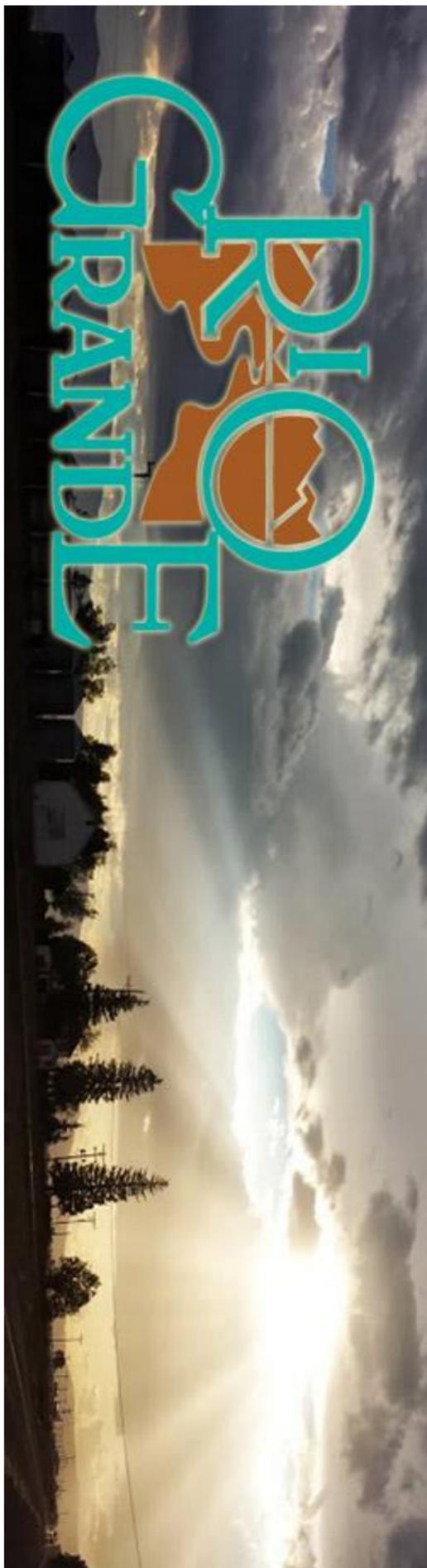


Rio Grande County
Weed District presents,

Informational
guide of
Noxious
weeds and
their control
methods

Brianna Brannan



Hoary cress,(Short White Top), *Cardaria draba*



Hoary cress - A non-native deep rooted perennial that thrives in a wide range of soil types, they grow to two foot tall and are extremely invasive.

Hoary cress reproduces via both seed and root, with root being the primary reproduction source. One plant can produce from 1,200 to 4,800 seeds per plant with a soil seed bank longevity of three or four years. Within three weeks of germination the seed produces new rosettes which emerge within 3 ½ weeks and root shoots that have been documented to grow as fast as approximately 4 ft. in a season. A single plant can produce 450 new shoots in a single growing season.

Weed management – Mowing in spring to keep from flowering and continue throughout growing season controls seed dispersal, but also stimulates roots. Grazing is effective to keep from flowering in spring, but is not effective for long term eradication. **Herbicides**, always use in accordance with label, these suggestions are for **HANDGUN APPLICATION ONLY. Mix together:**

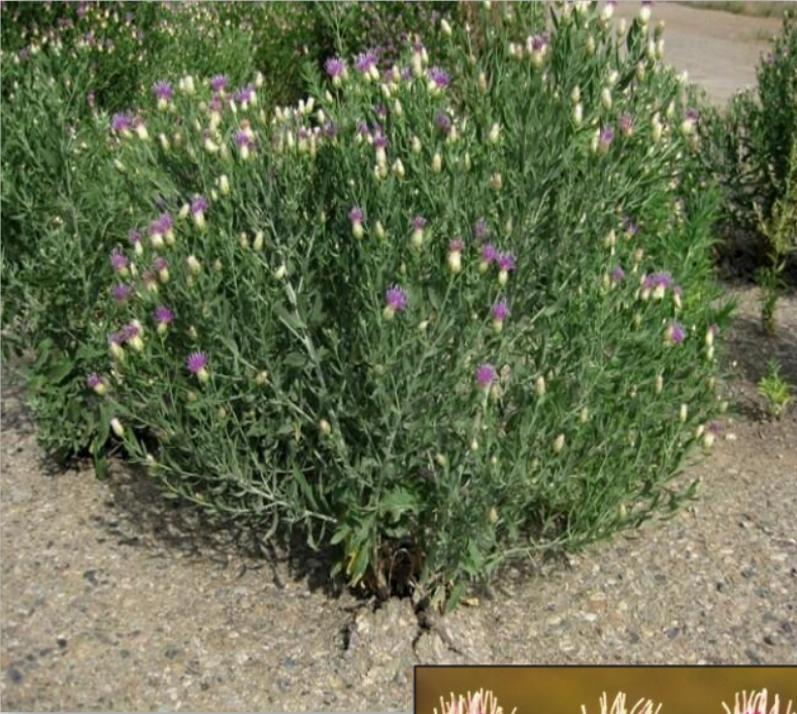
Rangestar – (2-4D and Dicamba mix), 2 qt. / 50 gal

Plateau- (Imazapic), 12 oz./ 50 gal

Vapogaurd (adjuvant)drift, vapor, conditioning, 1qt./50gal

Loctite- (Sticker), 1 qt./ 50 gal

Do not shovel, disc, or pull as this stimulates root growth



Russian knapweed develops on many soil types and is highly drought tolerant. The allelopathic properties of the plant allow it to absorb Zinc from the soil therefore

creating a toxic environment for native forbs, grasses and grazing animals. Russian knapweed reproduces primarily through root system but still produces over 500 seeds per plant with a seed longevity in the soil for up to 2-3 years. Fragments of root of one inch or less can reproduce into a new plant from depths of six inches or less. Root growth per season can reach up to 10 foot allowing the plant to create monotypic stands invading areas of natural plant life with ease.

Animals, especially horses, which graze Russian knapweed can experience physical dysfunction, neurological disorder and eventual death from consumption. **Weed management**, mowing – is effective if mown every 20 days for the full growing season for several seasons. Grazing- DO NOT GRAZE With HORSES, not effective control. **Herbicides:** Always use in accordance with label, these suggestions are for **HANDGUN APPLICATION ONLY. Mix together: Milestone**(Aminopyralid), 10 oz./50 gal

Plateau- (Imazapic), 12 oz./ 50 gal
Rangestar – (2-4D and Dicamba mix), 2 qt. / gal 50
Vapogaurd- (adjuvant) drift, vapor, conditioning, 1qt./50gal

Loctite- (Sticker), 1 qt./ 50 gal

Yellow Toad Flax, *Linaria vulgaris*



Yellow Toadflax- is a highly competitive plant that not only enjoys sandy disturbed soils but also undisturbed prairie and riparian areas. Large colonies displace the native vegetation and decreases forage for wildlife and livestock. This perennial reproduces both by root and by seed. With roots growing horizontally through the soil. Yellow toadflax contains quinazoline alkaloids that could possibly pose toxicity problems to livestock if ingested in sufficient quantity. Goats and sheep have grazed with no report of effects.

Weed management- Hand pulling is only effective on seedlings before establishing an extensive root system. Mowing simply stimulates root growth. Grazing heavily has potential for eradication.

Herbicides: Always use in accordance with label, these suggestions are for **HANDGUN APPLICATION ONLY. Mix together:**

Rangestar – (2-4D and Dicamba mix), 2 qt. / 50 gal

Plateau- (Imazapic), 12 oz./ 50 gal

Vapogaurd- (adjuvant) drift, vapor, conditioning, 1qt./50gal

Loctite- (Sticker), 1 qt./ 50 gal

Do not shovel, disc, or pull as this stimulates root growth

Puncture Vine, *Tribulus terrestris*



Puncturevine – Is one of the most annoying of the noxious weeds that humans encounter, when ingested in high quantities it is highly toxic to sheep and other livestock due to its saponin compounds. Seeds of the vine can last up to 6 years in the soil and can germinate within a few weeks of dispersal. Puncturevine only reproduces via seed, ideal conditions for seed germination is warm temperatures and wet/damp soil. **Weed management:** Mechanical hand pulling, shallow tilling and hoeing are effective if done before flowering stage and when population is low. Grazing, is not recommended due to the toxic nature of the plant. **Herbicides:** Always use in accordance with label, these suggestions are for **HANDGUN APPLICATION ONLY. Mix together:**
Rangestar – (2-4D and Dicamba mix), 2 qt. / 50 gal
Vapogaurd- (adjuvant) drift, vapor, conditioning, 1qt./50gal
Loctite- (Sticker), 1 qt./ 50 gal

Perennial pepperweed,(Tall White top), *Lepidium latifolium*



Perennial pepperweed

can grow to a height of six foot tall and reproduces via both seed and root. Each plant produces over 1,000 seeds per plant but seeds have been reported to not have the reproductive capabilities in comparison to the root. Most of the plant's root system grows within the first 2 foot of the soil but have been known to penetrate to a depth of 10 foot or greater and expands at a rate of 10 feet per year. Root segments produce adventitious buds; pieces as small as 1/2 inch in length are capable of generating new shoots. Perennial Pepperweed is also known to have Allelopathic (secretes toxins in the soil) properties which prevent propagation of desired plant life. **Weed management.** Mowing stimulates new growth in both root and stem, also allows regrowth to cut pieces producing additional plants. **Herbicides:** Always use in accordance with label, these suggestions are for **HANDGUN APPLICATION ONLY. Mix together:**

Rangestar – (2-4D and Dicamba mix), 2 qt. / 50 gal

Plateau- (Imazapic), 12 oz./ 50 gal

Vapogaurd- (adjuvant) drift, vapor, conditioning, 1qt./50gal

Loctite- (Sticker), 1 qt./ 50 gal

Do not shovel, disc, or pull as this stimulates root growth

Field bindweed, *Convolvulus arvensis*



Field bindweed- is a perennial and considered one of the hardiest of noxious weeds in agriculture due to their extensive root system and seed longevity in the soil. Roots form both a tap root and horizontal creeping root and can grow over 10 foot in depth per season. Each plant can produce up to 500 seeds per plant and each seed has the capacity to survive in the soil for up to 20 years. Flowers can be pink, white or both.

Weed management. Hand pulling can be effective on young adults or seedlings, but is not effective on established root systems. Mowing is not effective due to stimulation of the root system and the low profile of the plant. The recommended method is to use suggested chemical:

Herbicides: Always use in accordance with label, these suggestions are for **HANDGUN APPLICATION ONLY. Mix together:**

Rangestar – (2-4D and Dicamba mix), 2 qt. / 50 gal

Plateau- (Imazapic), 12 oz./ 50 gal

Vapogaurd- (adjuvant) drift, vapor, conditioning, 1qt./50gal

Loctite- (Sticker), 1 qt./ 50 gal

Do not shovel, disc, or pull as this stimulates root growth

Spotted knapweed, *Centaurea stoebe*



Spotted knapweed - is a bushy biennial to short lived perennial, and reproduces both by root and seed.

This plant produces approximately 1,000 seeds per blossom where one plant can produce as many as 40 flowers. Each seed has a longevity in the soil of about 8 years. Spotted Knapweed also has an extensive root system that reproduces vegetative from lateral roots just below the soil surface. **Weed management-** Hand pulling is feasible if done before flowering, are pulled from 3 to 4 inches below the soil and is done throughout the growing season. This must be done every year for at least eight years due to the seed longevity in the soil. Mowing simply stimulates the roots and the plant will develop new rosettes therefore will not kill the plant. **Herbicides:** Always use in accordance with label, these suggestions are for **HANDGUN APPLICATION ONLY. Mix together:**

Milestone-(Aminopyralid), 10 oz./50 gal

Plateau- (Imazapic), 12 oz./ 50 gal

Rangestar – (2-4D and Dicamba mix), 2 qt. / 50 gal

Vapogaurd- (adjuvant) drift, vapor, conditioning, 1qt./50gal

Loctite- (Sticker), 1 qt./ 50 gal

Do not shovel, disc, or pull as this stimulates root growth

Common mullein, *Verbascum thapsus*



Common mullein- is a biennial or short-lived perennial that are highly invasive and non-palatable

for livestock. Often these plants can produce over 100,000 seeds per plant with a seed longevity in the soil of over 100 years. Populations can spread quickly and prefers, but is not limited to disturbed and/or unpopulated bare ground areas. **Weed management:** Mechanical, hand pulling, hoeing are very effective methods of control for common mullein, but must be done before flowering stages. Mowing and tilling are not recommended control as the plant tends to grow back quickly and the tilling allows opportunity for regrowth of seeds.

Herbicides: Always use in accordance with label, these suggestions are for **HANDGUN APPLICATION ONLY. Mix together:**

Rangestar – (2-4D and Dicamba mix), 2 qt. / 50 gal

Milestone-(Aminopyralid), 10 oz./50 gal

Vapogaurd- (adjuvant) drift, vapor, conditioning, 1qt./50gal

Loctite- (Sticker), 1 qt./ 50 gal

Canadian thistle, *Cirsium arvense*



Canadian thistle is a non-native, deep-rooted perennial that spreads by seeds and aggressive, horizontal roots (rhizomes) that can grow 15 to 30+ foot in depth. Canada thistle can produce about 1,000 to 5,000 seeds per plant, and seeds can survive in the soil for 20 years or more. Typically, it reproduces by root and grows about 6 foot in a season through a creeping root system, quickly forming dense monotypic stand. Every piece of root, from 2 cm in length, is capable of forming new plants. Canadian thistle also hosts several agricultural disease and pests such as sod-web worm, bean aphid, stalk borer, cucumber mosaic virus. **Weed management** - Mowing is effective if mown every 20 days for the full growing season for several seasons. Grazing- In the spring and summer with fall application of herbicide is very useful technique for eradication. **Herbicides:** Always use in accordance with label, these suggestions for **HANDGUN APPLICATION ONLY. Mix together :**
Milestone-(Aminopyralid), 10 oz./50 gal
Rangestar – (2-4D and Dicamba mix), 2 qt. / 50 gal
Vapogaurd- (adjuvant) drift, vapor, conditioning, 1qt./50gal
Loctite- (Sticker), 1 qt./ 50 gal

Do not shovel, disc, or pull as this stimulates root growth

Black henbane, *Hyoscyamus niger*



Black Henbane is an annual / Biennial with a long tap root and reproduces only by seed, but produces approximately 100,000 to 500,000 seeds per plant. Seeds are known to last approximately 5 years in the soil. Black henbane is an opiate and all parts of the plant are poisonous and potentially lethal to humans and livestock. The plant and seeds have been used as a hallucinogenic, and the flowers and give off an odor that causes a kind of “high”.

Weed management, owing/ hand pulling (with appropriate safety equipment) is ideal in the spring before flowering occurs and is done repeatedly throughout the season. With a shovel, dig at least 3 inches below the surface of the soil and cut tap root making sure not to spread any seed from existing pods

Herbicides: Always use in accordance with label, these suggestions are for **HANDGUN APPLICATION ONLY. Mix together:**

Rangestar – (2-4D and Dicamba mix), 2 qt. / 50 gal

Vapogaurd- (adjuvant) drift, vapor, conditioning, 1qt./50gal

Loctite- (Sticker), 1 qt./ 50 gal

Houndstongue, *Cynoglossum officinale*



Houndstongue - Is a highly invasive weed that can form dense monotypic stands. Foliage, especially young leaves, and fruits contain pyrrolizidine alkaloids and are liver toxins in all livestock classes, especially horses when ingested over time or in a single large quantity. Plants have a distinctive scent that appease to deter animals from consuming live foliage, thus most poisonings occur when consume hay over time. **Weed management** - Digging and hand pulling can be very effective if done below the crown of the plant, but this must be done often as regrowth can occur. **DO NOT GRAZE** as this plant is toxic even to sheep. The Root Mining flea beetle is optional for a bio control method but due to the San Luis Valley climate the beetle may not survive. **Herbicides:** Always use in accordance with label, these suggestions are for **HANDGUN APPLICATION ONLY.**

Mix together:

Rangestar – (2-4D and Dicamba mix), 2 qt. / 50 gal

Plateau- (Imazapic), 12 oz./ 50 gal

Vapogaurd- (adjuvant) drift, vapor, conditioning, 1qt./50gal

Loctite- (Sticker), 1 qt./ 50 gal

Do not shovel, disc, or pull as this stimulates root growth

Musk thistle, *Carduus nutans*



Musk thistle – is a winter annual or biennial that can grow up to 5 foot tall and form deep tap roots. Their foliage looks similar to the Canadian thistle but larger with different blossoms. With a blossom the average size of 3.5” this plant can produce anywhere from 10,000- 20,000 seeds. Musk thistle only reproduces through seed and only last a few years in the soil seed bank.

Weed management: because musk thistle are not root propagated mechanical pulling, tilling, and shovel control are effective IF done before flowering stage preferably during rosette stage and the root is taken at about 4 inches below the ground level. **Herbicides:** Always use in accordance with label, these suggestions are for **HANDGUN**

APPLICATION ONLY. Mix together:

Milestone-(Aminopyralid), 10 oz./50 gal

Plateau- (Imazapic), 12 oz./ 50 gal

Rangestar – (2-4D and Dicamba mix), 2 qt. / 50 gal

Vapogaurd- (adjuvant) drift, vapor, conditioning, 1qt./50gal

Loctite- (Sticker), 1 qt./ 50 gal

Additional Information:

1. Reseeding after weed control is one of the most important parts of weed control you can perform to prevent other noxious weeds from taking over an area. Consider reseeding after applying the “Weed management” control you desire and consider native wildflowers for pollinator advantage when reseeding, as this can be beneficial for not only competition for noxious weeds but also a benefit to pollinators.
2. The San Luis Valley Weed Management Association provides additional information to assist those who reside in other counties within the San Luis Valley. Check the website for your local county weed manager.
<http://slvnoxiousweeds.org/report-weeds/>

Disclaimer: The statements in this pamphlet are suggestions only and are not to be used in any way that differentiates from these suggestions or the chemical label. Rio Grande County Weed District is not responsible for any application of chemical, and/or that is improperly applied, or any misuse of chemical that has been used in accordance with the suggestions of this pamphlet.

HOW TO READ THE CHEMICAL SUGGESTIONS ON THIS PAMPHLET :

Rangestar – (2-4D and Dicamba mix), 2 qt. / 50 gal

1. **Rangestar-** is brand name only, all chemical brands suggested come first and typed in bold. If you cannot find the specific brand name turn to the chemical name, which is in “()”. There are many different names for the same chemical family that will do the job right. Your local farm or chemical retailer should be able to recommend to you the similar chemical suggestions in the brand they carry.
2. **2 qt. / 50 gal** - is the amount of chemical / gallon of water used, 2 quarts for every 50 gal of water. If working with 25 gallons divide chemicals by half = 1 quart of Rangstar / 25 gallons of water. If you are working with a back pack sprayer, boom sprayer, or any other equipment you are using for application of chemical, do not use these measurements. THESE MEASUREMENTS ARE FOR HANDGUN SPRAYING, to use these measurements with any other equipment would be in violation of federal law as per the label on the chemical label. ALWAYS READ THE LABEL FIRST BEFORE MIXING.

If you have any questions please contact us :

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