SERICEA LESPEDEZA CONTROL

PURDUE UNIVERSITY
Extension

FNR-645-W

Do's

- Prepare the site for herbicide application with prescribed fire or mowing.
- Combine various control practices.
- Treat sericea with triclopyr or triclopyr+fluroxopyr in Jun-Aug.
- Treat sericea with metsulfuron methyl when sericea is flowering (Aug-Sep).
- Consider utilizing late-growing season fires (Jul- early Sep) to reduce sericea's ability to flower and produce seed.

Don'ts

- Burn an area with sericea in the dormant season without a follow-up herbicide application.
- Disk an area infested with sericea lespedeza.
- Mow sericea after it has produced seed.
- Treat sericea with ineffective herbicides such as 2,4-D.

Sericea lespedeza (*Lespedeza cuneata*) is an invasive plant species that is common in Indiana. Once planted for wildlife, soil conservation and livestock grazing, sericea has invaded open areas like old fields, conservation plantings, and native grasslands. Sericea is a prolific seed producer that is adapted to a wide variety of soil conditions. Unfortunately, sericea can outcompete native plants, and the seed produced by sericea is of little value to wildlife. Sericea lespedeza should not be confused with native lespedezas, such as round-headed bush clover (*Lespedeza capitata*), or slender bush clover (*Lespedeza virginica*), which are beneficial to wildlife and are not invasive.

Plant Facts

- Herbaceous broadleaf, 3-5 feet tall
- Perennial warm-season legume
- Growing period: April to October
- Flowering: late July to early October
- Seed production: September-October

EXPERT REVIEWED

Control Options

Sericea lespedeza is relatively easy to kill, but can be difficult to eradicate due to prolific seed production and development of a seedbank that can last decades. Control requires a combination of methods over several years.

Mowing or Grazing

Repeated mowing during the summer can reduce the vigor and dominance of sericea, but it will not control sericea. Mowing can be used to stop sericea from producing seed or to prepare the site for an herbicide application. Sericea is most vulnerable to mowing during the late-growing season at flowering (~Aug) but before seed set. Mowing should be avoided after sericea produces seed as mowing and haying activities can spread the seed. Grazing, especially during the late summer with sheep and goats, can be used to reduce sericea vigor, but grazing alone will not provide long-term control.

Prescribed Fire

Prescribed fire alone will not control sericea lespedeza – and in some cases can make the infestation worse. However, fire can be used in combination with other methods to enhance long-term control. Dormant-season fires (Nov-Apr) will clear a site of plant litter and stimulate sericea germination and growth, which will help reduce the seedbank and prepare the site for an herbicide application. Growing-season fires prior to sericea producing seed (Jul to early Sep) can reduce sericea vigor, dominance, and seed production, and make it easier to control sericea with herbicide later in the fall or the next spring.

Herbicide

Herbicides containing the active ingredients glyphosate, metsulfuron methyl, triclopyr, and triclopyr+fluroxpyr are effective for controlling sericea lespedeza. Herbicide containing 2,4-D, dicamba, and picloram have been proven ineffective at controlling sericea. Most herbicides should be applied when sericea is actively growing during its vegetative stage or early bloom period (Jun-Aug). However, metsulfuron methyl is most effective when sericea is in full bloom (Aug-Sep).

Tillage

Tillage, such as disking, is ineffective for sericea lespedeza control and it can make the infestation worse. Disking scarifies sericea seed and can spread it across the field. In areas where sericea is present, tillage should be avoided.

Acknowledgments

We thank Zach Voyles, Nate Yazel, Adam DeLucenay from the Indiana Department of Natural Resources, and Matt Kraushar from the Indiana Department of Transportation for reviewing this publication. Thank you to the Renewable Resources Extension Act and the West Central Indiana and Sagamore chapters of Pheasants Forever and Quail Forever for funding. Thank you to Dawn Minns for layout and design.

Additional Resources

Brooke, J. and C. Harper. 2017. Renovating native warm-season grass stands for wildlife: A land manager's guide. Purdue University and University of Tennessee Extension. FNR-548-W, PB-1856.

Early summer control of sericea lespedeza using herbicides. Agronomy eUpdates. Kansas State University Extension. https://eupdate.agronomy.ksu.edu/eu_article_prep.php?article_id=3747

Sericea Lespedeza Control. Missouri Department of Conservation. https://mdc.mo.gov/trees-plants/invasive-plants/sericea-lespedeza-control

Sericea lespedeza, in flower in August, is invading this conservation planting.

Conservation Program Disclaimer: *The management practices in this publication may conflict with cost-share program (e.g., CRP) rules and regulations (e.g., primary nesting season). If you are enrolled in a conservation program, please consult with an agency representative before utilizing a prescribed practice.*

Control Scenarios

These scenarios are only a few examples of common scenarios in the field. Many other scenarios exist. For your specific conditions, please consult a biologist.

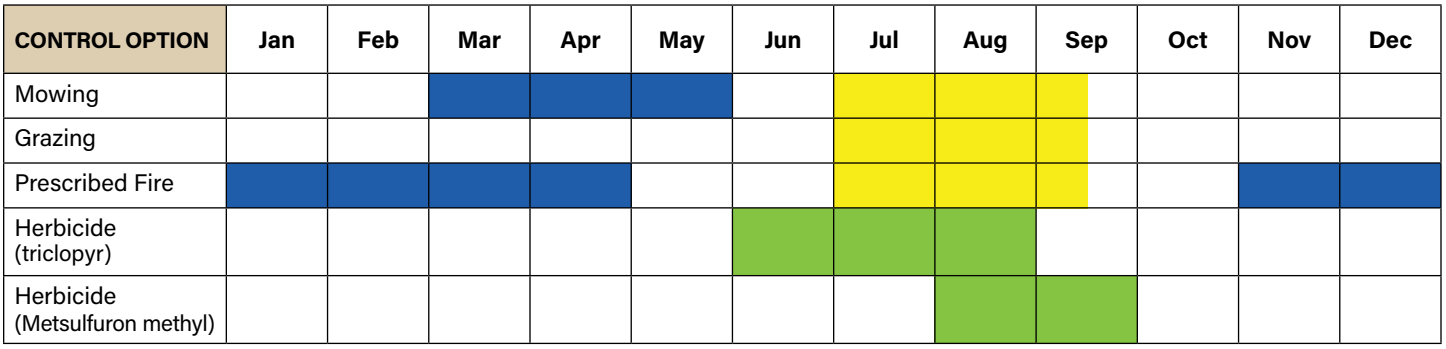
Native grassland with high-forb diversity and/or low sericea infestation

OPTION 1.	OPTION 2.
Year 1 ▪ Use prescribed fire during the late-growing season (Jul-Sep) ▪ Treat any resprouting plants with triclopyr during the late summer or early fall (Sep-Oct) **Year 2** ▪ Spot treat sericea in Jun-Aug with triclopyr or during flowering (Aug-Sep) with metsulfuron methyl **Year 3+** ▪ Utilize prescribed fire as necessary ▪ Spot treat sericea in Jun-Aug with triclopyr or during flowering (Aug-Sep) with metsulfuron methyl	**Year 1** ▪ Prepare the site with a dormant season (Nov-Mar) prescribed fire or spring mowing (Mar-May) ▪ Spot treat sericea in Jun-Aug with triclopyr ▪ Spot treat any remaining sericea with metsulfuron methyl during flowering (Aug-Sep) **Year 2** ▪ Spot treat sericea in Jun-Aug with triclopyr or during flowering (Aug-Sep) with metsulfuron methyl **Year 3+** ▪ Spot treat sericea in Jun-Aug with triclopyr or during flowering (Aug-Sep) with metsulfuron methyl

Old field, native grass pasture, or CRP field with low forb-diversity and heavy sericea infestation

OPTION 1.	OPTION 2. HERBICIDE
Year 1 ▪ Prepare the site with a dormant season prescribed fire (Nov-Mar) or spring mow (Mar-May) ▪ Broadcast or spot treat sericea in Jun-Aug with triclopyr ▪ Spot treat any remaining sericea with metsulfuron methyl during flowering (Aug-Sep) **Year 2** ▪ Spot treat sericea in Jun-Aug with triclopyr or during flowering (Aug-Sep) with metsulfuron methyl **Year 3+** ▪ Spot treat sericea in Jun-Aug with triclopyr or during flowering (Aug-Sep) with metsulfuron methyl as needed	**Year 1** ▪ Mow the sericea in late summer (late July-early August) prior to flowering. ▪ Broadcast treat sericea resprouts with triclopyr in Sep-Oct **Year 2** ▪ Broadcast or spot treat sericea in Jun-Aug with triclopyr or during flowering (Aug-Sep) with metsulfuron methyl **Year 3+** ▪ Spot treat sericea in Jun-Aug with triclopyr or during flowering (Aug-Sep) with metsulfuron methyl as needed

Control Timeline



Control[1]

Suppression[2]

Site Preparation[3]

[1] Control = provides effective control of sericea lespedeza

[2] Suppression = reduces sericea vigor, dominance, or seed production, but may not provide long-term control

[3] Site preparation = used prior to herbicide application to improve herbicide efficiency

Herbicide Recommendations

Active Ingredient	Trade Names[1]	Application rates[2]	Application Timing	Adjuvant Information[3]	Additional Information
glyphosate	Roundup, Gly Star Plus, and others	**Broadcast:** 1.5–2 qt/ac **Spot Spray:** 2-3% solution of glyphosate by volume	June to August when sericea is at least 12 inches tall, but prior to flowering	Add AMS (2-3 lbs/A). Add NIS to improve control of tough to control species of if the formulation does not contain a spray adjuvant.	No selectivity. Will also kill native grasses and other beneficial plant species.
metsulfuron methyl	Escort XP	**Broadcast:** 1 oz/ac **Spot Spray:** 1 gram of Escort XP per gallon of water	August to September when sericea is flowering	Apply with NIS at a minimum rate (concentration) of 0.25% v/v (1qt/100 gal of spray solution)	Many native grasses are tolerant to application. Apply to sericea lespedeza when the stand <50% flowering will compromise control. Provides control of problematic broadleaf species, including, sweetclover, wild carrot, curly dock, henbit, teasel, and poison hemlock.
triclopyr (amine or choline formulation)	Element 3A, Garlon 3A, Remedy Ultra, Triclopyr 3A, Vastlan	**Broadcast:** 1 qt/ac (Triclopyr 3a) **Spot Spray:** 2 oz of Remedy Ultra per gallon of water	June to August when sericea is at least 12 inches tall and during vegetative and early flowering stage	Add a NIS to all spray mixtures.	Applications during drought conditions may not be as effective. Effective for spot-spraying sericea lespedeza or woody plants.
triclopyr + fluroxypr	Pasturegard, Pastureguard HL, Tailspin	**Broadcast:** 1.5 pt/ac (Pasturegard HL) **Spot Spray:** 1 oz of Pasturegard HL per gallon of water	June to August when sericea is at least 12 inches tall and during vegetative and early flowering stage	Add a NIS or AMS (0.25-0.5% or 1-2 qt/100 gal) can improve weed control	Effective for spot-spraying sericea lespedeza or woody plants. Pasturegard is 25% triclopyr and 8.6% fluroxypyr, whereas Pasturegard HL is 45% triclopyr and 16% fluroxypyr.

[1] Product names are provided as examples and for educational purposes. Several other products with the same active ingredient may exist. Listing of the products does not constitute an endorsement.

[2] The rates for these applications are provided for one specific product as an example. These products are sold under several trade names with different concentrations (active ingredients per gallon). Be sure to read the label to determine application rates for specific products.

[3] Spray adjuvants, including surfactants, are supplemental products added to a spray mixture to improve the performance of the chemical. Please refer to the product labels for more information. AMS = ammonium sulfate, COC = Crop Oil Concentrate, MSO = Methylated Seed Oil, NIS = Nonionic Surfactant, v/v = volume/volume

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In partnership with: DNR Indiana Department of Natural Resources; USDA United States Department of Agriculture Natural Resources Conservation Service; Quail Forever; Pheasants Forever