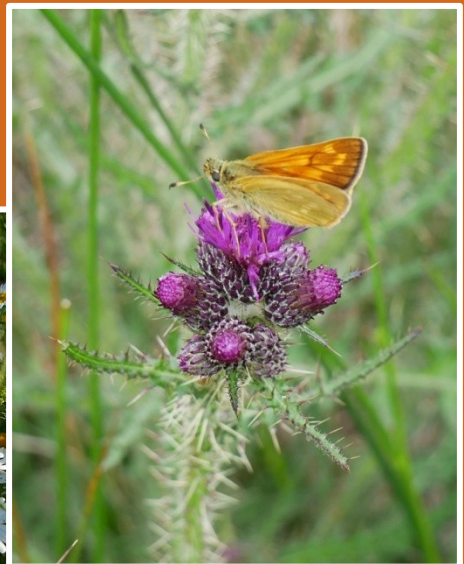


# Remarkably radical but practical solution for weeds



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Learning from Nature



# A remarkably radical but practical solution to weeds

## Tired of weeding?

It's never-ending. Like mowing the grass and washing the dishes! There are more rewarding things we can do with our time.

And it's expensive if you need to employ people, use machinery or herbicides to do the job.

One commercial vegetable grower, I spoke to recently in England, estimated his weeding costs to be between £500 – £1,000 per hectare!

## There is a better option - using instead of removing weeds.

Hold on, wait a moment... before you chuck this resource in the recycling bin – using weeds is not such a ridiculous idea.

## Look at what weeds do for you –

- ✓ Produce mulch right where you need it
- ✓ Improve soil by upping the supply of organic matter and root exudates
- ✓ Provide ecological services like soil decompaction and nitrogen-fixation
- ✓ Add bio-diversity
- ✓ Provide food and habitat for insects, birds and other beneficial species
- ✓ Produce a living ground cover reducing soil compaction, runoff and erosion
- ✓ Produce shade reducing water loss from soil through evaporation
- ✓ Increase water infiltration and storage in soil
- ✓ Moderate temperatures fluctuations in soil
- ✓ Sequester carbon






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# Eco-logic

Using weeds can make sense. It's eco-logical!

Many of the annoying characteristics of weeds are actually assets.

## Experts in colonising and repairing degraded soil.

They are ready, waiting, and keen to help us regenerate our soil, because they produce masses of seed with excellent seed dispersal mechanisms and which can remain viable in the soil for years.

They grow fast, protect soil, reduce temperature extremes and water loss through evaporation.

## Supply organic matter and root exudates.

When soil organisms get a regular, generous and varied diet of organic matter and root exudates,<sup>i</sup> they work 24/7 building soil structure, recycling nutrients, and making nutrients available to plants when and where they are needed.<sup>ii</sup>

## Supply free ecological support services.

Many weeds are ecological support plants.

Use them to provide ecological services - functional biodiversity. For example, weeds that are legumes and have nitrogen-fixing bacteria in their roots. Weeds providing generous supplies of pollen and nectar for the predators and parasites of insect pests.

How many times have you tried to pull a weed out of the ground, and find you can't because it has deep roots? These weeds help decompact your soil and bring leached nutrients up to the surface.



**Butterfly feeding on a thistle**

## Why use weeds when other plants can do the job?

Weeds are not the only plants providing these benefits. Other plants can do the job as well. But there are good reasons for using weeds:

- ✓ Cheap seed!
- ✓ Adapted to your growing conditions – otherwise, they wouldn't be growing!
- ✓ Save time researching and trialling suitable plants to grow
- ✓ Grow without help from you

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# Ideas for using weeds

Around the world, it is becoming increasingly common for commercial producers and back yard gardeners to grow mixtures of crops, cover crops between cropping cycles, and to interplant crops with ecological support plants (companion cropping).

Some people are now *even* experimenting with using weeds!

In Sri Lanka, tea farmers get higher yields and the bonus of edible weeds by using weeds instead of removing weeds! <sup>iii</sup> One of the biggest vegetable producers in England is skillfully using weeds in lettuce and celery production.



**Lettuce growing with weeds on a farm producing 50,000 lettuce/week<sup>iv</sup>**

## Jumping the obstacles

Does working with weeds sound too easy?

**There may be times when you need to remove weeds.**

Weeds which could:

- Overshadow your crop
- Competitively exclude pasture grasses and the ecological support (companion) plants you've planted
- Quickly produce seed and contaminate your next crop

If you hand-weed, this can be time-consuming. But removing a few undesirable plants is easier than removing the whole lot! If you weed row crops mechanically, the timing of your weeding and space between rows become crucial.

**There may be times when encouraging weeds isn't a good idea.**

Particularly, if you end up growing plants that:

- Are difficult to control. For example, Field Horsetail (*Equisetium arvense*) and Black grass (*Alopecurus myosuroides*) in Europe, Paterson's curse (*Echium plantagineum*) and Sicklepod (*Senna obtusifolia*) in Australia. Even some vigorous and creeping grasses.
- You are required to control by law.
- Invade natural areas - our nature reserves, waterways, and National Parks need all the help they can get!

## However, don't always be quick to judge

Look first at the ecological services provided by your weeds.

On my farm in Australia, I get masses of Sicklepod seedlings sprouting where there is bare ground. They are such a perceived problem that friends advised me not to buy the land. But I was lucky to have Hugh Lovel, a soil scientist visit the property and advise me otherwise.

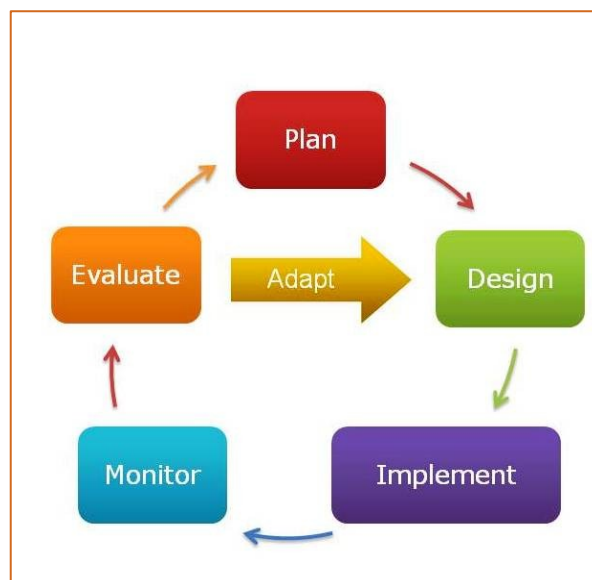
“Look at the pasture grasses growing around that patch of Sicklepod and tell me what you see,” he said. The benefits were clear. The grasses were greener and more vigorous around the Sicklepod patch. “Sicklepod isn’t competing with your grasses. It’s improving your pasture with its deep roots and nitrogen-fixing bacteria.”

It was a game-changing moment for me. Never again would I be so ready to label plants weeds!

## Sometimes the hardest obstacle is change itself

Our fear that the change we make might not work. “What will the neighbours think!”

Some risk is inevitable. We can never be 100% certain how things will turn out. Start small and try out different options first.



Keep in mind you'll naturally get fewer weeds as you use your ingenuity to work with Nature repairing your soil.

You'll grow nutritious food in ways that are not in conflict with caring for your environment. You'll benefit from Nature's expertise in developing ecosystems that are self-maintaining and highly productive – using the energy and resources they have available. Ecosystems that quickly bounce back from extreme weather events. Everything we want for our gardens and farms!

**Remember this when you get ready to go out weeding again!**



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<sup>i</sup> Root exudates are sugars and proteins plants release from their roots, usually 20 to 30% of the plant's total production.

<sup>ii</sup> Wendy Seabrook, 2019, [Ecological Farming Handbook](#), Learning from Nature

<sup>iii</sup> Sri Lankan Tea Farmers Fight Deforestation & Climate Change, Rainforest Alliance

(<https://www.youtube.com/watch?v=LR7OS04RbEq&list=PLhxgy6oQa8vNhh8jUaUOX8Zueec-LVHm&index=9>)

<sup>iv</sup> G's Growers Ltd <https://www.gs-fresh.com>