

A close-up photograph of a hand pulling a daisy weed from a lawn. The hand is positioned at the top right, gripping the green leaves of the plant. The daisy has a single white flower with a yellow center. As the plant is pulled, its root system is exposed, showing a network of fine roots and a thicker taproot embedded in the dark soil. The surrounding grass is green and slightly out of focus. The title 'Eradicating weeds' is overlaid in large white text on the lower half of the image.

Eradicating weeds

Weeds are simply unwanted plants growing in the wrong place, and something every gardener has to face. Fortunately there are many ways of controlling them, as **Tony Dickerson** outlines. Photography by Tim Sandall



A handful of weeds are notoriously difficult to control, such as Japanese knotweed, which is capable of growing through tarmac



Hand weeding is cheap and effective

NEIL HENNORTH



Woven plastic landscape fabric can be unattractive – cover with a mulch



Once you have used a watering can or sprayer for weedkiller, keep it solely for that purpose

THERE IS NO GETTING AWAY from weeds, even in the best-kept garden – plants have evolved to fill almost every environmental niche and weeds are, from the gardener's point of view, just opportunistic plants in the wrong place.

Weeds are unsightly, upsetting the balance, order and clarity of a design or horticultural intention. But they also compete with garden plants for moisture, nutrients, light and growing space, and can also act as hosts for pests and diseases.

Annual weeds, such as bittercress and chickweed, complete their life cycle within a single season. Their survival depends on their ability to produce seeds freely: once allowed to seed, they may produce several generations in a year – there are seed banks of accumulated weed seeds in most soils.

Perennial weeds grow from year to year. Herbaceous perennials, such as nettle and bindweed, have non-woody stems that die back to the ground in early winter. They survive winter or drought by going dormant, resuming growth when conditions are more favourable. Woody perennials such as brambles and elder maintain a permanent framework, increasing in size each year.

Even the most overgrown plot can be reclaimed from the domination of weeds. Act before weeds establish to ensure they do not become an intractable problem. ■

Tony Dickerson is a garden writer and nurseryman

Areas vulnerable to weeds

Annual weeds colonise bare soil between ornamental plants or between rows of vegetables. Perennial weeds tend to establish in undisturbed ground among shrubs, in herbaceous borders and in lawns.

Densely planted gardens and well-maintained lawns give weeds less chance to establish, but there are always suitable niches for weeds to exploit, such as gravel beds, rock gardens and cracks in paving. Neighbouring waste ground or poorly maintained gardens can be unwanted reservoirs for wind-blown weed seed, or pernicious creeping weeds such as horsetail, bindweed and Japanese knotweed, which can grow up through tarmac (above).

In areas infested with annual weeds, frequent cultivation, as in a vegetable plot, encourages germination of weeds from the soil seedbank. To combat this, use the stale seedbed technique – two weeks before sowing, cultivate the area. Then, just before planting or sowing the desired crop, kill the young weed seedlings that have appeared with a contact weedkiller, or by hoeing.

Control options

There are three main options for weed control: physical removal, physical barriers and chemical weedkillers. All weeds can be controlled without weedkillers, but persistent or deep-rooted weeds may prove extremely difficult to eradicate in this way.

Physical removal

These methods are cheaper than chemical control, use simpler tools, and are often the only practical ways of removing weeds where weedkillers cannot be used safely without risk to surrounding plants in borders and lawns.

● **Hand weeding** Picking out weeds by hand is effective in closely planted flower borders, or where crops are raised from seed sown in rows *in situ*. It can be less effective with perennial weeds, as even small pieces of root or rhizome left behind can re-establish.

● **Forking** Hand forks (above) are ideal for working between garden plants; full size forks are better for larger areas. Both are less effective for weeds with rhizomatous roots, such as couch grass and ground elder, as their root fragments can regrow.

● **Hoeing** For weeding between plants and in the vegetable plot, hoes are ideal. A two-bladed push-pull hoe is particularly effective. Keep the blade sharp and draw through the soil just below the surface to sever weeds. It is most effective in dry weather, when weed seedlings quickly desiccate on the surface.

● **Repeated cutting** Repeatedly strimming or mowing to ground level over several years weakens and can eventually eradicate even the most troublesome weeds.

● **Flame guns** Although useful on hard surfaces to burn off above-ground weed growth and kill weed seedlings and seeds, a flame gun is not always effective against deep-rooted perennial weeds.

Physical barriers

● **Black polythene** This is particularly useful on weed-infested allotments. Clear top growth and remove woody weeds before covering the surface. Excluding light for six to 12 months will kill off all but the most persistent perennial weeds. Vegetables such as sweet corn can be planted through slits in the polythene, but it does not allow rain to percolate through into the soil.

● **Landscape fabrics** These are porous and can be either spun fabrics or tougher, woven plastic material (above). They are, however, unattractive, so are often covered with a thin layer of bark or gravel.

● **Root barriers** Available as proprietary products, root barriers are effective where perennial weeds, such as ground elder and horsetail, are invading from neighbouring ground. Concrete slabs or galvanised iron sheets can also be utilised. Barriers need to be at least 30cm (12in) deep, and ideally 60cm (2ft) or more.

● **Mulches** A thick layer of organic material such as garden compost, manure or bark, or inorganic gravel and other aggregates, will suppress weed growth and conserve moisture, but it needs to be a minimum of 7cm (3in) deep. Apply in spring, before the soil dries out, having removed any overwintering weeds. Organic mulches will need replacing as they rot down, once or twice a year.

Chemical control

Weedkillers are particularly effective on lawns, on patios and paths (where it is difficult to remove deep-rooted perennial weeds), and on neglected plots. Properly applied, they can kill weeds with little chance of regrowth from sections of root or rhizome missed by hand weeding. Cost is one disadvantage, and most are non-selective, so wanted plants can be damaged. For more on active ingredients and treating pernicious weeds, see RHS Advice, p432.

Applying weedkillers

Many weedkillers are available as convenient – but relatively expensive – ‘ready-to-use’ products or, more economically, as concentrated formulations for dilution in a proprietary sprayer or watering can. Apply using a dribble bar attachment on a watering can (good for hard surfaces, lawns, between rows of crops and around trees and shrubs) or fine rose (above) where thorough wetting of dense weed foliage is required. Bruising the foliage may help uptake.

Woody weeds can be difficult to eradicate. Tree stumps can be dug out by hand, or removed with a stump grinder. Treat stumps of trees that are prone to suckering, such as sumach or cherries, with a glyphosate-based stump killer before removal. Cut back brambles and tree seedlings and spray cut surfaces. Glyphosate concentrate can be poured directly into cut hollow stems of Japanese knotweed and bamboo.

USING WEEDKILLERS SAFELY

- Read the product label carefully and follow the manufacturer's instructions exactly (this is a legal requirement).
- Unless indicated, never mix different weedkilling products.
- Apply at the correct dilution rates.
- Make the correct number of applications as indicated by the manufacturer – some weeds may be easily killed by a single treatment, but many require two or more applications.
- Have specific sprayers or watering cans for weedkillers. Wash and rinse them thoroughly after use.

WEEDKILLER TYPES

- **Contact** These products give rapid results, but destroy only the above-ground green parts of plants, not the roots. Most effective against annual weeds. Usually have little or no long-term residual effect on the soil. Some contact weedkillers are now available based on natural products such as acetic acid and pelargonic acid.
- **Systemic or translocated** These act more slowly. Absorbed into the weeds mainly through the leaves, they spread to all parts. Glyphosate is non-selective and will damage or kill any green tissue it comes into contact with, but is inactivated on contact with the soil, so sowing or planting can take place as soon as the weeds are dead (typically three weeks).

Lawn weedkillers are systemic but are also described as ‘selective’, as the active ingredients leave turf grasses unaffected. They typically contain a mixture of translocated active ingredients and are usually residual in the soil for two or three months.

● **Residual or total weedkillers** These remain active in the soil or on hard surfaces for several months. Several soil-acting residuals have been removed from the market, but there are alternatives. Weedkillers for the home gardener are available as either liquid concentrate, to be diluted with water, or ready-to-use formulations.

- **More at:** www.rhs.org.uk/gardening/help-advice/garden-chemicals-and-pesticides