

COLE CROP IPM NEWSLETTER: Late July Update (Instagram Updates from the Field: @ufvvegipm)

This week the newsletter focuses on weeds.

Scouting Tips – Identifying Weeds

Weed identification is often overlooked especially as we enter the last half of the growing season, where the focus is on insect/disease control and harvest. So, why take the time to identify summer annuals (or any weed)? Knowing in advance what weeds are going to be in a field the following spring can help with herbicide selection. Most herbicides have limitations on which weeds can be controlled. So, taking the time to identify the dominant weeds in NEXT season's cole crop fields will allow growers to make better herbicide choices. For example, if Bonanza 480 is the preferred pre-plant herbicide it would be important to know that this

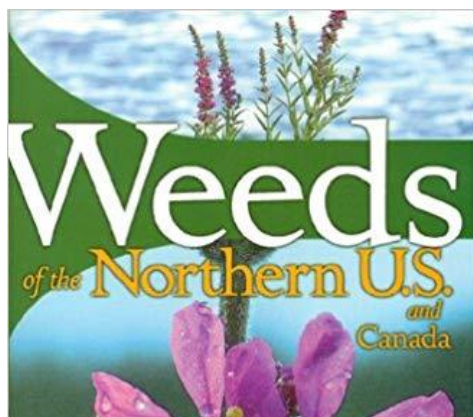


Figure 1. No school like the old school: A physical copy of a weed ID guide is a handy resource to keep in the vehicle at all times.



herbicide does not control hairy galinsoga, mustards or nightshades. If these are the dominant weeds in a field planned for cole crop planting next year, then another herbicide will be required. Information on weeds not controlled by the different cole crop herbicides are summarized in the production guide. **Learn more:**

<https://www2.gov.bc.ca/gov/content/industry/agriservice-bc/production-guides/vegetables/cole-crops>

At this time of year, summer annuals are blooming and can be easily identified. Again, the benefit of identifying blooming weeds at this time of year is for better weed control NEXT field season, so focus on the fields that will be getting cole crops next year. Print or

on-line field guides are readily available. The excellent *Weeds of the Northern US and Canada* by France Royer and Richard Dickson (Fig. 1) is still available (new and used available on-line). Almost all the weeds

encountered in Fraser Valley fields are in this book. (NB: A newer guide – *Weeds of North America* – by the same authors was published in 2014). There are also many on-line field guides (many available as free APPs) to weeds that essentially function the same as a physical book – i.e. you scroll through the pictures till you find a match. APPs like “PlantSnap” or “PictureThis” work in the opposite way. Instead of the grower looking for a picture to match the weed, the APP asks for the picture (which is taken with the phone) and then the APP does the searching for you – matching the picture with a database. In our “unofficial” tests these APPs have accurately identified all the field weeds we have submitted.

Why do weeds matter?

Weeds reduce yield. For cole crops, the critical weed free period – the time when competition with weeds will result in yield loss – is not defined for the Fraser Valley. However, there are guidelines from other parts of Canada that we can use. In Ontario, the first 3 weeks after planting is the critical weed free period for cabbage. Learn more:

<http://www.omafra.gov.on.ca/IPM/english/weeds-herbicides/critical-weed-free.html>. For canola, the critical weed free period is the four leaf stage of the crop. If weed control is maintained up to the four leaf stage of the crop, there is minimal economic benefit to a second round of herbicides after that weed free period (<https://www.canolacouncil.org/canola-encyclopedia/weeds/weed-management/#best-practices>). So, taking the time to do good weed control during the critical period when weed competition will cause yield loss, can help save money on subsequent herbicide applications. Lastly, later herbicide applications may not be as effective, in part, because weeds are harder to control as they get larger.

Weeds support pests. This past week we have found aphids on the brassica weeds growing along the edges of fields (Fig. 2). In other years we have also found clubroot on brassica weeds growing within fields.

Weeds also support **BENEFICIALS**.

The other name for weeds is plants. Like all plants, weeds provide important resources not just for pest insects but also for those that are beneficial to farmers. Allowing weeds to flower along field edges (Fig. 2) has been shown to support natural enemies, like ladybugs, by providing adults with pollen and nectar. Pollinators are also supported by having a supply of flowering weeds along the edge of fields. (Blaix *et al.* (2018) *Weed Research* 58: 151-164). Showcasing management that enhances habitat for beneficial insects is a way of building good will with consumers who are aware of their importance to the ecosystem.



Figure 2. Flowering brassica weeds along field edge – supports both pests and beneficial insects.

Pests found in the past 2 weeks (and to continue to look for)

Aphids – We continue to see very large colonies of aphids in the older cole crops. These colonies often have parasitized aphids and other natural enemies in them, so growers should choose if possible products that will be soft on beneficial insects.

Thrips – We are now starting to see an increase in the number of thrips in some fields. Thrips can be a contaminant issue in some cole crops (e.g. cauliflower) and can cause cosmetic damage to cabbage. Locally, the thrips issue has been especially problematic for storage cabbage. Storage cabbage should be monitored and treated for thrips before head formation begins (tight cupping). The next newsletter will focus on thrips control.

Learn more: <http://www.omafra.gov.on.ca/IPM/english/brassicacrops/insects/thrips.html#advanced>

The Cole Crop Newsletter is prepared by Renee Prasad (UFV Agriculture) in consultation with Dru Yates (ES Cropconsult Ltd.), and Susan Smith (BC Agri). The purpose of this newsletter is to educate producers on the current status of cole crop pests in the Fraser Valley. Pest status in individual fields will vary. Funding is from Brassica Levy Research Fund, Processing Vegetable Industry Development Fund and the Fraser Valley Cole Crop Growers Association. References to products are for educational purposes and do not imply endorsement or recommendations for use. Growers should always read and follow label directions. Full labels for products registered in Canada can be accessed via Health Canada: <https://www.canada.ca/en/health-canada/services/consumer-product-safety/pesticides-pest-management/registrants-applicants/tools/pesticide-label-search.html>