

Velvetleaf: Options for Control

Velvetleaf (*Abutilon theophrasti*)

Velvetleaf is a tap-rooted annual reaching 3 to 8 feet tall and is covered in soft hairs. Flowers are typically solitary on short stalks in upper leaf axils. Flowers are about 3/4 inches wide with five yellow to yellow orange petals and numerous stamens that are fused at the base to form a tube. Leaves are alternately arranged (or with alternate arrangement) on stem with petiole (leaf stalk). Leaves are rounded and heart-shaped with a pointed tip. Leaf width is typically 2 to 5 inches but can be as wide as 10 to 12 inches. Velvetleaf grows from a stout, main stem with upper branches. Fruit is semi-rounded to cup-shaped capsules composed of many compartments. Each compartment contains 2 to 9 seeds.

Reproduction: Velvetleaf is self-compatible. Flowering is triggered by day length, beginning in July and continuing until frost. Flowers are pollinated the day they open and the seeds mature 2 to 3 weeks after flowering. Each plant can produce from 700 to 17,000 seeds. Seeds are viable in the soil for 50 to 60 years and remain viable after passing through the digestive tracts of animals. Seeds will ripen on the plant after the plant is pulled.

Velvetleaf Plant



Photos and information are from the Washington State Noxious Weed Control Board.



Velvetleaf Flower

**The best
invasive weed
control is
prevention!**

Economic Importance

Beneficial: Velvetleaf was used as a fiber crop in China since 2000 B.C. The stem and branches of velvetleaf produce long strong fiber used for cord, rope, binder twine, fishing nets, coarse cloth, paper and a caulk for boats. (Mitich 1991; Spencer 1984)

Detrimental: 1982 control costs of Velvetleaf in North America were estimated at \$343 million, and where there is no control, millions more were lost. It causes the most concern in row crops, mainly soy bean, corn and cotton, where this fast growing late season annual will quickly grow and thrive after the last cultivation.

History: Velvetleaf was first identified in 1885 in Klickitat County, and those populations died out. (Roche' 1991). It was identified in 1988 from Thurston and Grays Harbor Counties.

Velvetleaf forming seed pod



Response to Cultural Methods: Prevention of a seed bank is essential for controlling velvetleaf. Crop rotation aids crop production and prevents yearly favorable conditions for velvetleaf. Nutrient loading is not recommended, as velvetleaf demonstrated an opportunistic response, using later applied nutrients to extend the flowering period and higher seed production.

Response to Herbicides: The rates for various chemical control options are found in the annually updated Pacific Northwest Weed Control Handbook. However, data is lacking in the Pacific Northwest.

Response to Mechanical Methods: Small populations, and young plants are easy to control by hand pulling, before flower production. Velvetleaf germinates and grows later in the summer, after the last cultivation of row crops. Cultivation in row crops is effective if controlled late in the season, before seed pod production. Remaining plants should be hand pulled and removed or burned, since the seeds will ripen after the plant is pulled. Close mowing is effective if mowed prior to seed production. Seed bank tillage is also mentioned as a control method.



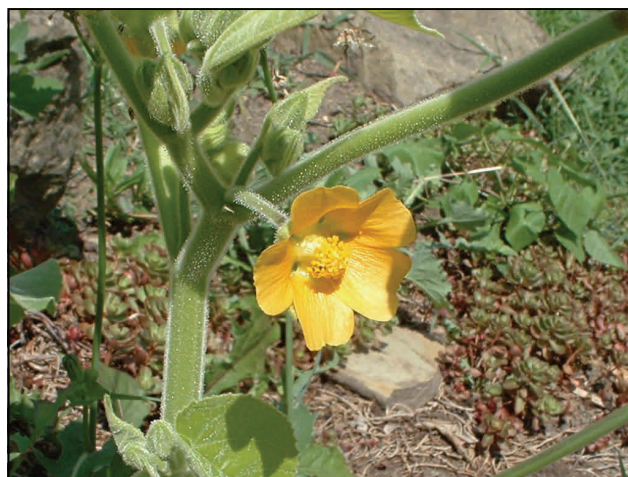
Velvetleaf
Abutilon theophrasti

For additional information about weed identification and control, contact:

Ferry County Noxious Weed Control Board

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Velvetleaf flower



Velvetleaf stem



Velvetleaf is a Class "A" Noxious Weed
Eradication will be required and enforced in all areas.

Velvetleaf is a common weed of waste areas, roadsides, vacant lots, fence rows and around farmsteads where it is found in barnyards, cultivated fields and gardens. It is moving northward into Canada, however it did not produce seeds in Alaska, where the frost free growing season was only 88 days long.

Prevention
Early detection is vital to prevent invasion. Prevent spread from infested fields by cleaning equipment.