

Herbicides

Herbicides are chemicals that kill or control undesirable plants. Herbicides can significantly alter the successional trajectory of an area. For example, they are regularly used to restore early successional habitats, such as the longleaf pine community. If fire is excluded from a pine forest, hardwood species (e.g., oaks and sweet gums) become established and shade out the native grasses. The resulting loss of herbaceous vegetation decreases the wildlife value of the habitat and reduces the ability of the forest to burn. An appropriate herbicide applied in conjunction with prescribed fire can restore the habitat.



Response of native grasses to herbicides and fire

Herbicides are often the only effective method for controlling invasive species, such as the Chinese tallow tree. Thousands of tallow trees have been killed on Spring Island by volunteers and staff members over the last decade. Without herbicides, cut tallow trees resprout from the stump and roots.

Aquatic herbicides are labeled specifically for use in and around wetlands. These herbicides are formulated so they are safe for fish and other aquatic organisms. In shallow ponds (< 3 feet), aquatic weeds are a problem because sunlight can reach the bottom of the pond basin.

Although aquatic vegetation is desirable for fishing quality and habitat, if left untreated, aquatic weeds can take over a pond and make fishing nearly impossible. In addition, excess aquatic vegetation can cause the depletion of dissolved oxygen when they die. We also use aquatic herbicides to keep trees and woody shrubs from growing on pond dikes.



Spring Island members herbicide tallow trees

Herbicides can be applied using different techniques. For small plants, the most effective method is foliar (i.e., leaves) spraying. This typically is done when the leaves are actively growing. Using a sprayer mounted on a tractor or ATV, a lot of acreage can be covered using this method. For large trees, the hack-and-squirt method is used, a technique where an axe is used to hack into the bark and herbicide is sprayed into the cut.

We always are concerned about the potential toxic effects of pesticides on nontarget species (both plants and animals). The herbicides that are commonly used on Spring Island do not affect the physiology of animals when applied at normal rates.

Herbicides can be expensive, but if used properly, they are a cost-effective tool that can have long-term positive effects on the habitat.