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Weeds in the Home Vegetable Garden

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Weeds

The most common definition of a weed is a plant out of place. Many plants that are considered weeds in the vegetable garden are beneficial wildflowers in other settings. Unfortunately, some of the plants, while attractive in the wild, are too aggressive for use in the home garden and can take over the landscape. Seeds of even very obnoxious wild flowers may be sold occasionally, so care must be used in the selection of wildflowers vs. weeds.

Figure 1. Considered a weed, Queen Anne's lace is a biennial plant with beautiful lace-cap florets.

Some weedy plants are edible, providing nutritious variety to the regular diet: dandelions, purslane, chickweed, cress, mustards, and lambsquarters all offer greens; blackberries produce sweet fruits; Jerusalem artichokes (sunchokes) are the tubers of a native sunflower; and, of course, there is always wild asparagus to stalk. Before attempting to eat wild plants, be sure they are properly identified. Weedy plants often provide a habitat for various insects, some of which are beneficial to the garden. They provide shelter, pollen, and nectar for bees and predators of garden pests, such as the preying mantis.

Weeds in and around the Garden

Weeds are highly adapted to where they grow and compete too well with crop plants for water, nutrients, and light. They have large, efficient root systems, grow rapidly and frequently produce tremendous amounts of seed. Most weeds tolerate drought and low soil fertility. Meaning, they require lower amounts of nutrients, like potassium and calcium, than vegetable crops. Examples of weeds that compete highly with vegetable crops are grasses, purslane, lambsquarter, and common dock. Weeds serve as a host of some insects and diseases, often providing an overwintering site for them to survive and emerge again as the weather warms.

Figure 2. Large-flowered vetch, *Vicia grandiflora*, can be a weed or a cover crop in the vegetable garden.

Cultivation

There are several ways to rid the garden of most problem plants. Since mature weeds extract large quantities of moisture and nutrients from the soil, removing the weeds when they are young is beneficial. Hand-pulling suffices for small gardens and raised beds, but a hoe is critical for larger gardens. Manual-powered rotary cultivators do a good job on long rows and pathways, provided the soil is not too wet or dry and the weeds are small. In large gardens with widely spaced rows, a rotary tiller of appropriate size makes the work easy and fast. Manual and powered rotary cultivators are usually unable to turn under weeds close to vegetable plants without damaging the vegetables. Hand-pulling or hoeing are best for removing weeds near vegetable plants. Deep cultivation with any instrument is likely to damage roots or stems of crop plants.

Turning annual weeds under, especially before they flower, provides organic matter to the soil. Hand-pulled weeds, except for rhizomatous grasses, may be laid on top of the soil to dry out, then left as a mulch or turned under. However, if rain is predicted within a day or two, remove pulled weeds to the compost pile. Otherwise, rain will wash soil around the roots enabling some to survive. Weeds which have started to go to seed and grasses that spread by rhizomes or stolons should not be left in the garden after pulling or they will create new problems. Composting may not destroy the weeds or their seeds if the pile doesn't heat up sufficiently after they are added. In these cases, despite their potential value as organic material, it's better to put them in the trash or burn them, if local ordinances permit. Reducing weed growth near the garden by mowing or other means will also help prevent the spread of weeds and seeds to the garden area and reduce insect and disease hosts.

Cultivation is best done when the soil is moist, but not wet. Working wet soil will change the structure, especially of heavy clay-type soils. When it is too dry, weeds are difficult to pull and hoeing is difficult. A day or two after a rain or irrigation is the best time to cultivate. The work will be much more pleasant done in the cool temperatures of early morning or evening rather than the hottest part of the day. Wear protective clothing to work when it's hot, and stop frequently for rest and refreshment.

Mulching

Thick layers of organic mulch will not allow most annual weeds to poke through, and those that do are usually easily pulled. Weeds with runners are not so easily controlled, and black plastic may be a better choice where these prevail. For paths, newspaper or other such materials covered with wood chips or hardwood mulch will provide excellent weed suppression. See Publication 426-326, "Mulches for the Home Garden," for detailed information on various mulches.

Spacing

Once vegetable plants are established, if they have been planted close enough to each other, they will shade the soil and prevent the growth of many weed seedlings. This is the effect achieved by a well-planned raised bed or narrow-row planting in which plants are spaced so that the foliage of adjacent plants touch, forming a closed canopy at the mature growth stage. See publication 426-335, "Intensive Vegetable Gardening," for recommended space requirements.

Other practices

Some gardeners are using various types of no-till gardening to reduce weed problems, as well as prevent erosion and moisture loss. One method is the standard no-till practice of sowing a fall cover crop, killing it with an herbicide and planting vegetables in the dead plant material after a recommended waiting period. There are no herbicides recommended for use in established home vegetable gardens to kill emerged weeds that won't also damage or kill vegetable plants. However, post-emergent herbicides can be used in row middles to control small weeds. Care must be taken to prevent drift of sprayed herbicides onto vegetable plants. Also, certain herbicides can be used before planting to kill cover crops for no-till practice or before vegetable crops are transplanted or seeded. See your Extension agent for recommendations. Use of weed-killers normally recommended for lawns or other areas is not permitted.

Figure 3. Wheat as a cover crop in a raised vegetable garden

The use of cover crops over several seasons or years in a particularly weedy section can also reduce weed problems. However, this method requires leaving that part of the garden uncultivated, reducing growing space. Cover crops must be mowed or harvested regularly, which can be time-consuming and/or difficult without appropriate tools. Investigate cover-crop rotations thoroughly before using them to control weeds. If you are unsure about using cover crops in your vegetable garden, try them in small sections of the garden to determine how effective they may be for you.

Herbicides

Certain herbicides may be used in or around the home garden. They should always be used according to label instructions and only for crops listed on the label. The wrong herbicide can be very damaging to your garden. Check with your Extension agent for recommendations. Even when used properly, drift from herbicide sprays used on the lawn or in areas surrounding the garden can cause damage to vegetable plants, so take care to spray on windless days and erect barriers to protect plants if necessary. Drift or runoff from pre-emergence herbicides does not damage growing plants, but may prevent seeds from germinating. Be aware that treatment with an herbicide for one type of weed may result in the area being colonized by other weeds which are tolerant to the chemical. Finally, never use an herbicide in the same sprayer you use for insect and disease control. Keep a separate one for herbicides only.

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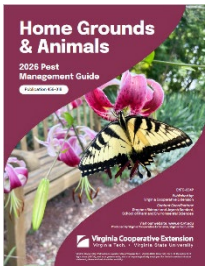
Weeding Resources

Weed Identification

- Use plant apps (Picture This, iNaturalist), Google Lens, or the PMG Help Desk (email a photo).
- NC State Extension "Plant Toolbox": https://plants.ces.ncsu.edu/
- University of Maryland Extension: https://extension.umd.edu/resources/yard-garden/weeds/weed-identification/
- Virginia Tech/Virginia Cooperative Extension Weed Identification website: https://weedid.cals.vt.edu/

Publications and Online Resources



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- Virginia Cooperative Extension. (2026). *Home Grounds & Animals*. https://www.pubs.ext.vt.edu/content/dam/pubs_ext_vt_edu/456/456-018/ENTO-634.pdf
- Virginia Cooperative Extension Publications: https://ext.vt.edu
- Extension websites for all land grant universities: https://www.extension.org/search
- Blue Ridge PRISM (invasive plant resource): https://blueridgeprism.org/

PMG Resources

- Call, e-mail, or visit our Horticulture Help Desk: albemarlevcehelpdesk@gmail.com Telephone: (434) 872-4583
- www.piedmontmastergardeners.org
  - Subscribe to *The Garden Shed,* our free, monthly online newsletter
  - Check for upcoming events and classes
  - Become a Master Gardener
  - Speakers Bureau
  - Facebook: https://www.facebook.com/AlbemarleCharlottesvillePMGs
  - Instagram: https://www.instagram.com/piedmontmastergardeners/

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