

FIELD PENNYCRESS

(*THLASPI ARVENSE*)

Background/ Description

Field pennycress (*Thlaspi arvense*) is a non-native in North America. It is native to parts of Europe and may have been introduced to the U. S. as far back as the 1700s. It is a summer or winter annual and can be found in or along disturbed areas, pastures, croplands and non agricultural areas in many different environmental conditions.

Depending on the habitat, this species can grow vertically from 2 to 32 inches in height. In the initial stage of life it can emerge in the spring, summer or fall as a basal rosette. At this stage it possible for it to overwinter.

When desirable conditions exist it can grow one main stem and produce lateral branches from the base of the plant. The leaves of the plant change characteristics throughout the life cycle of the plant. In the beginning the leaves are simple, alternate, hairless with wavy margins. During the early-flowering stage of the plant the shape of leaves have longer petioles and deeper serrations.

Field pennycress produces a cluster of tiny white flowers at the top of the stem. Each flower produces a seedpod called a silicle or seed capsule that is bright green. The seeds are encased in a round flat wing pod, which is also a characteristic that gives away its identity. As many as 20,000 seeds can be produced per plant. These seeds can remain viable in the soil for up to 20 years.

Biological Control

Currently, there are no approved biological control methods to manage the field pennycress.

Cultural Control

Burning and grazing is not recommended for control. Although not palatable to equine, long term consumption at high doses can be toxic to horses.

Mechanical Control

Tilling, hand pulling or grubbing are effective methods of control if conducted before flowering.



Picture courtesy of John Coyle, Ark Valley Weed Management and consulting, LLC.



Chemical Control

As this species is an annual, the best time to apply herbicide is once it has started to emerge from germination. Following label guidelines for timing to get the best results.

For earlier growth stages of field pennycress, using a glyphosate or 2,4-D herbicide will be the most effective. This treatment will help with the prevention of production of additional seeds to the soil bank.

Once it has matured and getting close to the flowering stage, a SU class herbicide will control this species. Always follow the label. The Label is the LAW!



Picture courtesy of John Coyle, Ark Valley Weed Management and consulting, LLC.

HERBICIDE	RATE PER ACRE	APPLICATION TIMING / NOTES
Glyphosate (Roundup, Rodeo, other trade names)	1 qt.	Apply to early growth stage of plant. Glyphosate is non-selective and will affect any plant it comes in contact with.
2,4-D (4 lb. Amine, 4 lb. Lovol Ester)	1 to 2 pints (Amine) 1 to 2 qt.(Ester)	Use early in the growth stage of field pennycress. Avoid temperatures above 80° and conditions of low humidity.
Metsulfuron (Escort XP)	0.30 to 0.50 oz.	Treat mature plants up to flowering stage. Can be applied in rangeland and pastures.
Chlorsulfuron (Telar XP)	0.25 to 0.50 oz.	Treat mature plants up to flowering stage. Can be applied in rangeland and pastures. Use within 24 hours to avoid degradation.

References

DiTomaso, J.M., G.B. Kyser et al. 2013. Weed Control in Natural Areas in the Western United States. Weed Research and Information Center, University of California. 544 pp.

Andersen, Bish, Bradley, Perez-Hernandez. "Weed of the Month: Field Pennycress." Integrated Pest Management University of Missouri, Division of Plant Sciences, 19 April 2017, https://ipm.missouri.edu/IPCM/2016/4/Weed_of_the_Month-Field_Pennycress/#:~:text=Field%20pennycress%20can%20be%20easily,before%20plants%20start%20shedding%20seed.

