

# Wild Licorice Identification and Management in Pastures

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## Description

### *Wild Licorice Quick Facts*

- Wild licorice (*Glycyrrhiza lepidota*) is a native perennial that thrives in moist soils, spreading by seeds and rhizomes.
- It is commonly found along streams, ditch banks, and pastures.
- Wild licorice's rapid summer growth and its unpalatable nature reduce both forage yield and pasture quality for livestock grazing.
- Early detection and prevention are crucial to limiting its rapid spread via rhizomes.
- Nonchemical control includes early detection, intensive grazing, and mechanical removal when infestations are small.
- Conventional herbicides are effective for control, but no organic options have been identified.



**Figure 1.** Wild Licorice

*Plant on a Ditch Bank (in September)*

Wild licorice, also known as American licorice, is a perennial legume native to North America, commonly found in the western United States (Figure 1). Historically,

Native Americans used wild licorice for medicinal purposes and as a food source (Kosto, 2023). In the 1950s, research highlighted its high nutritional value for livestock (Kosto, 2023). However, despite its nutritional benefits, livestock show low preference for wild licorice, making it unsuitable as a pasture or forage crop.

Wild licorice reproduces rapidly through seeds and rhizomes, leading to large infestations, particularly in pastures. This becomes a concern during summer when pasture grasses are less competitive. The low preference of livestock for wild licorice results in overgrazing of other plant species, leaving them at a competitive disadvantage, further promoting the spread of wild licorice and contributing to pasture infestations.

## Identification



**Figure 2.** Wild Licorice

### *Compound Leaf Structure*

Wild licorice grows between 1.5 and 3.5 feet tall (Wynia, n.d.). Its compound leaves are composed of smaller leaflets, with mature plants typically having 7–21 odd-pinnate leaflets (3–10 pairs; Figure 2). The flowers are pea-like yellowish-white flowers, blooming from June to August (Wynia, n.d.; Figure 3). Wild licorice is often mistaken for goatsrue (*Galega officinalis*); however, their seeds provide a key distinguishing feature. Wild licorice seeds mature between July and October and develop inside a brown, leathery pod covered with hooked barbs, forming a bur (Wynia, n.d.; Figure 4). Goatsrue seeds form in a smooth, dull-yellow pod that is straight (Van Vleet, 2011). Wild licorice barbs aid seed dispersal by attaching to animals. The seeds are green to reddish-brown and bean-shaped (Wynia, n.d.; Figure 5).

## Management



Figure 3. Wild Licorice

Flowers

### Prevention

Prevention is the best control method.

- Scout areas with current or potential infestations, including ditch banks, waterways, fence lines, and irrigated pastures. This is especially important in pastures adjacent to streams, rivers, or bodies of water.
- To prevent the spread of burs, thoroughly clean equipment, tools, clothing, and livestock after working in infested areas.
- Once an infestation is detected, implementing multiple management strategies is crucial for effectively controlling wild licorice.

### Cultural Methods



Figure 4. Wild Licorice

Seed Pod (bur)

Cultural practices are also important. Proper fertilization, irrigation, seeding, and grazing promote healthy pasture grasses, thereby increasing their ability to outcompete wild licorice. Conversely, both overgrazing and excessive irrigation weaken forage grasses, creating an ideal environment for wild licorice to thrive.

Although wild licorice is nutritious, livestock usually avoid it, making grazing an unreliable control method unless pastures are intensively grazed, forcing livestock to consume it (Kosto, 2023). Further, intensive grazing reduces its prevalence but is unlikely to achieve total control (Kosto, 2023). Additionally, livestock spread burs, which leads to new infestations. A healthy, well-

established pasture remains the best defense against unwanted weeds. Mowing helps reduce seed production but does not stop the weed's spread through underground rhizomes. To have success with this approach, frequent mowing is required from June to September. Currently, no biocontrol methods are available.

### Chemical Control



Figure 5. Penny-Sized Wild Licorice Seed Pod (bur), With Green to Red-Brown, Bean-Shaped Seeds

Wild licorice can be controlled using one or more herbicides listed in Table 1. **Always read the herbicide label before use; it is both illegal and unsafe to apply herbicides without adhering to the label.** Pay close attention to safety requirements, usage restrictions, application instructions, and disposal guidelines.

*For wild licorice, ensure the herbicide is labeled for pasture use and check for grazing restrictions.*

The herbicide label will specify where the product can be applied and may limit its use based on specific site conditions. At the treatment site, be mindful of your surroundings. Factors such as slope, nearby vegetation, temperature, and wind can significantly impact the efficacy of herbicide applications. When applying herbicides to control wild licorice, assessing the area for water bodies is vital. Wild licorice thrives in moist environments and is commonly found along creeks, ditch banks, and rivers. If the herbicide is not approved near water, follow label restrictions or choose an alternative, registered product.

Wild licorice is best controlled with postemergence herbicides, particularly during specific growth stages like full bloom or after the first frost, when sugars are transported to the roots or flowers respectively. Early applications may temporarily suppress the plant but often require follow-up treatments due to regrowth.

Table 1. Chemical Control for Wild Licorice

Active chemical	Products	Notes
Aminopyralid	Milestone, Whetstone, Malibu	Aminopyralid use restrictions limit the distribution of manure

Active chemical	Products	Notes
		and hay from treated areas. Always read the label before application.
Aminopyralid + Florpyrauxifen	Duracor, High Noon	These products have the same restrictions as Milestone.
Aminopyralid + Metsulfuron	Chaparral	It contains aminopyralid, so manure and hay restrictions apply. Always read the label before use.
Aminopyralid + Triclopyr	Capstone	It contains aminopyralid, so manure and hay restrictions apply. Always read the label before use.
Picloram	Tordon 22K, Triumph 22K, Trooper 22k, Picture	Picloram is a restricted-use herbicide that requires a pesticide applicator license for purchase. Be sure to review grazing restrictions carefully before applying any picloram-based products.
Picloram + 2,4-D	Grazon P+D, Graslan L, Picloram+D	Products containing picloram are restricted-use herbicides. Consult the label for use restrictions.

## References

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## Figures Credit

Jacob Hadfield provided all photos.