	7.67	4.92	4.82	1.56	1.59
Spring Wheat, 1997	6.49	3.74	3.75	1.74	1.73
Spring Wheat, 1998	5.69	3.28	3.19	1.73	1.78
Spring Wheat, 1999	5.49	2.86	2.94	1.92	1.87
Spring Wheat, 2000	5.72	2.79	2.82	2.05	2.03
Spring Wheat, 2001	5.75	2.93	2.96	1.96	1.94
Spring Wheat, 2002	5.54	3.50	3.47	1.58	1.60
Spring Wheat, 2003	6.09	3.55	3.59	1.72	1.70
Oats, 1995	1.97	1.54	1.46	1.28	1.35
Oats, 1996	3.17	1.95	2.00	1.63	1.59
Oats, 1997	2.96	1.66	1.71	1.78	1.73
Oats, 1998	2.43	1.25	1.33	1.94	1.83
Oats, 1999	2.04	1.07	1.15	1.91	1.77
Oats, 2000	2.00	1.18	1.17	1.69	1.71
Oats, 2001	2.00	1.45	1.42	1.38	1.41
Oats, 2002	3.54	1.99	1.89	1.78	1.87
Oats, 2003	4.57	1.70	1.72	2.69	2.66

\*The organic soybeans refer to Clear Hilum, cleaned.

\*\*Price ratios have 1 as the basis of comparison. For example, 1.45 can be interpreted as 1.45:1

FIGURE 1. CORN PRICES

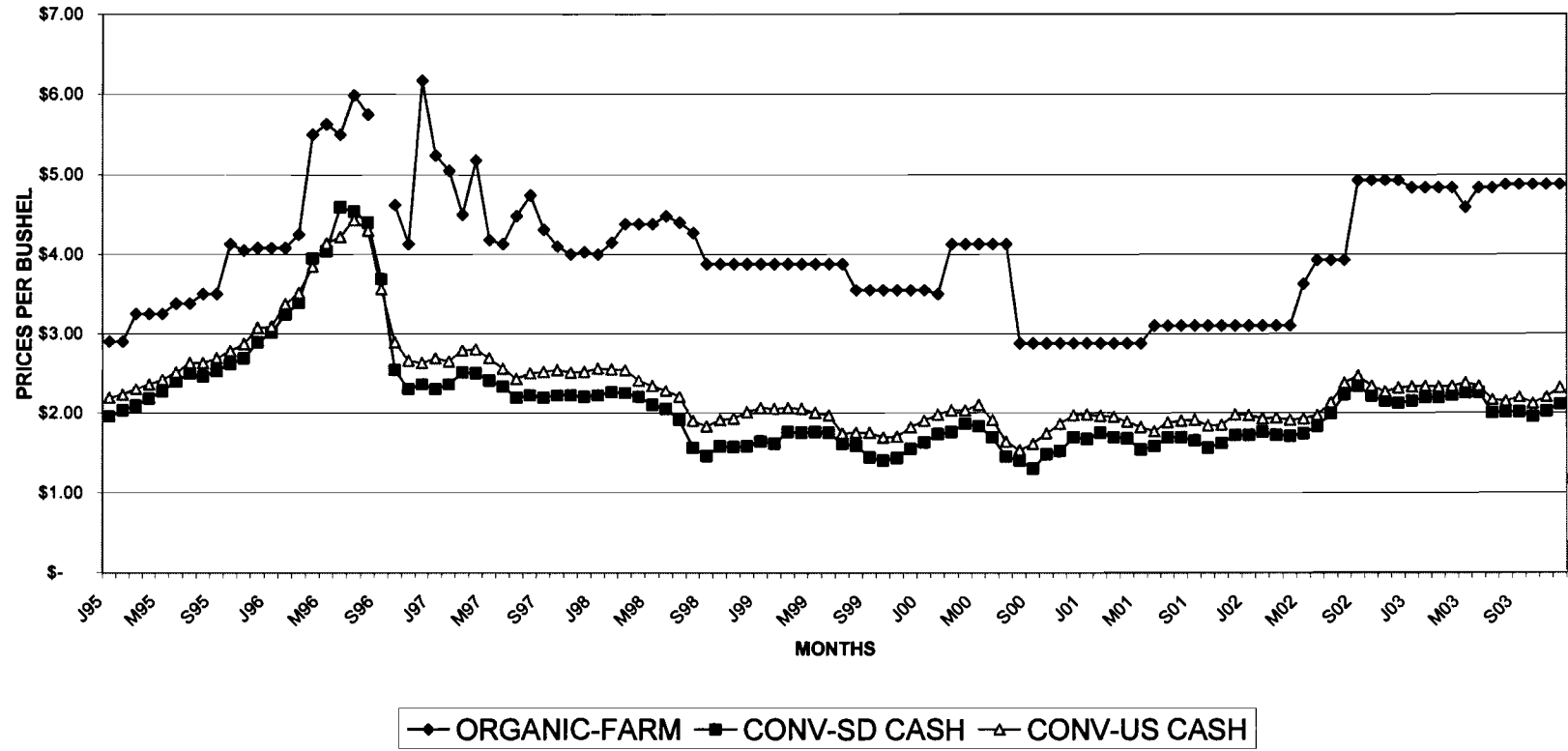


FIGURE 2. SOYBEAN PRICES -- CLEAR HILUM

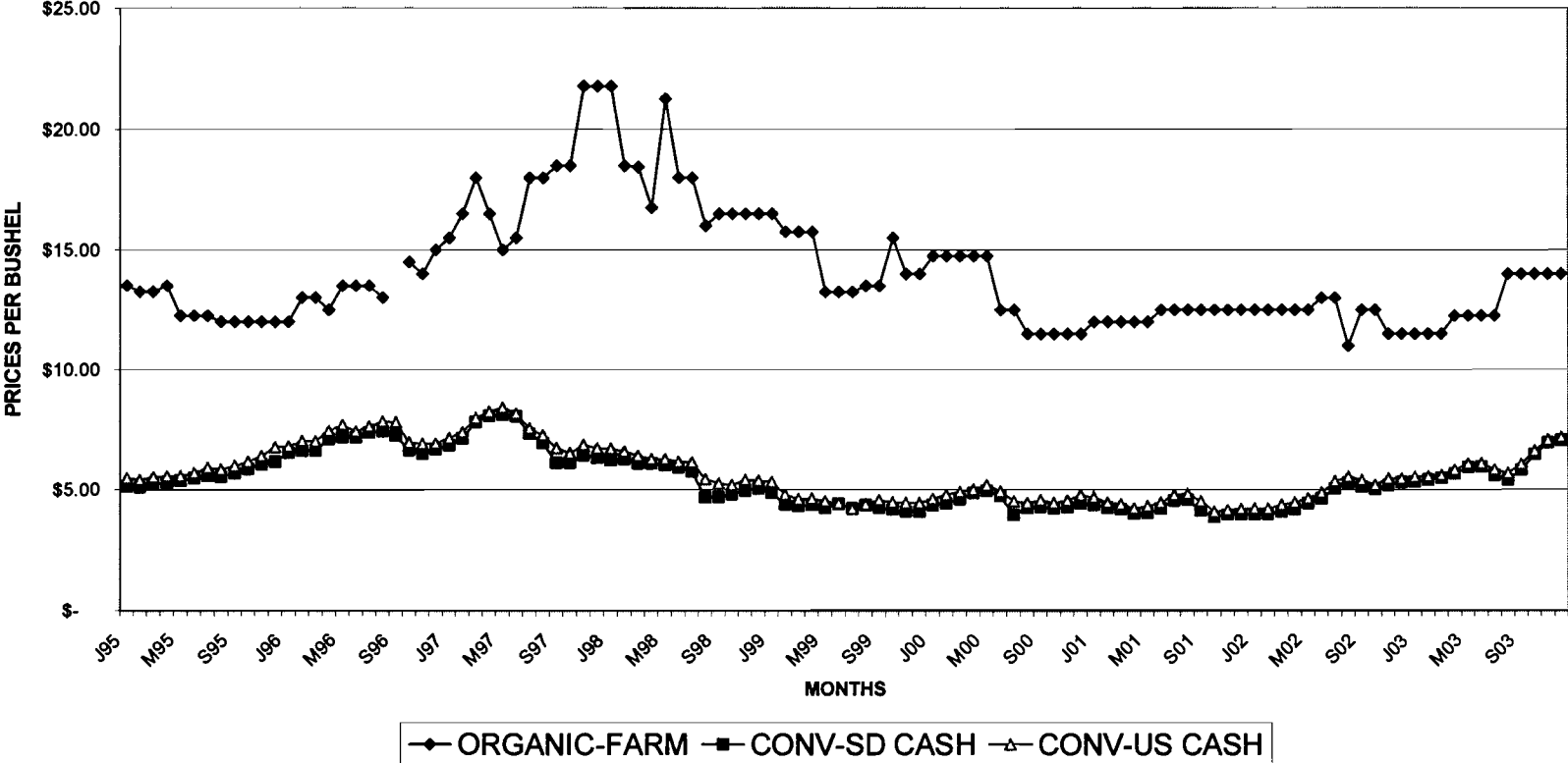


FIGURE 3. SOYBEANS PRICES -- VINTON

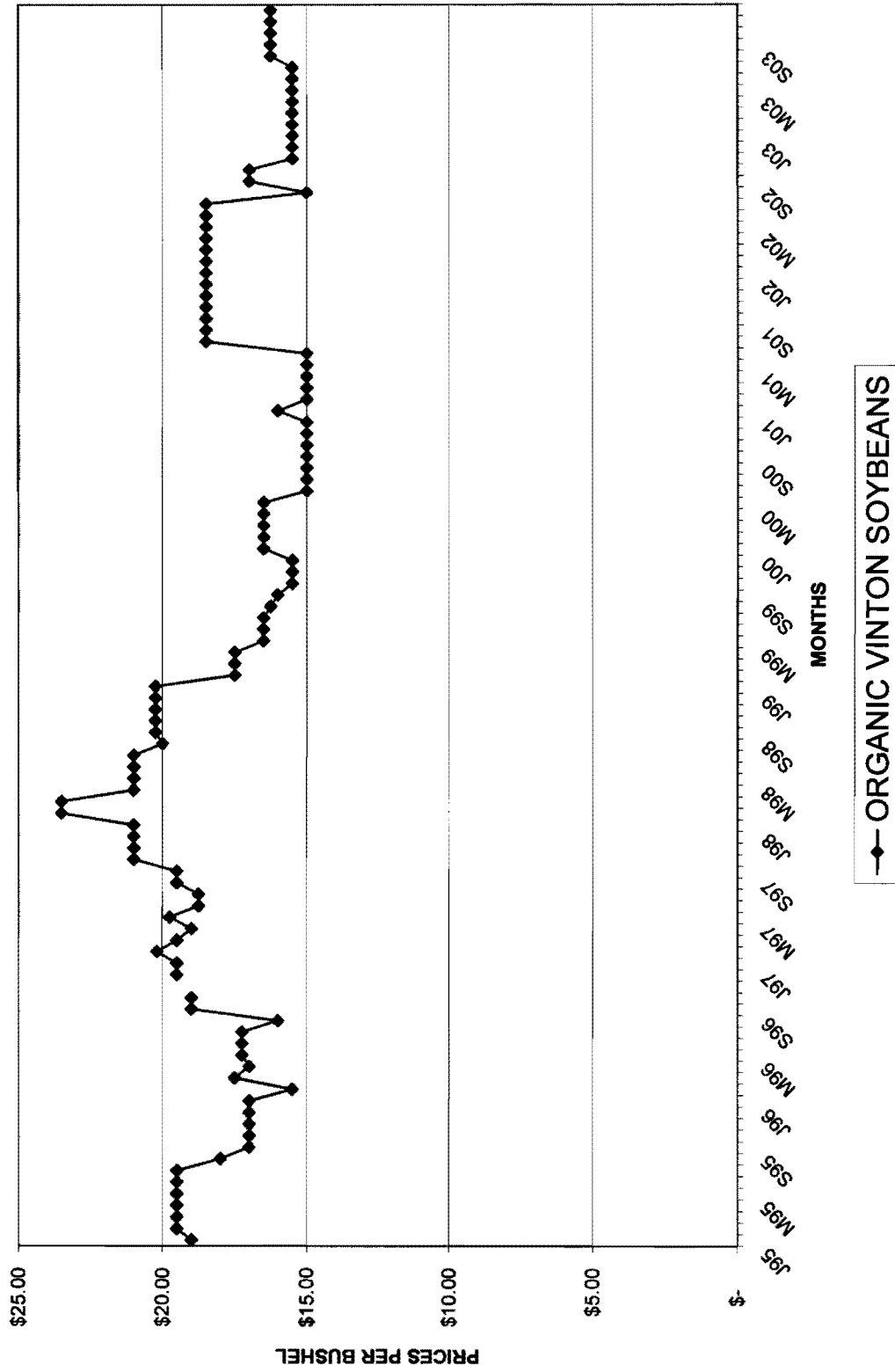


FIGURE 4. SPRING WHEAT PRICES

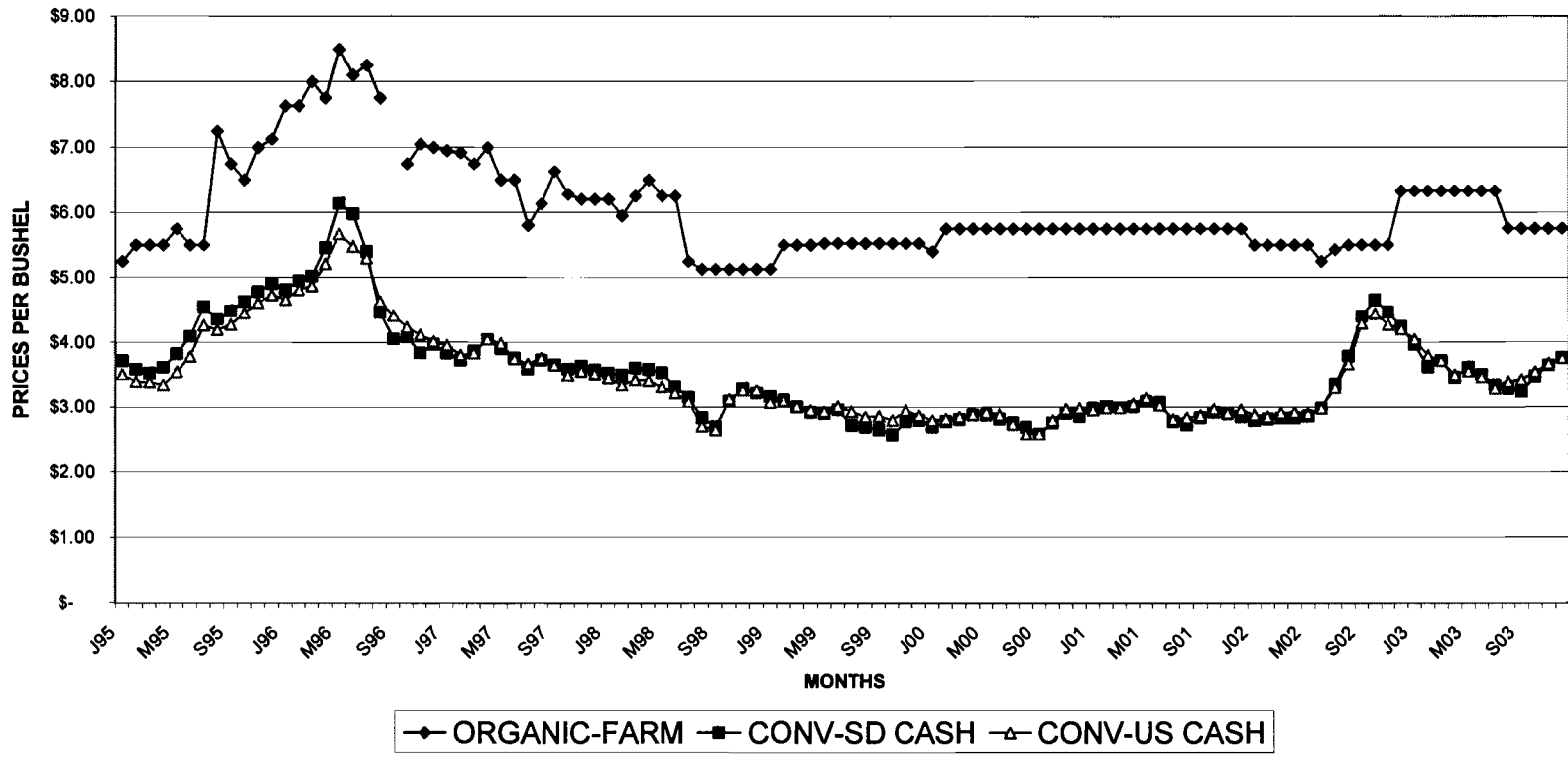
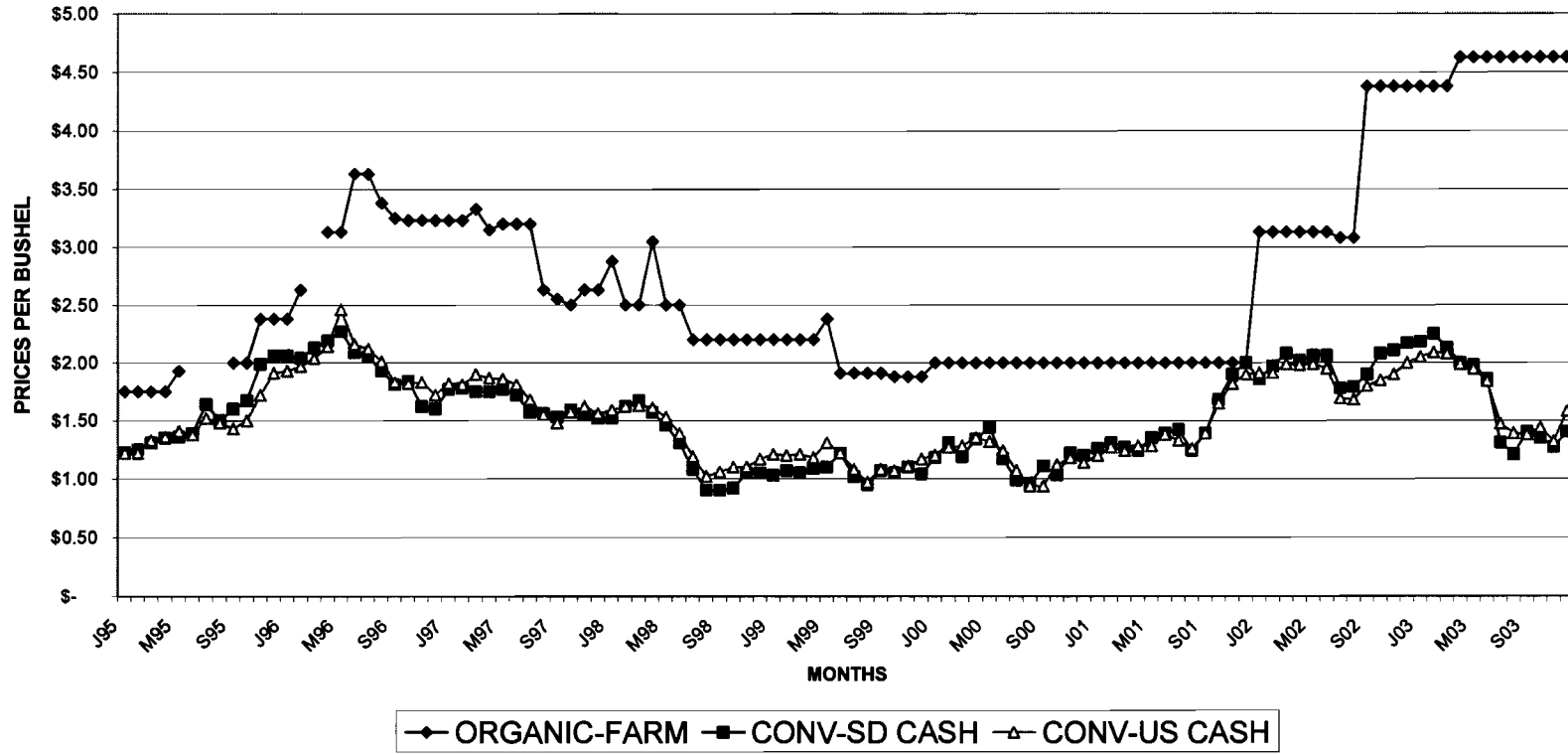


FIGURE 5. OATS PRICES



## Appendix

### Organic Price Information Comparison

Organic price information is often hard to find, since there are no USDA publications that report current prices for all organic products. Although the USDA continues to provide information about organic farming, current information for many organic products is often not readily available for producers. The lack of current information only adds to the difficulties that organic producers face when attempting to market organic products. One relatively new information source for organic prices that organic producers may use is the *New Farm Organic Price Index* (OPX), found at [www.newfarm.org/opx/index.shtml](http://www.newfarm.org/opx/index.shtml).

The OPX provides a comparison of conventional and organic prices for over 40 products, from grains to vegetables and meats, and is updated weekly. Organic prices for grains listed on OPX are obtained from the Organic Farmers' Agency for Relationship Marketing (OFARM). The organic grain prices listed are "target prices," which reflect historical prices organic farmers have received in the past and represent levels felt necessary to sustain a "fair" return for organic farmers. OFARM notes that the actual prices received by organic farmers are often lower than the "target prices." The "target prices" listed as of May 3, 2004 were adopted by OFARM in September 2003. These prices are shown in Appendix Table 1. The difference between premium and regular quality reflects levels of processing (cleaning, grading, and polishing).

The 2003 organic corn price that we reported in this pamphlet (Table 1) was above the regular quality price reported by the OPX, but below the premium quality price (Appendix Table 1). In the case of organic soybeans (non-Vinton type), the 2003 organic price we reported was \$.79/bu higher than the premium quality feed stock price reported in the OPX. The Vinton

soybean price that we reported for 2003, however, was more than \$2/bu below the regular quality price reported in the OPX. Also, the 2003 organic spring wheat price that we reported was lower (by \$.41/bu) than the OPX spring wheat premium quality price. Our 2003 organic oats price (\$4.57) was higher than the food grade organic oats price listed in the OPX (\$3.50).

We should note that these are not exact comparisons. The prices obtained from the *Commodity Fax Service* are the mid-points of prices that farmers received, while the OPX prices are “target prices” that are updated periodically. Also, as pointed out in previous writings, there can be a great deal of variation in the organic prices received by different farmers within any given month or year. Although there is variation in the prices received by conventional farmers, the variation is likely to be greater for organic farmers. Therefore, readers should be cautious when drawing inferences from data reported here, based on price ranges and averages.



Appendix Table 1. Organic Price Index Weekly "Target Prices" for the  
Week of May 3, 2004

Crop Commodity	Quality	Price (\$/bu)
#2 Yellow Corn	Premium Quality	5.50
	Regular Quality	4.60
Soybeans: Feed Stock	Premium Quality	12.00
	Regular Quality	10.00
Soybeans: Vinton	Premium Quality	20.00
	Regular Quality	18.00
Spring Wheat	Premium Quality	6.50
	Regular Quality	--
Oats: Food Grade	Premium Quality	3.50
	Regular Quality	--

Source: The New Farm. <http://www.newfarm.org/opx/grains.html>