

# 2015 Crop Economics

Crop Insurance Conference  
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# Which is More Important?

- Output (Yield)
- Market Price
- Costs



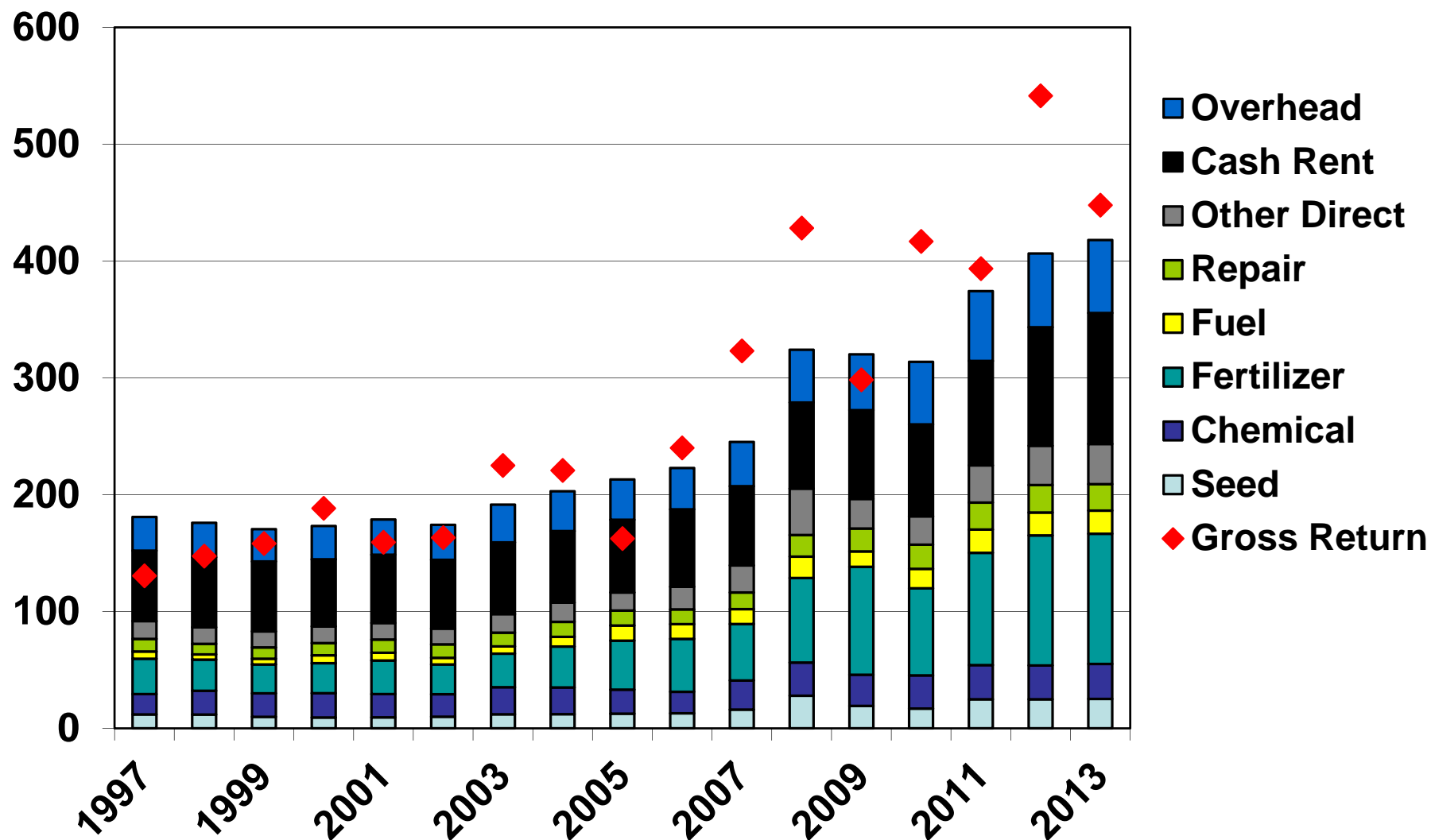
# North Dakota Marketing Year Average Price:

Range 1971-2006, Years 2007-2013 and Estimates 2014-15

Year	Spring Wheat	Soybean	Corn
1971-2006	1.30 - 4.71	2.87 - 7.37	1.00 - 3.16
2007	7.45	9.63	4.06
2008	7.19	9.71	3.74
<b>2009</b>	<b>4.90</b>	<b>9.26</b>	<b>3.18</b>
2010	6.78	10.90	5.01
2011	8.17	11.90	5.81
2012	8.19	14.00	6.46
2013	6.50	12.40	4.00
2014 est.	5.80	9.40	3.30
<b>2015 budgets</b>	<b>6.00</b>	<b>9.00</b>	<b>3.50</b>

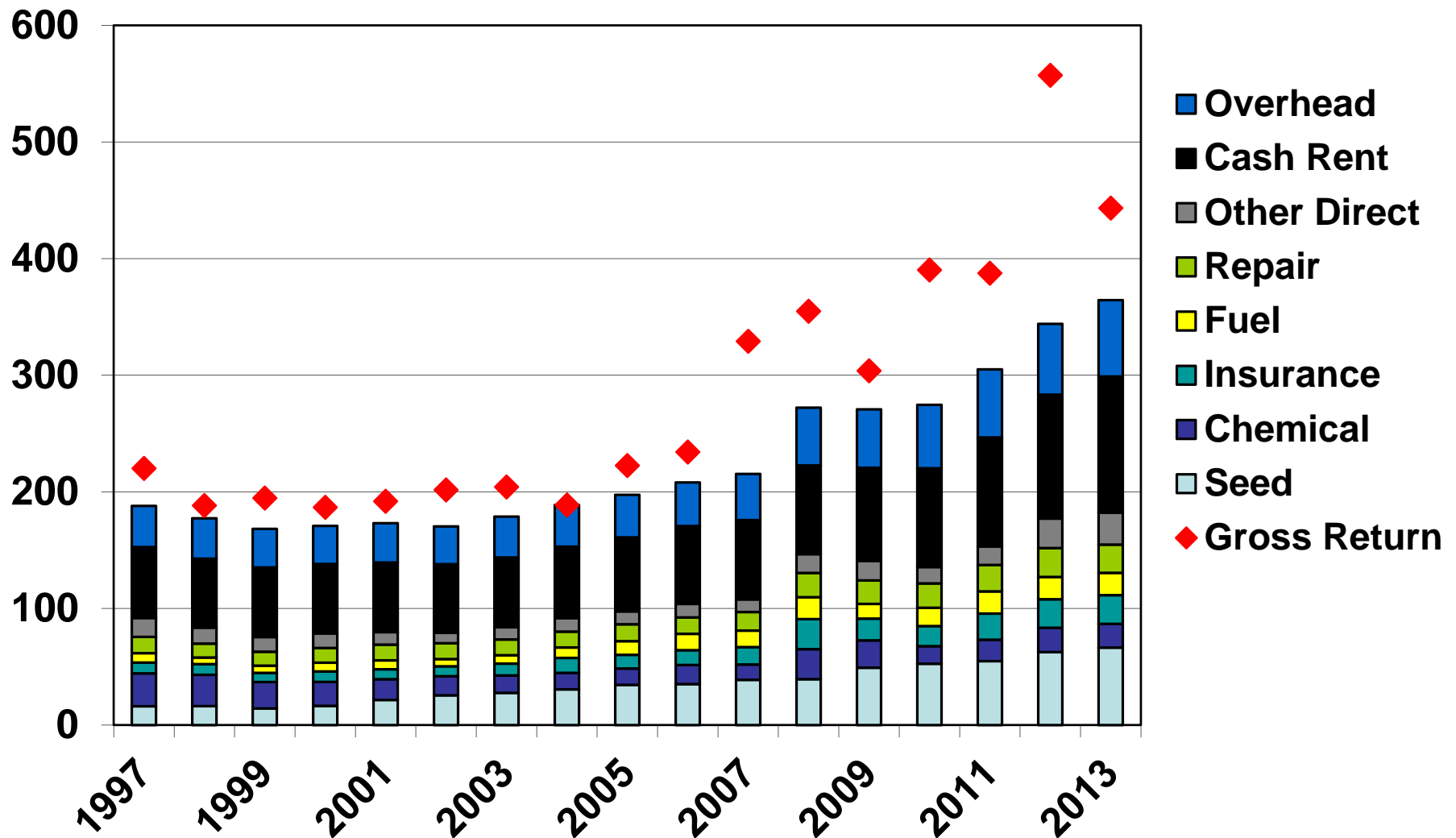
# Spring Wheat Costs per Acre

Red River Valley, MN and ND Farm Management Education, 1997-2013



# Soybean Costs per Acre

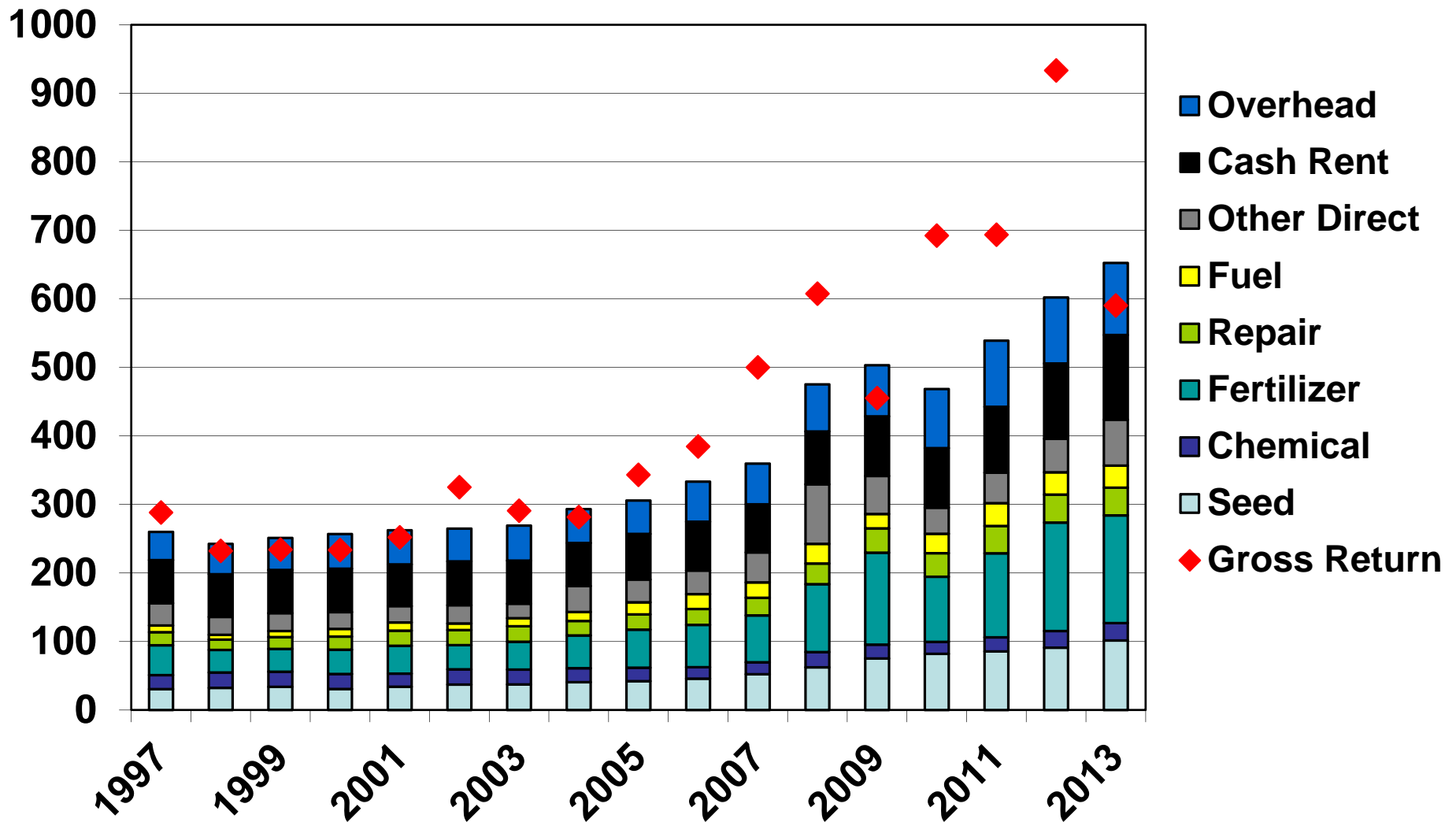
Red River Valley, MN and ND Farm Management Education, 1997-2013



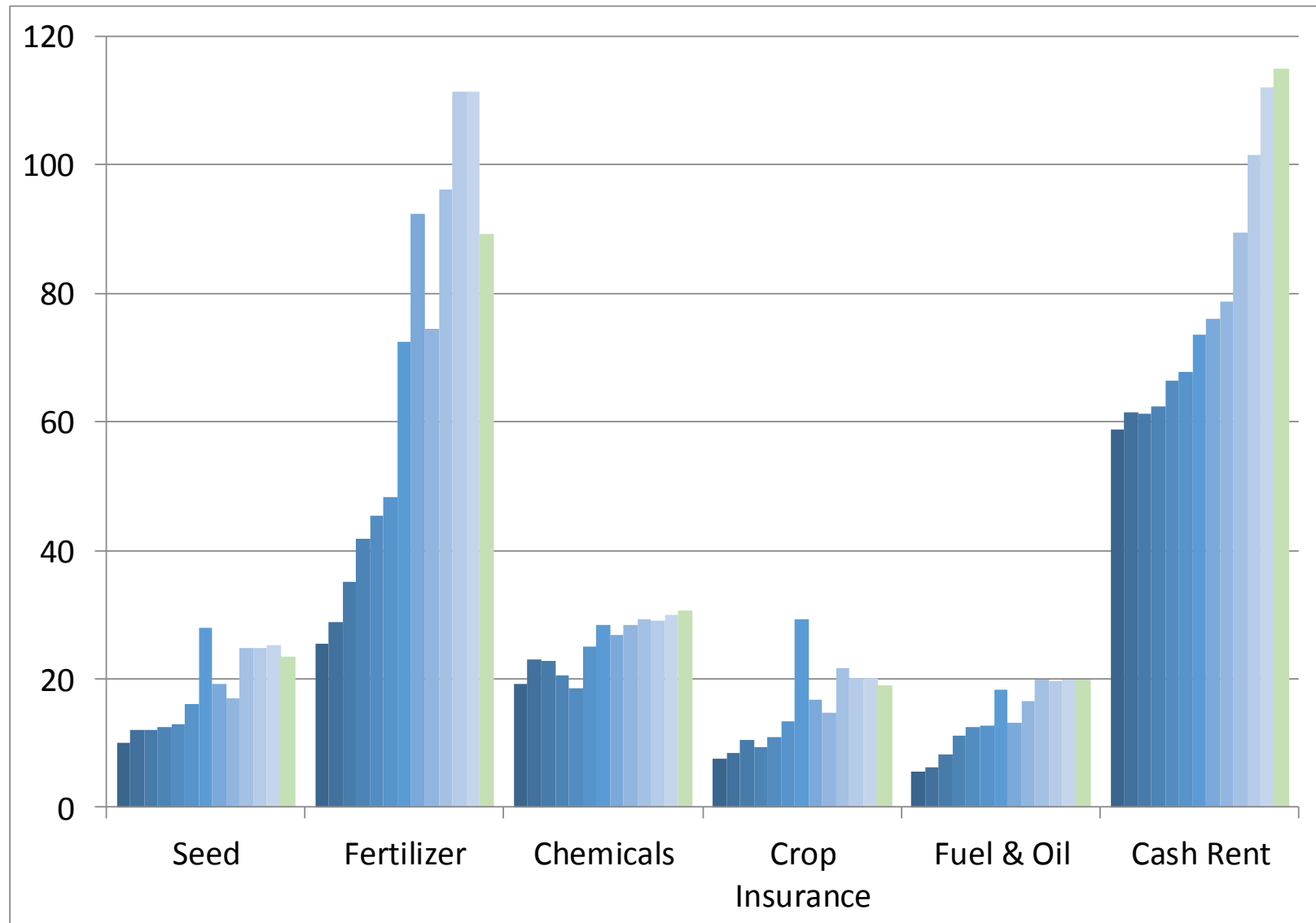


# Corn Costs per Acre

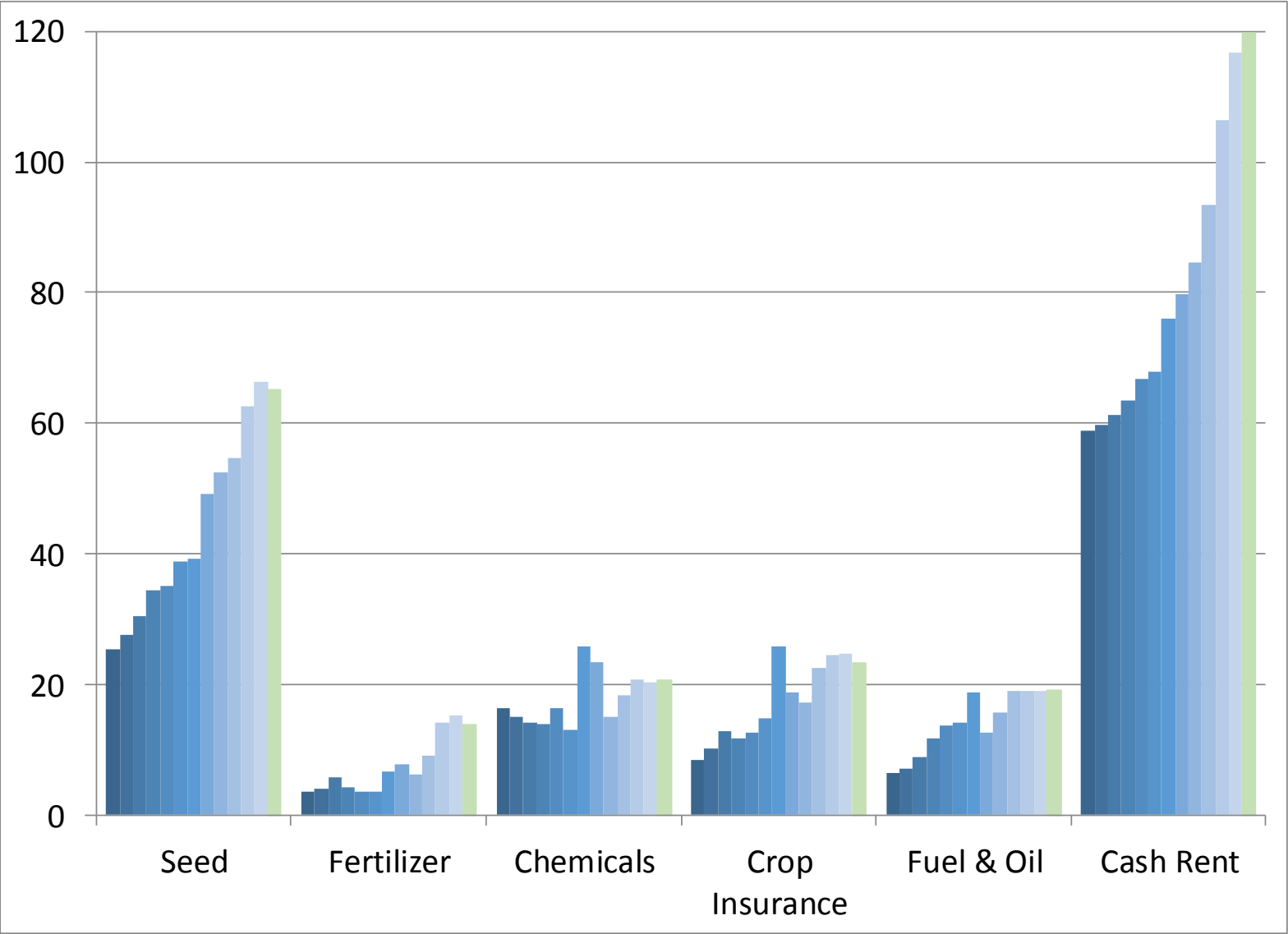
Red River Valley, MN and ND Farm Management Education, 1997-2013



# MN-ND FBM Selected Wheat Expenses, Red River Valley, 2002-2013, Estimates 2014

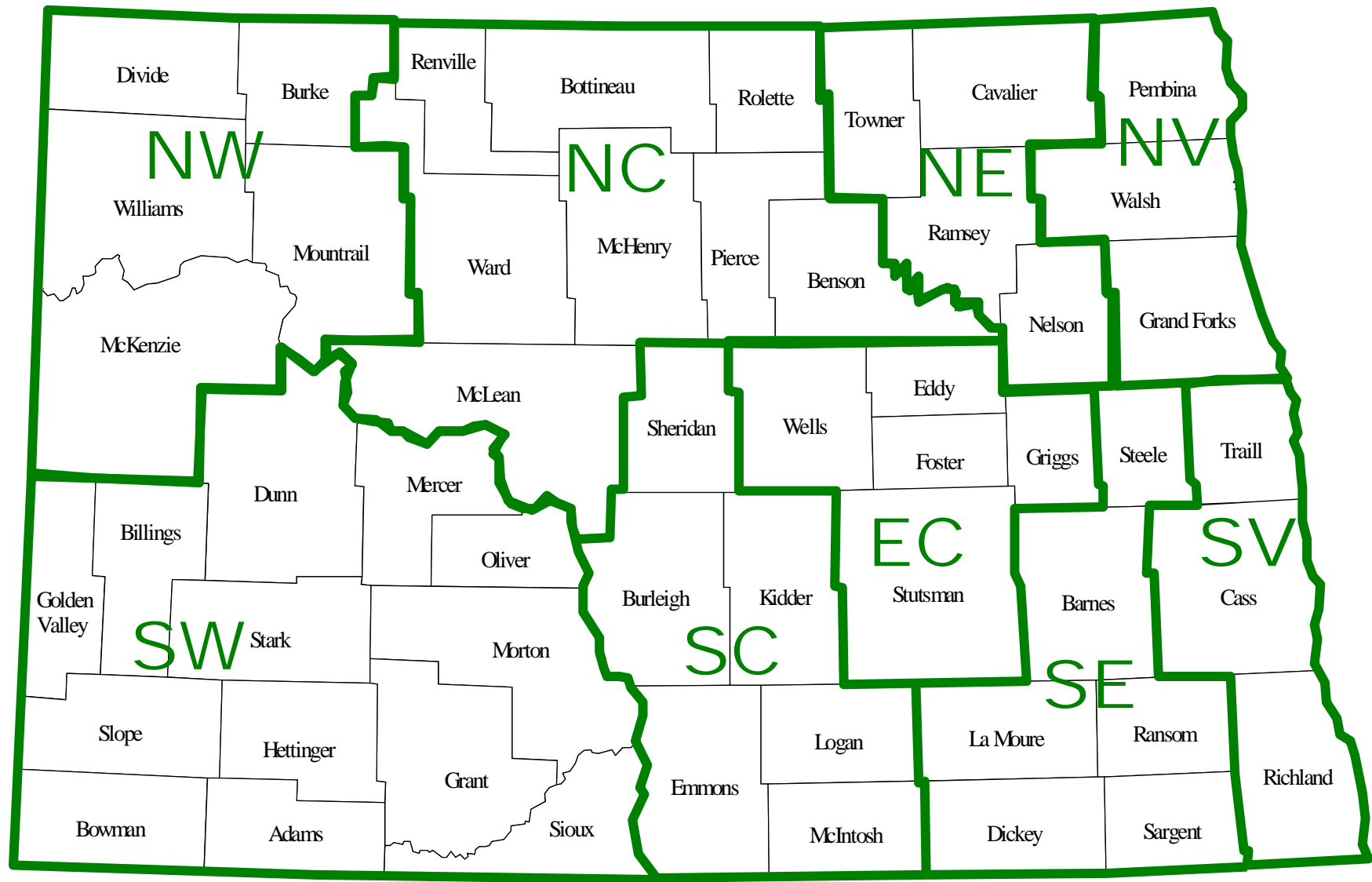


MN-ND FBM Selected Soybean Expenses, Red River Valley, 2002-2013,  
Estimates 2014





# NDSU Crop Budget Regions, 2012



# Crop Budgets

- Are a guide for a large multi-county region
- “Typical” or “Middle-of-the Road” yields and costs at a point in time.
- Budgets will be wrong for any individual
- Plug in your own numbers and be aware of the limitations on comparing crop budgets.

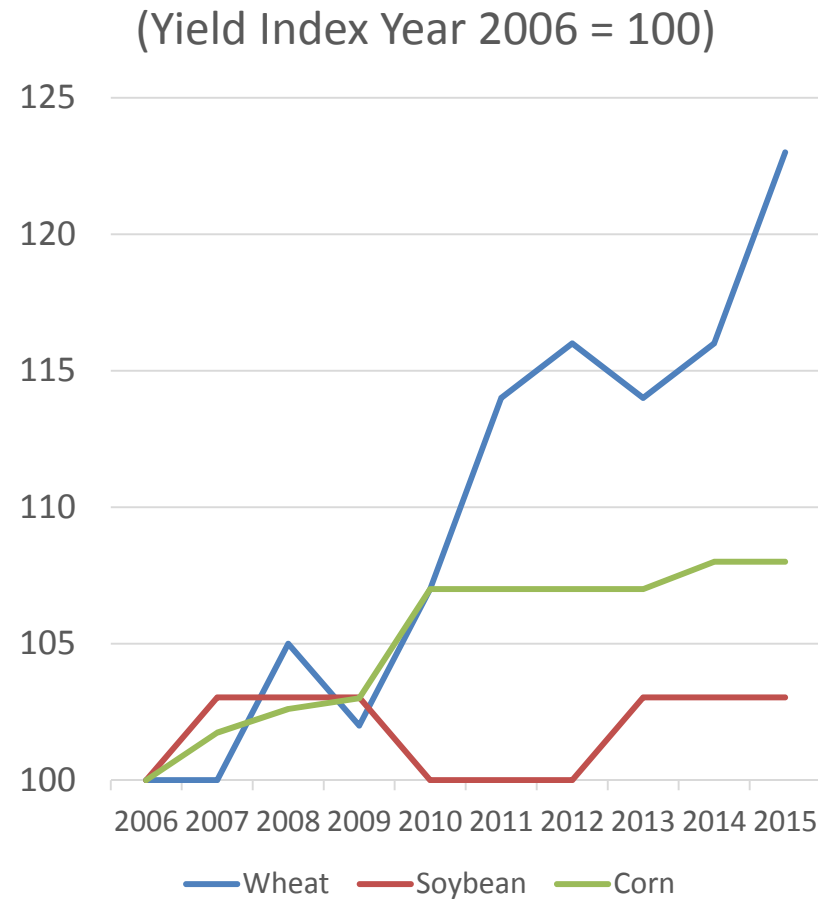
**THESE BUDGETS ARE ONLY INTENDED  
TO BE USED AS A GUIDE. EVERY  
INDIVIDUAL IS HIGHLY ENCOURAGED  
TO DEVELOP HIS/HER OWN BUDGETS!**

**Market Price:** Best estimates of NDSU extension economists. The greater of projected market price and marketing loan rate is used.

**Market Yields:** Average yield for the 7 year period 2005-2013, after the low and high yield years are removed. Yields for safflower, yellow mustard, buckwheat, millet, rye and chickpeas are from NDSU extension agronomists and industry sources.

# South RRV North Dakota Yields Used in Projected Budgets

	Wheat	Soybean	Corn
2006	44	33	122
2007	44	34	125
2008	46	34	126
2009	45	34	126
2010	47	33	130
2011	50	33	130
2012	51	33	130
2013	50	34	130
2014	51	34	132
2015	54	34	132

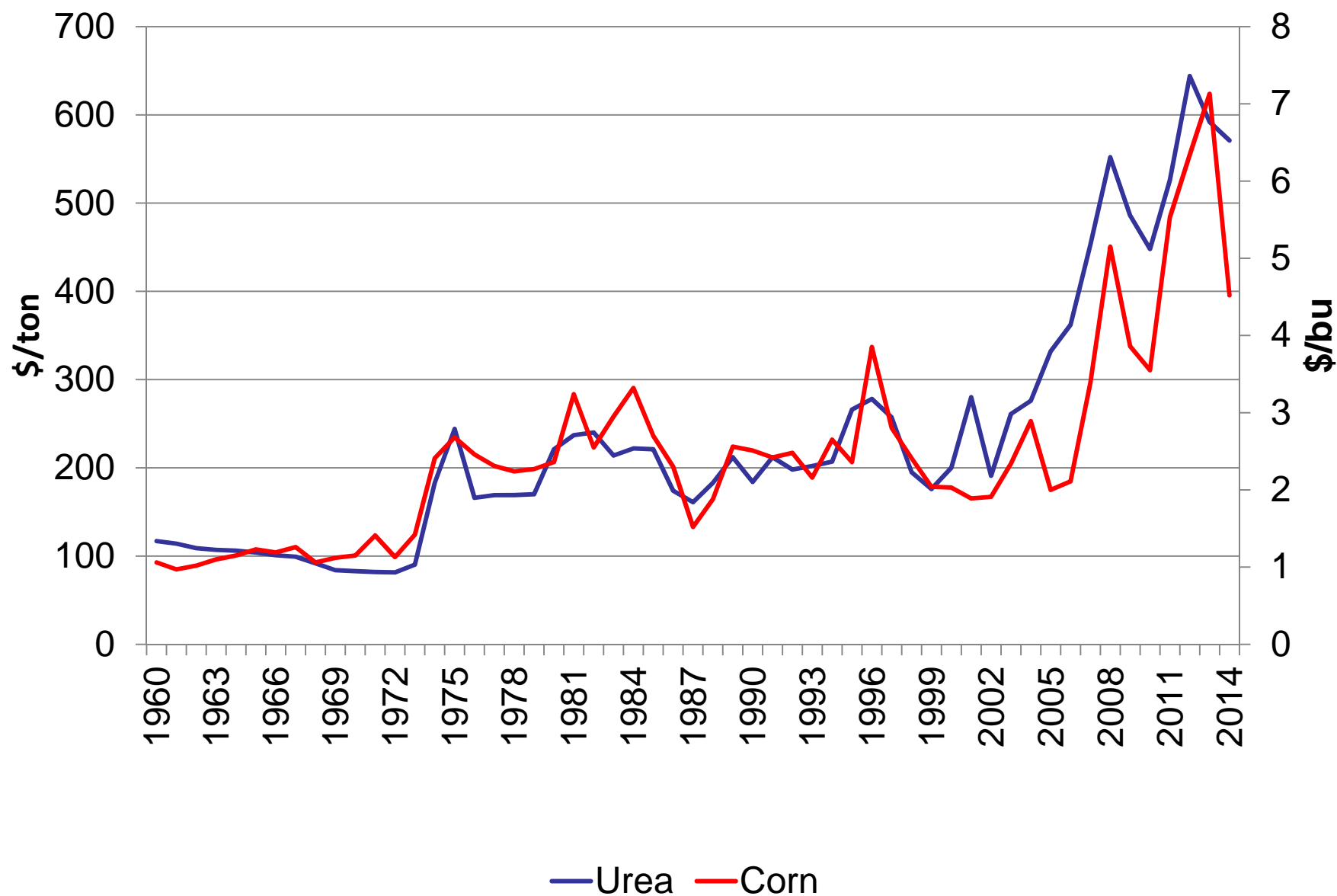


<b>Fertilizer Prices:</b>	<u>2015</u>	<u>2014</u>
Nitrogen	.46/lb	.46/lb
Phosphorus	.45/lb	.42/lb
Potassium	.38/lb	.39/lb

<b>Fuel Prices:</b>		
Diesel	2.65/gal	3.25/gal
Gas	2.60/gal	3.05/gal

# U.S. Urea and Corn Prices, April

(March prices for 2009-14)





<b>Seed Prices:</b>	<b><u>2015</u></b>	<b><u>2014</u></b>
Spring Wheat	11.00/bu	12.25/bu
Durum	18.50/bu	11.25/bu
Barley	9.00/bu	11.00/bu
Corn	3.15/thou.kern.	3.30/thou.kern.
Soybean	.35/thou.kern.	.352/thou.kern.
Dry Beans	.88/lb	.90/lb
Oil Sunflower	1.50/thou.kern.	1.42/thou.kern.
Conf. Sunflower	2.50/thou.kern.	2.45/thou.kern.
Canola	10.25/lb	9.70/lb
Flax	18.00/bu	19.00/bu
Field Peas	12.75/bu	14.00/bu
Oats	6.00/bu	7.00/bu
Buckwheat	.62/lb	.67/lb
Millet	.30/lb	.38/lb
Winter Wheat	10.50/bu	11.50/bu

<b>Spring Wheat South RRV</b>	<b><u>2015</u></b>	<b><u>2014</u></b>
Market Yield	54	51
Market Price	6.13	6.95
Market Revenue	331.02	354.45
-Seed	22.00	24.50
-Herbicides	22.00	21.80
-Fungicides	5.50	5.50
-Insecticides	0.00	0.00
-Fertilizer	78.68	71.31
-Crop Insurance	11.00	11.98
-Fuel & Lubrication	18.36	22.21
-Repairs	19.43	18.89
-Drying	0.00	0.00
-Miscellaneous	7.50	7.50
-Operating Interest	<u>3.92</u>	<u>3.90</u>
SUM OF DIRECT COSTS	188.39	187.59
-Misc. Overhead	7.63	7.42
-Machinery Depreciation	22.63	21.99
-Machinery Investment	13.14	12.77
-Land Charge	<u>124.00</u>	<u>117.00</u>
SUM OF INDIRECT COSTS	167.41	159.17
SUM OF LISTED COSTS	355.80	346.76
RETURN TO LABOR & MGMT	(24.78)	7.69

## Projected South RRV, ND, Wheat Budgets

	2015	2014
Market Yield	54	51
LISTED DIRECT COSTS	\$188.39	\$187.59
LISTED INDIRECT COSTS	167.41	159.17
ALL LISTED COSTS	355.80	346.76
LISTED COSTS PER BU.		
- Direct Costs	3.49	3.68
- Indirect Costs	3.10	3.12
- Total Costs	6.59	6.80

<b>Soybeans South RRV</b>	<b><u>2015</u></b>	<b><u>2014</u></b>
Market Yield	34	34
Market Price	9.12	11.12
Market Revenue	310.08	378.08
-Seed	69.25	69.60
-Herbicides	23.00	22.60
-Fungicides	0.00	0.00
-Insecticides	7.00	7.00
-Fertilizer	2.98	2.78
-Crop Insurance	11.20	13.34
-Fuel & Lubrication	15.54	18.98
-Repairs	18.81	18.36
-Drying	0.00	0.00
-Miscellaneous	1.50	1.50
-Operating Interest	<u>3.17</u>	<u>3.28</u>
SUM OF DIRECT COSTS	152.46	157.44
-Misc. Overhead	7.27	7.11
-Machinery Depreciation	21.91	21.41
-Machinery Investment	12.60	12.31
-Land Charge	<u>124.00</u>	<u>117.00</u>
SUM OF INDIRECT COSTS	165.77	157.84
SUM OF LISTED COSTS	318.23	315.27
RETURN TO LABOR & MGMT	(8.15)	62.81

## Projected South RRV, ND, Soybean Budgets

	2015	2014
Market Yield	34	34
LISTED DIRECT COSTS	\$152.46	\$157.44
LISTED INDIRECT COSTS	165.77	157.84
ALL LISTED COSTS	318.23	315.27
LISTED COSTS PER BU.		
- Direct Costs	4.48	4.63
- Indirect Costs	4.88	4.64
- Total Costs	9.36	9.27

<b>Corn South RRV</b>	<b><u>2015</u></b>	<b><u>2014</u></b>
Market Yield	132	132
Market Price	3.50	4.00
Market Revenue	462.00	528.00
-Seed	103.95	108.90
-Herbicides	23.00	22.60
-Fungicides	0.00	0.00
-Insecticides	0.00	0.00
-Fertilizer	100.08	97.36
-Crop Insurance	26.30	30.14
-Fuel & Lubrication	25.13	32.50
-Repairs	26.09	25.47
-Drying	27.72	27.72
-Miscellaneous	7.50	7.50
-Operating Interest	<u>7.20</u>	<u>7.48</u>
SUM OF DIRECT COSTS	345.97	359.68
-Misc. Overhead	10.36	10.15
-Machinery Depreciation	34.70	33.93
-Machinery Investment	19.94	19.49
-Land Charge	<u>124.00</u>	<u>117.00</u>
SUM OF INDIRECT COSTS	189.00	180.57
SUM OF LISTED COSTS	534.97	540.25
RETURN TO LABOR & MGMT	(72.97)	(12.25)

## Projected South RRV, ND, Corn Budgets

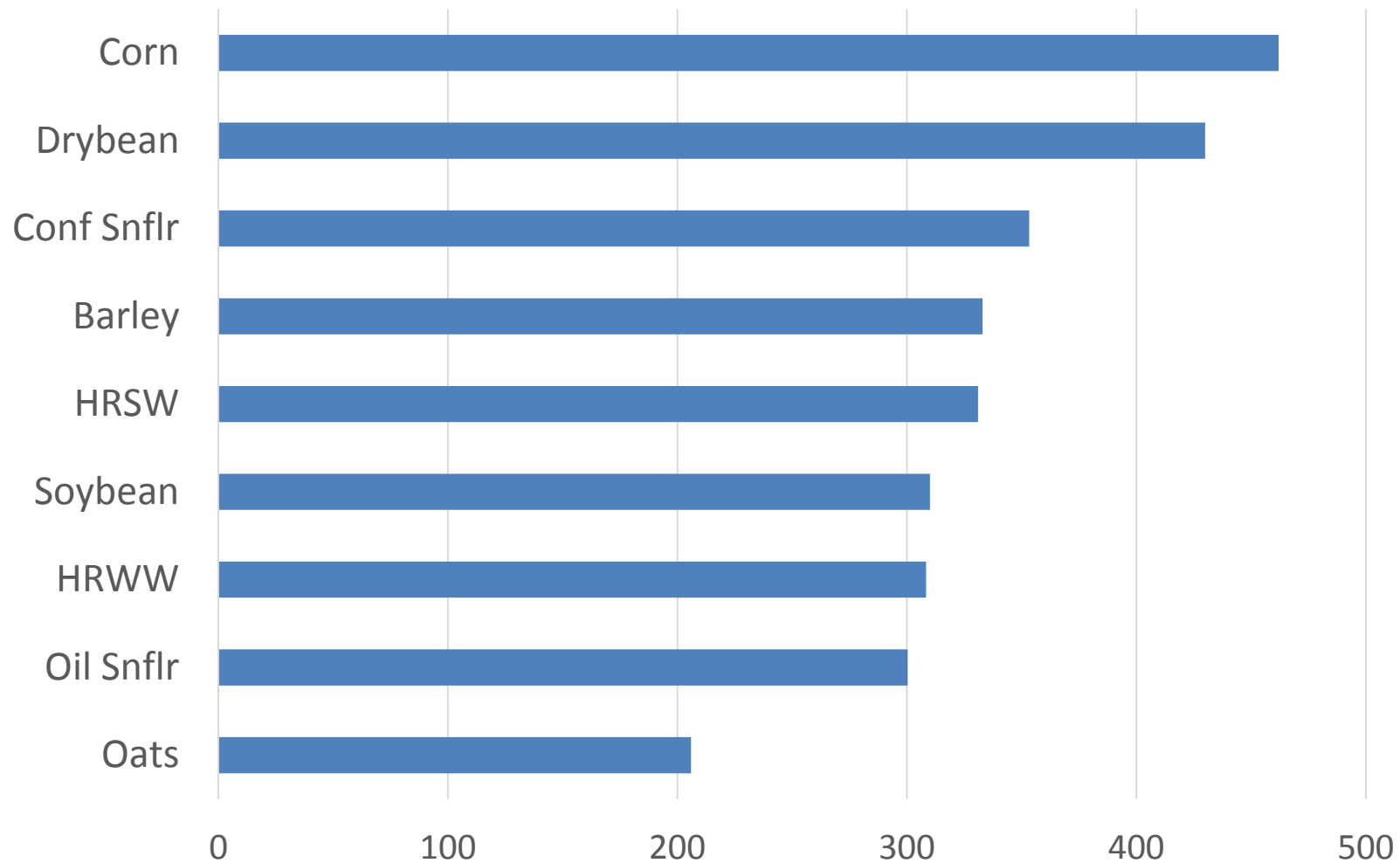
	2015	2014
Market Yield	132	132
LISTED DIRECT COSTS	\$345.97	\$359.68
LISTED INDIRECT COSTS	189.00	180.57
ALL LISTED COSTS	534.97	540.25
LISTED COSTS PER BU.		
- Direct Costs	2.62	2.72
- Indirect Costs	1.43	1.37
- Total Costs	4.05	4.09



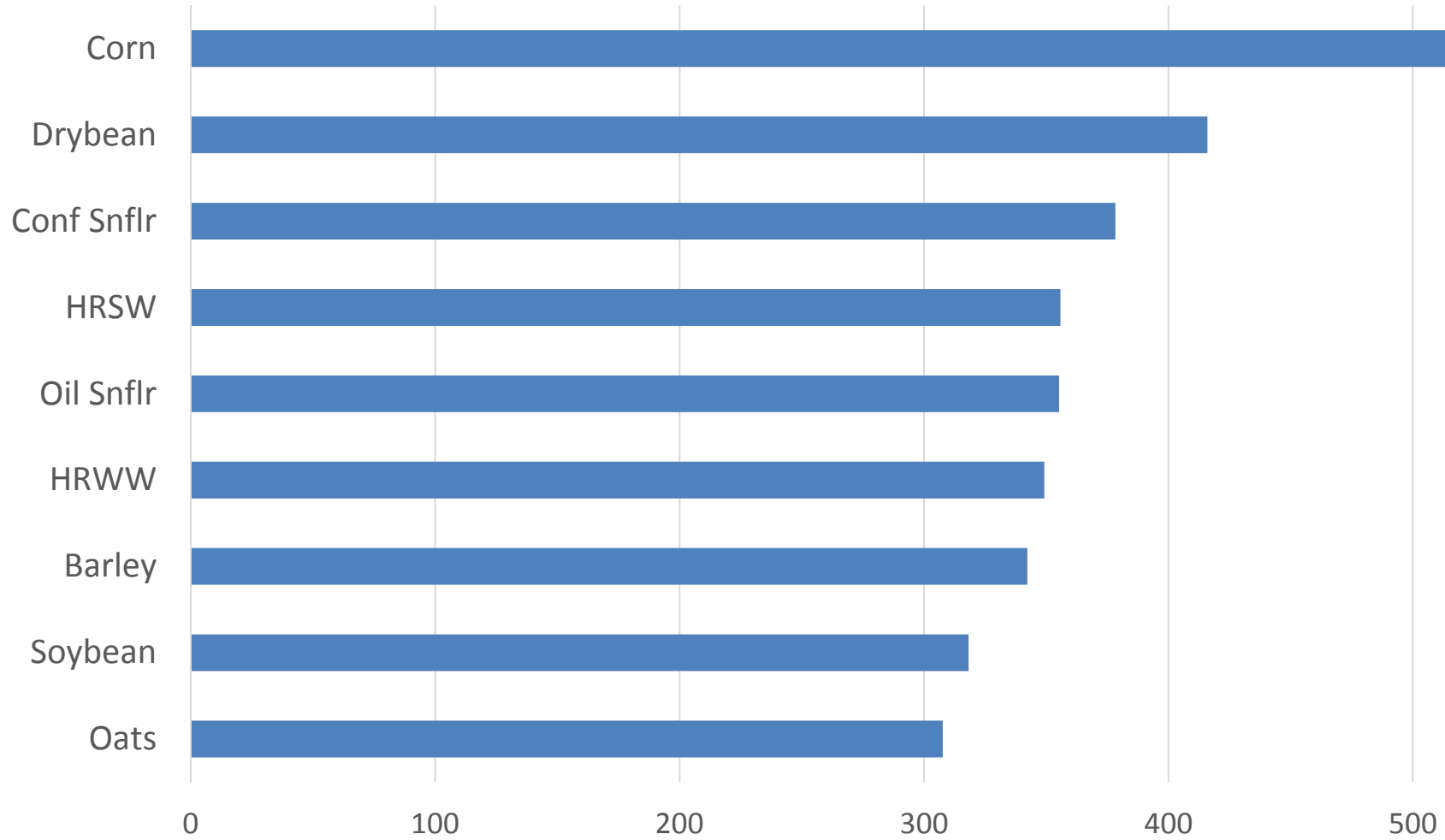
# South RRV, ND, 2015 Projected Budgets

	SV15 Pric	Yield	Income	Var.Cost	Tot.Cost	RODC	Profit
Drybean	0.25	1720	430	237	416	193	14
Soybean	9.12	34	310	152	318	158	-8
Barley	4.69	71	333	172	342	161	-9
HRSW	6.13	54	331	188	356	143	-25
Conf Snflr	0.256	1380	353	207	378	146	-25
HRWW	5.71	54	308	183	349	125	-41
Oil Snflr	0.182	1650	300	183	355	117	-55
Corn	3.5	132	462	346	535	116	-73
Oats	2.64	78	206	136	308	70	-102

## South RRV North Dakota 2015 Projected Gross Revenue

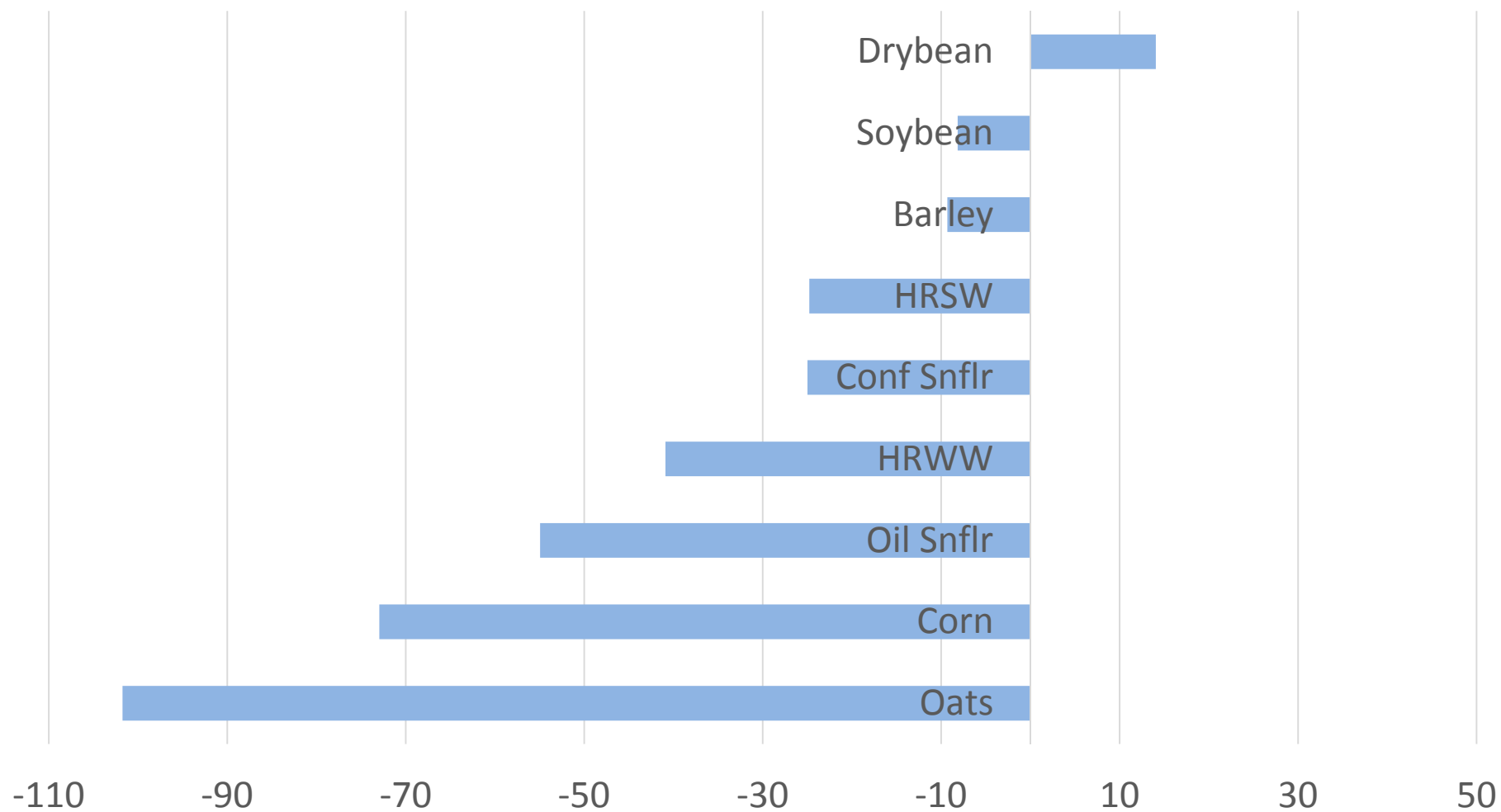


**South RRV North Dakota**  
**2015 Projected Total Costs per Acre**  
(Excluding labor and management)



# South RRV North Dakota

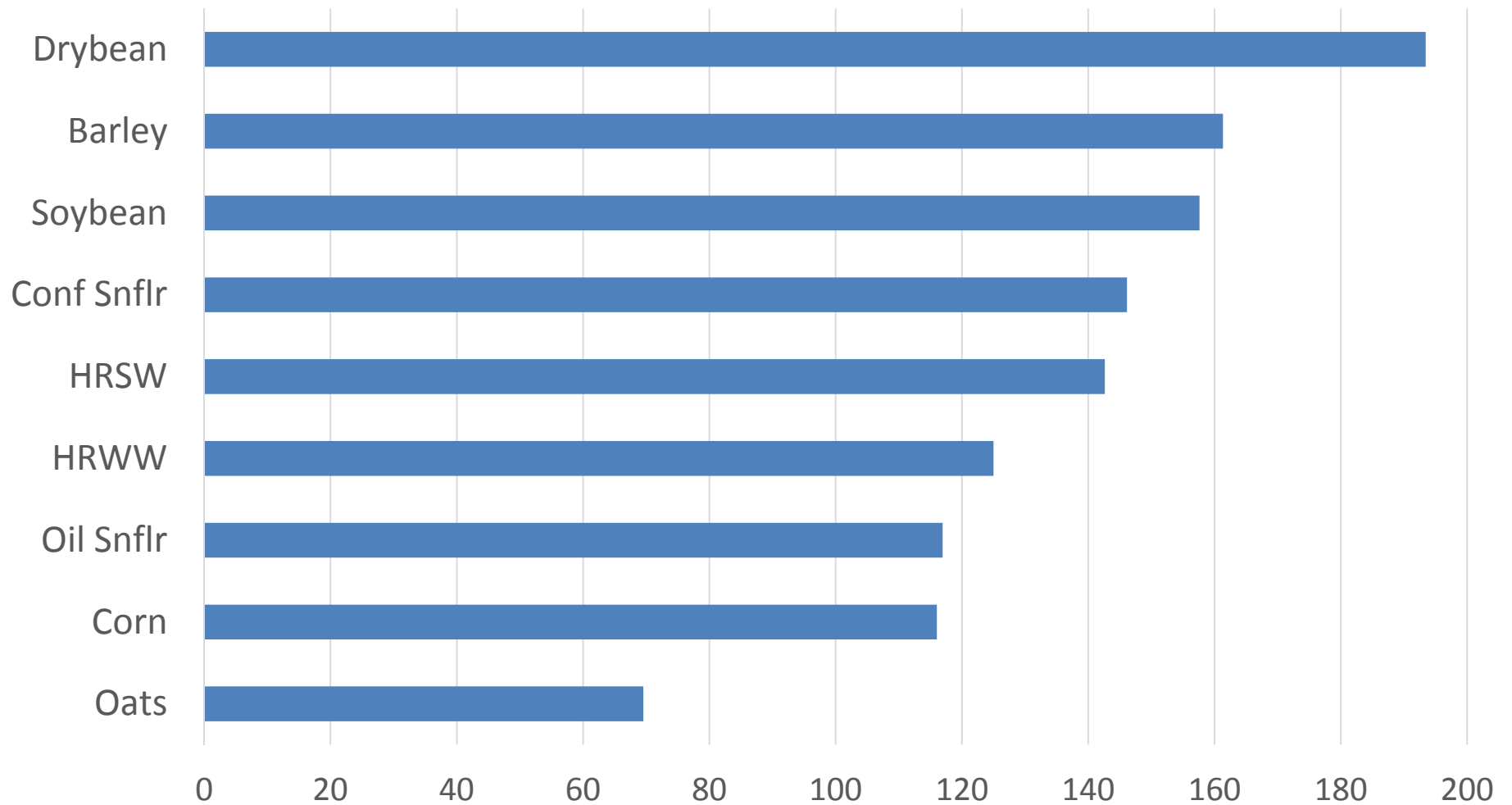
## 2015 Projected Returns to Labor and Management



# Make Adjustments for Differences in :

- Labor
- Management
- Risk (yield, quality and price)
- Storage considerations
- Rotation

**South RRV North Dakota**  
**2015 Projected Returns over Direct Costs**  
(Excluding labor and management)



# “Crop Compare” Objective



- “Crop Compare” calculates the cash price needed for other crops to yield the same return over variable costs as the base crop



# User Input



- All yields
- All variable costs
- Futures price and basis for base crop

# Crop Compare

Prices which provide the same Return over Variable Costs between crops - South Valley N.D.

## Select reference crop

Enter the Corn futures price  
Enter expected local basis (cash-futures)  
Expected Corn local cash price

Corn
\$4.20
-\$0.70
\$3.50

	S. Wht	Barley	Corn	Soybean	Drybeans	Oil Snflr	Conf Snflr	Oats	W.Wht
Yield	54	71	132	34	1720	1650	1380	78	54
Relative Price	\$5.64	\$4.05	\$3.50	\$7.90	\$0.205	\$0.181	\$0.234	\$3.24	\$5.54
Income	\$304.42	\$287.67	\$462.00	\$268.48	\$352.59	\$299.38	\$323.17	\$252.41	\$299.38

## Variable costs:

Seed	\$22.00	\$18.00	\$103.95	\$69.25	\$44.00	\$36.00	\$50.00	\$12.00	\$13.65
Herbicide	22.00	19.20	22.00	23.00	41.60	27.00	29.20	5.25	23.90
Fungicide	5.50	5.50	0.00	0.00	20.00	0.00	0.00	0.00	9.00
Insecticide	0.00	0.00	0.00	7.00	0.00	7.00	14.00	0.00	0.00
Fertilizer	78.68	60.80	100.08	2.98	46.03	42.82	33.40	56.59	78.68
Crop Insurance	11.00	16.30	26.30	11.20	20.70	9.10	12.20	10.80	11.00
Fuel & Lube	18.36	20.32	25.13	15.54	20.21	17.98	17.44	20.76	16.96
Repairs	19.43	20.45	26.09	18.81	23.60	19.18	18.95	20.64	18.84
Drying	0.00	0.00	27.72	0.00	0.00	4.95	4.14	0.00	0.00
Misc.	7.50	7.50	7.50	1.50	15.50	15.50	23.50	7.50	7.50
Operating Int.	3.92	3.57	7.20	3.17	4.92	3.82	4.31	2.84	3.82
Total Var.Costs	\$188.39	\$171.64	\$345.97	\$152.45	\$236.56	\$183.35	\$207.14	\$136.38	\$183.35
Return Over Variable Costs	\$116.03	\$116.03	\$116.03	\$116.03	\$116.03	\$116.03	\$116.03	\$116.03	\$116.03

**Note:** - Only variable costs are considered in this comparison. You can include an amount under "misc." to account for any differences between crops in fixed costs, labor, management and risk.

# Shortcoming of Crop Compare

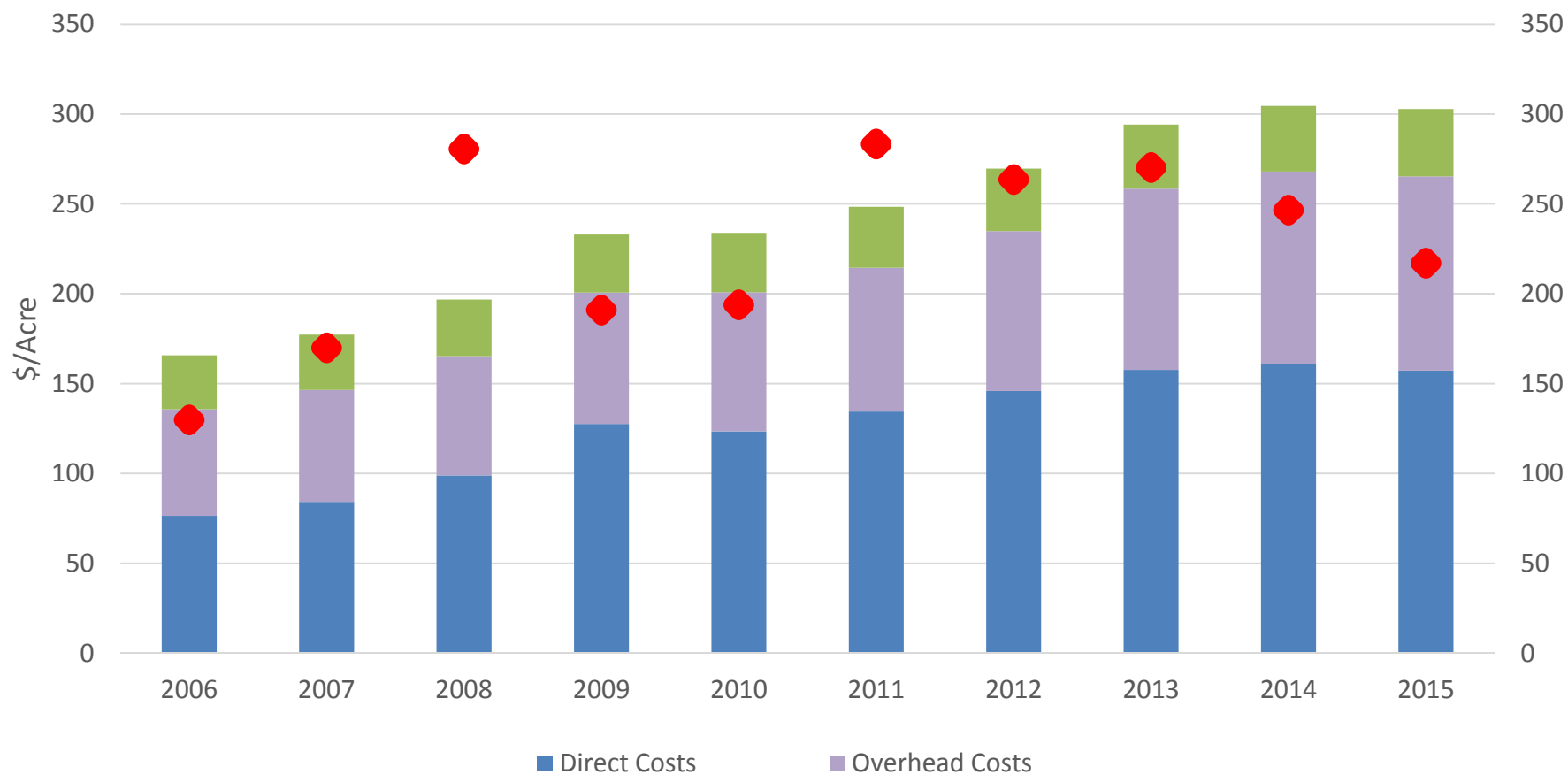


- Fixed costs are not included
  - ▣ Machinery ownership
  - ▣ Owner/operator labor
- Differences in management and risk are not included

## Crop Insurance Safety Net Analysis for East Central ND using Projected Yields, Costs and Projected Crop Revenue Insurance Price

Soybean	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Yield	30	30	30	31	30	30	30	30	31	31
Crop Ins. Price	6.18	8.09	13.36	8.80	9.23	13.49	12.55	12.87	11.36	10.00
Revenue Guarantee*	129.78	169.89	280.56	190.96	193.83	283.29	263.55	270.27	246.51	217.00
Direct Costs	76.49	84.24	98.93	127.55	123.5	134.47	145.95	157.63	161.02	157.28
Overhead Costs	59.29	62.27	66.38	73.11	77.32	79.96	88.92	100.85	106.95	108.07
Total Listed Costs	135.78	146.51	165.31	200.66	200.82	214.43	234.87	258.48	267.97	265.35
+ Labor & Mgmt	30.00	30.75	31.52	32.31	33.11	33.94	34.79	35.66	36.55	37.46
Total All Costs	165.78	177.26	196.83	232.97	233.93	248.37	269.66	294.14	304.52	302.81
Guar%/Total Costs	78.3%	95.8%	142.5%	82.0%	82.9%	114.1%	97.7%	91.9%	81.0%	71.8%
*70% coverage level, 2014 price is estimated.										

## Projected Soybean Costs and Revenue Insurance Guarantee, East Central ND



### **NDSU Projected Crop Budgets**

- [www.ag.ndsu.edu/farmmanagement/crop-budget-archive](http://www.ag.ndsu.edu/farmmanagement/crop-budget-archive)

### **Crop Compare**

- [www.ag.ndsu.edu/farmmanagement/tools](http://www.ag.ndsu.edu/farmmanagement/tools)

### **NDSU Farm Bill**

- [www.ag.ndsu.edu/farmmanagement/farm-bill](http://www.ag.ndsu.edu/farmmanagement/farm-bill)

### **NDSU Extension Farm Management Presentations**

- [www.ag.ndsu.edu/farmmanagement/presentations](http://www.ag.ndsu.edu/farmmanagement/presentations)

### **ND Farm Business Management Education Program reports**

- [www.ndfarmmanagement.com](http://www.ndfarmmanagement.com)

### **Farmland Leasing Arrangements**

- [www.aglease101.org](http://www.aglease101.org)

### **North Dakota Land Values and Rents**

- [www.land.nd.gov/surface/rentsurvey.aspx](http://www.land.nd.gov/surface/rentsurvey.aspx)

Questions?