

LANDOWNERS FOR WILDLIFE



Moist-soil Management

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Properly managed moist-soil impoundments regularly attract a diversity of wetland wildlife. Migrating and wintering waterfowl in particular are attracted by an abundance of carbohydrate-rich seeds, roots and tubers, as well as protein-rich invertebrates produced in these impoundments. These areas can also provide excellent brood habitat for resident waterfowl, particularly the wood duck. This concentration of wildlife has the potential to provide numerous outdoor recreational opportunities, including waterfowl hunting, bird watching and photography.

Simply stated, moist-soil management involves controlling water levels in an area to encourage the growth of beneficial native vegetation adapted to saturated soil conditions. Prolific seed producing annual vegetation, such as sprangletop and wild millet, is most often desired. Successful moist-soil impoundments usually have a few things in common, including low permeability soils, reliable levees and water control structures, a dependable water source, and relatively flat terrain to disperse water evenly over the area.

Soil disturbance, timing, duration of flooding, and dewatering greatly influence the plant community in an impoundment. Moist-soil management should not follow strict guidelines based on calendar dates. It should be adaptive and dependent upon objectives, local environmental conditions, previous vegetation responses, and present plant communities. Managers are encouraged to maintain a log of environmental conditions, management performed, and plant and wildlife responses within impoundments for future reference. The following information is a basic schedule of generalized moist-soil management activities.



DRAWDOWNS, DISTURBANCE & FLOODING

Drawdowns (dewatering) should occur in the spring and summer in Louisiana. Early (first 45 days of the growing season), mid or late season drawdowns depend on location, objectives, environmental conditions, desired vegetative response, and current stage of plant succession. Slow drawdowns over a period of two to six weeks prevent the soil from drying too quickly and maximize annual plant diversity. Conversely, fast drawdowns over one to three days typically result in similar vegetation throughout the impoundment. Soil moisture must be maintained during the growing season. Shallow flooding may be necessary during dry periods to stimulate moist-soil plants and set back undesirable plants. Moist-soil plants can tolerate flooding up to two-thirds their height.

Annual vegetation dominates early succession habitat. To remove less-desirable perennial vegetation and encourage annuals, succession should be set back every three years. This is achieved through site disturbance (mowing, disking, burning) in the spring or year-round flooding, although disking is the most common method. The soil must be dry enough to support machinery for disking and the impoundment should be smoothed and re-flooded after disking to prevent undesired vegetation from becoming established.

Fall flooding of impoundments should start during September and October. Flooding should not occur until plants have germinated and grown over 6 inches tall. Slow, continuous watering allows for maximum wildlife use. Water levels can be manipulated to cater to different bird groups, such as waterfowl, wading birds or shorebirds. In general, dabbling ducks utilize water depths between 4 and 10 inches, wading birds prefer depths of 3 to 5 inches, and shorebirds utilize depths less than 3 inches. Open water containing submerged aquatic vegetation interspersed with emergent and floating aquatic vegetation will attract a diversity of wildlife.



CONTROLLING UNDESIRABLE VEGETATION

Plants such as cocklebur and coffeebean are typical early, very undesirable invaders to moist-soil impoundments. Undesirable woody vegetation may include black willow, water elm, ashes and Chinese tallowtrees, as these species can form dense colonies reducing herbaceous growth. Unwanted vegetation not only provides little wildlife value, but it can degrade the habitat by out-competing high-quality moist-soil vegetation.

The most important aspect of controlling undesirable vegetation is performing routine inspections of the vegetative communities in an impoundment to identify and control any unwanted vegetation in a timely manner. Control techniques for these invasive species are similar to those used to promote moist-soil vegetation, typically incorporating site disturbance and/or water level manipulation.

Undesirable herbaceous vegetation is controlled by shallow flooding once the desired plants are established. Woody vegetation can be controlled with deep flooding, but setting back succession through mowing, disking or burning is generally most successful and practical. Chemical control is another alternative for controlling undesirable vegetation.



PLANTING & BAITING REGULATIONS

Promoting diverse native vegetation is the goal of moist-soil management. Planting a crop should not be necessary if the impoundment is properly managed. However, if a crop is planted with the intentions of hunting waterfowl over it, be sure to contact the U.S. Fish and Wildlife Service or visit www.fws.gov for information on waterfowl baiting regulations.



TARGET SPECIES FOR MOIST-SOIL IMPOUNDMENTS IN THE SOUTHEAST



WILD MILLETS
(*Echinochloa spp.*)



FLATSEDGES
(*Cyperus spp.*)



SPRANGLETOP
(*Leptochloa spp.*) &
PANIC GRASSES
(*Panicum spp.*)



SMARTWEEDS
(*Polygonum spp.*)

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