

## Kochia and Russian thistle

Amaranthaceae

*Kochia scoparia*  
*Salsola iberica*


### Kochia

- Origin:** Eurasia
- Description:** 2 to 6 feet tall forb. Emerges as early as March and throughout the summer
- Color:** Bluish-green
- Roots:** Shallow taproot
- Stems:** Erect, sometimes red-streaked
- Leaves:** Soft, fringed with fine hairs
- Flowers:** Green calyx. July thru October
- Seeds:** 2,000 to 30,000 brown to black seeds per plant
- Viability:** 40 to 76% germinate the first year with germination drastically falling off in subsequent years
- Toxicity:** Accumulates toxic levels of nitrates under certain conditions and linked to livestock photosensitivity



### Russian thistle

- Origin:** Russia
- Description:** 1 to 3 feet tall forb. Emerges in warmer May to June temperatures
- Color:** Green to dull-green with red striped stems
- Roots:** Taproot
- Stems:** Red or purple striped
- Leaves:** Alternate, scale-like with a stiff spine at tip
- Flowers:** August thru October. Reddish pink with spiny bracts at axils
- Seeds:** Up to 200,000 seeds per plant
- Viability:** 30 to 60% germinate and 30% more decay the first year
- Toxicity:** Can accumulate toxic levels of nitrates and oxalates



Both of these plants are members of the goosefoot family. They mature into tumbleweeds that spread their seeds as the wind carries them.

Some plants have become resistant to specific herbicides such as glyphosate, 2,4-D, dicamba and imazapyr products.

Earlier treatments (while plants are small and actively growing) will provide more effective control regardless of herbicide resistance.

On the backside of this sheet are management recommendations for non-chemical resistant and chemical resistant varieties.

If you have any questions, please contact the Weld County Public Works Dept., Weed Division at (970) 400-3770 or visit <https://www.weldweeds.org>

## Recommended range and pasture management methods:

### **Non - Chemical Resistant** Kochia and Russian Thistle Herbicide

<u>Herbicide</u>	<u>Rate</u>	<u>Application Timing</u>	<u>Comments</u>
Glyphosate – at least 41% active. <b>Non-selective</b>	2% solution OR 2.66 oz/gal water	Rosette stage.	Safe near trees, shrubs and other ornamental plants. Check label for more information. <i>Will kill all vegetation it touches</i>
2,4-D Amine (4 lb. product)	1qt/acre OR 1 oz/gal water	Spring rosette stage up to 6-10" growth stage to be the most successful.	Add non-ionic or methylated seed oil surfactant @ 0.32 oz/gal water or 1 qt/100 gal water. DO NOT apply when outside temperatures will exceed 85 degrees. Grazing restriction is 7 days.
Dicamba (Clarity)	8-16 oz/acre for small, actively growing plants. 16-24 oz/acre for established growth	Spring rosette stage up to 6-10" growth stage to be the most successful.	Add non-ionic or methylated seed oil surfactant @ 0.32 oz/gal water or 1 qt/100 gal water. DO NOT apply when outside temperatures will exceed 85 degrees. Grazing restriction is 21 days.
Range Star (Dicamba + 2,4-D Amine)	Kochia: 1-2 pts/acre up to 4 pts/acre Russian thistle: 2 pts/acre	For Kochia lower rate if plants are up to 20 inches tall. Max rate for taller and actively growing plants.	DO NOT apply when outside temperatures will exceed 85 degrees. Add non-ionic or methylated seed oil surfactant @ 0.32 oz/gal water or 1 qt/100 gal water. Grazing restriction is 7 days.

### **Chemical Resistant** Kochia and Russian Thistle Herbicide Options

<u>Herbicide</u>	<u>Rate</u>	<u>Application Timing</u>	<u>Comments</u>
WideMatch (Clopyralid & Fluroxypyr)	1 pt/acre	Treat when plants are less than 4 inches tall.	Add non-ionic surfactant @ 0.32 oz/gal water or 1 qt/100 gal water. Grazing restriction is 7 days and Haying restriction is 14 days.
E2 (2,4-D, Dicamba & Fluroxypyr)	1 - 2 qt/acre OR 1 – 2 oz/gal water	Best control from germination to 1 inch tall.	Add non-ionic surfactant @ 0.32 oz/gal water or 1 qt/100 gal water. DO NOT apply when outside temperatures will exceed 85 degrees. Grazing and haying restriction is 7days and 30 days for slaughter animals.
Rejuvra (Indaziflam)	5 oz/acre	Pre-emergent herbicide only.	Controls about 50-70% of the germinating seeds for 1 year only. The product still lasts for up to 4 years in the soil. Additional herbicide applications will be needed.
Vista XRT (Fluroxypyr)	6-12 oz/acre	Higher end of the low rate for smaller plants. Increase the rate up to 23 oz/acre and add a 2,4-D ester at 1-2 qts. for larger, more established plants.	Add methylated seed oil surfactant @ 0.32 oz/gal water or 1 qt/100 gal water. No grazing restrictions. Do not apply 7 days before haying.
Detail (Saflufenacil)	2 oz/acre	Treat when plants are less than 6 inches tall.	Can be tank mixed with glyphosate. Add methylated seed oil surfactant @ 0.32 oz/gal water or 1 qt/100 gal water. Grazing is permitted.
Prowl H2O (Pendimethalin)	1.1 – 4.2 qt/acre Max rate is 4.2 qt/acre	Pre-emergent herbicide only.	Smaller rates can be applied up to the max rate 30 days or more apart. Grazing restrictions on cool-season grasses is 14 days. No grazing restrictions for warm-season grasses.

**ALWAYS READ, UNDERSTAND, AND FOLLOW HERBICIDE LABEL DIRECTIONS**

*The herbicide label is the LAW*