



**urban  
agriculture**  
AUSTRALIA



## How can I manage weeds so they don't cause problems?

'Problems' are states of mind that arise when reality conflicts with our wishes. Similarly, we label plants as 'weeds' when they appear uninvited and out of place in our gardens. Examining our perspective on weeds can make it much easier to manage them efficiently without the use of dangerous herbicides.

### What are weeds?

Weeds are simply plants that people perceive as being in the wrong place – and therefore a problem.

However, from the plant's perspective it is in exactly the right place, having evolved to grow there.

Scientifically speaking, a plant can only grow where it has a competitive advantage. Indeed, by growing in a particular site that plant is remediating the limiting factors and conditions that gave it the competitive advantage in the first place (e.g. disturbed or degraded soil).

Some plants we label weeds are actually the only willing workers able to fix that site and make it more productive and suitable for a wider range of other, less competitive plants. From a biological perspective, 'weeds' are in fact highly beneficial plants with specialized capacity to:

- Act as 'pioneers' to colonize virgin or degraded soils.
- Provide a protective non-palatable cover and remediation mechanisms for overused soils to help minimize their erosion and loss.

So weeds need to be seen as an indicator of soil health conditions, as well as the willing worker best equipped to naturally regenerate any damage we have caused.

The problem is not the weed, but us, on two counts: causing degradation and then demonizing the natural agent that has come to fix it!

### Weeds and our attempts to eliminate them

During evolution, no 'weed' species has taken over the planet or even any area for long. Rather, it has always been replaced by a wider, less competitive bio-diversity of synergistic plants. This replacement occurs once the 'weed' with the initial competitive advantage to colonize and remediate the site has done its job.

No 'weed' species that reproduces and disperses by means of masses of small wind-blown seeds has been excluded from reaching most areas. The key factor that determines whether such a weed can establish itself is the capacity of pre-existing natural vegetation to naturally exclude it.

No 'weed' has ever been permanently eliminated from an area where it has a clear competitive advantage – not by any of the methods of eradication, including herbicides, devised by humans.

Every 'weed' is the food for some natural herbivore or pest that can control it in the right conditions. The successful biological control of weeds has simply involved re-introducing these pests to weeds that had established themselves as exotic species in new areas.

Where 'weed control' has been achieved by humans it has always been through ecological management: using the weed's natural pests, or changing the conditions in the soil or vegetation that limit its competitive dominance.

In contrast, none of our attempts at eradication using herbicides have ever been effective at eliminating weeds species. Instead, they have promoted bio-cide resistance and actually created conditions that encourage weeds. Where herbicides have been effective is in supporting a massive profitable agro-chemical industry that now often costs 40% of the gross product of some crops. These toxic chemicals have damaged the health of farmers, families and communities, with massive long term public health implications and costs. They are more likely to eliminate us than the plants we call 'weeds'.

### **So how do we manage plants that we don't want in particular places?**

Where possible, we should see weeds as valuable tools of ecological management. We can use them to:

- diagnose and rehabilitate degraded soils,
- protect and recolonize bare ground,
- enhance nutrient uptake and cycles,
- supply mulch,
- provide deep root canals and habitat for bio-diversity, and
- produce bio-materials.

If we cannot learn to like them, we can contain them by pulling them out, mulching them or stopping them from seeding to minimize spread. In larger areas, simply manage the existing vegetation and herbivores so that the prevailing ecological conditions are unsuitable for prolific colonization and competitive domination by the weed species.

Most valuably, use weeds as food. Many so-called 'weeds' are more nutritious than the majority of cultivated vegetables. Examples of edible weeds include dandelion, chickweed, mallow and even 'sticky weed'. Be sure of your identification before you eat any weeds – ask a friend to take you on a 'weed walk' – and avoid foraging in areas that may have been sprayed with herbicide or contaminated by other toxins.

Earth, its bio-systems and our communities are going to face dangerous extremes in the next decades that will test the resilience of all. 'Weeds', those hardy pioneer plants able to buffer and regenerate bio-systems, should be cherished – they may be critical to our future.

---

## **Suggestions for further reading**

**Permaculture, a Designer's Manual**, by Bill Mollison (Tagari Publications, 1988)

**Organic Control of Common Weeds: a Safe Environment Guide**, by Jackie French (Aird Books, 1989)

**The Weed Forager's Handbook**, by Adam Grubb and Annie Raser-Rowland (Hyland House Publishing, 2012)

---