

Conclusions

The links between soil productivity and environmental damages from crop cultivation have important implications for policies that influence land use. The evidence indicates that lands of low agricultural quality are more likely to move into and out of intensive agricultural uses and are also more sensitive environmentally based on some indicators of erosion, nutrient losses to water, and proximity to imperiled species. This suggests that policies that increase incentives for crop cultivation and thereby stimulate production on economically marginal land will have production effects that are smaller—and environmental impacts that are greater—than would be expected if these characteristics of the affected lands were not accounted for. Conversely, environmental benefits could be achieved at lower cost using targeted conservation programs because owners of low-quality and environmentally sensitive land require less payment to remove land from production than owners of higher quality land.

Our findings on the land-use and environmental impacts of crop insurance subsidies and of the Conservation Reserve Program (CRP) are consistent with the view that government farm programs disproportionately affect land use in areas that are less productive and more environmentally sensitive in some ways than other croplands. But we find that the lands affected by the change in crop insurance subsidies and by the CRP differ from each other and other croplands shifting in and out of production. While government policies that alter the incentives for crop cultivation are more likely to influence land use on economically marginal croplands, the subset of lands affected depends on the incentive structure of each program. Which lands are affected determines the size and types of environmental impacts. Identifying the lands changing use due to specific policy incentives could help improve the effectiveness of future farm programs.