



GROWING PLANTS IN SHADE

TYPES OF SHADE

Light or Dappled Shade - Shade produced by high or open-branched deciduous trees or under a lath roof.

Open Shade - Shaded most of the time but surrounded by bright light. This could be under high-branched trees or where light-colored buildings reflect the light.

Half Shade - Areas receiving direct sunlight during the morning or afternoon but in shade the rest of the day. Morning sun is preferred as afternoon sun can be extremely hot and drying. Many sun-loving plants will flower with just 4 hours of direct sun a day.

Medium Shade - Can be described as an open area that has no direct sunlight due to clustered tall trees with a heavy canopy of leaves high off the ground or overhanging branches of trees adding shade to the north sides of buildings, walls or fences.

Full Shade - Constant shade under trees with heavy foliage or narrow side yards shaded by high fences or structures.

SOILS

Spokane soils vary from sandy to clay. Most lack natural organic matter. Sandy soils are low in plant nutrients. Clay soils contain most elements necessary for plant growth. Both types are improved by adding organic matter such as leaf mold, compost, peat moss, dried steer manure, etc.

Most shade plants will respond to soils prepared with a 3-inch layer of organic matter incorporated into the soil to a depth of 6 inches.

Use a mild fertilizer such as 5-10-5 or 10-10-10 in early spring and as needed up to the first of July or use a slow-release fertilizer early in the spring.

Rhododendrons, azaleas, flowering dogwoods and several woodland flowers and ferns require acid soil. Add peat moss or leaf mold from oak leaves and use a fertilizer labeled for azaleas or rhododendrons. Follow the label carefully.

WATERING

- Shaded plants stay damp longer, which can lead to rot, mildew, fungus diseases and moss. The general rule is water deeply and then allow the surface to dry slightly before watering again.
- Don't neglect plants under heavily foliated trees or wide overhangs of buildings. You can't rely on moisture from rainfall - you must do additional watering, especially during the late fall.

GROWING UNDER EXISTING TREES AND IN OLD ESTABLISHED YARDS

- New plantings of trees and shrubs can be hard to establish in yards with mature trees because of root competition. Evaluate which trees and shrubs you wish to keep and remove the rest. Apply water and fertilizer consistently and control insects and diseases.
- Choose perennials or groundcovers that can compete with dense shade and existing tree roots. Recommended plantings are bulbs, Lily of the Valley, Epimedium, Ferns, Ivy, Hosta, Solomon's Seal, and Vinca minor.
- When possible, thin out branches of trees and shrubs to allow more light and better air circulation to plants below. Removing lower branches of a tree may raise the canopy enough to allow an underplanting. It is almost impossible to grow plants under mature Beech, Norway maple, Red maple, Silver maple and Sycamore trees.

CREATING A SHADE GARDEN BY ADDING NEW TREES

- Plants that are suitable for shade gardens need a rich soil that has good drainage but still retains moisture. Prepare the **entire site** by incorporating several inches of peat moss, compost, rotted sawdust, or bagged steer manure into the soil up to 24 inches deep. This will be your last opportunity for long range soil improvement in shrub and tree beds.
- Create shade with Black Oak, Cherry, Crabapple, Hawthorn, Honey Locust, Red Oak, and White Oak. These trees are deep rooted so other plants can survive around them without competing for nutrition and moisture.

PROBLEMS IN THE SHADE GARDEN

Slugs - Slugs feed at night or may be out on damp overcast days. Collect them at dusk or early in the morning and put in a bucket of soapy or salty water. Slugs will hide under them empty half orange or grapefruit shells and can be collected during the day. Several companies package a gray paste slug killer with the active ingredient metaldehyde. Squeeze a ring of paste around each plant to prevent slug damage. Mesurool (active ingredient methiocarb) is a granular form that can be sprinkled around plants or place under boards or overturned flats or pots. Iron phosphate (brand names include Escar-Go!, Sluggo and Worry Free) is an organic product that is nontoxic to animals as well as earthworms and beneficial insects.

Root weevils - Irregular notching along the edges of leaves is an indication of root weevil feeding. Orthene will help control this insect. Use during the month of June and July according to label instructions.

Mildew - is a fungus disease that forms a white felty coat on the surface of leaves and stems. When possible choose cultivars of plants that are resistant to mildew.

Leafspots - are spots with yellow or translucent borders on leaves which can be caused by fungus or bacterial diseases. Pick off and destroy leaves with leaf spot. To help control mildew leafspots, space out

the plants if possible. Prune to increase air circulation. Avoid overhead watering. Fungicides will give some control.

PERENNIALS TO GROW IN SHADE

<u>Plant Names</u>	<u>Shade Preference</u>	<u>Soil Needs</u>	<u>Size</u>
1. <i>Alchemilla</i> spp. (Lady's-Mantle)	medium shade	moist	to 2-18 in.
2. <i>Aquilegia</i> (<i>Columbine</i>)	full sun to half shade	moist, well drained	to 30 inches
3. <i>Aruncus</i> (Goats beard)	half shade	moist	to 7 feet
4. <i>Astilbe</i> spp.	half shade	moist, rich	4 in.-3 ft.
5. <i>Bergenia</i> spp.	light to half shade	moist, rich	20 inches
6. <i>Campanula</i> spp.	light to half shade	average, well drained	8-10 inches
7. <i>Campanula</i> (Canterbury bells)	sun to half shade	moist, average	2-3 feet
8. <i>Cimicifuga</i> spp.	medium to full shade	moist, rich, slightly acid	3-6 feet
9. <i>Hemerocallis</i> (Daylily)	sun to medium shade	average, well drained	15 in.-4 ft.
10. <i>Dicentra</i> <i>exima</i> (Wild Bleeding Heart)	half shade	moist, organic	12-18 in.
11. <i>Dicentra</i> spp. (Bleeding Heart)	half shade	rich, organic	2-3 feet
12. <i>Digitalis</i> (Foxglove)	medium shade	rich, well drained	2-3 feet
13. <i>Doronicum</i> (Leopard's Bane)	half shade	rich, well drained	24 inches
14. <i>Geranium</i> spp. (Hardy Geranium)	full sun, half shade	average garden soil	18-24 in.
15. <i>Hosta</i> spp.	light to open shade	moist	10-18 in.
16. <i>Iris</i> <i>cristata</i> (Crested Iris)	light shade	moist, well drained, slightly acid	6 inches
17. <i>Lupinus</i> (Lupine)	sun to half shade	moist, cool	3-4 inches
18. <i>Primula</i> (Primrose)	half shade	moist, rich, organic, cool	varies
19. <i>Pulmonaria</i>	half to full shade	moist, average, cool	10 inches
20. <i>Solomon's Seal</i>	medium to deep shade	moist, rich in humus, cool	30 inches
21. <i>Tiarella</i> (Foam flower)	light shade	moist, rich, cool	8 inches
22. <i>Trollius</i> (Globe flower)	light shade	moist, rich	2 feet
23. Violets	light to full shade	moist	6 in.-1 ft.
24. <i>Tradescantia</i> (Virginia Spiderwort)	full sun to deep shade	adapts to infertile or soggy conditions	15 inches

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<u>Plant Names</u>	<u>Shade Preference</u>	<u>Soil Needs</u>
1. <i>Ageratum</i>	full sun or half shade	moist, well drained
2. <i>Begonia sempiflorens</i> (wax)	open shade	moist, well drained
3. <i>Begonia</i> (tuberous)	open shade	moist, well drained
4. <i>Browallia</i>	open shade	moist, well drained
5. <i>Coleus blumei</i> (Coleus)	sun to light shade	moist, well drained
6. <i>Fuchsia hybrida</i>	light shade	moist, high organic
7. <i>Impatiens</i>	light to medium shade	moist, fertilize once a month
8. <i>Mimulus</i>	light to dense shade	constant moisture, rich soil
9. <i>Nicotiana</i>	full sun to medium shade	moist, fertile, well drained
10. <i>Petunia hybrida</i>	half shade	light, well drained soil
11. <i>Salvia splendens</i>	full sun to light shade	moist, rich, well drained
12. <i>Viola wittrockiana</i> (Pansy)	sun to half shade	moist, well drained

GROUNDCOVERS TO GROW IN SHADE

<u>Plant Names</u>	<u>Shade Preference</u>	<u>Soil Needs</u>
1. <i>Ajuga</i>	open to deep shade	moist to wet
2. <i>Asarum</i> (Wild Ginger)	light to deep shade	moist, high in humus
3. <i>Epimedium</i> (Bishop's Hat)	light to deep shade	moist in summer, rich
4. <i>Ferns</i>	open to deep shade	moist, rich
5. <i>Festuca</i> (ornamental grass)	sun to light shade	well drained
6. <i>Lamium spp.</i>	half shade	good garden soil
7. <i>Hedera helix</i> (English Ivy)		
8. <i>Convallaria majalis</i> (Lily-of-the-Valley)	half to full shade	add organic matter yearly
9. <i>Pachysandra</i>	light to deep shade	moist, loamy
10. <i>Galium odoratum</i> (Woodruff)	half to full shade	moist, well drained
11. <i>Vinca minor</i> (Periwinkle)	any shade	moist, rich, well drained

FERNS TO GROW IN SHADE

<u>Plant Names</u>	<u>Shade Preference</u>	<u>Soil Needs</u>	<u>Size</u>
1. <i>Adiantum pedatum</i> (Maidenhair fern)	all shade	moist, acid	18 inches
2. <i>Athyrium Felix-femina</i> (Lady fern)	medium, full	neutral, wet	1 1/2 feet
3. <i>Athyrium goeringtanum Pictum</i> (Japanese painted fern)	medium, full	neutral, wet	12 inches
4. <i>Dryopteris Felix-mas</i> (Male fern)	all shade	neutral, do not allow to dry out	2-4 feet
5. <i>Dryopteris marginalis</i> (Marginal shield fern)	medium, full shade	neutral	2-3 feet
6. <i>Matteuccia struthiopteris</i> (Ostrich fern)	light, medium, full	neutral to acid, moist	3-5 feet
7. <i>Osmunda cinnamomea</i> (Cinnamon fern)	light	acid, wet	4-6 feet
8. <i>Polypodium virginianum</i> (Polypody fern)	light, medium	neutral	6-8 inches
9. <i>Polystichum munitum</i> (Sword fern)	medium, full, deep	neutral	3 feet

UNDERSTORY TREES TO GROW IN SHADE

(Trees to grow under or among larger trees)

<u>Plant Names</u>	<u>Shade Preference</u>	<u>Soil Needs</u>	<u>Size</u>
1. <i>Acer palmatum</i> (Japanese maple)	open shade	moist, well drained	2 ft.-20 ft.
<i>Acer circinatum</i> (Vine maple)	open shade	moist, well drained	up to 15 ft.
2. <i>Amelanchier</i> (Serviceberry)	open shade	moist, well drained	10-15 ft.
3. <i>Cercis</i> (Red bud)	open shade	well drained	10-30 feet
4. <i>Cornus florida</i> (Flowering dogwood)	open shade	moist, well drained, acid, protect with mulch	15-30 feet
5. <i>Hamamelis virginia</i> (Common witch hazel)	light shade	moist, rich soil	15-20 feet
6. <i>Tsuga canadensis</i> (evergreen) (Canada hemlock)	open to deep shade	acid, moist well drained	up to 60 ft.

SHRUBS TO GROW IN SHADE

<u>Plant Names</u>	<u>Shade Preference</u>	<u>Soil Needs</u>	<u>Size</u>
1. <i>Azalea mollis</i>	half shade	moist, peaty, acid	varies
2. <i>Azalea exbury</i>	half shade	moist, peaty, acid	varies
3. <i>Cornus mas</i> (Cornelian cherry)	half shade	moist, good garden soil	shrub or small tree
4. <i>Cornus stolonifera</i> (Red osier dogwood)	light shade	constant moisture	shrub up to 6 ft.
5. <i>Euonymus fortunei</i> (Wintercreeper)	light to medium shade	good garden soil	varies
6. <i>Hydrangea spp.</i>	open to medium shade	moist, acid	3-6 feet
7. <i>Kerria japonica</i>	light to deep shade	moist, well drained	4-6 feet
8. <i>Mahonia</i> (Oregon grape)	light to medium shade	acid soil best	6-8 feet
9. <i>Pachistima canbyi</i> (Pachistima)	open shade	moist, acid, well drained	1 foot
10. <i>Rhododendron spp.</i>	light to half shade	moist, acid, well drained	varies
11. <i>Rhodotypos tetrapetal</i> (Jet bead)	light shade	good garden soil	to 7 feet
12. <i>Taxus spp.</i> (Yew)	light to deep shade	moist, acid, well drained	varies
13. <i>Viburnum spp.</i>	light to deep shade	good garden soil	varies