

**California Wildlife Habitat Relationships System
California Department of Fish and Game
California Interagency Wildlife Task Group**

Rice

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Vegetation

Structure-- Rice and wild rice are flood irrigated crops that are seed producing annual grasses. Commercial rice generally is only a couple of feet tall, whereas, commercially grown wild rice may be six feet tall or taller. They are usually grown in leveed fields that are flooded much of the growing period, and dried out to mature and to facilitate harvesting. They usually produce 100 percent canopy closure as they mature. They are usually planted in spring and harvested in fall.

Composition-- The California Agriculture - Statistical Review 1990 (California Department of Food and Agriculture, 1991) reported that 385,000 acres of rice was grown in California in 1990. Wild rice was not reported by the Department of Food and Agriculture for 1990.

Other Classifications-- Most vegetation classification systems include rice in more general categories, such as, Agriculture (California Department of Fish and Game, 1966), Urban/Agriculture (Parker and Matayas, 1981).

Habitat Stages

Vegetation Changes-- Rice does not conform to normal habitat stages, however it is similar to seasonally flooded wetlands. Rice is an annual. Crop rotation systems are common with rice in California. They may be planted in rotation with other irrigated crops and especially winter wheat or barley. Winter wheat or barley may be planted in the fall, dry farmed, and then harvested the following spring. This is often done for weed control, drying of the soil and to control rice root diseases. Some acres may be fallowed or placed in set-aside programs for a year or more; sometimes planted to legumes such as vetches which fix nitrogen in the soil.

Duration of Stages-- Rice is an annual, usually planted in the spring and harvested in the fall.

Biological Setting

Habitat-- Rice occurs in association with other croplands in the Central Valley of California and other wildlife habitats such as riparian, and wetlands. Wild rice is grown similarly in the Central Valley, but also is grown in northern California where it may occur near annual grassland, riparian, wetland, and brushland habitat types.

Wildlife Considerations-- Rice is grown usually in heavier clayey soils that hold water well. Many of these soils once supported natural wetlands which historically supported an abundance of wildlife, especially waterfowl and shorebirds. Although other croplands have greatly reduced the wildlife richness and diversity of California, rice has been more compatible. Many species of wildlife and especially waterfowl, shorebirds and wading birds have adapted to rice. Prior to establishing State and Federal wildlife refuges, waterfowl depredation of rice was extensive. That problem has been reduced; however, some species of waterfowl depend on waste rice that remains in the fields after harvesting. Pheasants have also benefited from rice, but pheasants have experienced recent population declines owing to changes in crop patterns and cultural practices for growing small grains. Changes include clean farming, double cropping, laser leveling and straight or "squared" levees as apposed to contour levees, and chemical control of rice diseases and pests rather than leaving land fallow in alternate years are examples of problems. Wildlife such as waterfowl, sandhill cranes, and other species that use waste grains after harvest are usually not discouraged. Rice fields flooded after harvest with waste grain and for waterfowl hunting serve as freshwater wetlands for a variety of associated wetland wildlife, including shorebirds, wading birds, and gulls.

Physical Setting

Rice is usually located on flat terrain. When flat terrain is put into rice production, it usually is leveled to facilitate irrigation. Rice can grow on poor quality soils, and rice and barley can do well on clay soils not suitable for other crops. Leaching or flushing can remove contaminants in areas of high salt or alkali levels, making the soils more productive. This has occurred in both the San Joaquin and Sacramento valleys.

Distribution

There were over 385,000 acres of rice grown in California in 1990. Wild rice is grown in the central valley along with other commercial rice. Wild rice is also grown in northern California, such as in Fall River Valley, where it is too cold for other commercial rice production.

Literature Cited

California Department of Fish and Game. 1966. California fish and wildlife plan.
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