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Feature: Farm Economy

March 01, 2012



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## Identifying Federal Farm Programs' Potential Overlaps

by Erik O'Donoghue, Anne Effland, and Joseph Cooper



### Highlights:

- ERS researchers have defined how overlap among farm safety net programs can occur and developed a revenue-based approach to identify and measure overlap among programs.
- As an example of measuring overlap, researchers explored ways that the Federal crop insurance revenue program can interact with the Average Crop Revenue Election program and found evidence of potential overlap for certain types of farms in select locations.

- The availability of various combinations of programs can alter producers' farm management and production decisions in complex ways that may require case-by-case analysis, for example, when policy provisions link benefits across programs.

The Nation's current fiscal crisis has generated increasing demands for cuts from all portions of the U.S. budget. Despite their relatively small share of the total U.S. Federal budget (less than one-half of 1 percent), farm programs are drawing attention from both the media and Congress. This has been spurred partly by observations that farmers continue to receive some Government support even though commodity prices and farm income have been high since 2007. The focus has intensified in recent months as many support programs authorized under the 2008 Farm Act will expire in 2012. Farm groups, legislators, and other stakeholders have proposed various options for reorienting programs to replace the current Farm Act within the context of a declining Federal budget.

### **Producers Typically Participate in Multiple Programs**

A growing number of policies have been put in place over the years to provide U.S. farmers some form of an economic safety net. The resulting complexity has given rise to public concern about possible duplication in the farm safety net.

In general, the farm safety net focuses on farm business viability and includes the various commodity, risk management, and disaster assistance programs. Conservation programs, though often involving direct payments to producers, are generally not considered safety net programs because they are designed to address environmental concerns rather than farm business viability. Federal farm safety net programs that provide payments to farmers can be divided broadly into two categories--income support and risk management.

USDA's Farm Service Agency (FSA) administers income support programs, including direct payments (DP), countercyclical payments (CCP), and marketing loan benefits (MLB). Risk management programs include the relatively new Average Crop Revenue Election (ACRE) program along with all forms of disaster assistance (both administered by FSA), as well as crop insurance (administered by USDA's Risk Management Agency (RMA)).

This wide array of programs can support either specific commodities or whole-farm revenues. Program expenditures can vary across regions and time, depending on factors such as market conditions, weather patterns, and pest infestations.

Because program designs and purposes vary, producers may participate in, and receive benefits from, multiple programs on the same farm.

For example, FSA administrative data show that more than 99 percent of farms growing cotton in Texas in 2007 received direct payments, more than 99 percent received countercyclical payments, 13 percent received marketing loan benefits, 23 percent received crop disaster payments, and 2 percent received livestock disaster payments. (Note: the above payments could be from any program crop grown on the farm, not necessarily cotton.) Because producers can--and often do--participate in multiple programs, they may receive both higher levels and a wider array of program benefits when commodity prices drop or crop yields decline, increasing the potential for overlap. However, simply receiving support from multiple sources does not mean that overlap is occurring among programs within the farm safety net. Identifying overlap requires defining overlap, analyzing the interactions among programs, and measuring how those interactions may lead to overlapping support.

**Producers often participate in and receive benefits from multiple programs on the same farm**

Program	Crop grown on Farm Service Agency (FSA) farm:											
	Corn		Cotton		Rice		Soybeans		Wheat			
	2001	2007	2001	2007	2001	2007	2001	2007	2001	2007		
<i>Percent of FSA farms growing (crop) and receiving program payments in:</i>												
<i>Kansas:</i>												
PFC/DP			97	100	--	--	--	--	95	100	> 99	100
MLA/CCP			93	< 1	--	--	--	--	95	< 1	> 99	< 1
MLB			91	3	--	--	--	--	100	3	73	3
Dairy			< 1	2	--	--	--	--	0	1	1	1
Crop Disaster			< 1	12	--	--	--	--	0	13	3	14
Livestock Disaster			< 1	< 1	--	--	--	--	0	< 1	< 1	< 1
<i>Texas:</i>												
PFC/DP			> 99	100	> 99	> 99	> 99	100	--	--	> 99	100
MLA/CCP			99	< 1	> 99	99	> 99	< 1	--	--	> 99	< 1
MLB			56	7	46	13	59	2	--	--	39	8
Dairy			< 1	1	< 1	< 1	0	0	--	--	< 1	1
Crop Disaster			3	14	11	23	< 1	1	--	--	15	14

Livestock Disaster	2	3	1	2	< 1	1	--	--	5	4
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PFC = Production Flexibility Contract Payments; DP = Direct Payments; MLA = Marketing Loss Assistance Payments; CCP = Countercyclical Program Payments; MLB = Marketing Loan Benefits.

Source: USDA, Economic Research Service using administrative data from USDA, Farm Service Agency, program years 2001 and 2007.

## Defining and Measuring Overlap

Suppose for the sake of simplicity that the Government desires to provide farmers a guaranteed revenue, defined as the minimum dollar amount the farmer is guaranteed to receive through a combination of farm product sales and Government support programs. Under this hypothetical goal, if a farmer receives support from more than one program and total revenue (the dollar amount received from the sale of farm output and farm programs) exceeds guaranteed revenue, overlap has occurred. The next step requires determining how to calculate farm revenues. ERS researchers developed a method of calculating farm revenues based on the methods used to determine payments under USDA's new Supplemental Revenue Assurance (SURE) program, linking their research directly to Government payment provisions.

The SURE program, which provides a revenue-based supplement to crop insurance, contains a unique set of provisions that researchers could adapt to determine the potential for overlap among programs. The SURE program considers the broad suite of USDA's farm program support mentioned earlier as part of actual farm income when calculating the whole-farm income to compare against the expected market revenue guarantee. Expected market revenue refers to the dollar amount the producer expects to receive from the sales of the farm output given expectations of prices and yields.

Based on the principles of the SURE payment calculation, researchers developed methods to calculate total revenues that can be compared with the guaranteed level of expected market revenue. This approach also allows researchers to determine the extent of overlap and which combination of programs could potentially lead to overlapping payments. ERS researchers employed the method in a simulation model to examine the likelihood that producer participation in selected combinations of programs would lead to this type of overlap.

## The Potential for Overlap

The ACRE program provides payments to a farmer if a program commodity's State and farm-level revenues both fall below guarantees that

are determined using recent prices and yields. Because ACRE insures revenues, it has the potential to target some of the same revenue losses as Federal crop insurance programs, thereby generating overlapping support within the farm safety net.

ERS researchers simulated the interaction between the ACRE program and revenue-based insurance (assuming the producer elects 70 percent revenue coverage) for average corn, soybean, and wheat farms in four counties: Logan County, IL; Butler and Finney Counties, KS; and Barnes County, ND. Data sets of prices and yields were simulated from 1975 to 2008 yield data from USDA's National Agricultural Statistics Service (NASS), futures prices at planting and harvest over the same period, and farm-level yield variability information derived from RMA crop insurance premiums. These simulated data sets then served as the basis for calculating gross revenue, ACRE payments, crop insurance indemnities, and SURE payments for representative farms in each county examined.

While a farmer's ACRE revenue support payment is based on the extent to which State crop revenues fall below guaranteed levels, findings from the simulations suggest that the ACRE program covered a significant portion of the farm-level revenue risk. Not treating the ACRE payment as part of a farmer's crop revenue exaggerates the year-to-year changes in total farm revenue, making it larger than it would be if ACRE were considered part of revenue, and effectively causing ACRE to overlap with some of the benefits provided by purchasing Federal crop insurance. For the representative farms studied in these select locations, policy designs that explicitly account for overlapping coverage provided by participation in ACRE may lower a farmer's actuarially fair crop insurance premium by an estimated 10 to 41 percent. (The magnitude of the reduction depends on how closely the farmer's revenue moves with the average State revenue--the more closely they move together, the larger the potential premium reduction.)

Further ERS research extended the analysis to corn, soybean, and wheat farms in Minnesota and South Dakota and examined how overlap could change if ACRE were altered from a State-level program to either a national-level or a county-level program. Findings again suggested overlap between ACRE and revenue-based crop insurance. If the overlap between the two programs was accounted for, insurance premiums could drop between 6 and 29 percent with a national-level ACRE trigger, between 20 and 38 percent for a State-level trigger, and between 29 and 45 percent for a county-level trigger. Because researchers only explored the interaction between these two programs for certain types of farms in select locations, however, these results cannot be generalized for all U.S. farms.

Simulations also showed that producers may alter their management decisions (such as crop insurance coverage levels and the number of planted acres) in response to the availability of different combinations of programs. For example, because SURE benefits rise (up to a point) with increased levels of crop insurance coverage, making SURE available in conjunction with a crop insurance revenue program tended to induce a farmer to select a higher level of crop insurance coverage.

Simulations involving more complex combinations of programs, however, led to some surprising outcomes. Results show that, even in the absence of overlap (since the SURE provisions work to preclude overlap with other programs), the use of different combinations of programs to address farm business viability could have unexpected effects on farmers' decisions. For example, making a second risk management program available to farmers enrolled in a crop insurance program induced them to plant more land, not an unexpected result, since adding additional protection against revenue variability reduces the risk of planting. However, when a third program that linked benefits to those provided by other programs was made available, farmers chose to plant fewer acres rather than further increase the amount of land planted (although farmers did still choose to plant more than when only crop insurance was available). In this last case, the policy provisions of the third program limited the additional protection against revenue variability from the other programs, reducing the previous incentives to increase plantings. The complexity of programs and the way farmers make planting decisions make it difficult to anticipate outcomes, and any attempt to integrate programs to eliminate potential overlap may have unintended consequences on production.

**This article is drawn from...**

[Identifying Overlap in the Farm Safety Net](#), by Erik O'Donoghue, Anne Effland, Joseph Cooper, and Chengxia You, USDA, Economic Research Service, November 2011

"Average Crop Revenue Election: A Revenue-Based Alternative to Price-Based Commodity Payment Programs", by Joseph C. Cooper, American Journal of Agricultural Economics, January 2010, 92(4): 1214-28.

[Identifying and Reducing Overlap in Farm Program Support](#), by Joseph C. Cooper and Erik J. O'Donoghue, Agriculture and Applied Economics Association Annual Meeting, July 2011, Selected paper from the Agriculture and Applied Economics Association Annual Meeting, Pittsburgh, PA.





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