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### PB1585-Annual and Perennial Flower Shade Gardening in Tennessee

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# Annual and Perennial Flower Shade Gardening in Tennessee



THE UNIVERSITY of TENNESSEE

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## Annual and Perennial Flower Shade Gardening in Tennessee

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Gardening in the shade can add interest and color to the restful recesses of your landscape, but it can be difficult and challenging. Shade gardening presents a new set of problems as compared to gardening in the sun. Both the homeowner who instructs his or her builder to leave "every tree possible" and the gardener who one day looks up and finds that the maple and oak saplings planted years ago now flood much of the landscape with shade have trouble finding suitable plants which can add color in these areas of their landscapes.

Perennials, plants which flower year after year, have traditionally been the plants of choice for shade gardening. Columbine, ferns, bleeding heart, sweet woodruff and hostas, to name a few, have been useful in adding color to these areas. However, unlike the short blooming period of many perennials, shade-loving annuals, plants which flower for one growing season and then die, can provide color throughout most of the growing season.

One advantage of growing plants in the shade is the shade itself. The chore of preparing the beds, planting, fertilizing and watering can all be done in the relative coolness provided by overhanging branches. Later in summer when heat is blanketing the lawn, one can find that gardening chores do not necessarily include heat stroke.

### What Is Shade?

Shade can vary in intensity and is rarely defined. You will see the terms "partial shade" and "light shade," but usually no explanation of these terms is given. Shade has been defined as "a kind of light" by Rosalie Davis in Taylor's Guide to Shade Gardening. Following are descriptions of shade levels she offers which you may find in your yard:

**Part shade:** Also called semi- or half-shade, part shade is an area which alternates between full sun and full shade. Preferably, the area is shaded during midday and afternoon and is open and sunnier during the cooler, morning hours. The yard that receives morning light and afternoon shade allows for a wealth of plants.

**Light shade:** Also called dappled or moving shade, light shade lies between part shade and full shade. Here, the sun never seems far away and is not so much blocked as filtered, typically by the translucent screen of deciduous trees. Black locust with its small, feathery leaves is typical of those trees providing light shade.

**Full shade:** Full shade suggests a garden that is nearly always in substantial shade during the growing season. A full-shade garden reaps another benefit as well, which is moisture-retentive soil during dry spells.

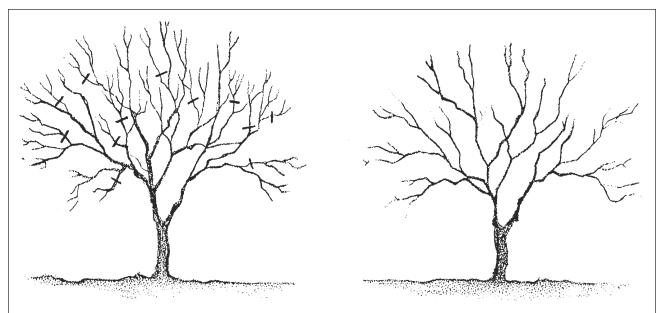


Figure 1. Selectively pruning limbs from shade trees allows more light to reach plants around the base of the tree. Most species of shade-loving plants are benefited by this practice.

Davis also considers a type of shade she calls "dense and difficult." This is found under shallow-rooted deciduous trees like maples or beeches; near tall, mature hedges; and under needled evergreens. This type shade is seldom promising because its soil tends to be root-bound and dry. However, this sort of shade, though challenging, does not need to be regarded as uninhabitable by understory plants. Such trees may be "limbed up," thinned or even removed (see Figure 1). However, the gardener who rejoices in mature deciduous trees is not likely to be enthusiastic about such measures. Use of raised beds can at least temporarily overcome the problem of shallow tree roots, although eventually the tree roots will grow into the raised beds to compete with other plants found there. Yearly cultivation of such raised beds can keep tree roots in check and allow for successful annual color in these areas. The addition of 1 foot (or less) of soil to create a raised planting around the base of trees will not damage or hamper their growth. However, it is important that this soil not be placed right around the base of the tree trunk to avoid growth damage. It is better to taper the soil starting approximately 1 foot away from the tree trunk into the raised growing area. (see Figure 2).

### How to Be Successful at Shade Gardening:

### Site & flower selection

Selecting plants which are compatible with the light available in your garden is the most important factor to shade-gardening success. Included in this publication is a list of those annuals and

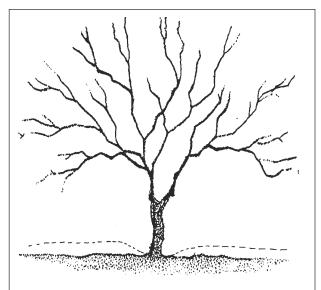


Figure 2. Example of properly tapering soil for a raised bed away from the base of a tree trunk.

perennials which various authors consider successful shade plants. Since the degree of shade your garden possesses and the light requirements of the various plants you desire may not be compatible, you may wish to study the books listed at the end of this publication for suitable matches.

Cultivation of many of the plants included in the following lists of this publication can be somewhat difficult. For this reason,we have included the following "Top 10" list of easily cultivated, readily available annuals and perennials for the beginning gardener.

### Bed preparation

If the three most important words in the real estate trade are "location, location, location," then the three most important words to the shade gardener are "preparation, preparation, preparation." Assuming you have deep-rooted trees under which to plant, your bed preparation steps are similar to those used in sun gardening. Mark off the area you wish to plant. A garden hose or heavy rope is helpful in choosing graceful curves to complement the planting. Before preparing the soil for planting, it should be tested. Proper soil testing with kits available from your county Agricultural Extension Service office provides information on soil pH and nutrient levels of your soil. Your soil test will indicate if any of

these need adjusting, which can be done during bed preparation. Till to a depth of 6 to 8 inches and remove any stones, roots or debris from the soil. Spread the appropriate amount of fertilizer or soil amendment recommended on the soil surface, along with 3 to 5 inches of organic matter, which can include composted leaves, grass clippings, peat moss, garden waste, etc. Although you may feel that your soil has a generous amount of organic matter present, you will find that most soils benefit from the continuous addition of organic matter. Work these materials into the top 6 to 8 inches of soil with a digging fork or tiller and rake smooth. If you have shallow-rooted trees, the use of raised beds will remedy the problem.

### Proper planting practices

Proper spacing of plants prevents competition for available light and water and allows the plants to mature and fill in the garden at a rapid pace. Plants spaced too far apart look sparse, and weeding chores are increased. If planted too closely, plants are more likely to develop diseases as a result of reduced air circulation. The general rule of spacing plants is to plant them in spacing equal to their mature height (i.e., 6-8" height = 6-8" spacing). Root balls should be broken up before planting to encourage the roots to grow into the surrounding media. Pinching those plants that are blooming heavily at time of planting will decrease

Top 10 Annuals for Shade		
Ageratum	Part	
Begonia	Full	
Impatiens	Full	
Caladium	Full	
Coleus	Full	
Petunia	Part	
Sweet Alyssum	Part	
Salvia/Scarlet Sage	Part	
Periwinkle	Part	
Dahlia	Part	

Top 10 Perennials for Shade		
Daylily	Part	
Fern	Full	
Hosta	Full	
Coral Bells	Part	
Columbine	Part	
Foam Flower	Full	
American Alum Root	Part	
Lobelia	Part	
Rudbeckia/Coneflower	Light	
Lady's Mantle	Part	

transplanting stress, as well as encourage them to branch and produce more flowers as they mature.

### Use of mulch

Even in the shade, mulch has advantages. Mulching serves many purposes, but the major uses in shade gardening are to control weed growth and conserve soil moisture. It also serves as a contrasting background to unify and define your plantings. Compost, pine and hardwood are all suitable mulches. Whatever your choice of mulch, it should be applied 2-3 inches deep for full benefits.

#### Water

The familiar yellowing of foliage in plants located in shade is not, as many people consider, a lack of light, but an indication of insufficient water. Under established trees there is much competition for available water between tree and flower roots. While this is not a problem under shade caused by buildings, fences or walls, take care to ensure adequate water availability under overhangs and in other areas where natural rainfall may be insufficient. As with sun gardening, early morning watering is considered best. Once plants are established, frequent, shallow watering is harmful, encouraging development of roots near the soil surface where they can be destroyed during times of drought. Water the bed as needed, applying the

equivalent of 1 inch of rainfall. Use a breaker on your hose to assure an even, gentle application. If you decide to keep the beds permanently, sub-irrigation — soaker hoses or tubes and emitters placed on or under the soil line — can substantially decrease time spent on watering chores.

#### **Problems**

Many problems such as over- and under-watering can be avoided by carefully considering the needs of the plants. Do not hesitate to feel the soil with your hands to determine watering needs. Disease problems can be directed to your county Extension agent, who has a variety of resources with which to aid you. He or she will also be able to assist you in deciding what defense to take against insect pests. Weeds can usually be prevented by use of a pre-emergent herbicide such as Treflan, Surflan, Snapshot, Ronstar and Preen. These herbicides are successful in preventing seed germination of most common garden weeds in flower beds and certainly make gardening a pleasant pastime instead of a tedious task. When using any of these pre-emergent herbicides, be sure to follow label instructions carefully for application rates and suitability for the plants you are growing.

One advantage of growing annuals is that so many exist that your gardening palette can change frequently. You may enjoy trying the following annuals suitable for shade gardening.

Annuals Suitable for Shade Gardening			
Scientific/Common Name	Average Height	Maximum Shade Tolerance	
Ageratum houstonianum/Ageratum	6-18"	Part	
Lunaria annua/Honesty	36"	Part	
Matthiola incana/Common stock	24-30"	Part	
Matricaria recutital German camomile	24"	Part	
Mimulus cupreus/Chilean monkey-flower	8"	Light	
Myosotis sylvatica/Woodland forget-me-not	9-24"	Light	
Nicotiana alatalWinged tobacco	12-36"	Part	
Nicotiana sylvestris/Flowering tobacco	36"	Part	
Nierembergia hippomanica v violaceal Blue cupflower	6-9"	Part	
Nigella damascena/Love-in-a-mist	12-18"	Part	
Pennisetum setacum/Annual fountain grass	36"	Part	
Pentas lanceolata/Star cluster	18"	Part	
Petunia x hybridal Garden petunia	6-12"	Part	
Phlox drummondi/Annual phlox	6-8"	Part	
Polygonum capitatum/Pinkhead	3"	Part	
Reseda odorata/Mignonette	6"	Part	
Rudbeckia bicolor/Thimbleflower	24"	Part	
Sagina subulata/Corsican pearlwort	4"	Part	
Salvia splendens/Scarlet sage	8-30"	Part	
Schizanthus pinnatus/Butterfly flower	48"	Part	
Thunbergia alata/Black-eyed Susan vine	36-60"	Part	
Torenia fournieri/Blue torenia	12"	Full	
Viola tricolor/Johnny-jump-up	6-8"	Part	
Viola sp./Violet & Pansy	6-8"	Part	

Many herbaceous perennials are tolerant of shade. On the following pages is a table of suitable perennials for shade gardening.

Perennials Suitable for Shade Gardening		
Scientific/Common Name	Average	Maximum Shade Tolerance
Aconitum sp./Monkshood	Height 24"	Part
Actaea sp./White baneberry	18"	Part
Adiantum pedatum/Northern maidenhair fern	18-26"	Part
Aegopodium podoraria/Goutweed	6-14"	Full
Ajuga reptans/Bugleweed	4-12"	Part
Alchemilla mollis (vulgaris)/Lady's Mantle	8-10"	Part
Anchusa azurea/Italian Bugloss	36"	Part
Anemonella thalictroides/Rue Anemone	12-18"	Part
Anemone sp./Anemone	18-36"	Part
Aquilegia sp./Columbine	12-18"	Part
Arisaeme triphyllum/Jack-in-the-pulpit	12-18"	Full
Arum italicum 'Pictum'/Painted arum	12-18"	Part
	36"	Part
Aruncus sylvester/Sylvan goats-beard	4-6"	Full
Asarun sp./Wild ginger	8-15"	Full
Asplenium ebenoides/Dragontail fern		
Aster sp./Aster	8-24"	Part
Astilbe sp./Astilbe	4-24"	Part
Athyrium filix-femina/Lady fern	18-36"	Part
Athyrium nipponicum 'Pictum'/ Japanese painted fern	18-36"	Part
Baptisia australis/Blue wild indigo	36-48"	Full
Begonia grandis/Hardy begonia	24"	Part
Brunnera macrophylla/Heartleaf brunnera	18-24"	Part
Campanula rapunculoides/Creeping bellflower	6"	Part
C. rotundifolia/Bluebell-of-Scotland	12-24"	Part
Centaurea montana/Persian Cornflower	12-24"	Part
Chrysogonum virginianum/Goldenstar	4-6"	Part
Cimicifuga racemosa/Snakeroot	36-48"	Full
Cineraria cruenta/Cineraria	12"	Part
Cleome glabra/White turtle-head	24-36"	Part
Convallaria majalis/Lily-of-the-valley	8"	Full
Corydalis lutea/Yellow corydalis	8"	Full
Cystopteris bulbifera/Bulblet bladder fern	24-36"	Full

Perennials Suitable for Shade Gardening		
Scientific/Common Name	Average Height	Maximum Shade Tolerance
Darmera peltata/Umbrella plant	36"	Part
Delphinium tricone/Dwarf Larkspur	24"	Part
Dennstaedtia punctilobula/Hay-scented fern	20-30"	Full
Dentaria diphylla/Toothwort	12-18"	Part
Dicentra cucullaria/Dutchman's Breeches	12-18"	Part
D. eximial Fringed bleeding-heart	12-24"	Part
D. spectabilis/Common bleeding-heart	24-36"	Part
Dictamnus albus/Gasplant	36"	Part
Digitalis grandiflora/Yellow Foxglove	24"	Part
D. purpureal Foxglove	24-36"	Part
Disporum sp/Fairy bells	12-24"	Part
Dodecatheon meadial Common shooting star	8-12"	Full
Doronicum caucasicum/Leopardbane	12-18"	Part
Dryopteris sp./Toothed wood Fern	24-36"	Part
Epimedium sp./Epimediums	8-12"	Part
Erythronium americanum/Trout lily	6-9"	Full
Filpendula ulmaria/Queen-of-the-meadow	36-48"	Part
Galax ureolata/Galax	6-12"	Full
Galium mollugo/White bedstraw	24"	Full
Galium odoratum/Woodruff	6"	Full
Geranium maculatum/Wild Geranium	12-18"	Part
Geranium sanguineum/Blood-red geranium	6-12"	Part
Heliopsis helianthoides var. scabralOx-eye Daisy	36"	Part
Helleborus orientalis/Lenten Rose	12-18"	Part
Helleborus foetidus/Stinking Hellebore	12-18"	Part
Hemerocallis sp./Daylily	12-48"	Part
Hepatica acutilobal Hepatica	8-9"	Part
Heuchera americanal American Alumroot	18"	Part
Heuchera sanguineal Coral-bells	12-24"	Part
Hibiscus moscheutos/Common rose mallow	36-48"	Light
Hosta sp./Plantain-lily	12-36"	Full
Hydrastis canadensis/Goldenseal	12-18"	Part
Hypericum sp./StJohn's-wort	12-18"	Part
Jeffersonia diphylla/Twinleaf	12-18"	Part

Perennials Suitable for Shade Gardening		
Scientific/Common Name	Average Height	Maximum Shade Tolerance
Lamiastrum galeobdolan 'Variegatum'l Variegated yellow	6-8"	Part
archangel		
Lamium maculatum/Spotted deadnettle	8-12"	Full
Ligularia clivorum/Bigleaf golden-ray	24"	Light
Liriope spicatal Creeping lily-turf	8-12"	Light
Lobelia cardinalis/Cardinal-flower	24-36"	Part
Luzula nivea/Snowy wood rush	18-24"	Full
Lychnis chalcedonical Maltese cross	24"	Part
Matteuccia struthiopteris/Ostrich fern	36"	Full
Mertensia virginicalVirginia bluebell	24"	Full
Mitchella repens/Partridge-berry	2-3"	Part
Myosotis sp./Forget-me-not	6-8"	Full
Omphalodes cappadocica/Navelwort	8-10"	Full
Osmunda regalis/Royal fern	36"	Full
Oxalis violacea/Violet wood-sorrel	6"	Light
Pachysandra terminalis/Pachysandra	6-8"	Full
Penstemon digitalis 'Husker Red'/Penstemon	12-18"	Part
Phlox stoloniferal Creeping Phlox	2-3"	Part
Phyllitis scolopendrium/Hart's tongue fern	12-18"	Full
Physostegia virginiana/Obedient plant	36"	Part
Platycodon grandiflorum/Balloonflower	24-30"	Part
Podophyllum peltatum/Mayapple	12-18"	Part
Polemonium reptans/Creeping Jacob's Ladder	12-16"	Part
Polygonatum biflorum/Small Solomon's seal	24-36"	Full
Polygonum bistorta/European bistort	24-30"	Part
Polygonum capitatum 'Magic Carpet'/Magic carpet polygonum	2-3"	Part
Polygonum cuspidatum/Japanese knotweed	24"	Part
Polystichum acrostichoides/Christmas fern	24"	Part
Polystichum braunii/Braun's holly fern	18-30"	Full
Primula sp./Primrose	6-12"	Part
Pulmonaria sp./Lungwort	8-12"	Part
Rudbeckia, several sp./Coneflower	24-36"	Light

Perennials Suitable for Shade Gardening		
Scientific/Common Name	Average Height	Maximum Shade Tolerance
Salvia lyrata/Sage	24-36"	Part
Smilacina racemosa/False Solomon's seal	24-36"	Full
Solidago caesia/Wreath goldenrod	36-48"	Part
Stylophorum diphyllum/Wood poppy	12-18"	Full
Tanacetum vulgarel Common tansy	36-48"	Part
Thalictrum dipterocarpum/Yunnan meadow-rue	36-48"	Part
Thalictrum aquilegifolium/Columbine meadow-rue	24-36"	Part
Tiarella cordifolial Foam flower	6-12"	Full
Tradescantia virginiana/Virginia spiderwort	18-24"	Part
Trillium sp./Trillium	6-12"	Full
Trollius sp./Globeflower	18-24"	Part
Uvalaria grandifloria/Bellwort	18-24"	Full
Vancouveria hexandra/American barrenwort	12"	Part
Veronica prostrata/Harebell speedwell	8"	Part
Vinca major/Big periwinkle	12"	Part
Viola sp./Violet	6-8"	Part
Viola odorata/Sweet violet	6-8"	Part

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