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Gardening in the Shade

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Many gardeners view shade as a challenging situation for growing plants. While some plants do not grow well in low light, numerous others thrive under these conditions. Just as moisture, temperature, and soil conditions may limit plant growth, the amount of shade present may determine which plants will grow successfully. The key is to discover which ones are adapted to the conditions in your yard or garden.

Landscapes change their degree of shade over time. As trees and shrubs mature, the landscape receives greater shade. What was once a sunny garden may evolve into a shady one. Analyze the degree of shade in your garden periodically to determine if changes in plant materials may be needed due to increased shade from a maturing landscape.

Several characteristics typify shade gardening. In addition to low light levels, plants growing in the shade must compete with shading trees for nutrients and water, and tolerate poor air circulation.

Lack of light

The best way to cope with low light levels is to choose plants that do well in less light. Plant lists later in this publication provide suggestions for plants tolerant toward various types of shade. The lists are not meant to be complete, but merely provide a starting point for choosing plants adapted to the conditions in your garden. Plants that tolerate low light levels often will grow more vigorously in brighter areas, provided they receive adequate moisture.

Light shade may be described as an area that is shaded but bright. It may be completely shaded for only several hours each day. The sun's rays may be blocked by a wall or building for several hours at midday, but the area is sunny the rest of the day. Light shade may also be found in areas that receive filtered or dappled sunlight for longer periods. Edges of shady gardens or areas under the canopy of solitary, lightly branched trees are typical of filtered sunlight. During the heat of summer, light shade at midday will provide a beneficial cooling effect. Flower and foliage color may be more brilliant when plants are shielded from intense midday sunlight.

Partial or **medium shade** is present when direct sun rays are blocked from an area for most of the day.

Figure 1. Prune tree branches high to improve air circulation in shade gardens.

Many established landscapes have large areas of partial shade, where sections of the yard are shaded by mature trees for much of the day but receive some direct sun early or late in the day. Bright, north-facing exposures may also be classified as medium shade.

Full shade lasts all day. Little or no direct sunlight reaches the ground at any time of the day. There may be reflected light from sunnier areas of the yard or off light-colored walls. Dense shade refers to full shade under thick tree canopies or in dense groves of trees. Areas under stairways, decks or covered patios on the north side of the house receive full shade.

Keep in mind that light patterns change with the seasons. An area that is in full sun in summer when the sun is high in the sky may have medium shade in spring and fall, when the sun is at a lower angle. Study your garden through the seasons to accurately determine what type of shade is present.

Available sunlight may be increased by selective pruning (see Figure 1). Removal of lower limbs on large trees may increase light levels significantly. Large shade trees are a valuable resource that in most cases should be preserved. However, removal of diseased, unattractive, or poorly placed trees improves the beauty of your property and increases the light available for plant growth.

Take advantage of reflected light, if possible. White or light-colored surfaces reflect more light than

dark-colored ones. Light-colored house siding or fences may increase available light to plants.

Competition

Plants growing in the shade often must also compete with roots of shading trees for nutrients and moisture. Shallow rooted trees such as maples and willows are particularly troublesome.

Adding organic matter to shade garden soils will help. Most woodland species are accustomed to growing in soils rich in leaf litter compost. Raking and removal of leaves each fall in the typical landscape disrupts this natural nutrient recycling process. If leaves are not removed, they can mat down and smother shade garden plants, but shredded leaves can be safely applied as a mulch. Another option is to compost the leaves first, and apply the compost in core aeration holes or in small pockets dug into the garden. Do not haul in several inches of compost-rich amendment to till into soil under shade trees. Some species, such as oaks, are extremely sensitive to changes in soil depth within their root zone. In addition, tillage will damage many of the tree's roots, starting a decline from which the tree may never recover. If the gardener is patient, earthworms will eventually incorporate surface-applied organic matter. Organic matter loosens heavy clay soils, improving drainage. In sandy soils, organic matter will increase the water-holding capacity. As organic matter breaks down, it also releases nutrients to the plants.

Roots competing for limited surface water may cause shade gardens to dry out more quickly than sunny sites during extended dry periods. Some shade-tolerant plants are adapted to low moisture situations, while others require moist shade. Provide water according to the plants' needs.

Poor air circulation

Branches or walls that cast shade also block air movement. Poor air circulation coupled with lower light levels means foliage of plants stays wet longer in the shade than in sunny areas. Most plant disease problems are worse under these conditions. Prevent disease problems by selecting disease-resistant varieties when available. Space plants farther apart in the shade to allow more air movement around each individual plant. Water with soaker hoses or drip irrigation systems to avoid wetting the foliage. Removal of lower tree limbs may funnel breezes underneath the tree canopy, thereby improving air circulation.

Figure 2. Variegated foliage patterns and light-colored bark add dimension and interest to a shady garden.

Design considerations in the shade

Bright, bold colors are less common in shade tolerant plants than in sun-loving ones. Flowers are usually produced less abundantly in the shade as well. For these reasons, shade gardens are often more subtle and restful than sunny ones. Plant textures, forms, and slight color differences become more important elements of the design (see Figure 2).

Texture has many aspects. Large-leaved plants such as hostas have a coarse texture, while finely divided fern fronds create a fine texture. Strong contrasts in texture accentuate their differences. Use strong textural contrasts only where emphasis is needed.

Pyramidal or upright, columnar plant forms serve best as accents in the shade. Rounded, weeping, or spreading forms create a more spacious effect and can be used more liberally in the design.

Glossy leaves have more impact than dull or velvety ones. Variegated or yellow-green foliage is evident in the shade more than solid green or blue-green foliage. Light colors — white, cream, yellow and pastel pink — stand out in the shade. Deep reds, blues and purples may fade into the shade unless set off by a contrasting lighter color. To emphasize plantings in the shade, concentrate on plants with light-colored flowers or foliage.

Woody plants for the shade

Understory trees. Many small trees and large shrubs thrive under large shade trees (see Tables 1 and 2). These small trees are often a good size plant to use in small, urban yards where space and light may be limited.

Table 1. Understory trees.

Plant name	Shade tolerance	Size	Comments
American hop hornbeam, Ironwood, *Ostrya virginiana*	Light to medium	25–40' tall, 15–30' wide	Best in dry sites. Fruits enclosed in a papery membrane resembling hops. Native.
American hornbeam, Blue beech, Ironwood, *Carpinus caroliniana*	Light, medium, or full	20–30' tall and wide	Does best in moist sites, but tolerates drier conditions. Can be difficult to transplant. Moderately slow grower. Good yellow to orange-red fall color. Native.
Carolina silverbell, *Halesia carolina*	Light to medium	30–40' tall, 20–35' wide	Dangling white, bell-shaped flowers in midspring, followed by winged brown fruits in fall. Prefers moist, acidic, well-drained soils.
Flowering dogwood, *Cornus florida*	Light to medium	20–30' tall and wide	Make certain plant source is from northern, hardy range of dogwood. Showy white or pink bracts in midspring, followed by clusters of red fruits in fall. Needs moist, well-drained soil.
Kousa dogwood, *Cornus kousa*	Light to medium	20–30' tall and wide	Large white bracts similar to, but 2–3 weeks after, flowering dogwood. Red fruits in late summer to early fall. Reddish-purple fall foliage. Generally good resistance to the dogwood anthracnose fungus.
Ohio buckeye, *Aesculus glabra*	Light to medium	20–40' tall and wide	Early to leaf out in spring. Prickly fruit covering opens to reveal chestnut brown “buckeyes.” Dropping fruits can be messy. Fall color yellow to orange. Susceptible to leaf spot diseases. Leaf scorch common in hot, dry sites.
Pagoda dogwood, *Cornus alternifolia*	Light to medium	15–25' tall and wide	Interesting layered branching pattern. Creamy white flowers in late spring not as showy as flowering dogwood. Flowers followed by red turning bluish-black fruits in mid- to late summer. Does best with moist, cool soils.
Serviceberry, Juneberry, *Amelanchier arborea, A. canadensis, A. laevis, A. x grandiflora*	Light to medium	15–25' tall, 10–20' wide	Clusters of white flowers in early spring followed by edible blue berries in late spring to early summer, much appreciated by birds. Does best in moist soils, but tolerates dry sites. Difficult to distinguish species unless in flower or fruit. Yellow to red fall color.
Sourwood, Lily of the Valley Tree *Oxydendrum arboreum*	Light to medium	25–30' tall, 20' wide	Long showy panicles of white flowers produced in early summer. Flowers best in full sun. Fall foliage color red, yellow and purple. Does best in gravelly soils.

Table 2. Deciduous shrubs.

Plant name	Shade tolerance	Size	Comments
Arrowwood viburnum, *Viburnum dentatum*	Light to medium	8–12' tall, 6–12' wide	Creamy white flower clusters in late spring, followed by blue-black berries in fall. Fall color varies from yellow to reddish-purple. Adapted to many soil conditions. Suckers freely.
Bottlebrush buckeye, *Aesculus parviflora*	Light to medium	8–12' tall, 8–15' wide	Showy panicles of white flowers in midsummer. Suckering, multistemmed shrub. Better pest tolerance than other buckeyes.
Burkwood viburnum, *Viburnum x burkwoodii*	Light to medium	8–10' tall, 6–8' wide	Flowers pink in bud, opening to fragrant white clusters 3" across in early spring. Semi-evergreen foliage. Adapts to most pHs. Prefers moist soil. Many similar hybrids are available in the nursery trade.
Common witchhazel, *Hamamelis virginiana*	Light, medium to full	20–25' tall, 15–20' wide	Yellow, straplike flowers in late fall, often at the same time as leaves are colored yellow. Best in moist shade.
Highbush cranberry, *Viburnum trilobum*	Light to medium	8–12' tall and wide	White, 4" clusters of flowers in midspring, followed by bright red fruits in fall, persisting into winter. Fall foliage color ranges from yellow to reddish-purple. ‘Compactum’ and ‘Arnold’ are dwarf versions, 3–6' tall.
Japanese kerria, *Kerria japonica*	Light, medium to full	3–6' tall, 6–9' wide	Spreading, arching plant with yellowish-green stems. Bright yellow flowers in midspring and sporadically through the season. Does best with low fertility and well-drained soils.
Koreanspice viburnum, *Viburnum carlesii*	Light to medium	4–8' tall and wide	Fragrant pinkish-white flowers in midspring. Dark green summer foliage sometimes turning purple in fall. ‘Cayuga’ is more disease tolerant.
Large fothergilla, *Fothergilla major*	Light to medium	6–10' tall, 4–8' wide	White, bottlebrush tufts of flowers in midspring. Fall leaf color is a mix of yellow, orange, and red. Requires acidic soil.
Leatherwood, *Dirca palustris*	Light, medium to full	3–6' tall and wide	Small yellow flowers in early spring. Yellow-green foliage. Prefers moist shade.
New Jersey tea, *Ceanothus americanus*	Light to medium	3–4' tall, 3–5' wide	Small white flowers in summer. Tolerates dry sites. Some leaf spot and mildew problems.
Oakleaf hydrangea, *Hydrangea quercifolia*	Light to medium	4–8' tall, 3–5' wide	White flowers in summer, changing to pink, then brown. Coarse, oak-leaf shaped foliage. Best in moist, well-drained soil.
Redosier dogwood, *Cornus sericea*	Light to medium	8–12' tall and wide	Noted for dark red bark coloration. Prune out old stems to maintain best color. White flower clusters in late spring and sporadically through the summer. Fall color is sometimes reddish-purple. Compact forms ‘Isanti’ and ‘Kelseyi’ are susceptible to leaf spots.

Table 2. Deciduous shrubs (continued).

Plant name	Shade tolerance	Size	Comments
Shrubby St. Johnswort, *Hypericum prolificum*	Light to medium	2–5' tall, 2–4' wide	Bluish-green foliage color. Bright yellow 1" flowers in summer. Seed capsules persist through winter. Well-adapted to dry, heavy soils.
Smooth hydrangea, *Hydrangea arborescens*	Light, medium to full	3–5' tall and wide	Cultivar 'Annabelle' produces panicles of flowers up to 1' wide in mid- to late summer. Cut back to ground each winter. Suckers and spreads from roots. Does best with moisture.
Sweet pepperbush, *Clethra alnifolia*	Light, medium or full	3–8' tall and 3–6' wide	Fragrant white to pink flowers in summer. Good for heavy shade and wet sites. Spreads slowly through suckers.
Virginia sweetspire, *Itea virginica*	Light, medium or full	3–5' tall and wide	Fragrant racemes of white flowers in summer. Deep red fall foliage color. Does best in moist sites.
Winterberry, *Ilex verticillata*	Light to medium	6–12' tall and wide	A deciduous holly. Separate male and female plants. Bright red berries on females in fall through early winter. Prefers moist, acid soil.

Evergreens. Broad-leaved evergreens generally need protection from winter winds and afternoon sun to prevent browning of leaves. Often, sites on the north or east sides of buildings are best (see Table 3).

Table 3. Evergreens.

Plant name	Shade tolerance	Size	Comments
American holly, *Ilex opaca*	Light to medium	15–30' tall, 10–20' wide	Native to southeast Missouri. Slow growing. Best treated as a large shrub, although it can become a medium-sized tree. Separate male and female plants. Red berries produced on females if pollinated by male. Needs a protected site in the north.
Canada hemlock, *Tsuga canadensis*	Light to medium	40–60' tall, 25–30' wide	Easily kept sheared to a height of 3–5' as a hedge. Needs well-drained soil, but doesn't tolerate drought or drying winds. Very cold hardy.
Drooping leucothoe, Fetterbush, *Leucothoe fontanesiana*	Light, medium or full	3–6' tall and wide	Fragrant white flowers in spring. Species has green to bronzy foliage. Some selections have been made for white to pink variegation in foliage color. Fall color is purplish-red. Does best in moist, acid, protected sites. Best in the southern half of Missouri. Leaf spot can be serious.
Japanese holly, *Ilex crenata*	Light to medium	5–10' tall and wide	Much variability in size and hardiness of cultivars. Some take many years to reach 3' in height. Best adapted to the southern half of the state. Finer texture than American holly. Nonshowy, black fruits are produced on female plants.
Japanese pieris, *Pieris japonica*	Light to medium	5' tall and wide	Panicles of white, pink or red flowers in springtime. Flower buds are formed the previous summer, and are attractive through the winter. Foliage is deep green, sometimes emerging red as in the cultivar 'Mountain Fire.' Best in the southern half of the state.
Leatherleaf viburnum, *Viburnum rhytidophyllum*	Light to medium	10–15' tall and wide	Upper leaf surface is leathery green, underside is grayish brown. Semi-evergreen. May suffer some dieback in severe winters, but will resprout from base. White flower clusters in midspring, followed by red fruits turning black in fall.
Littleleaf boxwood, *Buxus microphylla*	Light	3–4' tall and wide	Var. *koreana* is extremely hardy, but yellows during winter. 'Wintergreen' maintains better green color through winter. Shallow-rooted plants do best with mulching to keep roots cool and moist. Common boxwood, *B. sepervirens,* is best suited to southeast Missouri.
Oregon grapeholly, *Mahonia aquifolium*	Light to medium	3–5' tall and wide	Bright yellow clusters of flowers in spring followed by blue-black berries that hang on into winter. Foliage resembles holly. Unfolds reddish-bronze, turning medium green in summer. Semi-evergreen through winter.
Rhododendron, *Rhododendron sp.*	Light to medium	Variable	Many species and hybrids of azaleas and rhododendrons are available. All do best in light shade with acidic, well-drained soils. Some are deciduous, and some are evergreen. 'P.J.M.' and 'Nova Zembla' are two of the hardiest evergreen types. See MU publication G 6825, *Growing Azaleas and Rhododendrons,* for more details.
Spreading euonymus, *Euonymus kiautschovicus*	Light to medium	4–8' tall and wide	Glossy semi-evergreen foliage. 'Manhattan' and 'Paulii' are most common varieties.
Yew, *Taxus x media*	Light, medium or full	Variable	As a hybrid of two other species, plants vary from upright to spreading forms. 'Hicks' is a common upright cultivar. 'Taunton' is a spreading form only 3–4' tall which shows good resistance to winter burn and good heat tolerance. Needs well-drained soil. Female clones may produce red fruits.

Ground covers and vines

Since few turf grasses are well adapted to shady conditions, ground covers are often an excellent alternative to turf in the shade (see Table 4). Rather than struggling to keep grass alive in these problem areas, choose from among the following ground covers that do best with some protection from full sun. Some may be used either as a ground cover or a shade-tolerant vine.

Table 4. Ground covers and vines.

Plant name	Shade tolerance	Size	Comments
Ajuga, Carpetweed, Bugleweed, *Ajuga reptans*	Light, medium or full	4" tall, flower spikes to 12"	Semi-evergreen foliage ranges from solid green to variegated green, white and burgundy/red. Flower color is usually blue or purple, but some pink or white forms are available. The closely related *A. pyramidalis* 'Metallica Crispa' has bronze foliage and blue flowers in spring.
Bethlehem sage, Lungwort, *Pulmonaria saccharata*	Light, medium or full	1–1½' tall	Rosettes of straplike leaves, most varieties with some silvery mottling. 'Mrs. Moon' is a good variety. Pink flower buds open to blue flowers in spring.
Boston ivy, *Parthenocissus tricuspidata*	Light, medium or full	6–12" tall to 50' in length	Native vine with three-lobed leaves. Similar in growth habit and requirements to Virginia creeper. Lustrous green leaves turn red in fall.
Common periwinkle, *Vinca minor*	Light to medium	6" tall	Vining, matlike evergreen ground cover. Glossy green leaves. Blue flowers in spring and sporadically through the summer. Grows well under trees.
English ivy, *Hedera helix*	Light, medium or full	6–12" tall	Trailing evergreen vine. Prune or mow annually to maintain density. Many selections available. Leafspot can be a problem. Grows well under trees.
Epimedium, Barrenwort, *Epimedium* sp.	Light, medium or full	Most are 1–1½' tall	Heart-shaped trifoliate leaves, often with some red or bronze coloration. Flowers in spring are usually yellow or white, resembling small orchids. Relatively slow growing.
Hosta, Plantain lily, *Hosta* sp.	Light, medium to full	varies from 3" to 3' tall	Many species and cultivars of hosta are available. Foliage colors range from solid green, yellow-green or blue-green to variegated forms with white or gold markings. Many produce stalks of white to lavender flowers. Tolerate most growing conditions.
Japanese spurge, *Pachysandra terminalis*	Light to medium	8–10 tall	Glossy green, semi-evergreen foliage. White flowers in spring. The Allegheny pachysandra, *P. procumbens,* is native, and better adapted to Missouri's climate, but more difficult to find.
Lily-of-the-Valley, *Convallaria majalis*	Light, medium or full	8" tall	Fragrant stalks of white bell-shaped flowers in late spring. Foliage may deteriorate late in the season. Prefers moist, fertile sites, but tolerates most shady locations.
Lilyturf, *Liriope spicata*	Light, medium or full	1' tall	Dark green, grasslike foliage. White to lavender flower spikes similar to grape hyacinths develop in late summer. *L. muscari,* Big blue lilyturf grows to 1½' tall and produces dark purple flowers. It is best in the southern half of the state.
Mock strawberry, *Duchesnea indica*	Light, medium or full	6" tall	Semi-evergreen trailing foliage. Rampant grower. Yellow blossoms through much of the summer, followed by strawberry-like fruits. Tolerates drought and heat.
Plumbago, Leadwort, *Ceratostigma plumbaginoides*	Light to medium	12" tall	Deep blue flowers from midsummer through fall. Yellow, red, and bronze fall foliage contrasts nicely with flowers. Slow to start growth in spring.
Sweet woodruff, *Galium odoratum*	medium to full	6–8" tall	Whorls of bright green leaves around creeping stems. Small white flowers in late spring. Prefers moist soil.
Virginia creeper, Woodbine, *Parthenocissus quinquefolia*	Light, medium or full	1' tall to 50' long	Tough vine for most any situation. Will climb to tree tops. Colors early in the fall, developing a red or purplish coloration. Engelmann ivy is similar, but with smaller leaves.
Wild ginger, *Asarum canadense*	Light, medium or full	6" tall	Native to Missouri woodlands. Deciduous, heart-shaped, leathery green leaves. Flowers are purplish brown in spring, but usually hidden by leaves. European ginger, *A. europaeum* is evergreen with glossy foliage.
Wintercreeper, *Euonymus fortunei*	Light, medium or full	½–2' tall	Vining woody semi-evergreen ground cover. Many cultivars are available: 'Coloratus' turns purple in winter, 'Emerald Gaiety' has variegated white leaf margins, 'Emerald and Gold' is variegated green and yellow. Scale insects can be a severe problem. Considered by many to be an invasive species.
Yellow archangel, Dead nettle, *Lamiastrum galeobdolon*	Light, medium or full	1–1½' tall	Fast-growing vinelike ground cover. The form with silver variegation is most desirable. Yellow flowers in late spring. Shear in midsummer for more compact growth.

Flowers

Many spring flowering bulbs grow well in shady sites, particularly under trees that leaf out late in the spring. The bulbs bloom early, and complete their growth for the year before the shade becomes too dense. Daffodil (*Narcissus* sp.), crocus (*Crocus* sp.), snowdrop (*Galanthus* sp.), scilla (*Scilla* sp.), glory-of-the-snow (*Chionodoxa* sp.), winter aconite (*Eranthis* sp.), striped squill (*Puschkinia* sp.), and camass (*Camassia* sp.) will all perform well in shady, well-drained sites. Numerous spring wildflowers have a similar adaptation. They bloom in early spring and die down before the heat of summer arrives. Native woodland and savannah plants with this growth habit include Virginia bluebells (*Mertensia virginiana*), spring beauty (*Claytonia virginica*), bloodroot (*Sanguinaria canadensis*), blue-eyed Mary (*Collinsia verna*), wild sweet William (*Phlox divaricata*), and toothwort (*Dentaria laciniata*). Table 5 lists additional cultivated perennial flowers for shade gardens. Table 6 describes some shade-tolerant annual flowers. For additional information on annuals, consult MU publication G 6629, *Flowering Annuals: Characteristics and Culture.*

Table 5. Perennial flowers.

Plant name	Shade tolerance	Size	Comments
Alumroot,Coral bells, *Heuchera*	Light to medium	1–2' tall	American alumroot, *H. americana,* is grown primarily for its foliage. 'Palace Purple' is a purplish-bronze leaved selection. Coral bells, *H. sanguinea,* produce airy panicles of rose, pink or white blooms through much of the summer if old flower stalks are removed.
Astilbe, False Spirea, *Astilbe* sp.	Light to medium	6"–4' tall	Numerous species, cultivars and hybrids are available, with flower colors ranging from white, to pink, red, and lavender during summer. Finely divided foliage is fernlike. Require moisture through the summer, but need good drainage through the winter.
Balloon flower, *Platycodon grandiflorus*	Light to medium	1–3' tall	Flower buds look like inflated balloons. Open to bell-shaped blue, pink or white blooms. Slow to emerge in spring.
Bellflower, *Campanula, Campanula* sp.	Light to medium	3" to 4' tall	Many species available. Blue, purple or white flowers through much of the summer. Most prefer partial shade in the heat of the summer.
Bergenia, Pigsqueak, *Bergenia cordifolia*	Light, medium or full	6"–1' tall	Large, shiny evergreen leaves often develop purplish coloration in winter. Clusters of pink flowers in the spring.
Bleedingheart, *Dicentra* sp.	Light to medium	1–3' tall	Old-fashioned bleedingheart, *D. spectabilis,* produces arches of pink, heart-shaped blooms in spring, then dies down. *D. eximia,* fringed bleedingheart, and its hybrids are smaller, have finer-textured foliage and repeat blooms all season long.
Bugloss, *Brunnera macrophylla*	Light to medium	1–2' tall	Green, heart-shaped leaves. Clusters of small, true-blue flowers in spring. Tolerates dry shade, but prefers moisture.
Cardinal flower, *Lobelia cardinalis*	Light to medium	3–4' tall	Brilliant spires of red flowers in late summer. Cultivated forms may have green or bronze foliage. Needs moist soil.
Christmas fern, *Polystichum acrostichoides*	medium to full	2' tall	Native, evergreen fern. Dark green foliage provides a nice backdrop for other plants. Prefers moist, well-drained soil. Leathery fronds are useful in floral arrangements.
Cranesbill, Geranium, *Geranium* sp.	Light to medium	1–2' tall	Many species and cultivars are available. Flower color is usually pink to blue, but some whites are available. Flowers are most abundant in early summer, with some varieties blooming all season. Most form spreading clumps suitable as a ground cover.
Daylily, *Hemerocallis* sp.	Light to medium	1–3' tall	Daylilies tolerate fairly deep shade, but will bloom best in sun. Adaptable to most soil types.
Hardy ageratum, Mist flower, *Eupatorium coelestinum*	Light to medium	1–2' tall	Powder puff blue flowers in late summer to fall. Prefers at least partial sun. Spreads readily.
Lady's mantle, *Alchemilla mollis*	Light to medium	1–1½' tall	Silky, palmate leaves collect dewdrops. Lime green flowers in spring to early summer. Prefers moist site.
Ostrich fern, *Matteuccia pensylvanica*	Light, medium to full	4' tall	Fiddleheads in spring unfold to lacy medium green leaves. Needs moisture to prevent leaf scorch.
Toad lily, *Tricyrtis hirta*	Light to medium	2–3' tall	Produces multiple white flowers mottled with purple in late summer to fall. Exotic appearance. Prefers moisture.
Turtlehead, *Chelone* sp.	Light to medium	3–4' tall	Pink turtlehead, *C. lyonii,* has pink flowers in late summer to early fall on upright plants with glossy green foliage. *C. obliqua* has deeper rose colored blooms. Both need moisture.

Table 6. Annual flowers.

Plant name	Shade tolerance	Size	Comments
Ageratum, Flossflower, *Ageratum houstonianum*	Light to medium	6–12" tall	Powderpuff blue flowers on mounded plants all season long. Several varieties have white or pink blooms.
Browallia, *Browallia speciosa*	Light to medium	6"–12" tall	Purple, blue or white trumpet-shaped flowers through much of the summer. Flowers best with limited fertility and dry conditions.
Coleus, *Coleus x hybridus*	Light to medium	1–2' tall	Grown for its colorful foliage rather than flowers. Leaves may be chartreuse, pink, red, white or green with many different patterns on the leaf.
Flowering tobacco, *Nicotiana alata*	Light to medium	1–3' tall	This relative of petunia has flower colors ranging from white to pink, red, lime, and yellow.
Foxglove, *Digitalis purpurea*	Light to medium	2–5' tall	Most plants in the species are biennials, blooming only the second year after planting, but 'Foxy' reliably produces spikes of pinkish purple blooms the first year from seed.
Impatiens, *Impatiens wallerana*	Light, medium or full	6"–2' tall	One of the best plants for color in the shade. Flower colors range from white to pink, red, orange, lilac and variegations of these. Need moisture and warm temperatures.
Lobelia, *Lobelia erinus*	Light to medium	6" tall	Most cultivars have a spreading growth habit with sky blue to deep blue blossoms. Several cultivars have white or reddish blooms. Does best with adequate moisture and cool temperatures.
Pansy, *Viola x wittrockiana*	Light to medium	6" tall	Cool season annual. Overwinters as a fall planting for color in fall and spring. Many flower color combinations to choose from.
Wax begonia, *Begonia semperflorens*	Light, medium or full	6"–2' tall	Season long bloom in red, pink or white flowers. Foliage may be solid green or bronze.
Wishbone flower, *Torenia fournieri*	Light to medium	1' tall	Does best in cool part of growing season. Tubular flowers with yellow throat and purple and white or pink and white bicolor petals.

Grasses

Most turf grasses perform best in the sun. Some cultivars of cool-season grasses such as fescues, ryegrass, and bluegrass have been selected for their tolerance to shady conditions. See MU publication G 6725, *Grasses in Shade*, for a listing of shade tolerant turf varieties as well as suggestions for improving turf growth in the shade. Several ornamental grasses and grasslike plants perform well in the shade (see Table 7).

Table 7. Grasses.

Plant name	Shade tolerance	Size	Comments
Bottlebrush grass, *Hystrix patula*	Light to medium	1–2' tall	Green flower spikes resembling bottlebrushes rise 1–2' above the foliage in summer. Flowers turn brown by late summer, and shatter by late fall. Native woodland plant.
Hakonegrass, *Hakenochloa macra*	Light to medium	1–2' tall	Horizontal weeping foliage is similar to bamboo. 'Aureola' has yellow foliage streaked with green. Prefers moist soil, but not wet clay.
Maiden grass, Silver grass *Miscanthus sinensis*	Light	4–6' tall	Surprisingly tolerant of shade. Variegated cultivars such as porcupine grass, zebra grass, 'Variegatus' and 'Morning Light' are best with morning sun and afternoon shade.
Sedge, *Carex* sp.	Light to medium	6" to 2' tall	Clump forming grasslike plants that grow best in wet soils in the shade. Foliage color ranges from medium green to blue green, yellow, brown, or nearly black.
Soft rush, *Juncus effusus*	Light to medium	1½–2½' tall	Clumps of medium green grasslike foliage with tan flowers near the ends of stems. Prefers wet, boggy soils.
Tufted hairgrass, *Deschampsia caespitosa*	Light to medium	1–3' tall	A cool-season clumping grass. Panicles of light green flowers create almost veil-like appearance. Prefers moist soil.
Woodrush, *Luzula* sp.	Light to medium	6–12" tall	Clumps of gray-green to medium green foliage covered by downy hairs. Flowers are white to tan. Prefers moist conditions.

Fruits and vegetables

Almost all food crops grow best in sunny locations. Not only do they need full sunlight for good growth, few tolerate root competition from trees.

Cool-season salad vegetables such as lettuce, spinach and radishes may benefit from light shading through the heat of the summer. Beans, beets, broccoli, cabbage, kohlrabi, peas, potatoes, rhubarb and turnips will grow in light shade but not produce as large a crop as plants growing in full sun. For specific variety recommendations, consult MU publication G 6201, *Vegetable Planting Calendar.*

Currants and gooseberries are fruits which tolerate medium shade and still produce a crop. Bramble fruits such as blackberries and raspberries grow in light shade, but yields will be reduced. Variety recommendations may be found in MU publication G 6005, *Fruit and Nut Varieties for Home Plantings.*

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