

TECHNICAL NOTES

UNITED STATES DEPARTMENT OF AGRICULTURE
MAY 2008

NATURAL RESOURCES CONSERVATION SERVICE
ALEXANDRIA, LOUISIANA

PLANT MATERIALS TECHNICAL NOTE NO. 7

PLANT MATERIALS FOR FILTER STRIPS – CONSERVATION PRACTICE 393



DEFINITION

Filter strips (FS) are a type of conservation buffer used to intercept and trap nutrients, pesticides, sediments, and pollutants before they are allowed to reach streams or bodies of water. Grasses, legumes, forbs, shrubs and trees planted in various widths around and within fields can be used for vegetative filter strips.

PURPOSE

FS provide a buffer between contaminant sources such as cropland fields and bodies of

water. FS slow the velocity of water, allowing the settling out of suspended soil particles. FS provide a place for soluble pollutants to be taken up by plants. Other practices that are closely related to FS are contour buffer strips, field borders, grassed waterways, alley cropping and stream bank bioengineering.

PLANTING CONSIDERATIONS

- Identify what you are trying to accomplish. (nutrient uptake, sediment retention, etc.)
- Identify the season of use. (spring, summer, fall, winter, all year), this has an effect on whether cool season or warm season plants or a mix of both will give the best protection.
- Identify adapted plants that are available.
- Identify the type of land use (cropland or rangeland), this will have an effect on plant selection and management.

MANAGEMENT

Before establishment apply fertilizer and other soil amendments according to a soil test. Try to plant into a weed-free seedbed. Inspect FS periodically to insure unwanted weed do not become a problem. Mowing or grazing should be scheduled to encourage dense growth and to accommodate wildlife. Restoration may be required after the strip has accumulated so much sediment that it is no longer effective.

Specifications should be prepared in accordance with the local NRCS Field Office Technical Guide and the Filter Strip practice standard (393)



Helping People Help the Land

An Equal Opportunity Provider and Employer



Table 1. Species for Use in Filter Strips

<u>Species</u>	<u>Season of Use</u> <u>2/</u>	<u>Seeding Rate</u> <u>PLS LBS/ACRE</u>	<u>Uses</u> <u>1/</u>
Perennial Grasses			
*Bahigrass	W	15	1,2,4
*Bermudagrass	W	5	1,2,4
*Tall Fescue	C	20-30	1,2,4
Switchgrass	W	4-9	1,2,3,4
Indiangrass	W	7-10	1,2,3,4
Eastern Gamagrass	W	8-13	1,2,3,4
Big Bluestem	W	7-10	1,2,3,4
Little Bluestem	W	7-10	1,2,3,4
Virginia Wildrye	C	15-20	1,2,3,4
Canada Wildrye	C	15-20	1,2,3,4
Forbs/Legumes ^{3/}			
Partridge Pea	W	8-10	1,3
Maximilian Sunflower	W	1-2	1,3
Illinois Bundleflower	W	12-14	1,3,4
Black-eyed Susan	W	1-2	1,3,4
Plains Coreopsis	W	1-2	1,3,4
Purple Prairie Clover	W	1-2	1,3
White Prairie Clover	W	1-2	1,3
Companion Crop Species ^{4/}			
*Ryegrass	C	40	1,3,4
*Rye	C	70	1,3,4
*Oats	C	100	1,3,4
*Wheat	C	80	1,3,4
*Browntop Millet	W	40	1,3

* Denotes an introduced species, some may become invasive under certain conditions.

^{1/} Recommended Uses 1= Nutrient Uptake, 2= Sediment Retention, 3= Wildlife Utilization, 4= Traffic Tolerance

^{2/} W=Warm season C=Cool season.

^{3/} All legume seed shall be inoculated with the proper strain of Rhizobia bacteria.

^{4/} Companion crop species should only be used as a nurse crop in combination with perennial species and should not make up more than 25% of the total mixture

Additional information about Filter Strips Practice Standard 393 relating to additional species, varieties, adaptability, installation, and management of these plants can be obtained from your local Natural Resources Conservation Service Field Office.

Morris Houck
Plant Materials Specialist