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Historical Crop Prices, Seasonal Patterns, and Futures Basis for the Nebraska Panhandle 1983-2000

Corn
Wheat
Proso Millet
Sorghum
Sunflowers
Alfalfa Hay
Dry Beans
Pinto
Great Northern

by
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Tom Holman



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Panhandle Research and Extension Center

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There are several economically significant crops grown in the Nebraska Panhandle. There are, collectively, in excess of 2 million acres in corn, wheat, sorghum, proso millet, dry edible beans, sunflowers, and alfalfa hay in the area. There are some unique geographic, ecological and demographic features that influence crop prices in the area. This publication provides a basic price analysis for the crops in the Nebraska Panhandle to help growers to be able to make informed marketing and production decisions.

Wheat and corn are the two largest crops in terms of acreage in the region, followed by alfalfa hay. Wheat and corn are both traded on the futures market and we compare local cash prices to national futures prices to establish local basis. The remaining crops (sorghum, proso millet, dry beans, sunflowers, and alfalfa hay) do not have an underlying futures contract and in some cases there is limited price information available.

The price analysis has been done using regional prices for all crops where such data is available. The goal of this publication is to show what has happened to the prices of these commodities over time and to identify predictable seasonal patterns.

Average annual prices for all listed crops were lower in 1999-2000 than in the previous year. This has lowered the five year average prices across all the crops for the second consecutive year.

Data Description

The prices used in this analysis vary in source due to the availability of price data and specific production areas for each of the crops. Prices for alfalfa hay and sorghum are the monthly values available through the Nebraska Agricultural Statistics. These

prices represent a statewide average price for the crops. This is the only long-term published data series available for alfalfa and sorghum. Sunflower prices are based on an average of the weekly price quote from Crossroads Cooperative in Sidney, Nebraska. The price series for corn and wheat are an average of weekly quotes from approximately five to eight elevators scattered throughout the Nebraska Panhandle. Proso millet prices are an average of the price at four elevators in the southern Nebraska Panhandle. Prices for dry beans are based on the average weekly quote from the six area elevators that are active in the market. Each of the weekly average prices has been used to obtain a monthly average price for each commodity. Yearly average prices are calculated from the monthly averages and presented in the tables. Prices are presented in a "crop year" format. Each crop table and figure will begin with a different month, determined by the harvest date when new crop product becomes available on the market.

Price Indices

Seasonal price trends are usually described by a monthly price index. These indices provide a summary of the relationships between prices for each month as they relate to one another. Monthly price changes which tend to repeat from year to year are estimated by the average seasonal index. Monthly price index numbers are relatively simple to understand and use. A monthly price index of 1.00 or 100% means that the price was equal to the average price for the year, while a monthly index of 0.90 or 90% means the price was 10% below the average price for the year.

A monthly price index is calculated as follows:

$$\text{Monthly Price Index} = \frac{\text{Monthly Price}}{\text{Annual Avg. Price}}$$

The price index for September 1997 corn would be calculated as follows:

$$\text{Monthly Price Index} = \frac{2.49}{2.56} = 0.97 \text{ or } 97\%$$

This price index suggests that the monthly average corn price for September 1997 was 3% below the annual average corn price for the 1996-1997 crop year.

Price indices are a useful short term marketing tool. They can be useful in estimating future prices when a year is assumed to be "a normal crop year." The estimated price for a month in the future can be determined by calculating the relative difference from the current month to a specific future month. The calculation for this price estimate is as follows:

$$\frac{\text{Estimated Price in Future Mo.}}{\text{Index of Future Mo.}} = \frac{\text{Index of Current Month} \times \text{Price in Current Mo.}}{\text{Index of Current Month}}$$

For example, estimating the future price of corn can be based on the average seasonal influence provided prices are not influenced by unusual consequences and follow a relatively normal pattern. Assume the present month is March with a 5-year seasonal average index of 1.01 or 101% and the quoted price for corn is \$2.45/bu. An estimate of the price in June is necessary to determine marketing decisions. The 5-year seasonal average index for June is 1.07 or 107%. The expected corn price for June is calculated as follows:

$$\text{June Price} = \frac{1.07 \times 2.45}{1.01} = \$2.60/\text{bu}$$

This procedure gives the estimated price due only to the average seasonal influence. Projecting prices in the future depends on more than historical data and simple price indices. Supply and demand factors such as production levels, export levels, quantity in storage, supplies and prices of competing commodities, and government programs are also important in estimating prices.

Additional insight to seasonal price patterns can be gained by looking at the variability of the seasonal index values. This variability is easiest to explain using standard deviation. Use of the standard deviation suggests that approximately two-thirds of the time the actual indices will be within a range of the average plus or minus one standard deviation. In addition, approximately 97% of the time the actual index number will be within the average plus or minus two times the standard deviation.

Grain Basis

Understanding basis is essential to making marketing decisions in the corn and wheat markets. Basis is defined as the difference between the local cash price and the underlying futures contract for that commodity. In this context, basis is calculated as follows:

$$\text{Basis} = \text{Local Cash Price} - \text{Near-by Corn/Wheat Futures Price}$$

where *Local Cash Price* is the average spot price from local elevators reporting for the period, and *Near-by Corn/Wheat Futures Price* is the average monthly futures contract price for the corresponding commodity. The contract months for corn and wheat are December, March, May, July, and September.

Basis movements and patterns are critical for determining the actual price expected from hedging commodities. If basis is stronger or weaker than expectations, significant gains or losses can be incurred from a hedging program. Much of the basis in commodity markets can be explained by spatial differences between cash markets and delivery points for futures contracts. The basis should reflect the cost of transporting the crop from the local elevator to the nearest delivery point.

Corn basis calculations in this publication reflect prices in the North Platte River valley and must consider additional supply and demand factors that are unique to this market. A large number of cattle are fed in the area, creating an excess demand situation for corn. The excess demand causes the basis to be stronger in the valley than what may be available outside the valley.

Corn

Over the past five years, the average annual corn price has ranged from a high of \$3.66 per bushel (\$6.54/cwt) in the 1995-96 crop year to a low of \$1.86 per bushel (\$3.32/cwt) in the 1999-2000 season (Table 1). Corn prices are highest in mid season, during May and June with an average premium of approximately \$0.40 per bushel (\$0.71/cwt). This premium drops off rapidly as harvest approaches and expectations for production are realized. The lowest seasonal prices are found in November, as corn is being delivered from the combine.

The 5-year seasonal price index shows a high slightly over 8% above the average in May and June to a low of nearly 11% below average in October when new crop corn is nearly ready to enter the market. This represents nearly a 19% price swing

from October to June. Figure 1 shows the actual seasonal price variation experienced over the crop year.

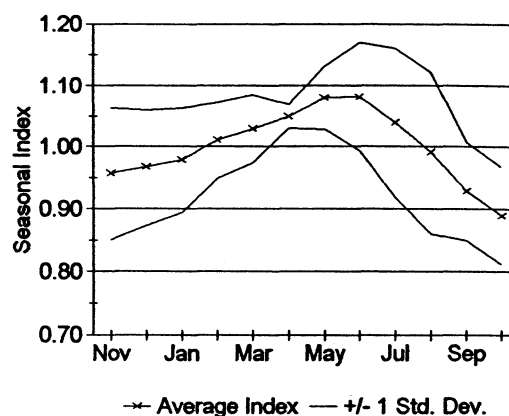


Figure 1. Seasonal Price Pattern for Corn, 1995-2000.

The basis for corn is consistently between \$0.20 and \$0.30 under the futures from October to May, with yearly average of \$0.18 under (Table 9). The June through September basis ranges from \$0.11 under to \$0.15 over. The corn basis values are displayed in Figure 2. The August basis shows the most variation over the five year period, with the strongest basis being \$0.89

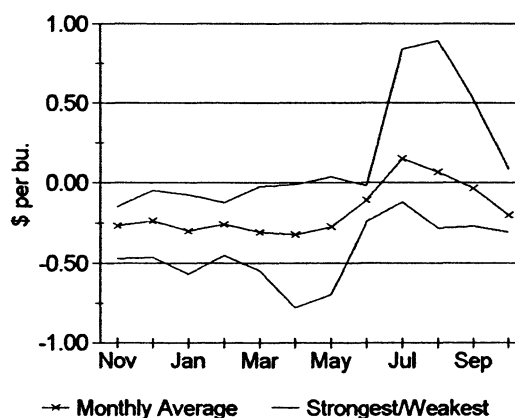


Figure 2. Historical Corn Basis, Western Nebraska, 1995-2000.

over and the weakest basis being \$0.28 under.

Wheat

Over the past 5 years, the yearly average wheat price has ranged from a low of \$2.11 per bushel in the 1999-2000 crop year to \$4.86 per bushel in the 1995-96 crop year (Table 2). In addition, there is a \$0.29 per bushel difference from the average monthly high of \$3.47 per bushel (April) to the average monthly low price of \$3.18 per bushel (September).

There is little change in the seasonal price index showing a high nearly 3% above the average in April, to a low of 3% below average in September, when new crop wheat has entered the market. This represents approximately a 6% price on an annual basis. Figure 3 shows the actual seasonal price variation experienced over the crop year.

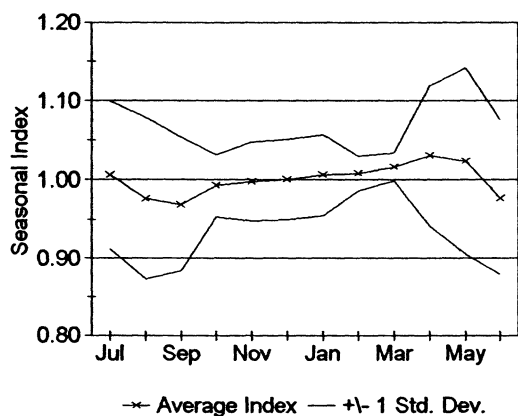


Figure 3. Seasonal Price Pattern for Wheat, 1995-2000.

Monthly average wheat basis varies between \$0.35 and \$0.58 under Kansas City Board of Trade Wheat futures (Table 10). The strongest basis is historically in December and March, with the weakest basis coming in August through November, as

new crop wheat enters the market. The variation in basis varies throughout the crop marketing year. Decisions made when there are significant differences between the strongest and weakest basis should consider the possibility that the basis may not move as expected. The wheat basis values are displayed in Figure 4.

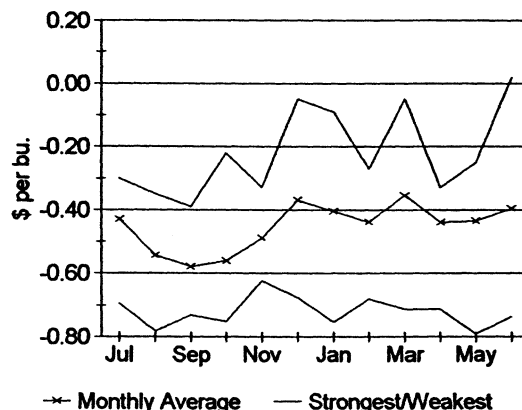


Figure 4. Historical Wheat Basis, Western Nebraska, 1995-2000.

Proso Millet

The prices of proso millet have stabilized over the past five years, following a period of dramatic price fluctuation in the early 1990's. The highest average annual price over the past five years is \$6.88 per cwt in the 1995-96 crop year, while the lowest average annual price has been \$4.00 per cwt in the 1999-2000 crop year (Table 3). The five year monthly averages range from a high of \$5.03 per cwt in August to low of \$4.40 per cwt in October as new crop proso millet is marketed.

The seasonal price indices for proso millet range from a high of 11% above the average in August to 6% below the average in October. The seasonal pattern shows nearly 17% total change from highest to lowest prices. Different from most

commodities, the highest prices are at harvest. This would imply no expected seasonal return from within year storage. Figure 5 shows the actual seasonal price variation experienced over the crop year.

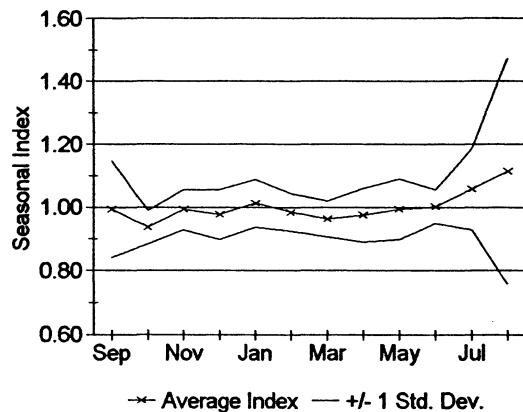


Figure 5. Seasonal Price Pattern for Proso Millet, 1995-2000.

Sorghum

The past five years have produced annual average sorghum prices that ranged from a high of \$6.28 per cwt in the 1995-96 crop year, to a low of \$2.91 per cwt in the 1999-2000 crop year (Table 4). The 5-year monthly averages show a high of \$4.31 per cwt in April, and a low of \$3.46 per cwt in October.

The seasonal price index for sorghum shows the lowest price to be in September and October, as the new crop begins to enter the market. The low is 11% below the average price, while the high index value is 8% above average in April. The total swing from high to low is approximately 19% for the sorghum crop year. Figure 6 shows the actual seasonal price variation experienced over the crop year.

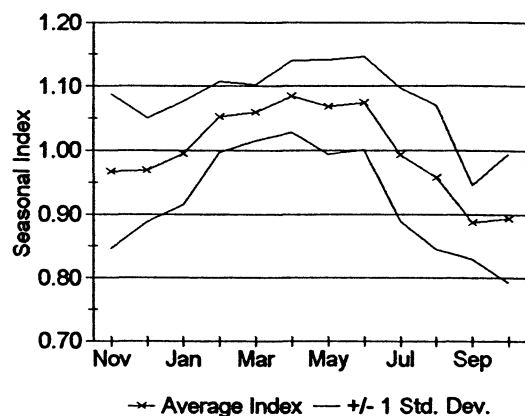


Figure 6. Seasonal Price Pattern for Sorghum, 1995-2000.

Sunflowers

Over the past five years, the low annual average price of sunflowers has been \$5.88 cwt in the 1999-2000 crop year, while the high price of \$11.97 per cwt came in the 1995-96 crop year (Table 5). The 5-year average monthly prices show a low price of \$8.68 in September, while the average monthly high price of \$10.22 has occurred in May over the past five years.

The seasonal price index pattern for sunflowers follows the standard crop pattern of the lowest prices near harvest time, and highest prices in the spring or early summer. However, the sunflower pattern seems to go up and down several times through the year, making price predictions difficult at best. There is a 15% difference between the index for the lowest month (September) and the highest month (May). Some of this variation and difference in seasonal patterns may be explained by the market structure for sunflowers. As an oilseed crop, the sunflower market is a small portion of the world oilseed market. This market is pressured by world production of safflower, canola, soybeans, peanuts, and other edible crop oils that are good substitutes for

sunflower oil. Figure 7 shows the actual seasonal price variation experienced over the crop year.

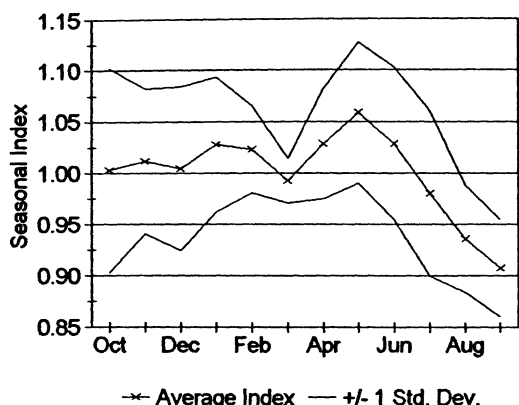


Figure 7. Seasonal Price Pattern for Sunflowers, 1995-2000.

Alfalfa Hay

Alfalfa hay prices tend to be determined by weather factors, supply of all harvested forages, livestock inventories, how it is packaged (bale size), and the quality of the product. The average annual price of alfalfa has varied from a low of \$39.50 per ton (1999-2000) to a high of \$78.33 per ton (1997-98) over the past five years (Table 6). There is little variance in the five-year average monthly prices for alfalfa hay, suggesting a fairly stable market on a year-round basis. The high 5-year monthly average price for alfalfa hay is \$61.40 per ton in June. The monthly low is \$58.20 per ton in September and October.

The monthly price indices suggest the lowest prices are found in the fall, when prices are 2-3% below the yearly average. The exception to this is June, when prices are highest as new first cutting hay enters the market. The highest index value at 5% above average, is found in June. The total swing in the price index for alfalfa hay is 8% from low to high. Figure 8 shows the seasonal price

variation experienced over the crop year.

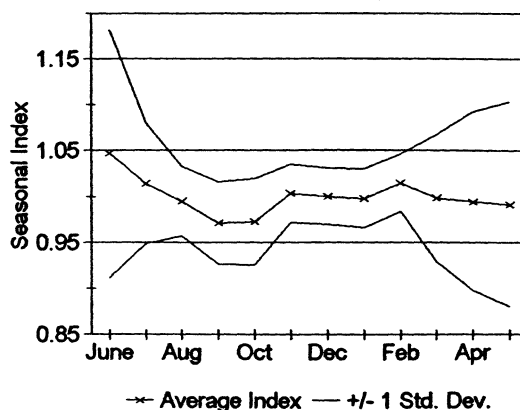


Figure 8. Seasonal Price Pattern for Alfalfa Hay, 1995-2000.

Dry Beans

Historically, the Nebraska Panhandle has been a producer of pinto and great northern beans, with small acreages in other classes. The dry bean acres will vary from one year to the next based on relative prices and growing conditions.

The dry bean market has been volatile over the past twenty years, with large swings in pricing from one year to the next. The dry bean acres on most farms can be increased or decreased very easily from year to year based on price expectations. In addition, a large portion of the domestic dry bean production is exported. These export markets are constantly changing, which affects the demand for dry beans in the United States. Different classes of beans have different export markets. Therefore, relative prosperity in different economic sectors influences export demand for different beans in different ways.

Pinto Beans

The pinto bean market has shown more volatility than the great northern

market over the past 15 years. The extremes are both higher and lower for the pinto market. The heavy dependence on export markets and the number of areas in the United States where pinto beans are grown contribute significantly to the market volatility.

Within the past five years, the highest annual average price was \$19.94 per cwt in the 1996-97 growing year, and the lowest price was \$13.92 per cwt in the 1999-2000 season (Table 7). Pinto bean prices are historically highest during the winter with nearly a \$2.00 per cwt premium over the lowest monthly prices at harvest.

The five year seasonal price index shows a high of 5% above the average in March to a low of 3% below average in October, November, and December. The total price swing is nearly 8% through the year. Figure 9 shows the actual seasonal pattern for the Nebraska Panhandle pinto bean market.

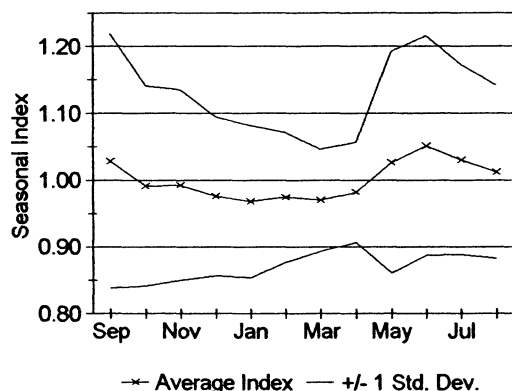


Figure 9. Seasonal Price Pattern for Pinto Beans, 1995-2000.

Great Northern Beans

Although not as prone to large price swings as seen in the pinto bean market, the great northern bean market is still volatile. The highest annual average price over the

past five years was in the 1995-96 season at \$27.22 per cwt. The lowest price was in the 1999-2000 crop year at \$16.01 per cwt. The \$11.00 per cwt swing is in excess of a 35% drop in a five year period. The highest monthly price is found in the early summer while the lowest price in this market is in January. The variation through the year is very small at \$1.66 per cwt from the highest monthly price of \$20.63 per cwt to the lowest monthly price of \$18.97 per cwt (Table 8). This suggests that once the price is set for a marketing year, the prices will remain fairly constant until the next season.

The five year seasonal price index shows little variation from the highest month to the lowest month. The highest month is June at 6% above the yearly average price, while the lowest month is march at 3% below the average. The total variation is at 9%, meaning that there is little seasonal variation in great northern bean prices in the average year. Figure 10 shows the actual seasonal price variation experienced over the crop year in the great northern bean market.

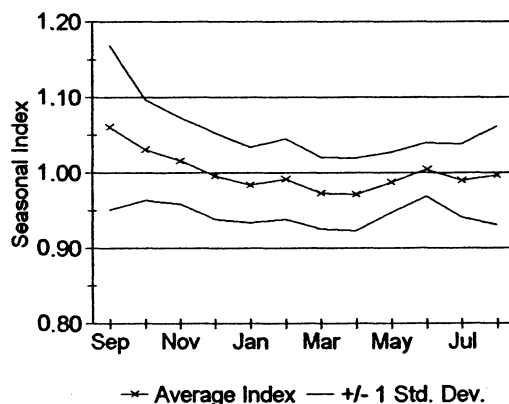


Figure 10. Seasonal Price Pattern for Great Northern Beans, 1995-2000.

Summary

With the exception of millet, all of the crops reviewed had a higher price sometime after harvest. This would suggest that producers should consider storage alternatives. However, producers need to be aware of the storage and handling costs required to hold crops. If expected price increases are greater than the storage and handling costs, then holding crops to capture market price increases would be a profitable alternative.

All of the crops reached their 5-year lows over the past year (1999-2000). The past year has found the grain market with high production and concerns over export markets, pushing market prices to historically low levels. With the high grain stocks present throughout the area, there is little expectation of significantly higher prices over the next crop year. Prices for alfalfa hay and proso millet have shown some significant strength to this point in the 2000-2001 crop year. The grain and dry bean markets have shown a slight improvement, but appear to be looking for significant increases in exports or a dramatic weather event to add strength to these markets within the next marketing year.

Table 1a. Average monthly prices of corn, Western Nebraska, 1983-2000. (dollars per cwt)

YEAR	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	Annual Average
1983-84	5.53	5.51	5.55	5.35	5.58	5.80	5.89	5.96	5.69	5.49	5.15	4.80	5.53
1984-85	4.60	4.47	4.58	4.65	4.67	4.76	4.76	4.67	4.69	4.35	4.30	3.99	4.54
1985-86	3.97	4.06	4.13	4.08	4.06	4.12	4.31	4.22	3.97	3.28	2.70	2.60	3.79
1986-87	2.70	2.67	2.68	2.56	2.60	2.68	2.97	3.04	2.90	2.68	2.68	2.83	2.75
1987-88	2.88	3.06	3.06	3.20	3.26	3.33	3.37	4.08	4.81	4.76	4.58	4.62	3.75
1988-89	4.39	4.42	4.69	4.58	4.47	4.46	4.53	4.40	4.39	3.94	3.96	3.90	4.34
1989-90	3.90	4.01	3.97	4.06	4.17	4.24	4.53	4.58	4.58	4.35	4.15	3.94	4.21
1990-91	3.96	3.96	4.03	4.05	4.12	4.30	4.28	4.15	4.08	4.17	4.12	4.10	4.11
1991-92	4.08	4.10	4.19	4.30	4.37	4.39	4.35	4.39	4.19	3.83	3.81	3.72	4.14
1992-93	3.62	3.62	3.67	3.62	3.76	3.85	3.79	3.71	3.96	4.05	3.99	4.08	3.81
1993-94	4.40	4.74	4.76	4.90	4.83	4.67	4.67	4.74	4.24	3.90	3.79	3.79	4.46
1994-95	3.71	3.85	3.94	3.97	4.08	4.24	4.33	4.53	4.81	4.83	4.98	4.92	4.35
1995-96	5.07	5.37	5.39	5.89	6.05	6.77	7.57	8.11	8.30	8.13	6.66	5.18	6.54
1996-97	4.55	4.66	4.56	4.68	4.85	4.88	4.73	4.51	4.21	4.32	4.45	4.46	4.57
1997-98	4.45	4.45	4.48	4.58	4.56	4.44	4.44	4.37	4.21	3.61	3.29	3.39	4.19
1998-99	3.51	3.49	3.48	3.40	3.44	3.43	3.44	3.46	3.25	3.27	3.18	3.02	3.36
1999-00	3.01	2.97	3.20	3.39	3.47	3.54	3.73	3.67	3.43	3.10	3.05	3.22	3.32
5-year Average	4.12	4.19	4.22	4.39	4.47	4.61	4.78	4.82	4.68	4.48	4.13	3.85	4.40
St. Dev.	0.75	0.86	0.79	0.93	0.97	1.21	1.47	1.69	1.85	1.87	1.36	0.83	1.22
----- Price Index -----													
5-year Average	0.96	0.97	0.98	1.01	1.03	1.05	1.08	1.08	1.04	0.99	0.93	0.89	
St. Dev.	0.11	0.09	0.08	0.06	0.06	0.02	0.05	0.09	0.12	0.13	0.08	0.08	

Source: Local elevators, Western Nebraska.

Table 1b. Average monthly prices of corn, Western Nebraska, 1989-2000. (dollars per bushel)

YEAR	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	Annual Average
1989-90	2.18	2.25	2.23	2.28	2.34	2.38	2.54	2.57	2.57	2.44	2.33	2.21	2.36
1990-91	2.22	2.22	2.26	2.27	2.31	2.41	2.40	2.33	2.29	2.34	2.31	2.30	2.30
1991-92	2.29	2.30	2.35	2.41	2.45	2.46	2.44	2.46	2.35	2.15	2.13	2.08	2.32
1992-93	2.02	2.02	2.05	2.02	2.10	2.15	2.12	2.07	2.22	2.27	2.24	2.29	2.13
1993-94	2.47	2.66	2.67	2.75	2.71	2.62	2.62	2.66	2.38	2.18	2.12	2.12	2.49
1994-95	2.07	2.15	2.21	2.23	2.29	2.38	2.43	2.54	2.70	2.71	2.79	2.76	2.44
1995-96	2.84	3.01	3.02	3.30	3.39	3.79	4.24	4.54	4.65	4.55	3.73	2.90	3.66
1996-97	2.55	2.61	2.55	2.62	2.72	2.73	2.65	2.53	2.36	2.42	2.49	2.50	2.56
1997-98	2.49	2.49	2.51	2.56	2.55	2.49	2.49	2.45	2.36	2.02	1.84	1.90	2.35
1998-99	1.97	1.95	1.95	1.90	1.93	1.92	1.93	1.94	1.82	1.83	1.78	1.69	1.88
1999-00	1.69	1.66	1.79	1.90	1.94	1.98	2.09	2.06	1.92	1.74	1.71	1.81	1.86
5-year Average	2.31	2.34	2.46	2.51	2.58	2.68	2.68	2.70	2.62	2.51	2.31	2.16	2.46
St. Dev.	0.42	0.48	0.52	0.54	0.68	0.68	0.82	0.95	1.04	1.05	0.76	0.46	0.68

Table 2. Average monthly prices of wheat, Western Nebraska, 1983-2000. (dollars per bushel)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Annual Average
1983-84	3.20	3.12	3.13	3.11	3.20	3.37	3.43	3.43	3.49	3.57	3.49	3.38	3.33
1984-85	3.22	3.20	3.27	3.20	3.19	3.21	3.16	3.05	3.11	3.22	3.23	3.20	3.19
1985-86	3.11	3.09	3.18	3.20	3.15	3.18	3.17	3.17	3.12	3.10	3.03	2.87	3.11
1986-87	2.71	2.59	2.63	2.66	2.77	2.84	2.76	2.70	2.82	2.75	2.78	2.28	2.69
1987-88	2.00	1.97	2.00	2.05	2.08	2.08	2.08	2.13	2.24	2.23	2.42	2.15	2.12
1988-89	2.07	2.11	2.21	2.28	2.34	2.53	2.61	2.68	2.54	2.57	2.59	3.22	2.48
1989-90	3.28	3.25	3.50	3.62	3.69	3.71	3.88	3.90	3.99	3.92	3.92	3.81	3.71
1990-91	3.72	3.70	3.70	3.71	3.77	3.81	3.71	3.54	3.40	3.46	3.28	3.04	3.57
1991-92	2.62	2.44	2.41	2.43	2.39	2.38	2.27	2.32	2.45	2.52	2.59	2.58	2.45
1992-93	2.48	2.58	2.77	3.09	3.19	3.45	3.37	3.24	3.16	3.08	2.89	2.88	3.02
1993-94	2.85	2.78	2.83	2.96	3.20	3.52	3.38	3.20	3.03	2.99	3.01	3.01	3.06
1994-95	2.96	3.13	3.46	3.67	3.62	3.64	3.47	3.41	3.27	3.30	3.47	3.85	3.44
1995-96	4.33	4.05	4.28	4.53	4.59	4.73	4.60	4.92	5.00	5.85	6.09	5.39	4.86
1996-97	4.78	4.43	4.05	4.05	3.92	4.01	4.00	3.95	4.02	4.09	3.93	3.61	4.07
1997-98	3.09	3.28	3.29	3.18	3.13	3.07	3.02	3.07	3.06	2.89	2.80	2.60	3.04
1998-99	2.39	2.15	2.10	2.48	2.63	2.66	2.68	2.46	2.53	2.47	2.35	2.36	2.44
1999-00	2.04	2.11	2.16	2.05	2.06	1.99	2.13	2.19	2.16	2.07	2.14	2.25	2.11
5-year Average	3.33	3.20	3.18	3.26	3.27	3.29	3.29	3.32	3.35	3.47	3.46	3.24	3.30
St. Dev.	1.07	0.95	0.91	0.93	0.90	0.97	0.90	1.00	1.03	1.37	1.45	1.18	0.84
----- Price Index -----													
5-year Average	1.01	0.98	0.97	0.99	1.00	1.00	1.01	1.01	1.02	1.03	1.02	0.98	
St. Dev.	0.09	0.10	0.08	0.04	0.05	0.05	0.05	0.02	0.02	0.09	0.12	0.10	

Source: Local elevators, Western Nebraska.

Table 3. Average monthly prices of proso millet, Western Nebraska, 1983-2000. (dollars per cwt)

YEAR	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	Annual Average
1983-84	4.72	4.90	5.14	5.62	6.04	6.06	5.82	6.95	7.01	7.01	6.64	4.51	5.86
1984-85	4.00	4.20	4.69	5.01	4.89	4.64	4.46	4.10	4.04	4.00	3.65	3.53	4.27
1985-86	3.40	3.72	3.65	3.65	3.63	3.45	3.10	3.00	3.05	3.10	3.10	3.03	3.33
1986-87	2.83	2.62	2.73	2.86	3.00	2.94	2.88	3.00	3.04	3.20	3.65	3.49	3.02
1987-88	3.47	4.02	6.20	6.61	6.76	6.76	6.51	6.51	6.51	6.81	7.82	6.96	6.24
1988-89	6.07	6.89	7.08	6.76	6.76	7.15	7.82	9.45	9.48	8.70	8.32	8.01	7.71
1989-90	5.39	5.51	6.71	6.89	6.91	5.95	5.11	6.26	6.28	6.31	5.82	5.07	6.01
1990-91	4.23	4.49	4.60	4.51	3.94	3.68	3.50	4.30	3.50	3.45	3.10	3.00	3.86
1991-92	3.16	2.76	2.97	3.25	3.05	3.25	3.57	3.50	3.50	3.94	4.00	4.18	3.43
1992-93	4.17	6.16	7.39	7.51	7.26	7.64	7.22	7.01	6.64	6.09	6.59	7.06	6.73
1993-94	7.20	8.71	11.01	11.76	13.95	17.27	21.35	22.52	20.02	20.02	18.02	8.01	14.99
1994-95	7.86	7.76	7.99	7.26	5.51	5.01	5.01	4.76	4.76	4.84	5.39	6.01	6.01
1995-96	5.51	6.26	7.26	6.26	7.50	7.00	7.25	7.75	8.00	7.50	7.00	5.25	6.88
1996-97	5.50	4.00	4.25	4.25	4.40	4.56	4.19	4.00	4.13	4.35	4.35	4.25	4.35
1997-98	4.19	4.25	4.25	4.25	4.19	4.00	4.00	4.00	4.00	4.05	4.10	4.25	4.13
1998-99	3.95	4.00	4.31	4.60	4.50	4.25	4.00	4.13	4.25	4.25	4.06	4.19	4.21
1999-00	3.80	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.70	5.25	7.23	4.00
5-year Average	4.59	4.40	4.71	4.57	4.82	4.66	4.59	4.68	4.78	4.77	4.95	5.03	4.71
St. Dev.	0.76	0.96	1.31	0.92	1.39	1.22	1.35	1.55	1.63	1.38	1.11	1.17	1.09
----- Price Index -----													
5-year Average	0.99	0.94	0.99	0.98	1.01	0.98	0.96	0.97	0.99	1.00	1.06	1.11	
St. Dev.	0.15	0.05	0.06	0.08	0.08	0.06	0.06	0.09	0.10	0.05	0.13	0.36	

Source: Crossroads Cooperative, Sidney, Nebraska.

Table 4. Average monthly prices of sorghum, Nebraska, 1983-2000. (dollars per cwt)

YEAR	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	Annual Average
1983-84	4.82	4.74	4.83	4.62	4.76	4.86	4.90	4.87	4.80	4.38	4.16	3.76	4.62
1984-85	3.82	3.88	4.00	3.97	4.19	4.33	4.34	4.29	4.20	3.72	3.42	3.19	3.95
1985-86	3.32	3.52	3.56	3.47	3.55	3.68	3.88	3.75	3.01	2.77	2.22	2.34	3.26
1986-87	2.41	2.37	2.29	2.32	2.45	2.50	2.62	2.73	2.49	2.29	2.25	2.40	2.43
1987-88	2.53	2.63	2.62	2.74	2.77	2.78	2.68	3.55	4.22	4.07	3.81	3.91	3.20
1988-89	3.67	3.87	3.98	3.92	4.03	4.03	3.98	3.78	3.71	3.63	3.57	3.57	3.82
1989-90	3.80	3.47	3.54	3.44	3.68	3.81	4.09	4.17	4.08	3.93	3.56	3.43	3.75
1990-91	3.48	3.55	3.65	3.78	3.90	3.93	3.75	3.61	3.61	3.94	3.94	3.87	3.75
1991-92	3.88	3.93	4.03	4.14	4.24	4.29	4.26	4.24	3.61	3.41	3.41	3.08	3.88
1992-93	3.15	3.24	3.24	3.23	3.36	3.38	3.30	3.30	3.52	3.51	3.47	3.65	3.37
1993-94	4.11	4.36	4.45	4.44	4.39	4.07	4.15	4.05	3.64	3.40	3.24	3.17	3.96
1994-95	3.13	3.39	3.48	3.61	3.67	3.74	3.93	4.08	4.30	4.42	4.77	4.91	3.96
1995-96	5.00	5.41	5.38	6.06	6.30	7.21	7.44	7.47	7.49	7.21	5.57	4.79	6.28
1996-97	4.27	4.06	4.15	4.31	4.13	4.12	4.03	4.06	4.01	3.97	3.82	4.02	4.08
1997-98	4.01	3.90	3.96	4.08	3.94	3.72	3.62	3.65	3.44	2.98	2.80	2.97	3.59
1998-99	2.99	2.96	3.03	3.05	3.15	3.18	3.06	3.07	2.67	2.88	2.77	2.52	2.94
1999-00	2.50	2.61	2.82	3.10	3.23	3.33	3.25	3.27	2.68	2.50	2.60	3.01	2.91
5-year Average	3.75	3.79	3.87	4.12	4.15	4.31	4.28	4.30	4.06	3.91	3.51	3.46	3.96
St. Dev.	0.90	0.98	0.91	1.09	1.14	1.49	1.61	1.62	1.79	1.72	1.12	0.83	1.24
-----Price Index-----													
5-year Average	0.97	0.97	1.00	1.05	1.06	1.08	1.07	1.07	0.99	0.96	0.89	0.89	
St. Dev.	0.12	0.08	0.08	0.06	0.04	0.06	0.07	0.07	0.10	0.11	0.06	0.10	

Source: Nebraska Agricultural Statistics.

Table 5. Average monthly prices of sunflowers, Western Nebraska, 1992-2000. (dollars per cwt)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	Annual Average
1992-93	9.81	10.20	10.30	10.37	11.83	12.00	10.15	10.23	11.82	13.40	14.45	15.25	11.65
1993-94	14.80	14.38	14.63	13.50	12.40	9.00	9.61	9.61	9.44	9.13	8.75	8.75	11.17
1994-95	8.75	8.83	9.00	9.33	10.75	10.50	10.43	10.85	11.50	11.00	11.00	11.25	10.27
1995-96	10.85	11.50	11.00	12.10	12.30	12.15	13.30	13.55	12.75	11.20	11.70	11.20	11.97
1996-97	10.45	10.50	10.60	10.88	10.75	10.50	10.80	11.50	11.38	10.90	10.00	9.75	10.80
1997-98	9.95	10.63	10.45	10.50	10.50	10.69	11.50	12.25	12.25	11.85	10.38	10.25	10.93
1998-99	9.69	9.50	9.50	9.50	9.00	7.95	7.81	7.84	7.52	7.00	6.90	6.72	8.24
1999-00	6.13	5.81	5.88	5.85	6.04	6.00	6.00	5.95	5.75	5.94	5.75	5.50	5.88
5-year Average	9.41	9.59	9.49	9.77	9.72	9.46	9.88	10.22	9.93	9.38	8.95	8.68	9.54
St. Dev.	1.69	1.99	1.87	2.13	2.12	2.19	2.63	2.85	2.78	2.42	2.24	2.19	2.20
----- Price Index -----													
5-year Average	1.00	1.01	1.00	1.03	1.02	0.99	1.03	1.06	1.03	0.98	0.94	0.91	
St. Dev.	0.10	0.07	0.08	0.07	0.04	0.02	0.05	0.07	0.07	0.08	0.05	0.05	

Source: Crossroads Cooperative, Sidney, Nebraska.

Table 6. Average monthly prices of alfalfa hay, Nebraska, 1983-2000. (dollars per ton)

YEAR	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	Annual Average
1984-85								51.00	50.00	46.00	42.00	42.00	46.20
1985-86	39.00	42.00	45.00	43.00	44.00	43.00	43.00	44.00	45.00	44.00	41.00	40.00	42.75
1986-87	37.00	37.00	36.00	36.00	34.00	35.00	35.00	36.00	35.00	35.00	35.00	35.00	35.50
1987-88	36.00	37.00	38.00	40.00	40.00	41.00	42.00	44.00	45.00	46.00	47.00	46.00	41.83
1988-89	48.00	63.00	72.00	74.00	71.00	70.00	71.00	72.00	71.00	72.00	72.00	79.00	69.58
1989-90	91.00	85.00	84.00	80.00	77.00	76.00	77.00	78.00	77.00	78.00	78.00	76.00	79.75
1990-91	71.00	66.00	62.00	59.00	58.00	58.00	60.00	58.00	57.00	54.00	53.00	52.00	59.00
1991-92	51.00	47.00	48.00	48.00	49.00	48.00	49.00	48.00	49.00	45.00	44.00	44.00	47.50
1992-93	44.00	46.00	45.00	46.00	46.00	46.00	46.00	49.00	50.00	52.00	51.00	51.00	47.67
1993-94	50.00	48.00	49.00	50.00	51.00	54.00	55.00	55.00	54.00	53.00	48.00	51.00	51.50
1994-95	53.00	52.00	53.00	52.00	55.00	52.00	57.00	60.00	59.00	62.00	57.00	59.00	55.92
1995-96	62.00	60.00	59.00	61.00	61.00	62.00	60.00	62.00	63.00	62.00	62.00	63.00	61.42
1996-97	63.00	67.00	68.00	67.00	64.00	66.00	69.00	71.00	73.00	75.00	74.00	74.00	69.25
1997-98	78.00	78.00	79.00	79.00	81.00	82.00	83.00	81.00	80.00	77.00	74.00	68.00	78.33
1998-99	64.00	56.00	52.00	49.00	49.00	50.00	48.00	47.00	47.00	43.00	41.00	42.00	49.00
1999-00	40.00	39.00	38.00	35.00	36.00	39.00	39.00	38.00	40.00	41.00	44.00	45.00	39.50
5-year Average	61.40	60.00	59.20	58.20	58.20	59.80	59.80	59.80	60.60	59.60	59.00	58.40	59.50
St. Dev.	12.19	9.16	10.15	10.80	10.81	11.48	11.88	11.37	11.41	12.16	12.27	10.83	11.21
----- Price Index -----													
5-year Average	1.05	1.01	0.99	0.97	0.97	1.00	1.00	1.00	1.01	1.00	0.99	0.99	
St. Dev.	0.14	0.07	0.04	0.04	0.05	0.03	0.03	0.03	0.03	0.07	0.10	0.11	

Source: Nebraska Agricultural Statistics

Table 7. Average monthly prices of pinto beans, Western Nebraska, 1983-2000. (dollars per cwt)

YEAR	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	Annual Average
1983-84	20.06	19.75	19.90	19.44	18.65	18.50	17.31	17.94	18.15	16.44	15.10	14.88	18.01
1984-85	14.38	14.75	14.03	14.19	14.90	15.19	15.50	16.80	17.63	18.06	19.60	18.31	16.11
1985-86	18.06	19.60	18.31	17.13	18.50	18.63	17.56	18.00	16.06	16.38	16.30	16.13	17.55
1986-87	14.54	16.31	15.75	15.30	14.31	14.13	13.80	13.50	13.88	15.00	15.00	16.50	14.83
1987-88	13.60	13.44	12.00	11.50	11.13	11.25	13.05	13.06	15.25	19.40	25.50	23.00	15.18
1988-89	30.00	29.88	29.00	28.67	29.00	31.00	33.63	34.00	35.20	36.00	36.00	32.60	32.08
1989-90	25.00	26.40	27.75	28.00	33.20	35.63	36.75	37.00	38.20	40.00	38.80	38.00	33.73
1990-91	15.75	15.00	15.00	14.67	14.10	15.75	15.88	16.10	17.63	17.75	16.40	14.38	15.70
1991-92	13.38	12.95	12.50	12.25	11.50	13.17	13.80	13.75	14.00	14.00	14.88	15.88	13.50
1992-93	18.40	19.00	20.00	20.00	20.00	19.88	18.60	17.75	17.00	17.00	17.00	19.40	18.67
1993-94	22.75	29.00	29.50	29.00	29.63	30.00	28.40	28.00	28.13	28.00	22.83	21.20	27.20
1994-95	16.38	17.00	17.00	16.00	15.10	15.00	15.75	16.00	16.60	17.00	16.75	15.90	16.21
1995-96	16.25	16.60	15.00	15.00	15.20	16.50	18.00	21.80	26.75	27.00	25.80	24.75	19.89
1996-97	25.00	22.25	22.00	20.31	19.84	19.80	18.75	18.00	18.40	19.34	18.25	17.32	19.94
1997-98	15.25	15.20	17.50	19.25	21.40	22.00	21.75	20.25	20.00	21.00	20.40	19.00	19.42
1998-99	16.25	16.00	16.00	15.95	14.82	13.93	13.48	13.09	12.75	12.95	13.68	13.30	14.35
1999-00	16.04	15.40	15.15	13.94	13.15	13.15	13.15	13.30	13.15	13.15	13.00	14.48	13.92
5-year Average	17.76	17.09	17.13	16.89	16.88	17.08	17.03	17.29	18.21	18.69	18.23	17.77	17.50
St. Dev.	3.64	2.63	2.59	2.47	3.17	3.39	3.28	3.55	5.13	5.26	4.69	4.03	3.65
----- Price Index -----													
5-year Average	1.03	0.99	0.99	0.98	0.97	0.97	0.97	0.98	1.03	1.05	1.03	1.01	
St. Dev.	0.19	0.15	0.14	0.12	0.11	0.10	0.08	0.08	0.17	0.16	0.14	0.13	

Source: Local elevators, Western Nebraska.

Table 8. Average monthly prices of great northern beans, Western Nebraska, 1983-2000.
(dollars per cwt)

YEAR	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	Annual Average
1983-84	24.19	22.00	21.20	20.88	19.55	19.44	17.19	17.50	17.85	16.38	14.55	13.69	18.70
1984-85	13.91	13.08	12.84	12.63	13.60	14.25	13.94	14.20	15.25	15.69	17.30	17.66	14.53
1985-86	18.34	22.25	21.69	22.56	23.00	20.50	21.38	22.60	21.63	21.75	20.90	18.75	21.28
1986-87	16.60	20.75	20.00	19.70	18.38	18.00	17.40	17.00	16.50	16.50	16.50	16.50	17.82
1987-88	17.50	17.31	15.25	15.00	14.75	14.75	15.00	15.00	16.38	17.00	23.13	23.00	17.01
1988-89	24.75	26.00	24.40	24.00	24.40	25.50	26.00	26.00	24.00	23.00	22.00	22.00	24.34
1989-90	22.00	22.40	22.00	22.00	23.60	25.00	25.00	25.00	25.00	25.00	24.20	20.00	23.43
1990-91	16.33	14.70	15.00	15.50	15.80	15.88	16.94	16.10	17.38	17.75	16.40	15.00	16.06
1991-92	14.38	14.50	13.44	13.08	12.63	13.00	13.80	13.94	14.00	13.81	14.00	14.00	13.71
1992-93	15.75	18.00	18.00	18.00	17.50	15.75	13.70	13.50	13.50	13.65	14.44	15.80	15.63
1993-94	18.50	20.50	22.00	22.00	22.63	23.00	23.00	23.00	23.00	23.00	23.25	22.60	22.21
1994-95	20.88	23.00	25.80	26.83	27.00	27.00	27.25	30.00	30.00	30.00	30.00	30.00	27.31
1995-96	27.75	30.00	29.00	29.00	29.00	29.00	26.00	25.70	26.00	26.00	24.80	24.40	27.22
1996-97	22.83	19.40	19.00	18.05	17.24	17.20	18.00	18.00	18.00	18.75	18.25	17.40	18.51
1997-98	17.00	17.00	17.00	17.00	18.04	19.60	20.00	20.00	20.00	20.00	20.00	20.00	18.80
1998-99	17.75	18.00	18.00	18.00	17.50	16.75	16.00	16.00	16.50	17.00	17.00	18.00	17.21
1999-00	17.80	16.84	16.61	15.81	15.15	15.15	15.12	15.15	15.80	16.07	16.00	16.59	16.01
5-year Average	20.63	20.25	19.92	19.57	19.39	19.54	19.02	18.97	19.26	19.56	19.21	19.28	19.55
St. Dev.	4.12	4.96	4.61	4.78	4.91	4.94	3.87	3.76	3.66	3.49	3.10	2.80	4.08
----- Price Index -----													
5-year Average	1.06	1.03	1.02	1.00	0.98	0.99	0.97	0.97	0.99	1.00	0.99	1.00	
St. Dev.	0.11	0.07	0.06	0.06	0.05	0.05	0.05	0.05	0.04	0.04	0.05	0.07	

Source: Local elevators, Western Nebraska.

Table 9. Average monthly near-by Chicago futures prices, cash prices and basis for corn, Western Nebraska, 1993-2000. (dollars per bushel)

Futures Price													
YEAR	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	Annual Average
1995-96	3.31	3.47	3.59	3.75	3.94	4.57	4.94	4.70	3.81	3.66	3.21	2.82	3.81
1996-97	2.70	2.66	2.63	2.83	3.03	2.98	2.81	2.62	2.46	2.60	2.67	2.80	2.73
1997-98	2.76	2.64	2.72	2.69	2.58	2.50	2.45	2.47	2.34	2.08	1.97	2.18	2.45
1998-99	2.19	2.15	2.17	2.13	2.21	2.19	2.19	2.18	1.94	2.11	2.05	2.00	2.13
1999-00	1.92	1.99	2.22	2.19	2.32	2.29	2.38	2.09	1.81	1.79	1.84	2.01	2.07
Cash Price													
YEAR	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	Annual Average
1995-96	2.84	3.01	3.02	3.30	3.39	3.79	4.24	4.54	4.65	4.55	3.73	2.90	3.66
1996-97	2.55	2.61	2.55	2.62	2.72	2.73	2.65	2.53	2.36	2.42	2.49	2.50	2.56
1997-98	2.49	2.49	2.51	2.56	2.55	2.49	2.49	2.45	2.36	2.02	1.84	1.90	2.35
1998-99	1.97	1.95	1.95	1.90	1.93	1.92	1.93	1.94	1.82	1.83	1.78	1.69	1.88
1999-00	1.69	1.66	1.79	1.90	1.94	1.98	2.09	2.06	1.92	1.74	1.71	1.81	1.86
Basis													
YEAR	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	Annual Average
1995-96	-0.47	-0.46	-0.57	-0.45	-0.55	-0.78	-0.70	-0.16	0.84	0.89	0.52	0.08	-0.15
1996-97	-0.15	-0.05	-0.08	-0.21	-0.31	-0.25	-0.16	-0.09	-0.10	-0.18	-0.18	-0.30	-0.17
1997-98	-0.27	-0.15	-0.21	-0.13	-0.03	-0.01	0.04	-0.02	0.02	-0.06	-0.13	-0.28	-0.10
1998-99	-0.22	-0.20	-0.22	-0.23	-0.28	-0.27	-0.26	-0.24	-0.12	-0.28	-0.27	-0.31	-0.24
1999-00	-0.23	-0.33	-0.42	-0.29	-0.37	-0.31	-0.29	-0.03	0.11	-0.05	-0.13	-0.20	-0.21
Average	-0.27	-0.24	-0.30	-0.26	-0.31	-0.32	-0.28	-0.11	0.15	0.06	-0.04	-0.20	-0.18
Strongest	-0.15	-0.05	-0.08	-0.13	-0.03	-0.01	0.04	-0.02	0.84	0.89	0.52	0.08	
Weakest	-0.47	-0.46	-0.57	-0.45	-0.55	-0.78	-0.70	-0.24	-0.12	-0.28	-0.27	-0.31	

Table 10. Average monthly near-by Kansas City futures prices, cash prices and basis for wheat, Western Nebraska, 1993-2000. (dollars per bushel)

Futures
Price

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Annual Average
1995-96	4.67	4.56	4.87	5.09	5.05	5.02	4.95	5.35	5.05	6.20	6.36	5.70	5.24
1996-97	5.08	4.78	4.44	4.27	4.25	4.06	4.09	4.22	4.22	4.48	4.18	3.59	4.31
1997-98	3.42	3.75	3.75	3.73	3.59	3.48	3.38	3.45	3.42	3.22	3.23	3.07	3.46
1998-99	2.87	2.75	2.83	3.23	3.20	3.08	3.15	2.89	2.98	2.88	2.78	2.84	2.96
1999-00	2.74	2.89	2.89	2.77	2.68	2.66	2.87	2.87	2.84	2.79	2.97	3.03	2.83

Cash
Price

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Annual Average
1995-96	4.33	4.05	4.28	4.53	4.59	4.73	4.60	4.92	5.00	5.85	6.09	5.39	4.86
1996-97	4.78	4.43	4.05	4.05	3.92	4.01	4.00	3.95	4.02	4.09	3.93	3.61	4.07
1997-98	3.09	3.28	3.29	3.18	3.13	3.07	3.02	3.07	3.06	2.89	2.80	2.60	3.04
1998-99	2.39	2.15	2.10	2.48	2.63	2.66	2.68	2.46	2.53	2.47	2.35	2.36	2.44
1999-00	2.04	2.11	2.16	2.05	2.06	1.99	2.12	2.19	2.13	2.08	2.18	2.30	2.12

Basis

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Annual Average
1995-96	-0.34	-0.51	-0.59	-0.56	-0.46	-0.29	-0.35	-0.43	-0.05	-0.35	-0.27	-0.31	-0.38
1996-97	-0.30	-0.35	-0.39	-0.22	-0.33	-0.05	-0.09	-0.27	-0.20	-0.39	-0.25	0.02	-0.24
1997-98	-0.33	-0.47	-0.46	-0.55	-0.46	-0.41	-0.36	-0.38	-0.36	-0.33	-0.43	-0.47	-0.42
1998-99	-0.48	-0.60	-0.73	-0.75	-0.57	-0.42	-0.47	-0.43	-0.45	-0.41	-0.43	-0.48	-0.52
1999-00	-0.69	-0.78	-0.72	-0.72	-0.62	-0.67	-0.75	-0.68	-0.71	-0.71	-0.79	-0.73	-0.72
Average	-0.43	-0.54	-0.58	-0.56	-0.49	-0.37	-0.40	-0.44	-0.35	-0.44	-0.43	-0.40	-0.45
Strongest	-0.30	-0.35	-0.39	-0.22	-0.33	-0.05	-0.09	-0.27	-0.05	-0.33	-0.25	0.02	
Weakest	-0.69	-0.78	-0.73	-0.75	-0.62	-0.67	-0.75	-0.68	-0.71	-0.71	-0.79	-0.73	