



Bureau of Indian Affairs Navajo Region

Noxious Weed Treatment Quick Reference

This general table is a quick reference only. Treatments can behave differently in different settings. Treatments may also affect native and desirable plants. Monitoring and periodic reviews of treatment effectiveness can inform the suitability of each method over time.



Effective



Must combine with other methods to be effective



Ineffective



Unknown (not recommended)

Integrated Weed Management utilizes all appropriate management methods to treat weed infestations. Using one method alone is not as effective as combining or "integrating" a variety of methods that affect more than one aspect of a weed's biology. Healthy plant populations compete with, replace, and resist future noxious weed invasions. In the absence of competitive plant populations, noxious weeds can re-establish regardless of the control method used. Consult your BIA Noxious Weed Coordinator to develop a management and safety plan to achieve your desired results. Refer to the Navajo Nation Integrated Weed Management Plan for more details. Based on University of California Weed Research and Information Center. <http://wric.ucdavis.edu> *Info from University of California Integrated Pest Management Site <http://ipm.ucanr.edu> †Pacific Northwest Extension Publication 703 "Integrated Management of Mustard Species in Wheat Production Systems"

INTEGRATED WEED CONTROL METHOD

SPECIES BY CATEGORY

Species	Cut/ Mow	Grubbing	Tilling	Hand pull	Herbicide	Biological Control	Targeted Grazing	Burn	Native Plant Restoration
CATEGORY A — HIGH									
African rue	—	OK Remove roots	—	—	✓ Imazapyr, glyphosate, metsulfuron	—	—	—	<p>All projects are required to restore native plants as part of noxious weed management. They should:</p> <ul style="list-style-type: none"> Evaluate sites for water availability, soil health, and sun exposure. Use plants adapted to the site. Create planting plans to designate appropriate planting zones. Seed after treatments (best for forbs and grasses) Replant a mix of native trees, forbs, and grasses. Monitor plant growth
Blue mustard	OK Before seeds	✓ Before seeds	✓ When young	✓ Before seeds	✓ Various	—	—	—	
Bull thistle	OK Before flowering	✓ Before flowering	✓ Before flowering	✓ Before flowering	✓ 2,4-D, aminopyralid, clopyralid, picloram	—	OK Rosette stage w/ herbicide for 3 yrs.	—	
Canada thistle	OK Cut seedheads. Repeat 3-4 wks	OK Remove roots	—	OK Repeat 3-4 wks	✓ Various	—	OK Seeding stage. 3 yrs w/ herbicide	—	
Common Mediterranean grass	—	OK May resprout	OK May resprout	—	✓ Fluazifop, glyphosate, imazapyr	—	OK Reseed to prevent annual grasses	—	
Dalmatian toadflax	—	OK Remove roots	OK Remove roots. Repeat weekly	✓ Small populations when young	OK Fluazifop, glyphosate, imazapyr	OK	—	—	
Fountaingrass	—	OK For plants with basal area > 6 in.	—	✓ Remove roots	OK Various	—	—	—	
Leafy spurge	—	OK Before seeds	OK Before seeds	—	OK Various	OK	OK Goats and sheep only, before seed	—	
Musk thistle	OK Cut seedheads or flowers	OK 2 to 4 inches below ground	OK 2 to 4 inches below ground	OK Remove roots and seeds	OK Various	—	OK Rosette stage w/ herbicide for 3 yrs.	OK Grass fires ineffective	
Perennial pepperweed	OK To remove thatch only	—	OK Only seedlings	OK Only seedlings	OK Various	—	OK Rosette stage for several years	—	
Ravenna grass	—	OK Remove whole plant	OK Remove roots	OK Remove roots	OK Various	—	—	—	
Sahara mustard	OK Before seeds	—	—	✓ Small populations when young	✓ Various	—	—	—	
Scotch thistle	OK Cut seedheads or before buds	OK 2 to 4 inches below ground	OK May stimulate germination	✓ Cut root below surface	✓ Various	—	OK Goats and sheep only for small pops	—	
Spotted knapweed	—	—	—	OK Small populations	✓ Various	OK	OK Rosette stage 2x per year	—	
Squarrose knapweed	—	—	—	OK Small populations	OK Various	—	—	—	
Sulphur cinquefoil	—	OK Remove root crown	OK May stimulate germination	✓ Small populations	OK 2,4-D, aminopyralid, picloram	—	—	—	
Tall whitetop / Hoary cress	OK Must repeat	—	—	OK Hand hoe every 2-4 weeks	OK Various	—	OK Before flowering 2x per year for 3+ yrs.	—	
Tamarisk (other spp.)	OK Use with herbicide	✓ Remove roots	OK Must repeat	✓ Only good for seedlings	OK Imazapyr	—	OK Seedlings and resprouts only	OK To remove debris only	
Tree of heaven	OK Only with herbicide	OK With woody weed extractor	—	OK Only good for seedlings	OK Glyphosate, imazapyr, triclopyr	—	—	—	
Uruguayan pampas grass	OK Use chainsaw or weed whacker	✓	—	OK Remove top of roots	OK Imazapyr	—	—	OK Burn tops. Pair with herbicide.	
Yellow nutsedge*	—	—	OK When young, to 14 in deep	OK Before they have 5-7 leaves	OK Glyphosate	—	—	?	
Yellow starthistle	OK When seedhead forms	OK Before seeds	✓ Before seeds	OK Small populations	✓ Various	OK	OK After bolting stage	OK During early flowering	
CATEGORY B — MEDIUM									
Camelthorn	—	—	OK Must repeat during season	—	✓ Clopyralid, imazapyr, metsulfuron, picloram	—	OK When young with few spines	—	<p>Combine with other cultivation methods, such as mulching, cover crops, fertilization, and crop rotation. Maintain dense native plants or agricultural crops to prevent weeds from establishing.</p>
Diffuse knapweed	OK Late bud stage	—	OK Remove 2-4 in of taproot	OK Small populations	✓ Various	OK	OK Early spring, reduce seed production	OK May cause germination	
Halogeton	OK Before seeds	—	✓ Before flowering	✓ Before flowering	OK Various	—	—	—	
Johnsongrass	OK Repeated, and close to ground	—	✓ In spring, repeat biweekly	OK Remove rhizomes and sprouts	✓ Metribuzin, proflaminate	—	—	—	
Russian knapweed	OK 3x per year. May stimulate growth	OK Small populations	OK 1ft deep for 3 yrs. Clean equip.	✓ Small populations when young	✓ Various	OK	—	—	
Russian olive	OK Cut mid-summer, mow next year	OK For agricultural sites	—	✓ Small populations when young	OK Various	—	OK Remove young seedlings	OK Suppression only	
Siberian elm	OK Use with herbicide	✓	✓	OK When young	✓ Glyphosate, imazapyr, triclopyr	—	—	—	
Tamarisk / Salt cedar	OK Only with herbicide	✓ Remove roots	OK Must repeat	✓ Only good for seedlings	OK Imazapyr	—	OK Remove young seedlings	—	
CATEGORY C — LOW									
Bald brome	OK Every 2-3 weeks	—	OK Shallow tilling, may germinate	✓ Before seed forms, remove roots	OK Glyphosate, indaziflam, metribuzin	—	—	OK Before seed development	<p>The goal is to suppress noxious weed growth and prevent establishment. Maintaining healthy native plant or agricultural crop cover is key to successful noxious weed control and eradication. Contact your BIA Noxious Weed Coordinator for more information.</p>
California burclover	OK Use with herbicide	—	OK Shallow tilling	OK Small populations, remove roots	OK 2,4-D, glyphosate, indaziflam	—	—	OK May cause resprouting	
Cheatgrass	OK Every 2-3 weeks	—	OK Shallow tilling, may germinate	OK Small populations	OK Glyphosate, imazapic, indaziflam	—	OK Before flowering 2x per year for 2+ yrs.	OK Spring burns only	
Field bindweed	—	—	OK Deep tilling with repeats	OK Only good for seedlings	OK 2,4-D, dichlobenil, glyphosate, picloram	OK	—	—	
Field brome	OK Every 2-3 weeks	—	OK Shallow tilling, may germinate	✓ Before seed forms, remove roots	OK Glyphosate, indaziflam, metribuzin	—	—	OK Before seed dispersal	
Horehound	OK To the ground in spring	—	OK When soil is dry	✓ Small populations	OK 2,4-D, metsulfuron, picloram, triclopyr	—	—	—	
Jointed goatgrass	OK After flowering, before seeding	—	OK Must bury seeds	✓ Small populations	OK Glyphosate, imazapic, indaziflam	—	—	OK Before joints disarticulate	
Kochia	OK Every 3 weeks	OK Cut root below surface	OK Deep tilling	✓ Small populations, remove roots	OK Various	—	—	—	
Puncturevine	—	—	✓ Shallow tilling	✓ Before seeds	✓ 2,4-D, indaziflam, pendimethalin	OK	—	—	
Red brome	OK Every 2-3 weeks	—	OK Shallow tilling, may germinate	✓ Small populations, remove roots	OK Various	—	—	OK Spring burns only	
Rescuegrass	OK Every 2-3 weeks	—	OK Shallow tilling, may germinate	✓ Small populations, remove roots	OK Various	—	—	OK Spring burns only	
Ripgut brome	OK Every 2-3 weeks	—	OK Shallow tilling, may germinate	✓ Small populations, remove roots	OK Glyphosate, indaziflam, metribuzin	—	—	OK Late spring before seed shatter	
Russian thistle	OK Repeat before seed forms	OK May stimulate germination	OK May stimulate germination	✓ Small populations	OK Various	—	—	—	
Smooth brome	✓ At boot stage, when dry and hot	—	—	OK Small populations, remove roots	OK Glyphosate, indaziflam, metribuzin	—	OK At start of grazing season	OK Early spring or boot stage	
Spreading wallflower†	OK Before flowering	—	OK Seedlings only, dry and warm	OK Small populations, remove roots	OK 2,4-D, thifensulfuron	—	—	—	

