

In the past, little value was seen in preserving the swamps, bogs and marshes that prevented realtors from developing land into lucrative real estate. The murky, muddy environment of wetlands was simply undeveloped property yet to be profited from. This resulted in the destruction of hundreds of acres of wetlands habitats. It is estimated that 53% of wetlands in the continental U.S. were lost since the late 1700s. Only recently has the true importance of wetlands been acknowledged. They provide shelter for hundreds of types of migratory waterfowl, clean and preserve the inland water supply, and are an integral part of the carbon and water cycles. Therefore, the preservation and maintenance of wetlands is of significant ecological and economic importance. However, past destruction of wetlands has left a considerable amount of wildlife without a habitat. Consequently, the U.S. Rice Industry has taken measures to support the protection of wildlife and is using progressive farming techniques to promote environmental protection.

The conservation of wetlands is of prime importance for the preservation of many species of wildlife. Wetlands are the only environment capable of adequately supporting many species that have recently been on the verge of extinction. The amount of natural wetland habitats remaining is no longer sufficient to provide enough food to maintain healthy waterfowl populations. Because original wetlands in the United States have vanished, American rice farmers are using rice fields as wetlands habitats for migrating birds. Rice growers combined forces with government agencies and conservation groups to farm in a way that supplies food and shelter for wetlands dependent species. However, with the gradual loss of wetlands, wildlife has become increasingly dependent on agricultural lands for food and shelter. Because of the lack of natural wetlands, the agricultural wetlands created by the United States rice industry have provided an

important substitute for the extensive loss of natural wetland habitats. The efforts of American rice farmers serve as a national model for agriculture – not only in working with environmentalists to sustain the ecosystem, but also to provide food for the world. In conjunction with taking measures to protect wetland wildlife, rice farmers are improving farming methods to raise efficiency. For instance, rice farmers are now researching ways to decompose rice straw while simultaneously helping waterfowl populations. Select farmers run cage rollers through fields after harvest to push rice straw into the soil and start a decomposition process. While wintering waterfowl forage for grain left in rice fields after harvest, feeding on the plants, insects and invertebrates found in the synthetic wetland habitat, they also trample the rice straw, helping it to decompose. Rice farmers also benefit from the natural fertilizer left behind in the droppings of these waterfowl. Rice prairies all over the United States annually host several million species of migrating birds and other wetland creatures.

In addition to its role as a habitat, American wetlands act as a balancing agent in our environment. They have a significant role in the global carbon and water cycles. Water evaporated from the seas or transpired from plants returns as rainfall filling both upland and lowland wetlands. Wetland systems, and their forested counterparts, slowly release their waters either to the atmosphere or to the sea, playing a major role in governing world climate. With the flow of water arrives a steady input of nutrients from the surrounding land - the organic silts and sediments settle and, warmed by the sun, provide ideal conditions for the growth of microscopic plants and animals - the base of aquatic food chains. In fact, a well established marsh is estimated to be up to 50 times more productive than a similar area of grassland and about 8 times as productive as

cultivated land. Rice fields also complete this cycle, and thus are an ideal substitute for the dwindling wetlands. With respect to the carbon cycle, reformed practices of the United State's rice farmers have benefited the environment. Wetlands are a well documented source of carbon storage. By storing carbon in the depths of a wetland, the detrimental gases that contribute to the greenhouse effect and o-zone layer destruction are contained. Reforms in rice farming practices, including restrictions on burning rice straw left over from harvest, has retained carbon in the wetlands and further helped the environment.

The ecological aspect of wetland preservation is matched with an equally persuasive economic aspect. The economic value of wetlands has only been recognized recently. It is proven that wetlands, popularly known as "nature's kidneys," improve water quality by filtering, diluting, and degrading toxic wastes, excess nutrients, sediments, and other pollutants. The Audubon Society estimates that inland wetlands in the U.S. provide water-quality protection worth at least 1.6 billion dollars per year. Rice fields work much in the same way as wetlands. Studies show that water flowing out of a flooded rice field is cleaner than when it is flowed in. The rice helps decompose agricultural pesticides and dissipates nutrients from fertilizers. So along with acting as a habitat for migrating birds, rice fields also act as a purifier of natural water sources.

An additional quality rice fields share with wetlands is its effectiveness in water control. Floodplain wetlands near rivers reduce flooding and erosion by absorbing storm water and releasing it slowly and by absorbing overflows from streams and lakes. Another Audubon Society estimates reveals that if the remaining wetlands in the U.S. were destroyed, additional flood control costs would be 7.7 to 31 billion dollars per year.

Inland wetlands also help replenish groundwater supplies, a primary water source for over 50% of the US population.

At the mention of a swamp, an image of a slimy green creature climbing from the depths of murky water may come to mind. However, wetlands contribute much more to society than an ideal setting for horror stories. And with the gradual decrease in the number of wetlands in the United States, rice fields have stepped up to fill the void in our environment. U.S. rice farmers are leaders in developing innovative farming practices that protect the environment. Several of the species that have adopted rice fields as their new habitat are known to breed in, or are in some way dependent on, rice culture habitats for successful reproduction. Rice fields have all the benefits of natural wetlands, as well as being a source of food for two-thirds of the world's population. So as the amount of rice fields grow, both humanity and the environment benefits.