

Common Fennel

(*Foeniculum vulgare*)

NOXIOUS WEED FACT SHEET • EB2034

Description: Common fennel is a large perennial herb native to the Mediterranean that grows to a height of 4 to 10 feet. It has feathery dark green to bronze-colored leaves and flat-topped umbrella-shaped clusters of yellow flowers known as umbels. The plant blooms from July to September, producing large numbers of seed. All parts of the plant, including the seed, foliage, stems, and roots, have a strong licorice scent and flavor similar to the commercially available herb anise. However, the negative consequences of growing it in your garden for either its aesthetic or culinary value significantly outweigh the benefits.



Common fennel

Impacts: Common fennel readily escapes cultivation. A single plant can produce thousands of seed during its initial year of establishment, and more than 100,000 in subsequent years. Seed remains viable in the soil for many years. The tap root can reach depths of 10 feet, allowing it to thrive during dry summer months. It often forms dense infestations that prevent the growth of vegetation critical for native wildlife habitat or other desired plants. It has become a weedy pest after escaping cultivated areas and infesting many disturbed waste areas, roadsides, and embankments throughout western Washington.



Common fennel plant parts

Fennel seed spread easily through water, on contaminated machinery, attached to animals, and mixed with crop seed and forage. Dormant seed in the soil allow infestations to reoccur even if plants have not been present at a particular site for several years. In addition, plants establish from vegetative buds on small pieces of roots or bulbs. Plant parts containing buds easily move with water, soil, and

equipment used for cultivation. Once established, fennel tends to dominate sites via seed production and vegetative propagation.

A different cultivar, bulbing fennel, *F. vulgare* var. *azoricum*, does not pose a threat, as it behaves as an annual plant and is grown as a vegetable for its fleshy stems and foliage. It is not an invasive problem and is not listed as a noxious weed in Washington State.



Bulbing fennel

Control Options: You can control common fennel by manual, mechanical, and chemical techniques.

Manual and mechanical techniques. Remove small infestations of common fennel by hand-pulling the small seedlings. Hand tools such as trowels and hoes are effective in uprooting larger seedlings. Mature fennel plants are difficult to remove due to their large crown and deep taproot. Shovels or picks may be needed to dig out individual mature plants and are most effective with moist soil.



Common fennel removal

If the root breaks, be sure to remove the upper 3–6" portion, also known as the crown. Cutting and removing the crown just before the plant sets seed will reduce the number of sprouts from the remaining root portions.

Cutting alone will not provide effective control of common fennel unless it is repeated numerous times throughout the growing season for at least 4 continuous years. The plant should not be mowed or cut when it contains seed, as this will simply spread seed over a wide area. Mowing too early in the year or prior to flowering can increase the number of sprouts coming off the crown and increase the density of the infestation.

To suppress and contain fennel, remove any ripe seed or flower heads and destroy them in a manner that will prevent

germination. Burning is the most effective method if it is allowed in your area. Please check with your local weed board or Extension office for other methods to destroy seed. Replant desired vegetation following soil disturbance to help prevent fennel seed from germinating. In addition, it is important to follow-up manual removal such as digging and mowing with a rigorous monitoring plan to destroy emerged seedlings or regrowth.

Chemical techniques. Spot treatments of glyphosate are also effective for controlling fennel. A spot treatment means you treat only the weed you wish to control without treating the surrounding soil or other vegetation. When applying spot treatments, spray the leaves and stems of each plant thoroughly enough so that they are wet, but not dripping.

Herbicides labeled for spot treatment generally recommend mixing the product with water to create a specified percentage solution. Directions for broadcast applications recommend applying a set amount such as quarts or ounces per specified area. For example, the Roundup PRO label recommends 2–4 quarts per acre for control of fennel using a broadcast application or mixing a 1–2% solution for hand-held or spot applications. Table 1 lists the Roundup PRO label specifications for mixing 1, 25, and 100 gallons of spray at concentrations of ½–10%.

Table 1. Roundup PRO spray solution

Desired spray volume	Amount of Roundup PRO Herbicide*					
	½%	1%	1½%	2%	5%	10%
1 gallon	2/3 oz	1 1/3 oz	2 oz	2 2/3 oz	6 1/2 oz	13 oz
25 gallons	1 pint	1 quart	1 ½ quarts	2 quarts	5 quarts	10 quarts
100 gallons	2 quarts	1 gallon	1 ½ gallons	2 gallons	5 gallons	10 gallons

1 fluid ounce = 2 tablespoons

*Only products with an initial glyphosate concentration of 40% or greater should be used when diluting for percentage solutions (this generally excludes pre-mixed/ready-to-use products).

Timing

Herbicides should be applied to the leaves of common fennel seedlings before the plant develops a flower stalk, usually about June.

Precautions

- Always read and follow all herbicide label directions and safety measures.
- Do not use an herbicide unless both the weed and type of application site are specifically listed on the label.
- Remove domestic livestock before application and wait 14 days after spot application before grazing livestock or harvesting.
- Do not enter or allow worker entry into treated areas during the restricted entry interval of 12 hours. Keep people and pets off treated areas until the spray solution has dried.
- Use personal protective equipment that includes coveralls, waterproof gloves, socks, shoes, and eyewear during applications.
- If herbicide is spilled on clothing or skin, remove clothing and wash skin thoroughly.
- Store herbicides in their original containers and keep them out of the reach of children, pets, and livestock.



Common fennel infestations in Anacortes, June 2006

