

Elaine Mills, presenter of Keystone Plants for the Home Landscape

Three questions were posed during the presentation. Fuller responses are supplied here.

Regarding the question as to whether goldenrod plants (*Solidago*) respond well to the “Chelsea Chop”:

- The term “Chelsea Chop” refers to a pruning practice which is used in late spring (May, around the time of the Chelsea Flower Show in London) for tall summer- and fall-blooming perennials.
- In this technique, stems with flower buds are cut back by one-third to one-half to create fuller, more compact plants that are less likely to flop. The process will delay bloom time by several weeks.
- If plants grow back considerably after the first treatment, cutting back may be done again in June, certainly no later than July 4th.
- Goldenrods are good candidates for the Chelsea Chop as well as tall asters, such as New England Aster (*Symphyotrichum novae-angliae*) and New York Aster (*S. novi-belgii*); Garden Phlox (*Phlox paniculata*); Sneezeweed (*Helenium autumnale*); Purple Coneflower (*Echinacea purpurea*); and New York Ironweed (*Vernonia noveboracensis*).
- See this short video on [“Cutting Back Perennials as They Grow”](#) with Master Gardener Alyssa Ford Morel for a great demonstration of the cutting back technique.

One participant inquired about my endorsement for several cultivars and asked whether I was not strict about planting “straight” native species.

- In general, I personally opt for the straight species of native plants as they have a long proven record of support for wildlife. I certainly avoid any plants where the foliage color has been modified or where flower color has been changed or doubled petals replace flower reproductive parts because those changes will affect a plant’s use as a larval host plant or a source of floral resources for pollinators.
- The ‘Fireworks’ goldenrod that I mentioned was given to me by fellow Master Gardeners at a demonstration garden, so I grow that cultivar as well as straight species Blue-stemmed Goldenrod (*Solidago caesia*) which I purchased from a native plant nursery.
- Studies have shown that cultivars of native plants can be acceptable in certain circumstances.
 - Entomologist Doug Tallamy’s study with graduate student Emily Baisden at Mt. Cuba Center from 2014-2016 measured the effects of six traits of trees and shrubs on feeding preference by caterpillars. They determined that cultivars modified for height were still acceptable as larval host plants. Therefore, the short (8- to 10-foot) ‘Little King’ cultivar of River Birch (*Betula nigra*) I mentioned should still support the feeding of caterpillars.



- Some cultivars can originate from a naturally occurring individual mutation within a species. They may be discovered by a horticulturist in a wild population, given a name, and brought to market. These are sometimes referred to as “natural selections.” For example, the yellow-flowered ‘John Clayton’ cultivar of Trumpet Honeysuckle (*Lonicera sempervirens*) was discovered in 1991 in the woodlands on the grounds of an old church in Gloucester, Virginia.
- In the pollinator trials I mentioned, the Penn State Extension Master Gardeners concluded that “it is not possible to generalize that the cultivar is better or poorer than the species.” For example, the ‘October Skies’ cultivar of Aromatic Aster (*Symphyotrichum oblongifolium*) greatly outperformed both the straight species and the ‘Raydon’s Favorite’ cultivar with 381 pollinator visits compared to 102 and 76 visits. On the other hand, the gardeners discovered that straight species Wild Bergamot (*Monarda fistulosa*) attracted many more pollinators than the popular ‘Claire Grace’ cultivar (478 visits vs 106).
- Please see the recording of my [presentation “Native Plant Species & Cultivars”](#) for many more examples from multiple plant trials and a fuller discussion of the topic.

Another participant asked for advice about growing blueberries in acid marine clay soil in Alexandria, Virginia. She was unsuccessful, even after adding 1/3 permatil, 1/3 compost, and 1/3 native garden soil.

- The current advice on planting shrubs is to avoid the addition of any amendments to the planting hole. Such additions create a “bathtub effect” in which plant roots remain in the planting hole and don’t extend into the surrounding soil.
- The marine clay of Northern Virginia, referred to as Marumsco soil, is highly acidic, which seems to be the proper pH for blueberries, but it is dense and slow to drain. In this case, the addition of compost (organic matter) and permatil (a soil conditioner to improve soil aeration and drainage) in an attempt to create a “nice” planting hole in “bad” soil actually accentuated the bathtub effect. Water drained into the amended hole but not out. Sensitive blueberry roots weren’t able to get the oxygen they needed and rotted. The gardener was fighting physics.
- The key rule for blueberries is not to plant directly in clay soil. Commercial growers plant blueberries in raised beds or mounds 3 to 4 feet wide by a minimum of 12 to 18 inches deep with sloping sides. This way roots will stay above the clay with excellent drainage.
- Blueberries grow naturally in acidic, airy, barky forest soil, not garden soil. A recommended soil mix for a mound created over marine clay consists of 50% pine bark fines (not nuggets), 40% coco coir (preferred over non-renewable peat moss), and 10%



leaf mold. An optional structural variant replaces 5 to 15% of the pine bark fines with coarse sand (builder's sand, not playground sand) for more porosity.

- Leaf mold consists of decomposed leaves that are broken down primarily by fungi. It is light, fluffy, and holds moistures without becoming soggy, and mimics the forest floor duff which is the natural blueberry habitat. It is low on nutrients, so it won't overfeed blueberries, and won't cause salt buildup. Ideally, it will be used in place of compost, which collapses structurally, is overly nutrient-rich, is dominated by bacteria, can raise the soil pH, and can hold too much water, which are liabilities for blueberries, especially in the marine clay environment.
- Cultivars recommended for Northern Virginia include 'Duke,' 'Bluecrop,' 'Chandler,' 'Reka,' 'Legacy,' and 'Patriot.'
- Blueberries can be mulched with 3 to 4 inches of pine needles to retain moisture, suppress weeds, and keep roots cool, and they should be irrigated consistently.

A fourth question regarding the possible negative effects of deer repellents on beneficial insects was not addressed during the live session. Here are some thoughts.

- I would avoid the use of any deer repellent sprays, particularly those that contain capsaicin derived from hot peppers, which (per the University of Connecticut), while not problematic for birds, will be toxic to pollinating bees and other beneficial insects. Sprays applied to foliage would be toxic to any caterpillars feeding on larval host plants.
- Sprays are not all effective and they need to be reapplied regularly. Some landscape professionals suggest switching to granular repellents rather than sprays.
- Other preferred methods of repelling deer include surrounding vulnerable plants with those they are less likely to eat, such as grasses, Wild Bergamot, and Mountain Mint, and using protective fencing.
- See the recording of a presentation by the colleague Kathie Clements on "[Strategies for Dealing with Deer](#)" for thorough coverage of the topic, including the use of exclusion tactics, creative hardscaping, and deer-resistant plants.