

United States  
Department of  
Agriculture



Economic  
Research  
Service

Economic  
Research  
Report  
Number 84

December 2009

# Factors Influencing ACRE Program Enrollment

Andrea Woolverton  
Edwin Young



## Visit Our Website To Learn More!

Find additional information about farm policy, the 2008 Farm Act, and related topics at:

[www.ers.usda.gov/briefing/FarmPolicy](http://www.ers.usda.gov/briefing/FarmPolicy)

[www.ers.usda.gov/FarmBill/2008](http://www.ers.usda.gov/FarmBill/2008)

## National Agricultural Library Cataloging Record:

Woolverton, Andrea

Factors influencing ACRE program enrollment.  
(Economic research report (United States. Dept. of Agriculture.  
Economic Research Service); no. 84)

1. Agricultural price supports—United States.

2. Agriculture and state—United States.

I. Young, C. Edwin (Chester Edwin), 1948-

II. United States. Dept. of Agriculture. Economic Research Service

III. Title.

HD1761

### **Photo credits: Creatas for wheat and corn; USDA, ARS Image Gallery for soybeans**

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and, where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

The logo for the United States Department of Agriculture (USDA), featuring the letters "USDA" in a serif font above a stylized graphic of a field and sky.

United States  
Department  
of Agriculture

Economic  
Research  
Report  
Number 84

December 2009



A Report from the Economic Research Service

[www.ers.usda.gov](http://www.ers.usda.gov)

# Factors Influencing ACRE Program Enrollment

**Andrea Woolverton**, [woolverton@ers.usda.gov](mailto:woolverton@ers.usda.gov)

**Edwin Young**, [cyoung@ers.usda.gov](mailto:cyoung@ers.usda.gov)

## Abstract

Authorized by the 2008 Farm Act, the Average Crop Revenue Election (ACRE) program is the first revenue-based, income-support program that calculates payments using recent market prices and a producer's actual plantings. The payments are triggered when a farm's revenue and State revenue (price multiplied by yield per planted acre) fall below a calculated guarantee for a crop. By contrast, other income-support programs are based on legislated rates and support levels, computed using a farm's base acres and payment yields. Had the ACRE program been available during crop years 1996-2008, this report shows that farmers would have benefited more from participating in 2002 Farm Act programs than in the hypothetical ACRE program. The report further suggests that, for 2009-12, producers of corn, soybeans, wheat, and rice are likely to benefit more from the ACRE program than from the price-based, income-support programs. Initial enrollment data suggest that factors aside from expected market prices and yields entered into the enrollment decision such as producer risk preferences and initial learning and negotiation costs. Data indicate that about 8 percent of farms with almost 13 percent of eligible base acres elected to participate in ACRE, which is less than might be expected given price- and yield-based analysis alone.

**Keywords:** Average Revenue Crop Election, ACRE, 2008 Farm Act, farm bill, commodity programs, risk management, income support, ERS, USDA

## Acknowledgments

The authors would like to thank Phil Sronce, Farm Service Agency, USDA, for a spreadsheet model of ACRE, for explanations of program operations, and for his review of this monograph, as well as his FSA colleagues Tom Tice and Bradley Karmen for providing data on initial program enrollment. The authors would like to thank USDA colleagues Paul Westcott, Robert Dismukes, Joe Cooper, and Phil Jarrell, and academic colleagues Carl Zulauf and Frayne Olson for their reviews, as well as Ryan Williams for support in creating the maps. Thanks also go to our editor, Priscilla Smith and to Wynnice Pointer-Napper for graphic layout and design.

# Contents

|                                                                                                       |     |
|-------------------------------------------------------------------------------------------------------|-----|
| Summary . . . . .                                                                                     | iii |
| Introduction . . . . .                                                                                | 1   |
| Catalysts for a Commodity Program That Addresses Revenue Risk . . . . .                               | 2   |
| Opportunity Costs and Payment Scenarios . . . . .                                                     | 5   |
| Complex Program Results in a Variety of Payment Outcomes . . . . .                                    | 9   |
| A Historical Perspective . . . . .                                                                    | 14  |
| The Enrollment Decision in 2009 and Beyond . . . . .                                                  | 17  |
| The Farm-Level Decision . . . . .                                                                     | 17  |
| 2009 Average Crop Revenue Election Program Enrollment . . . . .                                       | 22  |
| Conclusion . . . . .                                                                                  | 26  |
| References . . . . .                                                                                  | 27  |
| Appendix A—Program Details . . . . .                                                                  | 28  |
| Payment Calculations . . . . .                                                                        | 28  |
| Key Payment Details . . . . .                                                                         | 30  |
| Appendix B—Scenario A: State-level yield shocks (national average market prices unaffected) . . . . . | 34  |
| Appendix C—Scenario B: Falling market price scenario . . . . .                                        | 36  |

**Recommended citation format for this publication:**

Woolverton, Andrea, and Edwin Young. *Factors Influencing ACRE Program Enrollment*, ERR-84, U.S. Dept. of Agriculture, Econ. Res. Serv., December 2009.

## Summary

Authorized by the 2008 Farm Act, the Average Crop Revenue Election (ACRE) program is the first Federal agricultural income-support method to be based on agricultural revenues and planted acres. Income-support programs continued from the 2002 Farm Act, such as direct and counter-cyclical payments, are based on legislated rates and a farm's base acres. ACRE is a revenue guarantee program that farmers can select as an alternative to counter-cyclical payments. Producers had until August 14, 2009, to elect to participate in ACRE for 2009.

### What Is the Issue?

U.S. farmers eligible for the ACRE program face several unknowns because the program requires farmers to make assumptions about farm and State yields and commodity prices before deciding whether to participate in the program. Some may prefer payment certainty by remaining in a program with which they feel comfortable.

### What Did the Study Find?

Initial enrollment data as of October 2009 indicate that about 8 percent of farms with almost 13 percent of eligible base acres elected to participate in ACRE, which is less than might be expected given price- and yield-based analysis. However, enrolled producers must incur initial learning and negotiation costs and must forgo 20 percent of direct payments. These costs may be larger than the expected ACRE benefits for some producers in 2009 and beyond. As expected, ACRE enrollment is in regions that typically grow wheat, corn, and soybeans. The three crops comprise 96 percent of crops planted on ACRE-enrolled acreage. Remaining producers of eligible crops who did not elect to enroll in ACRE can still enroll in any of the next 3 years (until 2012), but those who do enroll must remain in the program through 2012.

ERS researchers applied ACRE requirements to program-eligible crops from 1996 to 2008 and analyzed whether farmers would have benefited more from participating in ACRE or in the 1996 and 2002 Farm Act programs during that time. They found that total payments under the 1996 and 2002 Farm Act programs exceeded estimated total ACRE program payments every year except 1996 and 1997. While most producers would have been better off participating in 1996 and 2002 Farm Act programs than in the ACRE program in 1996-2008, this may not be the case in crop years 2009-12. The prices used to calculate the initial ACRE revenue guarantees include the historically high commodity prices of 2007 and 2008. Thus, Government payments are likely to be higher for many farmers electing ACRE than for those who retain the 2002 Farm Act set of payments.

By participating in ACRE, an agricultural producer forgoes counter-cyclical payments and is subject to a 20-percent reduction in direct payments and a 30-percent reduction in marketing loan rates. Despite these tradeoffs, many U.S. farmers may find ACRE attractive, particularly farmers who are producing crops—such as corn, wheat, and soybeans—for which market prices are projected to be high relative to historical levels. Producers of those crops are unlikely to be eligible for counter-cyclical payments and marketing loan benefits.

Agricultural producers must consider two less quantifiable costs when deciding whether to elect to participate in ACRE: (1) the learning costs associated with the new revenue-based program, and (2) the negotiation costs due to the requirement that all producers/landowners in the farm operation must agree to participate. These factors will differ across producers and could discourage participation in ACRE.

ACRE payments are crop-specific and are based on planted acres of all farm-program-eligible crops on a participating farm. Eligible crops include wheat, corn, barley, grain sorghum, oats, upland cotton, long-grain and medium-grain rice, peanuts, pulse crops, and soybeans and other oilseeds. Payments are based on a “moving” 2-year average of market prices and on 5-year Olympic averages of yields. ACRE payments are triggered when both the farm and State revenues fall below benchmark levels. (An Olympic average is a 5-year average that “drops” the highest and lowest values.)

Two ACRE program generalities are evident. First, farms with yields that are positively correlated with State yields are more likely to receive ACRE payments given the dual-payment criterion. Second, the revenue guarantee (called the State ACRE Guarantee, or SAG) will follow relatively current market prices, high and low. As prices rise (fall), the SAG will increase (decrease), although by no more than 10 percent from one year to the next, regardless of changes in commodity prices or yields.

Given the relatively high initial SAG and projected crop prices, producers of wheat, corn, soybeans, and rice could qualify for payments under ACRE if they experience even a small decline in price or yield, which could offset most of the forgone direct payments. However, for farms that expect to receive counter-cyclical payments and marketing-loan benefits (upland cotton and peanut producers, for example), ACRE payments are unlikely to offset both the forgone payments and marketing loan benefits.

## **How Was the Study Conducted?**

ERS researchers applied ACRE requirements to program-eligible crops from 1996 to 2008 and analyzed whether farmers would have benefited more from participating in the ACRE program or in the 1996 and 2002 Farm Act programs during that time. The researchers then projected their findings into crop years 2009-12. The historical costs were estimated for ACRE, assuming State-level historical production. The analysis was based on an indepth review of the 2008 Farm Act rules and regulations for ACRE. Data on planted acreage, production, prices, and enrollment from USDA’s National Agricultural Statistics Service and Farm Service Agency were used to simulate farm-level and aggregate impacts of ACRE.