

Landowner/Producer:		Farm #:
Field(s):	Acres:	Tract #:
Soil Map Unit(s):		County:
Planner:		Date:

DEFINITION

The removal or control of herbaceous weeds including invasive, noxious, and prohibited plants. Herbaceous plant species determined to be invasive or undesirable will be based on documented resource concerns and landowner or producer objectives.

PURPOSE

Treatment activities will encourage the control of undesirable herbaceous plant species in non-cropland areas. Early detection and treatment are necessary to eradicate or control the establishment and spread of undesirable plant species. Specific purposes of this practice are:

- Enhance accessibility, quantity, and quality of forage and/or browse
- Restore or release native vegetation or create desired plant communities and wildlife habitats consistent with the ecological site
- Protect soils and control erosion
- Reduce fine-fuels fire hazard and improve air quality

MANAGEMENT

Before initiating an herbaceous weed control treatment, it is important to identify the target plant species and populations as well as any non-target plants that are to be maintained in the stand. Understanding the physiology of both target and non-target plants is important in determining the treatment timing and method(s). If possible, avoid treatments when non-target species are susceptible to damage. This is particularly important when managing for diverse natural plant communities, i.e. areas with a high density of native forb species.

Effective treatment methods include mechanical (cutting or specialized machinery), chemical, manual (pulling by hand), biological, and prescribed burning. The best results are often achieved by using a combination of methods, such as (cutting + herbicide application) or (cutting + herbicide application + prescribed burning). If using prescribed fire as a management tool, follow an approved burn plan.



Serecia Lespedeza

Photo By: MDC Staff

SPECIFICATIONS

Treatment of herbaceous weeds is often described as a component of resource inventories, grazing plans, wildlife management plans, or forest management plans. In instances where inventories or plans do not exist or do not sufficiently describe the extent of infestation, utilize the "OPTIONAL WORKSHEET FOR DETERMINING % CANOPY COVER OF TARGET SPECIES" to determine the extent and level of treatment.

OPERATION AND MAINTENANCE

- Scout infested areas annually to detect re-growth or re-introduction of undesirable species into the site.
- Apply follow-up treatments to re-growth of targeted species within the treatment area.
- Success of the practice shall be determined by evaluating post-treatment re-growth of target species after sufficient time has passed.
- Length of evaluation periods will depend on the species being monitored.

PLANS AND SPECIFICATIONS – HERBACEOUS WEEDS IN NON-CROPLAND

SECTION II

GENERAL RECOMMENDATIONS AND GUIDANCE: (Provide detailed, site-specific information as needed)

Disposal: If needed, plan how treated material will be disposed before beginning any treatment methods. With cutting applications, plant material without mature seeds can be left on site with little to no chance of adding to the seed bank. If seeds are present destroy plant material by burning or bag and remove from site for disposal. With pulling methods, ensure all roots are exposed and not in contact with the soil surface to prevent re-rooting.

Recommendations for disposal of treated material:

Herbicides: If herbicides are used, follow label rates, directions, and manufacturer recommendations. Use the current version of Win-PST to determine Soil/Pesticide Interaction Hazard Ratings. Each Hazard Rating category will have an associated minimum Mitigation Index Score Level that must be attained. Use Appendix Table 1 in the current Missouri Integrated Pest Management (IPM) conservation practice standard (Code 595) to determine if planned conservation practices provide an adequate level of mitigation. Use Appendix Table 2 to select additional IPM techniques if planned conservation practices are not adequate. Be sure to apply herbicide when the target plant is most susceptible to the chemical and the chosen treatment method. When choosing herbicides, review leaching, runoff potential, setback requirements, persistence, and toxicity ratings of chemical formulations. Use the safest available herbicide. Adhere to all application setbacks directed by chemical label for use in proximity to water bodies and other environmentally sensitive areas. Mention of trade names for plant control chemicals is not an endorsement for a particular product.

Biological Control: Sheep and/or goats can be used as an ecologically sound and economically viable alternative for biological weed control, especially if combined with other treatment methods. Site specific grazing plans will need to be developed that lists target species to control, owner’s objectives, number and type of grazing animal to be used as well as timing, duration and frequency of each grazing event. Refer to Agronomy Technical Note MO-32 and Prescribed Grazing with Goats Information Sheet (IS-MO528gg).

Attach a map or aerial photo that shows:

- Unit Boundaries (Field or Stand)
- Location & Description of Sensitive Resources (If Applicable)
- Treatment Area (If Different than Unit)
- Location & Description of Setbacks (If Applicable)
- Planned Treatment Year (If Applicable)

SECTION III

DESCRIPTION OF EACH UNIT (field or stand) THAT REQUIRES CONTROL

Unit Number	Unit Acres	Undesirable target plant specie(s) to be controlled	Average % Canopy Cover	Current land use and dominant desirable species

SECTION IV

SCHEDULE OF TREATMENTS (If available, utilize information from Section III to complete schedule)

Unit #	Average %Canopy Cover <u>1/</u>	Treatment		Target Specie(s) to be controlled	Treatment Method(s) (Cutting, Chemical, Prescribed Burning, Pulling, etc.) <u>2/</u>	Timing of Treatment(s) or Plant Growth Stage for Best Effective Control
		(Year)	(Number)			
<i>Example Unit 1</i>	<i>75%</i>	<i>2012</i>	<i>1</i>	<i>Serecia Lespedeza</i>	<i>Chemical - Broadcast or blanket foliar chemical treatment across entire area.</i>	<i>June – September, after stem has branched but prior to seed development</i>
<i>Example Unit 1</i>	<i>30% regrowth</i>	<i>2013</i>	<i>2</i>	<i>Same</i>	<i>Mechanical - Brush hog treatment area</i>	<i>Late June to early July, depending on regrowth, but prior to seed development</i>
<i>Example Unit 1</i>	<i>30% regrowth</i>	<i>2013</i>	<i>3</i>	<i>Same</i>	<i>Chemical - Spot spray, foliar application</i>	<i>Allow adequate regrowth after mechanical treatment and spray prior to seed development</i>

- 1/ Average % Canopy Cover (for the Unit) of target specie(s) will be used to determine level of the infestation within the treatment unit boundary. Estimate the average % cover over the entire treatment unit. The *Optional Worksheet for Determining % Canopy Cover of Target Species* may be used for an inventory procedure. Treatment will be needed over the entire area of infestation regardless of percent cover of the target species in different areas of the unit.
- 2/ Include specific application method(s), equipment type, herbicide type and rate, and timing of application(s). Provide reference documentation if methods, herbicide rate, and timing are provided through an alternative fact sheet, management plan, information sheet, study result, or other credible alternate source which is specific for control of the target species.

Additional Specifications and Post Treatment Goals:

SECTION V

ADDITIONAL RESOURCES AND REFERENCES

- NRCS Conservation Practice Standards
 - Prescribed Burning (338)
 - Forage Harvest Management (511)
 - Prescribed Grazing (528)
 - Integrated Pest Management (595)
 - Restoration of Rare and Declining Habitats (643)
 - Upland Wildlife Habitat Management (645)
- NRCS Agronomy Technical Note MO-32: *Biological Weed and Brush Control with Sheep and Goats*
- NRCS Conservation Practice Information Sheet: *Prescribed Grazing with Goats (IS-MO528gg)*
- Refer to applicable Ecological Site Description (ESD) State and Transition models to develop specifications that are ecologically sound and defensible. See Section II of the Missouri NRCS eFOTG at:
www.mo.nrcs.usda.gov
- Missouri Department of Conservation Website – Invasive Plants page:
www.mdc.mo.gov/your-property/problem-plants-and-animals/invasive-plants
- Missouri Department of Agriculture's Invasive Species website:
<http://mda.mo.gov/plants/ipm/noxiousweedlist.php>

