6-2001

Comparison of Prices for 'Organic' and 'Conventional' Grains and Soybeans in the Northern Great Plains and Upper MIdwest: 1995-2000

Sherry K. Bertamsen
South Dakota State University

Thomas L. Dobbs
South Dakota State University

Comparison of Prices for 'Organic' and 'Conventional' Grains and Soybeans in the Northern Great Plains and Upper Midwest: 1995 to 2000

by Sherry K. Bertramsen
and Thomas L. Dobbs*

Econ Pamphlet 2001-1
June 2001

Economics Department
Agricultural Experiment Station
South Dakota State University
Brookings, SD 57007-0895

Support for the research on which this paper is based came from South Dakota State University's Agricultural Experiment Station Project H-056, entitled "Implications of Risk and other Factors for Diversified and Sustainable Farming Systems".

* Bertramsen is a Graduate Research Assistant in Economics and Dobbs is a Professor of Agricultural Economics at South Dakota State University.

Comparison of Prices for 'Organic' and 'Conventional' Grains and Soybeans in the Northern Great Plains and Upper Midwest: 1995 to 2000

Price premiums for organic crops drew the attention of increasing numbers of farmers in the Northern Great Plains and Upper Midwest during the 1990s. Continuing low prices for crops grown with 'conventional' farming methods during the late 1990s caused a growing number of farmers to explore the possibilities of switching to organic methods and obtaining organic certification.

As part of the sustainable agriculture research program in the Economics Department at South Dakota State University (SDSU), we have been comparing 'organic' and 'conventional' crop prices over the past six years. This pamphlet contains an update of the price comparisons through 2000. The information should be of use to farmers and others considering management changes and investments related to organic agriculture, as well as to policy makers.

Data sources

Our data on organic prices come from the **Organic Food Business News** *Commodity Fax Service*, through Hotline Printing and Publishing.[1] Weekly lows and highs for a wide variety of organic crop 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. We have these data for the third week of each month since 1995. For each commodity, the midpoints between the highs and lows in those third weeks were calculated and used for our monthly observations. The following four crops that are frequently 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,

[1] Altamonte Springs, Florida.

and oats. Monthly and annual average organic prices for these four crops are reported in this pamphlet.

A limitation of the *Commodity Fax Service* data is that only price ranges are available. From the 'highs' and 'lows' provided, we compute 'midpoints'. Midpoints are not the same as averages. 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. The price range for a particular crop--and consequent midpoint--could go unchanged, for example, at the same time that the weighted average of prices is actually going down (or up).

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

A comparison is made between organic and conventional prices for the past six years, using line charts and ratios.

Price comparisons

Yearly average organic and conventional prices for corn, soybeans, spring wheat, and oats are shown in Table 1, as are ratios of organic to conventional prices. 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. Monthly organic and conventional prices are shown in Figures 1 through 4.

Corn: The ratios of organic to conventional corn prices rose continuously through 1999, but dropped slightly in 2000 (Table 1). We can see in Figure 1 that organic corn prices declined in 1999, but they jumped in early-2000. Late-2000, however, saw organic corn prices drop

significantly. Conventional corn prices faced a similar trend, but they recovered slightly in late-2000. Both organic and conventional prices fell by 15 percent between 1998 and 2000.

Soybeans: Organic price premiums for soybeans were higher (on a percent basis) than for corn, wheat, and oats throughout the 1995-2000 period (Table 1). The 3.17:1 organic to US cash price ratio for soybeans in 1999, for example, means that the organic price premium was 217 percent of the conventional price.[2] Both organic and conventional soybean prices have trended downward since their highs three to four years ago (Figure 2). Organic soybean prices have declined more than conventional prices since 1998. For example, organic soybean prices fell by 27 percent (based on annual averages) between 1998 and 2000, whereas conventional soybean prices fell by 22-23 percent between 1998 and 1999, and then recovered slightly in 2000. However, organic soybean prices reported by the *Commodity Fax Service* in 2000 were 193 percent higher than SD cash prices and 175 percent higher than US cash prices (Table 1).

The organic soybean prices reported here are for the Clear Hilum type, on a cleaned basis. This is the variety required by the Japanese market. Even if one were to allow for a 10-15 percent loss in volume from cleaning organic soybeans, the price differentials shown in Table 1 and Figure 2 are substantial. Some farmers in climatically suited areas grow the Vinton variety of Clear Hilum soybeans, which generally commands an even higher price premium. The ratio of cleaned organic Vinton prices to conventional soybean US prices was 3.67:1 in 1999 and 3.30:1 in 2000. The Vintons, however, usually have lower yields than do other Clear Hilum varieties.

Wheat: The ratios of organic to conventional spring wheat prices have increased almost every year since 1995 (Table 1). Prices for conventional spring wheat were on a downward trend

[2] The premium in dollars was $9.93 ($14.50 - $4.57). In percent terms, this is $9.93/$4.57 = 2.17 = 217 percent. The calculation also can be carried out directly with ratios, as follows: 3.17-1.00 = 2.17 = 217 percent.

from 1996 through 1999, and then leveled off some in 2000. Organic wheat prices also trended downward, but they recovered slightly in late-1999 and 2000 (Figure 3). On average, organic wheat sold for around $2.60/bushel over and above the price of conventional wheat in 1999 and for around $2.90/bushel more than the price of conventional wheat in 2000.

Oats: Ratios of organic to conventional prices for oats have been very similar for the past four years (Table 1). In the past two years, however, price premiums (in percent terms) for oats have fallen. Prices for conventional and organic oats both followed a downward trend from 1996 through 1999. Organic oats prices have stabilized since late-1999, and conventional oats prices averaged slightly higher in 2000 than in 1999 (Table 1 and Figure 4). Organic oats prices fell proportionally more than conventional prices between 1998 and 2000. U.S. conventional oats prices in 2000 were only 12 percent lower than in 1998, whereas organic oats prices were 18 percent lower. However, organic oats prices still averaged 69 percent higher than SD cash prices for conventional oats and 71 percent higher than US cash prices in 2000.

Market trends and developments

In the early part of 2001, organic markets indicate trends similar to those of late- 2000. Organic markets for corn and soybeans appear to be softening, while the markets for organic spring wheat and oats appear to be holding steady. The markets for conventional corn, spring wheat, and oats, however, appear to be strengthening a little, while soybeans markets are weakening. Some organic farmers are indicating, however, that the prices they receive are still maintaining a substantial spread over conventional prices.[3]

[3] Several SD organic farmers and processors or marketers were contacted for their impressions of the current organic market. This was not intended to be a random or representative sample.

Organic prices reported by *Commodity Fax Service* for the first five months (January-May) of 2001 were lower for corn and soybeans and the same, or higher, for oats and spring wheat than in the same months of 2000. The averages of midpoint organic prices during the first five months of 2001, computed from *Commodity Fax Service* data, were as follows (averages for the same months of 2000 are shown in parentheses): corn--$2.88 ($3.88); soybeans--$12.00 ($14.75); spring wheat--$5.75 ($5.68); and oats--$2.00 ($2.00). Furthermore, the ratios of reported organic to US cash conventional prices were lower, except for oats, in early 2001 than in early 2000. The ratios for January-April 2001 were as follows (with the comparable ratios for 2000 shown in parentheses): corn--1.48:1 (1.93:1); soybeans--2.70:1 (3.05:1); spring wheat--1.92:1 (1.99:1); and oats--1.60:1 (1.57:1).

Organic farmers and processors indicate that the markets for organic crops generally are not saturated. Furthermore, organic farmers suggest that the market, after falling for about three years, may be stabilizing. Farmers also indicate that the market for organic livestock feed is growing, but that prices are not as high as for the same organic commodities sold for human food. Organic processors point out that the growth in the market for organic livestock feed is very good and that there is moderately strong demand, but that organic farmers are reluctant to sell at the prices offered.

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 also is variation in the prices received by conventional farmers, the variation is likely to be greater for organic farmers. Organic farmers use a variety of broker, distributor, and contracting arrangements. Sometimes they are able to market nearly all of their production from a particular

crop at a relatively high premium, and at times part or all of their production from the same or another organically grown crop may garner little or no premium.[4]

[4] Also, cleaning losses and transportation costs can be higher for organic than for conventional crops.

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
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
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
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

*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

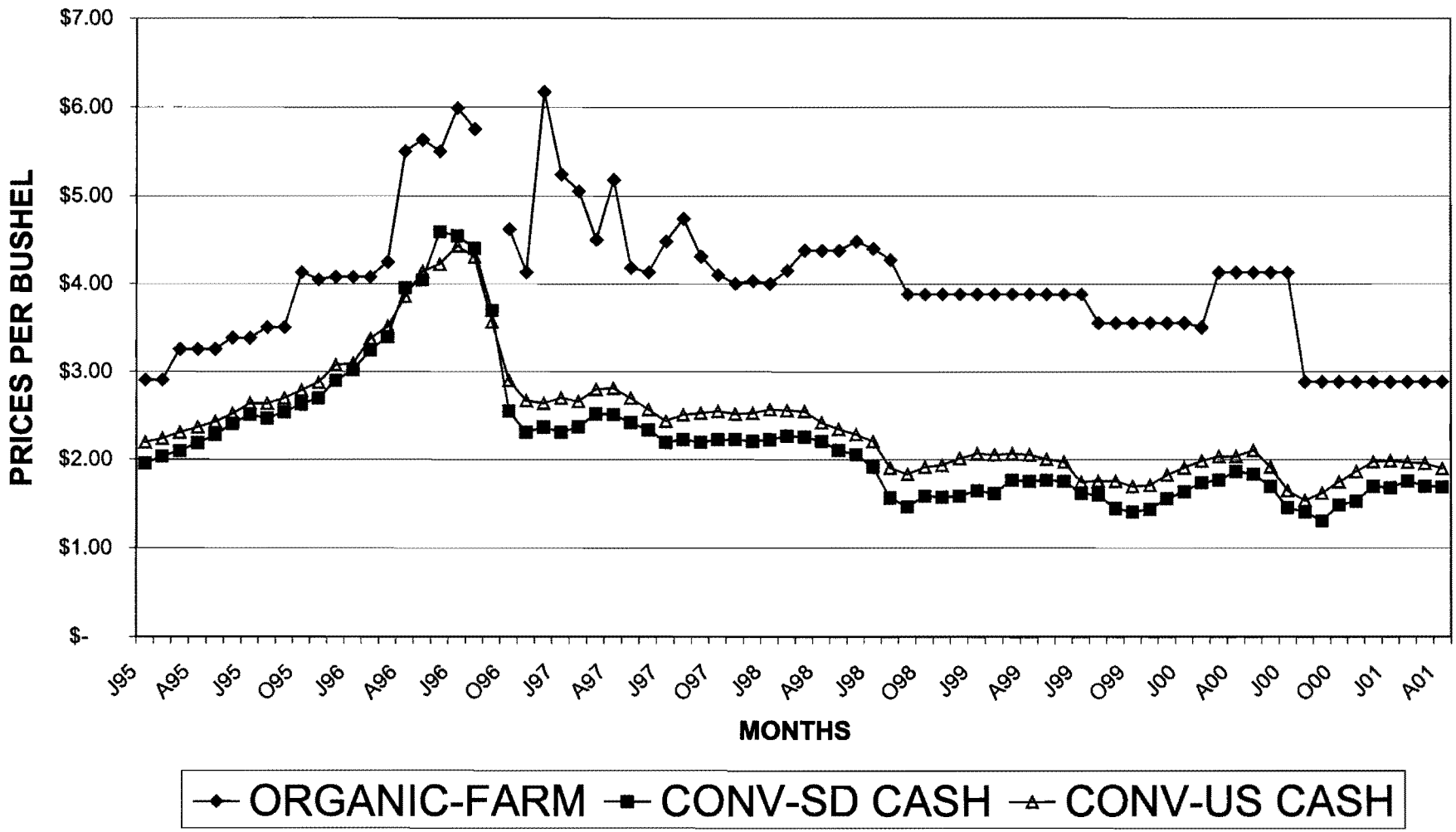

FIGURE 2. SOYBEAN PRICES

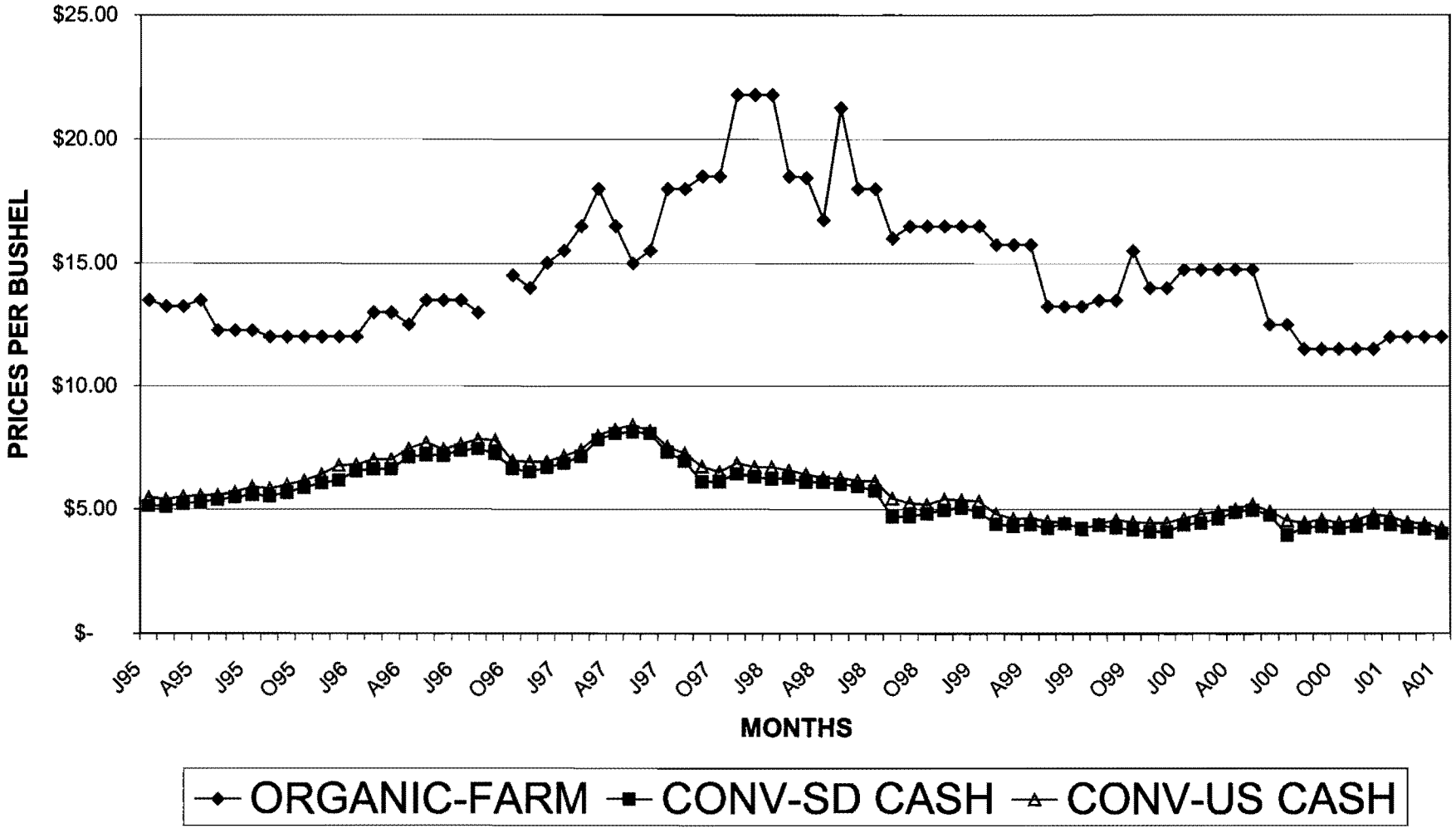

FIGURE 3. SPRING WHEAT PRICES

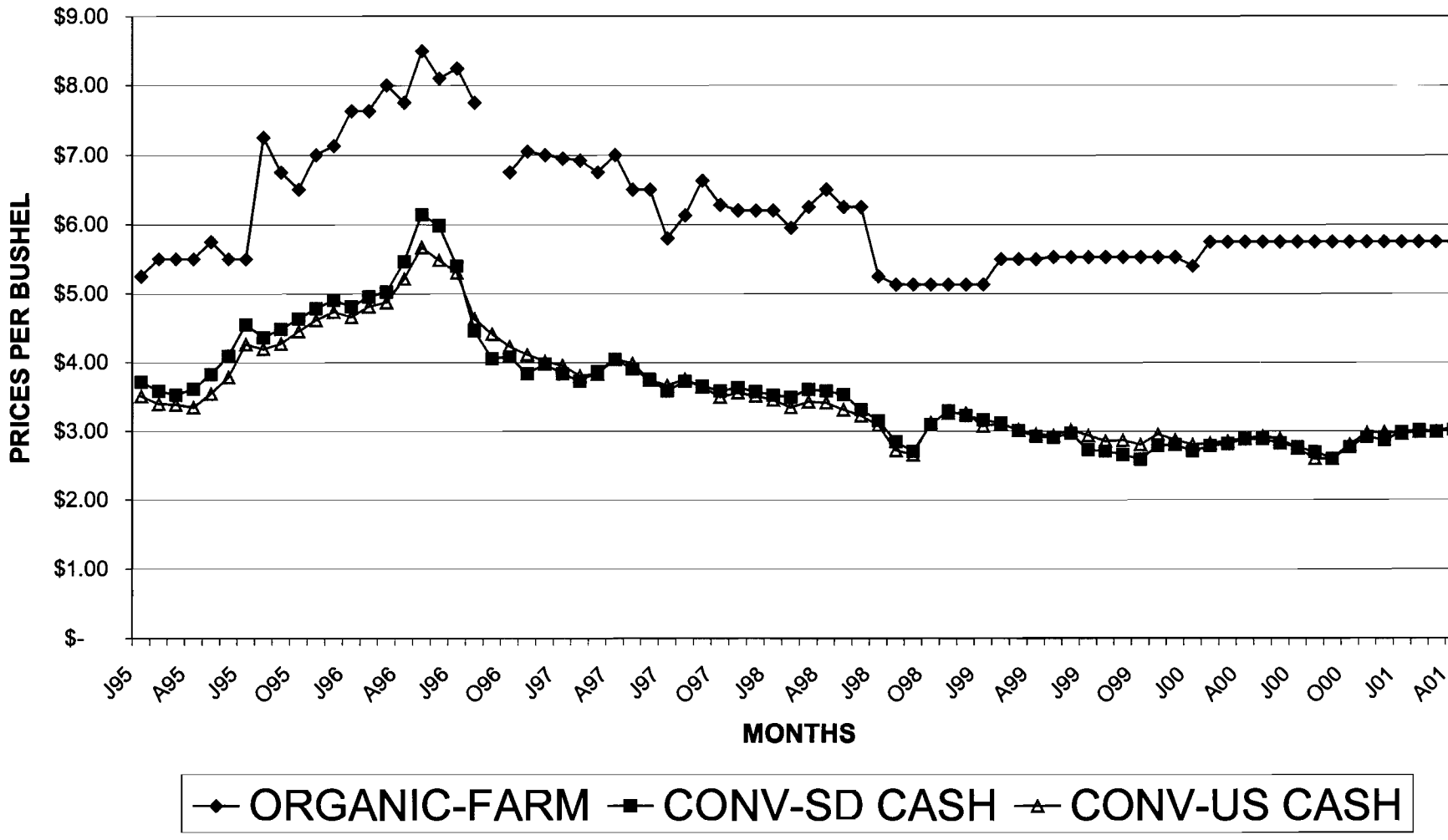

FIGURE 4. OATS PRICES