

COMMON GROUNDSEL

Integrated Pest Management for Home Gardeners and Landscape Professionals

Common groundsel or old-man-of-the-spring (*Senecio vulgaris*) is found nearly everywhere in California (Fig. 1). It is most prolific during the cooler times of the year, but can be found year-round near the coast or in shady areas. Although common groundsel grows best in moist fertile soil, it can grow in more trying environments such as along roadsides and other disturbed sites. It is also one of the major weeds in nurseries. It is a competitive plant in landscaped areas and gardens, but it is generally not a problem in lawns. In addition to the general weediness of this plant, it also can cause chronic liver poisoning to horses, cattle, and swine, even if only a small amount is eaten over a few weeks time.

The success of common groundsel as a weed lies in its seeds. It starts developing seeds very early in its life cycle and can produce 25,000 or more seeds per plant under optimal conditions, although about 1,700 seeds per plant are more likely. These seeds are easily spread by wind. Additionally, there can be three or more generations per year. Even when the plant is pulled from the ground or cut down, seeds from open flowers can still mature and germinate. This weed was also one of the first to have populations develop resistance to some common agricultural herbicides.

IDENTIFICATION AND LIFE CYCLE

Common groundsel is in the Asteraceae family, which also includes sunflower, dandelion, and thistles. It is classified as a winter annual since the seeds germinate in late fall through early spring. The plant matures throughout spring and early summer and usually dies in the summer heat.

The first true leaves of seedlings have shallow teeth, may be purple on the

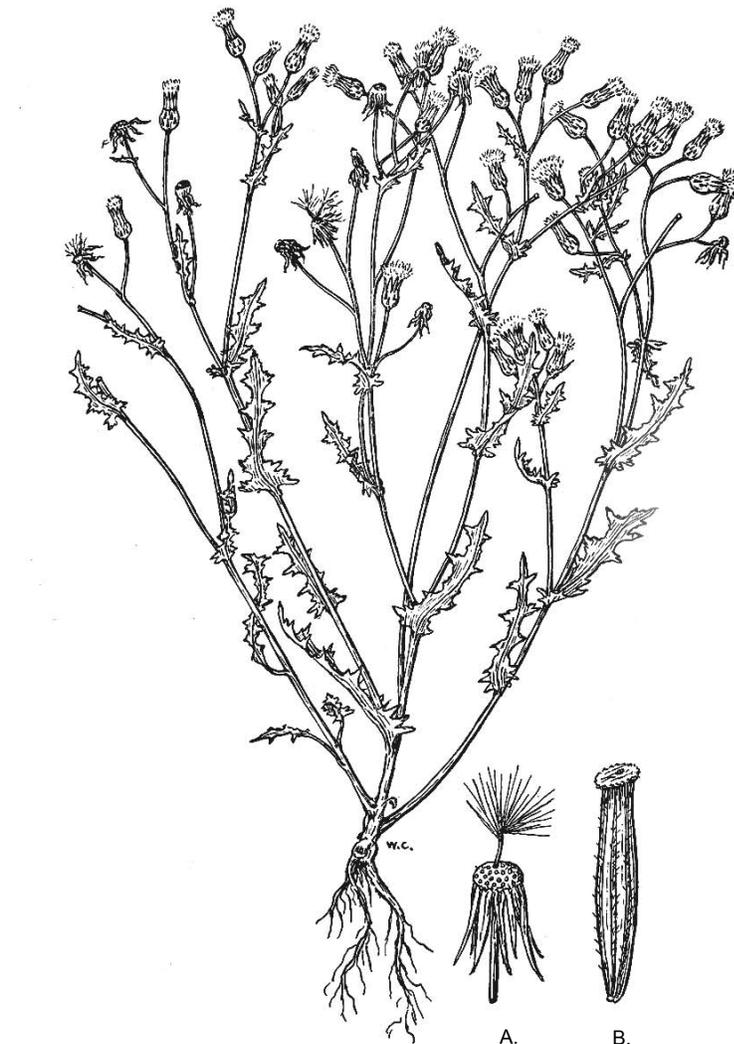


Figure 1. Common groundsel or old-man-of-the-spring (*Senecio vulgaris*). A. receptacle showing a single flower; B. achene (seed).

underside, and are attached to the stem with a short petiole. Later developing leaves are more deeply lobed and are attached directly to the stem. Leaves alternate on the stem and are mostly hairless. In full sun, groundsel grows up to 2-feet tall with a shallow taproot and a secondary fibrous root system and is often branched. Under shaded conditions the mature plant will have

a scraggly appearance with fewer and smaller leaves.

Flowers generally form about 6 weeks from sprouting. Flower clusters are surrounded by green bracts with black tips. This characteristic black tip distinguishes common groundsel from other plants in the Asteraceae family (Fig. 2). Flowers are bright yellow and when

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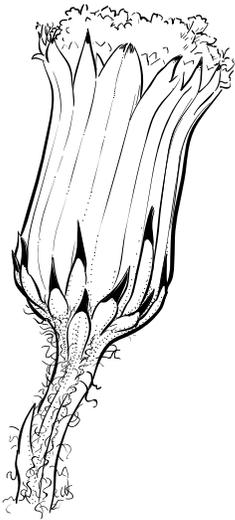


Figure 2. Bracts at the base of the common groundsel flower have black tips, distinguishing this species from common sowthistle and other plants in the Asteraceae family.

the seeds mature, the bracts fully open to reveal a ball of white-tufted seeds. These seeds are easily dislodged and carried by wind. Under good growth conditions the plant can produce numerous flowers. When growing in shade or other stressful conditions the plant may only produce a few flower heads.

IMPACT

Because common groundsel produces so many seeds and the seeds are easily spread, it can rapidly produce an unsightly infestation in landscape beds. In flower and vegetable gardens, early emerging common groundsel plants can out-compete later emerging crop seedlings and reduce their growth. Common groundsel plants that emerge after the crop is established are not effective competitors and have less of an impact. The most harmful consequence of the weed is liver poisoning of livestock. It is important to control common groundsel in and around areas where livestock may graze.

MANAGEMENT

Common groundsel is best controlled by eliminating the plant before it flowers. Since seeds can still mature even if the plant itself is killed, it is imperative to remove the plant from the area

if there is any evidence of flowering. Seeds of common groundsel are not long-lived, usually remaining viable for about one year. Therefore, controlling this weed before flowering will have a great impact on the size of the next year's population.

Shallow tilling or hoeing of young plants effectively controls common groundsel. Start monitoring for seedlings in early fall and remove seedlings and plants as soon as possible. Monitoring should continue through early summer. Even if all the weeds in your garden are controlled, common groundsel may still infest the area from seeds that are blown in from nearby sites.

Cultural and Mechanical Control

In most situations, common groundsel is easily controlled by hand removal or cutting the plant off at its taproot by hoeing. Monitoring the area on a regular basis and removing the weed throughout the growing season will greatly reduce the impact of the weed the next year. In larger areas, rototilling of young plants is effective. Mowing can be effective if the blade is set as close to the ground as possible.

Mulches are very effective for controlling common groundsel. Seedlings cannot push through a 3-inch deep layer of mulch. Blown in seeds cannot establish on mulch if the surface is allowed to dry out. The key to control when using mulches is to choose a mulch size that is large enough to allow water to pass through and the mulch surface to dry out. This is best accomplished by using coarse mulch, usually sold as medium size. Fine mulch such as sawdust and potting compost will absorb water and actually become a suitable site for the common groundsel seeds to establish. Using mulch that has large pieces is also not recommended because these types will have too much space between the pieces. Seeds can drop to the soil underneath and grow up between the spaces. Synthetic mulches, such as landscape fabrics, provide a physical barrier to seedling development. How-

ever, these are only effective for controlling seeds that are already in the soil. They will not be effective in controlling seeds that have blown in during the current growing season.

Biological Control

The most promising method of biological control is the use of the rust fungus *Puccinia lagenophorae*. This fungus provided about 30% control in greenhouse tests. Research is being conducted to find ways to improve its efficacy. There are no insects that are effective for controlling common groundsel.

Chemical Control

Common groundsel in the home garden and landscape is best controlled using cultural and mechanical methods. If these methods cannot be used, herbicides containing diquat or glyphosate will control growing plants in home landscape beds. Only glyphosate can be used around edible crops and it will severely injure or kill any plant it touches. The sprayer tip should be shielded so that the spray does not contact any desirable plants, as either of these herbicides will injure many ornamental plants. There are no preemergent (before the plant emerges from the soil) chemical controls available for home use that are effective for controlling common groundsel.

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WARNING ON THE USE OF CHEMICALS

Pesticides are poisonous. Always read and carefully follow all precautions and safety recommendations given on the container label. Store all chemicals in the original labeled containers in a locked cabinet or shed, away from food or feeds, and out of the reach of children, unauthorized persons, pets, and livestock.

Confine chemicals to the property being treated. Avoid drift onto neighboring properties, especially gardens containing fruits or vegetables ready to be picked.

Do not place containers containing pesticide in the trash or pour pesticides down sink or toilet. Either use the pesticide according to the label or take unwanted pesticides to a Household Hazardous Waste Collection site. Contact your county agricultural commissioner for additional information on safe container disposal and for the location of the Household Hazardous Waste Collection site nearest you. Dispose of empty containers by following label directions. Never reuse or burn the containers or dispose of them in such a manner that they may contaminate water supplies or natural waterways.

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