Understanding the Economic Factors Influencing
Farm Policy Preferences

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Introduction

Freedom to Farm legislation enacted in 1996 was widely perceived as a dramatic step toward a more market oriented farm policy which would create a producer decision environment more conducive to competitive adjustments. Enacted in a time of high market prices and large exports of agricultural products, the transition payments were initially larger than deficiency payments would have provided. Generally, this legislation received strong support from Midwestern and Central Plains states. However, final passage was secured through concessions to legislators from other regions.

Abrupt declines in many farm program crop prices in 1998 have tested the support for Freedom to Farm. Aggregate net cash income excluding direct government program payments in 1999 is now projected to be $35.4 billion which is 31 percent below the record high of 1997. These changes have brought about a severe test of the Freedom to Farm legislation. This is evidenced by the passage of *ad hoc* disaster legislation in both 1998 and 1999, after a three-year cessation. In 1999, USDA projects direct government payments to total $22.5 billion -- three times the payment level of 1996, when Freedom to Farm was enacted.

Thus, in 2000 there is widespread debate about the future direction of farm policy. The Secretary of Agriculture has repeatedly called for modifications of farm policy to provide a better "safety net" for agricultural producers. Some have gone as far as suggesting a repeal of the 1996 Farm Bill. Further, substantial attention has been given to crop insurance reform during the past year. The President called for modifications of crop insurance in his State of the Union Address, and a number of bills have been submitted in both Houses of Congress that would significantly

modify current crop insurance programs. These proposals generally provide enhanced benefits to producers through increased subsidy percentages for buy-up insurance coverage and/or a higher level of catastrophic coverage. No legislation was ultimately enacted in 1999, but previously budgeted funds will likely ensure continued efforts to find consensus legislation.

As Congressional leaders and the administration continue to seek solutions to concerns expressed by producers and their representative organizations, they are often confronted by divergent and even contradictory messages from various regions and producer groups. Because alternative policies have potentially dissimilar economic implications for producers, their preferences would logically be derived from an economic evaluation of the various alternatives. This research follows the vein of literature that has investigated producer policy preferences at various points in the past. Past agricultural policy surveys include Edeleman and Lasley; Orazem, Otto, and Edeleman; Barkley and Flinchbaugh; Kastens and Goodwin; and Zulaf, Guither, and Henderson.

Scrimgeour and Passour related preferences for farm policy to the public choice literature which assumes that self interest explains actions of individuals in the political process. They go on to argue that many factors beyond wealth maximization may enter into policy preferences. Given that many farm policy options under consideration today involve the provision of risk protection, a natural extension of policy preference analysis consistent with Scrimgeour and Passour, is to consider policy preferences in an expected utility framework.

This study explores producers' preferences for current farm policy options and investigates the economic factors underlying producer preferences. It is useful to understand the perceptions of producers and how they differ regarding to the possible alternatives for modifying

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current farm policy. Because farm policy is often criticized for applying a one-size-fits-all approach to a heterogenous population of producers, understanding the causal economic relationships between policy preferences and determinants of the farm's decision making context provides useful insights into why producers differ in their policy preferences. In particular, we incorporate variables which characterize the risk perceived by the respondents and their level of risk aversion.

Survey Procedures

A survey conducted in the spring of 1999 elicited producers' preferences for various farm policy changes. This survey was conducted as part of a research project funded through a USDA risk management education initiative. The project objective is to conduct research to gain a greater understanding of farmer risk management decision making and educational needs. The survey was conducted in four states: Mississippi, Texas, Indiana, and Nebraska. Two major crops were chosen for particular emphasis in each state. The crop emphasis in each state is as follows: corn and soybeans in Indiana and Nebraska; cotton and soybeans in Mississippi; and cotton and grain sorghum in Texas.

Each state's Agricultural Statistical Service was contracted to sample from their pool of commercial farms. After excluding small noncommercial farms generating less than $25,000 in gross income, the sample was stratified across four categories of gross farm income. Mail surveys were sent to crop producers prior to planting in the spring of 1999. A follow-up reminder card was sent two weeks following the first mailing and a second mailing was sent to those who had not returned a survey two weeks after the postcard reminder. A total of 1,812 questionnaires were returned for a response rate of 26.6 percent. After elimination of non-responses to

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particular questions used in this analysis, 1350 useable responses were included in this analysis.

Producers were asked to make a comparison between two policy alternatives and to state their preference for one versus the other. Five possible responses were allowed: Strongly Agree, Agree, Disagree, Strongly Disagree, or Not Sure. Questions were posed in a direct comparison form to force the producer to evaluate which program they prefer. In this analysis, the responses are collapsed into a binary choice framework. Responses of either strongly agree or agree are treated as a positive response to a particular policy, while responses of disagree, strongly disagree, and not sure are treated as a non-positive response. This approach does not fully reflect the diversity of responses which might be captured with a multinomial model. However, this approach allows for a simplicity of interpretation that is confounded by more complex models.

Policy Choices Examined

Producers were asked for their preference between transition payments and the deficiency payment program. Specifically they were asked for their agreement or disagreement with the statement, "eliminate transition payments and go back to deficiency payments." This question elicited producers' preference for the 1996 Freedom to Farm Act versus the deficiency payment program, which had existed for many years prior to 1996.

Producers were also asked for their agreement or disagreement with the statement, "Subsidy should be increased on higher crop insurance coverages, rather than increasing the level of catastrophic coverage." This question is relevant to the ongoing Congressional debate about reforming crop insurance. Current legislation provides free catastrophic coverage insurance, which provides a 50 percent yield guarantee indemnified at 55 percent of expected price. Subsidies for higher crop insurance coverage options are keyed off the value of the catastrophic

coverage policy. However, the percent subsidy on higher levels of coverage declines from the 100 percent subsidy on a catastrophic policy. A key provision of many crop insurance reform bills is increasing the benefits of the program, either through higher subsidies on buy-up coverage or through increased catastrophic coverage levels.

Producers were also asked for their agreement or disagree with the statement, "Raise loan rates, rather than increase crop insurance funding." Much of the decline in farm market income since 1997 has resulted from price declines resulting from weakened export markets. The 1996 farm bill left the marketing loan program intact, but capped at 1995 levels. Thus, this question elicits the producer's preferences for price support through higher marketing loan rates versus increased insurance subsidies.

Producers were also asked for their agreement or disagreement with the statement, "Provide insurance premium subsidies, rather than make disaster payments." This question elicited producer preferences for receiving risk protection in the form of insurance subsidized at a higher level rather than disaster payments, which have traditionally been offered after the disaster event and on an *ad hoc* basis. Producers in all four states are assumed familiar with the choices, given that *ad hoc* disaster payments were made in 1998. Further, the disaster payments of 1998 included increased insurance premium subsidies for producers, so producers should have been aware of additional insurance premium subsidies.

Model

Producers are assumed to maximize expected utility according to a von Neuman-Morgenstern utility function defined over wealth (W). When confronted with a choice between two alternative farm policies, the i'th producer compares expected utility with the first farm policy

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$EU_{1i}(W)$ to expected utility with the second farm policy $EU_{2i}(W)$. While direct measurements of producers' perceptions and risk attitudes are not available, observable measures can be obtained for factors that influence the distribution and expected utility evaluation of wealth (Maddala). These factors are used as a vector, X, of attributes of the choices made by individual i and ε_i is a random disturbance that arises from unobserved variation in preferences, attributes of the alternatives, and errors in optimization. Following customary discrete choice analysis, we limit the amount of nonlinearity in the likelihood function by assuming that $EU_{1i}(W)$ and $EU_{2i}(W)$ may be written:

(1) $EU_{1i}(W) = \beta_1'X_i + \varepsilon_{1i}$

(2) $EU_{2i}(W) = \beta_2'X_i + \varepsilon_{2i}$.

The difference in expected utility may then be written:

(3) $EU_{1i}(W) - EU_{2i}(W) = (\beta_1'X_i + \varepsilon_{1i}) - (\beta_2'X_i + \varepsilon_{2i})$

$$= (\beta_1' - \beta_2') X_i + (\varepsilon_{1i} - \varepsilon_{2i})$$

$$= \beta' X_i + \xi_i$$

where $\beta' = (\beta_1' - \beta_2')$ and $\xi_i = (\varepsilon_{1i} - \varepsilon_{2i})$. A preference for the first policy will result if $EU_{1i}(W) - EU_{2i}(W) > 0$; whereas, a preference for the second policy will be revealed if $EU_{1i}(W) - EU_{2i}(W) < 0$.

This binary choice framework is consistent with econometric estimation techniques such as logit and probit. In this analysis, we use logit models which provide estimates of the probability that an individual prefers policy alternative one. The probability from the logit model may be written:

(4) $\text{Prob}(\ EU_{1i}(W) - EU_{2i}(W) > 0) = \quad \dfrac{e^{\beta' X}}{1 + e^{\beta' X}} = \Lambda(\beta' X)$

where, following Greene, the notation $\Lambda(\beta' X)$ represents the logisitic cumulative distribution function.

Data

Table 1 provides summary statistics on the dependent and independent variables involved in this analysis. First, the dependent dummy variables are examined. Fifty-six percent of the sample indicated that they would prefer to go back to the deficiency payment program. The second dependent variable, indicating a preference for increased insurance subsidies over increased catastrophic coverage, is shown to be preferred by 53 percent of the survey respondents. Of the four dependent variables, the lowest level of agreement, 42 percent, was indicated for the question asking a preference for increased loan rates rather than increased insurance subsidies. Finally, the fourth dependent variable represents a trade off between increased funding for insurance programs versus disaster programs. Fifty-four percent of those responding indicated that they would prefer insurance programs to the disaster program.

The remaining variables in Table 1 are independent explanatory variables for the analysis. An indicator of farm size is measured as the total crop acres in the farming operation. Farm size is meant to reflect differences in scale of operation. Among the survey respondents, the mean total crop acres is slightly more than 1,400 acres in the farming operation. The maximum size was 18,000 acres of cropland.

The next four variables in Table 1 indicate the percent of total acres planted to a specific

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crop. The four crops examined are the four primary crops analyzed in the survey (corn, soybeans, cotton, and sorghum). It is hypothesized that potential differences in the economic context of producing different crops may influence policy preferences. For example, cotton tends to be a high-input cost crop as compared to soybean production. Given that many producers produce only a subset of the crops included in this list and would have a zero value in an instance where they did not produce the crop, the mean values for the percent of crop acres planted to a particular crop on average are relatively low. Of the four crops, soybeans have the highest mean percentage value of approximately 28 percent. Sorghum, which is only analyzed in one state, has the lowest mean value for this variable of three percent. Examining the range these variables take reveals there were some farms that had a maximum value near 100 percent. This indicates that there were some farms included in the analysis which were highly specialized.

The next two variables are derived from questions asking the perceived potential for yield and price variability to affect farm income. In the survey instrument, producers were asked to evaluate these risks on a five-point scale as to the potential effect of particular risks on that individual's farm income. A value of five on the scale represented a high potential to affect farm income. If the survey respondent indicated a value of five, they were identified with a dummy variable. The mean values for price and yield variability are both relatively high with slightly more than 44 percent of respondents indicating that yield variability had a high potential to affect their farm income and 69 percent of respondents indicating the price variability had that potential.

A negative correlation between market price and farm yield may influence the overall risk environment of a firm. There is evidence suggesting that negative correlation may exist in some crops and regions (Hennessy, Babcock, and Hayes, and Heifner and Coble). Survey respondents

were asked if they perceived a negative correlation between their farm yield and price through a hypothetical scenario where their farm yield fell 30 percent below average. They were then asked to indicate whether they would expect prices to increase or decrease, or their expectations would remain unchanged given this yield shock. Individuals responding that they would expect an increase in market price if their yield was 30 percent below average are indicated by a dummy variable. If the respondent perceived that a 30 percent shortfall in their yield would not change their price expectation, or that they would perceive that price would be below expectation, the dummy variable was given a value of zero. The table shows 28 percent of the respondents perceived that there was a negative correlation between their yield and the market price.

The next variable included in the analysis is described as a willingness to accept a lower price to avoid risk. This question, although couched in terms of price risk, is indicative of whether the individual behaves in a manner consistent with risk aversion as suggested by expected utility theory. A risk averse individual would be willing to forego income to avoid risk. This question was also asked on a five-point agree/disagree scale. Individuals indicating that they agreed or strongly agreed with the statement that they were willing to accept a lower price to avoid risk received a value of one in the construction of this dummy variable. Of the respondents, 33 percent indicated that they had a willingness to accept a lower price to avoid risk.

The next variable was derived from a question asking whether the producer's farm income in 1998 was below the average of the preceding five years. This variable was included to indicate whether the producer had recently suffered a farm income loss, such that they might be more sensitive or vulnerable to risks in the current year. Summary statistics show that 65 percent of the respondents indicated they had a below average income year in 1998.

One of the commonly recognized approaches to limiting farm risk is the augmentation of the farm family's income with off-farm earnings. This has the potential both to raise household income and diversify income sources for the household away from the production agriculture sector. Survey respondents were asked what percent of their household gross farm income came from farming. This percentage can take a value up to 100 percent. The average value indicated by producers is 73.5 percent, with a range from two to 100 percent.

Percent of total farm investments that are borrowed is also included. This measures an important aspect of financial risk. This information is hypothesized to be an important component of characterizing the risk decision making environment for the farm. Among the survey respondents, the mean value was 31.8 percent.

The college education variable indicates whether the respondent had completed at least a four-year college degree. The results indicate that 36 percent of the individuals responding to the survey had completed a four-year college degree.

The next variable identifies farmers who perceive government program risk as having significant potential to affect their farm income. This variable was also measured on a five-point scale with a value of five indicating that government program changes had a strong potential to affect farm income and a low value on the five point scale indicating that they perceive potential government program changes as a low risk to their farm income. Construction of a dummy variable was carried out by giving a positive value to the dummy variable if the individual indicated that government program risk merited either a four or five on the five-point scale. In the sample, the variable took a positive value for 64 percent of the respondents.

Participation in buy-up crop insurance is included in the models involving changing crop

insurance policies. The purchase of buy-up crop insurance is indicated by a dummy variable, which takes a value of one if the individual purchased some form of buy-up crop insurance in 1998. Fifty-three percent of the individuals in the survey sample indicated that they bought some form of buy-up crop insurance. This variable takes a value of zero for all individuals who did not purchase crop insurance or only purchased the catastrophic coverage policy.

Results

In this section we report the logit model results predicting producer preferences for each of the four dichotomous policy choices posed. Likelihood ratio test chi-squared statistics for each of the models are reported and all models are strongly significant. A second measure of model performance, percent concordant, gives the percent of observations where the predicted probability and observed response agree. The models all had a percent concordance of at least 60.1 percent.

Prefer to go Back to Deficiency Payment Program

The analysis of preferences between the current farm policy and deficiency payments are reported in Table 2. The results indicate several significant economic factors influencing this preference.

Two of the four variables indicating the percent of crop acres planted to a specific crop are significant. These are the percentages of crop acres planted to corn and cotton. Opposing signs indicate that as the percent corn increases the producer is significantly less likely to prefer a return to deficiency payments while cotton producers tend to have a preference for going back to the deficiency payment program. Given that support for Freedom to Farm was strong in the Cornbelt and that Southern legislators tended to be less supportive of enacting Freedom to Farm,

the underlying perceptions of Freedom to Farm appear to still exist. Thus, of the four crops examined in this analysis, cotton producers would have the strongest propensity to return to the deficiency payment program.

Interestingly, of the yield and price risk variables, yield variability is significant and negative in the deficiency payment model. This suggests that producers who perceive yield variability as having a high potential to affect their farm income are less desirous of a return to the deficiency payment program. We would interpret this result as indicating that a return to the price-support-oriented deficiency payment program is less attractive to producers who view yield variability as a major source of risk in their farm businesses.

The next significant variable in the model was the variable indicating whether 1998 income was below the five-year average. This dummy variable is significant and positive in sign, indicating that those individuals who incurred a below average income in the previous year are more inclined to return to the deficiency payment program. Given that deficiency payment programs had a risk mitigating effect, and in particular, provided price risk protection, this result suggests that individuals who had recently incurred a below average income year perceive that the previous farm legislation would have provided greater protection.

College education is significant and negative suggesting that individuals who have a college degree are significantly less likely to prefer a return to the deficiency payment program over current farm policy.

The final significant variable in the model is the variable indicating whether the respondent perceives that changes in government farm policy represent a risk that has a high potential to affect farm income. Our results show that this variable has a positive effect on the preference to

go back to deficiency payments.

Prefer More Insurance Subsidy to Increased Catastrophic Coverage

Table 3 provides results from the model explaining the characteristics of individuals who prefer more insurance subsidies to an increase in catastrophic coverage insurance.

The total crop acres variable is significant and positive. This indicates that larger operations tend to prefer increased insurance subsidies relative to catastrophic coverage. Of the four commodity percentage variables, two crops, corn and cotton, are significant. As in the previous model they take opposite signs. This result indicates that individuals with a higher percentage of corn in their crop mix are less likely to prefer increased insurance subsidies over increased catastrophic coverage. Conversely, producers with a higher percent of cotton in their crop mix are more desirous of an increase in insurance subsidies.

Price variability is negative and significant in this model, indicating that individuals who perceive high price variability are less likely to prefer increases in an insurance subsidy, rather than increases in catastrophic coverage levels.

The next significant variable in this model is the willingness to accept a lower price to avoid risk. Risk aversion, as captured by this variable, has a negative effect on the preference between insurance subsidy and increased catastrophic coverage. This indicates that producers who are more risk averse are less willing to take the insurance subsidy and would prefer to see an increase in catastrophic coverage.

The percent of total farm investment that is borrowed takes a significant positive value. Thus, farms that are more highly leveraged would like to see more insurance subsidies relative to an increase in catastrophic coverage. College education takes a positive and significant sign,

indicating that individuals with a four-year college degree are more desirous of seeing increased insurance subsidies relative to increases in catastrophic coverage. Also, significant in this model is the variable indicating purchase of buy-up insurance in 1998. The results suggest that individuals who purchase insurance are more likely to prefer insurance subsidies over catastrophic coverage.

Prefer Increased Loan Rates to Increased Insurance Subsidy

Table 4 reports results of the model of preference between loan rate increases and an increase in the insurance subsidy. Total crop acres has a significant and positive effect on the preference for increased loan rates. Only one of the crop percentage variables is significant. It is the percentage of crop acres planted to sorghum, which has a negative effect on the probability of preferring higher loan rates to increased insurance subsidies. This is consistent with sorghum producers being more desirous of increased subsidies on their crop insurance and perceiving less value in an enhanced the price safety net for their commodity.

Price variability as perceived by the producer is significant and has a positive effect on the probability of preferring a loan rate. This indicates that respondents who perceive price risk as being a major risk tend to prefer direct price support rather than support through insurance.

The variable indicating that 1998 income was below the five-year average is also significant in this model and takes a positive sign, as it did in the model analyzing preferences for deficiency payment programs. Producers who incurred a below average income in 1998 are more likely to prefer a loan rate to an increase in insurance subsidies. This is consistent with individuals who had a below average year in 1998 due to a low price perceiving a need for a price floor relative to an increase in insurance subsidies.

In this choice, producers who had a higher percent of gross income from farming indicate

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a significantly higher probability of preferring higher loan rates. College education is also significant, but takes a negative sign. This suggests that individuals with a college education are less likely to prefer an increase in loan rates to an increase in insurance subsidies.

The perception of government programs affecting risk is positively associated with a preference for loan rate increases. Conversely, previous crop insurance participation is negatively related to a preference for increased loan rates.

Prefer Insurance to Disaster Programs

The final model estimated is reported in Table 5. This analysis examined the preference for insurance premium subsidies rather than disaster payments. Two of the crop percentage variables are significant. Both variables have a positive effect on the probability of preferring an insurance premium subsidy. This suggests that corn and soybean producers tend to be more favorably inclined to insurance subsidy as compared to disaster payments.

Yield variability is also significant in this model. Producers who perceive yield variability as having a high potential effect on farm income are significantly more likely to prefer increased insurance subsidies even though both forms of support mitigate yield losses. This is consistent with individuals who would incur higher premium rates preferring more subsidy. However, these individuals would also tend to have higher payouts from a disaster program as well. We interpret this result as indicating the high yield risk farms perceive a greater value in statutory premium subsidies as compared to the more unpredictable passage of *ad hoc* disaster legislation.

Perception of a negative correlation between price and yield is shown to have a significant effect on the probability of preferring insurance subsidy over disaster funding. In this case, producers who perceive a negative yield-price correlation may perceive a greater benefit from

revenue insurance than from a purely yield triggered disaster program. A negative yield-price correlation would create a situation where revenue insurance is a relatively cheap and effective protection as compared to protecting yield and price separately.

The next significant variable in the model is the risk aversion variable. Those who reveal risk aversion are significantly more likely to prefer insurance subsidies over disaster payments. This result suggests that risk averse producers perceive greater protection from crop insurance than from *ad hoc* disaster legislation which is generally not enacted until a disaster has occurred.

Percent of household income from farming is positive and significant in this model, indicating that farms earning a greater percentage of household income from farming have a greater probability of preferring increased insurance premium subsidies. College education also has a significant and positive effect. The final variable in the model is the dummy indicator of whether the respondent has purchased buy up crop insurance. As hypothesized, those who have previously purchased insurance reveal that they find crop insurance beneficial and are found to be significantly more likely to prefer insurance subsidy.

Conclusions and Interpretation

The results from the four models indicate several significant relationships between economic variables and farm policy preferences. While it is intuitive that policy preferences are related to the economic context of the producer, these results provide significant insights into why consensus policy is difficult to achieve.

Farm size is significant and positive in two of the four models. Given the economies of scale in agricultural production and the imposition of payment limitations on some government programs, this is not surprising. Farms with more crop acres are found to prefer more insurance

subsidy to increased catastrophic coverage and reveal they prefer increased loan rates to more insurance subsidy. This suggests larger farms find relatively little value in low level insurance coverage and have a strong desire for the price guarantee of loan rates.

Examination of the percent crop acres variables revealed that each of the crops was significant in at least one model. The most intriguing general finding is the opposite signs taken by percent corn acres and percent cotton acres. Cotton producers are significantly more likely to prefer a return to deficiency payments and prefer increased insurance subsidy over catastrophic coverage. The percent acres planted to corn takes the opposite sign in both models. This dichotomy suggests that the economics of these two crops are sufficiently distinct to lead to strongly divergent policy preferences. We surmise that this divergence of policy preference stems in part from differences in producers' views of the U.S. markets. U.S. cotton has many world competitors and a relatively small share of world exports. Cotton producers are likely to desire the protection of deficiency programs in spite of the distortionary trade effects. Conversely, U.S. corn is a large share of world corn exports and past experience with deficiency payments and the associated set-asides may be perceived as harmful to remaining competitive in world markets.

The three variables characterizing the components of revenue variability, price risk, yield risk, and yield-price correlation are each significant in some models. Producers perceiving yield variability as having a significant potential to affect them have a lower probability of preferring a return to deficiency payments and are more likely to prefer insurance subsidy to disaster payments. This is consistent with wanting relatively more government funding devoted to higher insurance protection and relatively less to price protection programs.

Those perceiving a high degree of price risk are less likely to prefer insurance subsidy over

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catastrophic coverage and have a higher probability of preferring increased loan rates to insurance subsidy. Given that this variable is not significant in the "return to deficiency payments" question, those perceiving price risk as important may be indicating a lesser desire for increased insurance funding and a desire for price protection through higher loan rates. The correlation variable is found to have a positive effect on the probability of preferring insurance to disaster programs. A factor here may be the introduction of revenue insurance, individuals perceiving negative correlation in price and yields might be expected to prefer revenue insurance which implicitly recognizes correlation of price and yield.

Risk aversion has a significant positive effect on the preference for increased subsidy over increased catastrophic coverage and the preference for insurance over disaster programs. This suggests that risk aversion is positively related to a preference for the high levels of protection afforded by buy-up insurance coverage versus the low level of yield protection afforded by either catastrophic coverage or disaster programs.

Producers who incurred a below average farm income in 1998 might be expected to desire greater government support. Given that the questions posed require a preference between alternative policies it was found that this variable is positively related to a desire for traditional farm policy mechanisms. Below average income is positively associated with a desired return to deficiency payments and increased loan rates over insurance subsidy. It is negatively related to a preference for insurance over disaster programs. Thus, this group appears least in favor of the policy trends toward Freedom to Farm and expanding crop insurance programs. Conversely, the college education variable is the only variable significant in all four models and is positively associated with the policy trends of the 1990s --toward Freedom to Farm and expanding crop

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insurance programs.

Not surprisingly, producers who perceive government programs having a high potential to affect income are inclined to prefer a return to past policies. This variable was positively related to a preference for a return to deficiency payments and increased loan rates over insurance subsidy. Finally, the purchase of buy-up insurance is consistently related to a preference for increased insurance subsidy rather than increased loan rates, disaster programs, or increased catastrophic coverage. This suggests that those who have participated in buy-up insurance tend to find it useful, and would like to see additional government resources devoted to it.

This study provides an insight into producer policy preferences at a time when much attention is being given to farm policy issues. It is also unique in that producers from four diverse regions and crops are included. This allowed examination of the diversity of preferences that smaller single-state studies have not allowed. Given the current debate over farm policy it reveals some of the economic forces underlying preferences. These findings add to our understanding of why producers of different regions and commodities are not always in agreement regarding preferred policy. A recognition of the underlying economic factors influencing farm policy preferences may provide guidance to finding resolution. While, it is common for political leaders and various interest groups to be well versed in the economics situation of their constituents, this analysis gives perspective across regions and commodities that is seldom available.

Natural extension of this work would investigate producers of other commodities or from other regions. Further, a more refined approach to examining this data may be undertaken using multinomial logit models.

Table 1.

Variable	Mean	Std, Dev.	Min.	Max.
Prefer to Go Back to the Deficiency Payment Program	0.56	0.50	0	1.00
Prefer More Insurance Subsidy to Increased Catastrophic Coverage	0.53	0.50	0	1.00
Prefer Increased Loan Rates to Increased Insurance Subsidy	0.42	0.49	0	1.00
Prefer Insurance Premium Subsidy to Disaster Payments	0.54	0.50	0	1.00
Total Crop Acres	1440.38	1572.72	46	18000
Percent of total acres planted to corn	0.24	0.23	0	0.97
Percent of total acres planted to soybeans	0.28	0.27	0	0.96
Percent of total acres planted to cotton	0.14	0.25	0	0.99
Percent of total acres planted to sorghum	0.03	0.11	0	0.98
Yield Variability Perceived as a High Potential to Affect Farm Income	0.44	0.49	0	1.00
Price Variability Perceived as a High Potential to Affect Farm Income	0.69	0.46	0	1.00
Perceives a Negative Correlation Between Farm Yield and Price	0.28	0.45	0	1.00
Willing To Accept a Lower Price to Avoid Risk	0.33	0.47	0	1.00
1998 Income was Below 5-year Average	0.65	0.48	0	1.00
Percent of Household Gross Income from Farming	73.53	27.62	2	100
Percent of Total Farm Investment that are Borrowed	31.86	28.25	0	99
College Education	0.36	0.48	0	1.00
Government Programs Perceived as Having a High Potential to Affect Farm Income	0.64	0.48	0	1.00
Purchased Buy Up Crop Insurance	0.53	0.50	0	1.00

Table 2.

	Prefer to Go Back to the Deficiency Payment Program	
	Parameter	p-value
Intercept	**-0.3889**	0.1178
Total crop acres (100s)	-0.003	0.3856
Percent of total acres planted to corn	**-0.5566**	0.0866
Percent of total acres planted to soybeans	-0.1927	0.4481
Percent of total acres planted to cotton	**1.2996**	0.0001
Percent of total acres planted to sorghum	-0.3431	0.5569
Yield variability perceived as a high potential to affect farm income	**-0.2299**	0.0769
Price variability perceived as a high potential to affect farm income	0.0901	0.519
Perceive a negative correlation between farm yield and price	-0.1159	0.4575
Willing accept a lower price to avoid risk	0.0612	0.6146
1998 income was below 5-year average	**0.3211**	0.0082
Percent of household gross income from farming	-0.00218	0.3139
Percent of total farm investment that are borrowed	0.0027	0.1971
College Education	**-0.4217**	0.0007
Government programs perceived as having a high potential to affect farm income	**0.4276**	0.0007
Purchased Buy up crop insurance	---	---
Likelihood Ratio	105.202	
Percent Concordant	65.4	

Table 3.

	Prefer More Insurance Subsidy to Increased Catastrophic Coverage	
	Parameter	p-value
Intercept	**-0.997**	0.0069
Total crop acres (100s)	**0.007**	0.0867
Percent of total acres planted to corn	**-0.659**	0.048
Percent of total acres planted to soybeans	0.2276	0.3608
Percent of total acres planted to cotton	**0.5596**	0.0585
Percent of total acres planted to sorghum	0.2989	0.6192
Yield variability perceived as a high potential to affect farm income	0.3547	0.1641
Price variability perceived as a high potential to affect farm income	**-0.5323**	0.0924
Perceive a negative correlation between farm yield and price	0.1106	0.4849
Willing accept a lower price to avoid risk	**0.3772**	0.0023
1998 income was below 5-year average	-0.1083	0.3791
Percent of household gross income from farming	-0.00038	0.8629
Percent of total farm investment that are borrowed	**0.00546**	0.0109
College Education	**0.2404**	0.0554
Government programs perceived as having a high potential to affect farm income	**---**	---
Purchased Buy up crop insurance	**1.2026**	0.0001
Likelihood Ratio	181.64	
Percent Concordant	70.5	

Table 4.

	Prefer Increased Loan Rates to More Insurance Subsidy	
	Parameter	p-value
Intercept	-0.3916	0.2621
Total crop acres (100s)	**0.008**	0.0521
Percent of total acres planted to corn	0.2965	0.3561
Percent of total acres planted to soybeans	0.0636	0.7937
Percent of total acres planted to cotton	0.3995	0.1688
Percent of total acres planted to sorghum	**-0.9925**	0.0909
Yield variability perceived as a high potential to affect farm income	-0.3643	0.1454
Price variability perceived as a high potential to affect farm income	**0.5636**	0.0639
Perceive a negative correlation between farm yield and price	-0.2024	0.1817
Willing accept a lower price to avoid risk	0.1446	0.2311
1998 income was below 5-year average	**0.223**	0.0586
Percent of household gross income from farming	**0.00426**	0.0457
Percent of total farm investment that are borrowed	-0.00019	0.9282
College Education	**-0.2956**	0.0146
Government programs perceived as having a high potential to affect farm income	**0.2782**	0.0251
Purchased Buy up crop insurance	**-0.3943**	0.0009
Likelihood Ratio	50.44	
Percent Concordant	60.1	

Table 5.

	Prefer Insurance to Disaster Programs	
	Parameter	p-value
Intercept	**-2.0691**	0.0001
Total crop acres (100s)	-0.002	0.5851
Percent of total acres planted to corn	**0.6284**	0.0509
Percent of total acres planted to soybeans	**0.5679**	0.0315
Percent of total acres planted to cotton	0.1754	0.5481
Percent of total acres planted to sorghum	-0.1647	0.7837
Yield variability perceived as a high potential to affect farm income	**0.582**	0.0246
Price variability perceived as a high potential to affect farm income	0.2227	0.4919
Perceive a negative correlation between farm yield and price	**0.3787**	0.0016
Willing accept a lower price to avoid risk	**0.2464**	0.0949
1998 income was below 5-year average	**-0.1978**	0.0954
Percent of household gross income from farming	**0.00405**	0.0609
Percent of total farm investment that are borrowed	0.00236	0.2574
College Education	**0.2483**	0.0404
Government programs perceived as having a high potential to affect farm income	---	---
Purchased Buy up crop insurance	**0.5655**	<.0001
Likelihood Ratio	83.5	
Percent Concordant	64.2	

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