

ECONOMIC VALUATION OF POTENTIAL ECOSYSTEM BENEFITS FROM CRAWFISH POND HABITAT IN COASTAL LOUISIANA

*John V. Westra, Center for Natural Resource Economics and Policy, LSU
Jay V. Huner, Crawfish Research Station, University of Louisiana at Lafayette
Rex H. Caffey, Center for Natural Resource Economics and Policy, LSU*

KEYWORDS: agricultural wetlands, habitat, rice, crawfish, waterbirds, valuation

In coastal Louisiana, one traditional cropping system used by hundreds of farmers involves rotating rice production with crawfish farming. This working agricultural wetland system provides shallow water habitat for much of the year in areas adjacent to natural wetlands. Thus, over 260,000 hectares (ha) of such land in coastal Louisiana provide nesting, wintering and breeding habitat for 100 species of waterbirds when this land is flooded for rice and crawfish production. These working wetlands have become critical waterbird habitat in the coastal region of Louisiana in the last century, particularly due to the loss of 600,000 ha of adjacent coastal wetlands.

The area dedicated to rice and crawfish production in Louisiana has declined in recent years. Despite steady yields, the area planted to rice has been declined due to lower prices for rice and increasingly higher input costs (fuel and fertilizer). More recently, damage associated with recent hurricanes (saltwater intrusion and debris deposition), have exacerbated the economic problems rice farmers face. Meanwhile, the area in crawfish production has stabilized after a prolonged decline. Revenue from crawfish production has helped to keep many rice operations in business, despite economic problems associated with crawfish production (low prices and increasing costs) and competing crawfish products imported from China.

The long-run economic situation facing Louisiana's rice industry is pessimistic. Without additional financial assistance, it is possible that as much as 35% of these working wetlands and associated waterbird habitat may be lost in the near future. The level of financial support available to rice and crawfish farmers under the Conservation Provisions of recent Farm Bills is \$250-500 per hectare. On the other hand, producers incur economic costs of \$500-750 per hectare, from increased irrigation pumping cost for providing environmental benefits from these working wetlands. However, research findings for the estimated value of the environmental services associated with these working wetlands range from \$750 to \$1,000 per hectare. Thus, there is evidence that the economic value of environmental benefits to society exceed the private costs farmers incur when providing them. If the potential conservation payments producers received for providing environmental services from agricultural wetlands increased to offset the private expenses for maintaining seasonal working wetlands, then such conservation program payments may stem this potential habitat loss and help provide the environmental benefits society values. In this way, producers can provide multiple benefits to society.

John V. Westra
Center for Natural Resource Economics and Policy (CNREP)
Department of Agricultural Economics and Agribusiness
Louisiana State University
101 Ag Admin Building
Baton Rouge LA 70803
225-578-2721
jwestra@lsu.edu