



A Report from the Economic Research Service

www.ers.usda.gov

The Conservation Reserve Program

Economic Implications for Rural America

Patrick Sullivan, Daniel Hellerstein, Leroy Hansen, Robert Johansson, Steven Koenig, Ruben Lubowski, William McBride, David McGranahan, Michael Roberts, Stephen Vogel, and Shawn Bucholtz

Abstract

This report estimates the impact that high levels of enrollment in the Conservation Reserve Program (CRP) have had on economic trends in rural counties since the program's inception in 1985 until today. The results of a growth model and quasi-experimental control group analysis indicate no discernible impact by the CRP on aggregate county population trends. Aggregate employment growth may have slowed in some high-CRP counties, but only temporarily. High levels of CRP enrollment appear to have affected farm-related businesses over the long run, but growth in the number of other nonfarm businesses moderated CRP's impact on total employment. If CRP contracts had ended in 2001, simulation models suggest that roughly 51 percent of CRP land would have returned to crop production, and that spending on outdoor recreation would decrease by as much as \$300 million per year in rural areas. The resulting impacts on employment and income vary widely among regions having similar CRP enrollments, depending upon local economic conditions.

Keywords: Conservation Reserve Program, CRP, rural development, rural employment, land retirement impacts, land-use changes, recreation spending

Acknowledgments

This report builds on a Congressionally mandated study completed in January 2004 for the House and Senate Agriculture Committees and owes much to those who contributed to the earlier study. In addition to the authors listed above, contributors include Peter Feather (formerly with ERS) for assembling the study team and outlining the report; Alex Barbarika and Skip Hyberg, of the Farm Service Agency, together with Charles Barnard and Rick Reeder of ERS for help assembling the data and conceptualizing the analysis; Charlie Hallahan of ERS for statistical assistance; and Carol Jones of ERS for coordinating the Congressional report's peer and interagency review. Valuable comments and suggestions were provided by Thomas Johnson (University of Missouri), Maureen Kilkenny (Iowa State University), Larry Leistritz (North Dakota State University), Andrew Plantinga (Oregon State University), Robert Stephenson (Farm Service Agency), Gerry Royston and Scott Steele (USDA's Office of Budget and Program Analysis), Larry Salathe (USDA's Office of the Chief Economist), Michael Torrey (USDA's Office of Congressional Relations), Ralph Linden (USDA's Office of the General Counsel), and Ralph Heimlich (formerly with ERS). Within ERS, reviews were provided by James Johnson, Daniel Milkove, James Ryan, Gerald Schluter, Katherine Smith, Marca Weinberg, Keith Wiebe, and Timothy Wojan. Olivia Wright and Lou King provided clerical and editorial support, and Cynthia Ray and Victor Phillips, Jr., did the layout and cover design.

Contents

Summaryiv
Introduction1An Overview of the Conservation Reserve Program (CRP)3Characteristics of Farm Operators Participating in the CRP8Geographic Dispersion of Whole-Farm Enrollees13CRP Rental Payments and Absentee Landowners15Environmental and Scenic Impacts of the CRP18
Rural Economic Trends Following CRP's Implementation26Population and Employment29Farm-Related Businesses37Beginning Farmers38Summary and Caveats43
Land-Use and Economic Implications of ExpiringCRP Contracts45Land-Use Decisions46Recreational Spending51Revenue Impacts Associated With Land-Use Changes52Modeling Economywide Impacts55Regional Economic Impacts57Rural-Urban Impacts63Summary and Caveats64
Conclusions
References
Appendix A: Modeling Rural County Socioeconomic Change 78 Beginning Farmer Model 83
Appendix B: Predicting Land-Use Changes85A Binomial Probit Model86Data87County-Level Estimates of Annual Net Returns89Empirical Results91
Appendix C: Description of the Recreation Models96The Trips-Based Method96The Receipts-Based Method98
Appendix D: U.S. Regional Agricultural Sector Model 100
Appendix E: The Social Accounting Matrix (SAM)Multiplier Framework102The SAM Multiplier Model104Modeling Urban-Rural Differences106

Summary

By retiring over 34 million acres of cropland since 1986, the Conservation Reserve Program (CRP) has substantially reduced soil erosion, enhanced wildlife populations, and protected soil quality. But, despite its considerable environmental and farm sector benefits, concerns continue that the program may adversely affect nearby communities as farmland is retired and demand for farm inputs and agricultural marketing services declines. This report examines the economic trends accompanying changes in CRP enrollment and finds that, in aggregate, the adverse economic impacts of the CRP are generally small and fade over time.

High CRP enrollment was associated with a net loss of jobs in some rural counties between 1986 and 1992, but this relationship did not persist throughout the 1990s. Farm-related businesses, such as input suppliers and grain elevators, continued contracting throughout the 1990s, but other business expansions moderated the CRP's impact on total employment. In particular, the CRP may be responsible for as much as \$300 million dollars per year in increased outdoor recreational expenditures in rural areas.

We found no statistically significant evidence to support the commonly held belief that CRP encourages rural outmigration. Once county characteristics, such as population density, economic base, and distance to urban centers, are taken into account, post-1985 population trends in rural counties are largely unaffected by CRP enrollment. In addition, high levels of CRP enrollment appear not to have affected beginning farm trends (although whole-farm enrollment was negatively related with beginning farmer trends and partial-farm enrollment was positively related). Nor does CRP participation seem to encourage absentee ownership.

In aggregate, the economies of rural counties, even those experiencing longterm population and employment declines, were able to adjust to CRPinduced shifts in demand. But what would happen if CRP enrollments were reduced or eliminated now that the program has been in operation for nearly two decades? Supplementing this retrospective analysis, economywide impacts of allowing CRP contracts to expire were also estimated. Based on market conditions prevalent in 2000, we estimate that only about half of the land enrolled in CRP would have immediately returned to crop production if CRP contracts had expired in 2001. The remainder would have gone into pasture or stayed in conservation uses. Land brought back into production would increase demand for farm-related goods and services (farm inputs, labor, marketing and transportation services, etc.), leading to job growth in these industries. But reduced outdoor recreational spending would lead to job losses in other industries. And, as income is redistributed away from farm households to other sectors of the economy, shifting demand for consumer goods and services could lead to other job changes as well.

Nationally, the economic effects of allowing CRP land to return to production would be very small, with positive and negative effects within particular industries and regions largely canceling each other out. But, the potential effects could be noticeable in areas of the country where CRP enrollment is relatively high. CRP's impact on local economies is sensitive to local conditions. The value of alternative uses of CRP land, the value of the environmental benefits attributable to land retirement, and the extent to which goods and services are produced and provided locally all affect the CRP's local economic impacts. While regional output and jobs are estimated to increase at least slightly, this is largely due to changes in the farm sector. Nonfarm output and employment would decline in some regions if CRP contracts expired, as would aggregate household income.