Analyzing Crop Revenue Safety Net Program Alternatives and Impacts on Producers and Program Costs

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This study evaluates the policy effects of alternative program designs for federal revenue-based farm income safety net programs. Eight representative farms across Nebraska are used to stochastically simulate the financial impact of changing the current farm crop revenue-based safety net with a state revenue trigger against potential alternative programs involving guarantees at the district, county, or farm level. Results indicate that decreasing the aggregation of the revenue guarantee increases expected farm-level payments and program costs for the revenue-based safety net.

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Objectives

This study evaluates the policy effects of alternative program designs for federal revenue-based farm income safety net programs. Current policy discussions of proposed changes to the Average Crop Revenue Election (ACRE) program have focused on potential changes to the scope and the level of protection (Shields and Schnepf, 2011). This study uses a stochastic model to simulate the potential economic impacts on representative Nebraska farms of changes in the Average Crop Revenue Election (ACRE) program from a state guarantee to potential program alternatives involving guarantees at the district, county, or farm level. Results of the simulation and analysis provide insight on the economic consequences of alternative revenue safety net designs for Nebraska that are also relevant to other crops or regions of the country during the 2012 Farm Bill debate.

Background

The ACRE program provides a revenue-based safety net and was authorized as part of the Food, Conservation, and Energy Act of 2008. ACRE became part of the suite of price- or revenue-based income support programs available to grain and oilseed farmers in the United States (USDA Farm Service Agency, 2009). Previous legislation enacting the Direct and Counter-Cyclical Program (DCP) provided income support to producers based on price (USDA Farm Service Agency, 2008). Qualifying producers may either participate in the DCP or ACRE. Opting for ACRE allows the producer to still receive 80% of the Direct Payments (DPs), but the irrevocable decision eliminates participation in the Counter-Cyclical Payment Program (USDA Farm Service Agency, 2009).

Cooper (2009) discussed how a revenue-based program was initially projected to be more effective than previously-established price-based income support and ad hoc disaster programs for a producer's bottom line during the early implementation phase of the 2008 Farm Bill. Participation in ACRE relative to DCP remains low however due to producer concerns about the effectiveness and complexity of the ACRE program and the perceived tradeoff of reduced DPs relative to potential ACRE program support payments (Lubben and Novak, 2010). Fundamentally, the level of aggregate risk necessary to meet the statewide program trigger may not be well correlated with the risks facing individual producers, limiting the effectiveness of the program (Dismukes, Arriola, and Coble, 2010) .

States such as Nebraska have a wide variety of production and climatic factors. Moderate to severe drought in western regions may only have slight effects in the east. Previous findings by Dismukes, et al. (2011) show switching from the current state ACRE trigger to a district or county guarantee may allow for increased correlation with the risks faced by an individual producer and potential farm-level payments. Previous research relevant to Nebraska by Lubben, Jansen, and Stockton (2011) also verify these assumptions. Changes in program design will also have implications on national program costs.

Changing the farm program revenue trigger to a lower aggregation level marks a fundamental shift in the scope and type of risk coverage available to producers to deal with detrimental declines in crop revenue. At the most basic level, the types of revenue losses may be either classified as shallow or deep on which the farm-specific (idiosyncratic) and large-scale (systemic) losses influence crop revenue (Zulauf, 2011). Interactions between ACRE and commonly utilized private crop insurance products show the level of overlap between the types of losses these tools cover remains relatively low (Zulauf, Schnitkey, and Langemeier, 2010).

Discussions on farm programs beyond 2012 are considering shifts from the current state-level systemic loss risk protection to farm-level idiosyncratic risk protection.

Debates sounding the work of the Joint Select Committee on National Deficit Reduction created a rich source of farm program proposals to evaluate potential farm program payments and federal program costs. The current design of ACRE with a state revenue trigger serves as the base against which to compare alternative program designs. At the next lower geographic level, the Aggregate Risk and Revenue Management (ARRM) proposal relied on a district guarantee, whereas the Systemic Risk Reduction Program (SRRP) proposal presented a county trigger. At the farm level, the Agricultural Risk Coverage (ARC) proposal correlated protection against farm-level crop revenue losses by using a producer-level guarantee (Shields and Schnepf, 2011). The current ACRE program, along with ARRM, SRRP, and ARC create a set of hypothetical alternatives to investigate potential farm program payments and implications on national program costs.

Data and Methods

This study models eight representative grain and oilseed farms across Nebraska to simulate expected farm program payments under five different policy alternatives. The representative farms were created to depict average cropping patterns and productivity factors seen across the eight National Agricultural Statistical Service (NASS) Agricultural Statistics Districts of Nebraska in Figure 1. One county per district has been identified with a lighter outline to show the county in which a representative farm lies. The districts with these counties in Figure 1 include: Norwest 10 – Morrill, North 20 – Holt, Northeast 30 – Wayne, Central 50 - Sherman, East 60 – Butler, Southwest 70 – Hayes, South 80 – Kearney, and Southeast 90 – Saline.

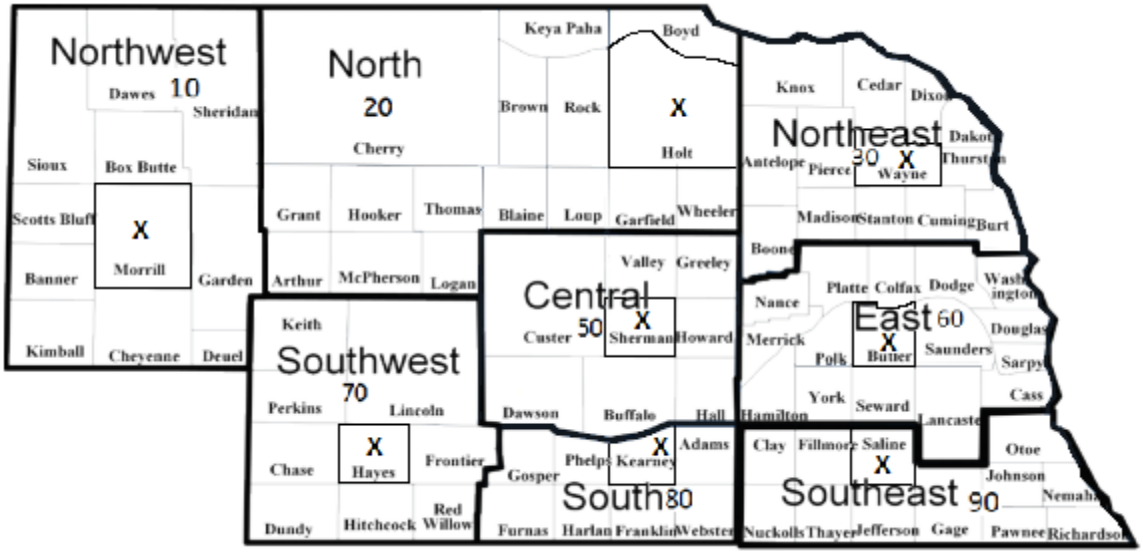

Figure 1. Nebraska Agricultural Statistics Districts, Representative Counties, and Representative Farms

To define average size and scale of Nebraska farm operations, the 2007 Census of Agriculture conducted by NASS provided cropland acres and total number of operators sorted according to farm income ranges (National Agricultural Statistics Service 2009). Using operations with an income range classification above $100,000, the total cropland acres and producers at the district level were aggregated from county level data to determine the number of cropland acres per representative farm. Annual yield and harvested acreage series maintained by NASS for the nation, state, districts, and counties allowed for identification of recent cropping and irrigation patterns practices across different aggregations (USDA National Agricultural Statistical Service 2011). Table 1 presents the sizes and cropping mixture of the eight representative farms developed for the simulation.

Table 1. Cropland Acres on Representative Farms

Cropland Acres	District 10 Farm	District 20 Farm	District 30 Farm	District 50 Farm	District 60 Farm	District 70 Farm	District 80 Farm	District 90 Farm
Corn Irrigated	373	891	230	795	319	703	559	280
Corn Dryland	0	157	380	127	273	283	172	378
Soybeans Irrigated	0	329	148	206	174	97	304	174
Soybeans Dryland	0	0	304	0	260	0	0	378
Winter Wheat	874	0	0	0	0	522	167	0
Total	1,247	1,377	1,062	1,128	1,026	1,604	1,201	1,209

Farm level size and crop mixtures are based upon the tabulated averages and analysis of NASS data sets. Also, analyzed average harvested acreages data in Table 2 for each Agricultural Statistics District of Nebraska allows estimation of aggregate payments under simulated farm program alternatives.

Table 2. Total Average Harvested Cropland Acres by Agricultural Statistics District in Nebraska

Cropland Acres	District 10	District 20	District 30	District 50	District 60	District 70	District 80	District 90	State
Corn Irrigated	293,000	327,333	661,667	980,000	1,085,667	677,000	671,000	552,667	5,248,334
Corn Dryland	40,867	50,933	983,333	169,533	893,333	360,833	245,833	757,000	3,501,665
Soybeans Irrigated	3,000	118,333	414,667	288,500	617,000	133,433	372,667	343,000	2,290,600
Soybeans Dryland	0 *	28,367	794,000	66,467	876,000	0 *	106,567	744,667	2,616,068
Winter Wheat	691,600	24,300	17,000	34,033	33,000	456,100	177,600	153,033	1,586,666
Total	1,028,467	549,266	2,870,667	1,538,533	3,505,000	1,627,366	1,573,667	2,550,367	15,243,333

* All soybean acres assumed to all be irrigated in the denoted District.

The simulation involving the representative farms was constructed and analyzed in the Microsoft Office 2010 Excel platform using the software add-on Simulation & Econometrics to Analyze Risk (SIMETAR) developed at Texas A&M University (Richardson, Schumann, and Feldman, 2008). Stochastic components include price and yield expectations, variability, and correlations, including prices at the national level and yields at the national, state, district, county, and farm level. At the base of the simulations is a correlated national and state yield and price deviation matrix based on previous relationships identified by Lubben and Jansen (2010).

This matrix provides the core of the model and guides the directionality of the yields and prices for a particular outcome. Once state and national yields and national prices are simulated, the district yields are ordered by a Direct Acyclical Graph (DAG) search to properly regress them to each other and their related state deviations. Counties selected as representing typical attributes of a district are regressed on corresponding district yield variables according to commodity type and cropping practice from which representative farms were simulated using a stochastic component representing farm level expectations implied by crop insurance premium rates consistent with Miranda's (1991) implied volatility model for the 2011 production year.

Data for the crop yields in the simulation came from historical yield data published by NASS (2011) and farm-level yield variability estimates implied from crop insurance premium estimates for the 2011 production year (Farmdoc 2011). Historical commodity futures data was collected and obtained from the Commodity Research Bureau (2011) to determine seasonal volatility of prices. Marketing Year Average (MYA) prices maintained by NASS (2011) provided the data for estimates of basis patterns and cash market prices. Based on the historical data, trend projections, and variability from trend, the stochastic model generated yield and price distributions allowing for analysis of expected crop revenue under alternative farm program scenarios. Expected crop revenue is the average crop revenue summed across individual enterprise revenues from 500 randomly drawn outcomes for each representative operation.

Analysis of the impact proposed farm programs have on payments and aggregate program costs are based on the scenarios of Table 3.

Table 3. Alternative Farm Program Simulation Scenarios

Alternative	Guarantee Geography	Guarantee Level	Payment Cap	Payment Acres
No Program	-	-	-	-
ACRE: State	State	90%	25% of Guar.	85%
ARRM: District	District	90%	15% of Guar.	85%
SRRP: County	County	70%	100% of Guar.	85%
ARC: Farm	Farm	87%	12% of Oly. Avg. Rev.	60%

Each alternative has a guarantee geography, guarantee level, payment cap, and payment acres correlating with the parameters with the current or proposed farm program. As the base, the model simulated crop revenue without the effects of any government program. Next, the four farm program alternatives with the geographical revenue guarantees including: ACRE: State, ARRM: District, SRRP: County, and ARC: Farm serve as the four scenarios to analyze potential farm program payments, aggregate costs, and the effects of farm programs with crop revenue. As a note, Direct Payments (DPs) are not included in the analysis of any of the farm program alternatives. Although they are part of the current ACRE program, the focus is on how alternative revenue safety nets might perform in the next farm bill and DPs are expected to be cut as part of the farm bill reauthorization.

Results

The simulation of yields and prices modeled on farm program alternatives in Table 3 provides an analysis of potential revenue safety net designs, payments, and aggregate program costs. Shifting the revenue safety net trigger from the state level under the current ACRE program to a smaller geography generally increases the risk protection provided by the program, increasing the frequency of the safety net triggering and also the expected payments. Table 4 and Figure 2 show the expected payments for 2011 range from just $28 to $277 per farm over the 8 representative farms, but increase to $2,900 to $7,628 per farm under the ARC proposal.

Table 4. Average Farm Program Payment by Representative Farm

Representative Farm	ACRE: State	ARRM: District	SRRP: County	ARC: Farm
District 10 Farm	$32	$178	$133	$5,403
District 20 Farm	51	4,089	691	3,714
District 30 Farm	243	1,690	0	2,900
District 50 Farm	28	3,761	3,227	4,341
District 60 Farm	217	2,278	690	3,767
District 70 Farm	112	2,495	4,186	7,628
District 80 Farm	37	3,677	1,500	3,274
District 90 Farm	277	2,870	2,375	4,261

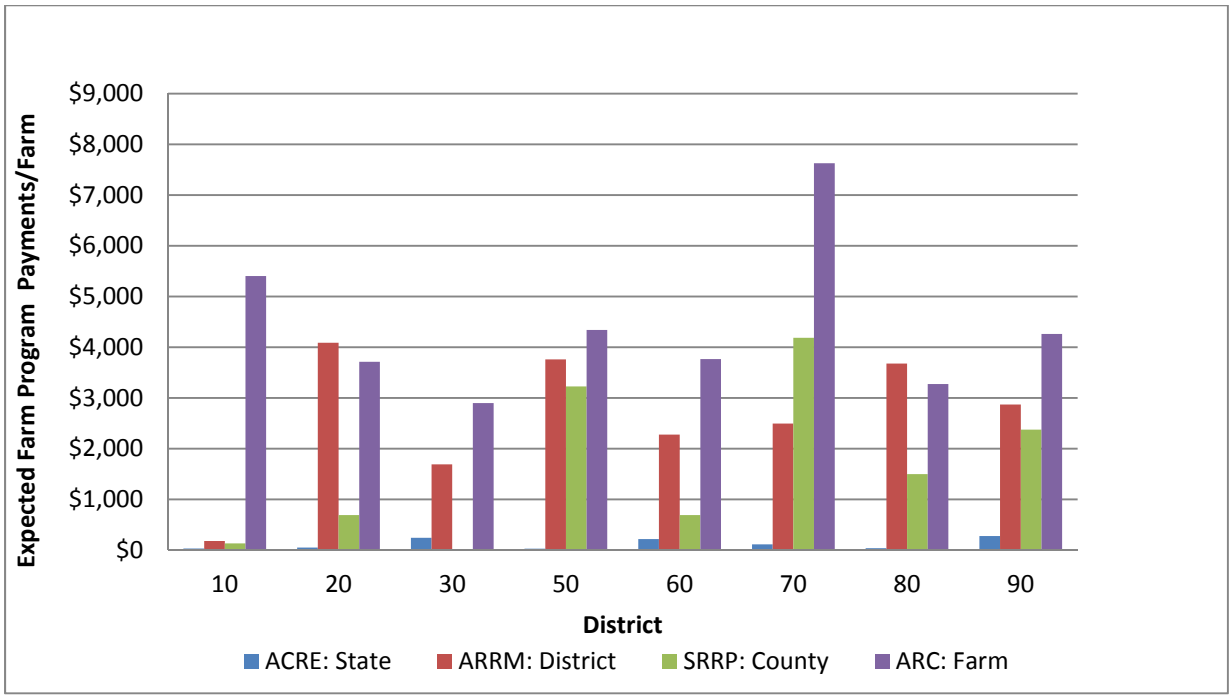

Figure 2. Expected Farm Program Payments Under Simulated Alternatives

These are still small payments per acre as shown in Table 5 due primarily to the high initial price expectations in 2011 relative to the revenue safety net guarantee levels. But, the expected payments and the program costs clearly increase with the closer proximity of the safety net trigger to the farm level. (Table A.1 in the appendix provides statistical details of the simulation results beyond the average payments shown in Table 4.)

Table 5. Expected Farm Program Payments per Acre by Representative Farm

Representative Farm	ACRE: State	ARRM: District	SRRP: County	ARC: Farm
District 10 Farm	$0.03	$0.14	$0.11	$4.33
District 20 Farm	0.04	2.97	0.50	2.70
District 30 Farm	0.23	1.59	0.00	2.73
District 50 Farm	0.02	3.34	2.86	3.85
District 60 Farm	0.21	2.22	0.67	3.67
District 70 Farm	0.07	1.56	2.61	4.75
District 80 Farm	0.03	3.06	1.25	2.73
District 90 Farm	0.23	2.37	1.96	3.52

Table 5 also illustrates the differences in expected payments per acre across a state such as Nebraska with a range of productivity and climatic factors. Shifting the revenue safety net trigger from the state level to a more-local level may greatly increase the relevance and the risk protection provided by the program. The largest payments per acre under the ARC farm-level guarantee are in districts 10 and 70, the northwestern and southwestern parts of Nebraska respectively. These regions of the state are more semi-arid growing regions susceptible to moisture stress that experience greater yield variability. As a result, revenue safety net payments that trigger at the farm level under ARC pay more on these farms than any of the program alternatives at higher levels of aggregation.

An analysis of average payments by crop further demonstrates the relationship between yield variability and the relevance of the safety net. Table 6 provides the average farm program payment per acre by crop across the 8 representative farms in Nebraska.

Table 6. Average Farm Program Payment per Acre for Nebraska

Crop	ACRE: State	ARRM: District	SRRP: County	ARC: Farm
Corn Irrigated	$0.00	$0.00	$0.00	$2.57
Corn Dryland	0.55	2.77	5.96	5.44
Soybeans Irrigated	0.00	0.00	0.00	1.44
Soybeans Dryland	0.09	0.24	0.33	0.92
Winter Wheat	0.04	0.20	0.08	2.64

The expected payment for an acre of dryland corn is substantially greater than for irrigated corn across all farm program alternatives, reflecting the greater yield variability under dryland growing conditions relative to irrigated production and the resulting variability in revenue. This comparison holds for soybeans as well, although yield variability and average program payments are much smaller.

Table 7 provides estimates of aggregate farm program payments in Nebraska based on the per acre averages in Table 6 and the crop acres in the state from Table 2.

Table 7. Expected Farm Program Payments for Nebraska

Crop	ACRE: State	ARRM: District	SRRP: County	ARC: Farm
Corn Irrigated	$0	$0	$0	$13,514,398
Corn Dryland	1,909,178	9,713,245	20,864,025	19,033,728
Soybeans Irrigated	0	0	0	3,266,915
Soybeans Dryland	237,985	639,369	861,483	2,436,204
Winter Wheat	62,595	319,494	121,673	4,182,131
Total	$2,209,758	$10,672,109	$21,847,182	$42,433,376

Consistent with the previous analysis, total farm program payments, and thus program costs increase as the revenue safety net trigger moves in closer proximity to the farm level. Expected revenue safety net program payments in 2011 based on the simulation model amounted to just $2.2 million in Nebraska under the current state-level ACRE program (without DPs) to more than $42.4 million for the farm-level ARC proposal.

While adjusting the geography of the revenue safety net trigger may increase the risk management protection provided by the program, none of the alternatives are expected to make farm program payments of the magnitude of the current DP program which has paid Nebraska producers more than $300 million in recent years. Thus, it appears the revenue safety net alternatives all represent a possible shift to a more relevant, but much smaller farm program for producers.

Further analysis of farm program payments together with crop revenue (statistical details in Table A.2 in the appendix) reinforces the smaller role for farm programs. While farm program payments are estimated from $28 to $7,628 across the 8 representative farms under the various program alternatives, crop revenue alone (in the no program alternative) is estimated at $601,805 to $1,363,132 across the 8 representative farms. Farm program payments do correlate with reduced crop revenue as designed, particularly with the farm-level ARC proposal, but even then, the reduction in the coefficient of variation is generally less than 1 percentage point.

The result is that revenue safety net programs may contribute to a farm's risk management plan, but given the price and revenue expectations going into the 2011 growing season, there is substantially more risk that cannot be protected by the farm program that falls to the producer to effectively manage.

Conclusion

Agriculture in Nebraska encompasses a variety of crops, climatic factors, and production systems seen throughout the United States. Policy discussions related to the 2012 Farm Bill must carefully evaluate potential changes to the ACRE program and simulation results from Nebraska help demonstrate the impact on potential program costs and producer impacts.

Changing the revenue safety net guarantee from the current state-level ACRE guarantee to a more-local guarantee will increase the expected risk protection and program payments for producers. But, given current price and revenue expectations for crop producers in Nebraska, estimated revenue program payments across all proposed program alternatives will not be of the magnitude of current DPs. As a result, the potential program changes will likely continue the recent transition in programs toward an increased emphasis on risk management and producer decision-making.

Policy formation will continually place a focus on the expected costs and performance of particular programs. This simulation shows the potential increase in risk management benefits of a change in the revenue safety net guarantee level and the accompanying change in expected program costs. Given the on-going debate about future farm program directions, this analysis provides valuable insight on the direction of future farm program, the costs of program alternatives, and the impact on Nebraska crop farms. Furthermore, the simulation provides insight and applicable methodology to address similar questions for for other crops and regions in the country.

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Appendix

Table A.1. Representative Farm Simulation Summary Statistics for Farm Program Payment Alternatives

District 10 Farm Program Payment Alternatives

Variable	ACRE: State	ARRM: District	SRRP: County	ARC: Farm
Mean	32.08	178.41	133.09	5,402.54
StDev	526.90	1,695.69	1,699.80	7,905.89
CV	1,642.30	950.47	1,277.17	146.34
Min	0.00	0.00	0.00	0.00
Max	10,299.21	20,009.83	27,229.71	32,808.84

District 20 Farm Program Payment Alternatives

Variable	ACRE: State	ARRM: District	SRRP: County	ARC: Farm
Mean	50.66	4,089.46	690.57	3,713.81
StDev	667.73	7,810.79	3,866.79	9,807.43
CV	1,317.94	191.00	559.94	264.08
Min	0.00	0.00	0.00	0.00
Max	12,833.45	24,582.27	36,054.03	51,362.12

District 30 Farm Program Payment Alternatives

Variable	ACRE: State	ARRM: District	SRRP: County	ARC: Farm
Mean	242.62	1,690.15	0.00	2,900.18
StDev	2,711.15	3,717.69	0.00	5,867.81
CV	1,117.43	219.96	0.00	202.33
Min	0.00	0.00	0.00	0.00
Max	51,546.06	10,015.89	0.00	33,881.87

District 50 Farm Program Payment Alternatives

Variable	ACRE: State	ARRM: District	SRRP: County	ARC: Farm
Mean	28.00	3,761.10	3,227.13	4,341.02
StDev	340.50	6,223.21	10,233.26	9,588.59
CV	1,216.13	165.46	317.10	220.88
Min	0.00	0.00	0.00	0.00
Max	6,419.21	19,239.52	78,413.50	57,200.50

District 60 Farm Program Payment Alternatives

Variable	ACRE: State	ARRM: District	SRRP: County	ARC: Farm
Mean	216.74	2,278.21	689.59	3,766.67
StDev	2,127.79	5,070.30	7,122.62	6,533.96
CV	981.75	222.56	1,032.88	173.47
Min	0.00	0.00	0.00	0.00
Max	36,095.49	28,643.97	103,326.82	37,731.58

District 70 Farm Program Payment Alternatives

Variable	ACRE: State	ARRM: District	SRRP: County	ARC: Farm
Mean	112.39	2,495.35	4,186.28	7,627.78
StDev	1,183.03	3,554.43	16,469.85	11,280.41
CV	1,052.64	142.44	393.42	147.89
Min	0.00	0.00	0.00	0.00
Max	21,543.95	13,699.90	136,219.19	57,802.30

District 80 Farm Program Payment Alternatives

Variable	ACRE: State	ARRM: District	SRRP: County	ARC: Farm
Mean	36.79	3,677.43	1,499.63	3,274.02
StDev	461.86	7,863.34	7,474.89	5,935.06
CV	1,255.34	213.83	498.45	181.28
Min	0.00	0.00	0.00	0.00
Max	8,947.65	28,475.93	66,051.95	38,890.51

District 90 Farm Program Payment Alternatives

Variable	ACRE: State	ARRM: District	SRRP: County	ARC: Farm
Mean	277.06	2,869.62	2,374.52	4,261.09
StDev	2,517.68	5,682.66	18,206.86	6,710.21
CV	908.73	198.03	766.76	157.48
Min	0.00	0.00	0.00	0.00
Max	45,418.04	35,752.24	267,756.04	39,996.30

Table A.2. Representative Farm Simulation Summary Statistics for Crop Revenue and Farm Program Payment Alternatives

District 10 Farm Crop Revenue and Farm Program Payment Alternatives

Variable	No Program	ACRE: State	ARRM: District	SRRP: County	ARC: Farm
Mean	601,804.97	601,837.06	601,983.38	601,938.06	607,207.51
StDev	153,144.25	153,104.24	152,974.90	153,050.35	148,117.34
CV	25.45	25.44	25.41	25.43	24.39
Min	151,266.95	151,266.95	151,266.95	151,266.95	184,075.79
Max	1,079,414.20	1,079,414.20	1,079,414.20	1,079,414.20	1,079,414.20

District 20 Farm Crop Revenue and Farm Program Payment Alternatives

Variable	No Program	ACRE: State	ARRM: District	SRRP: County	ARC: Farm
Mean	1,363,132.10	1,363,182.77	1,367,221.56	1,363,822.67	1,366,845.92
StDev	297,782.95	297,798.08	296,836.51	297,756.16	292,799.33
CV	21.85	21.85	21.71	21.83	21.42
Min	404,187.54	404,187.54	408,289.17	404,187.54	455,549.66
Max	2,075,428.05	2,075,428.05	2,075,428.05	2,075,428.05	2,075,428.05

District 30 Farm Crop Revenue and Farm Program Payment Alternatives

Variable	No Program	ACRE: State	ARRM: District	SRRP: County	ARC: Farm
Mean	1,005,511.76	1,005,754.39	1,007,201.91	1,005,511.76	1,008,411.94
StDev	179,135.55	178,889.23	178,332.27	179,135.55	176,027.49
CV	17.82	17.79	17.71	17.82	17.46
Min	418,561.50	418,561.50	418,561.50	418,561.50	449,473.73
Max	1,581,699.86	1,581,699.86	1,581,699.86	1,581,699.86	1,581,699.86

District 50 Farm Crop Revenue and Farm Program Payment Alternatives

Variable	No Program	ACRE: State	ARRM: District	SRRP: County	ARC: Farm
Mean	1,191,186.64	1,191,214.63	1,194,947.73	1,194,413.77	1,195,527.65
StDev	266,694.01	266,701.93	265,373.89	265,981.66	261,073.67
CV	22.39	22.39	22.21	22.27	21.84
Min	199,675.22	199,675.22	214,803.16	199,675.22	248,368.75
Max	1,811,795.24	1,811,795.24	1,811,795.24	1,811,795.24	1,811,795.24

District 60 Farm Crop Revenue and Farm Program Payment Alternatives

Variable	No Program	ACRE: State	ARRM: District	SRRP: County	ARC: Farm
Mean	900,795.69	901,012.43	903,073.90	901,485.28	904,562.36
StDev	158,164.14	157,892.24	157,013.52	157,777.35	154,289.96
CV	17.56	17.52	17.39	17.50	17.06
Min	396,221.48	396,221.48	396,221.48	396,221.48	433,953.06
Max	1,350,447.81	1,350,447.81	1,350,447.81	1,350,447.81	1,350,447.81

District 70 Farm Crop Revenue and Farm Program Payment Alternatives

Variable	No Program	ACRE: State	ARRM: District	SRRP: County	ARC: Farm
Mean	1,177,680.09	1,177,792.48	1,180,175.44	1,181,866.37	1,185,307.88
StDev	263,334.22	263,383.89	262,804.98	262,413.10	256,636.73
CV	22.36	22.36	22.27	22.20	21.65
Min	358,596.21	358,596.21	358,596.21	358,596.21	405,142.47
Max	1,924,921.60	1,924,921.60	1,924,921.60	1,924,921.60	1,924,921.60

District 80 Farm Crop Revenue and Farm Program Payment Alternatives

Variable	No Program	ACRE: State	ARRM: District	SRRP: County	ARC: Farm
Mean	1,136,063.46	1,136,100.26	1,139,740.89	1,137,563.09	1,139,337.49
StDev	193,315.85	193,319.41	191,548.64	193,575.64	190,956.14
CV	17.02	17.02	16.81	17.02	16.76
Min	536,895.66	536,895.66	536,895.66	536,895.66	569,191.37
Max	1,603,007.71	1,603,007.71	1,609,260.45	1,627,527.46	1,603,007.71

District 90 Farm Crop Revenue and Farm Program Payment Alternatives

Variable	No Program	ACRE: State	ARRM: District	SRRP: County	ARC: Farm
Mean	944,607.39	944,884.45	947,477.01	946,981.91	948,868.48
StDev	166,673.96	166,295.16	165,210.63	163,954.68	162,581.04
CV	17.64	17.60	17.44	17.31	17.13
Min	427,882.75	437,295.88	442,016.32	463,311.00	467,879.05
Max	1,533,412.69	1,533,412.69	1,533,412.69	1,533,412.69	1,533,412.69