

Some Like It Hot

Dealing with Trees, Shrubs, & Flowers during Drought Periods

Droughts occur when there is insufficient rain to replace the moisture that is lost by wind, plants and people with their activities. Seasonal droughts are not uncommon. Brown lawns, withered dry leaves on trees and shrubs, crop failures, and watering restrictions are all evidence of dry weather. Gardens suffer during periods of low rainfall and intense heat. Without moisture plants will show stress, produce fewer and smaller flowers and fruits, be more prone to disease and insect infestation, have less vegetative growth, and develop fewer roots.

Minimizing the Impact of Drought on Your Garden

The Soil. The soil is like a sponge that holds and releases all the ingredients that plants need to live and grow. Soils that drain quickly (such as sandy or rocky soils) will add to the effects of a drought. Heavy clay soils will retain moisture longer but become hard and compacted during drought, thus deterring fibrous root growth on plants. By amending your soil with organic matter (the more you add, the better results), your soil will have better moisture retention, more nutrients, added aeration for root growth, and regulated pH. Organic matter comes from anything living including composted manure, composted leaf mold, decayed grass clippings, peat moss, and other plant material from your own compost pile.

Mulch. To preserve the moisture in the soil, add several (2-3) inches of aged mulch around trees, shrubs, and garden areas. This protective barrier reduces evaporation caused by sun and wind.

Watering Techniques. The best way to water is with drip irrigation or a soaker hose. By these methods moisture goes directly into the soil where roots can absorb it. Less moisture is lost through evaporation and run-off (35%) compared to using conventional overhead methods. Use a normal garden hose to connect the soaker hose or drip irrigation system to the tap. Timing devices can be added to make turning off and on automatic.

Try 'snaking' the hose through the garden instead of running in a straight line. Using a trowel or hoe, make a shallow ditch to lay the soaker hose or drip irrigation in, and then cover it up with mulch to hide and reduce evaporation. Time and money spent on a soaker/drip irrigation system is minimal when compared to the time invested, inconvenience, inefficiency and increased water use of hand and overhead watering.

Choose Drought Tolerant Plants. Drought tolerant plants are adapted to grow well in regions that get minimal amounts of rainfall. These plants require less water to live. Plants best adapted to hot, dry conditions include the following:

- * Native Plants
- * Plants with deep taproots that find their way deep into the soil and store moisture.

What To Do During A Drought

Spray Trees & Shrubs With An Anti-Transpirant. Do not cut back trees and shrubs. This will only encourage a growth spurt, which takes energy that drought-stressed shrubs and trees can not afford. Instead spray foliage of plants (forming a thin film) with an anti-transpirant or anti-desiccant to help leaves and needles retain moisture.

Water Early. Morning temperatures are cooler, and have less solar radiation, so there is less moisture loss due to evaporation. Also this decreases the chance of fungal infection - especially during humid weather.

Water Slowly And Deeply. Watering slowly will allow the moisture to penetrate more deeply into the soil, rather than running off the surface. This also encourages roots to grow deeper instead of on the surface, making them more tolerant of dry conditions. Remember to water trees at the drip line and not just at the trunk. Most of the active roots of a tree are further away from the trunk.

Water The Soil, Not The Leaves. Plants take-up the majority of their moisture through their roots. Most of the water landing on the foliage is lost due to evaporation. Thus, the more water directed to the soil, the less you will waste.

Conserve Precious Water. Use rain barrels under downspouts to collect rainwater. Wash the car on the lawn rather than on the driveway. Re-use 'gray water', such as bathtub or dishwater for your garden.

Drought Tolerant Plants

Trees

The following trees offer tolerance to compacted, infertile soils, and other environmental stresses such as heat and drought once established.

Sugar Maple (<i>Acer saccharum</i>)	Ginkgo (<i>Ginkgo biloba</i>)	Sweetgum (<i>Liquidambar styraciflua</i>)
Redbud (<i>Cercis canadensis</i>)	Pear (<i>Pyrus calleryana</i>)	Sycamore (<i>Platanus</i>)
Hawthorn (<i>Crataegus</i>)	Pin Oak (<i>Quercus palustris</i>)	Linden (<i>Tilia</i>)
Green Ash (<i>Fraxinus pennsylvanica</i>)	Thornless Honeylocust (<i>Gleditsia triacanthos var. inermis</i>)	Japanese Zelkova (<i>Zelkova</i>)

Shrubs, Vines & Evergreens The following plants tolerate dry soil once established.

Concolor Fir (<i>Abies concolor</i>)	Blue Ice Cypress (<i>Cupressus arizonica</i>)	Japanese Cedar (<i>Cryptomeria japonica</i>)	Leyland Cypress (<i>Cupressocyparis leylandii</i>)
Chokeberry (<i>Aronia</i>)	Scotch Broom (<i>Dytissus</i>)	Smokebush (<i>Cotinus coggygria</i>)	Swiss Stone Pine (<i>Pinus cembra</i>)
Japanese Aucuba (<i>Aucuba japonica</i>)	Deutzia (<i>Deutzia</i>)	Cotoneaster (<i>Cotoneaster</i>)	Firethorn (<i>Pyracantha</i>)
Barberry (<i>Berberis</i>)	Burning Bush (<i>Euonymus alatus</i>)	Liriope (<i>Liriope</i>)	Rugosa Rose (<i>Rosa rugosa</i>)
Butterfly Bush (<i>Buddleia davidii</i>)	Wintercreeper (<i>Euonymus fortunei</i>)	Honeysuckle (<i>Lonicera</i>)	Spirea species (<i>Spirea spp.</i>)
Beautyberry (<i>Callicarpa</i>)	Forsythia (<i>Forsythia</i>)	Spruce species (<i>Picea spp.</i>)	Lilac (<i>Syringa</i>)
Trumpet Vine (<i>Campsis radicans</i>)	Blue Holly (<i>Ilex x meservae</i>)	Virginia Creeper (<i>Parthenocissus</i>)	Viburnum species (<i>Viburnum spp.</i>)
Hornbeam (<i>Carpinus</i>)	American Holly (<i>Ilex opaca</i>)	Bayberry (<i>Myrica</i>)	Chaste Tree (<i>Vitex</i>)
Deodara Cedar (<i>Cedrus deodara</i>)	Juniper (<i>Juniperus</i>)	Yucca (<i>Yucca</i>)	Wisteria Vine (<i>Wisteria</i>)
Walking Stick (<i>Corylus</i>)	Crape Myrtle (<i>Lagerstroemia</i>)		

Perennials & Grasses The following perennials tolerate dry soil once established.

Yarrow (<i>Achillea</i>)	Tickseed (<i>Coreopsis</i>)	Evening Primrose (<i>Oenothera</i>)	False Sunflower (<i>Heliopsis</i>)
Bishopsweed (<i>Aegopodium</i>)	Ice Plant (<i>Delosperma</i>)	Switch Grass (<i>Panicum varieties</i>)	Daylily (<i>Heemerocallis</i>)
Licorice Mint (<i>Agastache</i>)	Carnation (<i>Dianthus</i>)	Fountain Grass (<i>Pennisetum</i>)	Plantain Lily (<i>Hosta</i>)
Rock Cress (<i>Arabis</i>)	Cone Flower (<i>Echinacea</i>)	Lamb's Ear (<i>Stachys</i>)	Candy Tuft (<i>Iberis</i>)
Wormwood (<i>Artemisia</i>)	Globe Thistle (<i>Echinops</i>)	Russian Sage (<i>Perovskia</i>)	German Iris (<i>Iris germanica</i>)
Butterfly Weed (<i>Asclepias</i>)	Barrenwort (<i>Epimedium</i>)	Black Eyed Susan (<i>Rudbeckia</i>)	Red Hot Poker (<i>Kniphofia</i>)
Aster (<i>Aster</i>)	Sea Holly (<i>Eryngium</i>)	Sage (<i>Salvia</i>)	Archangel (<i>Lamiastrum</i>)
False Indigo (<i>Baptisia</i>)	Cushion Spurge (<i>Euphorbia</i>)	Stokes Aster (<i>Stokesia</i>)	Dead Nettle (<i>Lamium</i>)
Heart-leaf Bergenia (<i>Bergenia</i>)	Fescue Grass (<i>Festuca</i>)	Stone Crop (<i>Sedum</i>)	Lavender (<i>Lavendula</i>)
Feather Reed Grass (<i>Calamagrostis</i>)	Blanket Flower (<i>Gaillardia</i>)	Hens and Chicks (<i>Sempervirens</i>)	Gayfeather (<i>Liatris</i>)
Corn Flower (<i>Centaurea</i>)	Gaura (<i>Gaura</i>)	Goldenrod (<i>Solidago</i>)	Sea Lavender (<i>Limonium</i>)
Plumbago (<i>Ceratostigma</i>)	Cranesbill (<i>Geranium</i>)	Verbena (<i>Verbena</i>)	Campion (<i>Lychnis</i>)
Mum (<i>Chrysanthemum</i>)	Sun Rose (<i>Helianthemum</i>)	Lavender Cotton (<i>Santolina</i>)	Silver Grass (<i>Miscanthus varieties</i>)
Catmint (<i>Nepeta</i>)	Bearded Tongue (<i>Penstemon</i>)		

Annuals Flowers that tolerate dry conditions.

Joseph's Coat (<i>Amaranthus tricolor</i>)	Gazania (<i>Gazania rigens</i>)	Geranium (<i>Pelargonium</i>)	Verbena (<i>Verbena x hybrida</i>)
Bidens (<i>Bidens</i>)	Strawflower (<i>Helichrysum</i>)	Petunia (<i>Petunia</i>)	Dusty Miller (<i>Senecio cineraria</i>)
Ornamental Pepper (<i>Capsicum annuum</i>)	Globe Amaranth (<i>Gomphrena globosa</i>)	Creeping Zinnia (<i>Sanvitalia procumbens</i>)	Dahlberg Daisy (<i>Thymophylla tenuiloba</i>)
Vinca (<i>Catharanthus roseus</i>)	Statice (<i>Limonium sinuatum</i>)	Spider Flower (<i>Cleome</i>)	Moss Rose (<i>Portulaca grandiflora</i>)
Cockscomb (<i>Celosia</i>)	Sweet Alyssum (<i>Lobularia maritima</i>)	Melampodium (<i>Melampodium</i>)	Marigold (<i>Tagetes</i>)