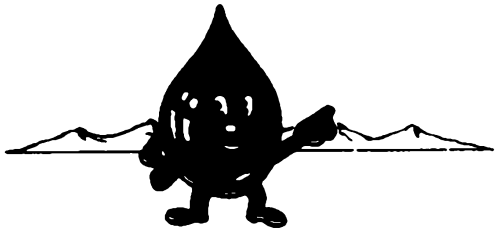

FALL COLOR IN THE LANDSCAPE
Adding Seasonal Interest to your yard

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What makes Fall Color?

- In the summer, leaves are green because of chlorophyll.
- Leaves manufacture simple sugars from water and carbon dioxide, using energy captured from the sun by chlorophyll (photosynthesis). These sugars are the sole source of carbohydrates needed for a tree's growth and development.
- During the food-making process, chlorophylls break down and are continuously "used up".
- The tree replenishes them all through the growing season.
- As long as replacement remains high, the leaves stay green.
- As fall approaches, influences inside and outside of the plant cause chlorophylls to be replaced at a slower rate.
- Shorter days cause a layer of cork cells to form at the base of each leaf, gradually closing off the flow of water and minerals to the leaf.
- As the supply of chlorophylls dwindles, other pigments that may have been present in the leaf all along are slowly unmasked and begin to show through.
- Carotenoids (found in the leaf cells) are responsible for the brilliant yellows and oranges.
- Anthocyanins are responsible for the reds, purples and blended combinations of these colors.
- Unlike carotenoids, these pigments have not been present in the leaves all season. They develop in late summer in the sap of the leaf cells.
- Their formation depends on the breakdown of sugars in the presence of bright light while the phosphate in the leaf is reduced.
- Phosphate is at a high level during the growing season, but moves out of the leaf and into the stem in the fall.

- When this happens, the sugar breakdown process changes, leading to the production of anthocyanin pigments.
- The brighter the light, the more anthocyanins, and the more brilliant the fall color.
- Plants growing in shade do not typically produce the brilliant colors seen when growing in full sun.
- Plants in poor health or stressed usually change color earlier than healthy plants.
- The "best" fall colors occur during the shortening days of autumn when days are bright, sunny and cool, nights are cool but not below freezing, and there has been adequate rainfall.

LEAVES

YELLOW

Goldenrain Tree (*Koelreuteria paniculata*)

European Larch (*Larix decidua*)

Kentucky Coffeetree (*Gymnocladus dioicus*)

Golden Barberry (*Berberis thunbergii* 'Aurea')

ORANGE

Pacific Sunset® Maple (*Acer truncatum* × *platanoides* 'Warrenred' (Pacific Sunset®)

Shadblow Serviceberry (*Amelanchier canadensis*)

Katsura Tree (*Cercidiphyllum japonicum*)

Smooth Cutleaf Sumac (*Rhus glabra* 'Laciniata')

RED

Northern Red Oak (*Quercus rubra)*

Winter King Hawthorn (*Crataegus viridis* 'Winter King')

Amur Maple (*Acer tataricum* subsp*. Ginnala*)

Burning Bush (*Euonymus alatus* 'Compacta')

PURPLE

Callery Pear (*Pyrus calleryana)*

Kousa Dogwood (*Cornus kousa*)

American Cranberrybush Viburnum (*Viburnum trilobum*)

Arrowwood Viburnum (*Viburnum dentatum*)

FRUIT

Winter King Hawthorn (*Crataegus viridis* ‘Winter King’)
Golden Raindrops Crab® (*Malus transitoria ‘Schmidtcutleaf’* Golden Raindrops®)
Lavalle Hawthorn (*Crataegus* × *lavallei*)
American Cranberrybush Viburnum (*Viburnum trilobum*)
Wayfaring Viburnum (*Viburnum lantana*)
Blue Muffin® Arrowwood Viburnum (*Viburnum dentatum* ‘Christom’)
Pawnee Buttes Sand Cherry (*Prunus besseyi* 'Pawnee Buttes’)
Cranberry Cotoneaster (*Cotoneaster apiculatus*)
Pyracantha (*Pyracantha coccinea*)

BARK

Winter King Hawthorn (*Crataegus viridis* ‘Winter King’)
Paper Bark Maple (*Acer griseum*)
London Planetree (*Platanus* × *acerifolia* ‘Bloodgood’)
River Birch (*Betula nigra*)
Rocky Mountain Birch (*Betula occidentalis*)
Lacebark Pine (*Pinus bungeana*)
Scotch Pine (*Pinus sylvestris*)

PERENNIALS

Garden Mums (*Chrysanthemum* hyb.)
Blanket Flower (*Gaillardia aristata*)
Prairie Coneflower (*Ratibida pinnata*)
Purple Coneflower (*Echinacea purpurea*)
Autumn Joy Sedum (*Sedum spectabile* ‘Autumn Joy’)
Alert Aster (*Aster* ‘Alert’)
Kippenburg Aster (*Aster* ‘Prof. Kippenburg’)
Black-Eyed Susan (*Rudbeckia fulgida* ‘Goldsturm’)

ORNAMENTAL GRASSES

Feather Reed Grass (*Calamagrostis arundinacea* 'Karl Foerster')

Blood Grass (*Imperata cylindrica* 'Rubra')

Blue Fescue (*Festuca glauca* 'Elijah Blue')

Dwarf Fountain Grass (*Pennisetum alopecuroides* 'Hameln')

Hardy Pampas Grass/Plume Grass (*Erianthus ravennae*)

Switch Grass (*Panicum virgatum*)

"The true meaning of life is to plant trees, whose shade you do not expect to sit"

- Nelson Henderson

"Except for the nine months before he draws his first breath, no man manages his affairs as well as a tree does"

- George Bernard Shaw

"A Street without a tree is just a St."

- Anonymous