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Farm Bill Options, Impacts and Outlook

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CORNHUSKER ECONOMICS

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Market Report	Yr Ago	4 Wks Ag	11/23/12
Livestock and Products, Weekly Average			
Nebraska Slaughter Steers, 35-65% Choice, Live Weight	$126.21	$127.12	$127.62
Nebraska Feeder Steers, Med. & Large Frame, 550-600 lb.	160.70	162.62	165.39
Nebraska Feeder Steers, Med. & Large Frame 750-800 lb.	141.08	148.63	148.52
Choice Boxed Beef, 600-750 lb. Carcass	196.64	198.49	194.92
Western Corn Belt Base Hog Price Carcass, Negotiated	82.40	80.39	76.30
Pork Carcass Cutout, 185 lb. Carcass, 51-52% Lean	89.66	86.46	81.75
Slaughter Lambs, Ch. & Pr., Heavy, Wooled, South Dakota, Direct	164.50	98.50	*
National Carcass Lamb Cutout, FOB	409.86	300.33	304.28
Crops, Daily Spot Prices			
Wheat, No. 1, H.W. Imperial, bu.	5.86	8.35	8.06
Corn, No. 2, Yellow Nebraska City, bu.	5.96	7.38	7.46
Soybeans, No. 1, Yellow Nebraska City, bu.	10.99	15.36	13.88
Grain Sorghum, No. 2, Yellow Dorchester, cwt.	9.95	12.46	12.61
Oats, No. 2, Heavy Minneapolis, MN , bu.	3.20	4.04	3.84
Feed			
Alfalfa, Large Square Bales, Good to Premium, RFV 160-185 Northeast Nebraska, ton.	155.00	237.50	*
Alfalfa, Large Rounds, Good Platte Valley, ton.	153.50	215.00	*
Grass Hay, Large Rounds, Good Nebraska, ton.	95.00	190.00	*
Dried Distillers Grains, 10% Moisture, Nebraska Average.	232.50	275.00	284.75
Wet Distillers Grains, 65-70% Moisture, Nebraska Average.	74.25	102.50	107.00

***No Market**

After the 2012 elections, Congress returned to Washington, D.C. for a lame-duck session to address the "fiscal cliff," the simultaneous challenge of expiring tax legislation and pending budget sequestration. Somewhere in this lame-duck agenda the farm bill may also find attention, as promised during the campaign season. Finishing a farm bill could produce budget savings that helps solve part of the fiscal cliff challenge. And perhaps more urgently, reauthorizing or at least extending now-expired farm bill legislation would prevent permanent farm bill legislation from 1949 taking effect on January 1.

While the consideration of farm bill legislation in the lame-duck session of Congress was yet to happen as this was written, it was expected that the principal farm bill proposals as passed in the Senate or in the House of Representatives Agriculture Committee would form the basis of any final compromise. The major differences between the two farm bill proposals were largely constrained to a price-vs.-revenue debate for the commodity program, and a question of the size of spending cuts for food assistance programs. While the food assistance spending question became the real political sticking point leading up to the election, the commodity program debate is of relevance here.

Farm Bill Research

On-going research at the University of Nebraska is focused on an analysis of farm income, policy and risk management decisions that impact Nebraska producers. The research model and analysis was initially developed through grant support of the Nebraska Soybean Board, while on-going research is currently funded by the Nebraska Corn Board. The research essentially addresses the question of price, yield and revenue risk for Nebraska producers, building on historical price and yield distributions and correlations. Model farms, one for each agricultural statistics district in the state, provides a

representative sample of crop acreage, crop mix, yield levels and yield variability throughout the state for analysis. The model includes a representative mix of wheat, irrigated corn, non-irrigated corn, irrigated soybeans and non-irrigated soybeans across the state. Figure 1 shows each representative farm and county in each district across the state.

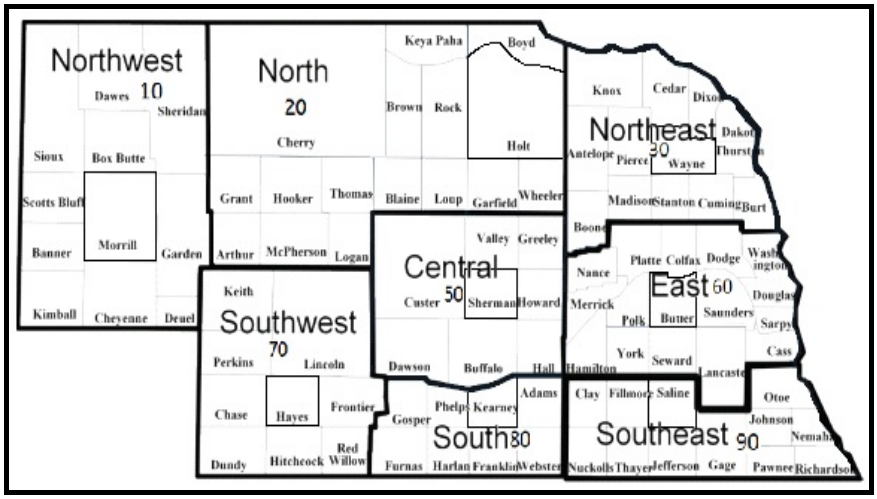

Figure 1. Nebraska Farm Income and Risk Model Representative Farms

Each analysis is based on a simulation of 500 draws or possible outcomes for each representative farm based on the price and yield distributions and correlations. The averages and distributions of those 500 draws provide the basis for the following analysis of the alternative commodity program proposals and related crop insurance language, and provide a comparison of the House and Senate farm bill proposals and impacts for Nebraska producers. Information on the model and simulation is discussed in the Jansen, Stockton and Lubben paper, while earlier research illustrating the analysis methods and tools is available in the Jansen, Lubben and Stockton paper, both of which are available on the web as listed in the references.

Farm Bill Proposals

The current farm bill proposals differ primarily in whether they offer an average revenue-based safety net (Senate) or an average revenue vs. fixed price-based safety net (House). Whether the farm bill is completed in the lame-duck session of Congress or is pushed off to the new year and the new Congress, these basic options and differences should frame the decision for producers.

In the Senate proposal, the program is called ARC, or Agricultural Risk Coverage. It would provide a revenue-based safety net based on five-year average yields and prices. It is a shallow-loss program that would start paying on losses below 89 percent of the average revenue benchmark, but would only pay on losses down to 79 percent of the benchmark. There is a proposed option to base the coverage on either farm-level revenue or county-level revenue. Farm-level protection would be expected to pay more often based on more yield variability at the farm, but the payment rate is lower, creating at least some offset.

In the House proposal, the choice is between Revenue Loss Coverage (RLC) or Price Loss Coverage (PLC). RLC provides shallow-loss revenue protection similar to the Senate ARC proposal at the county level, but the trigger starts at 85 percent of the benchmark and pays on losses down to 75 percent, with a different payment rate. Alternatively, PLC provides traditional counter-cyclical income support if season-average market prices drop below target prices. The proposed target prices are substantially increased relative to existing target prices in 2008 and earlier legislation.

Both Senate and House revenue safety net proposals only cover shallow losses and presume that farmers will purchase individual crop insurance as the foundation of their risk management plan. Another component of the proposed safety net is a Supplemental Coverage Option (SCO) that would provide producers the option to purchase a subsidized area-based revenue insurance policy on part of their crop insurance deductible. The availability of this option varies between the Senate and House versions, but essentially it could cover much of the gap of losses that are not covered by either the revenue safety net program or the individual crop insurance purchase.

Table 1 (on next page) provides an overview of the mechanics of each of the farm program options and establishes the "scenarios" for analysis in the research model. The first scenario is not participating in any program or purchasing any insurance to produce a crop revenue only result for comparison. The second scenario considers only the purchase of SCO which would be possible under the Senate proposal if not participating in the ARC program, coupled with Revenue Protection (RP) crop insurance at the 70 percent protection level, the most common policy and protection purchased in Nebraska. The third and fourth scenarios consider the ARC plan from the Senate at either the farm or county level. Under these proposals, ARC pays on losses from 89 to 79 percent of five-year Olympic-average revenue. As a result, SCO is only available below 79 percent, down to the 70 percent RP policy. Scenario five includes the RLC coverage from 85 percent down to 75 percent of five-year Olympic average revenue, as proposed in the House. This option specifically excludes eligibility for SCO, so there is a gap in protection down to the 70 percent RP coverage. Finally, scenario six considers the PLC option in the House proposal, which provides counter-cyclical payments based on a revised target price, as noted in the table. Importantly, this option was written in the House proposal as allowing SCO at 90 percent, so the scenario considers SCO from 90 to 70 percent and RP at 70 percent.

Table 1. Farm Program Options, Supplemental Crop Insurance and Revenue Protection Scenarios

Scenario	Commodity Program		Supplemental Coverage Option	Crop Insurance
	Program	Coverage Level		
NP-NSCO-NI	No Program	-----	No SCO	No crop insurance
NP-SCO-RP	No Program	-----	SCO (90%-70%)	RP (70%)
ARCF-SCO-RP	ARC-Farm	89%-79% of 5-year average farm revenue	SCO (79%-70%)	RP (70%)
ARCC-SCO-RP	ARC-County	89%-79% of 5-year average county revenue	SCO (79%-70%)	RP (70%)
RLC-NSCO-RP	RLC	85%-75% of 5-year average county revenue	No SCO (not available	RP (70%)
PLC-SCO-RP	PLC	Counter-cyclical payments below target prices: Corn = $3.70; Soybeans = $8.40; Wheat = $5.50	SCO (90% - 70%)	RP (70%)

Table 2. Average Commodity Program Payments per Acre by Representative Farm

Representative Farm	Risk Management Scenario				
	NP-SCO-RP	ARCF-SCO-RP	ARCC-SCO-RP	RLC-NSCO-RP	PLC-SCO-RP
District 10 Farm	$0.00	$13.32	$0.74	$0.56	$0.00
District 20 Farm	0.00	12.55	0.30	0.22	0.00
District 30 Farm	0.00	20.17	0.01	0.00	0.00
District 50 Farm	0.00	13.03	0.83	0.74	0.00
District 60 Farm	0.00	20.26	0.45	0.32	0.00
District 70 Farm	0.00	10.88	0.77	0.67	0.00
District 80 Farm	0.00	5.96	0.63	0.52	0.00
District 90 Farm	0.00	22.61	1.41	1.18	0.00

Farm Bill Analysis

Using the scenarios and farm program options described in Table 1, we can analyze economic impacts on representative Nebraska crop producers. Table 2 provides a per-acre analysis of the expected commodity program payments (ARC, RLC or PLC) for 2013, given trend yield expectations and price expectations as of September 2012.

Based on current price expectations for 2013, the ARC program at the farm level clearly outperforms every other commodity program proposal. Not surprisingly, the farm-level coverage of ARC pays more often and at higher average levels than ARC or RLC at the county level. PLC in the last column does not pay at all, indicating that at current price expectations, we could not simulate any price drops large enought to trigger counter-cyclical payments for 2013, even at the proposed higher target prices.

A second important component to consider is the potential premiums and indemnities from SCO. The coverage looks particularly attractive, considering the proposed 70 percent subsidy rates for premiums. The available coverage also varies between farm program options, meaning that commodity programs and SCO really need to be analyzed together to get a true picture of the potential payments. Table 3 (on next page) provides that full analysis of expected payments. When analyzing the combination of commodity program payments and SCO net payments, the picture becomes much more mixed. While ARC at the farm makes the largest commodity program payments (as shown in Table 2), the availability of SCO is substantially limited under ARC (and not available at all under RLC). But, if a producer can and does purchase the maximum SCO coverage (90 percent down to the assumed 70 percent RP coverage) by not participating in ARC or by choosing the PLC option, then expected net SCO payments are substantial, particularly in the Panhandle (District 10). Based on expectations, ARC at the farm with limited SCO still appears preferable to the other options for Nebraska producers, but the availability of SCO is an important consideration.

Two graphs complete the analysis and discussion of farm program alternatives. Figure 2 (on next page) illustrates the probability of commodity program and SCO payments on the farm in Southwest Nebraska (District 70). With the inherent yield variability of the region, this repre-

Table 3. Average Commodity Program and Supplemental Coverage Net Payments per Acre by Representative Farm

Representative Farms	Risk Management Scenario				
	NP-SCO-RP	ARCF-SCO-RP	ARCC-SCO-RP	RLC-NSCO-RP	PLC-SCO-RP
District 10 Farm	$16.35	$16.94	$4.36	$0.56	$16.35
District 20 Farm	4.97	13.26	1.01	0.22	4.97
District 30 Farm	1.73	20.28	0.12	0.00	1.73
District 50 Farm	6.45	14.09	1.89	0.74	6.45
District 60 Farm	5.87	21.52	1.71	0.32	5.87
District 70 Farm	6.73	12.09	1.99	0.67	6.73
District 80 Farm	5.30	7.16	1.84	0.52	5.30
District 90 Farm	9.55	25.19	3.99	1.18	9.55

sentative farm shows a good picture of how payments compare across strategies. The chart is a plot of the Cumulative Density Function (CDF) for each of the scenarios in the study. To read the CDF, you read the number on the left axis as the probability that the actual payment will be less than or equal to the number on the bottom axis. For example, the brown line (PLC-SCO-RP) crosses the $0 line at approximately 0.5, meaning there is a probability of about 50 percent that this scenario will result in negative payments (remember there are farmer-paid premiums on SCO). A scenario with a line that is further to the right in the graph is preferred to the others as it indicates greater payments and probabilities. Since the lines cross multiple times, there is not an obvious optimal scenario in this method of analysis, but is clear that either the ARC plan at the farm with SCO (ARCF-SCO-RP) or the PLC plan with SCO (PLC-SCO-RP) provide the greatest probability and size of expected payments.

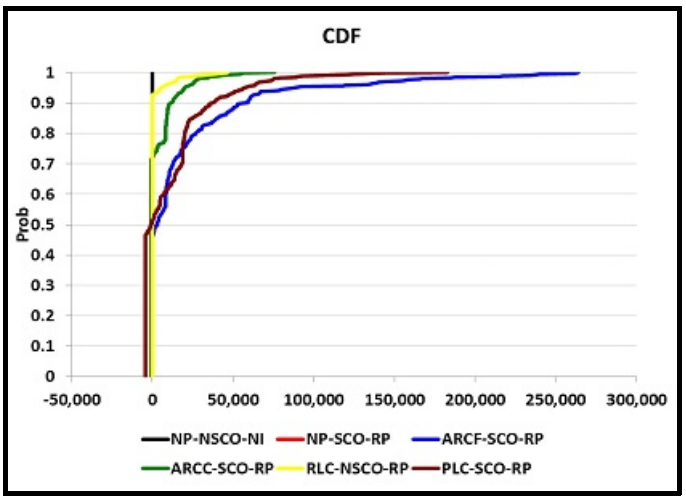

Figure 2. Commodity Program Payments and SCO Net Payments on the District 70 Representative Farm

The graph shown in Figure 3 is a CDF chart of the total adjusted crop revenue on the farm, including actual crop revenue, commodity program payments, net SCO payments and net RP payments. The graph shows the impact of expected prices for 2013 in terms of expected revenue on the representative farm in Southwest Nebraska. The scale of expected crop revenue generally dwarfs the expected payments from commodity programs and crop insurance (SCO and RP), except on the low end of revenue. As compared to the do nothing approach (NP-NSCO-NI), all of the scenarios substantially improve the worst-case outcomes. Buying crop insurance (RP in the study), buying SCO and participating in the farm program all improve on the bottom line, with differences of nearly $400,00 between the worst-case outcome of doing nothing and the other scenarios of various farm program and insurance combinations.

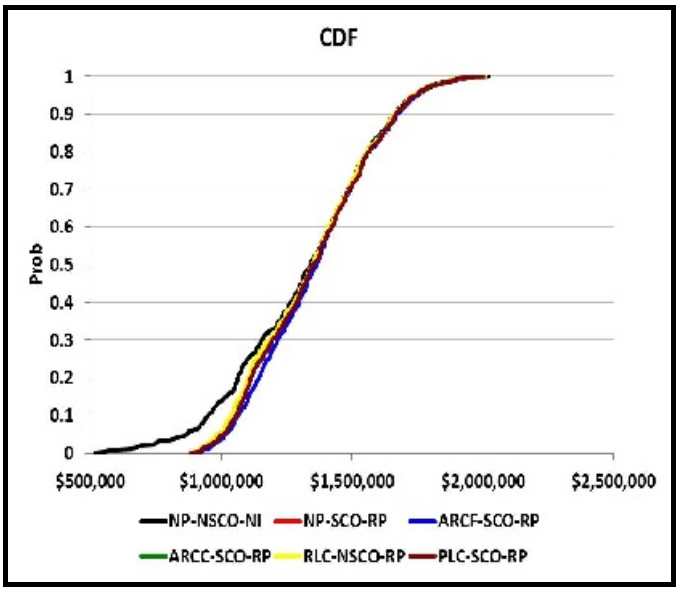

Figure 3. Crop Revenue, Commodity Program Payments, SCO Net Payments and RP Net Payments on the District 70 Representative Farm

The analysis demonstrates the substantial impact that proposed commodity programs and supplemental crop insurance could have for producers across the state. The analysis shows the largest expected payments from the ARC program at the farm level, although the greater

availability of SCO under the PLC plan can greatly offset that advantage. And the probability analysis shows some mixed results between the various scenarios.

It is important to remember again that this is an analysis of farm program alternatives and expectations for 2013 revenue and payments. At current expected price levels, the price safety net of PLC never kicks in and the advantage of an average revenue-based safety net is clear. But, if price levels were to someday return to lower levels and remain lower, than the PLC plan could make substantial payments over several years, even as the average revenue-based plans eventually offer lower protection with lower average prices. The optimal program option for producers is partly a function of producer expectations for prices over the life of the farm bill. Even the choice between participating in a commodity program tied to average revenue (average yields and average prices) vs. participating in greater purchases of SCO (tied to current year prices) could vary from year to year, based on current prices relative to the five-year Olympic average price.

Farm Bill Outlook

As of late November, expectations were for Congress to take up the farm bill, likely as part of a broad legislative effort to address the fiscal cliff. If so, the farm bill could well contain both a revenue-based and a price-based safety net in line with the House proposal as a necessary compromise. If the farm bill is not completed in 2012, a short extension to push the debate to a new Congress in 2013 will still leave the same basic framework and options for commodity programs. Thus, the analysis should provide good guidance for producers on how the programs could work and how they could offer risk protection in 2013 and beyond. Expected payments look to be smaller than the direct payments of the past that are essentially guaranteed to disappear, but the risk protection against crop revenue losses could be substantially greater and should merit careful attention and decision-making from producers.

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