NRCS Natural Resources Conservation Service
MISSISSIPPI

FLOODED FOOD PLOTS FOR WILDLIFE

MS-ECS-646-02 (JS)
Rev. September 2011

Purpose:
Agricultural plantings are often established for wildlife use. These plantings are commonly referred to as food plots. Food plots can be established in seasonally floodable impoundments for waterfowl and other wetland wildlife. Because these food plots are normally established for waterfowl, this job sheet addresses waterfowl. However, other wetland wildlife species will benefit.

Management:
Water should be held in impoundments until 2 weeks prior to planting date of planned crop. This will help provide weed control and also prolong wildlife use of habitat. After drainage, seedbed preparation can begin when area has dried enough for equipment use, generally 14 days or longer.

Common agricultural plantings used by waterfowl are corn, milo, Japanese millet, browntop millet, and rice. Soybeans should not be planted because they deteriorate rapidly when flooded (Table 1) and contain an enzyme that inhibits protein digestion. Suggested broadcast planting rates and times are:

Japanese millet	20 lbs/ac.	May-July	Browntop millet	20 lbs/ac.	May-July
Milo	15 lbs/ac.	April-June	Corn	20 lbs/ac.	March-April
Proso millet	20 lbs/ac.	May-July	Wheat	90 lbs/ac.	September
Rice*	120 lbs/ac.	April-June			

*Rice should only be planted where irrigation is possible.

Fertilizer and lime should be applied according to soil test recommendations.

Do not use herbicides or cultivation unless there is excessive weed competition. Native weeds and grasses often benefit wildlife by producing more seed and providing higher protein levels (see “Moist-soil Management for Wildlife”, MS-ECS-646-01 (JS)). If species such as sesbania, cocklebur or other undesirable broadleafs become a serious competition problem, spot treat with approved herbicide, mowing, or disking. Contact local Extension office for herbicide recommendations. When irrigation is possible, rice should be flooded 3-4 inches deep after plants reach 6 inches (3-4 weeks). Also, Japanese millet can be shallowly flooded, not inundated, after establishment. Shallow flooding of these plants will provide good weed control.

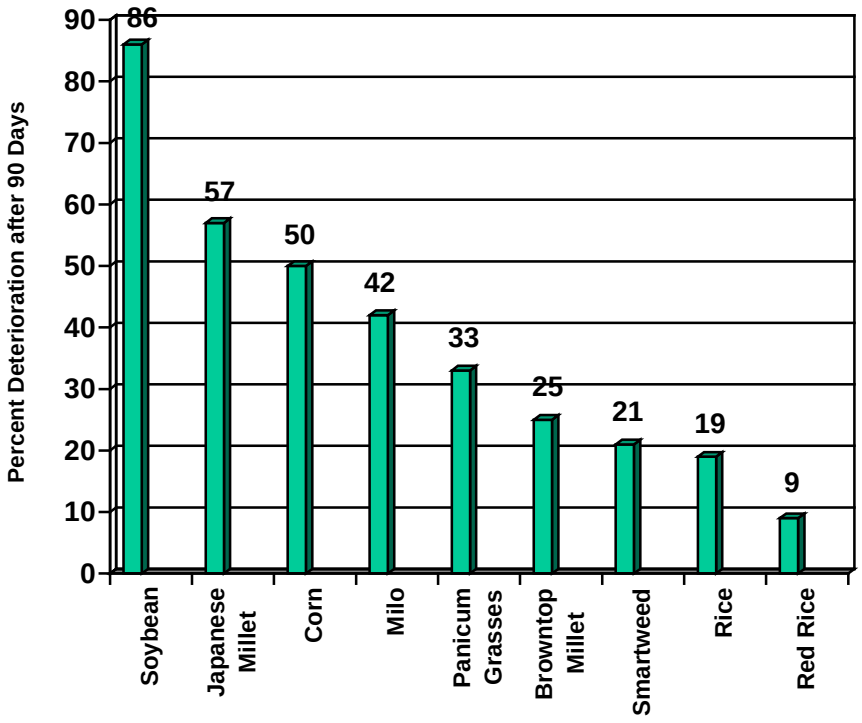
Impoundments should be gradually flooded to provide waterfowl access. If grain is mature, shallowly flood 10-25 percent of the area between August 15 and September 15. Rice and Japanese millet can be flooded. Slowly flood remainder of impoundment between October 15 and December 15. If multiple impoundments are being managed for waterfowl, an impoundment can be reserved and flooded between December 1 and January 1 to provide continued food.

Requirements:
- Impoundments must have a water control structure to facilitate draining for planting and subsequent reflooding.
- Current migratory game bird hunting regulations allow hunting of waterfowl over standing crops, flooded standing crops, and harvested croplands. These crops may not be manipulated except by normal agricultural practices used to produce and harvest the crop. Grain inadvertently scattered by entering and leaving the field, placing decoys, or retrieving birds is not considered baiting. Japanese millet can readily reseed in subsequent years and can be manipulated when naturally reseeded, but not during the establishment year. **Check with the U.S. Fish and Wildlife Service and Mississippi Department of Wildlife, Fisheries, and Parks for current hunting and baiting regulations.**
- Currently food plots established on Conservation Reserve Program and Wetland Reserve Program lands cannot exceed 5% of the total contract acreage and cannot be harvested. Individual food plots on Conservation Reserve Program lands cannot exceed 5 acres. Future changes in USDA program policies and procedures may restrict or supercede information in this job sheet. Therefore, check with the appropriate USDA agency for guidelines pertaining to lands under USDA programs.

Considerations:

- When managing impoundments for waterfowl, agricultural food plots should not be the only food provided. Research suggests agricultural crops do not contain enough protein or amino acids to provide a complete diet for waterfowl. Food plots should be mixed with moist-soil management in order to provide maximum wildlife benefits (see "Moist-soil Management for Wildlife", MS-ECS-646-01 (JS)).
- In order to provide optimal benefits, linear food plots can be established around moist-soil impoundment fringes where drying occurs first. Japanese millet and rice can be hand seeded into wet areas.
- Moist-soil plants commonly last longer when flooded than do agricultural crops (Table 1). Longevity of seed when flooded should be considered when planting agricultural crops.
- Maturation time of crop should be considered when determining crop and planting time. Maturity for Japanese millet = 90 days, browntop millet = 60 days, milo = 100 days, corn = 120 days, proso millet = 70 days, rice = 115-140 days depending on variety.
- Wheat can be planted in September and flooded when plants are about 6 inches tall. This provides excellent food for white-fronted and Canada geese and widgeon.
- Millets, especially Japanese, will commonly reestablish in subsequent years. If plants do reseed, they are considered naturalized and can be manipulated for wildlife.

Table 1



Percent deterioration of selected agricultural crop and native plant seeds submerged for 90 days;
from Neely 1956, Nelms and Twedt 1996.