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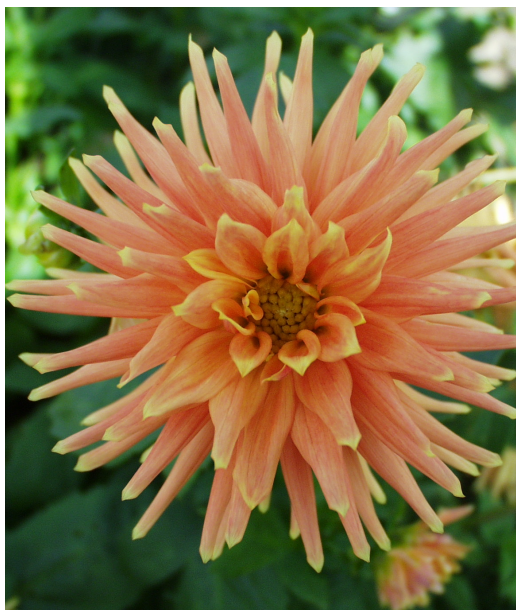
# Dahlias: Getting More Popular With People (and Pests)

*"Just living is not enough," said the butterfly.*

*"One must have sunshine, freedom, and a little flower."*

- Hans Christian Andersen

For many years our Long Island station has featured a display garden of beautiful dahlia varieties, thanks to our fantastic volunteer gardeners, and our local Long Island Dahlia Society maintains one with over 1,000 plants at the estimable Bayard Cutting Arboretum, a bayside destination worth a visit even when the dahlias are not at their peak. It's hard not to be wowed by the stunning diversity of flower forms and wide range of bright colors in the cool of late summer and fall when dahlias really come into their own. Dahlias have a long history of horticultural and botanical appreciation;



Dahlias have an amazing diversity of forms and colors

according to L. H. Bailey's *Standard Cyclopedia of Horticulture* (1933) 'dahlia' was named by 18<sup>th</sup> century Spanish botanist Antonio José Cavanilles for a Swedish pupil of Linnaeus, Prof. Andreas Dahl, who incidentally was also for a time the keeper of Swedish Baron Clas Alströmer's (of the eponymous 'alstromeria') botanical garden. Bailey notes one English dealer in 1841 with over 1,200 varieties; the American Dahlia Society's current *On-line Classification Guide* lists over 10,000 registered.

The popularity of dahlias only seems to increase; our summer and fall tourists snap up irresistible cut flower bouquets from the local farmstands as quickly as they're produced. But entomologists

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and plant pathologists also know as popularity in the plant trade rises, associated pests and pathogens often follow. Here are some of the more common insect and mite pests to watch for on dahlias, especially those grown for cut flowers.

**Potato leafhopper** on dahlias sounds misplaced, but in fact it's one of the most damaging pests we see on dahlias outdoors. In the Northeast US the pale green adults migrate in each year during late spring from their southeastern US overwintering sites. Feeding by adults and nymphs causes 'hopperburn' symptoms that can be mistaken for fertilizer, drought or other damage. Foliage may be dramatically stunted with yellowing and edge burn. Population levels vary considerably from year to year and even within the season; there may be early warning signs from hopperburn damage on other sensitive and attractive host plants nearby like alfalfa, potato, snap beans, birch, English walnut, red maple, wisteria and hemp. I generally advise growers to note these plants to gauge the situation, check under dahlia leaves regularly for the small green insects that move rapidly sideways, and if available stay attuned to local in-season field crop/vegetable newsletters that report weekly crop pest updates. The insects – and the damage – can be managed with insecticides (PLH are easy to kill) but frequent applications may be needed for waves of migrating adults and especially if they may be invading from drying hedgerows or mowed alfalfa fields nearby. Exclusion netting should keep them out, as well as most other pests.

**European corn borer**, a moth, is another pest that's not very discriminating and finds dahlias quite to its liking. The stem-boring caterpillars cause shoot wilting, dieback and breakage. The effect on individual plants can be quite dramatic. The caterpillars overwinter in stems (conventional field corn is a common host) and, like potato leafhopper, population levels



Potato leafhopper nymphs move sideways when disturbed



Potato leafhopper 'hopperburn'



Early symptoms of potato leafhopper damage

European corn borer in dahlia stem<sup>3</sup>

European corn borers bore into stems resulting in breakage

vary from year to year. Our Vegetable IPM Program tracks moth flights during the growing season using pheromone traps and the weekly data provide a rough sense of the threat level and timing for late summer controls. There are two 'races' of ECB moths that respond to different pheromone lures: the 'E' or 'New York' race with two generations per year and the 'Z' or 'Iowa' race with just one. Generally the second 'E' generation seems to be most troublesome, appearing late July through August. Growers with a history of ECB problems might choose to treat during late summer when numbers of moths in traps surge. If local trap data aren't available it's possible to inspect under leaves for the egg masses. There is no defined protocol for scouting, egg masses can be difficult to see and checking for them can be time-consuming, but it may provide a clearer idea of what is actually going on. A an egg parasitoid, *Trichogramma ostrinae*, is one biocontrol available but we have not evaluated performance of releases in cut flowers.

**Western flower thrips**, is a major pest here in greenhouse bedding plant (including dahlia) production, but usually of minor interest in production of outdoor cut dahlias. Concern might be greatly elevated, however, where tospovirus (tomato spotted wilt, impatiens necrotic spot), vectored by this insect and with a broad host range, is present. There was a time when tospovirus was being found associated with vegetatively-propagated dahlias and we prescribed fastidious roguing of infected plants and insecticides for thrips to halt the spread, but the issue has largely receded and tospovirus-infected dahlias are now rarely seen in our Diagnostic Lab these days.

**Twospotted spider mite** feeding under leaves causes a kind of dusty bronzing beneath and overall yellowing of foliage that can be mistaken for nitrogen deficiency. The mites overwinter under leaves outdoors (we've found them under green henbit leaves in February under freezing conditions) and in unheated ranges and of course can be active all winter in heated greenhouses. In outdoor plantings damage is usually seen after mid-summer when mite levels have built during dry and warm periods. Populations can start in hedgerows, moving into adjacent production areas as the weeds dry down in summer. Applications of some broad-spectrum insecticides (e.g.,

pyrethroids and carbaryl) have a reputation for flaring mites. Check under oldest leaves for signs of mites especially during summer conditions to assess need for treatment. Releasing predatory mites early is also an option, if environmental conditions are favorable.

**Tarnished plant bug**, one of the ‘Lygus bugs,’ will feed on stems, buds and other plant parts. This can kill buds or leave flowers distorted or with dead areas. The highly mobile adults overwinter and can move into plantings quickly. Weedy areas are noted breeding spots and the insects are often observed on seed heads of weeds like pigweed and lambsquarters. Preventive treatment isn’t usually needed but watch for the greyish insects as flower buds are developing to assess whether treatment might be helpful and address the weed situation to discourage the population.

Other **minor pests**, which may be less minor for some growers and in some years, include aphids (several species), beetles (Japanese, spotted and striped cucumber, Asiatic garden), caterpillars (saltmarsh, yellow bear, cabbage looper, sunflower moth, leaftiers), leafminers, earwigs, and broad mite. Most of these can be addressed if and when they appear, but note Asiatic garden beetles are active at night, so where damage from a chewing insect is ongoing in late spring and summer and the culprit isn’t apparent get out the flashlight: you may confirm the responsible party in the act after dark – but alert neighbors to expect the unusual behavior!

*Note: The American Dahlia Society’s 56<sup>th</sup> Annual Show will be held in Portland, Oregon August 26 – 27, 2023. For more information:*

<https://www.dahlia.org>



western flower thrips injury sometime appears as pale streaks on dark petals



Tarnished plant bug nymph



Tarnished plant bug injury may appear after flowers open



saltmarsh caterpillar damage on dahlia



Yellow bear caterpillar are minor pests on dahlia though may cause considerable damage on individual plants



Twospotted spider mite injury under dahlia leaf



This 'oakleaf' pattern is one symptom of tospovirus infection (TSWV here)



One of the beautiful dahlias at LIHREC



The dahlia display garden at LIHREC

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