

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

Scouting Tips – What do with all the data? (Part 1)

As scouting continues, a mighty pile of data begins to accumulate. Although it is tempting to shred or delete this information once the season ends; there is enormous value in holding onto it. In the remaining Cole Crop IPM bulletins we will explore how data from crop monitoring can be used for decision making.

For example, charting aphid data, from a single kale field, shows some interesting trends. In Figure 1, we see that mid-July to mid-September was a period of intense cabbage aphid pressure. The kale field was on a regular aphid spray schedule, from July to September. In reviewing the data with the spray program, some questions could be asked about the efficacy of the sprays (especially the ones applied between August 4 and September 1). As the kale

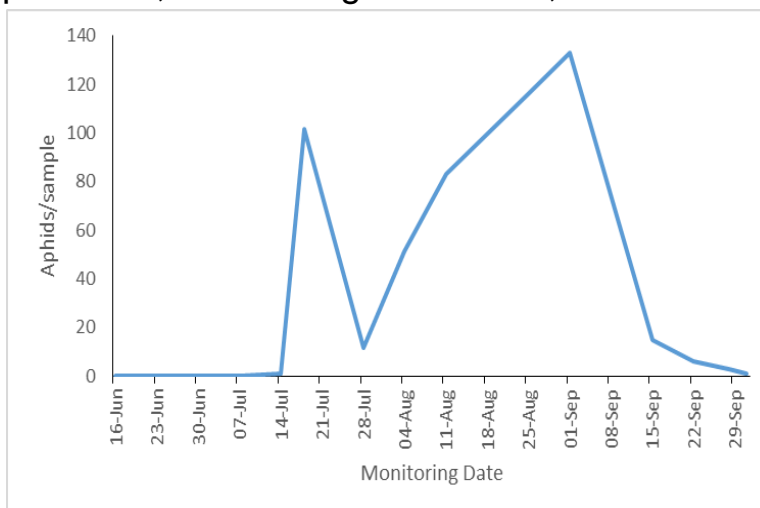


Figure 1. Cabbage aphid counts from a conventional kale field. Data are from the 2017 field season and summarized as aphids/sample for each monitoring day. (Data from: R. Prasad, UFV)

canopy matures coverage is a major challenge – the data may be reflecting this. All cole crops have coverage issues as the canopy matures, so while our example is from kale the same issue may arise for Brussels sprouts, cabbage or broccoli. Coverage is the result of many factors including sprayer speed, droplet size, nozzle position (e.g. drop nozzles), and/or use of adjuvants.

We can look at Figure 1 and ask additional questions. For example, the kale field that these data were collected from had several different varieties of kale. Were aphids more abundant on some varieties? If yes,

then perhaps those varieties are better for early season (i.e. harvest before July) production. Using data to help with decision-making can give cole crop growers more options for effectively reducing input costs while still protecting their crop. However, the decisions are only as good as the data used to make them, so - see Cole Crop IPM Bulletins 1 through 7!

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

Cabbage Aphids – As Figure 1 shows, we are in the peak times for cabbage aphids (Figure 2). For all cole crops the challenge is to keep the cabbage aphids out of the harvestable part of the crop. Aphid populations will start to go down on their own, but usually not for several more weeks. Natural enemies are also being seen in colonies (Figure 3). Choosing products that are safe for natural enemies is another step to ensure that growers benefit from the “free” service of biological control. (See BC Vegetable Production Guide for information on products that are safer for natural enemies or beneficials). However, even in organic fields, natural enemy numbers may not be present in high enough numbers or early enough to prevent economic losses. In California, growers are using Sweet Alyssum as an intercrop with lettuce plantings to provide habitat for natural enemies that help to control aphids.

Learn more: Pesticide toxicity to natural enemies (see Table 2, Pages 7 to 8) – BC Vegetable Production Guide:

https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/agriculture-and-seafood/agriservicebc/production-guides/vegetables/pest_management_bc_vegetable_production_guide_0.pdf



Figure 2 (top): Kale leaf covered in cabbage aphids. **Figure 3 (bottom):** A single aphid mummy. This aphid has been parasitized by a wasp and will not produce more offspring. While aphid natural enemies are present in large colonies (top pic) – they are often hard to see. Taking the time to look for mummies in discouragingly large cabbage aphid colonies can give growers hope.

Sweet Alyssum intercropping in organic lettuce (An 18 minute YouTube video by Dr. Eric Brennan – USDA):

https://www.youtube.com/watch?v=KVLgt2_J1Wk&t=9s

Cabbage Loopers – While all caterpillars are still active, we saw mostly cabbage loopers in fields this week. The majority of individuals we saw were medium to large size (so older caterpillars). Some pesticide labels recommend using higher rates for older larvae (larger than 2-cm). Other pesticides indicate that the product is best for young larvae only. Using the results from field scouting can guide choices about which product and how much (rate) to use. This can lead to more effective pest control (and less waste of money). Using a higher rate as a default or the wrong product are both ways that money is wasted.

Learn more: See caterpillar control section of the Cole Crops chapter in the BC Vegetable Production Guide (label recommendations related to caterpillar size are summarized in the Looper, Cutworm and Caterpillar control table): <https://www2.gov.bc.ca/gov/content/industry/agriservice-bc/production-guides/vegetables/cole-crops>

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>