

Carefully select herbicides suitable to your land use goals. Always read, understand, and follow label directions; the label details pesticide LAWS. Some listed herbicides are not suitable for croplands, turf, ornamental beds, etc.; read the label to determine acceptable application sites.

Note: 0.25% v/v = 0.32 oz./gallon of solution or 1 pint/100 gallon of solution

List A Noxious Weeds

African rue

Peganum harmala

	Herbicide	Rate	Application Timing
	Imazapyr* (Arsenal)	0.5-1 qt./acre + 1% v/v methylated seed oil	Apply when plants are actively growing.
Note: *Imazapyr products are non-selective and will kill any vegetation contacted. Imazapyr is NOT recommended for use in ornamental or turf settings.			

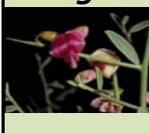
Bohemian/Giant/Japanese knotweed

Polygonum x bohemicum, Polygonum sachalinense, Polygonum cuspidatum

	Herbicide	Rate	Application Timing
	Glyphosate (Rodeo*, AquaMaster*, AquaNeat* are all safe for aquatic use)	2.5-3% solution (3.2-3.8 oz./gal water) + 0.25% v/v non-ionic surfactant	Apply evenly over leaf surface to wet, not so dripping occurs. Treat when plants are actively growing, pre-bud to flowering stage: June to July (at least half of foliage should still be green).**
	Glyphosate (Rodeo*, AquaMaster*, AquaNeat* are all safe for aquatic use)	5-6 ml undiluted herbicide per individual stem for injections	Use a calibrated injection gun to inject just below the third node from July to September. (gun can be bought online) (total treatment must not exceed 8 quarts (2 gallons) per acre or approximately 1,000-1,500 stems per acre for suggested rates).
	Triclopyr (Garlon 3A for aquatic sites) OR Imazapyr*** (Habitat* or Arsenal* are all safe for aquatic use)	1% solution (1.3 oz./gal water) + 0.25% v/v non-ionic surfactant	Apply evenly over leaf surface to wet, not so dripping occurs. Treat when plants are actively growing, pre-bud to flowering stage: June to July.** Injection method is not allowed for these herbicides.
Note: *These herbicide products are non-selective and will kill any vegetation contacted. **If leaves are above one's head, plants can be bent down to allow better foliar spray coverage. ***Imazapyr is NOT recommended for use in ornamental or turf settings.			

Camelthorn

Alhagi maurorum

	Herbicide	Rate	Application Timing
	Metsulfuron (Escort XP)	1 oz./acre + 0.25% v/v non-ionic surfactant	Apply during bolting to early flower growth stages.

Common crupina

Crupina vulgaris

	Herbicide	Rate	Application Timing
	Picloram (Tordon/Picloram 22K Restricted use pesticide)	1 pint/acre + 0.25% v/v non-ionic surfactant	Apply at rosette growth stage or when adequate soil moisture and plants are actively growing. (Early spring to late summer depending on conditions) DO NOT use near trees, desirable shrubs, water, or high water table. Not permitted for use in the San Luis Valley.
	Metsulfuron + Chlorsulfuron (Cimarron X-tra)	2 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply at rosette to bolting growth stages. (Early spring to early summer)
	Metsulfuron (Escort XP)	1 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply at rosette to bolting growth stages. (Early spring to early summer)

Cypress spurge

Euphorbia cyparissias

	Herbicide	Rate	Application Timing
	Quinclorac (Paramount - non- crop)	16 oz. product/acre + 2 pints/acre methylated seed oil or crop oil concentrate	Apply at the flowering stage. (Spring)
	2,4-D + Dicamba (Range star)	2 qts. 2,4-D/acre (2.0 lb/active ingredient) + 1 qt. dicamba/acre (1 lb active ingredient)	Apply at the flowering stage. (Spring)

Dyer's woad

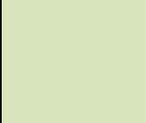
Isatis tinctoria

	Herbicide	Rate	Application Timing
	Metsulfuron (Escort)	0.5-1 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply at the rosette to bloom growth stages. (Late winter to early spring)
	Chlorsulfuron* (Telar)	1 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply at the rosette to early bolt growth stage. (Late winter to early spring)
Note: *This herbicide has residual soil activity that will affect all broadleaf seedlings germinating after application has occurred.			

Elongated mustard

Brassica elongata

	Herbicide	Rate	Application Timing
	Metsulfuron (Escort XP)	0.5-1 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply at the rosette to bloom growth stages. (Spring to mid-summer)

	Chlorsulfuron* (Telar XP)	1 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply at the rosette to bolting growth stages when plants are actively growing. (Spring to mid-summer)
Note: *This herbicide has residual soil activity that will affect all broadleaf seedlings germinating after application has occurred.			

Giant reed

Arundo donax

	Herbicide	Rate	Application Timing
	Glyphosate* (Rodeo, AquaMaster, AquaNeat: all safe for aquatic use)	2-4 qts./acre + 0.25% v/v non-ionic surfactant OR 2% v/v product + 0.25% v/v non-ionic surfactant for spot spraying	Apply foliar application when plants are actively growing (late summer to fall). May require several years of treatment.
	Imazapyr* (Arsenal, Stalker, Habitat)	1-2 qts./acre	Apply to foliage until wet (but not dripping) while plants are actively growing (late summer to fall)
Note: *These herbicide products are non-selective and will kill any vegetation contacted. Imazapyr is NOT recommended for use in ornamental or turf settings.			

Giant salvinia

Salvinia molesta

	Herbicide	Rate	Application Timing
	Diquat (Reward - general use)	Refer to label.	Refer to label.
	Glyphosate (Rodeo, Aqua Master, etc. - general use)	Refer to label.	Refer to label.
	Fluridone (Sonar - general use)	Refer to label.	Refer to label.

Hairy willow-herb

Epilobium hirsutum

	Herbicide	Rate	Application Timing
	Imazapyr* (Habitat**, Arsenal** for aquatic use)	0.5-1% v/v (0.6-1.3 oz. imazapyr/gal water) + 0.25% v/v non-ionic surfactant	Apply evenly over leaf surface "to wet," not dripping. Treat in the pre-bud to flowering stage. (June to August)
	Glyphosate (Rodeo**, AquaMaster**, AquaNeat** for aquatic use)	Up to 5% v/v (Up to 6.4 oz. glyphosate/gal water) + 0.25% v/v non-ionic surfactant	Apply evenly over leaf surface "to wet," not dripping. Treat in the pre-bud to flowering stage. (June to August; at least half of foliage should still be green)
Note: *Imazapyr is NOT for use in ornamental or turf settings. **These herbicide products are non-selective and will kill any vegetation contacted.			

Hydrilla

Hydrilla verticillata

	Herbicide	Rate	Application Timing
	Fluridone (Sonar - general use)	Refer to label.	Refer to label.
	Endothall + Diquat (Aquathal K + Reward - general use)	Refer to label.	Refer to label.
	Endothall (Aquathal K - general use)	Refer to label.	Refer to label.

Meadow knapweed

Centaurea nigrescens

	Herbicide	Rate	Application Timing
	Aminopyralid* (Milestone)	7 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply in spring to early summer during bolting to bud growth stages or in fall. Add 1 qt./acre 2,4-D when plants are treated in the bolt to flowering phase.
	Aminocyclopyrachlor + chlorsulfuron (Perspective)*	4.75-8 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply from the seedling to the rosette growth stages. IMPORTANT: Applications greater than 5.5 oz. product/acre exceeds the threshold for selectivity. DO NOT treat in the root zone of desirable trees and shrubs. Not for use on grazed or feed forage.
	Picloram* (Tordon/Picloram 22K Restricted use pesticide)	1 qt. product/acre + 0.25% v/v non-ionic surfactant	Apply in spring to early summer during bolting to bud growth stages or in fall. Add 1 qt./acre 2,4-D when plants are treated in the bolt to flowering phase. DO NOT use near trees, desirable shrubs, water, or high water table.
Note: *Products not permitted for use in the San Luis Valley.			

Mediterranean sage

Salvia aethiopsis

	Herbicide	Rate	Application Timing
	Aminopyralid (Milestone)	7 oz. product/acre + 1% v/v methylated seed oil	Apply in spring during rosette to bolting (early flowering) growth stages. Not permitted for use in the San Luis Valley.
	Metsulfuron (Escort or Cimarron) + 2,4-D	1 oz. product/acre (metsulfuron) + 1 qt./acre (2,4-D) + 0.25% v/v non-ionic surfactant	Apply in spring during rosette to bolting (early flowering) growth stages.
	Picloram (Tordon/Picloram 22K Restricted use pesticide) + Chlorsulfuron (Telar)	1 qt. product/acre (Tordon) + 1 oz. product/acre (Telar) + 0.25% v/v non-ionic surfactant	Apply in spring during rosette to bolting (early flowering) growth stages. DO NOT use near trees, desirable shrubs, water, or high water table. Not permitted for use in the San Luis Valley.

Medusahead

Taeniatherum caput-medusae

	Herbicide	Rate	Application Timing
	Sulfometuron + Metsulfuron (Oust Extra)	3 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply in fall either pre-emergence or very early postemergence

Myrtle spurge

Euphorbia myrsinites

	Herbicide	Rate	Application Timing
	2,4-D ester	2 qts./acre + 1% v/v methylated seed oil	Use a 2,4-D ester formulation that has a 4.0 lbs. active ingredient/acre. Apply during spring or during fall regrowth.
	Dicamba + 2,4-D	1 pint/acre dicamba + 2-3 pints/acre 2,4-D (amine or ester)	Use a 2,4-D formulation that has a 4 lbs. active ingredient/gallon. Apply during spring or during fall regrowth.
	Picloram (Tordon/Picloram 22K Restricted use pesticide) + 2,4-D	20 oz./acre + 2-3 pints/acre 2,4-D (amine or ester)	Apply at flowering growth stage during spring or to fall regrowth. DO NOT use near trees, desirable shrubs, water, or high water table. Not permitted for use in the San Luis Valley.

Orange hawkweed

Hieracium aurantiacum

	Herbicide	Rate	Application Timing
	Aminopyralid (Milestone)	6-7 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply when plants are in rosette to bolting stage. (Spring to early summer)* Not permitted for use in the San Luis Valley.
	Clopyralid (Transline)	1.33 pints product/acre + 0.25% v/v non-ionic surfactant	Apply when plants are in the rosette growth stage. (Spring to early summer)*
	Clopyralid + 2,4-D (Curtail)	2 qts. product/acre + 0.25% v/v non-ionic surfactant	Apply when plants are in the rosette growth stage. (Spring to early summer)*
Note: *Ideally treat in the reproductive stage, which is bolting to flowering. Fall treatments are ineffective.			

Purple loosestrife

Lythrum salicaria

	Herbicide	Rate	Application Timing
	Triclopyr (Garlon 3A)	6-8 qts./acre OR 1.3-1.9 oz./gal water + 0.25% v/v non-ionic surfactant	Apply in summer. If plants are flowering, cut and properly dispose of flowerheads before applying Garlon 3A.
	Glyphosate (Rodeo*, Habitat* - aquatic safe)	4 qts./acre OR 1.3-1.9 oz./gal water + 0.25% v/v non-ionic surfactant	Apply in summer during the flowering stage. Cut and properly dispose of flowerheads before applying Rodeo.

	Aquatic 2,4-D Amine	1-2 qts./acre or 1.3-2.5 oz./gal water + 0.25% v/v non-ionic surfactant	Early spring - prevents seed formation only. Retreatment will be necessary. DO NOT apply when outside temperatures will exceed 85 degrees.
Note: *These herbicide products are non-selective and will kill any vegetation contacted.			

Rush skeletonweed

Chondrilla juncea

	Herbicide	Rate	Application Timing
	Aminopyralid* (Milestone)	5-7 oz./acre (start with 7 oz.) + 0.25% v/v non-ionic surfactant	Apply at rosette growth stage. (Spring to early summer)
	Aminocyclopyrachlor + chlorsulfuron (Perspective)*	4.75-8 oz. product/acre + 0.25% v/v non-ionic surfactant	Post-emergence in spring until flowering, or to fall rosettes. IMPORTANT: Applications greater than 5.5 oz. product/acre exceeds the threshold for selectivity. DO NOT treat in the root zone of desirable trees and shrubs. Not for use on grazed or feed forage.
	Picloram* (Tordon/Picloram 22K Restricted use pesticide)	2-4 pints/acre (start with 4 pints) + 0.25% v/v non-ionic surfactant	Apply at rosette growth stage. (Spring to early summer) DO NOT use near trees, desirable shrubs, water, or high water table.
Note: *Products not permitted for use in the San Luis Valley.			

Squarrose knapweed

Centaurea virgata

	Herbicide	Rate	Application Timing
	Aminopyralid (Milestone)	7 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply in spring to early summer during bolting to bud growth stages or in fall. Add 1 qt./acre 2,4-D when plants are treated in the bolt to flowering phase.
	Aminocyclopyrachlor + chlorsulfuron (Perspective)	4.75-8 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply from the seedling to the rosette growth stages. IMPORTANT: Applications greater than 5.5 oz. product/acre exceeds the threshold for selectivity. DO NOT treat in the root zone of desirable trees and shrubs. Not for use on grazed or feed forage.
	Picloram (Tordon/Picloram 22K Restricted use pesticide)	1 qt. product/acre + 0.25% v/v non-ionic surfactant	Apply in spring to early summer during bolting to bud growth stages or in fall. Add 1 qt./acre 2,4-D when plants are treated in the bolt to flowering phase. DO NOT use near trees, desirable shrubs, water, or high water table.
Note: *Products not permitted for use in the San Luis Valley.			

Tansy ragwort

Senecio jacobaea

	Herbicide	Rate	Application Timing
	Aminopyralid* (Milestone)	4-5 oz./acre	Apply at the rosette growth stage. (During first year of growth or spring)
	Picloram* (Tordon/Picloram 22K Restricted use pesticide)	2-4 pints/acre + 0.25% v/v non-ionic surfactant	Apply at the rosette growth stage. (During first year of growth or Spring) DO NOT use near trees, desirable shrubs, water, or high water table.
	Metsulfuron (Escort XP)	1 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply at the bud growth stage. (Spring)
	2,4-D	2 lb ai/acre + 0.25% v/v non-ionic surfactant	Apply at the rosette growth stage. (During first year of growth or spring)

Note: *Products not permitted for use in the San Luis Valley.

Yellow starthistle

Centaurea solstitialis

	Herbicide	Rate	Application Timing
	Aminopyralid* (Milestone)	7 oz. product/acre	Apply during rosette growth and bolting growth stages. (Early spring to early summer)
	Aminocyclopyrachlor + chlorsulfuron (Perspective)*	3-5 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply during rosette growth and bolting growth stage; most effective at the seedling to the rosette stages. IMPORTANT: Applications greater than 5.5 oz. product/acre exceeds the threshold for selectivity. DO NOT treat in the root zone of desirable trees and shrubs. Not for use on grazed or feed forage.
	Clopyralid (Transline)	1.33 pints product/acre	Apply during rosette growth and bolting growth stages. (Early spring to early summer)
	Picloram* (Tordon/Picloram 22K Restricted use pesticide)	1.5-2 pints product/acre	Apply during rosette growth stage or when adequate moisture is available, and plants are actively growing. (Early spring to late summer depending on conditions.) DO NOT use near trees, desirable shrubs, water, or high water table.

Note: *Products not permitted for use in the San Luis Valley.

List B Noxious Weeds

Absinth wormwood

Artemisia absinthium

	Herbicide	Rate	Application Timing
	Aminopyralid* (Milestone)	7 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply late spring into summer though the flowering growth stage.
	Aminopyralid* + Metsulfuron (Opensight)	3.3 oz. product/acre	Apply late spring into summer though the flowering growth stage.
	Aminopyralid* + 2,4-D (Forefront HL)	2 pints product/acre	Apply late spring into summer though the flowering growth stage.
	Clopyralid (Transline)	0.66 pint/acre	Apply late spring into summer though the flowering growth stage. Provides greater selectivity when applying near trees and shrubs.
	Picloram* + 2,4-D (Tordon/Picloram 22K Restricted use pesticide)	1 pint product/acre + 1 qt./acre 2,4-D	Apply late spring into summer though the flowering growth stage. DO NOT use near trees, desirable shrubs, water, or high water table.
*Product not permitted for use in the San Luis Valley.			

Black henbane

Hyoscyamus niger

	Herbicide	Rate	Application Timing
	Metsulfuron (Escort XP)	1 oz. product/acre + 0.25% v/v non-ionic surfactant	Surfactant absolutely necessary. Apply late bolt to early flower. (Summer to early fall)
	Chlorsulfuron* (Telar)	1 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply late bolt to early flower. (Summer to early fall)
	Chlorsulfuron + Metsulfuron (Cimarron Plus)	0.625-1.25 oz./acre + 0.25% v/v non-ionic surfactant	Apply late bolt to early flower. (Summer to early fall)
Note: *This herbicide has residual soil activity that will affect all broadleaf seedlings germinating after application has occurred.			

Bouncingbet

Saponaria officinalis

	Herbicide	Rate	Application Timing
	Chlorsulfuron* (Telar)	1 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply at bolting to bud growth stage. (Late spring to mid-summer)
	Sulfometuron (Oust XP)	2 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply at bolting to bud growth stage. (Late spring to mid-summer)

	Picloram (Tordon/Picloram 22K Restricted use pesticide)	1 quart/acre + 0.25% v/v non-ionic surfactant	Apply at bolting to bud growth stage. DO NOT use near trees, desirable shrubs, water, or high water table. Not permitted for use in the San Luis Valley.
Note: *This herbicide has residual soil activity that will affect all broadleaf seedlings germinating after application has occurred.			

Bull thistle

Cirsium vulgare

	Herbicide	Rate	Application Timing
	Aminopyralid* (Milestone)	3-5 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply to rosettes through bolting stage in spring, or to fall rosettes.
	Chlorsulfuron** (Telar)	1 oz. product/acre (0.75 oz. active ingredient/acre)+ 0.25% v/v non-ionic surfactant	Spring from bolting to bud stages.
	Clopyralid (Transline)	0.67-1.33 pints product/acre + 0.25% v/v non-ionic surfactant	Apply to rosettes through flower bud stage in spring, or to fall rosettes.
	Aminocyclopyrachlor + chlorsulfuron (Perspective)*	4.75-8 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply from the seedling to the bolting stage. IMPORTANT: Applications greater than 5.5 oz. product/acre exceeds the threshold for selectivity. DO NOT treat in the root zone of desirable trees and shrubs. Not for use on grazed or feed forage.
Note: *Product not permitted for use in the San Luis Valley. **This herbicide has residual soil activity that will affect all broadleaf seedlings germinating after application has occurred.			

Canada thistle

Cirsium arvense

	Herbicide	Rate	Application Timing
	Aminopyralid* (Milestone)	5-7 oz. product/acre + 0.25% v/v non-ionic surfactant OR 1 teaspoon product/gal water + 0.32 oz./gal water	Apply in spring at the pre-bud growth stage until flowering and/or to fall regrowth. Can also add chlorsulfuron (Telar) at 1 oz./acre to the mix.
Clopyralid + Triclopyr (Prescott; Redeem; others)	3 pints product/acre + 0.25% v/v non-ionic surfactant OR 1.25 oz. product/gal water + 0.32 oz./gal water	Apply until flowering and/or fall regrowth.	

	Aminocyclopyrachlor + chlorsulfuron (Perspective)*	5.5 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply to spring rosette to flower bud growth stage; or fall. IMPORTANT: Applications greater than 5.5 oz. product/acre exceeds the threshold for selectivity. DO NOT treat in the root zone of desirable trees and shrubs. Not for use on grazed or feed forage.
	Picloram* (Tordon/Picloram 22K Restricted use pesticide)	1 qt./acre + 0.25% v/v non-ionic surfactant OR 1.0 oz./gal water + 0.32 oz./gal water	Spring to early flower bud stage and/or fall regrowth. DO NOT use near trees, desirable shrubs, water, or high water table.
Note: *Product not permitted for use in the San Luis Valley.			

Chinese clematis

Clematis orientalis

 Herbicide	Rate	Application Timing
2,4-D amine	2 qts. product/acre at 4.0 lb active ingredient/gallon of product + 0.25% v/v non-ionic surfactant	Apply anytime when the plant is actively growing. Will damage neighboring brush species, if present.
Imazapic (Plateau, Panoramic)	12 oz. product/acre + 1 qt./acre methylated seed oil	Apply in the fall at flowering growth stage.
Aminopyralid (Milestone)	4 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply at flowering growth stage in the fall. Not permitted for use in the San Luis Valley.
Metsulfuron (Escort XP)	1 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply at flowering growth stage in the fall.

Common tansy

Tanacetum vulgare

 Herbicide	Rate	Application Timing
Aminocyclopyrachlor + chlorsulfuron (Perspective)	4.75-8 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply to when in the flower bud to flowering growth stages. (Late spring to mid-summer) IMPORTANT: Applications greater than 5.5 oz. product/acre exceeds the threshold for selectivity. DO NOT treat in the root zone of desirable trees and shrubs. Not permitted for use in the San Luis Valley. Not for use on grazed or feed forage.
Aminopyradlid + Metsulfuron (Opensight)	3.3 oz. product/acre	Apply to when in the flower bud to flowering growth stages. (Late spring to mid-summer)
Metsulfuron (Escort XP)	1 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply to when in the flower bud to flowering growth stages. (Late spring to mid-summer)

Common/ Cutleaf teasel

Dipsacus fullonum/ Dipsacus laciniatus

	Herbicide	Rate	Application Timing
	Metsulfuron (Escort XP)	1 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply when in rosette or bolting growth stage. (Spring or fall rosettes, or early summer bolting)
	Aminopyralid (Milestone)	4-7 oz. product/acre (start with 7 oz.) + 0.25% v/v non-ionic surfactant	Apply when in rosette or bolting growth stage. Best choice of herbicide to use in riparian areas. (Spring or fall rosettes, or early summer bolting) Not permitted for use in the San Luis Valley.
	Imazapic (Plateau)	8-12 oz. product/acre + 2 pints/ acre methylated seed oil	Apply when in rosette or bolting growth stage. Good choice of herbicide to use in riparian areas. (Spring or fall rosettes, or early summer bolting)

Corn/ Mayweed/ Scentless Chamomile

Anthemis arvensis/ Anthemis cotula/ Tripleurospermum perforatum

	Herbicide	Rate	Application Timing
	Metsulfuron (Escort XP)	0.33 oz. product/ac + 0.25% v/v non-ionic surfactant	Apply when plant is in rosette to bolting growth stage. (Early spring to early summer, sometimes fall rosettes)
	Chlorsulfuron* (Telar)	0.33 oz. product/ac + 0.25% v/v non-ionic surfactant	Apply when plant is in rosette or bolting growth stage. (Early spring to early summer, sometimes fall rosettes)
	Aminopyralid (Milestone)	7 oz./ac + 0.25% v/v non-ionic surfactant	Apply when plant is in rosette growth stage. (Early spring to early summer, sometimes fall rosettes) Not permitted for use in the San Luis Valley.
Note: *This herbicide has residual soil activity that will affect all broadleaf seedlings germinating after application has occurred.			

Dalmatian toadflax

Linaria dalmatica, L. genistifolia

	Herbicide	Rate	Application Timing
	Aminocyclopyrachlor + chlorsulfuron (Perspective)*	4 oz. product/acre + 1% v/v methylated seed oil	Apply <u>when flowering</u> in spring and/or in the fall regrowth. IMPORTANT: Applications greater than 5.5 oz. product/acre exceeds the threshold for selectivity. DO NOT treat in the root zone of desirable trees and shrubs. Not for use on grazed or feed forage.
	Picloram* (Tordon/Picloram 22K Restricted use pesticide)	1-2 qts./acre + 1% v/v methylated seed oil	Apply <u>when flowering</u> in spring and/or in the fall regrowth. DO NOT use near trees, desirable shrubs, water, or high water table.
	Chlorsulfuron** (Telar)	1.5-2 oz./acre + 1% v/v methylated seed oil	Apply <u>when flowering</u> in spring and/or in the fall regrowth.

	Imazapic (Plateau, Panoramic)*	10-12 oz. product/acre + 1 qt./acre methylated seed oil	Apply during the fall regrowth when the top 25% of the plant is necrotic; typically occurs after a hard frost.
Note: *Not permitted for use in the San Luis Valley. **This herbicide has residual soil activity that will affect all broadleaf seedlings germinating after application has occurred.			

Dame's rocket

Hesperis matronalis

	Herbicide	Rate	Application Timing
	Chlorsulfuron* (Telar)	1 oz. product/acre + 0.25% non-ionic surfactant	Apply when plant is in rosette or bolting growth stage. (Early spring)
	Metsulfuron (Escort XP)	1 oz. product/ acre + 0.25% non-ionic surfactant	Apply when plant is in rosette or bolting growth stage. (Early spring)
	Imazypic (Plateau)	9-10 oz./acre + 2 pints/acre methylated seed oil	Apply in the late flower growth stages. (Late spring to fall)
Note: *This herbicide has residual soil activity that will affect all broadleaf seedlings germinating after application has occurred.			

Diffuse knapweed

Centaurea diffusa

	Herbicide	Rate	Application Timing
	Aminocyclopyrachlor + chlorsulfuron (Perspective)*	4.75-8 oz. product/acre + 0.25% non-ionic surfactant	Pre-emergence or from seedling to mid-rosette stage. IMPORTANT: Applications greater than 5.5 oz. product/acre exceeds the threshold for selectivity. DO NOT treat in the root zone of desirable trees and shrubs. Not for use on grazed or feed forage.
	Aminopyralid* (Milestone)	5-7 oz./acre + 0.25% non-ionic surfactant	Spring at rosette to early bolt stage and/or in the fall to rosettes. Add 1 qt./acre 2,4-D or 3 oz. Perspective when treating in the bolting to flowering growth stages.
	Clopyralid (Transline)	0.67-1.33 pints/acre + 0.25% non-ionic surfactant	Apply to spring/fall rosettes before flowering stalk lengthens. Add 1 qt./acre 2,4-D when treating in the bolting to flowering growth stages.
	Picloram* (Tordon/Picloram 22K Restricted use pesticide)	1-2 pints/acre + 0.25% non-ionic surfactant	Apply to spring rosettes through mid-bolt and in fall to rosettes. Add 1 qt./acre 2,4-D when treating in the bolting to flowering growth stages. DO NOT use near trees, desirable shrubs, water, or high water table.
Note: *Not permitted for use in the San Luis Valley.			

Eurasian watermilfoil

Myriophyllum spicatum

	Herbicide	Rate	Application Timing
	2-4-D (Aqua-Kleen, Navigate, DMA 4 IVM; Use only aquatic approved products)	Determined by herbicide concentration within the water column. *Read the Label*	Actively growing plants or manufacturers specified recommendations. *Read the Label*
	Fluridone (Sonar or Avast)	Determined by herbicide concentration within the water column. *Read the Label*	Actively growing plants or manufacturers specified recommendations. *Read the Label*
	Imazamox (Clearcast)	Determined by herbicide concentration within the water column. *Read the Label*	Actively growing plants or manufacturers specified recommendations. *Read the Label*
	Triclopyr (Renovate 3)	Determined by herbicide concentration within the water column. *Read the Label*	Actively growing plants or manufacturers specified recommendations. *Read the Label*

Hoary cress

Cardaria draba

	Herbicide	Rate	Application Timing
	Chlorsulfuron* (Telar)	1 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply at flowering. (Early spring to early summer)
	Metsulfuron (Escort XP)	1 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply at flowering. (Early spring to early summer)
	Imazapic (Plateau, Panoramic)	12 oz./acre + 2 pints/acre methylated seed oil or crop oil concentrate	Apply at late flower to post-flower growth stage. (Late spring to mid-summer)
Note: *This herbicide has residual soil activity that will affect all broadleaf seedlings germinating after application has occurred.			

Houndstongue

Cynoglossum officinale

	Herbicide	Rate	Application Timing
	Metsulfuron (Escort XP) + 2,4-D	1 oz. product/acre + 1 qt. 2,4-D/acre +0.25% v/v non-ionic surfactant	Apply in spring rosette to early flower growth stages.
	Chlorsulfuron (Telar) + 2,4-D	1-1.5 oz. product/acre + 1 qt. 2,4-D/acre +0.25% v/v non-ionic surfactant	Apply in spring rosette to early flower growth stages. This herbicide has residual soil activity that will affect all broadleaf seedlings germinating after application has occurred.

	Metsulfuron + Chlorsulfuron (Cimarron X-tra)	2.0 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply in spring rosette to early flower growth stages.
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Jointed goatgrass

Aegilops cylindrica

	Herbicide	Rate	Application Timing
	Glyphosate* (Roundup, and others)	16 oz./acre + 0.25% v/v non-ionic surfactant	Apply before first spikelets begin to emerge from the boot; usually weeds are < 6" in height. (Late winter to early spring)
	Imazapic + Glyphosate* (Journey)	6 oz./acre + 0.25% v/v non-ionic surfactant	Apply before first spikelets begin to emerge from the boot; usually weeds are < 6" in height. (Late winter to early spring)
	Imazapic (Plateau, Panoramic)	6 oz./acre + 1% v/v methylated seed oil	Apply pre-emergence in late summer or fall, or early postemergence in late winter before tiller.
Note: *These herbicide products are non-selective and will kill any vegetation contacted.			

Leafy spurge

Euphorbia esula

	Herbicide	Rate	Application Timing
	Aminocyclopyrachlor + chlorsulfuron (Perspective)* + Diflufenzopyr + dicamba (Overdrive, Distinct)	3-4 oz. Perspective/acre + 4 oz. Overdrive/acre + 1% v/v methylated seed oil	At flowering in the spring and/or fall.
	Quinclorac (Paramount, Facel-L, Quinstar) + Diflufenzopyr + dicamba (Overdrive, Distinct)	12-24 oz. Quinstar/acre + 4 oz. Overdrive/acre + 1% v/v methylated seed oil	At flowering in the spring and/or fall.
	Aminocyclopyrachlor + chlorsulfuron (Perspective)*	4.75-8 oz. product/acre + 1% v/v methylated seed oil	Post-emergence in spring until flowering, or to fall rosettes.
	Imazapic (Plateau, Panoramic)	12 oz./acre or 0.4 oz./gal water + 1% v/v methylated seed oil	Fall only treatment prior to hard freeze. Imazapic can injury some grasses. Repeat treatment over several years may be necessary.
	Picloram (Tordon/Picloram 22K Restricted use pesticide) + 2,4-D	1 qt. picloram/acre + 1 qt./acre 2,4-D + 0.25% v/v non-ionic surfactant	Just after full-bloom in the spring and/or fall. DO NOT use near trees, desirable shrubs, water, or high water table. Not permitted for use in the San Luis Valley.
Note: *IMPORTANT: Applications greater than 5.5 oz. product/acre exceeds the threshold for selectivity. DO NOT treat in the root zone of desirable trees and shrubs. Not permitted for use in the San Luis Valley. Perspective is not for use on grazed or feed forage.			

Moth mullein

Verbascum blattaria

	Herbicide	Rate	Application Timing
	Aminopyralid (Milestone)	7 oz./acre + 0.25-0.5% v/v non-ionic surfactant	Apply when plant is in rosette to early bolting growth stages. (Spring to summer, and fall rosettes) Not permitted for use in the San Luis Valley.
	Metsulfuron (Escort XP)	1-2 oz. product/acre + 1% v/v methylated seed oil	Spot spray only. Apply when plant is in rosette to early bolting growth stages. (Spring to summer, and fall rosettes)
	Chlorsulfuron* (Telar)	1-2 oz. product/acre + 1% v/v methylated seed oil	Spot spray only. Apply when plant is in rosette to early bolting growth stages. (Late Spring to Summer)
Note: *This herbicide has residual soil activity that will affect all broadleaf seedlings germinating after application has occurred.			

Musk thistle

Carduus nutans

	Herbicide	Rate	Application Timing
	Aminopyralid* (Milestone)	5 oz./acre + 0.25% v/v non-ionic surfactant	Apply in spring rosette to early bolting growth stages or in fall to rosettes.
	Chlorsulfuron** (Telar)	1-2.6 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply in spring from rosette through very early flower growth stages. (Can prevent viable seed formation if applied no later than the first viable flowers begin to open.)
	Clopyralid (Transline)	0.67-1.33 pints product/acre + 0.25% v/v non-ionic surfactant	Apply to rosettes through flower bud stage in spring, or to fall rosettes.
	Aminocyclopyrachlor + chlorsulfuron (Perspective)*	3-4.5 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply from the seedling up to flowering in spring, or to fall rosettes. IMPORTANT: Applications greater than 5.5 oz. product/acre exceeds the threshold for selectivity. DO NOT treat in the root zone of desirable trees and shrubs. Not for use on grazed or feed forage.
Note: *Product not permitted for use in the San Luis Valley. **This herbicide has residual soil activity that will affect all broadleaf seedlings germinating after application has occurred.			

Oxeye daisy

Leucanthemum vulgare

	Herbicide	Rate	Application Timing
	Aminopyralid (Milestone)	4-6 oz./acre + 0.25% v/v non-ionic surfactant	Optimum control when applied <u>at the pre-flower bud growth stage</u> . Not permitted for use in the San Luis Valley.

	Metsulfuron (Escort XP)	1 oz. product/acre + 0.25% v/v non-ionic surfactant	Surfactant is absolutely necessary. Optimum control when applied <u>at flowering</u> growth stage. 1 oz. product is the minimum eradication rate based on best treatment observed in several CSU experiments.
	Chlorsulfuron (Telar)	1 oz. product/acre + 0.25% v/v non-ionic surfactant	Surfactant is absolutely necessary. Optimum control when applied <u>at flowering</u> growth stage.

Perennial pepperweed

Lepidium latifolium

	Herbicide	Rate	Application Timing
	Chlorsulfuron* (Telar)	1 oz. product/acre + 0.25 v/v non-ionic surfactant	Apply when plant is in the early flower to flowering growth stages. (Early spring to early summer)
	Metsulfuron (Escort XP)	1 oz. product/acre + 0.25 v/v non-ionic surfactant	Apply when plant is in the early flower to flowering growth stages. (Early spring to early summer)
	Imazapic (Plateau, Panoramic)	12 oz./acre + 2 pints/acre methylated seed oil or crop oil concentrate	Apply when plant is in the early flower to flowering growth stages. (Early spring to early summer)
Note: *This herbicide has residual soil activity that will affect all broadleaf seedlings germinating after application has occurred.			

Plumeless thistle

Carduus acanthoides

	Herbicide	Rate	Application Timing
	Aminopyralid* (Milestone)	5 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply in spring rosette to early bolting growth stages or in fall to rosettes.
	Chlorsulfuron** (Telar)	1-2.6 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply in spring from rosette through very early flower growth stages. (Can prevent viable seed formation if applied no later than the first viable flowers begin to open.)
	Clopyralid (Transline)	0.67-1.33 pints product/acre + 0.25% v/v non-ionic surfactant	Apply to rosettes through flower bud stage in spring, or to fall rosettes.
	Aminocyclopyrachlor + chlorsulfuron (Perspective)*	3-4.5 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply from the seedling to flowering in spring, or to fall rosettes. IMPORTANT: Applications greater than 5.5 oz. product/acre exceeds the threshold for selectivity. DO NOT treat in the root zone of desirable trees and shrubs. Not for use on grazed or feed forage.
Note: *Product not permitted for use in the San Luis Valley. **This herbicide has residual soil activity that will affect all broadleaf seedlings germinating after application has occurred.			

Russian knapweed

Acrotilon repens

	Herbicide	Rate	Application Timing
	Aminopyralid* (Milestone)	7 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply in the fall when above-ground stems die back and root buds are highly susceptible. Can also apply in the bud to senescence stages or in the spring during early bolt before flower buds form.
	Aminocyclopyrachlor + Chlorsulfuron (Perspective)*	4-5 oz. product/acre + 1% v/v methylated seed oil	Apply in the fall when above-ground stems die back and root buds are highly susceptible. Can also apply in the bud to senescence stages or in the spring during early bolt before flower buds form. IMPORTANT: Applications greater than 5.5 oz. product/acre exceeds the threshold for selectivity. DO NOT treat in the root zone of desirable trees and shrubs. Not for use on grazed or feed forage. Not for use on grazed or feed forage.
	Aminopyralid* (Milestone) + Chlorsulfuron** (Telar)	7 oz. Milestone/acre + 1 oz. Telar/acre + 1% v/v methylated seed oil	Apply in the fall when above-ground stems die back and root buds are highly susceptible. Can also apply in the bud to senescence stages or in the spring during early bolt before flower buds form.
	Picloram* (Tordon/Picloram 22K Restricted use pesticide)	1 qt./acre or 1 oz./gal water + 0.25% v/v non-ionic surfactant	Apply in the fall when above-ground stems die back and root buds are highly susceptible. Can also apply in spring to in the early bolt stage before flower buds forms. DO NOT use near trees, desirable shrubs, water, or high water table.
Note: *Product not permitted for use in the San Luis Valley. **This herbicide has residual soil activity that will affect all broadleaf seedlings germinating after application has occurred.			

Russian olive

Elaeagnus angustifolia

	Herbicide	Rate	Application Timing
	Triclopyr (Garlon 4, Remedy)	20-30% solution in basal bark oil. The herbicide Pathfinder comes pre-mixed in oil and does not require dilution.	<u>Cut-Stump Treatment:</u> Apply to the cambial layer of the tree immediately after the cut-stump treatment and to roots above soil surface. (Summer to fall; fall treatments showed fewer re-growth) <u>Basal Bark Treatment:</u> Spray till wet but not dripping; the roots above soil surface, root collar, and lower trunk to a height of 12-15 inches above ground (Late summer to fall)

	Glyphosate* (Rodeo - approved aquatic label)	Undiluted (100% solution) or 50% solution in basal bark oil	<u>Cut-Stump Treatment</u> : Apply to the cambial layer of the tree immediately after the cut-stump treatment and to roots above soil surface. Diluted solutions requires regular agitation. Treat summer to fall; fall treatments showed fewer re-growth.
	Triclopyr (Garlon 4, Remedy) + Aminopyralid (Milestone)	1-2 qts. Garlon 4/acre + 7 oz. Milestone/acre	<u>Broadcast foliar treatment</u> : Apply when plants are growing rapidly from May to September. Milestone is not permitted for use in the San Luis Valley.
Note: *These products are non-selective and will kill any vegetation contacted.			

Salt cedar

Tamarix chinensis, T. parviflora, and T. ramosissima

	Herbicide	Rate	Application Timing
	Triclopyr (Garlon 4, Remedy)	20-30% solution in basal bark oil. The herbicide Pathfinder comes pre-mixed in oil and does not require dilution.	<u>Cut-Stump Treatment</u> : Apply to the cambial layer of the tree immediately after the cut-stump treatment and to roots above soil surface. (Summer to fall) <u>Basal Bark Treatment</u> : Spray till wet but not dripping; the roots above soil surface, root collar, and lower trunk to a height of 12-15 inches above ground (Summer to fall)
	Glyphosate* (Rodeo - approved aquatic label)	Undiluted (100% solution) or 50% solution in basal bark oil	<u>Cut-Stump Treatment</u> : Apply to the cambial layer of the tree immediately after the cut-stump treatment and to roots above soil surface. Diluted solutions requires regular agitation. (Summer to fall)
	Triclopyr (Garlon 4, Remedy) + Aminopyralid (Milestone)	3 qts. Garlon 4/acre + 7 oz. Milestone/acre + 0.25% v/v non-ionic surfactant	<u>Broadcast foliar treatment</u> : Apply when plants are growing rapidly. (May to September) Milestone is not permitted for use in the San Luis Valley.
Note: *These products are non-selective and will kill any vegetation contacted.			

Scotch thistle

Onopordum acanthium, O. tauricum

	Herbicide	Rate	Application Timing
	Aminopyralid* (Milestone)	7 oz. product/acre + 0.25-0.5% v/v non-ionic surfactant	Apply in spring rosette to early bolting growth stages or in fall to rosettes.
	Chlorsulfuron** (Telar)	1-2.6 oz. product/acre (0.75 oz. active ingredient/acre)+ 0.25% v/v non-ionic surfactant	Spring from bolting to flower bud stages.
	Metsulfuron + Chlorsulfuron (Cimarron X-tra)	2 oz. product/acre + 0.25-0.5% v/v non-ionic surfactant	Apply during rosette to flower bud stages.

	Clopyralid (Transline)	0.67-1.33 pints product/acre + 0.25% v/v non-ionic surfactant	Apply to rosettes in spring or fall.
	Aminocyclopyrachlor + chlorsulfuron (Perspective)*	4.75-8 oz. product/acre + 0.25% v/v non-ionic surfactant	Apply from the seedling to the bolting growth stages. IMPORTANT: Applications greater than 5.5 oz. product/acre exceeds the threshold for selectivity. DO NOT treat in the root zone of desirable trees and shrubs. Not for use on grazed or feed forage.
Note: *Product not permitted for use in the San Luis Valley. **This herbicide has residual soil activity that will affect all broadleaf seedlings germinating after application has occurred.			

Spotted knapweed

Centaurea stoebe

	Herbicide	Rate	Application Timing
	Aminocyclopyrachlor + chlorsulfuron (Perspective)*	4.75-8 oz. product/acre + 0.25% non-ionic surfactant	Pre-emergence or from seedling to mid-rosette stage. IMPORTANT: Applications greater than 5.5 oz. product/acre exceeds the threshold for selectivity. DO NOT treat in the root zone of desirable trees and shrubs. Not for use on grazed or feed forage.
	Aminopyralid* (Milestone)	5-7 oz./acre + 0.25% non-ionic surfactant	Spring at rosette to early bolt stage and/or in the fall to rosettes. Add 1 qt./acre 2,4-D or 3 oz. Perspective when treating in the bolting to flowering growth stages.
	Clopyralid (Transline)	0.67-1.33 pints/acre + 0.25% non-ionic surfactant	Apply to spring/fall rosettes before flowering stalk lengthens. Add 1 qt./acre 2,4-D when treating in the bolting to flowering growth stages.
	Clopyralid + 2,4-D (Curtail)	2-3 qts./acre + 0.25% non-ionic surfactant	Apply in spring and fall to rosettes.
	Picloram* (Tordon/Picloram 22K Restricted use pesticide)	1-2 pints/acre + 0.25% non-ionic surfactant	Apply to spring rosettes through mid-bolt and in fall to rosettes. Add 1 qt./acre 2,4-D when treating in the bolting to flowering growth stages. DO NOT use near trees, desirable shrubs, water, or high water table.
Note: *Product not permitted for use in the San Luis Valley.			

Sulfur cinquefoil

Potentilla recta

	Herbicide	Rate	Application Timing
	Aminopyralid* (Milestone)	5-7 oz. product/acre + 0.25-0.5% v/v non-ionic surfactant	Spray rosettes to pre-bud growth stage. (Late spring to early summer)
	Metsulfuron (Escort XP) + Aminopyralid* (Milestone)	1 oz. Escort XP/acre + 5-7 oz. Milestone/acre + 0.25% v/v non-ionic surfactant	Spray rosettes to pre-bud growth stage. (Late spring to early summer)

	Picloram* (Tordon/Picloram 22K Restricted use pesticide)	1 pint/acre + 0.25-0.5% v/v non-ionic surfactant	Spray rosettes to pre-bud growth stage. (Late spring to early summer) DO NOT use near trees, desirable shrubs, water, or high water table.
	Glyphosate** (Roundup, and others)	1.5% v/v glyphosate + 0.25% v/v non-ionic surfactant	Spray rosettes to pre-bud growth stage. (Late spring to early summer)
	Note: *Products not permitted for use in the San Luis Valley. **These products are non-selective and will kill any vegetation contacted. IMPORTANT: Treat weeds before desirable perennials have emerged. Glyphosate has no soil activity.		

Wild caraway

Carum carvi

	Herbicide	Rate	Application Timing
	Aminopyralid + Metsulfuron (Opensight)	2.5-3 oz. product/acre + 0.25% non-ionic surfactant	Apply at bolting to bud growth stages. (Spring to early summer; or fall rosettes) Not permitted for use in the San Luis Valley. See the label AND supplemental label regarding specific grazed or feed forage pre-cautions and restrictions. This is a treatment option for roadsides and non-crop; not recommended for forage producers.
	Metsulfuron (Escort XP) + 2,4-D	1 oz. product/acre + 1 qt. 2,4-D/acre + 0.25 % v/v non-ionic surfactant	Apply at bolting to bud growth stages. (Spring to early summer, especially for hay producers; fall rosettes, but will likely need to treat again in the spring) May stunt grass growth.
	2,4-D	2 qts./acre + 0.25 % v/v non-ionic surfactant	Apply at rosette to bud growth stages. This may require several years of treatment. (Spring to early summer, especially for hay producers; fall rosettes, but will likely need to treat again in the spring)

Yellow nutsedge

Cyperus esculentus

	Herbicide	Rate	Application Timing
	Halosulfuron (Sandea 75DF)	0.66-1.33 oz./acre + 0.25-0.5% v/v non-ionic surfactant; follow the label for dry formulations	2 or 3 treatments in June and July over 2-3 years. Apply when plants are young and before the 5-leaf stage. Apply to plants that are not recently mowed or cut.
	Glyphosate* (Roundup)	1-3 qts./acre or a 1-2% solution	2 or 3 treatments in June and July over 2-3 years. Apply when plants are young and before the 5-leaf stage. Apply to plants that are not recently mowed or cut. This is a non-selective herbicide.

Sulfentrazone	Follow the label's recommended rate + 0.25% v/v non-ionic surfactant	For turf conditions: 2 or 3 treatments in June and July over 2-3 years. Apply when plants are young and before the 5-leaf stage. Apply to plants that are not recently mowed or cut.
Note: *These herbicide products are non-selective and will kill any vegetation contacted.		

Yellow toadflax

Linaria vulgaris

	Herbicide	Rate	Application Timing
	Aminocyclopyrachlor + Chlorsulfuron (Perspective)*	4 oz. product/acre + 0.5% v/v methylated seed oil	Apply <u>at flowering through fall post-flower into senescence</u> . IMPORTANT: Applications greater than 5.5 oz. product/acre exceeds the threshold for selectivity. DO NOT treat in the root zone of desirable trees and shrubs. Not for use on grazed or feed forage.
	Picloram* (Tordon/Picloram 22K Restricted use pesticide) + Chlorsulfuron (Telar)	1 qt./acre Tordon + 1.25 oz./acre Telar + 0.25% v/v non-ionic surfactant	Apply <u>at flowering through fall post-flower into senescence</u> . Typically late August through September application timing has shown best results. Re-treatment may be necessary. Refer to label for grazing restrictions on Telar. DO NOT use near trees, desirable shrubs, water, or high water table.
	Chlorsulfuron** (Telar)	1.5-2 oz./acre product + 0.50% v/v methylated seed oil	Apply <u>at flowering through fall post-flower into senescence</u> . Telar has grazing restrictions at 1.33 oz./acre rate and greater. Refer to label for more detail.
Note: *Product not permitted for use in the San Luis Valley. **This herbicide has residual soil activity that will affect all broadleaf seedlings germinating after application has occurred.			