

Grazing Management:

Defer grazing until plants are firmly established, at least one growing season. Develop a grazing system that incorporates rest or deferment to maintain a healthy grass stand.

Conclusion:

Medusahead can be controlled and replaced with productive grasses and forages. Technical assistance is available through the Weed Prevention Area to coordinate treatments and cost-share funds are available to help defray the cost of herbicides and grass seed.



Medusahead Control & Seeding to Perennial Grasses



Produced by the Southern Cache County Medusahead Weed Prevention Area

For more information, please contact:
Blacksmith Fork Conservation District
(435) 753-5616 ext. 38
Natural Resource Conservation Service
(435) 753-5616 ext. 24
Cache County Weed Department
(435) 755-1562
You can also visit www.ebipm.org

Medusahead

Medusahead (*Taeniatherum caput-medusae*) is an invasive winter annual grass that has tremendous potential to spread, limit forage production, and reduce biological diversity on rangelands and pastures in the Intermountain West.

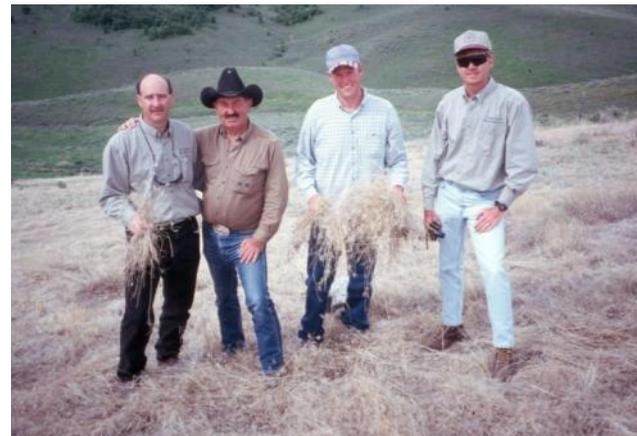


Medusahead contains high concentrations of silica, which makes it unpalatable to

livestock and wildlife and slow to decompose. Consequently, it builds up a thick layer of thatch and increases the threat of wildfires.

Medusahead seeds germinate quicker and seedlings grow faster than desirable grasses, making them strong competitors for soil moisture and nutrients.

Given the threat of medusahead to rangelands and pastures, it is imperative to control existing infestations and prevent them from expanding.



Southern Cache County Weed Prevention Area

Medusahead has invaded more than 2,000 acres in Cache and Box Elder counties. Concerned land owners in southern Cache County and agency personnel organized a Weed Prevention Area to control medusahead and prevent its spread.

An aggressive, hard-hitting effort is needed to stop it here and prevent its spread further into Utah and throughout the Great Basin.



Action Plan

1. Survey of area and map medusahead infestations 2008-2010.
2. All land owners having infestations will be contacted and requested to participate.
3. Each land owner will develop a treatment plan and schedule. NRCS can help with maps and planning.
4. Individual plans will be aggregated into annual work plans to schedule burning, herbicide, and seeding.

Treatment Practices

Burning: Prescribed burning is recommended if the thatch layer is thick. Removing the thatch improves herbicide contact with the soil and prepares the land for seeding. County and city fire departments can assist in carrying out safe burns.

Tillage: If the site can be tilled, the best chance of success is to plow the site, bury its seed 4-6 inches and prepare a seed bed for drill seeding.

Herbicide: Research and experience have shown that single treatments of herbicides have not given long-term control of medusahead. Seed reserve in the soil allows it to germinate and re-establish following treatment. Three successive years of herbicide control may be necessary to deplete seed in the soil.

Plateau is effective in controlling annual grasses, however results can be inconsistent. It is most effective when applied to bare soil in September before medusahead germinates. No surfactant is necessary if applying it to the soil. The initial application rate when applied to existing thatch should be 8-10 oz/acre. If the thatch has been burned, or there is little thatch to intercept the herbicide, 6 oz/acre may be sufficient. The 2nd year's application rate could



be reduced to 6 oz/acre, and 4 oz/acre the 3rd year.

A follow-up treatment in May with Journey may be effective in preventing any spring-germinating medusahead plants from going to seed, which will increase the rate at which the seed bank will be depleted.

Matrix has shown good results in field trials and it may be more consistent than Plateau. Perennial desired species do not seem to be negatively effected.

Landmark has long-lasting residual that provides 1-2 yrs control of annual grass seedlings, plus it provides some level of broadleaf weed control. It is



recommended to be applied at 1.5 oz/acre in fall after the first frost. However, perennial grasses may be damaged.

Post-establishment broadleaf weed control is also critical for successful establishment of desirable perennial grasses. Escort (0.25-0.5 oz/acre) is

Herbicide	Application	Treatment			Purpose	Notes
		Year 1:	Year 2:	Year 3:		
Plateau (imazapic)	Fall-before medusahead germinates (Sept.)	8 oz/ac	6 oz/ac	4 oz/ac	Successive applications to deplete medusahead seeds in the soil	Use adequate water to penetrate thatch (8 gal or more/ac). Results can be inconsistent
Matrix (rimsulfuron)	Fall,-before fall rains, prior to soil freezing	2 oz/ac			To control annual grasses	Multiple applications may be needed. Plant desired species, at least 7 months after application
Journey (imazapic + glyphosate)	Spring-before medusahead goes to seed (May)	16 oz/ac			To prevent spring-germinating plants from going to seed	
Landmark (sulfometuron +chlorsulfuron)	Fall-after first frost			1.5 oz/acre	Control of annual grasses and other invasive plants: morning glory, mallow and ragweed	Damage can occur to perennial grasses
Escort (metsulfuron)	Post-emergence (during rapid growth)			0.25-.5 oz/acre	For control of annual and perennial weeds	Is safe on young seedlings of perennial grasses
2,4-D	Post-emergence when weeds are small			0.5-1 lb/ac	To control most broadleaf weeds	
Roundup (glyphosate)	Spring	Variable rates			Post-emergence control of annual grasses	Low rates minimal damage to perennial species

This publication reports research involving pesticides. It does not contain recommendations for their use nor does it imply that uses discussed here have been registered. All uses of pesticides must be registered by appropriate State and/or Federal agencies before they can be recommended.

effective for control of annual and perennial weeds and is safe on young seedlings of most perennial grasses. 2,4-D (0.5 to 1 lb/acre) is also effective on most broadleaf weeds.

Seeding:

A healthy stand of desirable grasses and forbs is essential to suppress medusahead and prevent its expansion. Perennial grasses should be seeded after the herbicide residue dissipates. Drill seed at rates of 12-14 lb/acre of pure live seed. If the site is too steep or rocky, broadcast seed at 20 lb/acre of pure live seed and cover with a drag or chain to incorporate the seed into the soil. Late fall planting allows seeds to germinate when snow melts in early spring. A narrow planting time frame exists in early spring in northern Utah when soils are dry enough for equipment, yet enough soil moisture remains for seeds to germinate and establish. Adapted species include:
Rhizomatous spreading grasses:
 'Luna' pubescent wheatgrass
 Intermediate wheatgrass
Bunchgrasses:
 'Hycrest' crested wheatgrass
 'Vavilov II' Siberian wheatgrass

To add diversity, include native grasses, such as Western wheatgrass and Sherman big bluegrass (2 lb/acre), alfalfa (2 lb/acre) and forage kochia (1 lb/acre).

For more details on seeding, consult the 'Revegetation Guidelines for the Great Basin', available free by request or online as a PDF at www.ebipm.org, or you can also consult the 'Intermountain Planting Guide' (available at: http://extension.usu.edu/files/publications/publication/pub_7717229.pdf)