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PARTICIPATION IN THE AVERAGE CROP REVENUE ELECTION PROGRAM (ACRE): LESSONS FOR THE NEXT FARM BILL

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The 2008 Farm Bill created the Average Crop Revenue Election (ACRE) program as a new commodity support program. Eligible producers could choose between participating in the traditional set of commodity programs, like the direct and counter-cyclical payments program, or the newly created ACRE program. Farmers were allowed to sign up for the program annually. However, once a farmer enrolled in the program, the choice became irrevocable for the life of the Farm Bill.

This issue of the *NC State Economist* discusses the findings from a recent study that examined the various factors affecting farmer intentions regarding ACRE participation, as well as factors that affected actual sign-up rates at the county-level (Mitchell et al., 2012). Implications of these findings in relation to the 2013 Farm Bill are also discussed.

The ACRE Program

ACRE payments are triggered by revenue shortfalls, unlike traditional commodity program payments which are triggered by price shortfalls. ACRE payments for a crop are triggered when a revenue loss occurs at both the state level and at the individual farm level. When both triggers are met, ACRE payments are made for that crop based on the difference between the state ACRE guarantee and actual state revenue. To receive these revenue-based ACRE payments, producers lose their eligibility

for price-based counter-cyclical payments, give up 20% of their direct payments, and accept a 30% reduction in the loan rates used to determine marketing assistance loans and loan deficiency payments.

A number of studies conducted by agricultural economists before the program began examined the expected relative benefits of the ACRE program in relation to benefits offered by traditional commodity programs. Most of these studies concluded that for many farmers growing crops such as corn, soybeans, and wheat, expected ACRE payments would likely exceed the 20% reduction in direct payments, the loss of counter-cyclical payments, and the reduction in loan deficiency payments. Some analyses also showed that ACRE would provide better risk protection than traditional commodity programs. Thus, many economists encouraged farmers to seriously consider participating in this new program.

Based on these economic studies, it was expected that a large number of producers would sign-up for the ACRE program when it became available in 2009. However, enrollment data indicated that nationally only about 8% of farms with eligible base acreage signed up for ACRE in 2009. This represents roughly one-eighth of eligible base acreage, much lower than most experts had expected. Participation also has not significantly increased over the life of the 2008 Farm Bill. A number of explanations

have been postulated for the lower-than-expected enrollment, including producer risk preferences, learning and negotiation costs, decision irreversibility, and the option to enroll in later years (Woolverton and Young, 2009). Moreover, a poll found that the most common reason farmers did not sign up for ACRE was that they did not understand the program themselves, or that it was too difficult to explain to landlords (Zarley Taylor, 2010). ACRE represented a significant change from previous commodity programs, with farmers commonly citing complexity as a problem.

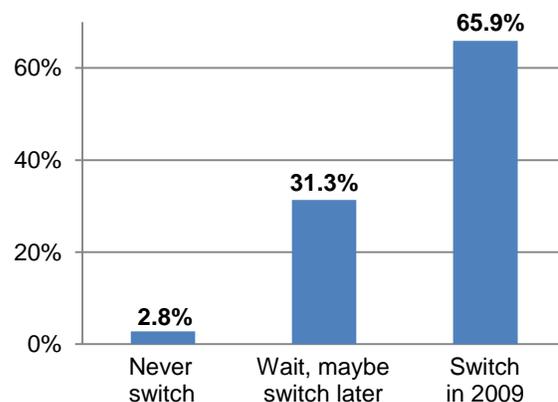
Factors Influencing Intentions to Sign-up for ACRE

Data from a mail survey administered in early 2009 to corn, cotton, grain sorghum, soybeans, rice, and wheat farmers were utilized to investigate factors that shape ACRE sign-up intentions in the following states: Mississippi, North Carolina, Texas, and Wisconsin. Because the survey pre-dated the ACRE sign-up deadline by several months, farmers were asked to report their anticipated or intended ACRE decision. The survey offered the following response options regarding intentions to participate in ACRE: (1) stay in the traditional commodity program through the life of the current Farm Bill, (2) wait and possibly switch to ACRE in a later year, and (3) switch immediately to ACRE in 2009.

Farmer responses indicated that only 2.8% of the producers intended to switch to ACRE in 2009. A much larger 31.3% stated that they might switch to ACRE in later years, while 65.9% reported that they intended to stay in the current program for the life of the Farm Bill (Figure 1). These results suggest that at the time the survey was administered most producers did not intend to sign-up for the ACRE program.

Based on information from the same survey on farmer intentions, additional statistical analyses were conducted in order to examine what

Figure 1. Response of Surveyed Farmers Regarding their Intentions to Participate in ACRE



farmer (or farm) characteristics significantly affected intentions to participate in the ACRE program. The effects of farmer beliefs and attitudes are of specific interest. The empirical results indicated that farmer intentions to switch to ACRE in 2009 were primarily driven by producer perceptions of whether or not ACRE would pay more than existing programs — and whether or not it would provide more risk protection. On the other hand, planning to stay with existing programs in 2009 and possibly switching to ACRE later was driven more by producer risk aversion. Membership in organizations such as National Farmers Union, National Farmers Organization, and the Grange was consistently and strongly associated with intending to stay with existing programs in 2009. These organizations typically supported commodity programs that rely on loan deficiency payments rather than on direct and counter-cyclical payments, so these intentions for delayed ACRE sign-up are consistent with membership. Consistent crop effects were also found: cotton growers consistently and strongly indicated intentions to stay with existing programs in 2009. This preference likely reflects large perceived cost of giving up the relatively larger direct payments for cotton, in combination with cotton producers' price expectations that made counter-cyclical payments more likely.

What Factors Affect Actual ACRE Participation Decisions?

The analysis above focused on farmer intentions because the farm level survey was conducted several months before the actual sign-up deadline for ACRE. Unfortunately, it was not feasible to conduct a follow-up survey of the same farmers to compare reported ACRE intentions to actual enrollment decisions. Therefore, use was made of USDA Farm Service Agency (USDA-FSA) data containing information on 2009 ACRE enrollment rates — specifically, the proportion of eligible base acres in each county that enrolled in ACRE in 2009. The USDA-FSA data were then linked to the survey data discussed previously to examine the effect of the same factors investigated before on actual ACRE enrollment decisions at the county level.

Statistical analysis of the actual, county level ACRE enrollment rates suggests that crop effects were again important — cotton areas had low enrollment rates, wheat areas had high enrollment rates, and counties with more diversity in crops had higher enrollment rates. In addition, regions where farmers believed yield variability would be an important source of risk also had higher enrollment.

The results of the county level data analysis also provide some evidence that program complexity contributed to the lower than expected ACRE enrollment rates. Counties with greater participation in current farm programs had higher ACRE enrollment rates, as more growers were likely more familiar with how farm programs worked and received more educational efforts. In addition, counties with a greater proportion of farmers renting land and/or buildings had lower enrollment rates. This suggests the important impacts of transactions costs and program complexity on enrollment, as both renters and landlords had to sign ACRE election forms. Many farmers noted the difficulty in obtaining signatures in the short time allowed for a new, complex program that was hard for many to understand.

Discussion

The analyses of factors affecting ACRE participation intentions and actual sign-up decisions suggest that farmer beliefs and attitudes play an important role in these processes. Producer perceptions of whether or not ACRE would pay more than traditional commodity programs, whether or not it would provide more risk protection, and farmer risk aversion were important factors in shaping ACRE participation intentions. Farmer belief about yield variability as a major source of risk is an important driver of actual ACRE enrollment. However, there is little consistency with regards to the factors that affect participation intentions and actual decisions. Attitudes and beliefs likely change over time and the effect of these variables on intentions and actual sign-up decisions are expected to be different — especially during the time frame of analysis, given the substantial uncertainty and lack of understanding about the ACRE program itself.

The study reveals what many economists that initially investigated the ACRE program may have failed to appreciate — that program uncertainty and complexity can impede program participation. As the results suggest, actual ACRE enrollment decisions are fairly clear for farmers of some crops, like cotton and wheat. However, the fact that many producers did not sign up for ACRE, even though most economic analysis suggested that expected returns from ACRE would exceed those from traditional programs, highlights the important role that risk aversions and uncertainty play in many farmers' decisions to participate in new programs.

In the current 2013 Farm Bill debates, the ACRE program and other existing commodity programs are likely to be repealed in order to achieve Federal spending reduction targets (Paulson, 2013). However, there are proposals to replace these programs with several new price and revenue-based programs. In light of the results presented above, it is important to

consider how the complexity of these new programs may affect future participation. Have these programs reached the point where producers cannot effectively evaluate and utilize the best safety-net options offered to them? Perhaps more effort should be devoted to examining simpler revenue-based commodity support programs that are easier for farmers and non-farming landlords to understand. Our results indicate that in crafting these new price or commodity programs, policy-makers should be mindful of the uncertainty connected with introducing new programs and its effect on participation. The results also suggest that funding to support educational programs should accompany these new commodity programs in order to facilitate understanding of the various options available and help farmers choose the best safety-net for their operations.

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