

Custom Rates 2016



Kansas Department of Agriculture
And the
Kansas State University
Agricultural Land use Survey Center

KANSAS STATE
Agricultural Economics


Kansas
Department of Agriculture

2016

RATES PAID BY KANSAS FARMERS FOR CUSTOM WORK



Kansas Department of Agriculture
In Cooperation with
Kansas State University Agricultural Land Use Survey Center

KANSAS DISTRICTS

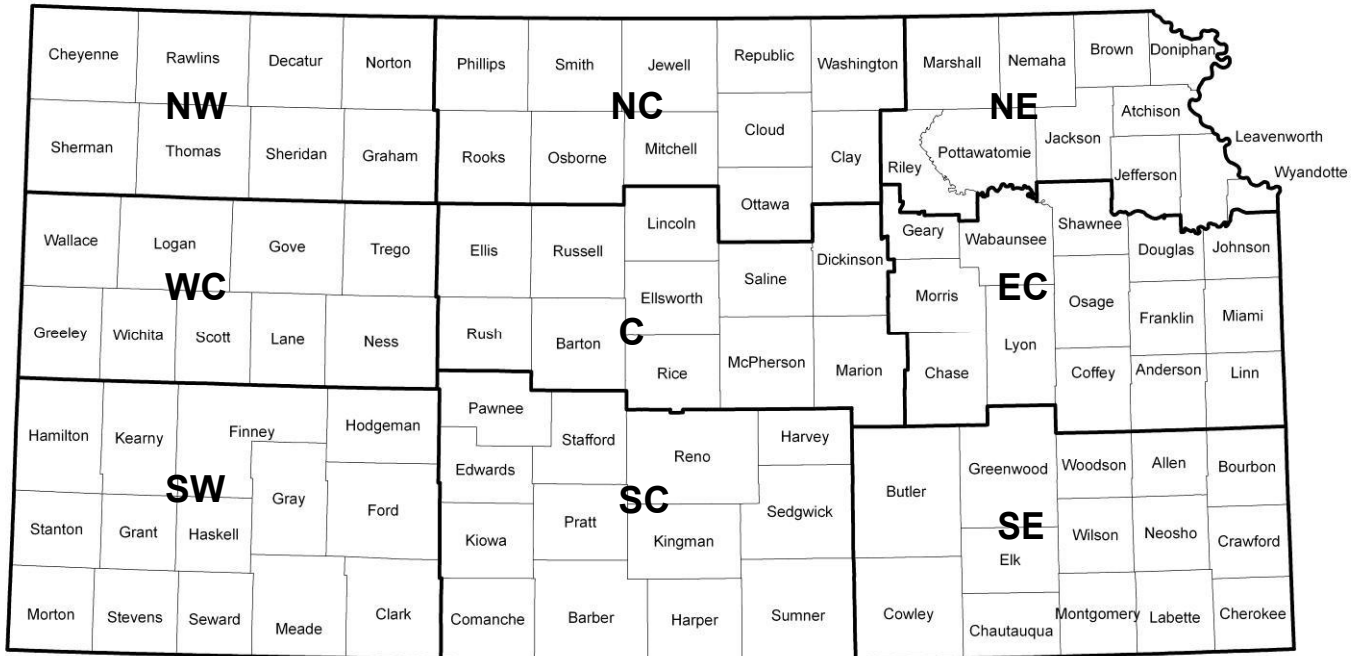


TABLE OF CONTENTS

	Page
Introduction	3
Grain Harvesting	
Wheat	4
Grain Sorghum.....	5
Corn.....	6
Soybeans	7
Sunflower	8
Seed Cleaning	
Wheat and Soybeans.....	9
Historical Averages	9
Grain Hauling	
Wheat, Grain Sorghum, Corn, Soybeans, and Sunflower	10
Silage Operations	11
Haying	
Mowing or Swathing Hay and Forage.....	12
Swathing, Conditioning, Side Raking and Baling (square bales).....	12
Baling (large round bales)	13
Hauling	14
Entire Haying Operation	14
Rotary Mowing	15
Tree Shearing.....	15
Land Tillage	
Disking	16
Chiseling	16
Strip and Vertical Tillage	17
Cultivation and Undercutting.....	18
Historical Averages	18
Planting	
Regular-Till Planting	19
Grass and Legume Seeding	19
Historical Averages	20
Minimum-Till or No-Till Planting.....	21
Historical Averages	21
Cover Crops.....	22
Chemical Applications	
Row Crop Cultivation	23
Dry and Liquid Fertilizers	23
Anhydrous Ammonia.....	24
Herbicides	24
Insecticides.....	25
Historical Averages	25
Feed Preparation	
Grinding, Rolling, and Mixing.....	26
Pelleting and Sacking.....	27
Historical Averages	27
Feed Delivery.....	28
Machinery Rental	29
Terracing and Dozing.....	30
Manure Removal and Spreading.....	30
Livestock Hauling	31
Fence Building	31

INTRODUCTION

With the rising cost of machinery and the uncertainty of local workers, custom agricultural work has become a staple for today's farm. This publication reports the average rates for Kansas agricultural custom work in 2016. Previous versions of this survey and report were written and conducted by the National Agricultural Statistics Service-Kansas office (NASS). NASS surveyed custom operations from a database that was not provided to the Agricultural Land Use Survey Center (ALUSC), who wrote and conducted the 2016 Survey. The current survey was sent to custom operators from a database compiled by the Kansas Department of Agriculture (KDA) and the ALUSC.

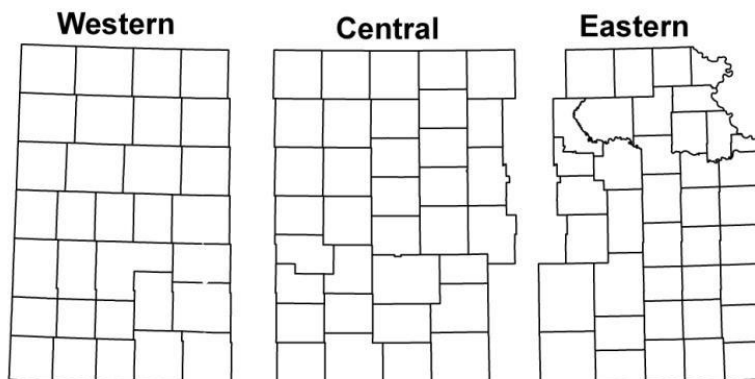
KDA and the ALUSC extend a special thanks to Kansas farmers, ranchers, custom operators, co-ops, and elevators for their responses to the 2016 Kansas Farm Custom Rates Survey. We have received many comments about the Custom Rates report from the agricultural community. We appreciate this feedback and encourage readers to continue sharing their ideas and suggestions regarding this survey.

The data in this report provide additional information to Kansas farmers, ranchers, and custom service businesses for making decisions about rate charges. The prices reported here should not be regarded as official or established rates. The average figures in this book give equal weight to all reports received.

The prices in this report include charges for machinery, power, fuel, and the operator. These prices do not include the costs of chemicals, seeds, and other materials unless otherwise specified. The one exception is hay baling materials. Exchange work between farmers is not considered custom work for the purposes of this report.

There are large variations in the rates charged for specific jobs. For many items, the state averages may not be typical of any particular locale. There are many reasons for price differences. Some farmers may charge lower prices to neighbors, relatives, or close friends. Soil conditions and field sizes are also significant factors. The number of responses may also lead to variation in the rates.

The average custom rates charged in 2016 have generally increased compared to rates reported in 2013, the last time the survey was conducted. This report contains historical tables and graphs which show the results of previous surveys. Some reports are included in more than one district because reports are counted in districts where custom work was performed. Kansas is classified into three regions: western region, central region, and eastern region as shown below.



GRAIN HARVESTING

WHEAT: Two methods are commonly used to charge for harvesting grains: a flat rate charge and a base rate with extra charge for high yield. Custom harvesters charged an average of \$23.17 per acre for harvesting wheat in 2016, \$0.86 lower than 2013. In 2016, custom harvesters also charged an average of \$0.232 per bushel of wheat for yields greater than 21 bushels per acre. The higher additional charge may explain the lower base rate in 2016. The average flat rate in 2016 for harvesting wheat was \$24.67 per acre.

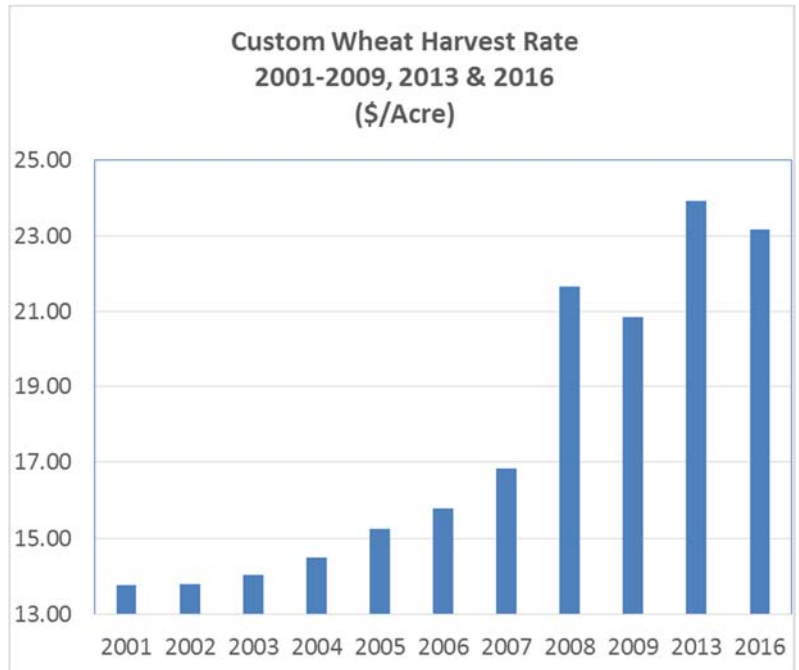
Custom Rates for Wheat Harvest, 2016, by District

District	Base Rate with Extra Charge for High Yield (if any)						Flat Rate Charge		
	Base Rate (\$/Acre)			Extra Charge for High Yield			Dollar Per Acre		
	No. of Reports	Range	Average	No. of Reports	\$/Bushel	Above Bushels	No. of Reports	Range	Average
NW	24	21-25	23.33	24	0.230	22	7	23-25	23.71
WC	33	16-26	22.94	33	0.231	20	5	21-25	23.55
SW	17	18-28	23.59	19	0.237	22	4	23-27	25.00
NC	11	22-25	23.36	10	0.225	21	4	23-24	23.75
C	15	20-26	23.00	16	0.222	20	6	21-25	23.17
SC	25	12-26	22.72	26	0.236	21	4	21-25	24.00
NE	3	24-25	24.67	3	0.247	33	7	24-25	24.86
EC	1/			1/			19	22-30	25.57
SE	1/			1/			10	24-28	25.50
State	131	12-28	23.17	131	0.232	21	66	21-30	24.67

^{1/} Insufficient number of reports.

Custom Wheat Harvest Historical Rates

Year	Dollars Per Acre	Extra Charge for High Yield	
		Dollar per Bushel	Above Bushels
1993	13.05	0.121	20
1994	13.03	0.122	21
1995	13.02	0.122	20
1996	13.32	0.124	20
1997	13.33	0.126	21
1998	13.32	0.126	21
1999	13.29	0.126	21
2000	13.68	0.128	21
2001	13.77	0.131	20
2002	13.80	0.131	22
2003	14.04	0.136	23
2004	14.48	0.136	21
2005	15.24	0.144	21
2006	15.78	0.149	21
2007	16.85	0.160	21
2008	21.65	0.211	21
2009	20.86	0.200	22
2013	23.93	0.227	23
2016	23.17	0.232	21



GRAIN HARVESTING (Continued)

GRAIN SORGHUM: Custom harvesters charged an average of \$24.39 per acre for harvesting grain sorghum in 2016, up \$0.06 from 2013. Frequently, custom harvesters include an additional charge per bushel to customers with high yields. In 2016 that charge was an average of \$0.23 per bushel of grain sorghum for yields greater than 41 bushels per acre. The 2016 flat rate charge per acre was \$25.67.

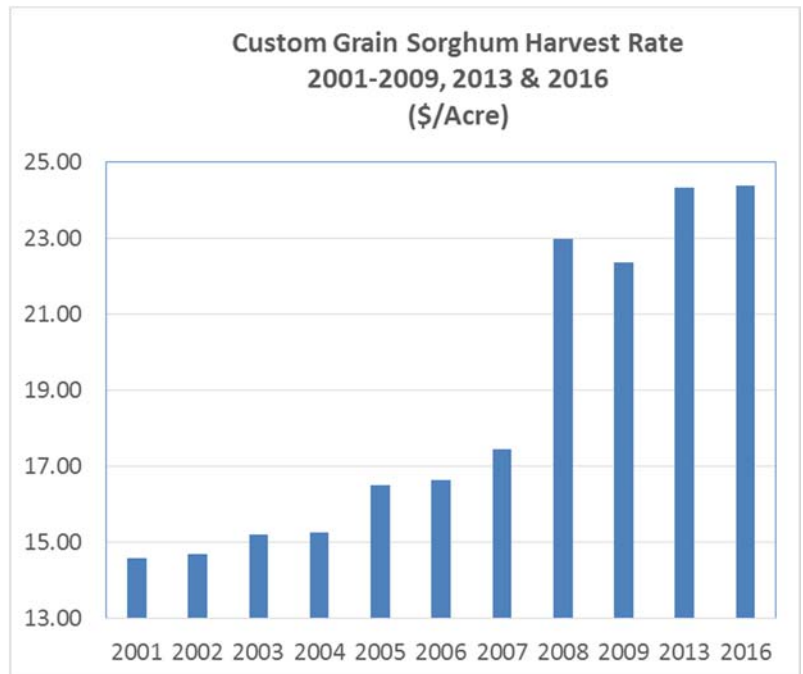
Custom Rates for Grain Sorghum Harvest, 2016, by District

District	Base Rate with Extra Charge for High Yield (if any)						Flat Rate Charge		
	Base Rate (\$/Acre)			Extra Charge for High Yield			Dollar Per Acre		
	No. of Reports	Range	Average	No. of Reports	\$/Bushel	Above Bushels	No. of Reports	Range	Average
NW	16	22-25	23.50	16	0.233	41	6	22-30	24.50
WC	22	21-35	25.50	22	0.219	50	3	24-25	24.67
SW	13	20-35	24.77	15	0.233	43	6	20-35	25.50
NC	10	21-25	22.90	9	0.231	41	6	21-35	25.67
C	9	16-26	22.11	10	0.228	36	5	21-35	24.80
SC	8	22-35	26.75	11	0.234	29	6	22-30	27.83
NE	3	24-25	24.67	3	0.247	40	4	24-25	24.75
EC	1/			1/			7	25-30	25.93
SE	-	-	-	1/			1/		
State	82	16-35	24.39	88	0.229	41	44	20-35	25.67

^{1/} Insufficient number of reports.

Custom Grain Sorghum Harvest Historical Rates

Year	Dollars Per Acre	Extra Charge for High Yield	
		Dollar per Bushel	Above Bushels
1993	14.62	0.120	34
1994	14.27	0.120	35
1995	14.27	0.119	36
1996	14.21	0.123	36
1997	14.35	0.125	37
1998	14.42	0.124	37
1999	14.45	0.127	36
2000	14.64	0.126	34
2001	14.58	0.129	35
2002	14.68	0.130	35
2003	15.19	0.137	35
2004	15.27	0.135	36
2005	16.51	0.146	37
2006	16.64	0.148	36
2007	17.45	0.159	36
2008	22.99	0.216	36
2009	22.37	0.204	35
2013	24.33	0.230	35
2016	24.39	0.229	41



GRAIN HARVESTING (Continued)

CORN: Custom harvesters charged an average of \$26.89 per acre for harvesting corn in 2016, up \$0.54 from 2009 but down \$3.13 from 2013. The average additional charge to customers with high yields was \$0.24 per bushel of corn for yields greater than 81 bushels per acre. The 2016 flat rate charge was 35 cents per bushel and \$29.29 per acre.

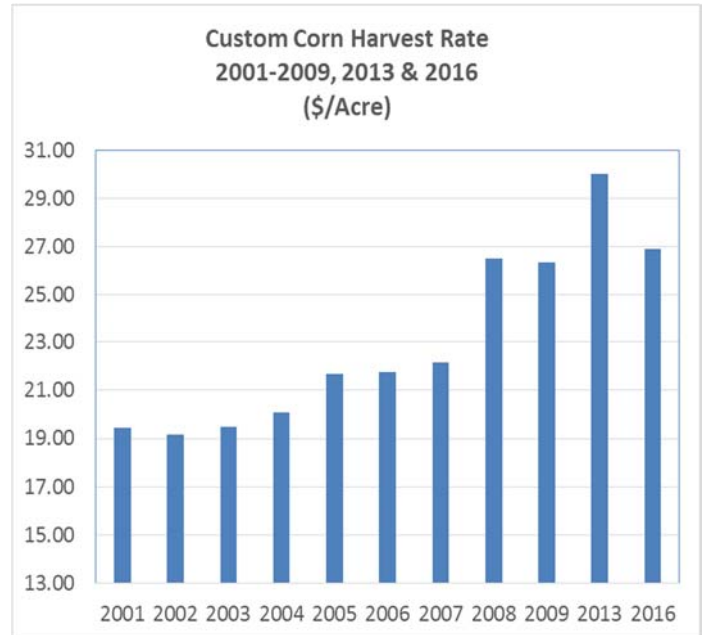
Custom Rates for Corn Harvest, 2016, by District

District	Base Rate with Extra Charge for High Yield (if any)						Flat Rate Charge					
	Base Rate (\$/Acre)			Extra Charge for High Yield			Dollar Per Acre			Dollar Per Bushel		
	No. of Reports	Range	Average	No. of Reports	\$/Bushel	Above Bushels	No. of Reports	Range	Average	No. of Reports	Range	Average
NW	8	24-36	29.63	10	0.236	95	11	24-38	32.18	6	0.26-0.40	0.38
WC	5	20-29	25.20	6	0.227	57	3	24-35	29.67	16	0.26-0.45	0.35
SW	^{1/}			^{1/}			^{1/}			11	0.26-0.45	0.39
NC	5	21-30	26.40	4	0.238	76	4	21-30	23.75	^{1/}		
C	3	15-25	20.33	4	0.228	47	6	21-28	24.67	6	0.25-0.39	0.31
SC	^{1/}			^{1/}			6	30-50	37.00	13	0.26-0.45	0.36
NE	^{1/}			4	0.260	110	5	17-32	24.60	-	-	-
EC	-	-	-	^{1/}			17	25-60	29.18	-	-	-
SE	-	-	-	-	-	-	10	24-35	28.00	5	0-0.30	0.23
State	27	15-36	26.89	33	0.240	80	63	17-60	29.29	59	0.18-0.45	0.35

^{1/} Insufficient number of reports

Custom Corn Harvest Historical Rates

Year	Dollars Per Acre	Extra Charge for High Yield		Flat Rate Charge
		Dollar per Bushel	Above Bushels	Dollar per Bushel
1993	18.21	0.118	58	0.21
1994	18.23	0.101	65	0.22
1995	17.79	0.124	62	0.21
1996	18.77	0.126	63	0.23
1997	18.72	0.123	66	0.23
1998	18.96	0.127	59	0.23
1999	19.28	0.120	70	0.24
2000	19.23	0.147	66	0.23
2001	19.43	0.119	48	0.23
2002	19.15	0.148	87	0.24
2003	19.50	0.143	69	0.24
2004	20.09	0.143	76	0.24
2005	21.68	0.142	76	0.26
2006	21.75	0.150	74	0.27
2007	22.14	0.164	71	0.29
2008	26.51	0.203	68	0.32
2009	26.35	0.192	73	0.29
2013	30.02	0.217	71	0.36
2016	26.89	0.240	80	0.35



GRAIN HARVESTING (Continued)

SOYBEANS: Custom harvesters charged an average of \$26.58 per acre for harvesting soybeans in 2016, up \$0.58 from 2009 and down \$2.23 from 2013. The average additional charge per bushel to customers with yields in excess of 28 bushels per acre in 2016 was 23.3 cents per bushel. The average flat rate charge was \$29.17 per acre.

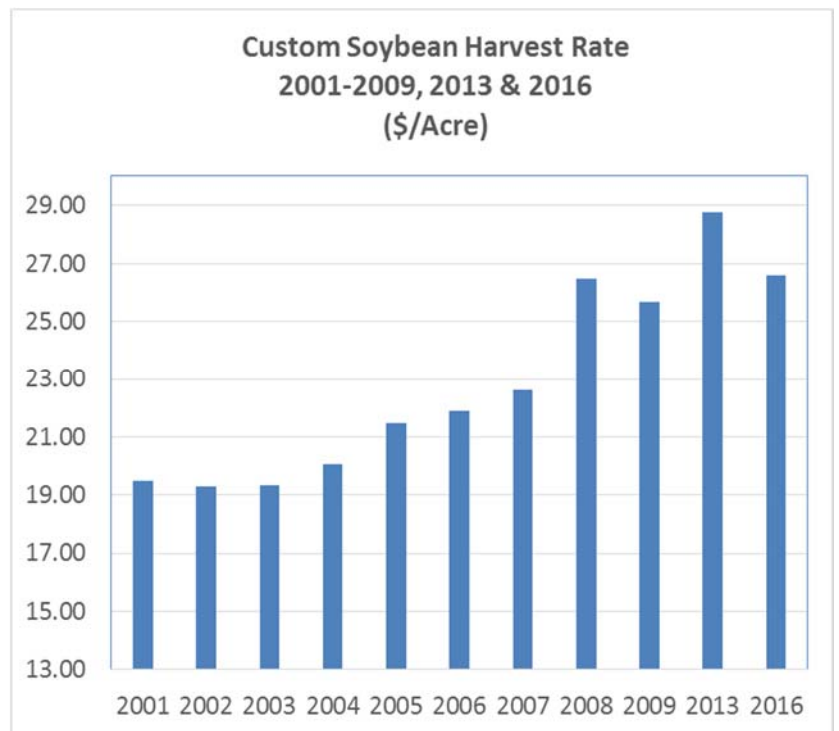
Custom Rates for Soybean Harvest, 2016, by District

District	Base Rate with Extra Charge for High Yield (if any)						Flat Rate Charge		
	Base Rate (\$/Acre)			Extra Charge for High Yield			Dollar Per Acre		
	No. of Reports	Range	Average	No. of Reports	\$/Bushel	Above Bushels	No. of Reports	Range	Average
NW	6	25-32	29.17	6	0.243	40	3	28.00-30.00	28.67
WC	8	24-32	27.38	8	0.236	23	-	-	-
SW	3	25-32	27.33	3	0.247	23	^{1/}		
NC	8	21-30	25.25	7	0.227	25	6	21.00-30.00	25.83
C	5	18-28	23.00	6	0.233	23	11	21.00-38.50	27.68
SC	^{1/}			4	0.218	50	14	25.00-38.50	34.29
NE	-	-	-	-	-	-	9	25.00-38.00	31.22
EC	-	-	-	-	-	-	16	23.50-38.00	26.84
SE	-	-	-	^{1/}			11	24.00-30.00	27.27
State	31	18-32	26.58	35	0.233	28	71	21.00-38.50	29.17

^{1/} Insufficient number of reports.

Custom Soybean Harvest Historical Rates

Year	Dollars Per Acre	Extra Charge for High Yield	
		Dollar per Bushel	Above Bushels
1993	17.96	0.125	23
1994	18.15	0.122	25
1995	17.65	0.122	25
1996	18.54	0.127	24
1997	18.68	0.124	26
1998	18.85	0.128	27
1999	18.69	0.130	25
2000	19.15	0.125	25
2001	19.48	0.127	24
2002	19.29	0.134	28
2003	19.35	0.133	26
2004	20.06	0.135	26
2005	21.48	0.143	26
2006	21.88	0.172	27
2007	22.61	0.158	28
2008	26.47	0.206	26
2009	25.66	0.198	27
2013	28.78	0.232	27
2016	26.58	0.233	28



GRAIN HARVESTING (Continued)

SUNFLOWER: Custom harvesters charged an average of \$38.80 per acre for harvesting soybeans in 2016, up \$8.47 from 2013. Too few base rate charges with extra charge for high yields were reported to be able to publish this year.

Custom Rates for Sunflower Harvest, 2016, by Region

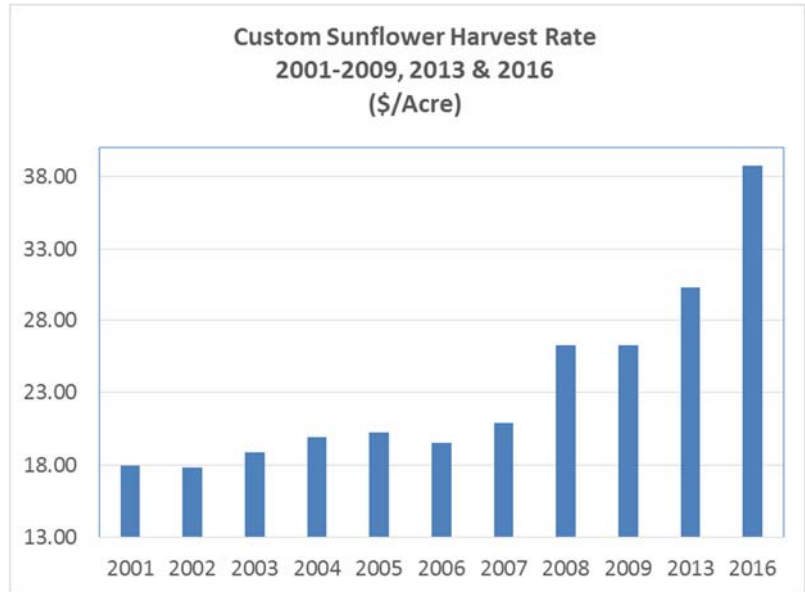
Region	Flat Rate Charge		
	Dollar Per Acre		
	No. of Reports	Range	Average
Western	11	30-45	40.91
Central	3	30-42	34.00
Eastern	1/		
State	15	30-45	38.80

^{1/} Insufficient number of reports.

**Custom Sunflower Harvest
Historical Rates**

Year	Dollars Per Acre	Extra Charge for High Yield	
		Dollar per Bushel	Above Bushels
1997	17.69	0.116	5.8
1998	16.94	0.119	11.8
1999	18.35	0.120	10.8
2000	16.33	0.127	9.6
2001	17.93	0.138	8.3
2002	17.80	0.131	6.7
2003	18.90	0.137	6.4
2004	19.95	0.203	7.4
2005	20.24	0.197	7.2
2006	19.55	0.213	12
2007	20.88	0.198	14
2008	26.28	0.265	18
2009	26.26	0.274	19
2013	30.33	1/	1/
2016	38.80	1/	1/

^{1/} Insufficient number of reports.



SEED CLEANING

Rates for seed cleaning are higher with treatment than without treatment. Wheat seed cleaning with treatment averaged \$3.17 per bushel, an increase of \$0.30 from 2013. Rates for cleaning wheat without treatment averaged \$0.68 per bushel, 5 cents lower than in 2013. The average cost of cleaning soybeans without any treatment was 75 cents, up one cent from 2013; while cleaning soybean seed with treatment averaged \$9.38 per bushel, up \$2.15 from 2013.

Custom Rates for Wheat Seed Cleaning (\$/Bushel), 2016, by District

District	With Treatment			Without Treatment		
	No. of Reports	Range	Average	No. of Reports	Range	Average
NW	4	0.17-3.90	1.31	^{1/}		
WC	10	0.17-5.50	2.26	14	0.45-0.70	0.56
SW	^{1/}			5	0.45-0.85	0.65
NC	4	1.6-2.00	1.90	^{1/}		
C	7	1.6-6.25	3.70	13	0.50-0.85	0.70
SC	4	0.50-5.00	1.74	17	0.45-2.64	0.77
NE	-	-	-	-	-	-
EC	5	1.25-10.25	7.13	7	0.75-1.00	0.79
SE	6	1.25-5.00	3.13	13	0.45-0.84	0.62
State	42	0.17-10.25	3.17	73	0.45-2.64	0.68

^{1/} Insufficient number of reports.

Custom Rates for Soybean Seed Cleaning (\$/Bushel), 2016, by Region

Region	2016				2013			
	With Treatment		Without Treatment		With Treatment		Without Treatment	
	No. of Reports	Average	No. of Reports	Average	No. of Reports	Average	No. of Reports	Average
Western	-	-	-	-	-	-	-	-
Central	-	-	-	-	^{1/}		^{1/}	-
Eastern	6	9.38	4	0.75	3	7.31	7	0.77
State	6	9.38	4	0.75	4	7.23	8	0.74

^{1/} Insufficient number of reports.

Historical Custom Rates for Seed Cleaning (\$/Bushel)

Year	With Treatment			Without Treatment		
	Wheat	Soybeans	All Other Seed	Wheat	Soybeans	All Other Seed
2003	0.90	1.1	^{2/}	0.48	0.50	^{2/}
2004	0.82	0.96	^{2/}	0.47	0.49	^{2/}
2005	0.98	1.13	-	0.48	0.55	0.47
2006	1.14	1.07	0.35	0.51	0.47	0.43
2007	1.07	1.86	-	0.54	0.55	0.53
2008	1.45	1.72	0.88	0.6	0.73	0.36
2009	1.36	^{1/}	^{1/}	0.58	0.73	0.30
2013	2.87	7.23	^{1/}	0.73	0.74	0.75
2016	3.17	9.38	3.60	0.68	0.75	0.70

^{1/} Insufficient number of reports. ^{2/} Data not collected.

GRAIN HAULING

Rates for hauling grains from the field to the farm or to the nearest elevator in 2016 were higher, with a longer maximum distance, compared to the numbers in 2013. The average base rate charged for hauling wheat, grain sorghum, corn, and soybeans was 20.2 cents per bushel, with an extra charge of 5.2 cents per bushel per mile over 28 miles. This was higher than the 2013 average of 19.7 cents per bushel plus 2.2 cents per bushel per mile over 17 miles. The average rate for hauling sunflower was \$0.374 per bushel, with an extra charge of \$0.01 per bushel per mile over 50 miles.

Custom Rates for Hauling Grain from Field to Farm Storage or Elevator, 2016, by District

District	No. of Reports	Hauling Charge (\$/Bushel)	Mile Limits (Miles)	Extra Charge for Longer Distances (\$/Bushel/Mile)	No. of Reports	Hauling Charge (\$/Bushel)	Mile Limits (Miles)	Extra Charge For Longer Distances (\$/Bushel/Mile)
		Wheat				Grain Sorghum		
NW	25	0.222	21	0.007	20	0.215	24	0.007
WC	35	0.212	33	0.009	24	0.218	40	0.008
SW	14	0.230	23	-	9	0.233	24	-
NC	16	0.203	29	-	15	0.203	33	-
C	16	0.216	21	0.005	11	0.210	20	0.005
SC	25	0.221	15	0.031	11	0.220	14	0.031
NE	11	0.189	16	0.006	7	0.206	8	1/
EC	17	0.193	53	1/	12	0.201	69	1/
SE	12	0.183	21	0.297	3	0.253	40	1/
State	171	0.210	26	0.040	112	0.214	30	0.014
	Corn				Soybeans			
NW	21	0.200	22	0.096	14	0.220	30	0.003
WC	16	0.159	43	0.010	11	0.207	55	-
SW	4	0.154	21	1/	4	0.245	21	-
NC	10	0.203	40	-	14	0.201	33	-
C	8	0.184	20	1/	10	0.219	23	1/
SC	16	0.158	15	0.042	16	0.198	14	0.038
NE	14	0.181	16	0.006	13	0.195	16	0.006
EC	19	0.203	56	1/	19	0.187	47	1/
SE	12	0.175	21	0.297	12	0.170	13	0.297
State	120	0.182	28	0.085	113	0.200	28	0.068

1/ Insufficient number of reports.

Custom Rates for Hauling Sunflower, 2016, by Region

Region	No. of Reports	Hauling Charge (\$/Bushel)	Mile Limits (Miles)	Extra Charge For Longer Distances (\$ Per Bushel Per Mile)
Western	8	0.356	67	0.010
Central	3	0.446	18	1/
Eastern	1/	1/	1/	1/
State	12	0.374	50	0.010

1/ Insufficient number of reports.

SILAGE OPERATIONS

Custom rates for silage operations were separated into four categories: 1) chopping, hauling, and filling the silo, 2) chopping and hauling, 3) chopping only, and 4) hauling only. Operations which included only chopping and hauling averaged \$9.14 per ton, up \$1.07 from 2013. The average rate per ton for the complete silage operation was \$8.83 per ton. The lower rate for the complete silage operation could be attributed to many factors, including the limited number of responses and variation of respondents. Chopping averaged \$7.16 per ton, up \$1.95 from 2013, and hauling averaged \$3.41 per ton, up \$1.08 from 2013.

Custom Rates for Silage Operations, 2016, by Region

Region	Chopping, Hauling & Filling Silo			Chopping & Hauling		
	No. of Reports	Dollars per Ton		No. of Reports	Dollars per Ton	
		Range	Average		Range	Average
Western	-	-	-	15	6.50-12.00	9.03
Central	1/			5	7.50-11.20	9.48
Eastern	1/			7	8.25-10.00	9.11
STATE	4	7.25-11.00	8.83	27	6.50-12.00	9.14

^{1/} Insufficient number of reports.

Custom Rates for Silage Operations, 2016, by Region

Region	Chopping Only			Hauling		
	No. of Reports	Dollars per Ton		No. of Reports	Dollars per Ton	
		Range	Average		Range	Average
Western	8	6.50-8.00	7.5	9	0.25-12.00	4.17
Central	4	8.00-8.25	8.06	1/		
Eastern	1/			4	3.00-3.50	3.25
STATE	14	4.00-8.25	7.16	15	0.25-12.00	3.41

^{1/} Insufficient number of reports.

HAYING

The average custom rate for mowing or swathing hay was \$13.75 per acre in 2016, up \$0.89 from 2013. The rate for mowing or swathing forage was higher than hay, averaging \$15.52 per acre, up \$0.60 from 2013. Mowing or swathing with conditioning averaged \$13.46 per acre in 2016, compared to \$13.54 in 2013. The charge for side raking averaged \$4.65 per acre, up 7 cents from 2013.

Custom Rates for Mowing or Swathing, 2016, by District

District	Hay			Forage		
	Number of Reports	Dollars per Acre		Number of Reports	Dollars per Acre	
		Range	Average		Range	Average
NW	4	15.00-15.00	15.00	8	15.00-16.00	15.13
WC	1/			-	-	-
SW	1/			1/		
NC	1/			-	-	-
C	8	10.00-15.00	12.85	1/		
SC	11	10.00-16.00	13.75	9	15.00-18.00	16.78
NE	4	5.50-19.00	14.38	-	-	-
EC	14	12.00-14.00	12.79	3	12.50-12.50	12.50
SE	-	-	-	-	-	-
STATE	46	5.50-19.00	13.75	22	12.50-18.00	15.52

^{1/} Insufficient number of reports.

Custom Rates for Swathing & Conditioning and Side Raking, 2016, by District

District	Swathing and Conditioning			Side Raking		
	Number of Reports	Dollars per Acre		Number of Reports	Dollars per Acre	
		Range	Average		Range	Average
NW	1/			1/		
WC	1/			1/		
SW	3	12.00-18.00	15.33	1/		
NC	3	11.00-13.00	11.67	1/		
C	1/			3	4.00-5.00	4.33
SC	5	11.00-16.00	14.20	8	2.00-6.00	5.00
NE	-	-	-	1/		
EC	10	12.50-14.50	13.65	5	4.00-5.00	4.40
SE	-	-	-	-	-	-
STATE	25	11.00-18.00	13.46	22	2.00-7.00	4.65

^{1/} Insufficient number of reports.

HAYING (Continued)

The custom rates for baling small square bales in 2016 were lower than the 2013 averages. Custom baling of small square bales with wire cost an average of \$0.93 per bale, while baling with twine averaged \$0.89 per bale in 2016. Large round bales weighing less than 1500 pounds, without net wrapping, cost an average of \$11.73 per bale; bales of the same size with net wrapping cost an average of \$11.78 per bale. Large round bales weighing over 1500 pounds without net wrapping cost an average of \$13.96 per bale; wrapped bales of the same size cost an average of \$14.00 per bale. The charge for large square bales weighing about one ton averaged \$14.38 per bale, up 28 cents from 2013.

Custom Rates for Baling Hay (\$/Bale)

Type of Bale		2016			2013		
		# of Reports	Range	Average	# of Reports	Range	Average
Small Bales, Square	With wire	13	0.50-2.00	0.93	20	0.60-2.50	1.28
	With twine	9	0.50-1.35	0.89	23	0.55-3.00	1.16
Large Round Bales under 1,500 pounds	Without net	34	7.00-17.50	11.73	64	7.00-25.00	11.47
	With net	9	8.00-18.00	11.78	146	6.00-25.00	12.34
Large Round Bales over 1,500 pounds	Without net	24	10.00-17.00	13.96	28	8.00-18.00	11.66
	With net	4	13.00-15.00	14.00	101	8.00-25.00	12.92
Large Square Bales about 1 ton		12	8.00-18.00	14.38	35	6.00-24.00	14.10

Custom Rates for Baling, Square Bales, 2016, by Region

Region	Small Square with Wire			Small Square with Twine			Large Square		
	No. of Reports	Dollars per Bale		No. of Reports	Dollars per Bale		No. of Reports	Dollars per Bale	
		Range	Average		Range	Average		Range	Average
Western	1/			5	0.80-1.35	0.91	1/		
Central	4	0.80-1.20	1.00	1/			6	14.00-15.00	13.92
Eastern	8	0.50-1.29	0.76	1/			4	8.00-16.00	13.25
STATE	13	0.50-2.00	0.93	9	0.50-1.35	0.89	12	8.00-18.00	14.38

^{1/} Insufficient number of reports.

Custom Rates for Baling, Large Round Bales, 2016, by Region

Region	With Net						Without Net					
	Under 1500 lbs.			Over 1500 lbs.			Under 1500 lbs.			Over 1500 lbs.		
	No. of Reports	Dollars per Bale		No. of Reports	Dollars per Bale		No. of Reports	Dollars per Bale		No. of Reports	Dollars per Bale	
		Range	Avg.		Range	Avg.		Range	Avg.		Range	Avg.
Western	-	-	-	1/			4	7.00-17.50	12.38	8	14.00-16.00	15.00
Central	3	8.00-18.00	12.67	1/			12	10.00-15.00	12.25	13	11.00-17.00	13.69
Eastern	6	10.00-13.00	11.33	1/			18	10.00-15.00	11.23	3	10.00-14.00	12.33
STATE	9	8.00-18.00	11.78	4	13.00-15.00	14.00	34	7.00-17.50	11.73	24	10.00-17.00	13.96

^{1/} Insufficient number of reports.

HAYING (Continued)

Custom rates for hauling small bales from the field to farm storage averaged 93 cents per bale in 2016, up 10 cents from 2013. The cost of hauling large square bales averaged of \$2.70 per bale in 2016. Rates for hauling large round bales averaged \$3.18 per bale or \$11.43 per ton in 2016. There were too few reports for hay stacking to provide a reasonable indication of current rates; therefore the table has been removed.

Custom Rates for Hauling Square Bales from Field to Storage, 2016, by Region

Region	Small Bales			Large Square Bales		
	Number of Reports	Dollars per Bale		Number of Reports	Dollars per Bale	
		Range	Average		Range	Average
Western	1/			1/		
Central	4	0.85-1.15	1	3	2.25-5.00	3.17
Eastern	-	-	-	-	-	-
STATE	5	0.65-1.15	0.93	5	2.00-5.00	2.70

1/ Insufficient number of reports.

Custom Rates for Hauling Large Round Bales from Field to Storage, 2016, by Region

Region	Large Round Bales					
	Number of Reports	Dollars per Bale		Number of Reports	Dollars per Ton	
		Range	Average		Range	Average
Western	6	2.00-7.00	4.60	1/		
Central	5	2.00-2.25	2.05	4	10.00-15.00	12.50
Eastern	1/			1/		
STATE	13	1.50-7.00	3.18	7	10.00-15.00	11.43

1/ Insufficient number of reports.

The custom rates for the entire haying operation include cutting, conditioning, raking, baling, hauling, and stacking. The average rate for large bales was \$23.96 per bale in 2016, up \$1.62 from 2013. There were insufficient responses to report the small bale rate.

Custom Rates for Entire Haying Operation, Large Round Bales, 2016, by Region

District	Number of Reports	Dollars per Bale	
		Range	Average
NW	-	-	-
WC	-	-	-
SW	-	-	-
NC	-	-	-
C	-	-	-
SC	1/		
NE	1/		
EC	3	20.00-25.00	22.50
SE	5	20.00-22.00	20.80
STATE	12	20.00-29.00	23.96

1/ Insufficient number of reports.

ROTARY MOWING AND TREE SHEARING

The custom rate for rotary mowing averaged \$12.22 per acre or \$63.68 per hour in 2016. In 2013, charges were \$13.17 per acre or \$70 per hour. The average custom rate for tree shearing was \$79.17 per hour for 2016, up \$4.46 from 2013.

Custom Rates for Rotary Mowing and Tree Shearing, 2016, by District

District	Rotary Mowing						Skid Loader Tree Shearing		
	Dollar per Acre			Dollar per Hour			Dollar per Hour		
	No. of Reports	Range	Avg.	No. of Reports	Range	Avg.	No. of Reports	Range	Avg.
NW	-	-	-	-	-	-	-	-	-
WC	5	10.00-15.00	12.40	^{1/}		60.00	-	-	-
SW	4	7.60-7.60	7.60	-	-	-	-	-	-
NC	-	-	-	-	-	-	^{1/}		
C	^{1/}			3	44.13-60.00	54.71	5	50.00-100.00	84.00
SC	^{1/}			3	44.13-60.00	49.42	^{1/}		
NE	-	-	-	^{1/}			-	-	-
EC	6	12.50-20.00	16.25	7	37.50-85.00	73.93	15	50.00-100.00	74.33
SE	^{1/}			4	40.00-75.00	48.75	^{1/}		
State	20	4.50-40.00	12.22	19	37.50-125.00	63.68	24	50.00-100.00	79.17

^{1/} Insufficient number of reports.

Custom Rates for Rotary Mowing and Tree Shearing, 2016, by Region

Region	Rotary Mowing						Skid Loader Tree Shearing		
	Dollar per Acre			Dollar per Hour			Dollar per Hour		
	No. of Reports	Range	Avg.	No. of Reports	Range	Avg.	No. of Reports	Range	Avg.
Western	9	7.60-15.00	10.27	^{1/}			-	-	-
Central	4	4.50-10.00	8.63	6	44.13-60.00	52.06	7	50.00-100.00	88.57
Eastern	7	12.50-20.00	16.79	12	37.50-125.00	69.79	17	50.00-100.00	75.29
STATE	20	4.50-40.00	12.22	19	37.50-125.00	63.68	24	50.00-150.00	79.17

^{1/} Insufficient number of reports.

LAND TILLAGE

Custom rates for tillage operations vary depending on many factors, including location, type of soil tillage practice, size of fields, and the size of equipment. The average charge for disking (including one-way disking), was \$12.20 per acre in 2016, up \$0.89 from 2013. The average offset disking charge of \$12.60 per acre in 2016 was up \$1.62 from the 2013 rate.

Custom Rates for Disking, 2016, by District

District	2016				2013			
	Disking (including One-Way Disking)		Offset Disk		Disking (including One-Way Disking)		Offset Disk	
	No. of Reports	Avg. (\$/Acre)	No. of Reports	Avg. (\$/Acre)	No. of Reports	Avg. (\$/Acre)	No. of Reports	Avg. (\$/Acre)
NW	1 ^{1/}		1 ^{1/}		3	11.67	4	10.25
WC	9	12.00	1 ^{1/}		8	10.94	4	13.00
SW	3	12.67	1 ^{1/}		4	11.75	3	8.83
NC	1 ^{1/}		1 ^{1/}		3	12.33	1 ^{1/}	
C	3	10.70	1 ^{1/}		5	11.00	4	12.50
SC	10	11.44	1 ^{1/}		10	11.15	10	10.09
NE	4	13.00	1 ^{1/}		8	13.56	1 ^{1/}	
EC	9	14.62	1 ^{1/}		9	9.97	1 ^{1/}	
SE	3	10.00	1 ^{1/}		4	9.88	4	11.63
State	44	12.20	5	12.60	54	11.31	33	10.98

^{1/} Insufficient number of reports.

The average custom rate for chiseling, 4-12 inch deep, was \$13.95 per acre in 2016, up \$1.24 from 2013. The number of responses to the charge for deep chiseling, over 12 inches, was low. In 2016, deep chiseling, on average, cost \$13.50 per acre in 2016, down \$2.38 from 2013.

Custom Rates for Chiseling (\$/Acre), 2016, by District

District	2016				2013			
	Chisel (4-12")		Deep Chisel (Over 12")		Chisel (4-12")		Deep Chisel (Over 12")	
	No. of Reports	Avg. (\$/Acre)	No. of Reports	Avg. (\$/Acre)	No. of Reports	Avg. (\$/Acre)	No. of Reports	Avg. (\$/Acre)
NW	1 ^{1/}		1 ^{1/}		1 ^{1/}		1 ^{1/}	
WC	8	12.88	1 ^{1/}		1 ^{1/}		1 ^{1/}	
SW	1 ^{1/}		1 ^{1/}		3	11.33	-	
NC	1 ^{1/}		1 ^{1/}		1 ^{1/}		-	
C	1 ^{1/}		1 ^{1/}		3	14.00	1 ^{1/}	
SC	5	17.00	1 ^{1/}		7	11.50	4	12.38
NE	1 ^{1/}		1 ^{1/}		3	13.83	3	21.50
EC	1 ^{1/}		1 ^{1/}		3	15.33	6	14.50
SE	3	13.33	1 ^{1/}		1 ^{1/}		1 ^{1/}	
State	21	13.95	3	13.50	24	12.71	17	15.88

^{1/} Insufficient number of reports.

LAND TILLAGE (Continued)

The custom rates charged for subsoiler/in-line ripper, strip tillage, and vertical tillage were added in the 2016 survey. The charges for strip tillage averaged \$17.07 per acre in 2016, while the average rate for shallow, high speed vertical tillage was \$13.33 per acre in 2016. Custom subsoiling/in-line ripping, about 30 hp per shank, averaged \$18.24 per acre in 2016.

Custom Rates for Strip and Vertical Tillage, 2016, by Region

District	Strip Tillage		Vertical Tillage--high speed, shallow (2-4")	
	No. of Reports	Avg. (\$/Acre)	No. of Reports	Avg.(\$/Acre)
NW	4	17.25	4	14.25
WC	11	16.88	12	13.33
SW	7	17.91	7	15.27
NC	1/		3	12.00
C	3	20.00	1/	
SC	8	16.06	7	11.78
NE	1/		1/	
EC	6	16.21	1/	15.00
SE	1/		1/	
State	39	17.07	40	13.33

^{1/} Insufficient number of reports.

Custom Rates for Subsoiler/In-line Ripper (about 30 hp per shank), 2016, by Region

District	No. of Reports	Avg. (\$/Acre)
Western	4	16.05
Central	1/	
Eastern	3	20.00
STATE	9	18.24

^{1/} Insufficient number of reports.

LAND TILLAGE (Continued)

The custom rate for field cultivators (5 hp per linear foot of implement) was included in the 2016 survey, and the rates for shank cultivators and wheel springtooth cultivators were not included in 2016. The rates for shank cultivators averaged \$11.78 per acre in 2016. The average rate for undercutting operations was \$11.13 per acre, up \$1.79 from 2013.

Custom Rates for Cultivation and Undercutting, 2016, by District

District	2016				2013			
	Field Cultivator (5 hp per linear foot of implement)		Undercutter (Large "V" Blade)		Shank Cultivator		Undercutter (Large "V" Blade)	
	No. of Reports	Avg. (\$/Acre)	No. of Reports	Avg. (\$/Acre)	No. of Reports	Avg. (\$/Acre)	No. of Reports	Avg. (\$/Acre)
NW	1 ^{1/}		1 ^{1/}		1 ^{1/}		7	9.07
WC	9	10.80	16	9.70	1 ^{1/}		22	8.42
SW	6	13.73	8	12.49	4	8.75	8	9.37
NC	1 ^{1/}		1 ^{1/}		3	12.33	1 ^{1/}	
C	3	10.07	1 ^{1/}	11.63	5	8.80	3	10.67
SC	4	9.74	6	12.67	9	9.89	5	9.50
NE	1 ^{1/}		1 ^{1/}		9	12.11	1 ^{1/}	
EC	8	12.73	1 ^{1/}		5	10.50	-	
SE	9	11.44	1 ^{1/}		1 ^{1/}		-	
State	42	11.78	34	11.13	41	10.40	48	9.34

^{1/} Insufficient number of reports.

Custom Rates for Land Tillage, Historical Averages (\$/Acre)

Type of Operation	2001	2002	2003	2004	2005	2006	2007	2008	2009	2013	2016
Disking	6.48	6.34	6.42	6.84	7.54	7.79	7.93	9.02	9.06	11.31	12.20
One-Way Disk	6.21	6.11	6.50	7.22	6.66	8.00	8.06	9.00	-	-	-
Offset Disk	6.54	6.72	7.02	7.01	7.76	8.53	8.37	9.56	9.52	10.98	12.60
Spiketooth Harrow	4.80	4.82	5.33	5.25	5.31	5.88	6.68	6.71	7.30	8.82	8.33
Springtooth Harrow	5.20	4.03	4.17	4.88	5.75	5.58	5.83	6.42	8.40	8.25	1 ^{1/}
Chisel (4-12")	7.79	7.61	8.02	7.96	8.45	9.10	9.75	11.19	10.06	12.71	13.95
Deep Chisel (Over 12")	9.54	10.33	8.94	10.05	10.85	11.88	11.46	15.81	13.70	15.88	13.50
Moldboard Plow	8.98	9.45	9.98	11.63	11.36	11.04	10.64	15.41	14.00	14.13	17.50
Undercutter	5.38	5.38	5.47	5.58	6.07	6.43	6.66	7.73	7.42	9.34	11.13
Shank Cultivator	5.92	6.16	6.18	6.27	7.13	7.37	7.25	8.95	8.84	10.40	-
Wheel Springtooth Cultivator	5.36	5.67	5.27	6.00	5.75	7.02	7.56	6.93	7.43	8.25	-
Field Cultivator (5 hp per linear foot of implement)	-	-	-	-	-	-	-	-	-	-	11.78
Subsoiler/In-line ripper (about 30 hp per shank)	-	-	-	-	-	-	-	-	-	-	18.24
Strip Tillage	-	-	-	-	-	-	-	-	-	-	17.07
Vertical Tillage	-	-	-	-	-	-	-	-	-	-	13.33

^{1/} Insufficient number of reports. Disking and One-Way Disking were combined beginning in 2009. Subsoiler/In-line ripper, Strip Tillage and Vertical Tillage were added in the 2016 Survey.

PLANTING

Regular-Till

The custom rates for planting small grains, grain sorghum, corn, and soybeans has been steadily increasing since 2001. Small grain seeding charges in 2016 averaged \$14.13 per acre, up \$0.55 from 2013. Charges for planting grain sorghum increased \$1.64 per acre from 2013 to \$16.41 in 2016. The average price charged for planting corn was \$16.43 per acre, up \$1.72 from 2013. Soybean planting charges averaged \$16.29 per acre in 2016, an increase of \$1.76 from 2013. The grass seeding rate decreased \$1.39 per acre from 2013 to \$15.96 per acre in 2016. The price for seeding alfalfa-legumes averaged \$14.88 per acre, compared to \$15.04 in 2013.

Custom Rates for Regular Till Planting (\$/Acre), 2016, by District

District	No. of Reports	Range	Average	No. of Reports	Range	Average
	Small Grain drilling			Grain Sorghum- Row Planting		
NW	-	-	-	-	-	-
WC	10	7.00-16.00	12.85	6	14.50-18.00	16.67
SW	4	12.10-16.00	13.80	4	17.00-19.10	18.30
NC	-	-	-	-	-	-
C	8	12.50-18.00	15.34	7	13.00-19.00	17.00
SC	9	9.00-16.50	13.85	4	13.00-16.00	15.00
NE	-	-	-	-	-	-
EC	8	12.00-18.00	15.98	6	13.00-19.00	15.13
SE	5	10.00-15.00	12.60	-	-	-
State	44	7.00-18.00	14.13	27	13.00-19.10	16.41
	Corn-Row Planting			Soybeans-Row Planting		
NW	-	-	-	-	-	-
WC	7	14.50-18.00	16.36	3	18.00-18.00	18.00
SW	4	17.00-19.10	18.30	1/		
NC	-	-	-	-	-	-
C	5	16.00-18.00	17.60	5	16.00-19.00	18.20
SC	6	14.00-18.50	15.92	3	13.00-16.00	15.00
NE	3	19.00-20.00	19.67	1/		
EC	13	13.00-20.00	16.25	11	13.00-20.00	16.40
SE	5	12.00-15.00	13.00	5	12.00-15.00	13.00
State	43	12.00-20.00	16.43	29	12.00-20.00	16.29
	Grass Seeding			Alfalfa-Legume Seeding		
NW	4	7.50-15.00	11.25	1/		
WC	7	15.00-16.00	15.29	1/		
SW	1/			3	10.75-18.50	15.92
NC	1/			1/		
C	1/			4	12.50-19.00	17.38
SC	5	10.75-22.00	15.25	4	10.75-17.00	12.31
NE	-	-	-	-	-	-
EC	1/			8	12.50-19.00	15.69
SE	-	-	-	-	-	-
State	24	7.50-22.00	13.96	25	10.00-19.00	14.88

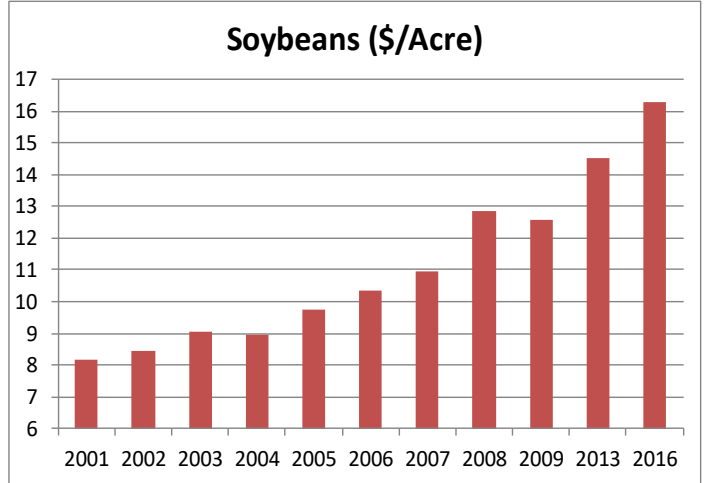
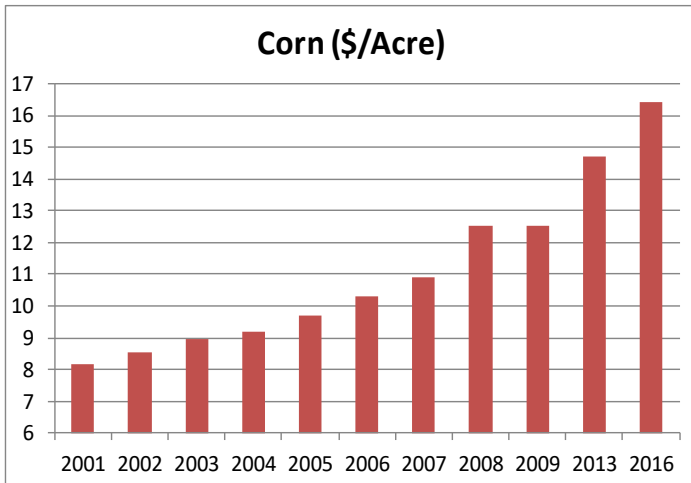
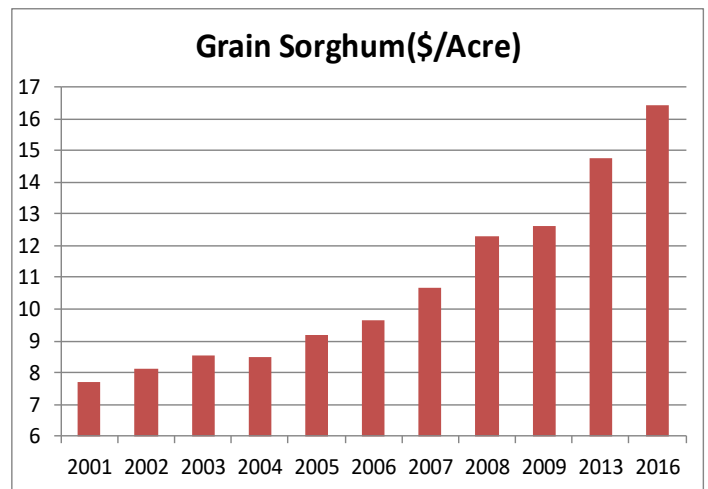
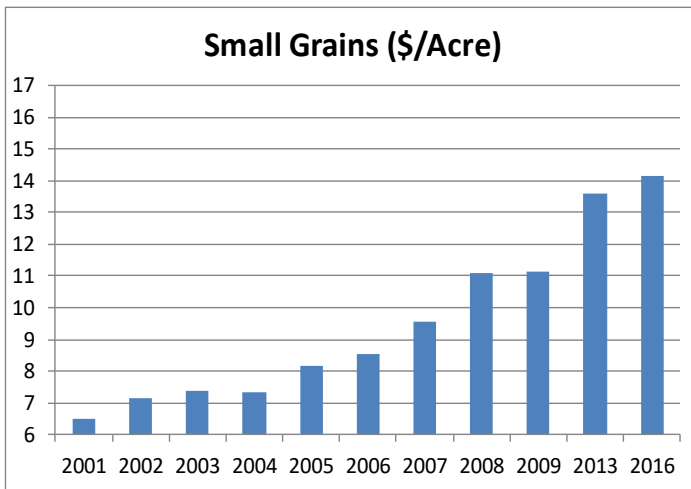
^{1/} Insufficient number of reports.

PLANTING (Continued)

Custom Rates for Regular-Till Planting, Historical Averages (\$/Acre)

Crop	2001	2002	2003	2004	2005	2006	2007	2008	2009	2013	2016
Small Grains	6.49	7.13	7.38	7.35	8.17	8.52	9.54	11.09	11.10	13.58	14.13
Grain Sorghum	7.72	8.13	8.55	8.48	9.17	9.65	10.65	12.30	12.60	14.77	16.41
Corn	8.19	8.54	8.95	9.21	9.69	10.3	10.91	12.51	12.50	14.71	16.43
Soybeans	8.17	8.47	9.06	8.95	9.76	10.33	10.94	12.87	12.60	14.53	16.29
Grass	8.92	9.77	10.61	10.83	11.45	11.44	12.6	14.65	14.00	15.35	13.96
Alfalfa-Legume	8.59	9.83	10.29	9.63	10.52	10.79	11.35	13.75	12.68	15.04	14.88

Regular-Till Planting, Historical Averages



PLANTING (Continued)

Minimum-Till or No-Till

The average custom rate for minimum-till or no-till drilling of small grains averaged \$15.49 per acre in 2016, compared to \$15.52 in 2013. Minimum-till grain sorghum planting averaged \$16.59 per acre, an increase of \$1.59 from 2013. Corn planting in 2016 averaged \$16.79 per acre, an increase of \$0.96 from 2013. Soybean planting averaged \$16.06 per acre, up \$0.28 from 2013's average of \$13.68 per acre. Overtime the custom rates for minimum-till planting of crops have been on the rise.

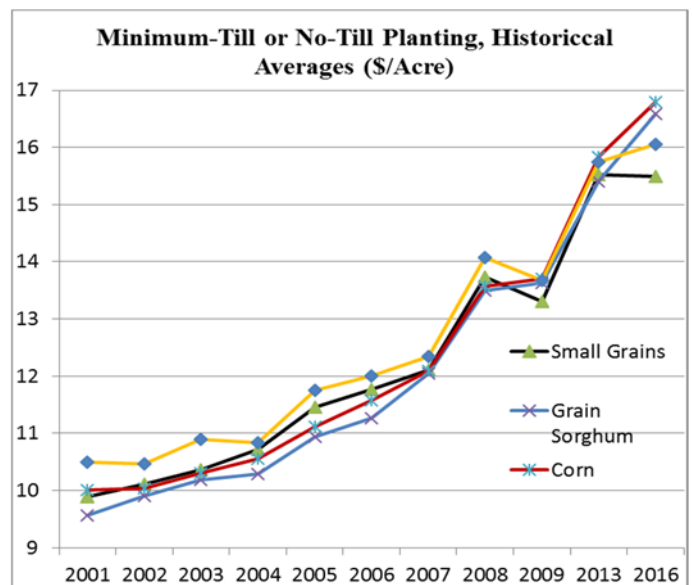
Custom Rates for Minimum-Till or No-Till Planting (\$/Acre), 2016, by District

District	No. of Reports	Range	Average	No. of Reports	Range	Average
Small Grain Drilling				Grain Sorghum- Row Planting		
NW	10	15.00-17.00	16.05	9	15.00-17.00	16.33
WC	19	12.00-18.00	16.07	16	14.00-18.00	16.13
SW	11	12.10-20.00	16.08	8	15.00-20.00	18.30
NC	5	12.00-18.00	13.60	3	15.00-20.00	16.67
C	14	13.00-18.50	15.89	15	14.00-20.00	16.87
SC	14	11.00-18.50	15.68	7	13.00-20.00	17.00
NE	4	11.00-20.00	14.00	1/		
EC	12	12.50-20.00	15.67	8	13.00-19.00	15.34
SE	9	12.00-15.00	13.44	-	-	-
State	98	11.00-20.00	15.49	67	13.00-20.00	16.59
Corn-Row Planting				Soybeans-Row Planting		
NW	13	15.00-17.00	16.575	6	15.00-17.00	16.33
WC	20	7.50-21.00	16.98	5	15.00-18.00	16.60
SW	10	17.00-20.00	18.54	1/		
NC	3	15.00-15.00	15.00	1/		
C	9	15.00-22.00	18.11	12	15.00-22.00	17.75
SC	12	14.00-20.00	17.92	6	13.00-20.00	17.33
NE	11	14.00-25.00	18.41	6	12.50-17.00	14.75
EC	17	12.00-22.00	15.16	11	13.00-19.00	15.61
SE	7	12.00-15.00	12.71	9	12.00-15.00	13.00
State	102	7.50-22.00	16.79	57	12.00-22.00	16.06

^{1/} Insufficient number of reports.

Custom Rates for Minimum or No Till Planting, Historical Averages (\$/Acre)

Year	Small Grains	Grain Sorghum	Corn	Soybeans
2001	9.89	9.56	10.00	10.50
2002	10.11	9.91	10.04	10.46
2003	10.36	10.19	10.31	10.90
2004	10.72	10.29	10.55	10.84
2005	11.45	10.94	11.11	11.75
2006	11.77	11.26	11.57	12.00
2007	12.10	12.04	12.09	12.34
2008	13.73	13.49	13.57	14.07
2009	13.31	13.63	13.70	13.68
2013	15.52	15.40	15.83	15.74
2016	15.49	16.59	16.79	16.06



PLANTING (Continued)

Cover Crops

The custom rates for both regular-till and minimum-till or no-till planting of cover crops were included in the 2016 survey. Regular-till cover crop drilling averaged \$17.23 per acre in 2016, while minimum or no-till cover crop drilling averaged \$15.75 per acre. The rate for minimum-till aerial planting a cover crop was lower, averaging \$11.73 per acre in 2016. There were too few responses to report the averages for cover crop broadcasting and regular-till cover crop aerial planting.

Custom Rates for Cover Crop Drilling, Regular-Till Planting (\$/Acre), 2016, by Region

Region	No. of Reports	Range	Average
Western	4	18.00-18.00	18.00
Central	4	17.00-18.00	17.25
Eastern	5	12.00-18.00	16.60
State	13	12.00-18.00	17.23

Custom Rates for Cover Crop Planting, Minimum-Till or No-Till (\$/Acre), 2016, by Region

Region	Drilling			Aerial		
	No. of Reports	Range	Average	No. of Reports	Range	Average
Western	4	18.00-18.00	18.00	6	9.00-15.00	10.29
Central	7	10.00-18.00	14.14	6	10.75-15.00	12.54
Eastern	9	14.00-18.00	16.00	3	13.00-13.00	13.00
State	20	10.00-18.00	15.75	15	9.00-15.00	11.73

CHEMICAL APPLICATIONS

The custom rates for chemical applications presented here include the cost of machine, power, and the operator; however, the costs of the chemicals are excluded. Rates charged for row crop cultivation with fertilizer application averaged \$9.40 per acre in 2016, a decrease of \$1.44 from the 2013 average. The average rate for cultivation without fertilizer application in 2016 was \$8.27 per acre, a decrease of \$1.12 from 2013. Rates decreased moving from the western to eastern region of Kansas.

Custom Rates for Row Crop Cultivation, 2016, by Region

Region	with Fertilizer Application (\$/Acre)			without Fertilizer Application (\$/Acre)		
	No. of Reports	Range	Average	No. of Reports	Range	Average
Western	9	5.25-17.00	13.44	9	12.00-15.00	11.75
Central	19	4.75-19.50	8.97	11	5.00-10.00	6.66
Eastern	9	5.00-7.50	6.28	6	5.50-6.25	6.00
State	37	4.75-19.50	9.40	26	5.00-15.00	8.27

The rate for the application of dry fertilizer averaged \$5.48 per acre in 2016, up 17 cents per acre from 2013 (\$5.31 per acre). Liquid fertilizer application, on average, cost \$5.65 per acre in 2016, 6 cents less per acre than in 2013.

Custom Rates for Fertilizer Application, 2016, by District

District	Dry Fertilizers (\$/Acre)			Liquid Fertilizers (\$/Acre)		
	No. of Reports	Range	Average	No. of Reports	Range	Average
NW	8	5.00-6.50	5.56	19	4.00-7.50	5.62
WC	23	4.50-6.00	5.01	33	3.00-12.00	5.90
SW	12	3.75-5.50	4.77	21	4.50-12.00	5.66
NC	19	4.75-14.00	5.96	21	4.25-7.50	5.84
C	23	4.50-6.25	5.24	25	4.50-7.35	5.18
SC	17	4.00-6.00	4.84	33	4.00-8.00	5.22
NE	22	5.00-14.00	6.89	20	5.00-6.50	5.90
EC	26	5.00-6.75	5.64	26	4.50-7.50	6.26
SE	21	4.50-6.00	5.04	20	5.00-6.00	5.34
State	171	3.75-14.00	5.48	218	3.00-12.00	5.65

CHEMICAL APPLICATIONS (Continued)

Custom chemical applicators charged an average of \$15.15 per acre to apply anhydrous ammonia, \$2.65 more than the 2013 average.

Custom Rates for Application of Anhydrous Ammonia, 2016, by District

District	No. of Reports	Range	Average (\$/Acre)
NW	4	14.00-17.50	15.75
WC	9	12.00-18.00	14.44
SW	3	12.00-18.00	14.00
NC	8	12.00-16.75	14.66
C	10	12.60-20.00	16.87
SC	4	12.00-15.00	12.92
NE	14	12.00-20.00	14.93
EC	11	12.00-20.00	15.73
SE	1/	1/	1/
State	65	12.00-20.00	15.15

^{1/} Insufficient number of reports.

The average cost for aerial application of herbicide in 2016 was \$7.69 per acre, up 9 cents from 2013. When herbicide was applied with a ground rig, the average cost was \$5.61, up 17 cents from the average of \$5.44 in 2013.

Custom Rates for Herbicide Application, 2016, by District

District	Aerial (\$/Acre)			Ground Rig (\$/Acre)		
	No. of Reports	Range	Average	No. of Reports	Range	Average
NW	10	7.25-8.50	7.65	22	4.00-7.50	5.63
WC	22	5.75-8.00	7.05	33	4.50-6.50	5.42
SW	7	5.75-7.75	7.00	31	4.50-6.50	5.37
NC	15	7.50-9.50	8.22	24	4.50-7.50	5.83
C	17	7.25-9.00	7.91	25	4.75-7.35	5.35
SC	19	5.00-8.00	7.03	31	4.50-6.00	5.16
NE	8	7.00-9.50	8.81	26	5.00-8.00	6.10
EC	9	7.25-9.75	8.50	30	5.00-7.50	6.23
SE	1/	1/	1/	23	5.00-6.00	5.52
State	109	5.00-10.00	7.69	245	4.00-8.00	5.61

^{1/} Insufficient number of reports.

CHEMICAL APPLICATIONS (Continued)

The custom rates for insecticide/fungicide application in 2016 was at about the same as in 2013. The average cost for aerial application of insecticide was \$7.65 per acre, down 8 cents from 2013. When insecticides were applied with a ground rig, the average cost was \$5.62 per acre in 2016, up 17 cents from the 2013 rate.

Custom Rates for Insecticide/Fungicide Application, 2016, by District

District	Aerial (\$/Acre)			Ground Rig (\$/Acre)		
	No. of Reports	Range	Average	No. of Reports	Range	Average
NW	12	4.00-8.50	7.27	17	4.00-7.50	5.69
WC	20	4.50-8.00	7.13	29	4.50-6.00	5.28
SW	8	7.00-8.40	7.67	17	4.50-7.75	5.51
NC	17	5.50-9.50	8.10	17	4.75-7.50	6.09
C	19	5.00-9.00	7.84	27	4.75-7.35	5.36
SC	21	5.00-9.00	6.64	32	4.50-6.00	5.09
NE	8	8.50-9.50	9.13	22	5.00-8.00	6.07
EC	11	7.25-9.75	8.50	24	5.00-7.50	6.30
SE	6	7.50-10.00	8.33	19	5.00-6.00	5.63
State	122	4.00-10.00	7.65	204	4.00-8.00	5.62

Custom Rates for Chemical Application, Historical Averages (\$/Acre)

Type of Operation or Application	2001	2002	2003	2004	2005	2006	2007	2008	2009	2013	2016
Cultivation with Fertilizer	6.77	6.19	6.64	6.73	7.59	7.60	6.33	8.41	8.00	10.84	9.40
Cultivation without Fertilizer	6.25	6.01	5.95	6.08	7.05	7.09	6.32	8.46	7.24	9.39	8.27
Dry Fertilizer	3.53	3.58	3.68	3.78	4.01	4.15	4.20	4.96	4.68	5.31	5.48
Liquid Fertilizer	3.57	3.72	3.78	3.87	4.17	4.42	4.37	4.98	4.82	5.71	5.65
Anhydrous Ammonia	5.61	5.90	6.18	6.93	7.12	6.75	8.46	10.20	10.55	12.60	15.15
Herbicide-Aerial	4.39	4.52	4.30	4.29	4.56	4.83	5.19	6.20	6.93	7.60	7.69
Herbicide-Ground Rig	3.72	3.81	3.85	4.03	4.26	4.40	4.50	5.01	4.98	5.44	5.61
Insecticide-Aerial	4.42	4.49	4.83	4.30	4.74	5.20	5.48	6.20	6.60	7.73	7.65
Insecticide-Ground Rig	3.77	3.90	3.92	4.02	4.33	4.51	4.49	5.07	4.95	5.45	5.62

FEED PREPARATION

Rates for custom feed preparations are those generally charged by grain elevators and feed mills. Rates charged in 2016 were higher to those reported in 2013. For grinding grain, the average custom rate in 2016 was 47 cents per hundredweight (cwt), up 10 cents from 2013 while the average rate for rolling grain in 2016 was 45 cents per cwt, an increase of 7 cents from 2013. Too few reports were available for the custom rates of grinding hay to be published. Mixing operations cost an average of 34 cents per cwt in 2016, compared to 33 cents per cwt in 2013. The average rates for rolling and mixing and for grinding and mixing in 2016 were \$0.77 per cwt and \$1.03 per cwt respectively, compared with \$0.72 per cwt and \$0.69 per cwt in 2013.

Custom Rates for Feed Preparation (\$/cwt), 2016, by District

District	Grinding Grain			Rolling Grain		
	No. of Reports	Range	Average	No. of Reports	Range	Average
NW	-	-	-	-	-	-
WC	-	-	-	4	0.38-0.60	0.55
SW	-	-	-	1/		
NC	-	-	-	7	0.20-0.50	0.41
C	3	0.45-0.49	0.47	8	0.38-0.47	0.44
SC	5	0.45-0.50	0.49	5	0.45-0.50	0.49
NE	-	-	-	-	-	-
EC	1/			1/		
SE	7	0.45-0.50	0.48	6	0.33-0.45	0.39
State	16	0.35-0.50	0.47	34	0.20-0.60	0.45

1/ Insufficient number of reports.

Custom Rates for Feed Preparation (\$/cwt), 2016, by District

District	Mixing Feed			Rolling and Mixing			Grinding and Mixing		
	No. of Reports	Range	Average	No. of Reports	Range	Average	No. of Reports	Range	Average
NW	-	-	-	-	-	-	-	-	-
WC	4	0.38-0.50	0.47	4	0.76-1.10	1.02	-	-	-
SW	1/			1/			-	-	-
NC	7	0.10-0.40	0.33	1/			-	-	-
C	8	0.20-0.38	0.26	8	0.50-0.76	0.65	3	0.65-0.75	0.72
SC	5	0.38-0.45	0.44	-	-	-	-	-	-
NE	-	-	-	-	-	-	-	-	-
EC	1/			3	0.35-1.00	0.62	8	1.25-1.25	1.25
SE	10	0.10-0.50	0.30	-	-	-	1/		
State	38	0.10-0.50	0.34	18	0.35-1.10	0.77	13	0.60-1.25	1.03

1/ Insufficient number of reports.

FEED PREPARATION (Continued)

Charges for pelleting feed operations in 2016 averaged \$0.89 per cwt, 1 cent lower than in 2009 but 28 cents lower than in 2013. The reports for grinding, mixing and pelleting operations were small. Hence, the table for it is not provided. Sacking operations, excluding the cost of sacks, averaged \$1.74 per cwt, up 25 cents from 2013's average.

Custom Rates for Feed Preparation (\$/cwt), 2016, by District

District	Pelleting Feed Only			Sacking Feed		
	No. of Reports	Range	Average	No. of Reports	Range	Average
NW	-	-	-	-	-	-
WC	-	-	-	4	1.20-1.80	1.35
SW	-	-	-	^{1/}	^{1/}	^{1/}
NC	-	-	-	6	1.80-2.50	2.30
C	3	0.75-0.75	0.75	5	1.80-2.00	1.92
SC	^{1/}			5	0.75-2.35	1.68
NE	-	-	-	-	-	-
EC	-	-	-	6	0.40-2.50	2.07
SE	^{1/}			7	0.25-2.20	1.30
State	7	0.75-1.00	0.89	35	0.25-2.50	1.74

^{1/} Insufficient number of reports.

Custom Rates for Feed Preparation, Historical Average (\$/cwt)

Year	Grinding Grain	Rolling Grain	Grinding Hay	Mixing Feed	Rolling and Mixing	Grinding and Mixing	Pelleting Feed	Grinding, Mixing, and Pelleting	Sacking Feed (excluding sack costs)
2001	0.34	0.31	0.66	0.23	0.49	0.53	0.70	1.18	0.91
2002	0.36	0.33	0.74	0.26	0.51	0.53	0.76	1.19	0.95
2003	0.35	0.33	0.62	0.26	0.52	0.57	0.84	1.14	1.16
2004	0.36	0.34	0.25	0.26	0.56	0.57	0.79	1.16	1.12
2005	0.39	0.36	0.32	0.28	0.58	0.62	0.89	1.20	1.15
2006	0.38	0.37	0.55	0.28	0.58	0.61	0.86	1.02	1.13
2007	0.44	0.39	0.57	0.33	0.57	0.58	0.83	1.34	1.27
2008	0.40	0.36	0.69	0.34	0.64	0.68	1.03	1.52	1.44
2009	0.41	0.37	0.61	0.32	0.61	0.67	0.90	1.51	1.30
2013	0.37	0.38	0.69	0.33	0.72	0.69	1.17	^{1/}	1.49
2016	0.47	0.45	^{1/}	0.34	0.77	1.03	0.89	1.47	1.74

^{1/} Insufficient number of reports.

FEED DELIVERY

In the 2016 survey, several different methods of charging for bulk feed deliveries were included. Rates for the most commonly reported methods are presented. There were very few responses to these questions in 2013; we have made comparisons where possible. If feed delivery was charged per load plus mileage, the rate in 2016 averaged \$27.63 per load plus \$2.05 per loaded mile for an average load of 6.6 tons. If the feed delivery charge was based on a straight charge per mile, the average rate in 2016 was \$2.11 per loaded mile on an average load of 9.72 tons. In 2013, operators charged \$2.54 per loaded mile on an average load of 10.4 tons. When a straight charge per ton method was used in 2016, an average of \$10.29 per ton was charged on an average load of 19.50 tons. Operators also had fee structures with a flat rate per load for feed delivery. For an average load of 3.55 tons, an average flat rate of \$41.82 per load was charged in 2016. Several operators charged an additional fee for miles beyond a specified limit. For all methods, the average extra charge was \$2.92 per mile per load after 28 miles. In 2013, the average extra charge was \$2.10 per mile per load after 19 miles.

Custom Rates for Feed Delivery, 2016, by Region

Region	Charge per Load Plus Mileage				Straight Charge per Mile		
	Number of Reports	Dollar per Load + Dollar per Loaded Mile	Avg. Load (Tons)		Number of Reports	Dollars per Loaded Mile	Avg. Load (Tons)
	2016				2016		
Western	-	-	-	-	6	2.54	7.83
Central	14	30.36	2.03	7.29	3	2.25	9.00
Eastern	5	20.00	2.13	5.00	9	1.78	11.22
State	19	27.63	2.05	6.60	18	2.11	9.72

^{1/} Insufficient number of reports.

Custom Rates for Feed Delivery, 2016, by Region

Region	Straight Charge per Ton			Flat Rate per Load			Extra Charge (All Methods)		
	Number of Reports	Dollar per Ton	Avg. Load (Tons)	Number of Reports	Dollars per Load	Avg. Load (Tons)	Number of Reports	Maximum Miles	Extra Dollars per Mile
	2016			2016			2016		
Western	^{1/}	14.50	26.00	-	-	-	-	-	-
Central	3	9.00	20.00	-	-	-	12	27.58	2.50
Eastern	3	8.77	14.67	11	41.82	3.55	11	28.64	3.11
State	8	10.29	19.50	11	41.82	3.55	23	28.09	2.92

^{1/} Insufficient number of reports.

MACHINERY RENTAL

Rental costs listed below do not include the cost of fuel or labor for self-propelled equipment and tractors. Combines were the most commonly reported rental items, followed by fertilizer applicators, different types of attachments including disks, vertical tillers, tractors, and planting equipment.

Rental charges increased in 2016 compared to the 2013 reports for most of the equipment. Average rental costs for most items show increases or decreases due to the varied demand and increasing costs of implements. Some of the variation may be due to the small number of reports for some rental items.

Machine Rental Rates, 2016

Machine or Tool	No. of Reports	Range	Average
Combine (\$/Hour)	23	110.00-200.00	153.48
Corn Header(\$/Acre)	4	12.00-12.00	12.00
No Till Drill (\$/Acre)	7	6.00-10.00	8.21
Drill Seeder (\$/Acre)	7	10.00-12.00	10.86
Dry Fertilizer Applicator (\$/Ton)	15	3.50-12.00	9.57
Anhydrous Applicator (\$/Acre)	4	6.00-12.00	7.50
Liquid Fertilizer Applicator (\$/Acre)	^{1/}		
Chemical Sprayer (\$/Hour)	7	100.00-150.00	128.57
Tractor-200+ hp (\$/hour)	6	110.00-200.00	153.33
Skid Loader (\$/hour)	4	25.00-50.00	31.25
Other attachments (\$/Acre)	11	5.00-9.00	6.14
vertical Tiller(\$/Acre)	7	5.00-9.00	7.57
Disk (\$/Acre)	3	5.00-9.00	6.33

^{1/} Insufficient number of reports.

TERRACING AND DOZING

The cost of building terraces averaged \$3.48 per foot, an increase of \$2.13 per foot from 2013. This variation may be due to the small number of reports. The average cost for general dozer work was \$136.11 per hour, up \$8.57 from 2013.

Custom Rates for Terracing and Dozing, 2016, by Region

Region	Terracing			Dozing		
	No. of Reports	Dollars per Foot		No. of Reports	Dollars per Hour	
		Range	Average		Range	Average
Western	1/			4	130.00-165.00	150.00
Central	-	-	-	1/		
Eastern	4	1.20-15.00	4.66	12	95.00-150.00	126.67
STATE	6	1.10-15.00	3.48	18	95.00-165.00	136.11

1/ Insufficient number of reports.

MANURE REMOVAL AND SPREADING

Custom rates for manure removal and spreading averaged \$5.68 per ton, with an additional mileage charge of \$1.67 per mile hauled. There are too few responses to custom rates for manure removal alone to be published.

Custom Rates for Manure Removal, 2016, by Region

Region	Removal and Spreading (\$/Ton)			Additional Charges (\$/Mile)		
	No. of Reports	Range	Average	No. of Reports	Range	Average
		2016			2016	
Western	20	2.35-10.00	5.78	11	0.25-6.00	1.33
Central	9	1.60-10.00	5.40	3	2.00-4.75	2.92
Eastern	1/			-	-	-
State	31	1.60-10.00	5.68	14	0.25-6.00	1.67
		2013			2013	
Western	6	2.35-4.50	3.18	6	0.20-6.50	3.02
Central	7	1.50-3.00	2.29	5	0.25-5.00	2.40
Eastern	-	-	-	-	-	-
State	13	1.50-4.50	2.70	11	0.20-6.50	2.74

1/ Insufficient number of reports.

HAULING LIVESTOCK

Questions related to custom rates for hauling livestock were added to the 2016 survey. Custom rates for hauling livestock with a belly-semi averaged \$3.23 per mile hauled at 57,364 lbs. capacity. There were too few responses for the rates for hauling cattle in flat trucks, small trucks, or gooseneck trailers to be presented.

Custom Rates for Hauling Livestock, 2016, by Region

Region	Belly Semi Truck					
	Weight Capacity (lb.)			One-Way Load Charge (\$/Mile)		
	No. of Reports	Range	Average	No. of Reports	Range	Average
Western	3	50000-80000	70000	3	3.25-4.00	3.50
Central	3	50000-50000	50000	5	4.00-4.20	4.08
Eastern	5	53000-55000	54200	5	1.45-2.75	2.23
State	11	50000-80000	57364	13	1.45-4.20	3.23

FENCE BUILDING

Rates for fence building were reported in the Bluestem Pasture Survey report published in November of 2015. The 2015 average fence building costs computed from responses in the 14 Flint Hills counties. The reported rates varied considerably due to the difference in materials, equipment, and terrain. The rate charged for building a five-wire fence, excluding materials, averaged \$15.91 per rod in 2015. The rate including materials averaged \$31.08 per rod. Average hourly rates charged for fence building were \$76.67 per hour with equipment, and \$55.00 without equipment. Additional charge for gates was \$88.33 and for corners was \$136.88.

Custom Rates for Fence Building, 2015

Type	Dollars
5 Wire Including Materials (\$/Rod)	31.08
5 Wire Excluding Materials (\$/Rod)	15.91
Additional Charge for Gates (\$)	88.33
Additional Charge for Corners (\$)	136.88
Average Hourly Rate With Equipment (\$/hour)	76.67
Average Hourly Rate for Rough or Rocky Terrain (\$/hour)	55.00