

## About Common Fennel:

Closely related to domestic garden fennels, common fennel is a large, aromatic, perennial with upright, branched stems, growing up to 7 feet tall, with a very large taproot. The fern-like foliage, as well as stems, roots, and seeds are hairless and all have a strong licorice scent. The finely divided leaves have a triangular arrangement and are dark green to bronze. Leaf stems are swollen, fleshy and have a widened base. The small, yellow flowers form an umbrella-shaped cluster and bloom from May to September. Plants reproduce from thousands of seeds and fragments of root crown.

## Why control Common Fennel?

Common fennel rapidly spreads by seed, forming dense, monotypic stands that overtake native plants and habitats critical to wildlife and pollinators, as well as gardens and landscaping. Plants can be difficult to control once established. In San Juan County, mature plants harbor great numbers of invasive snails that further threaten native plant populations.

## Before you begin:

Create a plan for restoration before removing weeds or disturbing the soil. Common fennel seeds germinate easily on bare soil, but have a more difficult time in established vegetation. If enough desirable vegetation is not present to replace the fennel, newly exposed soil can be sown with native plants or non-invasive perennial grasses to promote competition.

## Common Fennel vs. Other Apiaceae:

Common fennel displays traits similar to other species in the carrot (*Apiaceae*) family, most notably domestic fennel and dill, but can be distinguished by its much greater size, woody (not bulbing) stem bases and root crown, and perennial lifecycle. Persistent, woody, dead canes may be associated with older plants. Proper identification of the species you wish to control will help you choose the best management practices.



*Florence Fennel (Foeniculum vulgare v. azoricum)*

*Photo credit: WA NWCB*

If you would like weed identification, site-specific control recommendations, or additional noxious weed information, contact the San Juan County Noxious Weed Control Program.



## San Juan County Noxious Weed Control Program 2020

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Noxious Weed Control Boards and  
The Nature Conservancy.

# Common Fennel

*(Foeniculum vulgare var. vulgare)*

## Class B Noxious Weed

(Control required in San Juan County)



*Photo credit: Rich Lee (SJC NWCP, retired)*

# Common Fennel Control

By law, herbicides must be used in strict accordance with label instructions.

*Research on effective and safe herbicide use is on-going and often contradictory. For more recent information contact the San Juan County Noxious Weed Control Program.*

## Timing

Common fennel control is most effective when done in early summer, when plants are forming tight buds prior to blooming.

### Tools for Common Fennel removal:

- Work gloves
- Shovel, mattock
- Mower (brush), string trimmer, or scythe
- Pruners & plastic bag or bucket (for seeds)
- Herbicide & proper protective equipment, if appropriate

Repeatedly removing or treating all plants within a site will help prevent continued seed production and re-sprouting from the roots. Apply a combination of methods (manual, cultural, and/or chemical) to increase the success of control.

## Manual & Mechanical Control

**Digging/Pulling:** Due to the extensive taproot, manual removal is often labor intensive. Seedlings and very small plants can be dug out, removing as much taproot as possible to prevent re-sprouting. Mature root crowns can be removed with a mattock.

**Cutting/Mowing:** Cutting and mowing mature plants just prior to flowering can eventually deplete underground energy reserves, but may need to be repeated multiple times per year for several seasons. Mowing when plants are in flower or seed will further spread the infestation.

## Cultural Control

**Cultivation:** On appropriate sites, deep cultivation will kill mature plants. Repeating cultivation as necessary can deplete or greatly reduce seed bank populations.

**Mulching:** Seedlings and small plants can be controlled by sheet mulch in some cases.

**Burning:** Although fire alone will not control fennel, burning followed by herbicide treatments has achieved eradication in some cases.

## Biological Control

Due to potential negative effects to cultivated fennels, there are no biocontrol agents available for use in the United States.

Livestock grazing does not control fennel and may spread or worsen infestations.

## Chemical Control

Always follow label instructions to find the correct herbicide concentration and timing for your site and the method you plan to use.

**Timing:** Fall treatments are generally more effective, since most herbicides move more efficiently into roots when the days are shorter, soil is moist, and temperatures are cooler. Avoid treating old or drought-stressed leaves, or when the soil is dry. Herbicide treatment may be enhanced when fennel is cut in late summer, and then spot sprayed later in the fall when plants are again in the rosette stage. Low growth may be shielded from herbicide applications if debris is not removed prior to treatment.

**Spot Spray:** Triclopyr, glyphosate, and 2,4-D applications to fully developed leaves, but before flowering, are effective. Applications are less effective after plants have bolted. Triclopyr applications typically provide the best results.

Unlike glyphosate, triclopyr and 2,4-D are broad-leaf selective herbicides that can be used in pasture and meadow settings without damaging grasses. Adding a dye marker to the mixture can help reduce the amount of herbicide used. Always follow all label instructions. Adding a non-ionic surfactant to the mix may improve herbicide spread and penetration.

**Cut Stem:** In either the tight bud stage or in early fall, apply triclopyr or glyphosate directly to the outer edge of freshly cut stems. Cut stem applications should be made immediately after cutting to ensure effectiveness.



Common Fennel foliage  
Rich Lee, SJC NWCP (retired)

## Follow-up

Monitor and eradicate new populations for at least 7 years, while keeping established infestations from spreading into non-infested or recently controlled areas. Always purchase weed-free seed, mulch, soil, and hay for restoration purposes and whenever else possible.

**Debris Removal:** If cut before flowering, leave onsite or dry and then compost. Do not compost roots. If flowering, first remove and bag the flower heads and dispose of them in the trash. Burning is also an option if permissible and material is dry.

**Site Restoration:** Establish dense, competitive native or other non-invasive vegetation. Immediately re-seed bare ground areas with native plants and/or non-invasive perennial grasses after removing dense fennel infestations to reduce erosion and subsequent weed establishment.

## Non-Invasive & Native Substitutes for Common Fennel

If you enjoy Common Fennel, please consider instead growing one of many non-invasive relatives and cultivars. The biennial Florence fennel (*Foeniculum vulgare* v. *azoricum*) has equal or superior flavor and also produces a vegetable leaf base. Annual dill (*Anethum graveolens*) can also be substituted for its culinary value. Both will provide very similar yellow flowers and lacy foliage in garden settings, as well as forage for butterfly larvae.

For substitution in open, natural settings, the native Spring Gold (*Lomatium utriculatum*), a low-growing perennial, provides similar flowers, foliage, and high quality forage and habitat for a variety of native pollinators.



Dill (*Anethum graveolens*)  
Photo: Ansel Oommen, Bugwood.org



Spring Gold (*Lomatium utriculatum*)  
Photo: University of California, Irvine