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What Would Happen if the Conservation Reserve Program Were Reduced?

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The Conservation Reserve Program (CRP) was established by the Food Security Act of 1985 and was reauthorized in all subsequent farm bills. Under the CRP, farmers convert highly erodible cropland or other environmentally sensitive acreage to resource-conserving covers, such as native grasses, trees, and filter strips. In return, they receive an annual rental payment from the government for a contract period of 10–15 years. As of February 2012, the CRP contained 29.77 million acres.

US lawmakers face a different world now than when the program was established. With the growing federal deficit, there is impetus to cut federal spending. The CRP is a program some lawmakers have targeted as one they believe the United States can afford to cut. This raises an important question: What are the economic and environmental implications of reducing the size of the CRP?

This brief reviews the key academic studies of the CRP's costs and benefits and consolidates their main findings as a contribution to the policy conversation.

Economic Impact of the CRP

There is strong evidence that the CRP generates significant economic benefits to society. Some of these benefits go to the participating landowners directly, while others occur primarily off the farm as a result of improved environmental quality.

Economic Benefits from reduced soil erosion. Reduced soil erosion from CRP land has both on-site and off-site economic benefits. The on-site economic benefits include increased soil productivity, increased future crop yields, and decreased

input use, such as fertilizer, when CRP acres are returned to production. Off-site benefits include reduced sediment in surface waters, which, in turn, precludes the need (and expense) to dredge or otherwise remove soil that blocks or threatens structures. Reduced particulate matter in the air also reduces medical and structural effects and results in cost savings for people and businesses in areas downwind from CRP land. The total benefit, including both on-site and off-site benefits, from reduced soil erosion from CRP was estimated to be $653 million per year, or $20 per CRP acre per year (in 2011 dollars), based on the 1997 enrollment (Sullivan et al. 2004).

Recreational benefits. The CRP improves environmental quality, which leads to enhanced ecosystem health in general and increased public enjoyment of recreational activities in particular. Sullivan et al. (2004) estimated selected wildlife-related benefits attributable to CRP enrollments, including wildlife viewing and pheasant hunting, at approximately $963 million per year, or $29 per CRP acre per year (in 2011 dollars). Sullivan et al. (2004) pointed out that this represents a lower-bound estimate of wildlife benefits because it does not include improved hunting for many species and the increased protection CRP land affords to threatened and endangered species.

Impacts on land values. With about 8 percent of the nation's cropland enrolled into the CRP, up to 25 percent in some counties, the CRP was found to have a significant impact on land values. Wu and Lin (2010) estimate that the CRP increased the average farmland value nationwide by between $18 and $25 per acre in 1997. The effects were largest in the mountains, southern plains, and northern plains, where it increased the average farmland value by 5–14 percent, 4–6 percent, and 2–5 percent, respectively. The CRP also had a statistically significant effect on the value of developed land.

Table 1 summarizes selected economic impacts of the CRP. The annual benefits from the reduced soil erosion and increased recreational opportunities amount to roughly $49 per acre (2011 dollars). Only about 10 percent of these benefits accrue to the enrollee as on-site benefits, and the remaining 90 percent accrues to the rest of society (Sullivan et al. 2004). The most important local impacts are increased land values, at $58 per CRP acre per year (total increase in the value of agricultural and developed lands divided by the total CRP acreage annualized at 5 percent of the interest rate). The average CRP rental costs were only $52 per acre in 2011. These results provide evidence that the total benefit of the CRP outweighs its total cost to taxpayers, although the performance of the CRP could be improved (Wu, Zilberman, and Babcock, 2001).

Impacts on Rural Communities. Since the inception of the CRP in 1985, there has been concern that retirement of farmland from production will adversely affect at least some sectors in nearby communities as demand for local agricultural inputs and marketing services declines. Congress attempted to address this concern by limiting enrollment in the program to 25 percent of a county's cropland. Yet, particularly in farm-dependent counties, many have wondered whether such limits can cushion the negative impacts of the CRP on rural busi-

Table 1. Selected Economic Impacts of the Conservation Reserve Program

Impacts	Total [a]	Per CRP acre [a]
	$ million/year	*$/acre/year*
Reduced soil erosion [b]	653	20
Recreational benefits [b]	963	29
Increased agricultural land value [c]	1108	34
Increased developed land value [c]	786	24

[a] All benefits estimates are adjusted for inflation to represent 2011 dollars and total benefits are rounded to the nearest million dollars.

[b] Source: Sullivan et al. (2004)

[c] Wu and Lin (2010) estimated that the CRP increased farmland value by $18–25 per acre (with an average of $21.5) and increased developed land value by $6–274 per acre (with an average of $140/acre) in 1997. Multiplying the averages by the total acreages of agricultural land and developed land in 1997, we obtain the total increases in agricultural land value and developed land value, respectively. Assume a discount rate of 5%, annualized benefits from increased land values are calculated by multiplying the total increases by 5%. Dividing the annual benefits by the total CRP acreage in 1997 gives the per acre benefits, which are adjusted by the Consumer Price Index (CPI) to represent the 2011 dollars.

nesses, civic organizations, community services (education, public safety, roads and other infrastructure), and, ultimately, on community viability.

Much economic research was conducted to look at effects on local communities when the program was first introduced. Most early studies found that CRP enrollment had negative impacts on the local economy, including population, retail businesses, and poverty. Only a few found local economic gains in the short run.

Perhaps the most comprehensive effort to understand the economic and social impact of the CRP on rural counties is the 2004 Economic Research Service (ERS) study completed in response to a congressional mandate for the research (Sullivan et al. 2004). The ERS report concluded that "the adverse impacts of CRP are generally small and fade over time." It reached four specific conclusions: (1) "high CRP enrollment was associated with a net loss of jobs in some rural counties between 1986 [when the first land was enrolled] and 1992, but this relationship did not persist throughout the 1990s"; (2) "farm related businesses, such as input suppliers and grain elevators, continued contracting throughout the 1990s"; (3) "other business expansions [such as increased outdoor recreation businesses] moderated CRP's impact on total employment"; and (4) there was "no statistically significant evidence to support the commonly held belief that CRP encourages rural outmigration [or] absentee ownership."

In other words, the negative impacts on rural communities anticipated in the early reports appear to have been moderated as community economies have adjusted. If the CRP program decreases or is downsized, some businesses in rural communities would be negatively affected and others would benefit. The size of these impacts is expected to vary across different types of businesses and communities.

Environmental Impacts of the CRP

By converting highly erodible cropland or other environmentally sensitive acreage to long-term, resource-conserving covers, the CRP offers many environmental benefits, including reduced soil erosion, improved air and water quality, and improved wildlife habitat. Conversely, many of these environmental benefits will be lost when CRP acres are converted back into crop production. The major environmental benefits from the CRP are summarized as follows:

Reduced soil erosion. By converting highly erodible cropland to native grasses and trees, the CRP reduces wind- and water-induced soil erosion. Nationwide, the CRP was credited with reducing soil erosion by nearly 224 million tons a year, or approximately 6.8 tons per CRP acre based on 1997 enrollments (Sullivan et al. 2004). Enrolling land in the CRP also has a positive effect on soil quality. Reducing soil erosion and improving soil quality is key to improving the surrounding environment and production yields.

Improved water quality. Suspended sediment and nutrient run-off from agriculture have been cited as the most damaging nonpoint-source pollution to the U.S. environment. By reducing soil erosion and nutrient runoff, the CRP offers significant water quality benefits. It was estimated that the CRP reduced nitrate loadings by 90 percent, sediment and herbicide loadings by 50 percent, and phosphorous loadings by 30 percent in some U.S. agricultural regions. Improved water quality helps support healthy wildlife habitats and cuts costs on water filtra-

tion systems for drinking water, among other ecosystem services (Sullivan et al. 2004).

Wildlife habitat. By converting row cropland into native grasslands and trees, the CRP benefits many wildlife species by providing nesting cover, wintering habitat, and plant and insect feed. Many wildlife species have benefited from improved habitat, including ring-necked pheasants, elk and deer, neotropical migrant land birds, and eastern cottontail rabbits.

What Would Happen if the CRP were Reduced?

In an environment of federal fiscal restraint, the CRP is among dozens of conservation programs for which funding could be cut. CRP reductions could be realized in a number of ways, including through reductions in the maximum number of acres that can be enrolled or by allowing CRP participants to break their contract by opting out early—before the full contract term of 10–15 years has been met.

What all of the cited studies suggest is that: (1) the CRP has had economic benefits that outweigh its costs to taxpayers; (2) the economic losses occurring when acres in the CRP decrease may not be as great as the economic gains that accrued from bringing land into the CRP; but (3) a major reduction in the CRP would result in significant losses of the economic and environmental benefits of the current program. Depending on how farm producers and nonfarm businesses responded, the impacts of CRP reduction on particular communities in regions with large CRP enrollment could be sizable, although aggregate effects on rural income and employment would be small. ■

FOR FURTHER READING

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