

COOL SEASON GRASSES

PRACTICE IMPLEMENTATION AND MAINTENANCE



Natural
Resources
Conservation
Service

Maryland



Allegany	301-777-1494
Anne Arundel	410-571-6757
Baltimore	410-666-1188
Calvert	410-535-1521
Caroline	410-479-1202
Carroll	410-848-6696
Cecil	410-398-4411
Charles	301-934-9588
Dorchester	410-228-5640
Frederick	301-695-2803
Garrett	301-334-6950
Harford	410-838-6181
Howard	410-465-3180
Kent	410-778-5353
Montgomery	301-590-2855
Prince George's	301-574-5162
Queen Anne's	410-758-1380
Somerset	410-651-0370
St. Mary's	301-475-8402
Talbot	410-822-1344
Washington	301-797-6820
Wicomico	410-546-4777
Worcester	410-632-5439

Cool season grasses (CSG) may be established to reduce soil erosion and sedimentation, improve water quality, or to provide wildlife habitat. "Cool season" grasses are plants which grow best in the spring and fall when soil and air temperatures are cooler. They generally go dormant in mid-summer. Tall fescue, red fescue, orchardgrass, bluegrass, and timothy are examples of commonly planted cool season grasses.

PRE-PLANTING

Weeds should be controlled prior to planting. A herbicide application is preferred to tillage immediately prior to planting. If tillage is used for weed control, the field should be reworked at least two weeks prior to planting to prepare a firm seedbed. Refer to the Establishment Schedule for specific information on weed control. Maryland state laws require the control of noxious weeds on your property. Contact the Maryland Department of Agriculture Weed Control Section at 410-841-5871 for more information.

Herbicide carryover can pose a threat to new plantings. Herbicides such as Basagran, Blazer, Classic, Poast, Plateau and Roundup have low persistence and generally do not pose a risk for carryover. Herbicides such as Atrazine, Preview, Canopy, Lorox Plus, Command, Scepter and Treflan have medium to high persistence and can pose a risk of carryover. The persistence of herbicides is directly affected by factors such as soil pH and moisture and should be assessed prior to planting. Contact the herbicide manufacturer for specific information on persistence. A soil test should be taken to determine fertilizer and lime needs.

PLANTING METHODS

No-tilling into a cover crop is the best method for establishment because it greatly reduces weed competition and prevents erosion. No-till establishment is recommended where erosion is a concern and on all sites where slopes are over 6%.

No-tilling into existing vegetation is effective on fallow fields and on existing sod if it is treated with an herbicide. In fallow fields, where weeds are over 2 feet tall, mow or brush hog prior to herbicide application.

Conventional tillage can be used on all sites that were tilled during the pre-planting year. As with all planting methods, weeds should be controlled prior to planting. Plant the seed in a firm seedbed. After planting, cultipack the field to cover at least 50% of the seed 1/4" deep. It is not necessary to cover all of the seed.

Broadcast seeding can be used when tillage equipment is not available or on very small areas where it is not feasible to operate equipment. Seed should only be broadcast onto a well prepared, firm, weed free seed bed. After broadcasting, the area should be packed down so that at least 50% of the seed is covered. Broadcast seeding is usually not very successful because it is difficult to get good seed to soil contact.

FERTILITY REQUIREMENTS

Applications of lime, phosphorus, and potassium should be based on soil test results. For mixes that include a legume, nitrogen should be applied at a rate of 15-20 lb/ac at planting. Never exceed 30 lb/ac because this will adversely affect root nodulation in the legumes. For grass or grass/forb mixes, apply 30-50 lb/ac of nitrogen at planting. After taking a soil test, follow the recommendations in the Soil Amendments Table.

POST ESTABLISHMENT MANAGEMENT

The stand should be well established in 1-2 years. If you are concerned with the condition of your stand, contact your District Conservationist for technical assistance. Periodic management will be needed in order to rejuvenate stands and suppress woody growth. Management practices include mowing and grazing. If wildlife habitat is a concern, avoid disturbance of the grasses during the primary nesting season (April 15 to August 15). To ensure that some food and cover is always available, management practices should only be applied to one third of the stand at a time.

MOWING - One third of the total stand should be mowed to a minimum height of 3-4 inches every 3 to 4 years. Plant litter can smother new growth and should be removed. Mowing is not an effective management treatment unless the litter is removed.

In order to allow a sufficient recovery period prior to dormancy, mowing should be done no later than four weeks prior to the last average killing frost for your area. Mowing can also be done after the first killing frost when plants are dormant.

GRAZING - Initial grazing should not begin until plants are 8-10 inches tall. Graze down to 3 inches and allow to regrow to 6-8 inches before the next grazing. The final grazing height should be around 4 inches to allow sufficient recovery prior to dormancy.

ESTABLISHMENT SCHEDULE FOR COOL SEASON GRASSES

PRE-PLANTING

- Assess herbicide carryover risk.
- Control weeds
- Take a soil test. Apply lime to adjust the pH according to the recommendations provided.

PLANTING YEAR

- Apply P and K according to recommendations based on your soil test results.
- Apply 15-20 lb/ac of nitrogen to grass/legume mixes. Apply 30-50 lb/ac of nitrogen to grass and grass/forb mixes.
- Mow to control weeds. Do not let weeds get above 12 inches tall. Mow to 4-6 inches or just above seedling height.
- Do not mow seedlings.

SECOND YEAR

- If weeds persist and comprise more than 25% of the field, treat with a selective herbicide.
- Continue mowing to control weeds. Mow to a height of about 6-8 inches.

THIRD YEAR and BEYOND

- The stand should be well established. Mowing or grazing may be needed every 3 - 4 years to rejuvenate the stand and suppress woody growth. For optimum wildlife habitat, do not mow during the nesting season (April 15 - August 15). Control noxious weeds as required by State Law.

SOIL AMENDMENTS							
FERTILIZER	Recommended lb/ac of Fertilizer						
	Soil Test Results		At Planting		*Maintenance		
	P ₂ O ₅	Very Low	80		80		
		Low	60 – 80		60		
		Medium	40-60		40		
High		20		None			
K ₂ O	Very Low	80 lb/K ₂ O/ac		80			
	Low	60-80		60			
	Medium	40-60		40			
	High	20		None			
N	No test	Mix w/legumes:	15-20	15-20			
		Mix wo/legumes:	30-50	30-50			
LIME	Recommended lb/ac of Lime (50% oxide minimum)						
	pH Test Results	Loamy Sand	Sandy Loam	Loam		Silt Loam & Silt Clay Loam	
				Coastal	Piedmont & Mountain	Coastal	Piedmont & Mountain
	6.0	1000	2000	2000	2000	2000	4000
	5.9	1000	2000	2000	3000	2000	4000
	5.8	1000	2000	3000	3000	3000	5000
	5.7	1000	2000	3000	4000	3000	6000
	5.6	2000	3000	3000	4000	4000	7000
	5.5	2000	3000	4000	5000	4000	7000
	5.4	2000	3000	4000	5000	4000	8000
	5.3	2000	4000	4000	6000	5000	9000
	5.2	3000	4000	5000	6000	5000	9000
	5.1	3000	4000	5000	7000	6000	9000**
	5.0	3000	5000	5000	7000	6000	9000**
4.9	3000	5000	6000	8000	6000	9000**	
4.8	4000	5000	6000	8000	7000	9000**	
4.7	4000	6000	7000	8000**	7000	9000**	

* Retest the soil every three years and follow the recommendations in the fertilizer maintenance column & lime section.

**Retest the soil within one year to determine if additional lime is needed.

PLANTING PLAN FOR COOL SEASON GRASSES

For: _____ **Primary Purpose:** _____
Tract Number: _____ **Erosion Control** **Soil Loss B/A:** _____
Recommended Planting Date: _____ **Water Quality**
Assisted By: _____ **Wildlife Habitat** **Targeted Species:** _____

Planting Area (Field #, Firebreak, etc.)	Acres		Species	Cultivar (if any)	lb/ac
	Y	N			
Nurse/Cover Crop	Y	N	Oats or Barley		20-40

NOTES _____

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.