

Common Garden Weeds:

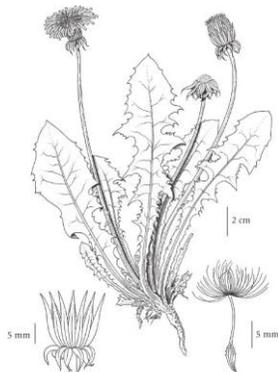
Bindweed (Convolvulus arvensis):



Identification: Creeping perennial often climbing or forming dense tangled mats with an extensive creeping root system that can penetrate the soil to a depth of 20 feet which gives rise to numerous long lateral roots. Bindweed has white to pale pink trumpet flowers.

Management: Handpulling and mowing are somewhat effective method of control as seeds are prevented this way, but the extensive, rhizomatous root system still causes problems. **Avoid using a rototiller where bindweed is present**

Common Dandelion (Taraxacum officinale):



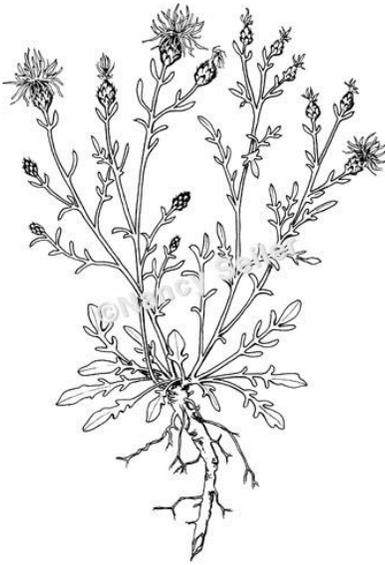
Taraxacum officinale



Identification: Dandelion is a perennial that produces a strong taproot that is capable of penetrating the soil to a depth of 10 to 15 feet – Deeply serrated Leaves are clustered in a rosette at the base of the plant and vary in length from 2 to 14 inches and from 1/2 to 3 inches wide. Flowering stalks are 6 to 24 inches in length and terminate in a compound inflorescence or head that contains 100 to 300 ray flowers and looks like a characteristic puffball.

Management: Dandelions can be dug out when very small plants by hand, taking care to remove the whole root rather than simply hoe off the top growth. However, it is very difficult to get the whole root, especially if the plants are large or the ground is dry, and any portion left in the ground can sprout at least one new plant. Mowing the flower heads as soon as they open helps reduce seed formation.

Knapweed (Spotted Knapweed) [Centaurea stoebe (syn. maculosa)]:



Identification: Grows 1-3 feet tall with leaves that are long and divided on lower, short and narrow above, covered with fine hairs. Flowers are pink to purple, rarely white. Knapweed has a well-developed and fibrous taproot.

Management: Hand pulling is an extremely effective method on small-scale infestations of spotted knapweed. Pulling is easiest when soil is moist; allowing you to remove most of the taproot and kill the plant. Any stage from flowering on should be bagged and removed from the site in order to minimize seed at the site. Mowing will help reduce seed production of spotted knapweed; however, repeated mowing will result in plants flowering and setting seed below the blades of the mower. Mowing should occur during the bud stage but before flower to prevent cut plants from producing viable seeds

Lambsquarters (*Chenopodium album*):



Fig. 48. Common lambsquarters (*Chenopodium album*)
Flowering plant, a. Enlarged seed.

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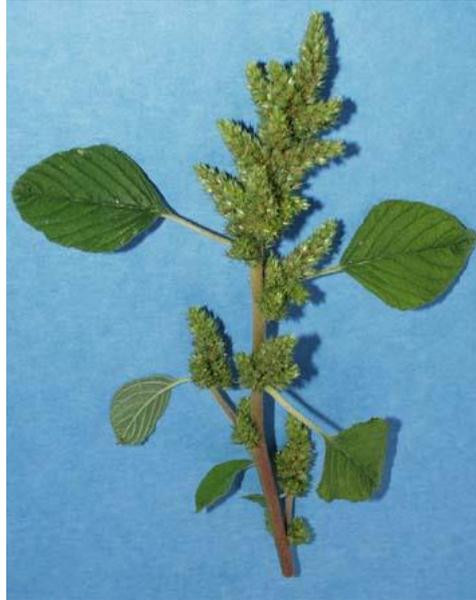
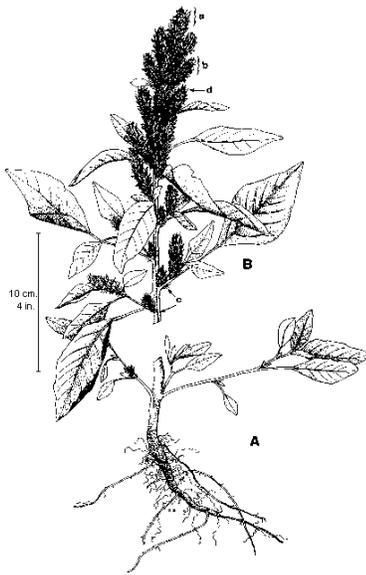


Identification: Lambsquarters is a rapidly growing summer annual weed. Height averages 3 feet (90 cm), but may vary from a few inches to 6 feet (1.8 m). The most distinguishing feature of common lambsquarters is its white mealy coating. The smooth stem below the seed leaves is light green, tan, or light maroon. Flowers are small, mealy, and green.

Management: The best control method is to prevent infestation and spreading by minimizing seed production. Tillage is another useful control method, because common lambsquarters cannot recover from uprooting or mechanical damage. Mowing is another way to prevent seed production.

Other Notes: Lambsquarters is an edible weed and delicious when harvested while the plant is young. You can add to salad, or cook it similar to spinach or chard.

Pigweed (Redroot Pigweed) (*Amaranthus retroflexus*):



Identification: A summer annual broadleaved weed, redroot pigweed usually grows about 2 to 3 feet (0.6 to 0.9 m) high, but sometimes as high as 6 feet (1.8 m). The leaves are dull green on the upper surfaces and reddish purple on the lower surfaces, alternating along the stem and are oval or long and narrow. Upper surfaces are green; lower surfaces vary from green with reddish tinges to completely red. Flowers are small, green, and crowded into dense fingerlike spikes that form long, terminal clusters. Each flower is surrounded by three stiff, awl-shaped bracts. Bracts are twice as long as the flowers and have spiny tips that protect developing seeds from predators.

Management: Because redroot pigweed is an annual and has a relatively shallow root system, its seedlings are easily destroyed by cultivation. Seedlings are most susceptible to cultivation during the first four weeks after germination, when growth is fairly slow, especially if the weather is cool. Once it is well established, redroot pigweed is difficult to control. It can recover from extreme disturbances, such as clipping and trampling, and can rapidly produce axillary flower clusters. Redroot is quite competitive with crops; it grows rapidly and uses water very efficiently. Control at early growth stages is essential. One can remove small numbers of plants with a spade or dandelion fork (a tool for cutting weeds just below the soil line). After removing weeds by hand, we recommend bagging and removing them to ensure seeds are not left in the field.

Purslane (Common or Summer) (Portulaca oleracea):



Fig. 62. Common purslane (*Portulaca oleracea*). Flowering plant, a. Flower, b. Seed.



Identification: Common purslane is a prostrate, succulent, annual that often forms a dense mat. The reddish stems originate from a central rooting point, radiating out like spokes of a wheel. The stems vary in length, commonly up to 12 inches. Leaves are stalkless (sessile), oval, smooth, succulent, and shiny, and vary from 1/2 to 2 inches in length. The leaves, although generally arranged opposite, may also occur alternately along the stem, particularly near the base. Small (3/8 inch), five-petaled, yellow flowers are borne singly in leaf axils and open only in sunshine. Seeds are borne in a small pod with a top that comes off like the lid on a cookie jar. Seeds are reddish brown to black, oval, and tiny (about 1/64 to 1/32 inch in diameter).

Management: This weed is generally managed by cultural means such as hand-weeding and mulching. Cultivation following irrigation when common purslane seedlings are small can reduce the weed population. However, because common purslane germinates at or near the soil surface, cultivation can bring up a fresh supply of weed seeds from deeper regions of the soil for future germination. If they screen out all light, mulches can be used to control common purslane. To be effective, organic mulches should be at least 3 inches thick. Synthetic mulches (plastic or fabric mulch) which screen out light and provide a physical barrier to seedling development, also work well. Fabric mulches, which are porous and allow flow of water and air to roots, are preferred over plastics.

Other Notes: Purslane is an edible delicious weed and can be added to salads for a lemony/zesty addition.

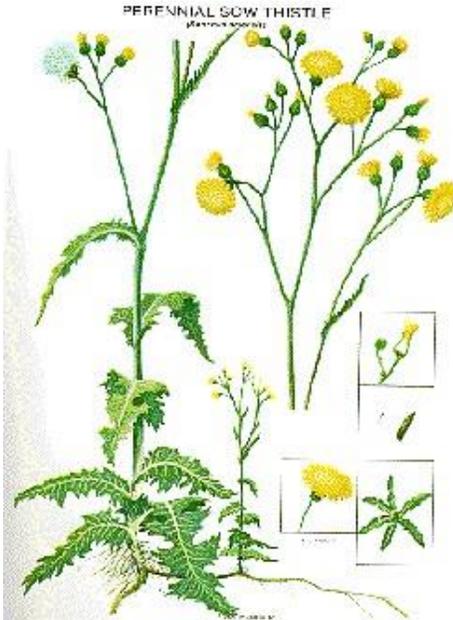
Quackgrass (*Agropyron repens*):



Identification: Quackgrass grows from underground rhizomes to an unmowed height of 1 to 4 feet. It has thin, flat, bright ashy green leaf blades. The seed spike grows from 3 to 8 inches long and appears in July. Each quackgrass plant produces about 25 seeds; they remain viable 3 to 5 years in the soil. It takes 2 to 3 months for a newly germinated plant to develop rhizomes. It is very important to eliminate the plants before they reach this stage. Rhizomes (underground stems) are yellow to white, 1/8" in diameter, with distinct joints or nodes every inch or so. Each node is capable of producing fibrous roots, and sending a new blade of grass through the soil. The creeping rhizomes are so tough they can grow through a potato tuber, or push up through asphalt pavement. If left to grow, they will form a dense mat 4" thick in the upper part of the soil. One plant can produce 300 feet of rhizomes each year. **Avoid using a rototiller where quackgrass is growing**, because it amounts to propagating thousands of new plants from the chopped up rhizomes.

Management: Several spring cultivations should sprout and kill any weed seeds before they develop rhizomes. Extremely shallow cultivation works best where there is existing quackgrass as any cutting of the rhizomes means rapid multiplication of plants. Mulch should be used as much as possible to smother plants, but you can be assured that the rhizomes will creep along until there is an area in which it can send up a shoot. Rhizomes will have to be hand dug as much as possible without breaking them off in the soil, then dried and disposed of. The main thing is to repeatedly eliminate the blades by slicing them off with a hoe. Without photosynthesis the plant will not be able to store food reserves in the rhizomes and will eventually die. Any newly germinated plants can be easily hoed out and they will dry up and die on a sunny day.

Sow Thistle (*Sonchus arvensis*):



Identification: Perennial herbaceous plant, 2 - 5' tall erect, single stem, branches near the top into several flower stalks. Broken stems emit a sticky milky bitter juice with a sour odor. Alternate, lower leaves are deeply lobed, upper leaves clasp the stem; similar to dandelion leaves except with teeth ending in small weak prickle. Flowers are bright yellow up to 2" wide daisies, blooming from June through August. Seeds are tufted, dispersed by the wind. The roots are widely spreading white brittle roots penetrating five to ten feet, producing new plants from small root pieces.

Management: Cutting and pulling sow thistle is an effective method. Try not to break the stem off from the root when pulling as a root left in the ground can regrow the plant.

Whitetop or Hoary Cress (*Cardaria draba*):



Identification: Whitetop is a perennial, grows up to 2 feet tall. Leaves are blue-green and stem leaves are blue-green to gray-green and arrow-shaped with occasional finely toothed edges. All leaves are covered with soft white hairs. Leaves of the lower stem are on stalks, while leaves of the upper stem attach directly to the stem with two clasping lobes. Flowers have four white petals arranged in a cross. Dense clusters of small flowers create the white, flat-top appearance.

Management: Whitetop can be managed in fall or early spring is appropriate when it is in the form of small seedling stands. When pulling, hoeing or tilling the seedlings, make sure to get the lateral and vertical roots. If fragments of the root remain, new plants will develop. Pulling and cultivation must be done on a regular basis, sometimes several times a season. For example, tilling white top must be repeated every 10 to 21 days until no seedlings emerge. Do not till or mow an established stand; this stimulates the rhizomes to grow new plants.