NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD AND SPECIFICATIONS

CONSERVATION COVER

(Acre)
CODE 327

DEFINITION

Establishing and maintaining perennial vegetative cover to protect soil and water resources.

PURPOSES

This practice may be applied as part of a conservation management system to support one or more of the following:

* Reduce soil erosion and sedimentation.
* Improve water quality.
* Enhance wildlife habitat.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies on land to be retired from agricultural production requiring permanent protective cover and on other lands needing permanent protective cover. This practice does not apply to plantings for forage production or to critical area plantings.

CRITERIA

General Criteria Applicable to All Purposes

Grasses, forbs, legumes, and woody plants shall be handled and planted in a manner that will enhance survival of all species. When formulating mixtures, select species that are compatible according to Table 3 of this standard. Species and selected varieties will be suited for the planned purpose.

Species will be adapted to the soil and site conditions. Use Table 4 of this standard for a rating of grass and legume species based on Pasture Suitability Groups. Use Woodland Suitability Groups, Section II-(iii)-C and Conservation Tree / Shrub Suitability Groups, Section II-(iii)-I in the Field Office Technical Guide for recommendations on woody species.

Trees and shrubs will be established according to the TREE / SHRUB ESTABLISHMENT (612) and FOREST SITE PREPARATION (490) conservation practice standards.

Recommendations for the appropriate planting period will be based on the species availability, species characteristics, and site preparation needs.

Acceptable planting dates shall be used for grasses and legumes. Dates for planting are listed on Table 1 of this standard.

Seeding Rates

Seeding rates are based on the amount of seed necessary to provide vegetative cover in a reasonable amount of time. The base seeding rates in Table 2 of this standard are the minimum rates for planting a single species into a well prepared seedbed with good planting equipment. The base rates are decreased as a percentage of the desired stand when used in a mixture of two or more species. Any species listed in Table 2 and included in a mixture will comprise a minimum of 10 percent of the mix.

Calculate seeding rates per species on a pure live seed (PLS) basis using either the JS-AGRON-25

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version, contact the Natural Resources Conservation Service.

form or the automated version, Missouri SeedRate Program.

Rate Adjustments

The base rates will be used without adjustment when the seeding method used is likely to provide **good** seedling establishment due to: uniformly metering the seed; placing the seed at the desired depth (usually ¼ inch); and firming the soil around the seed to provide seed to soil contact. Refer to Table 2, Column 1 for the base seeding rates. Table 2, Columns 3 and 5 are the base rate adjustments when legumes are included in the mixture with cool-season grasses.

*Planting on a prepared seedbed with grain drills or planters that have a seed delivery system designed for and adequate to handle the types of seed being planted meets this definition. Air-flow fertilizer spreaders uniformly applying seed over bare soil or light residue (less than 20 percent ground cover) and no-till drills specifically designed to handle grass and legume seeds and constructed to cut a seed slot through the surface residue also meet this definition of **good** conditions for seed placement.*

Increase the base seeding rates when the seeding method used is likely to provide **fair** seedling establishment due to: a deficiency in seedbed preparation; poor seed metering; poor seed placement; or less than desirable seed to soil contact. Refer to Table 2, Column 2 for the adjusted base rate due to a **fair** condition. Table 2, Columns 4 and 6 also include this adjustment along with an increase in seeding rates when legumes are included in the mixture with cool-season grasses.

*Broadcast seeding methods such as all cyclone style spreaders or air-flow fertilizer spreaders used for seed distribution over heavier residues (equal to or exceeding 20 percent ground cover) and no-till plantings with grain drills not totally suited to plant the desired species meet this definition of **fair** conditions for seed placement.*

All broadcast seeding operations require rolling or culti-packing prior to and immediately after seeding.

When cool-season grasses are included in mixtures with legumes and planted at the same time, the cool-season grass seeding rates will be increased according to Table 2 of this standard. Use Table 2, Columns 3 and 4 for fall planted mixtures of grass with legumes and Columns 5 and 6 for all dormant season and spring planted mixtures of grass with legumes. Use Table 2, Columns 1 and 2 for planting mixtures or single species of legumes and mixtures or single species of grasses without legumes included.

Seed Quality

Only viable, high quality and adapted seed will be used. Seed must be clean and relatively free of weed seed and other contaminants. Seed that has become wet, moldy, or otherwise damaged in transit or storage is not acceptable. Certified seed is preferred.

Legume seed shall be inoculated with the proper, viable *Rhizobium* bacteria species prior to planting. Pre-inoculated seed shall be planted prior to the expiration date on the inoculum tag or be re-inoculated with the appropriate inoculum within 24 hours prior to seeding.

Seedbed Preparation

Site and seedbed preparation shall be sufficient for establishment and growth of the selected species. Provide a firm, weed-free seedbed that ensures seed will contact soil moisture uniformly, facilitates seedling emergence, and provides a medium that does not restrict root growth.

Adequate seedbed preparation following annual tilled crops will consist of:

1) Conventional Tillage: A seedbed may be prepared by moldboard plowing and secondary tillage to make a clean, firm seedbed. Roll or culti-pack immediately prior to seeding.

2) Conservation Tillage: Prepare a seedbed with a chisel, disk or other similar tool that will leave enough residue to provide erosion protection. Apply herbicides or tillage operations early enough to assure a kill of existing vegetation. Roll or culti-pack immediately prior to seeding.

3) No-Till into Crop Residue (includes Temporary Cover Crops): Select crop harvest equipment and methods conducive to no-till planting operations and successful establishment. Prescribed burning may be used when residue is excessive for the proper operation of no-till equipment or for proper seed placement on sites with low erosion potential. Till and roll or culti-pack only those areas where excessive residue occurs such as chaff or straw

windrows. Apply herbicides to kill existing weeds or crops prior to the planting operation. In all cases, follow herbicide label instructions. Identify and treat insect or rodent problems prior to planting.

Soil Fertility and Lime

Fertilizer and lime will be applied according to a current soil test. A current soil test will be an analysis made during the last four years and since the most recent application of lime or manure.

Apply all or a portion of the nitrogen (N) requirement immediately prior to or during seeding. Rates of 10 to 20 pounds per acre for grass and legume mixtures and 20 to 40 pounds per acre for grasses are desired at planting. If a split N application is used, apply the remainder of the N topdress after the planting is established.

Soil test requirements for nitrogen, phosphate, and potash may be waived when the soil test calls for individual requirements of less than 25 pounds per acre and the total amount of fertilizer to be applied is less than 50 pounds per acre. Lime requirements of less than 600 pounds per acre effective neutralizing material (ENM) may be waived.

On warm season grass and legume plantings where nitrogen is not recommended but where the fertilizer vendor cannot provide a blend without nitrogen, up to 30 pounds per acre of N may be applied.

Temporary Cover

When existing residue will not provide at least 30 percent ground cover until the planned planting date and the permanent vegetation will not be planted within 60 days, temporary cover will be established.

All temporary cover crops must be clipped or destroyed before heading to prevent excessive competition with the permanent seeding. Winter wheat or rye must be killed by tillage or herbicides prior to seed set. Establish temporary cover according to the COVER AND GREEN MANURE CROP (340) conservation practice standard.

Planting into Cover

When planting on seedbeds with up to 50 percent ground cover, place the seed at the proper depth using a grassland drill, grain drill with press wheels, culti-packer seeder or similar tool. Seed may be broadcasted and rolled or culti-packed immediately after broadcasting.

On seedbeds with greater than 50 percent ground cover, grasses must be planted using a grassland drill, grain drill with press wheels or similar tool. Legumes should be drilled but may be broadcast as dormant plantings only.

Planting into Existing Stands

When planting into an existing vegetative stand, herbicides or mechanical tillage may be used to suppress the current vegetation. Both methods used separately or in combination will provide different levels of control.

Evaluate existing cover to determine the most effective treatment to allow interseeding success. Use mowing, grazing where permitted, and prescribed burning to remove or reduce vegetative growth that will interfere with herbicide applications, mechanical tillage, or planting operations. A combination of mowing, heavy grazing, and burning at the correct times will also weaken the existing stand.

All tillage must allow the operation of planting equipment to properly place the seeded species. A disk or similar tool disturbing 50 to 60 percent of the existing stand is desired. Tillage will result in undesirable vegetation germinating and competing with planted species.

When herbicides are used, mow in mid-summer and allow time for the vegetation to regrow prior to applying herbicides. Late summer to early fall herbicide applications prior to the killing frost can provide adequate control. Evaluate and treat again in the spring if necessary.

When the goal is to reduce the competition of an existing cover without total control, the same herbicides may be used with adjustments to the application pattern, rate, or timing. Plug nozzles on the spray boom to band apply herbicides or spray strips or patches to reduce the stand.

Plant areas that were tilled or controlled with herbicides to an acceptable seed mixture. On a site where a portion of the vegetation was maintained either with band spraying or prepared strips, seed the selected mixture on the entire

disturbed area. Delete any grass or legume species from the planting mixture that currently survives on the site in an adequate population.

Remove early spring regrowth of the existing stand by mowing to reduce competition and allow the new seedlings to become established. Mow as needed during the establishment year to reduce competition. Cease mowing operations when planted seedlings are tall enough to be damaged by the mowing operation.

When a broadcast seeding method is planned, evaluate the potential for seed to soil contact to occur. Select site preparation techniques and seeding methods that allow seeding success.

Companion Crops

Where erosion may be a problem during the initial establishment period for cool season grass plantings, a companion or nurse crop may be desirable. Seed a companion crop of spring oats at a rate of 25 to 30 pounds per acre for spring or fall plantings. Winter wheat and rye are not acceptable as fall companion crops but may be planted at a rate not to exceed 20 pounds per acre in the spring.

Companion crops will be grazed or mowed when 8 to 12 inches tall or before heading (which ever occurs first) to avoid seed-set and reseeding of the companion crop. Mowing will be high enough to avoid damage to the permanent seeding. Mow as often as necessary to keep the canopy from becoming competitive with the planted species. Herbicides may be used to kill or retard cover crop growth when benefits have been achieved.

Sprigs and Cuttings

Planting sprigs, rhizomes, stolons, or cuttings of bermudagrass may provide quicker and easier cover than planting seed. The basic planting rate will be 10 bushels of sprigs per acre. The steps to follow are:

1. Plant only in moist, fertile weed-free soil.
2. Plant bermudagrass either in the spring or summer but early enough to take advantage of available precipitation and the growing season.
3. Plant pure live sprigs as soon as possible after harvesting.
4. Plant sprigs at least 2 inches deep to ensure continued soil moisture, but leave tips above ground.
5. Firm soil around the sprigs to keep them moist.
6. Control weeds with selective herbicides applied immediately after planting.
7. Fertilize to hasten ground coverage as soon as new stolons or rhizomes are evident.

Additional Criteria to Reduce Soil Erosion and Sedimentation

The selected seed mixture will contain no less than 50 percent perennial grasses based on pure live seed rated excellent, good, or fair for erosion control in Table 2 of this standard. No more than 20 percent of the desired stand will be comprised of species rated poor for erosion control.

Erosion will be controlled prior to seeding permanent cover. Temporary cover will be used when:

1. the required seeds or plant stock are not available;
2. the acceptable planting period for the selected species has passed;
3. pesticide residues will not allow establishment of the desired species; or
4. weed pressure will require an interim annual crop to assist in suppression of weedy species.

Establish temporary cover according to the COVER AND GREEN MANURE CROP (340) conservation practice standard.

Final tillage, planting, and other mechanical operations will occur on the contour and across areas of concentrated flows.

When a woody component is desired, shrubs and trees will be planted on the contour. Permanent cover will be planted between the proposed woody rows, leaving a 36 inch minimum strip for the trees and shrubs, or the entire field can be seeded prior to planting the woody component and herbicides or strip tillage used to kill the permanent cover in the tree and shrub row prior to planting. A strip 36 inches wide along the planned tree and shrub row or areas 36 inches in diameter around each individual planting site should be treated prior to planting the trees and shrubs.

Additional Criteria to Enhance Wildlife Habitat

When the primary objective is to improve wildlife habitat, the seed mixture should not contain species with a poor wildlife rating from Table 2. Select species that create an open structure that allows increased forb production and wildlife movement.

Native, perennial forbs are important to many species of wildlife. Adding multiple species to a seeding mixture is advised. Since native forbs are generally planted at low rates, do not adjust seeding rates of grasses or legumes when 0.5 pounds or less good quality seed of native forbs is incorporated into the mixture. Refer to the RESTORATION OF DECLINING HABITATS (643) conservation practice standard for acceptable species.

If native forbs are the only species to be added to an existing plant community, the seeding rate is usually quite small. As planting equipment will not deliver small amounts of seed uniformly, the forbs are best established as patch or strip plantings within the field. These plantings shall be a minimum size of one-tenth acre to a maximum size of one acre. **For patch and strip plantings only, the seeding rate shall be equivalent to five (5) pounds of pure live seed per acre.**

Use the following formulas to calculate the area to be planted and the seed requirement per field:

- Field acreage multiplied by 0.25 pounds per acre equals the pounds of seed required.

- Field acreage multiplied by 0.05 equals the acres to be planted in patches or strips.

- Acres to be planted multiplied by 43,560 square feet per acre divided by the desired width equals the length of the strip to be planted. Determine the width and length of each patch or strip based on the equipment to be used and the site characteristics. At least one forb planting will be established in each separate field that is two acres or more in size. Seedbed preparation may be mechanical tillage or chemical controls to remove competition prior to planting the forbs.

Establish as many of these plantings as necessary to disperse the forb seed source in the field. Plant the forbs with a companion crop or complete field operations on the contour to reduce the erosion potential. Manage the entire field to encourage the increase and spread of the forb population across the field.

When wildlife habitat development is the producer's primary objective and will occur only on NHEL soil map units, seeding rates under this standard may be multiplied by a factor of 0.75. This reduced rate will provide for a more "open stand". Erosion rates must remain within the tolerable limit (T) after treatment. Gully erosion must be controlled by proper treatment. Refer to the WILDLIFE UPLAND HABITAT MANAGE-MENT (645) conservation practice standard.

Maintenance practices and field activities are not to disturb cover during the primary avian nesting period (May 1 to July 15) for grassland species. Mowing will be needed during the establishment period but should be minimized to lessen negative impacts on wildlife.

Annual mowing of the stand for generic weed control is not recommended. Annual mowing is discouraged as it greatly reduces residual cover for next year's nesting. When mowing is needed, mow between July 15 and August 15.

To benefit insect food sources for grassland nesting birds, spraying or other control of noxious weeds will be done on a "spot" basis to protect forbs and legumes that benefit native pollinators and other wildlife.

CONSIDERATIONS

This practice may be used to promote the conservation of declining species, including threatened and endangered species. The food and cover value of the planting can be enhanced by using a habitat evaluation procedure to aid in selecting plant species and providing and managing for other habitat requirements necessary to achieve the objective.

The use of native species on appropriate soil types should be encouraged. Planting native forbs, shrubs, or trees will add diversity and vertical structure to the restored habitat. If a native plant cover develops other than those planted and meets the intended purpose, the cover may be considered adequate.

Grasses, forbs, and legumes may be planted to encourage maximum plant diversity. The best wildlife planting mixes should contain multiple species with 60 percent or more of species having an excellent wildlife rating.

Rotating treatments such as strip disking and patch burning throughout the managed area creates vegetative edges and diversity desired for wildlife habitat.

To increase the population of forbs, prescribed burns should be completed during the dormant season from late fall to early spring. Do not burn after spring green-up has occurred. Dormant season burns should be used in areas of the field only where erosion is not a concern.

Install structural measures prior to planting conservation cover.

Rhizobium bacteria inoculum does not readily adhere to seed. Use a sugar-water solution as a sticking agent. Do not use carbonated beverages as the low pH of these products may harm the bacteria.

Lime, phosphate (P_2O_5), and potash (K_2O) should be incorporated during tillage operations prior to seeding. For no-till plantings where incorporation is not possible, it is advised that lime be broadcast 6 to 12 months prior to seeding and phosphate and potash be broadcast 30 to 60 days prior to seeding.

Fertilizer spreaders may be used to broadcast seed along with a portion of the lime and fertilizer requirements. Inert materials such as cracked corn or rice hulls may also be used as bulk material to aid in seed dispersal. Adequate coverage of the site is required if this method of seeding is used.

Herbicide carryover may dictate postponing the permanent seeding. In such cases, temporary cover may be required until that time when the permanent plantings can be made. Refer to the Crop Replant and Rotation Guides in UMC publication MP-575, "Weed Control Guide for Missouri Field Crops", for identification of those "problem" herbicides and the selection of plant species suitable for temporary cover.

Allelopathy and autotoxicity effects have been documented with certain cereal grains used as temporary cover and alfalfa. These crops produce chemical substances that inhibit the growth or establishment of succeeding plantings. Tillage is often used to reduce these negative effects prior to seeding permanent cover.

Where applicable, this practice may be used to conserve and stabilize archeological and historic sites.

PLANS AND SPECIFICATIONS

Site specifications for establishment and maintenance of this practice shall be prepared for each field or treatment unit according to the Criteria, Considerations, and Operation and Maintenance described in this standard.

Site specifications shall be recorded using approved specification sheets, job sheets, narrative statements in the conservation plan, or other acceptable documentation.

OPERATION AND MAINTENANCE

Vegetative manipulation to maximize plant and animal diversity can be accomplished by prescribed burning, mechanical, biological, chemical, or cultural methods or any combination of these. Select maintenance treatments that meet the objectives of the participant.

Mow, clip or use approved herbicides as often as necessary to control noxious weeds and undesirable plants during the establishment period. Manage plantings to reduce competition of companion crops or undesired vegetation.

After the stand is established, spot mowing, patch burns, or spot herbicide treatments to control noxious weeds and other undesirable plants should be used in lieu of treating the entire field. The minimum height for mowing cool-season grasses and introduced warm-season grasses is 3 inches and native warm-season grasses is 8 inches.

Maintain soil pH and fertility at levels necessary to meet landuse objectives.

Re-establish permanent cover as needed to provide adequate ground cover and maintain structures for erosion control.

Occasional grazing and/or haying may benefit the stand. If grazing is to be used, develop a planned grazing system and follow management recommendations outlined in the PRESCRIBED GRAZING (528A) conservation practice standard. Develop management criteria for haying based on the FORAGE HARVEST MANAGEMENT (511) conservation practice standard. Some USDA programs may prohibit grazing and/or haying of conservation cover.

Damage due to insects and diseases must be monitored. If an infestation threatens stand survival, timely corrective action must be taken.

Maintenance measures must be provided to control outbreaks of noxious weeds and other invasive species in order to comply with state noxious weed laws and stand maintenance requirements.

When pesticides are needed, only those labeled for the specific use will be recommended. University of Missouri publications, MP 581 "Weed and Brush Control Guide for Forages, Pastures and Non-cropland in Missouri" will be used for reference as well as the specific product labels. Use of a pesticide that exceeds the information stated on the label is a misuse of the product and is in violation of state law.

Optional strategies for maintenance of conservation cover are:

1) Light Disking
- No more than one-third of the field should be disked in any one year.
- Disking can begin the fourth year after establishment of the vegetative stand.
- Disking should be 2 to 4 inches deep and occur between October 1 and April 30. One or two passes are allowed with two passes the recommended treatment.
- Disk strips a maximum of 75 feet wide on the contour or across the slope with a minimum width of two times the disked width (150 feet) of undisturbed vegetation between the treated strips to reduce potential erosion problems.
- The same acreage within a field will not be disked more often than every third year.

2) Prescribed Burning
- Prescribed burns reduce mulch buildup, improve wildlife cover, and prepare ground for interseeding and control of undesirable plants.
- Follow criteria in the PRESCRIBED BURNING (338) conservation practice standard.
- Burns should be performed no more than every third year due to the adverse effects on soil organic matter and soil quality.
- Timing of the burns can be used to either set back or stimulate targeted vegetation.
- When burning to control undesirable sprouting or woody vegetation, it may be necessary to burn two or more consecutive years.

3) Herbicide Application
- Use of herbicides can begin the fourth year after establishment.
- Areas can be treated in strips totaling no more than one-third of the field in any one year.
- Only approved herbicides will be applied according to label directions.
- Use application rates that will temporarily retard vegetation without a complete kill.

4) Mowing and Shredding
- After the stand is established, mowing will be performed as needed to limit weeds while maintaining cover for erosion control and wildlife cover.
- No more than one-half of the field may be mowed in any growing season.

TABLE 1: PLANTING DATES

Plantings with:	Planting Date		
	Spring	Summer/Fall 2/	Dormant

Cool Season Grasses in: 1/			
Northern Missouri	3/16 - 5/31	8/01 - 9/30	12/01 - 3/15
Southern Missouri	3/01 - 5/15	8/15 - 10/15	12/15 - 2/29
Warm Season Grasses in: 1/			
Northern Missouri	4/01 - 6/30		11/15 - 3/31
Southern Missouri	4/01 - 6/15		11/15 - 3/31

1/ Planting dates are based on plant suitability zones. Northern Missouri is all counties north of Bates, Henry, Benton, Morgan, Moniteau, Cole, Osage, Gasconade, Franklin, and St. Louis Counties. Southern Missouri is all counties including and south of those listed.

2/ Mixtures containing legumes will be planted by September 15 in Northern Missouri except as a dormant seeding.

TABLE 2: SEEDING RATES BASED ON PLANTING METHOD AND PERIOD
(POUNDS PURE LIVE SEED PER ACRE)

Species	Erosion Control Rating*	Wildlife Rating*	Base Rate with Planting Conditions Good or Fair		Adjusted Rates of Fall Planting w/ Legumes Good or Fair		Adjusted Rates of all Dormant and Spring Plant w/ Legumes Good or Fair	
Cool Season Legumes:			Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Birdsfoot Trefoil	F	F	5.0	7.5	5.0	7.5	5.0	7.5
Alsike Clover	G	G	3.2	4.8	3.2	4.8	3.2	4.8
Ladino Clover	G	F	3.0	4.5	3.0	4.5	3.0	4.5
Red Clover	F	F	6.1	9.1	6.1	9.1	6.1	9.1
Warm Season Legumes:								
Alfalfa	F	E	7.5	11.2	7.5	11.2	7.5	11.2
Common Lespedeza	P	E	7.5	11.2	NA	NA	7.5	11.2
Crownvetch	G	P	8.0	12.0	8.0	12.0	8.0	12.0
Sweetclover	P	F	6.3	9.5	6.3	9.5	6.3	9.5
Cool Season Grasses:								
Canada or Virginia Wildrye	F	E	8.0	12.0	10.0	14.0	12.0	16.0
Kentucky Bluegrass	G	G	2.2	3.3	2.7	3.8	3.3	4.4
Orchard Grass	F	E	4.0	6.0	5.0	7.0	6.0	8.0
Redtop	G	G	1.7	2.5	2.1	3.0	2.5	3.4
Reed Canarygrass	E	P	4.8	7.2	6.0	8.4	7.2	9.6
Smooth Brome	E	F	8.0	12.0	10.0	14.0	12.0	16.0
Tall Fescue	E	P	8.0	12.0	10.0	14.0	12.0	16.0
Timothy	G	E	3.1	4.6	3.9	5.4	4.6	6.2
Western Wheatgrass	G	F	8.0	12.0	10.0	14.0	12.0	16.0
Warm Season Grasses:								
Bermudagrass (seed)	E	P	2.1	3.1	NA	NA	2.1	3.1
Bermudagrass (sprigs)	E	P	10 bushel	15 bushel	NA	NA	10 bushel	15 bushel
Big Bluestem	F	G	7.0	10.5	NA	NA	7.0	10.5
Old World Bluestem	G	P	2.4	3.6	NA	NA	2.4	3.6
Eastern Gamagrass	P	G	8.0	12.0	NA	NA	8.0	12.0
Indiangrass	F	E	7.0	10.5	NA	NA	7.0	10.5
Little Bluestem	G	E	6.4	9.6	NA	NA	6.4	9.6
Side-oats Grama	G	E	7.5	11.2	NA	NA	7.5	11.2
Switchgrass	G	G	4.0	6.0	NA	NA	4.0	6.0

Columns 1 (good) & 2 (fair): Select the planting rate depending on the method of planting (good or fair chance of seedling establishment).

Columns 3 (good) & 4 (fair): Adjusted seeding rates if cool-season grasses are fall planted with legumes.

Columns 5 (good) & 6 (fair): Adjusted seeding rates if cool-season grasses are dormant or spring planted with legumes.

*Wildlife and Erosion Control Ratings of E - Excellent, G - Good, F - Fair, and P - Poor.

TABLE 3: SPECIES COMPATIBILITY FOR CONSERVATION COVER

		LEGUMES								C/S GRASSES									W/S GRASSES							
SPECIES	SYMBOL	bitr	alsi	lacl	recl	alfa	col	cro	sw	ca	keb	orc	red	rec	sm	taf	tim	we	ber	bib	cab	eag	ind	libl	sig	swi
Cool Season Legumes:																										
Birdsfoot Trefoil	bitr	G	F	G	F	G	F	F	G	F	F	G	F	P	G	G	G	F	F	G	F	G	G	G	G	G
Alsike Clover	alsi	F	G	F	G	F	F	P	F	G	G	G	G	F	G	G	G	F	P	P	P	F	P	P	P	F
Ladino Clover	lacl	G	F	G	G	G	F	F	G	F	G	G	G	F	G	G	G	F	F	F	P	F	F	F	F	F
Red Clover	recl	F	G	G	G	F	F	P	F	F	G	G	G	F	G	G	G	F	P	P	P	P	P	P	P	P
Warm Season Legumes:																										
Alfalfa	alfa	G	F	G	F	G	F	P	G	F	P	G	P	F	G	F	G	F	P	F	F	F	F	F	F	F
Common Lespedeza	cole	F	G	F	F	F	G	P	F	F	G	F	G	P	F	G	G	F	F	F	F	F	F	F	F	F
Crownvetch	crow	F	P	G	P	P	P	G	P	F	F	G	F	P	F	F	G	F	P	F	P	F	F	F	F	F
Sweetclover	swcl	F	F	G	F	G	F	P	G	G	G	F	G	P	F	F	F	G	P	F	P	F	F	F	F	F
Cool Season Grasses:																										
Canada or Virginia Wildrye	cawi	F	G	F	F	F	F	F	G	G	P	P	F	F	P	P	F	G	P	G	P	G	G	G	G	G
Kentucky Bluegrass	kebl	F	G	G	G	P	G	F	G	P	G	P	F	P	F	P	F	F	P	P	P	P	P	P	P	P
Orchard Grass	orch	G	G	G	G	G	F	G	F	P	P	G	F	P	G	G	G	F	P	F	P	F	F	F	F	F
Redtop	redt	F	G	G	G	P	G	F	G	F	F	F	G	P	F	F	F	F	P	G	F	G	G	G	G	G
Reed Canarygrass	reca	P	F	F	F	F	P	P	P	F	P	P	P	G	P	P	P	P	P	P	P	P	P	P	P	P
Smooth Brome	smbr	G	G	G	G	G	F	F	F	P	F	G	F	P	G	F	G	P	P	P	P	P	P	P	P	P
Tall Fescue	tafe	G	G	G	G	F	G	F	F	P	P	G	F	P	F	G	G	P	F	P	F	P	P	P	P	P
Timothy	timo	G	G	G	G	G	G	G	F	F	F	G	F	P	G	G	G	F	P	G	P	G	G	F	F	G
Western Wheatgrass	wewh	F	F	F	F	F	F	F	G	G	F	F	F	P	P	P	F	G	P	G	P	G	G	G	G	G
Warm Season Grasses:																										
Bermudagrass	berm	F	P	P	P	P	F	P	P	P	P	P	P	P	P	F	P	P	G	P	P	P	P	P	P	P
Big Bluestem	bibl	G	P	F	P	F	P	F	F	G	P	F	G	P	P	P	G	G	P	G	P	G	G	G	G	G
Old World Bluestem	cabl	F	P	P	P	F	F	P	P	P	P	P	F	P	P	F	P	P	F	P	G	P	P	P	P	P
Eastern Gamagrass	eaga	G	F	F	P	F	P	F	F	G	P	F	G	P	P	P	G	G	P	G	P	G	G	G	G	G
Indiangrass	indi	G	P	F	P	F	P	F	F	G	P	F	G	P	P	P	G	G	P	G	P	G	G	G	G	G
Little Bluestem	libl	G	P	F	P	F	F	F	F	G	P	F	G	P	P	P	F	G	P	G	P	G	G	G	G	G
Side-oats Grama	sigr	G	P	F	P	F	F	F	F	G	P	F	G	P	P	P	F	G	P	G	P	G	G	G	G	G
Switchgrass	swit	G	F	F	P	F	P	F	F	G	P	F	G	P	P	P	G	G	P	G	P	G	G	G	G	G

Good (G), Fair (F), or Poor (P)-Species rated G can be in a mix without restrictions when compatible with the PSG.

If rating is F, it should make up no more than 25 percent of the mix. If rating is P, it will not exceed 10 percent of the mix.

TABLE 4: SPECIES COMPATIBILITY TO PASTURE SUITABILITY GROUPS FOR CONSERVATION COVER

Species	WLB	WCB	WCU	WLO	LyO	LyU	CyU	GrU	MDU	WtP	LyP	SyO	GrO	GrP	ShU	GNS
Cool Season Legumes:																
Birdsfoot Trefoil	G	G	G	E	E	E	E	E	E	G	G	F	F	F	P	P
Alsike Clover	E	E	E	E	E	E	E	-	G	G	F	P	-	-	P	-
Ladino Clover	G	G	E	E	E	E	E	G	G	E	G	F	P	P	P	-
Red Clover	-	-	P	E	E	E	E	G	G	-	F	F	P	F	P	-
Warm Season Legumes:																
Alfalfa	-	-	-	-	E	E	E	G	G	-	F	F	F	P	P	-
Common Lespedeza	-	-	E	E	E	E	E	G	G	-	G	G	F	F	F	F
Crownvetch	-	-	-	G	E	E	E	E	G	G	G	F	F	F	P	P
Sweetclover	F	F	G	G	E	E	E	G	G	G	F	F	P	P	P	P
Cool Season Grasses:																
Canada or Virginia Wildrye	E	E	E	E	E	E	E	G	G	G	F	F	P	P	-	-
Kentucky Bluegrass	E	E	E	E	E	E	E	G	G	G	F	F	-	-	P	P
Orchard Grass	E	E	E	E	E	E	E	G	G	G	G	F	P	P	-	-
Redtop	E	E	E	E	E	G	G	G	G	G	F	F	F	F	F	F
Reed Canarygrass	E	E	E	E	E	E	E	G	G	E	G	F	P	P	P	-
Smooth Brome	E	E	E	E	E	E	E	G	G	E	G	F	P	F	P	-
Tall Fescue	E	E	E	E	E	E	E	G	G	E	G	F	F	F	F	F
Timothy	E	E	E	E	E	E	E	G	G	E	G	F	-	-	-	-
Western Wheatgrass	E	E	E	E	E	G	E	F	F	G	F	-	-	-	P	P
Warm Season Grasses:																
Bermudagrass	E	E	E	E	E	E	E	G	G	G	G	G	F	F	F	-
Big Bluestem	E	E	E	E	E	E	E	E	E	E	G	F	F	F	P	-
Old World Bluestem	-	-	P	-	E	E	E	E	G	P	G	F	F	F	F	-
Eastern Gamagrass	E	E	E	E	E	E	E	G	G	G	G	F	F	P	P	-
Indiangrass	E	E	E	E	E	E	E	G	G	E	G	F	F	F	P	-
Little Bluestem	-	-	-	E	E	E	E	E	E	-	G	G	F	F	F	F
Side-oats Grama	-	-	-	E	E	E	E	G	G	-	F	F	F	F	F	F
Switchgrass	E	E	E	E	E	E	E	G	G	G	G	F	F	P	P	-

Pasture Suitability Groups are described in FOTG. Rating based on [E] Excellent, [G] Good, [F] Fair, [P] Poor, [-] Not Suited.
Species designated [E] or [G] can be used without restriction. Species designated [F] will not exceed 25 percent of the mix.
Species designated [P] will not exceed 10 percent of the mix. Species having the [-] designation should not be used on that site.