

Strategies for dealing with perennial weeds

Tackling runners and rhizomes in your home or market garden

BY JANET WALLACE

Quackgrass, buttercup, Canada thistle, ground ivy and sheep sorrel . . . to know them is to hate them.

I have a good relationship with most weeds. I value their role in covering the soil, cycling nutrients, and providing habitat for beneficial organisms. I add lamb's quarters to salads and make dandelion root tea. I appreciate how vetch and clover fix nitrogen. Unless a weed is competing with my crop or about to spread, I let it grow. That said, my tolerance doesn't extend to perennial weeds that spread by runners or rhizomes. These have no place in my garden.

Creeping perennial weeds include quackgrass (couch grass), buttercup, Canada thistle, ground ivy (creeping Charlie), sheep sorrel, daisies, goldenrod, yellow nutsedge and yarrow. After battling these weeds for years, I found success by (1) preventing the weeds from spreading, and (2) depleting the weeds' energy reserves, and (3) removing or killing the weeds. I began by understanding the growth habits of these sneaky weeds.

Know your enemy

Perennial weeds can live for years. They die back every winter, but return with vigour in the spring. In this article, I'm focusing on perennial weeds that spread by horizontal stems, rhizomes, when they grow underground or stolons, sometimes called runners, when they grow above ground. In addition to the creeping growth, these weeds also reproduce by seed.

Rhizomes and stolons can travel far from the mother plant. At certain intervals, they develop nodes which then root and form new plants. If you uproot the original plant, the runners or rhizomes will likely break off and start growing. Worse, if you chop up the rhizomes by tilling, you can multiply the problem by creating a legion of new weeds.



A heavy layer of straw can help suppress perennial weeds, or at the very least help deplete their energy reserves.

Stop the spread

The first step to control is to avoid introducing problem weeds to your property. You can do this by composting manure (ensuring it reaches high temperatures) before application, getting transplants from reputable suppliers and cleaning equipment that has been used on other farms.

A tale of tillage: Years ago, I moved into a house with an abandoned garden that was full of quackgrass. For years, I struggled to control the weed. Success came after I replaced the rototiller with a broadfork.

The quackgrass had thrived on the annual practice of spring rototilling. With every pass of the tiller, the rhizomes were chopped into pieces and spread. It was like inoculating the soil with quackgrass. Tillage can, however, be a useful part of a weed control strategy as outlined below.

Let weeds kill weeds: When I pull weeds, I have as many as three weed buckets. Some weeds will be used in salads or soups. Other weeds are destined for the compost or left on the pathways. The third group include creeping perennials and weeds that are going to seed. I make a tall



Canada thistle (below) and couchgrass can both spread via underground rhizomes. If broken or shattered during weeding or tilling, these rhizomes can each produce a new plant.





There's a strange satisfaction to be had in pulling out a three-foot length of quackgrass with sprouts coming out of it.

pile of these weeds outside my garden. As I add weeds to the top, the ones below are destroyed by anaerobic composting. I monitor the pile to ensure the weeds don't take over. A year later, after the pile has become rich soil, I'll plant a vigorous perennial (such as horseradish or Jerusalem artichoke) into it.

Weaken the weeds

The key to controlling, even eradicating, creeping perennials is energy. Reduce their energy reserves so they can no longer rebound with vigour. Think of the balance of energy in (sunshine) and energy out (growth). You can manipulate these factors by forcing the plant to keep growing and/or not allowing food. That's the principle; the practices are outlined below.

Mowing and tilling

Mowing and tilling often help perennial weeds by stimulating new growth. But, if timed right, you can deplete the weeds' energy reserves. Used alone, it's best to mow or till before the plants will be stressed by a hard frost or dry weather. A more effective strategy is to weaken the weeds and then mulch or smother them.

Mulches

Preventing exposure to sunlight will eventually kill the plant but it can take a year or longer. Smothering is most effective when the plant has been weakened by environmental stress, mowing or tilling. Ideally, mow or till, wait until the plant has put on new growth, till/mow again and then smother.

"Cover with old carpet," is often recommended, but not by me. I tried this once. The weeds grew right into the carpet. For years afterwards, I was pulling bits of nylon shag and foam underlay (not substances I want in my soil) out of my garden. I prefer biodegradable materials that will eventually decompose. Cardboard and bales (or very

Using livestock to control weeds

Intensive grazing can help control some weeds. Sheep can mow quackgrass before you smother it and pigs can uproot weeds. I once used pigs to eradicate Canada thistle and burdock. At the end of the summer, I had loose, weed-free soil. And pork.



thick layers) of straw or hay are effective. Black plastic, IRT (infrared transmitting) mulches or landscape fabric can also control weeds while enabling you to grow a crop.

When I'm creating a new garden from sod or perennial weeds, I apply cardboard. Every few feet, I make a hole in the cardboard, apply compost and plant a squash seedling. At the end of the season, I get squash and relatively weed-free soil.

Smother crops

Green manures can be used to compete with perennial weeds. Start off by weakening the weed, perhaps mow it, let it recover, then till, or till twice. Plant an aggressive green manure such as fall rye, ryegrass or buckwheat. You will likely need to repeat this two to three times. As soon as you see the weeds gaining ground, till and re-seed.

Removal

A labourious but very effective method is to remove weeds by hand. Garden forks and broadforks are ideal tools because they don't break the rhizomes as much as shovels do. As you turn the soil, try not to break rhizomes. There's a strange satisfaction to be had in pulling out a three-foot length of quackgrass with sprouts coming out of it.

Multi-pronged approach

The most effective way to control these problem weeds is to use a combination of methods to weaken, stress and remove the plants. Be forewarned, however, control is neither quick nor easy. It takes perseverance and vigilance, but you can get these creeps under control. Then you can admire the beauty of buttercups and daisies — the ones outside of your garden.

