

# Velvetleaf

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Agriculture

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## Key ID Points

## Identification and Management



## Identification and Impacts

Velvetleaf (*Abutilon theophrasti*) is an annual forb native to Asia. This summer annual's seedling is formed with one heart-shaped and one round cotyledon. These cotyledons are hairy on both the upper and lower surface. As the plant grows, the stems become erect and can range in heights of 2 to 7 feet tall. Fine and soft hairs are present along the unbranched stem. Leaves form alternate from one and another. They range in size from 2 inches to 6 inches in width and length. Both surfaces of the leaves are densely covered in soft, "velvet" hairs. Leaves are heart-shaped with toothed margins and taper to a point. Single flowers are born on individual stalks at the leaf axils. They are yellow-orange in color, and are 1/2 to 1 inch in size. The flowers have 5 petals and the stamens of the flower form a tube. Flowering occurs in late June to October. The seed capsule is round in shape about 1 inch in diameter. The seed capsule has 9 to 15 prickly seed pockets, arranged in a disk. Each seed pocket contains 3 to 9 egg-shaped seeds. Seed viability can last up to 50 years in the soil. The plant has a fibrous taproot.

Habitats for Velvetleaf are cultivated fields, roadsides, gardens, fencerows, and waste areas.

Velvetleaf thrives in nutrient rich soils. Velvetleaf is detrimental in croplands, outcompeting the strongest row crops for nutrients and water. It will appear generally after the last cultivation, growing quickly and vigorously.

The key to effective control of Velvetleaf is preventing the establishment of plants by keeping seed production in check. Mechanical, chemical, and cultural control options are effective if used in an integrated weed management approach. Hand pulling is most effective when plants are young, prior to flower production. Once established, control options diminish due to seed longevity. Details on the back of this sheet can help to create a management plan compatible with your site ecology.

Velvetleaf is designated as a "List C" species on the Colorado Noxious Weed Act. It is required to be either eradicated, contained, or suppressed depending on the local jurisdictions managing this species. For more information, visit [www.colorado.gov/ag/weeds](http://www.colorado.gov/ag/weeds) or call the State Weed Coordinator at the Colorado Department of Agriculture, Conservation Services Division, 303-239-4100.



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*Abutilon theophrasti*

**CULTURAL**

Since Velvetleaf is generally found in cultivated fields, utilizing a proper crop rotation regiment can prove to be effective. Planting competitive grasses and forbs in native pastures can assist in slowing establishment of Velvetleaf. For specific seed recommendations contact your local Natural Resources Conservation Services for seed mixes.

**BIOLOGICAL**

There is studies being conducted on proper biological control for Velvetleaf. Currently though there has not been any approved for use in Colorado. For more information please contact the Palisade Insectary of the Colorado Department of Agriculture at 970-464-7916.

**MECHANICAL**

Hand pull or dig when soil is moist, and before plants flower and go to seed. Bag specimens carefully so as not to scatter seeds. Mowing very close to the ground can also be effective. The key to effective control is to prevent seed production and/or spread.

*Integrated Weed Management:*

*Preventing the establishment of plant populations is the key to effective control of Velvetleaf. If plants are present preventing flower and seed production is the best option for control. Cultural, mechanical and chemical options are effective methods in controlling plant populations. Velvetleaf is hard to eradicate due to seed viability of 50 years once populations become established.*

# Velvetleaf

**HERBICIDES**

NOTE: The following are recommendations for herbicides that can be applied to range and pasturelands. Rates are approximate and based on equipment with an output of 30 gal/acre. Please read label for exact rates. Always read, understand, and follow the label directions. The herbicide label is the LAW!

HERBICIDE	RATE	APPLICATION TIMING
2,4-D + Dicamba (Banvel+2,4-D)	1 to 2 pts/acre	Apply to early growth stages. Add non-ionic surfactant @ 0.32 oz/gal of water or 1 pt/100 gal of water.
Glyphosate (Roundup) *Non-Selective herbicide*	22 oz/acre if < 6" in height - 1 to 2.7 qt/acre in > 6" in height	Apply to early growth stages.
Quinclorac (Paramount)	5.3 to 8 oz/acre	Apply to early growth stages.
Pendimethalin (Pendulum)	2.4 to 4.8 qts/acre	Apply pre-emergance of weed species.

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