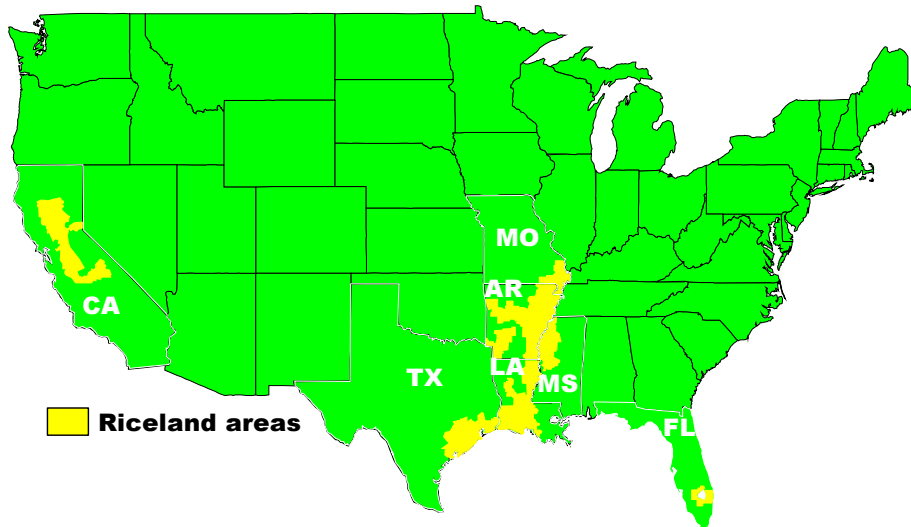


Research in Rice Fields

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Between 1987 and 1999, 2.4-3 million acres of rice were planted annually nationwide.

Rice fields are a major component of the contemporary landscapes in the Gulf Coastal Plain, the Mississippi Alluvial Valley, and Central Valley of California.

In 1998, approximately 600,000 acres of rice were planted in Louisiana.

In the Louisiana plant commodities report for 1998, total value for rice was over \$350 million; sugarcane was the only plant commodity that exceeded this value.

Louisiana has over 2,000 rice farmers supporting over 12,000 jobs in the state.

Rice fields in the United States receive high use by wildlife, especially shorebirds, wading birds, and waterfowl. Waterbirds use rice fields for food, shelter, and breeding habitat.

In Louisiana and California, where rice acreage equals or exceeds that of freshwater marsh, harvested rice fields receive high use by feeding and resting waterbirds in winter and during spring and fall migration.

Changes in the distribution and abundance of wading birds in Louisiana since the 1980's are associated with expansion of crayfish aquaculture, which is commonly practiced in rotation with rice.

Waterbirds are showing preference to agricultural fields of the Gulf Coastal Plain for several reasons: these fields are close to naturally occurring coastal marshes, they are located near the Mississippi and Central migratory bird flyways, and they are often wet because the region receives high rainfall.

Management of rice fields for wildlife has been promoted by farmers' groups, agricultural extension services, state and federal wildlife agencies, representatives of the rice industry, and private conservation organizations.

The "mini-refuge" program sponsored by the U.S. Fish and Wildlife Service through the Gulf Coast Joint Venture of the North American Waterfowl Management Plan is one of many programs focused on providing habitat in winter for waterbirds; since 1988, about 20,000 acres of private rice fields have been leased annually in southwestern Louisiana as mini-refuges.



Agricultural practices, especially those conducted under flooded conditions such as seeding and water levelling, contribute to high waterbird use.



At least 70 species of waterbirds use ricefields in the Gulf Coastal Plain.

Local and national rice grower federations have begun programs to promote wildlife use of rice fields. Two significant efforts are Operation Quackback (Louisiana) and the larger scale Rice Producers National Waterfowl Habitat Program. The goal of the rice producers is to flood more than 1 million acres (400,000 ha) of rice fields for wintering waterfowl.

Researchers from the National Wetlands Research Center as well as state universities are providing technical assistance to

these programs at meetings, workshops, and rice field days.

Researchers at NWRC have found that ducks nesting in southwest Louisiana consume only limited amounts of rice. Indeed, the research shows that use of rice fields by ducks may actually benefit farmers because the ducks eat seeds of undesirable plants; this could possibly reduce the need for costly herbicide treatments.

How farmers plant their rice may affect visiting wildlife. If more farmers resort to

dry seeding because of regulations mandated by the Clean Water Act, fields once flooded in the spring will be dry and not be available for migrating birds and may have reduced value for breeding birds.

Rice industry representatives, regional wildlife managers, and agricultural and wildlife researchers agree that the following research concerning rice fields and wildlife is needed:

- better information on costs and benefits of various management practices (e.g., winter flooding),
- significance of habitat for shorebird migration,
- and assessment of what influences use of rice fields.

Consequently, to better understand waterbird use of rice fields in the Gulf Coastal Plain, and to provide baseline data for continuing studies, NWRC researchers performed several surveys. They have documented use by waterbirds in fields with various management practices during the post-harvest and nongrowing seasons. Surveys indicated high use of rice fields by over 70 species of wintering and migrating waterfowl, shorebirds, and wading birds during fall, winter, and spring.

Additional research at NWRC is currently focusing on which rice field management practices are most conducive to waterbird use. Future research will focus on food availability and waterbird use of foods in rice fields.