

## Conservation Cover

### Virginia Conservation Practice Job Sheet

327



#### Definition

Establishing and maintaining permanent vegetative cover.

#### Criteria

Plant species suitable for the planned purpose and site conditions. Avoid using invasive species. Avoid persistent, mat-forming species such as Bermuda grass and fescue.

Select appropriate planting dates, planting methods and take care in handling and planting of the seed or planting stock to ensure that planted materials have an acceptable rate of survival.

Use sufficient site preparation to eliminate weeds for establishment and growth of selected species.

Use appropriate timing and planting equipment for the site and soil conditions.

Use planting methods that are designed to protect the soil resource from erosion.

If planting a pollinator mix, plant grasses, forbs and legumes to promote diversity. A minimum of 2 grasses and 9 flowering forbs shall be planted. Seeding rates shall be determined on a pure live seed (PLS) per square foot basis. The maximum seeding rate for all species in a mix should be no greater than 30 PLS per square foot when planting via seed drill (or 45 PLS per square foot when broadcast) to provide adequate ground coverage while creating desirable structure for wildlife.

If shrubs are included in the mixture, plant 4-5 different species in clumps at 5 clumps/acre to promote diversity. Spacing between plants will vary with species selected, but typically ranges from 5' x 5' to 8' x 8' (consult the Plant Establishment Guide). The species selected should provide food at different seasons as well as cover throughout the year.

Do not perform maintenance practices or activities during the reproductive period for grassland wildlife species. These dates for Virginia are April 15 to August 15.

Use adequate maintenance measures to control noxious weeds and other invasive species.

Plants will be selected on the basis of producing high volumes of organic material to maintain or improve soil organic matter. The amount of biomass needed will be determined using the current soil condition index procedure.

**Note: This summary does not address all requirements and considerations in the VA Conservation Cover Conservation Practice Standard (VA-327). Consult the Conservation Practice Standard for further details.**

<b>General Information</b>	
Client: _____	County: _____
Field Office: _____	Contract #: _____
Farm #: _____	Tract #: _____
Field # and acreage: _____	
<b>Producer's Purpose</b>	
<input type="checkbox"/> Reduce soil erosion and sedimentation	
<input type="checkbox"/> Improve water quality	
<input type="checkbox"/> Improve air quality	
<input type="checkbox"/> Enhance wildlife habitat and pollinator habitat	
<input type="checkbox"/> Improve soil quality	
<input type="checkbox"/> Manage plant pests	
<b>Practice Specifications</b>	
<p><b>Site Preparation</b></p> <p>Conventional seedbed preparation, herbicide application or both may be used to control competition prior to planting. Proper site prep is crucial to the establishment of Conservation Cover, especially with native species. The site prep plan shall be specific to each site.</p> <p>Several steps are required to successfully control undesirable competition prior to planting. The first step is to scout the area to be planted for troublesome weeds and prepare a control plan. One or more years-worth of weed control may be necessary to adequately prepare a site for planting, depending upon site conditions, weeds present, and control method used (tillage vs. herbicide).</p> <p><u>Site Prep via Herbicides</u></p> <p>To kill tall fescue, orchard grass, or other cool season grasses, spray vigorously growing grass in the fall after the first killing freeze (27 degrees or colder for 3 consecutive hours or more—usually occurs in October). Spray within 10 days of the first frost. To ensure that the grass is growing vigorously, mow, hay, or graze the site 10-14 days before spraying. Spray the site again in the spring (early to mid-April) when there are several inches of new growth on cool season grasses that may have been missed—this will also kill any other cool season weeds that may have emerged from the seedbank. If clover is present in the stand, it must be removed or it will take over a native planting, and special attention is required to kill it.</p> <p>After the second application of herbicide, burn the residue to remove it and prepare the site for seeding with a no-till drill or disk the residue to incorporate it into the soil and prepare the site for seeding with a standard drill or broadcast seeder. A no-till drill can plant through residue if it is not too thick. If the residue is disked, use care to not create erosion problems when disking. Disking can stir up the seed bank and increase competition with native seedlings, so some weed control may be necessary between the first time the site is disked and when it is planted.</p>	

Site Prep via Tillage and Smothering

The alternative to controlling fescue and other weeds with herbicides is to plow and smother them with annual cover crops (tilling weeds like Johnson grass, Bermuda grass, and sericea lespedeza can help *spread* these weeds rather than control them). A moldboard plow buries weeds and exposes roots to freezing and/or drying; the annual cover/smother crops establish quickly to hold soil and shade out emerging weeds, thereby depleting the seedbank. It may take multiple years of plow and smother cycles to adequately prepare a site for planting native species.

Till areas in both the cool and warm seasons (fall and summer) to control each suite of weed species, and do so prior to seed set, if possible. Establish annual grains such as wheat, barley, and/or rye in the fall; in the summer, use buckwheat, sunflower, and/or millet. After establishing the final smother crop the fall prior to planting native species, ensure the crop is removed or burned down by mid-April so it does not interfere with the establishment of the native species.

After the proper weed control regime, sow a seed mixture. The mixture may be sown onto a firm seedbed either with a no-till drill, standard drill or a broadcast seeder (drop-type seeders are much better than cyclone or spinner-type seeders). If you disk, the seedbeds should be packed before and after seeding to ensure placement of the seed at the proper depth, good seed-to-soil contact, and germination.

Planting early (April – May) ensures better germination, but planting in early June can allow for some control of emerging warm season weeds such as crabgrass and foxtails. Realize that planting in June increases the risk stand failure due to drought.

Average Dates of First and Last Frost by Region:

Region	Ave. Date of First Frost	Ave. Date of Last Frost
Mountain/Northern Piedmont	October 15/October 25	May 1
Southern Piedmont	November 5	April 15
Coastal Plain	November 15	April 1

Field Number	Species Selected (attach species mix, if necessary)	Seeding Date/ Acres Planted	Planting method	Planting rate/depth

**Operation and Maintenance**

Monitoring and controlling weeds is very critical in the first and second years. Prescribed Burning (338), Habitat Disking (647), or Habitat Mowing (647) about every 2-5 years, in early spring, can limit shrub invasion and provide desirable structure for wildlife.

First Year

Observation of the growth of weed competition is essential. When undesirable vegetation reaches 12-18" tall, mow to no less than 8" high to prevent weeds from going to seed. Most native plants will grow deeper root systems than tops in the first year, and mowing 8-10" high will not hurt them.

Subsequent Years

Annual scouting of invasive weeds is essential, and timely spot treatment of those weeds will prevent large, costly issues in the future while maintaining quality wildlife habitat.

Grasslands, shrub lands, and meadows require management to keep them from undergoing succession. Periodic disturbances such as prescribed burning, mowing, grazing, herbicide use and selective removal of trees shall occur about every 5 years at a minimum. Disturbances should be performed in late winter/early spring to leave cover standing all winter for wildlife while also avoiding nesting season.

**Additional instructions:**

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**Planner Certification**

This Conservation Cover planned in this job sheet fulfills minimum requirements of Virginia NRCS Conservation Practice Standard 327.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

**Certification of Practice Completion**

This Conservation Cover practice planned in this job sheet has been completed and maintained according to Virginia NRCS plans specifications (indicate in Practice Specifications any changes to planned activities and acreage).

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

**Guidelines for Conservation Cover Stand Evaluation:**

After a conservation cover stand has been made, the question arises as to whether the stand is adequate or inadequate. In many cases stands are obviously adequate or inadequate as determined by simple visual evaluation. However if the stand is visually questionable, then sometimes a more formal evaluation is needed to make the decision to wait or to re-seed the field.

A one square foot frame is a good tool to use for evaluation. The frame can be constructed from ½ inch PVC pipe or a circular one square foot frame can be constructed using 42.5 inches of 3/16 inch plastic covered cable.

At least 10 samples should be taken per 10 acres, either diagonally or perpendicular to the drill rows. A predetermined number of steps should be taken between samples and do not sample end rows or turn around areas where double seeding is common. Count only those plants that are rooted in the frame and only those species that are part of the planned seeding.

Other important factors that must be considered in the evaluation include: past weather, time of evaluation since seeding date, level of weed competition, planned use of the site, and the species planted. In some cases it is better to wait and make a final evaluation the next year than to re-seed too quickly. Warm season grasses\* may need to be evaluated after the 3rd growing season.

For evaluation of marginal stands after establishment the following table can be used to determine if the stand is inadequate to perform its intended function or should be considered for re-seeding.

<b>TABLE 1 - HERBACEOUS STAND EVALUATIONS</b>						
<b>Seedlings Needed per Square Foot (at end of first growing season)</b>						
<b>Species</b>	<b>Land Use</b>					
	<b>Forage</b>		<b>Wildlife - Idle</b>		<b>Biofuels</b>	
	<b>A</b>	<b>N</b>	<b>A</b>	<b>N</b>	<b>A</b>	<b>N</b>
Big Bluestem*, Indiangrass*	> 1.0	< .25				
Switchgrass*	> 1.0	< .25				
Little Bluestem*	> 1.5	< .38				
Bromegrass, Prariegrass	> 1.0	< 0.5				
Flowering Forbs	> 1.0	< 0.5				

> = Greater than	< = Less than	A = Adequate	N = Not adequate
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This evaluation table is based on pure stands; if a mixture of grass and legume is planted, reduce the numbers by the ratio of the species planted.

