

Using fallen leaves.

As we despatch annual flowers and veg plants to the compost heap, we need to work out the best way of dealing with the empty ground. Herbaceous borders are often close to trees and shrubs, so any cleared spaces are often covered with fallen leaves. This also happens amongst perennial plantings.

The good news is that you needn't try to remove the leaves. Leaf litter improves the ground in lots of ways. By acting as a blanket, leaves help prevent nutrient loss during winter rain. They prevent heavy rain from compacting the soil, thereby damaging its structure. Pull back any mulch in the spring and you'll see what I mean. You'll find fine, crumbly ground, not the flat, hard surface of bare ground.

Leaf litter improves as well as protects the ground. Although leaves themselves add little or no nutrient to the garden, research has shown¹ that valuable nutrients are added during decomposition. Once leaves have been partly broken down by soil microbes, soil fauna, like mites, fly larvae and potworms get to work. [Potworms are the tiny white worms that we see in compost bins. People often wrongly think they're baby compost or tiger worms.]

These soil creatures add goodness when digesting and excreting leaf material. Some years ago, the Nature Conservancy Council conducted trials in the Lake District. Scientists filled nylon mesh nets with oak and ash leaves and laid them on the ground. After 6 months, they found that the ash leaves had been stripped and many had been dragged into the soil by large earth worms. At the same time, springtails, mites and potworms worked inside the nylon nets.

The researchers conducted their trials in woodland areas and found that deciduous trees got 75% of their nutrients from the previous year's leaf fall. They also discovered the process worked more quickly and efficiently in rich soil. So it's safe to say that a similar, if small-scale, process could be happening in our gardens.

If you can't enjoy this leaf harvest, it often pays to apply a protective biodegradable mulch – coir, bark or rough compost. But mulch also provides a safe haven for most of our garden pests – slugs, cutworms and aphids to name a few. So, every few years after there's been a build up of pests, dig carefully round the plants and leave the ground bare. This brings pests closer to the surface; thrushes and robins will soon clean them up for you.

We also keep the veg patch clean and healthy by using similar methods. As in the herbaceous border, we need to rotate our overwintering soil treatments.

Unfortunately the veg patch isn't usually blessed with a surfeit of leaves, so we need different kinds of mulch. I have a handy source of mulch every time I clean out a duck house. I spread the duck-enriched straw over my beds. As with leaves, worms and tiny soil animals add this largesse to the ground. In the spring, I rake off and compost any remaining straw. But you could use any other biodegradable material.

But, as in the herbaceous border, mulches provide a safe haven for the baddies. So every 2 or 3 years, after the autumn dig, some ground should be left bare and open for our avian friends.

Veg growers have one extra technique for soil management: sowing green manures - the 'classic' organic tool. Different plant species – lupines, field beans, clovers, phacelia and grazing rye – are sown any time before mid September. Germination rates are pretty poor after that. As the plants grow, they absorb nutrients, so prevent leaching. In spring, the goodness is returned to the soil when plants are dug in. Even tender plants, like phacelia, provide ground cover, so they also act as a mulch.

¹B.Davis et al: 'The Soil' 1992.