

Weed focus: Dog Fennel

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Dog fennel (*Eupatorium capillifolium*), a member of the aster family, is common in over-grazed and unimproved pastures. It is recognized by its feathery, smooth foliage and hairy stem. Dog fennel is a warm-season perennial plant and is native to the eastern USA. It can grow to 6 ft in height (photos: young plant, left; maturing plant, right). It is considered an indicator of soil disturbance and will grow in a wide variety of soil types.



Dog fennel likes well-drained soils and can tolerate full sun, although it may prefer afternoon shade in areas with extreme heat. It has a fibrous root system which makes it difficult to pull up, once established. It has a distinct aroma when it is mowed. It is said that when the plant is cut and dried, placing the dried material around dog pens can help repel fleas and other pests. It has no forage value; however, some landscapers use it as a decorative plant because of its tall, showy foliage. Dog fennel has inconspicuous greenish, white flowers (right) which appear in mid- to late-fall. Mature seeds develop hairs, like those of dandelion seeds, that assist in dispersal. It propagates by seeds and roots.



Dog fennel contains pyrrolizidine, an alkaloid that can cause liver damage if consumed. Damage can result from both chronic consumption of small amounts of the plant or from one-time consumption of a large quantity of the plant. This chemical protects the plant from insect pests and gives it its reported insect repellency and aroma. It is also the chemical that makes it attractive to the Cinnabar moth, which lays its eggs on pyrrolizidine-rich plants, making its larva toxic to predators. Livestock generally avoid eating this plant because it isn't palatable; however, if other forage isn't available, livestock will consume dog fennel.

Controlling dog fennel in pastures: Because of its upright growth habit, dog fennel does not tolerate frequent mowing and it doesn't compete well in dense pastures. Maintaining soil fertility to support a dense, healthy pasture canopy can prevent infestation. If infestation is a problem, herbicide applications can provide effective population reduction; however, since dog fennel is a perennial, pre-emergent herbicides will not be effective. There is no certain time of year for dog fennel control. Instead, control of the plant is based on its height. Shorter plants are much easier to control than tall ones. Under about 20 inches, dog fennel is readily controlled using 2, 4-D either alone or mixed with dicamba. The effectiveness of these chemicals declines, however, as the plants grow taller. Once the plants reach approximately 36 inches in height, stronger chemicals such as aminopyralid, fluroxypyr, triclopyr, or metsulfuron methyl, will be needed. Chaparral®, Crossbow®, Pasturegard® HL and/or GrazonNext® HL are options. When applying pesticides, also consider the climate. Hot, dry conditions may reduce pesticide effectiveness. If the plants are wilting in the afternoon sun, it may be best to delay application until the soil is moister, temperatures are lower, and plants do not wilt. Furthermore, remember to check pasture safety and application intervals before grazing and hay harvest.

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