

Hedgerow Planting for Pollinators & Wildlife

WV Conservation Practice Job Sheet

Code 422



Definition

Establish a living fence of shrubs or trees in, across, or around a field.

Purpose

Although this practice may serve multiple purposes, this job sheet pertains to the establishment of hedgerows to provide food and cover for wildlife.

Hedgerows for Terrestrial Wildlife

A well planned and properly maintained hedgerow provides several advantages to wildlife. These include increased cover for travel ways and nesting or den sites, pollinator habitat and increased and more varied food supplies.

The recent trend in clean farming has been towards the elimination of fencerows and hedgerows. The reasons given for their elimination include that they harbor noxious weeds and insects, shade out crops, and cause a reduction in the yield of crops and modern mechanized agriculture operations require large fields.

Hedgerows provide multiple benefits. In open land they increase the “edge effect”, which is important to many species of wildlife. Hedgerows serve as a source of food and cover for wildlife, depending upon the variety of vegetation planted. They also provide corridors or screened travel lanes through which wildlife can move safely from one area to another. Therefore, linking fragmented habitats with

hedgerows may greatly increase the use of an area by wildlife.

Fencerows supporting vegetation more than 6 feet high may cause a material reduction in the yield of adjacent cultivated crops. However, well managed hedgerows are less than six feet high, and have little or no adverse effect on adjacent crops. In cropland settings, the roots of hedgerow plants can be confined by digging a trench alongside the row. Some other advantages include a change in the local microclimate resulting in increased soil moisture, and decreased evaporation. Water runoff is slowed, and soil loss is reduced. Hedgerows may also serve as windbreaks. Very few insects harmful to grain and forage crops occur on woody vegetation. Many beneficial insects, however, do frequent such areas. Breeding bird populations in crop field borders containing woody vegetation greatly exceed those of borders composed of herbaceous plants. Several hedge species are sources of pollen for bees, and provide nesting places for bumble bees. Some species of plants may provide nesting sites for wood nesting bees.

All hedgerows attract wildlife, but plant species selected can greatly affect the benefits provided. Plant species used should benefit wildlife as either food or cover. The best results will be achieved when there is a mixture of trees, shrubs, grasses, vines, and/or forbs.

A combination of low and tall growing shrubs and/or trees is more effective for cover than a single species.

Plant a variety of fruit- and nut-producing trees and shrubs and use natural succession to supplement the hedgerow establishment.

Activities of both birds and mammals are greatest in low, shrub-stage hedgerows where fruit, browse and cover are most abundant.

More than one species should always be used. The species should be planted in rows, and arranged so that the tallest forms are located in center. Utmost care must be exercised in the choice of species to avoid difficulties arising from the use of plants conflicting with agricultural practices.

Dense cover near the ground gives best protection to wildlife. Shading of adjacent crops may be reduced to a minimum by selecting species of a low height growth. Conifers may occasionally be used to advantage but they should be cut back when attaining excessive height.

Hedgerows provide desirable escape, refuge, and travel lanes for many songbirds and game birds and mammals. Low, woody vegetation can be planted along fence rows, in gullies, and along streams or around ponds, springs, food patches, nesting grounds, and breeding grounds.

Site preparation consists of reducing existing competition by plowing, contour furrowing, or scalping. Planting can be done by hand or with a mechanical planter depending upon the size of the project. Multiple rows of varying size plants should be planted in a stair-step method so that varied degrees of cover exist.

Hedgerows established for wildlife purposes should be a minimum of 15 feet wide. Generally, the wider the corridor, the greater the number of wildlife species that will use it. Hedgerows should be as long as needed for field conditions. The contour should be followed on sloping fields.

Native species should be planted whenever possible. However any adapted plant, except noxious or invasive species may be used.

Center row(s) should consist of the tallest growing species and height should decrease down to the outermost rows of herbaceous vegetation. Grasses, vines and forbs may be planted adjacent to the woody plants.

At least 25% of the hedgerow should consist of evergreens to provide winter cover if that is a concern.

The value of older established hedgerows can be improved for wildlife by interplanting open areas

within hedgerows or renovating one-third of the length of the hedgerow at a time, using species that provide wildlife food and cover.

Pollinator Habitat and Biodiversity

Hedgerows established for pollinators are a minimum of 25 feet wide and will usually require multiple rows of plants.

Hedgerow plants must provide abundant pollen and nectar resources. In addition shrubs that contain soft pith for wood nesting bees should be considered.

The plants selected should be based on their ability to provide nectar and/or pollen resources. They must bloom during critical time periods and provide food for pollinators continuously throughout the season.

They should always be protected from pesticides that may harm pollinators. If pest control is required, only non-blooming plants should be treated, and/or only pesticides non-toxic to pollinators should be used when available.

The actual number of species should be dependent upon the availability of adjacent flowering plants. Plants that bloom during the same period as adjacent insect-pollinated crops can be excluded. Often times however this information is not available at the time of planting. In its absence, utilize a minimum of six species of trees and/or shrubs. This mixture shall consist of at least two woody species in each of the following bloom periods:

- March to April = Very Early Season
- March through May = Early Season
- May through July = Mid Season

Because woody species stop blooming earlier in the growing season and the floral resources are not available, it is not advisable to depend solely upon woody species to provide pollinator resources. For this reason, it is acceptable to utilize bloom periods of very early, early and mid-season. Late season blooming species may be utilized if they are available.

Operation and Maintenance

The following actions shall be carried out to insure that this practice functions as intended throughout its expected life.

After a well-planned hedgerow has become established, generally only little upkeep is necessary. At any rate maintenance is less costly than cutting trees and shrubs along field margins.

Where practical, management activities will be performed outside the primary nesting season March 15 - July 15. An exception may be for mowing or cultivation during the establishment period to control vegetative competition.

Pruning, thinning and removal of plants should be performed at least annually and timed so as not to interfere with the lifecycle of the plants or the intended purpose of the hedgerow.

Removal of diseased plants or limbs should occur immediately upon detection.

Monitoring and replacement of dead trees or shrubs and control of undesirable vegetative competition will be continued until the hedgerow is fully functional.



The hedgerow will be continuously protected from fire, grazing and trampling. Cultivation for a year or two may be desirable if plant competition becomes a problem.

The hedgerow should be inspected after heavy storm events. Check for areas where water, ice or snow is concentrated and may cause damage to plants and take corrective actions as necessary.

Any renovation or maintenance required should be limited to one-third of a hedgerow's length or width to prevent sudden elimination of the resources to pollinators and other wildlife.

Additional operation and maintenance requirements may be developed on a site-specific basis to assure performance of the practice as intended.

Considerations

Use this practice in combination with other practices to create a minimum pollinator enhancement of at least one-half acre.

Planting a hedgerow larger than the minimum length and width will increase the amount of carbon stored in the soil and biomass.

Light disking an area 10 to 20 feet wide alongside the hedgerow planting will provide additional wildlife food and cover. Light disking should be performed on a 2-3 year cycle. Rotate and/or alternate the location of lightly disked areas each year. When the disked area is rotated, the old area should have sufficient permanent cover to provide wildlife habitat and soil loss protection. On highly erodible land, disking should maintain a minimum of 30 percent residue.

Hedgerows containing a mixture of native shrubs and small trees provide the greatest environmental benefits.

Use of bareroot and containerized seedlings will accelerate hedgerow development but increase cost.

Consider the amount of shading a hedgerow will provide at maturity. Shading may impact growth of adjacent plants, microclimate and aesthetics.

Avoid the use of plants that spread by root suckers as the hedgerow may expand beyond the desired treatment area.

Perennial forbs or annuals such as lespedeza, browntop millet, small grains, or corn can be planted in the spring alongside the hedgerow to provide additional wildlife plantings. These plantings should be a minimum of 20 feet in width.

In grassland habitats, hedgerows may adversely affect area-sensitive nesting birds by fragmenting habitat patches and increasing the risk of predation.

Dense or thorny shrub thickets provide songbirds with important nesting sites and a refuge to escape predators.

Installation of artificial nest boxes with predator guards can encourage cavity-nesting birds pollinators and small mammals to utilize a hedgerow.

Consider the use of native, warm-season grasses in and adjacent to hedgerows. These bunch grasses provide good nesting sites for ground-nesting birds, and the open spaces between plants allow good feeding habitat for birds, pollinators and small mammals.

Specifications

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Site-specific requirements are listed on the following pages of this job sheet. Specifications are prepared in accordance with the WV NRCS Field Office Technical Guide. Information listed in this job sheet is considered to be part of the conservation plan.

Client:	Farm #:
Location:	Tract #:
Designed By:	Date:
Target Wildlife Species:	

Purpose (check all that apply)	
<input type="checkbox"/> To provide food and cover for terrestrial wildlife (min 15 feet wide)	<input type="checkbox"/> To provide winter cover for various wildlife species (min 25% evergreen)
<input type="checkbox"/> To provide corridors or travel lanes for wildlife (min 25 feet wide)	<input type="checkbox"/> To provide pollinator habitat (min 6 species and 25 feet wide)

Layout	Hedgerow 1:	Hedgerow 2:	Hedgerow 3:
1- Plant Materials (species/cultivars)			
2 - Plant Materials (species/cultivars)			
3 - Plant Materials (species/cultivars)			
4 - Plant Materials (species/cultivars)			
5 - Plant Materials (species/cultivars)			
6 - Plant Materials (species/cultivars)			
7 - Plant Materials (species/cultivars)			
8 - Plant Materials (species/cultivars)			
9 - Plant Materials (species/cultivars)			
10 - Plant Materials (species/cultivars)			
Method of Establishment ¹			
Planting/Establishment Date			
Hedgerow Width (ft)			
Hedgerow Length (ft)			
Field Slope (%)			
Soil Type			
Field #			
Additional vegetation (native grass, forbs, etc.)			
Livestock Exclusion Required ²			

¹ **Hand** or **Mechanical**- refer to WV Conservation Practice standards (612) Tree/Shrub Establishment and (490) Tree/Shrub Site Preparation.

² Refer to WV Conservation practice Standard (472) Access Control.

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If needed, an aerial view, map or a sketch of the practice can be shown below. Other relevant information, complementary practices and measures, and additional specifications may be included.

Additional Specifications and Notes: (i.e. additional notes, operation and maintenance specifics, etc.)

The hedgerow(s) will be maintained as described in the section entitled "Operation and Maintenance". **Additional Notes:**

Questions regarding the operation or establishment of this practice should be directed to:

_____ at _____

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