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### SPOTTED KNAPWEED MANAGEMENT TIPS

Spotted knapweed, a member of the Sunflower family, is a biennial or short-lived perennial forb with a taproot. The flower is pinkish-purple with black-tipped bracts. Mature plants usually grow two to four feet tall. Reproduction is only by seed. Each seed head can produce 20 to 30 seeds. **Seed longevity is seven to ten years.** Spotted knapweed displaces native vegetation, reduces forage yields and degrades habitat in range, grasslands and agricultural areas.



Management actions should focus on reducing seed production. Control efforts must be planned for several consecutive growing seasons to prevent seed formation/dispersal. Monitoring for, and appropriately treating, new plants as soon as possible is critical.

## Effective control measures for the management of spotted knapweed include:

- 1. Mechanical (hand pulling & digging):** Hand pulling and digging can be effective for small infestations. Remove as much of the root as possible and place flowering plants in bags to prevent seed dispersal. Return to the area for several years to monitor for and remove any new plants. Wear gloves when pulling or digging plants.
- 2. Herbicide: Always follow directions on the label. The label is the law!** Calibrate your equipment to ensure that you are adding the proper amount of herbicide to your tank. The following herbicides are commonly used to control spotted knapweed. **Do NOT use these herbicides in lawns, turf or ornamental settings – read the label.** *For the most effective control, apply herbicides when plants are in the rosette stage up to the early bolting stage.*

### Mixing rates in small backpack or hand sprayers are as follows:

Tordon 22K (restricted use):	1 oz herbicide to 1 gallon of water.
Curtail:	1 - 2 oz herbicide to 1 gallon of water.
Milestone:	1 – 1.25 teaspoons herbicide to 1 gallon of water.
GrazonNext HL:	1 oz herbicide to 1 gallon of water.
*Opensight:	1/2 - 2/3 teaspoon herbicide to 1 gallon of water.
*Chaparral:	1/2 – 2/3 teaspoon herbicide to 1 gallon of water.
DuraCor:	0.5 oz herbicide to 1 gallon of water.
2,4-D:	2 oz herbicide to 1 gallon of water.

### Rates in large sprayers are as follows:

Tordon 22K (restricted use):	1 quart herbicide per acre.
Curtail:	1– 2 quarts herbicide per acre.
Milestone:	5 - 7 oz herbicide per acre.
GrazonNext HL:	1 quart herbicide per acre.
*Opensight:	2.5 – 3.3 oz herbicide per acre.
*Chaparral:	2.5 – 3.3 oz herbicide per acre.
DuraCor:	12 oz herbicide per acre.
2,4-D:	2 quarts herbicide per acre.

**NOTE:** Adding a surfactant to your tank mix may enhance the performance of your herbicide and is required for certain herbicides (read the label). Add 0.5 - 1 oz per gallon of water for backpack sprayers or 1 – 2 pints per 100 gallons for large sprayers.

**\* denotes that a surfactant is required for the herbicide to be effective**

- 3. Cultural (revegetation):** Planting desirable species to compete with spotted knapweed in susceptible areas, such as areas that have been disturbed, is highly recommended.
- 4. Biological (insects):** Several insects are available to feed on the seeds and roots of spotted knapweed. This method is only effective with large infestations and when the climate is favorable to support the insects.
- 5. Grazing:** Sheep and goats can reduce spotted knapweed seed production and biomass.
- 6. Integrated management:** Management of spotted knapweed is more effective when more than one strategy is used.