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Getting Ahead of Pests on Ornamental Cabbage and Kale

Ornamental cabbage and kale pests are not difficult to control but knowing what to look for, detecting pests early, and choosing controls appropriately are key to a damage- and pest-free crop.



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Among the signs that fall is approaching, ornamental cabbage and kale production is again underway at greenhouses and nurseries. The calls about pest problems will be starting too, but to help growers get a jump on things is a review of some of the usual pest problems I see in this crop and what might be done about them. For this article we'll assume the plants are strictly for ornamental purposes; if that is not the case and they may be for consumption then product choices will need to be made accordingly. Some insecticides for use on ornamental plants have no approved tolerances.

Caterpillars

'Worms' are a dependable threat to brassicas wherever they are grown, chewing holes in leaves and sometimes leaving unpleasant droppings behind.

It matters which one(s) you have when choosing controls. Four or five different kinds are common with a few more that may appear now and then. *Imported cabbageworm*, a slightly



Imported cabbageworm.

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Cabbage looper.

fuzzy, dark green caterpillar is familiar to everyone in its white cabbage butterfly form. It overwinters in cold areas and is a common pest spring through fall. Younger stages feed under leaves but older ones may move onto the upper surface, often resting along mid-veins. It is among the easiest one to control. *Cabbage looper* is a pale to medium-green hairless inchworm-type creature. Younger stages may have some paler striping the length of the body. It is migratory in the northeastern US, usually appearing on Long Island, NY after mid-July. Populations vary quite a bit from one year to the next. Newly hatched caterpillars chew away parts of the leaf underside, leaving the upper layer intact, a kind of 'windowpane' effect.

Older caterpillars chew right through. The adults are dark brownish moths with a distinctive silvery '8' mark on the forewing. *Diamondback moth* is the smallest with tiny gray-green smooth caterpillars. Unlike the others, the two hind legs project back in a V and they wriggle and drop off quickly when disturbed. The adult is a very small, slender gray-brown moth with pale diamond-shaped marks along the back. It apparently overwinters on Long Island and we often see problems with it from late spring onwards. Fall infestations are sometimes particularly heavy and it is notorious for developing resistance to insecticides. *Saltmarsh caterpillar*, a woolly bear relative, has a dense 'fur' coat ranging

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from yellowish-white when young to rusty brown in later stages. The adult is a bright white moth with small black spots. A minor pest, its habit of feeding in groups causes severe damage that sometimes alarms growers, but typically only one or two plants are affected. *Beet* and *yellowstriped armyworms* are occasional pests on ornamental brassicas. Both can be a bit tough to control. The former, a gray-green to black caterpillar that becomes a dull-gray moth, is occasionally serious due its habit of feeding directly on the growing point. The latter is sometimes a pest during occasional outbreak years. Youngest caterpillars are greenish but older stages are dark brown or almost black with distinctive thin yellow stripes along either side of the back. Adults become dark brownish moths with pale markings. Bt (*Bacillus thuringiensis kurstaki* or B.t. *aizawai*) insecticides can be used or any of these, but for good results there needs to be excellent coverage under leaves. Include a spreader-sticker or a wetting agent to improve coverage on waxy and upright foliage. Older caterpillars of some species (loopers, armyworms) can be tougher and may require stronger stuff. Conserve, Overture, Pylon, a pyrethroid (Talstar S, Decathlon,

Scimitar, Mavrik, Astro, etc.), Adept or Pedestal (both for armyworms) are other options. Note that in agricultural production Overture, Pylon, Astro, and Adept are for greenhouse-use only. Conserve and pyrethroids may not be the most effective choices where yellowstriped armyworm is present; diamondbacks are sometimes resistant to pyrethroids as well. Randomly select a sample of plants and check under leaves for infestation. Pheromone traps are available to help monitor adult moths (loopers, diamondbacks) or check local agriculture scouting reports.

Aphids

Dusty gray to dull green *cabbage aphids* can form large colonies on plants. While their presence is objectionable, the leaf distortion even low numbers can cause is of greater concern. They also like to feed between leaf layers where most insecticides don't reach. They overwinter as eggs on cabbage and related host plants. *Green peach aphids* are familiar to most growers, living year 'round in greenhouses (they overwinter outdoors in the north as eggs on peach, cherry and related trees). Varying in color from pale green to pinkish, a dark red



Green peach aphids.

variant is sometimes also seen. Look for aphids while checking for caterpillars. Natural enemies are often active and may be keeping aphid populations under

control. If not, growers have many control options available, including Marathon/Discus N/G (and generics), Flagship, Safari, TriStar SL, Kontos, Endeavor,



Cabbage aphids.

Aria, Avid (high rates), BotaniGard, horticultural oil (SuffOil-X, Sunspray Ultra-Fine), M-Pede, Triact 70, and pyrethroids (above, plus Tame). Include a wetting agent or sticker (no sticker with Avid but wetting agents are fine).

Flea beetles

At variety of *flea beetles* will feed on brassicas. Some are dedicated to this group of plants while others are more general feeders. They leave small ‘shotholes’ in leaves or notches in leaf edges and in high numbers can be very damaging, even destroying small plants. Scan foliage early in the day, while cool, for the small beetles, which jump readily when disturbed. Any of the pyrethroids usually provides good control, or you can use TriStar, Marathon/Discus N/G, or Flagship. Conserve (or the organic version Entrust SC) provides some suppression too.

Other pests

Onion and *western flower thrips*, *cross-striped cabbageworm*, *harlequin bug*, *whiteflies* (greenhouse, sweetpotato, and possibly cabbage whitefly), and *cabbage maggot* are among the other pests that might be found in ornamental cabbage and kale. Problems



Cabbage flea beetle and injury.

with these have been rare and some are more likely in outdoor or southern growing areas. Contact your local Extension specialist for information on best management options for these.

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