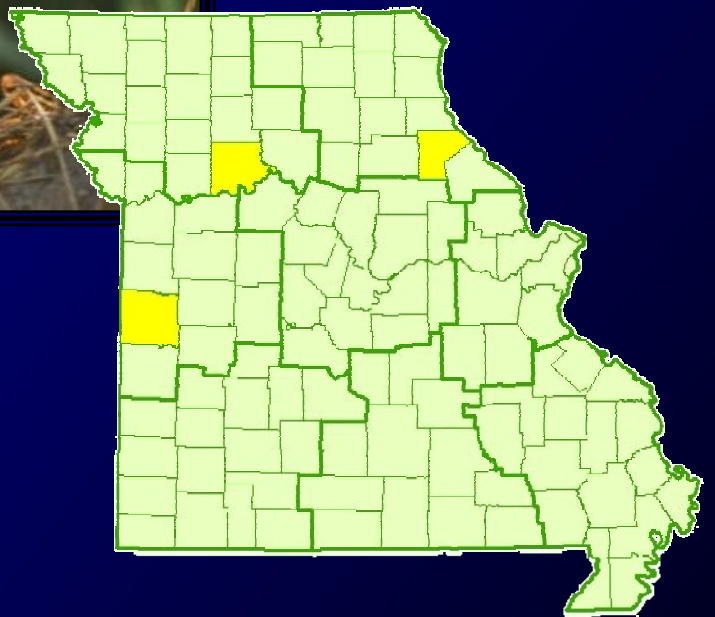




MDC Resource Science

A Farm-level Economic Analysis of Wildlife Habitat Buffers in Missouri



Science Notes

A Farm-level Economic Analysis of Wildlife Habitat Buffers in Missouri

By Lonny Boring



Summary

The Missouri Department of Conservation teamed with the Food and Agricultural Policy Research Institute (FAPRI) at the University of Missouri to complete a farm-level economic analysis of participation in CP-33, Habitat Buffers for Upland Birds. CP-33 establishes buffers around the edges of existing crop fields to provide cover and food for bobwhite quail and other upland birds. Missouri has 32,500 acres eligible for CP-33 allocation. The study was conducted using FAPRI's well established representative farm analysis. The approach used real world yields, prices, operational costs, and soil rental rates within a sophisticated computer model. Farm-level economics were modeled over 10-years, and projections of future commodity prices and operational costs were incorporated and validated by participating farmers.

For this study, five cooperative farmers in Carroll County served as panelists for a representative farm. Panelists participate in the CP-33 practice. Characteristics of the Carroll County representative farm, as well as modeled farms in Ralls and Bates counties, are shown in Table 1.

	Carroll	Ralls	Bates
Total CP-33 acres enrolled	10	20	20
General CRP acres	200	0	0
Cropped acres	500	1460	1400
Planted acres	568	1516	1740
Corn acres	216	584	530
Soybean acres	216	745	530
Wheat acres	68	131	340
Double-cropped acres	68	56	340
2006 farm corn yield, bu	145	125	120
2006 farm soybean yield, bu	43	42	36
2006 farm wheat yield, bu	58	68	60
2006 DC bean yield, bu	20	16	24
Beef Cows, number	0	80	150
Forage acres	0	400	440

Table 1.

Results indicated that participation in CP-33 pays off in all the representative farm scenarios tested. The average increase in returns to family living ranged from 25 cents to \$2.49 per acre per year, Figure 1. Government payments plus lower operating expenses exceed declines in market receipts and produced positive returns to family living over the 10-years modeled. Comparison of average annual returns to family living on a per acre basis is shown in Figure 2.

The management alternative of complete tree removal, or fencerow-to-fencerow farming, was also analyzed for the Carroll county farm. Higher returns to family living were

produced from CP-33 participation than the tree removal option.

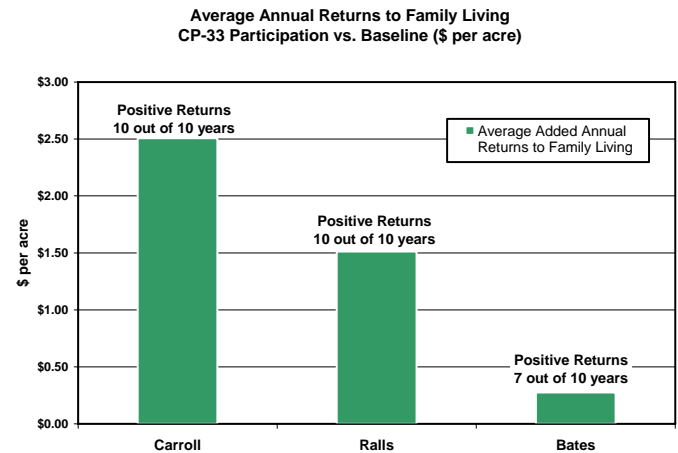


Figure 1.

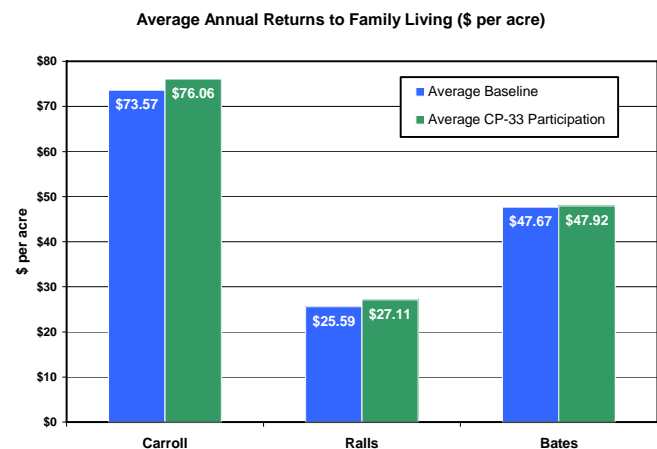


Figure 2.

Yields, commodity prices, operating costs, and soil rental rates were important factors affecting study results. Although net benefits were small and variable across farms, most producers should receive a positive economic return to idle acres by participating in CP-33 even with strong commodity prices in the future. Wildlife populations will be afforded improved habitat, and wildlife enthusiasts will benefit from more quail and songbirds.

For more information visit: www.fapri.missouri.edu.

For more information contact:

Missouri Department of Conservation
 Agricultural Systems Field Station
 3500 S. Baltimore Street
 Kirksville, MO 63501
 (660) 785-2424 Ext 256
Lonny.Boring@mdc.mo.gov

Keywords: CP-33, Habitat Buffers, Wildlife Habitat Economics, Farm-level Economics