

Dear Rochelle

by Rochelle Eisen

Dear Rochelle,

I am struggling with weeds. Every year I think it should be getting easier, but before I turn around, they are everywhere. What am I doing wrong?

Losing the Battle in Rutland

Dear Loser(!),

Yes, this is the number one challenge I sense most annual producers are constantly battling until they have a system “worked out” and even then things can go terribly wrong, especially if the weather is not ideal during critical periods in the growing season.

Weeds are inevitable. But if you believe the weed gurus, the problem is that we are not seeing what the soil is telling us, and if cul-

obvious that the first necessary step is to build healthy, fertile soil, because once you have biologically active soil you will grow vigorous, competitive crops – healthy soil, healthy plants, right?

It is also important to know which weeds are your nemeses, and where they are coming from, because that will help with choosing and timing your control measures. Most crops do not need to be weed free throughout their cycle to assure good yields. If you are using compost you might also have to

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consider that maybe whoever is making it is not doing a good enough job, and this may be how weed seeds keep getting reintroduced on your farm. Or maybe your soil tilth is poor, making your cultivation practices ineffective.

tivation is the only means of control that we employ, we will never get a handle on them.

The approach that needs to be embraced must come from a different perspective; one

that favours crop growth, and at the same time discourages weed development. In other words, cultural weed control.



Cultural Weed Control

So what is cultural weed control? Well, it is a few things, but the first concept I am sure you will agree with is that vigorous crops definitely beat out weeds. Thus the secret seems to be to set that paradigm in place. If you agree with that logic then it is

If your soil is out of whack – nutrient and/or pH balance, incredibly compacted, shallow hard pan, etc. – some types of weeds will flourish. One solution might be to concentrate on growing some perennial forage in the worse areas, thereby creating shade competition in place and starting to beat back some of the most antagonistic weeds before you use this area again for annual production. Or maybe you need to start with transplants versus seed to get ahead of the weeds, especially in cold soils. Some type of mulch could also be used to give you that jumpstart.

Whatever you do, be sure to use the best most viable seeds you can find, of the best variety appropriate for your area. This will surely help produce a competitive crop. And as I am sure you have heard before, mow weedy areas around fields to reduce reseeding opportunities, clean machinery especially when moving from a weedy to a clean field, search out weed-infested areas and get them under control to help minimize spread, and use only well-composted materials.

Mechanical Weed Control

One of the best manuals I have read to date on timing mechanical weed control is FiBL's *Weed Control in Organic Vegetable Cultivation*. It not only explains the how and why, but also has fantastic charts and graphs comparing ridge versus flatbed planting, the effectiveness of various weed treatment patterns (false seedbed in combo with blind harrowing or shallow flaming relevant to seed depth), impact of weather on treatments, and even lists the advantages and disadvantage of various cultivators. The manual also includes a useful checklist to help confirm that all the key factors align (land and weed condition, and the methodology of control suitable), ultimately increasing the chance of success.

Beyond the checklist some of the other gems in this manual are:

- As a general rule, it is important to keep most crops weed-free during the first half of their growing cycle; non-competitive crops need another 2-4 weeks of care, but leafy greens need to be clean for the entire cycle.
- Manual labour is the most costly annual expense on a farm. If weather hampers mechanical management, labour costs will go up.
- If the manual weed control expense is greater than 1/3 of the potential gross product sales, it is not possible for the impacted crop to realize a profit. Better to plough under a weedy field and reseed than to spend money on labour to weed the crop. Make this decision as early as possible to reduce labour expenditures.
- Seed/plant in straight rows or there is no way mechanical cultivation can be effective.
- Keep the number of row spacing combinations down as much as possible to reduce the frequency that equipment has to be adjusted to accommodate row spacing variations.
- Seed cover crops or complimentary (non-competitive) crops between the rows of your main crop, after the main crop is established.

The principles are the same no matter the scale of the operation. The problem has been finding equipment suitable for operations that are too small to afford specialized

tractor mounted equipment, yet at the same time is too large to manually hoe. Just the other day I tripped over this interesting website www.physicalweeding.com that does an excellent job covering all the bases, but they also have designed and are marketing a four wheel hoe which they describe as a tool that "fills a gap among weeding machines being created for growers producing crops on the bed system, i.e., not on ridges, with cropping areas too large to hand hoe and too small to justify tractor mounted hoes."

The website goes on and explains that it "can control both interrow (between the crop row) and intrarow (in the crop row) weeds by a combination of horizontal knife blade 'T' hoes and 'mini-ridger' hoes." Now if that isn't the cat's meow, I don't know what else is!

To find the resources mentioned in this column and more online visit:

Cyber-Help for Organic Farmers' Growing Organic Vegetable page www.certifiedorganic.bc.ca/rcbtoa/training/vegetable.htm (under the "Tillage and Cultivation" heading) or under the "Weed Management" heading on the Pest Management page www.certifiedorganic.bc.ca/rcbtoa/training/pestmanagement.htm