

## Colorful Autumn bushes

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“Autumn is a second spring when every leaf is a flower.” — Albert Camus (French philosopher). Autumn is a time that stimulates the senses. The smell of wood smoke, the aroma of spent vegetation, and the rustle of fallen leaves. However, the main attraction of the season is the leaf colors; the reds, purples, yellows, and oranges that were always present in the leaf chloroplasts but hidden by green chlorophyll during the summer. As leaves senesce, the chlorophyll disappears and the colors are unveiled.

Yellow leaves are produced by the retention of carotenoids or yellow pigments. Normally, carotenoids absorb light energy in photosynthesis, and protect chlorophyll from photodamage. Red and purple leaves are the result of the production of anthocyanin (a blue, purple or red compound). Similar to carotenoids, anthocyanins normally act as a "sunscreen", protecting cells from high-light damage by absorbing blue-green and ultraviolet light, thereby protecting tissues from high-light stress. This occurs in young leaves in the spring and in the autumn just before leaves fall from the trees.

Brown leaves are produced by a mix of anthocyanin and chlorophyll. Orange leaves are produced by a mix of anthocyanin and carotenoids. On some plants the color is quite uniform, as with blueberry leaves. In other plants, colors vary between individual leaves as on sugar maples. Following are a few suggestions of bushes with colorful palettes of autumn leaves that are adapted to northern Minnesota.

Burning bush, or winged euonymus. The foliage is dark green during the summer but turns a deep red on bushes grown in sunny sites and pink on bushes grown in partially shaded areas. The foliage will either turn color overnight or slowly over a period of days.

Burning bush should be planted in a well drained soil and in a sunny site. Bushes grow between 7 to 12 feet tall, depending on the site. Rabbits can cause winter damage to burning bushes so physical protection is necessary the first few years.

The twigs have corky ridges, hence the name “winged” euonymous. There also may be some die back of twigs.

However, these are easily seen and pruned off. The fruits are red but tend to be somewhat sparse. Birds usually do not like the fruits but fledgling robins have been seen to gorge themselves before heading south.

Another euonymous adapted to our area is the dwarf or Turkestan bush that has narrow upright leaves that turn purple green in the autumn. The fruits tend to be pendant and are pink with an orange inner seed.

Blueberry. Bushes turn a bright maroon, red, or orange in the autumn. There are several varieties of blueberries and as an example, Chippewa and Northland have very colorful leaves and has been shown to be very hardy and productive. Besides the brilliant autumn leaf color, the berries are blue because of anthocyanin and full of Vitamin C and antioxidants, the highest among all fruit. Blueberry plants are handsome bushes in the home landscape, living up to 50 years or longer. However growing blueberries needs special growing conditions of acidic, well drained soils, and a sunny location.

Saskatoon berry or Juneberry. The oval leaves emerge red in the spring then become a dark green before turning a bright yellow in the autumn. Saskatoon berry grows well in full sun to

partial shade and prefers average to moist soils in a range of pH's and soil types. This plant is an excellent bird attractant but deer tend to avoid it.

Plants produce clusters of white flowers in early spring that last until mid spring before the leaves come out. The berries turn dark purple and are excellent for jams, jellies and general baking.

The variety, Standing Ovation will grow up to 12 feet, is a low maintenance shrub and has a fine-textured columnar growth habit consisting of multiple stems. The variety Regent is a smaller bush, growing to about 6 feet. The fine textured growth habit consists of compact and upright multiple stems making it ideal for general garden use and hedges.

Barberry. This shrub does well in full sun to partial shade and is adaptable to both dry and moist soils but does not tolerate standing water. It does well in all soil types and pH ranges. They are considered to be drought-tolerant, an ideal choice for xeriscaping or the moisture-conserving landscape, and tolerate urban pollution. Clusters of yellow flowers hang below the branches in mid spring. The fruits are showy red drupes that persist from early to late fall. Deer normally leave this plant alone.

The variety 'Emerald Carousel' has dark green foliage that turns a brilliant red in the autumn. This plant will grow up to 5 feet and spread to 6 feet. It grows into a spiny, dense, multi-stemmed shrub with a rounded form making it an ideal plant for an impenetrable hedge barrier.

Rose Glow Japanese barberry has pink and purple variegated foliage that emerges red in the spring and turns a beautiful burgundy in the autumn. It too grows to about 5 feet and spreads out to 6 feet. It also becomes a dense, multi-stemmed spiny shrub.

Autumn Magic Black Chokeberry. This is a smaller shrub whose glossy oval leaves are dark green during the summer but turn a beautiful dark red to purple in the autumn. This plant grows to about 4 feet with a width of 3 feet. It has white flowers that develop into glossy black berries that last until late winter.

This shrub should only be grown in full sunlight and is tolerant of moisture conditions that range from dry to standing water. It will grow in most soil types and tolerates a range of pH's.

Bud's Yellow Dogwood. This is a large spreading shrub with a somewhat rounded form that reaches a height of about 8 feet and a spread of about 7 feet. It will produce branches right to the ground. It has green pointed leaves that turn yellow in autumn and beautiful bright yellow stems that contrast well against the snow.

This shrub produces clusters of creamy white flowers at the ends of branches in late spring that become white berries in mid summer. It does best in full sun to partial shade and tolerates moisture conditions from dry to standing water. It will grow in most soil types and pH's.

Remember, autumn paints in colors that summer has never seen.

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