

Hostas

Steven Rodie, Landscape Horticulture Specialist
Anne Streich, Horticulture Educator
Kim Todd, Landscape Horticulture Specialist
Fred Baxendale, Urban Horticulture Specialist
Loren Giesler, Pathologist

Shade loving hostas come in a variety of sizes and colors. When properly located and cared for, they are a valuable asset to home landscapes.

Hosta Selection

As landscapes mature, shaded areas develop. Hosta, also called plantain lily, is an excellent perennial plant for shade. Originally from the Orient, hostas were first introduced to Europe in the late 1700s. They were imported to the United States in the middle 1800s. Hostas are herbaceous perennials grown primarily for their attractive foliage. Some cultivars also have attractive and/or fragrant flowers. Because hosta foliage dies to the ground at 28°F or below, the plant does not provide winter display, but it can be combined with other plants that do offer seasonal interest.

Hostas vary in height from 2 inches to 4 feet. They have tubular or trumpet-like flowers in white or shades of lavender to purple. Bloom time ranges from early through late summer, depending on cultivar. Primary foliage colors include various shades of green, chartreuse and blue-gray. Gold, yellow, cream or white foliage variegation is common. Leaf surfaces may be smooth to crinkled and dull or waxy to glossy. Hostas with glossy leaves appear richer in color than other varieties. Leaf shapes vary from rounded to oval, heart-shaped to strap-like. Leaves may be flat, wavy-edged or contorted. Adult foliage characteristics develop three or more years after planting and may be quite different than foliage of immature and juvenile hostas.

Depending on both cultivar and site, most hostas spread slowly by underground stems. However, some cultivars have horizontal, above-ground stems which make them useful as groundcovers. Hosta is a long-lived and valuable landscape plant when located and managed properly.

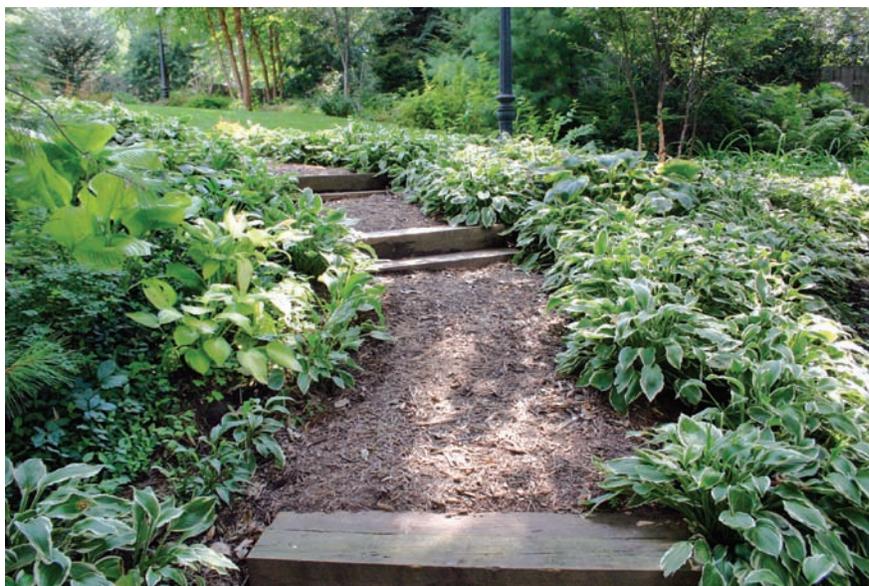
Vast numbers of hosta cultivars have been developed, with new ones available

each year. A list and description of selected cultivars suitable for Nebraska are included in this publication.

Site Requirements

Hostas should be planted in well-drained, slightly acidic soil for best performance. Once established, hostas are drought tolerant but require regular moisture for best performance. To improve the growing environment for hostas, add 2 to 3 inches of compost or other organic matter to the soil and incorporate to a depth of 10 inches. Avoid planting hostas in poorly drained locations, which can cause root and crown rot. In Nebraska's climate, hostas grow best in partial to full shade. Some cultivars will tolerate partial sun, particularly in more northern regions of the state where summer heat and sun exposure may be less damaging. Examples include 'Honeybells', 'Lancifolia' and 'Green Wedge'. Cultivars tolerant of partial sun flower best when in locations where they only receive morning sun. Fragrant hostas grow best under similar conditions.

Select a site that receives protection from wind and hail. Low humidity and wind can cause leaf browning or desiccation, and hail can destroy hosta foliage. Most cultivars will



Steven Rodie

be damaged by winds in excess of 35 mph. While plants typically recover from wind damage, tattered leaves usually remain tattered, and leaves developing after damage occurs aren't as attractive as the initial foliage. The site also should have good air circulation.

Starting and Growing Hostas

Plant, transplant and divide hostas either in spring after emergence or in late summer after temperatures have dropped and bloom has ended. Hostas may take several years to reach their mature size. Frequent division will delay their spread. Plants are divided to increase plant numbers or to rejuvenate plants that have developed a dead center crown surrounded by healthy leaves (referred to as fairy ring). Dividing hostas may be done in two ways, using clean, sharp tools:

1. Cut into the plant to slice away a section of a clump, being sure to include roots but leaving a portion of the original plant in place.
2. Lift the entire plant, including the roots, from the ground and divide the clump into separate plants.

Keep the plant and its roots moist. Dig a hole slightly shallower than the root ball and at least 1 1/2 times as wide. Place the hosta in the hole with the crown just above soil level and add soil as needed. Do not bury the crown. Do not tamp the fill soil. Water the soil thoroughly to remove air pockets and allow the soil to settle. Following late summer transplanting, at least one growing season must pass before active aboveground growth will resume. Starter fertilizer (high proportion of phosphorus) may be applied to transplanted hostas to promote root growth. Excess fertilization should be avoided, especially for late summer transplanting, to minimize the potential for delayed hardening off.

Although many hostas are drought tolerant once established, most hostas are native to habitats with 50 inches or more of rain per year and require supplemental irrigation for optimum growth in Nebraska. Drip tubing, soaker hoses or similar watering systems are preferred to overhead irrigation to avoid wetting the foliage. Dry foliage reduces disease problems and enhances the color intensity of cultivars with blue foliage.

Don't apply excessive amounts of nitrogen fertilizer. No more than one-eighth pound of actual nitrogen is needed for a 125-square-foot bed of hostas. High nitrogen applications result in soft foliage that readily wilts and is subject to foliar diseases. High nitrogen can also diminish the intensity of the variegated pattern. If fertilizer is needed, apply a slow-release fertilizer just as growth begins in spring.

In early summer, apply approximately 1 inch of a loose organic mulch to inhibit weed growth, reduce water loss and lessen soil compaction. A thicker layer of mulch is likely to promote slug populations. Water in the morning so the mulch surfaces dry before evening, and occasionally rake the mulch to improve air movement.

Winter mulch should be applied to help protect newly planted hostas from repeated freezing and thawing of the soil. Remove any remaining hosta foliage before a winter mulch is

added or snow covers the plant. Remove the winter mulch along with leaf debris in early spring prior to visible growth.

Hostas in the Landscape

Hostas are versatile landscape plants. Low-growing hostas can be placed at the front of a planting bed to form a unifying edge. The low growth habit and spreading ability of some cultivars makes them useful as groundcovers. Taller hostas can be used as a backdrop for shorter shrubs and flowers. The largest hostas assume shrublike proportions under tall trees. Hostas also work well with early blooming bulbs and perennials, where the spent bulb and flower foliage can be hidden by the emerging hosta leaves.

Hostas are excellent plants for focusing attention to specific landscape features. For example, hostas placed near a garden or building entrance provide a bold accent that is especially noticeable when they are placed adjacent to plants with finer texture. However, scattering brightly-colored or unusual hostas throughout a planting can detract from other important landscape features, decreasing the orderliness in the landscape.

Hostas also can be used to influence perceptions about the size of outdoor spaces. Large-leaved hostas placed near the viewer with small-leaved plants behind them will make the background appear more distant. Hostas used as the backdrop for small-leaved plants make the space seem smaller.

Planting hostas in shady areas under existing trees can be an effective way to add color, fragrance and texture to landscape areas where few other plants will thrive. To enhance success in these areas, the following guidelines should be considered:

1. It is best to install small hostas with small root masses, carefully loosening soil and planting them between existing tree roots to avoid the need for significant amounts of additional soil. Adding more than 2-3 inches of soil directly under the tree canopy may provide better growing conditions for hostas, but the soil can limit the amount of oxygen available to the tree causing potential tree decline.
2. Hostas require some light to thrive, so planting in the dense, dark shade typical under low-branched evergreen trees or large-leaved shade trees may not provide enough light for healthy hostas.
3. Hostas require supplemental watering during establishment. It is also likely that they will require ongoing supplemental watering in the dry, competitive root zone of established trees.

Hostas are valuable perennial plants for Nebraska gardens. They are adapted to shady spots in the landscape that can be difficult to fill, and they are relatively easy to grow when provided appropriate growing conditions. They offer ornamental value through foliage colors and textures and showy, fragrant flowers. They are relatively free of pests and diseases, tend to be long-lived and require little maintenance compared with many other perennials.

Selected Hostas for Nebraska

This list summarizes a basic selection of hostas for Nebraska. These hostas have proven successful when appropriate growing conditions are provided. It reflects a variety of cultivar sizes, leaf/flower/growth characteristics, and less common characteristics such as fragrance and sun tolerance. Carefully match these characteristics with your site and purpose. Since new cultivars are continually available, this list is not inclusive of all available hostas. For new cultivars not included on this list, please check with local nurseries and garden centers as well as sources for specialty hostas.

<i>Name</i>	<i>Ht.¹ (in.)</i>	<i>Width² (in.)</i>	<i>Leaf characteristics</i>	<i>Flower color</i>	<i>Bloom time</i>	<i>Sun tolerant³</i>	<i>Fragrant⁴</i>	<i>Habit/ Use⁵</i>
<i>Hosta</i> ‘Pandora’s Box’	5”	6”	white interior, blue-green edge	purple	June			small mound, specimen
<i>Hosta venusta</i>	6”	12”	dark green, heart- shaped	dark lavender	June			edger
<i>Hosta</i> ‘Gum Drop’	6”	10”	small, green-blue	lavender	June-July			mound
<i>Hosta</i> ‘Baby Bunting’	6”	12”	rounded, blue-green	pale lavender	June			small mound, specimen
<i>Hosta</i> × <i>fortunei</i> ‘Francee’	10”	24”	green w/narrow white margins	lavender	June-July	X		gdcvr ⁶ , specimen, drift (curving massed planting)
<i>Hosta</i> ‘Gold Edger’	12”	12”	heart-shaped, gold	lavender	June			edger, accent
<i>Hosta</i> ‘Golden Tiara’	12”	18”	gold margins	purple	June	X		edger, drifts
<i>Hosta sieboldiana</i> ‘Ginkgo Craig’	12”	24”	green w/irregular white margin	mauve	June			edger
<i>Hosta</i> ‘Gold Drop’	12”	24”	green-gold	mauve	June			gdcvr, edger
<i>Hosta</i> ‘Ground Master’	16”	36”	dark green/wavy white margin	deep purple	June-Aug.			gdcvr
<i>Hosta</i> ‘Blue Cadet’	12”	24”	blue, heart-shaped	lavender	June-July			gdcvr, edger
<i>Hosta lancifolia</i>	18”	18”	green, spear-shaped	lilac	Aug.-Sept. (tends to fade)	X		gdcvr, excellent edger
<i>Hosta</i> ‘Birchwood Parkys Gold’	18”	18”	ruffled green-gold	lilac	June			specimen, accent
<i>Hosta undulata</i> ‘Albomarginata’	18”	18”	Lance-shaped, green leaf w/white edge	lavender	June			gdcvr
<i>Hosta</i> ‘August Moon’	20”	20”	yellow, very large	pale lavender	July			specimen, drifts, accent
<i>Hosta</i> ‘Sagae’	20”	24”	yellow-green, wavy, creamy-gold margins	White tinged w/purple	June			specimen, vase-shaped and upright
<i>Hosta fortunei</i> ‘Gold Standard’	24”	30”	yellow w/green margins	pale lavender	June			specimen
<i>Hosta fortunei</i> ‘Albomarginata’	24”	24”	green w/narrow white margin	purple	June			mound, edger
<i>Hosta</i> ‘Guacamole’	24”	24”	shiny chartreuse-gold, wide green margins	near-white, large	Aug.	X	X	specimen
<i>Hosta</i> ‘Great Expectations’	24”	24”	creamy-yellow, blue- green margin	light lavender	June			mound, accent
<i>Hosta</i> ‘Royal Standard’	36”	30”	green	white	Aug.	X	X	upright, edger
<i>Hosta plantaginea</i>	24”	24”	pale green	white	Aug.-Sept.	X	X	specimen
<i>Hosta</i> ‘Krossa Regal’	30”	30”	frosty blue, leathery	orchid pink	June - July			vase-shaped
<i>Hosta sieboldiana</i> ‘Frances Williams’	30”	30”	large, blue-gray, wide golden border (tends to burn)	white	June			mound
<i>Hosta</i> ‘Regal Splendor’	36”	36”	gray-green, irregular creamy margin	lavender	June			vase-shaped
<i>Hosta</i> ‘Sum and Substance’	36”	48”	huge, chartreuse-golden, puckered	lavender	June - July	X		specimen, accent
<i>Hosta sieboldiana</i> ‘Elegans’	36”	48”	very large, blue-gray	white	June			specimen
<i>Hosta</i> ‘Blue Angel’	36”	48”	very large, heart-shaped, blue-green, puckered	lavender	June			specimen

^{1,2}Expected height and width dimensions are for mature plants (3-5 years) that have been appropriately fertilized and watered. Typical spacing of plants includes 8-12 inches between plant centers for relatively small hostas, 12-24 inches for medium-sized hostas, and 36 inches for large hostas.

³Sun-tolerant hostas will best tolerate sun and heat during the morning and midday hours (afternoon/late day sun will fade and burn leaves).

⁴Fragrant hostas require light and heat in order to bloom effectively; morning and/or midday sunlight are most desirable.

⁵Habit/use describes notable plant shapes and/or effective uses of hostas.

⁶Groundcover.

Pests and Diseases

Slugs and snails are common pests of hostas. Both of these gastropods thrive in moist conditions and are common in ornamental plantings that have been overwatered or are heavily mulched. Heavy leaf litter and neglected compost piles often harbor these pests. Both slugs and snails chew irregular holes in the leaves with their rasping mouthparts and leave silvery slime trails as they travel from plant to plant. They tend to conceal themselves on or beneath the plant and feed during the cooler parts of the day or at night. Leaves closest to the ground and thin-leaved cultivars tend to be most susceptible to damage.

The most effective method to control slugs or snails involves use of the molluscicide metaldehyde. This product is readily available in granular or bait formulations for use in ornamental beds. Other management approaches include removal of excessive mulch or organic matter to reduce slug and snail habitat and changing the frequency and/or method of watering to make conditions less suitable for these pests. In addition, shingles, boards or wet burlap can be set out to serve as traps. Large numbers of slugs and snails will be attracted under the traps for later disposal. Shallow containers of stale beer placed in the ground with the rims at ground level will collect large numbers of these pests. Some gardeners have reported reduced numbers of slugs and snails following applications of diatomaceous earth. Finally, hand-picking slugs or snails from plants at night is often an effective control option for smaller beds.

Sowbugs and pillbugs or “roly-pollies,” typically feed harmlessly on decaying vegetable matter. However, when they are abundant in high moisture situations, they can cause significant damage to hostas. Like slugs and snails, sowbugs and pillbugs are nighttime feeders and prefer similar cool wet conditions for shelter and breeding. The cultural controls recommended for slugs and snails can also be used for sowbugs and pillbugs.

Other occasional hosta pests include deer, rabbits, voles and squirrels which feed on the foliage and roots of hostas. Repellent chemicals and physical barriers, including fencing and wire cages, can be used to help limit damage.

Common hosta diseases include anthracnose and crown rot. Anthracnose is a fungal leaf disease that causes irregularly shaped white to tan leaf spots, usually with brown borders. The centers of the leaf spots often fall out. Warm, wet conditions enhance development of anthracnose. Using fungicides labeled for use on hostas is an option if the disease is a chronic problem. Correct timing of application is critical for successful control.

Crown rot can cause serious problems on a variety of garden plants. On hostas, marginal yellowing and browning of the leaves occurs, beginning with the lower leaves, followed by wilting and collapse of the entire plant. With close inspection, fluffy white threads (mycelium) of the crown rot

fungus are typically visible. Small, round bodies (sclerotia), approximately the size of mustard seeds, will also be present on rotted stems and in the soil around diseased plants. Crown rot can be difficult to manage. Current management strategies recommend removal of the infected plant; removal of the surrounding soil to a depth of 8 inches is also recommended to reduce future infection potential. Some fungicides are labeled for treatment of this disease on hostas but may not be readily available to the home gardener. Since crown rot fungus is only moved with diseased transplants and contaminated soil, the best management for the disease is to avoid introduction of the fungus into your landscape. Thoroughly examine the plants and potting mix for signs of disease or pathogens prior to planting in the landscape.

Two viral diseases of hosta have become more common over the last few years. *Hosta virus X* (HVX) symptoms vary by cultivar, including leaf mottling or “ink” streaking between veins. Some cultivars show no symptoms, and some are resistant. Nurseries are beginning to test stock for the disease and plants should not be purchased if any symptoms are present. *Hosta virus X* can be transmitted from plant to plant via infected sap on garden tools or other contact. Planted hostas showing symptoms should be removed; wait one-two weeks for replacement plantings to enable any remaining roots to die. *Tobacco rattle virus* (TRV) symptoms include dark and light green leaf mottling and brown dead spots on leaf surfaces. TRV infects hostas as well as vegetables, ornamentals and weeds, and is more difficult to control because it is spread by a microscopic soil nematode in the soil that is difficult to treat. Infected plants at the nursery almost always show symptoms, so the best way to avoid TRV is to select hostas showing no viral symptoms. No pesticides are available to control viral diseases.

Hostas may be affected by environmental damage rather than diseases or pests. Early or late frosts can damage leaves. Hostas are often improperly used in open, sunny landscapes that are beyond their tolerance limits. As a result, overexposure to sun and wind causes burned or bleached leaves and dried out leaf tissue. Periods of drought, even for established hostas, can lead to leaf tip dieback and stunted growth.

Acknowledgment

Jane Diesen, Nebraska Master Gardener, is gratefully acknowledged for her contributions to this NebGuide.

UNL Extension publications are available online at <http://extension.unl.edu/publications>.

**Index: Horticulture
Ornamentals**
Issued January 2007

Extension is a Division of the Institute of Agriculture and Natural Resources at the University of Nebraska–Lincoln cooperating with the Counties and the United States Department of Agriculture.

University of Nebraska–Lincoln Extension educational programs abide with the nondiscrimination policies of the University of Nebraska–Lincoln and the United States Department of Agriculture.

© 2006, The Board of Regents of the University of Nebraska on behalf of the University of Nebraska–Lincoln Extension. All rights reserved.