



Report on Research

College of Agricultural, Consumer and Environmental Sciences

Conservation Programs Needs Changes

An Illinois program that targets environmentally sensitive cropland in the Illinois River basin needs some fundamental changes to effectively meet its goals, according to a researcher in the University of Illinois Department of Agricultural and Consumer Economics.

“The Illinois Conservation Reserve Enhancement Program (CREP) was established to achieve numerically defined environmental benefits by restricting the definition of regions eligible for the program,” explained Madhu Khanna, a professor of agricultural and consumer economics.

“However, it lacks any mechanism for selectively enrolling eligible land to ensure that land parcels with higher environmental-benefits-to-opportunity-cost ratios will be enrolled in the program or that program goals will be achieved.”

As administered, CREP allows a land parcel to be enrolled on a first-come, first-served basis at the maximum soil rental rate for that parcel.

Established in 1996 as a program within the Conservation Reserve Program (CRP), CREP allows land to be included for an extended period of 15 or 35 years or permanently. Illinois has the largest CREP in the country, with 132,000 acres enrolled between 1998 and 2001, Khanna noted.

A study of the Illinois CREP reveals it could do a better job in meeting its mandate. Khanna studied the performance of land parcels enrolled in the CREP in two Illinois watersheds in terms of reducing off-site sediment loadings in bodies of water and the costs of retiring the parcels from crop production.

“Analysis of this system shows that geographical limitations on eligibility, without any competitive mechanism for selecting among eligible land parcels, do not guarantee cost-effectiveness of the land-retirement program,” she said.

Illinois CREP targets land in the floodplain of the Illinois River basin, and to be eligible a parcel must be located either in the 100-year floodplains, in wetlands, or on sloping land adjacent to a riparian buffer.

Currently, the program seeks 85 percent of its parcels from the 100-year floodplains and 15 percent from the erodible lands next to a riparian buffer.

Khanna believes changes should start with the types of land targeted if greater success toward the program’s goal is to be achieved.

“The eligible region should be limited to a narrow buffer, with a width of about 900 feet, along all streams and tributaries of the Illinois River Basin and not restricted to the 100-year floodplain,” she said.



“Another improvement would involve modifying selection criteria so that land parcels that are closer to a water body, more sloping, more erodible, and less productive would be enrolled in the program. To provide incentives for such land parcels to enroll in CREP, rental payments should be designed to vary across land parcels based on these observable on-site characteristics of the land parcel.

Observable characteristics of land parcels, she noted, can play an important role in determining rental payments to target cost-effective enrollment and can typically be determined by program administrators using easily available information about land parcels.

“Enrolling land parcels based on these observable characteristics would increase sediment-abatement benefits to opportunity cost ratio and lead to the achievement of CREP’s sediment abatement goal with enrollment of fewer acres and lower overall costs in the form of rental payments,” she said.

The study examined the performance of CREP with regards to its sediment-abatement objectives only and did not consider the program’s other aims in terms of wildlife habitat or wetland preservation.

“Still, incorporating these goals would not change the main arguments the study produced,” she said. “First, we need to design a mechanism to select parcels for enrollment to cost-effectively achieve CREP’s goals. Second, incentives need to be created to target those land parcels that could contribute most effectively to meeting CREP’s goals.”