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## Welcome to your invasive species guide

Healthy forage starts by restoring your land and controlling the invasive species that threaten it. Envu has the knowledge and tools to help you protect every acre. This guide will help you identify and understand invasive species and the management strategies and products available to increase forage quality and quantity while decreasing grazing pressure. With healthier forage, your productivity and profitability will thrive for years to come.

Invest in your land. Strengthen your forage.





### **Annual grasses**

Controlling invasive grasses takes time, vigilance and a plan.

Many species of grasses are aggressive and fast-growing, invading and replacing native vegetation within a few years and compromising the health of your rangeland and the quality of your forage.

Understanding the type of grasses you have is the first step to devising a plan to eliminate them.

### Key problem species

### Cheatgrass

**Bromus tectorum** 

Cheatgrass has a nodding seedhead with many fine hairy drooping spikelets. It thrives in the coarse-textured soil found in overgrazed rangelands and wildfire-affected zones. It produces many seeds that spread easily, transported by wind, water, animals and human activity.



**Life cycle:** Winter annual, but can be biennial. **Challenge:** Germinates in winter and matures early.



#### Medusahead

Taeniatherum caput-medusae

Medusahead is a winter annual with narrow leaves and long, twisted awns on seedheads that grow where soils are clay-rich or retain moisture late into the growing season. It is a highly invasive noxious weed that matures later than other annual grasses, staying green into late spring. Its seeds have small silica barbs that allow it to cling and spread.



Life cycle: Winter annual.

**Challenge:** Seedlings emerge in early spring and grow fast.



#### Ventenata

Ventenata dubia

Ventenata has a long, slender stem, rolled leaves and a tapered tip with dark-red/black nodes on its stem. It thrives in rocky soils and grasslands, reducing forage production up to 70%. Its seeds spread easily, transported by wind, water, animals and human activity.



Life cycle: Winter annual.

**Challenge:** Seeds can persist in the seed bank or up to three years.





Rejuvra® herbicide is made to last – it controls cheatgrass and other invasive annual grass species for longer, giving native vegetation the time it needs to recover.





#### Active ingredient: Indaziflam.

Rejuvra® herbicide is a preemergence herbicide that targets germinating seeds rather than emerging plants to provide long-lasting control for up to four years after one application. This long control time not only reduces time and labor costs but also frees resources like water and nutrients to promote recovery of perennial native vegetation.

#### Reap the benefits of Rejuvra herbicide:

- Controls weeds for up to four years.
- · Supports native vegetation recovery.
- · Improves forage quality and growth.
- · Reduces fine fuel loads that contribute to wildfires.

#### Rejuvra herbicide by the numbers:

- Up to 3.5x more perennial grass production.
- Reduce feed costs by up to \$50-\$100 per head.
- Reduce labor costs by up to \$15-\$25 per head.

Scan for detailed application information and tips to apply Rejuvra herbicide.







## Mesquite and huisache

Invasive brush, like mesquite and huisache, grows aggressively with deep roots that contribute to water loss and the crowding out of native vegetation and healthy forage. Understanding and controlling these types of plants is imperative to the long-term health of rangeland and your cattle.

Learn more about both types of invasive brush and how Invora® herbicide can help you eliminate them.

### Key problem species

#### Huisache

#### Vachellia farnesiana

Huisache has feathery, doubly compound leaves with tiny secondary leaflets and large thorns along the branches. It can form dense thickets and produces seeds that spread easily, transported by water, animals and human activity.

#### Quick look:

Life cycle: Can live up to 50 years.

**Challenge:** It can grow rapidly, up to 2 to 4 feet in a single year and can resprout even after a fire.



### Mesquite

#### Prosopis spp.

Mesquite has a distinct feathery leaf structure with bright-yellow flower spikes and thorny branches. It can thrive in arid and semi-arid regions with deep root systems capable of absorbing large amounts of water. It can form dense thickets that degrade grazing lands.

#### Quick look:

**Life cycle:** Spring flowering, impressive longevity once established, up to 100 years.

**Challenge:** Spreads rapidly and is able to thrive in arid conditions.





Invora® herbicide is redefining the meaning of long-lasting huisache and mesquite control. With just a single application, you can stop invasive species in their tracks, restore native vegetation and protect your land's legacy for years to come.





#### Aminocyclopyrachlor and triclopyr (Group 4 herbicides).

Invora® herbicide uses innovative chemistry to reduce brush competition from species like mesquite and huisache with a single application. Invora herbicide combines two different active ingredients to provide better brush management and control a wide spectrum of undesirable trees, brush, and herbaceous weeds through both root and shoot uptake.

#### Reap the benefits of Invora herbicide:

- A single application of Invora herbicide can reduce the competition from mesquite for 10+ years and huisache for five years or more.
- A decrease in canopy cover as a result of successful treatment is directly correlated to an increase in forage production.
- Invora herbicide is backed by a decade of research and in-field trials that demonstrate long-term efficacy over time.

Scan for detailed application information and tips to apply Invora herbicide.







## Benefits of long-lasting control

#### The pros outweigh the cons.

Undesirable species grow rapidly and some mature early, making physical methods like burning hard to time, manage and control. Managing the right strategies and finding the combination of physical and chemical solutions that are both efficient and cost-effective are key to successfully controlling undesirable species. Your Envu rep is a great resource to find the right strategy to strengthen your forage for years to come.

## Invest in your rangeland for healthier forage

#### Benefits of a treated pasture

Plants can restore their energy stores and are more resilient to stress

Strong, deep root system capable of accessing more moisture and nutrients

High diversity of native plant species

Minimal presence of invasive species

"It really knocks the ventenata and medusahead back.

The response from those perennial grasses has been extraordinary behind the Rejuvra® herbicide applications. It's an increase in forage production, which is what it's all about."

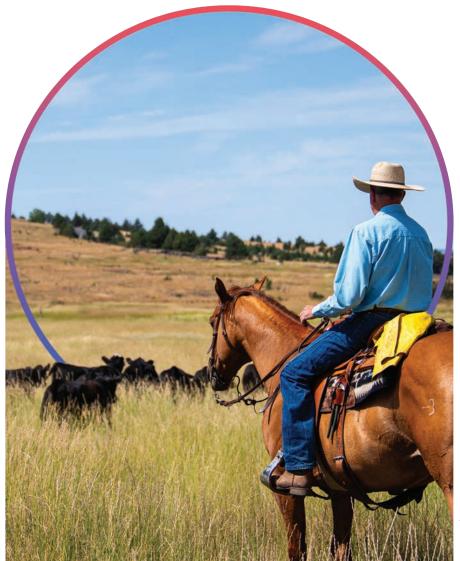
Jamie Foy, Vice President, Chief Pilot,
Bighorn Flying Company

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## Integrated approach to control

Rejuvra® herbicide and Invora® herbicide both provide multiyear control that disrupts the life cycles of resilient invasives, making them cost-effective tools when applied with precision to your rangeland.

Their success hinges on proper timing, adjuvant use and integration with land stewardship practices.



## Find the strategies that work for you

An integrated approach to invasive species management on range and pasture delivers more effective, sustainable and economically viable outcomes by combining multiple control strategies.





Long-term resistance management

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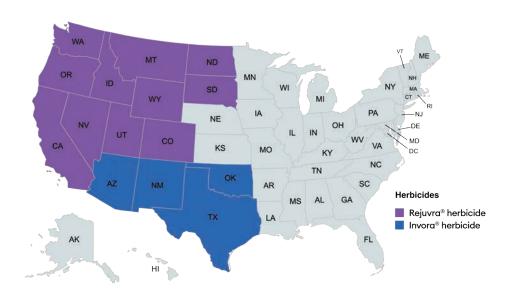


**Ecosystem** recovery

Both herbicides are effective tools for the long-term management of hard-to-control invasive species, creating windows for native perennial grasses to reestablish. While upfront costs may be higher, fewer applications are needed over time, decreasing labor costs while increasing your ROI for your operation.

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### States labeled for use



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At Envu, we're committed to restoring balance to the environment. When you use RangeView® to plan your application of either Rejuvra® herbicide or Invora<sup>®</sup> herbicide, we stand behind your efforts with the Long Haul Guarantee.

#### How to participate:



Enroll all treatment areas in RangeView.



Complete a species map of your land to help guide treatment decisions.



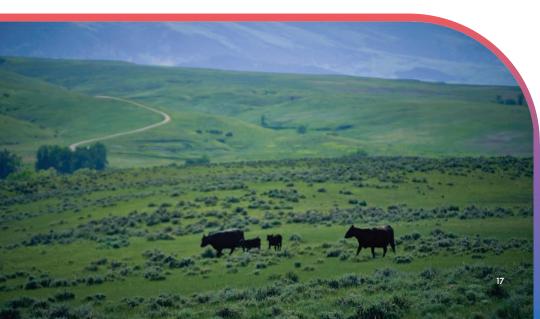
Determine which areas to treat and notify qualified applicator.



Upload as-applied file and herbicide invoice to RangeView for validation.

For more information on the Long Haul Guarantee, RangeView and how to participate in the program, ask your local rep or scan the QR code.







## About Envu Range & Pasture

We work with land managers to control invasive species, restore vegetation biodiversity and improve forage quality. To be a positive force for the land, we must be a positive force with nature. That's why we invest in innovative solutions to help you better care for your rangeland and strengthen your forage.



#### Find your rep

Connect with a local rep to learn more about Envu products.

