



CARE SHEET

Shade Tolerant Trees, Shrubs, and Groundcovers

Plants and Shade

Most plants grow best in full sunlight and all plants need some light to survive. The amount of shade a plant is growing under will directly affect the density of the foliage, as well as the flowering and fruiting characteristics. In choosing plants, the level of light the plant will receive should be taken into consideration.

To properly select plants suitable to your site, defining the level of shade or sun the plant will receive is helpful. For instance, heavy shade can be characterized as a site where no direct sunlight reaches the site such as that found at the base of a north-facing wall or below dense evergreens (e.g., under hemlocks).

Conversely a full sun site would receive full direct sunlight for at least six hours per day. Light shade sites are those exposed to partially filtered sun such as that found under open canopied trees (e.g., honey locust, ash, and birch).

Moderate shade sites could be defined as those receiving mostly reflected light found at the floor of a typical hardwood forest. Planters should understand

that generally, plants grown in shade will not be as dense as the same plants under full sunlight. Usually fewer flowers develop on plants in the shade. Frequently, fall color or unique foliage colors (e.g., maroon foliage of 'wine and roses' Weigela and red leafed Japanese maples) will not be as intense or maybe greener in color under shade conditions.

Moisture availability is a secondary factor in choosing shade adaptable plants—some plants may survive under shade conditions but require supplemental water to assure complete survival. Comparing your plant choices with a list of dry site tolerant plants will assure that you are making the most informed decision when choosing plants to fit the site.

Trees

Few trees require shade to thrive, however, some will adapt to these conditions rather well. The deeper the shade, the more difficult it will be for any tree to develop properly. In deep shade, many of the flowering trees will not set flowers or fruit as will similar plants given more sunlight.

Trees: Shade Type USDA Hardiness Zone

Scientific Name	Common Name	Shade Type	Hardiness Zone
<i>Abies concolor</i>	Concolor fir	Light	4-7
<i>Acer campestre</i>	Hedge maple	Light	5-8
<i>A. palmatum</i>	Japanese maple	Light/Moderate	5-8
<i>A. rubrum</i>	Red maple	Light/Moderate	3-9
<i>A. saccharum</i>	Sugar maple	Light/Moderate	4-8
<i>A. x freemanii</i>	Freeman maple	Light/Moderate	4-7
<i>Aesculus pavia</i>	Red buckeye	Light/Moderate	5-9
<i>Alnus glutinosa</i>	Black alder	Light/Moderate	4-7
<i>Amelanchier arobroea</i> , <i>A. canadensis</i>	Juneberry, serviceberry	Light/Moderate	4-9

Scientific Name	Common Name	Shade Type	Hardiness Zone
<i>A. laevis</i>	Allegheny serviceberry	Heavy	4-8
<i>Asimina triloba</i>	Pawpaw	Light/Moderate/Heavy	5-8
<i>Carpinus betulus</i>	European hornbeam	Light/Moderate	5-7
<i>Carpinus carolina</i>	American hornbeam	Light/Moderate/Heavy	3-9
<i>Cercis canadensis</i>	Eastern redbud	Light	4-9
<i>Chionanthus virginicus</i>	White fringe tree	Light	4-9
<i>Cornus alternifolia</i>	Pagoda dogwood	Light	3-7
<i>Cornus florida</i>	Flowering dogwood,	Light/Moderate	5-8
<i>Cornus kousa/C. kousa/ C. florida hybrids</i>	Kousa dogwood	Light/Moderate	5-8
<i>Enkianthus campanulatus</i>	Redvein enkianthus	Light	5-7
<i>Fagus sylvatica</i>	European beech	Light/Moderate	4-7
<i>Halesia tetraptera</i>	Carolina silverbell	Light/Moderate	4-8
<i>Ilex opaca</i>	American holly	Light	5-9
<i>Magnolia virginiana</i>	Sweetbay magnolia	Light/Moderate	5-9
<i>Nyssa sylvatica</i>	Black gum	Light/Moderate	4-9
<i>Ostrya virginiana</i>	Ironwood, American hophornbeam	Light	3-9
<i>Oxydendrum arboreum</i>	Sourwood	Light	5-9
<i>Picea glauca</i>	White spruce	Light	2-6
<i>Rhus typhina</i>	Staghorn sumac	Light/Moderate	4-8
<i>Styrax japonicus</i>	Japanese snowbell	Light	5-7
<i>Thuja plicata</i>	Western arborvitae	Light	2-7
<i>Tilia americana</i>	American basswood	Light	3-8
<i>Tsuga canadensis</i>	Canadian hemlock	Light/Moderate	3-7
<i>Ulmus americana</i>	American elm, (specifically new hybrid elms e.g., 'Valley Forge, New Harmony')	Light/Moderate	3-9
<i>U. parvifolia</i>	Lacebark elm	Light/Moderate	5-9

Shrubs

The following shrubs will tolerate shade conditions better than most. Some shrubs require some protection from direct sunlight to avoid leaf burn during the day for example mid morning to late afternoon.

Shrubs: Shade Type USDA Hardiness Zone

Scientific Name	Common Name	Shade Type	Hardiness Zone
<i>Abelia x grandiflora</i>	Glossy abelia	Light/Moderate	6-9
<i>Aronia arbutifolia</i>	Red chokeberry	Light/Moderate	4-9
<i>Berberis julianae</i>	*Wintergreen barberry	Light	6-8
<i>Berberis x mentorensis</i>	Mentor barberry	Light/Moderate	5-8
<i>J Berberis thunbergii</i>	Japanese barberry	Light	4-8

Scientific Name	Common Name	Shade Type	Hardiness Zone
<i>(Buxus microphylla & B. sempervirens)</i>	*Boxwood	Light/Moderate	6-8
<i>Calycanthus floridus</i>	Common sweetshrub	Light/Moderate	4-9
<i>Clethra alnifolia</i>	Summersweet	Light	4-9
<i>Comptonia peregrina</i>	Sweetfern	Light/Moderate	2-5
<i>Cornus mas</i>	Corneliancherry dogwood	Light	4-7
<i>Cornus racemosa</i>	Gray dogwood	Light/Moderate/Heavy	3-8
<i>Corylopsis pauciflora</i>	Buttercup winter hazel	Light/Moderate	6-8
<i>Corylus species</i>	Hazelnut	Light	4-8
<i>Daphne species</i>	*+Daphne	Light/Moderate	4-7
<i>Fothergilla gardenii</i>	Dwarf fothergilla	Light	5-8
<i>Hamamelis species</i>	Witchhazel	Light/Moderate	4-8
<i>Hydrangea quercifolia</i>	Oakleaf hydrangea	Light/Moderate	5-9
<i>Hypericum calycinum</i>	Aaronsbeard St. Johnswort	Light	5-8
<i>Ilex species</i>	*Holly	Light/Moderate	5-8
<i>Itea virginica</i>	Virginia sweetspire	Light/Moderate	5-9
<i>Kalmia species</i>	*Laurel	Light/Moderate/Heavy	4-9
<i>Kerria japonica</i>	Japanese kerria	Light/Moderate	4-9
<i>Leucothoe species</i>	*+Leucothoe	Light/Moderate	5-8
<i>Ligustrum species</i>	Privet	Light/Moderate	4-7
<i>Mahonia aquifolium</i>	*Oregon hollygrape	Light/Moderate	5-7
<i>Myrica pensylvanica</i>	Northern bayberry	Light/Moderate	3-6
<i>Nandina domestica</i>	*Heavenly bamboo	Light/Moderate	6-9
<i>Paxistima canbyi</i>	*Paxistima, Canby	Light/Moderate	3-7
<i>Philadelphus coronarius</i>	Mock orange	Light	4-8
<i>Pieris japonica and cultivars</i>	*Pieris	Light/Moderate	4-7
<i>Pyracantha coccinea</i>	*Scarlet firethorn	Light/Moderate	6-9
<i>Rhododendron species</i>	*+Rhododendron	Light/Moderate	4-8
<i>Rhodotypos scandens</i>	Black jetbead	Light/Moderate/Heavy	4-8
<i>Rhus aromatica</i>	Fragrant sumac	Light/Moderate	3-9
<i>Symphoricarpos species</i>	Coralberry and Snowberry	Light/Moderate/Heavy	4-7
<i>Taxus species</i>	*Yew	Light/Moderate/Heavy	4-7
<i>Viburnum acerifolium</i>	Viburnum, Mapleleaf	Light/Moderate/Heavy	4-8
<i>Viburnum dentatum</i>	Viburnum, Arrowwood	Light/Moderate	3-8
<i>Viburnum prunifolium</i>	Blackhaw,	Light/Moderate	3-9

Groundcovers: Shade Type USDA Hardiness Zone

Scientific Name	Common Name	Shade Type	Hardiness Zone
<i>Aegopodium podagraria</i>	Bishop's weed	Light	4-9
<i>Ajuga reptans</i>	*Bugle-weed,	Light	3-9

Scientific Name	Common Name	Shade Type	Hardiness Zone
<i>Arctostaphylos uva-ursi</i>	Bearberry,	Light	5-8
<i>Asarum canadense</i>	Wild Ginger,	Light/Moderate/Heavy	4-8
<i>Astilbe species and cultivars</i>	Astilbe,	Light	3-8
<i>Athyrium niponicum 'Pictum'</i>	Japanese painted fern,	Heavy	5-8
<i>Ceratostigma plumbaginoides</i>	Plumbago,	Light	6-9
<i>Convallaria majalis</i>	Lily of the Valley,	Heavy	4-9
<i>Epimedium species</i>	Barrenwort,	Light	5-9
<i>Euonymus fortunei</i>	*Wintercreeper,	Light	5-9
<i>Galium odoratum</i>	Sweet woodruff,	Moderate/Heavy	4-7
<i>Gaultheria procumbens</i>	*Creeping wintergreen,	Light/Moderate	3-5
<i>Gaylussacia brachycera</i>	*Box huckleberry,	Light/Moderate	5-7
<i>Hedera helix</i>	*English Ivy,	Heavy	5-11
<i>Helleborus orientalis</i>	Lenten rose,	Light	4-9
<i>Heuchera species and hybrids</i>	Coral bells,	Light	3-8
<i>Heucherella hybrids</i>	Foam bells,	Heavy	3-8
<i>Hosta species and cultivars</i>	Plantain-lily,	Light	4-9
<i>Hypericum calycinum</i>	St Johnswort,	Light	5-9
<i>Iris cristata</i>	Crested iris,	Light/Moderate/Heavy	3-8
<i>Lamiaeum galeobdolon</i>	*Yellow archangel,	Heavy	4-8
<i>Lamium maculatum</i>	*Deadnettle,	Light	4-8
<i>Liriope spicata, L. muscari</i>	Lily-turf,	Light	6-11
<i>Lysimachia nummularia</i>	Creeping Jenny,	Light	4-8
<i>Microbiota decussata</i>	*Russian arborvitae,	Light	3-8
<i>Ophiopogon japonicus</i>	Mondo grass,	Light	6-11
<i>Pachysandra procumbens</i>	*Allegheny spruce,	Moderate/Heavy	5-9
<i>Pachysandra terminalis</i>	*Japanese Spurge,	Moderate/Heavy	4-8
<i>Sarcococca hookeriana var. humilis</i>	*+Sweet box,	Moderate/Heavy	6-8
<i>Tiarella cordifolia</i>	Stonecrop,	Light/Moderate/Heavy	3-7
<i>Sedum species</i>	Foam flower,	Light/Moderate/Heavy	3-7
<i>Vinca minor</i>	*Periwinkle,	Light/Moderate/Heavy	4-9

* Indicates Evergreen.

* Indicates plants that require shade during a portion of the day (midmorning to late afternoon) or season to prevent desiccation injury or sunscald.

The Horticulture Fact Sheet series is produced for home gardeners and professionals by the Consumer Horticulture Center at Penn State. The complete series is available on the Web at www.hortweb.cas.psu.edu.