



Firefall™



Firefall™



'Northwood'



'Autumn Spire'

Trees

Maples

Brilliant early fall color distinguishes the Firefall™ Freeman ma-

ple. It is the result of a cross between 'Beebe,' a cut-leaf silver maple, and an earlier University red maple introduction, 'Autumn Spire.' This male selection produces no messy seed.

Field trials began in 1992, with young trees evaluated for form, cold tolerance, and quality and timing of autumn leaf color. The initial selections were propagated by softwood cuttings in 1994 and sent to cooperators in Iowa, Oregon, Manitoba, and outstate Minnesota before introduction in 2005.

Research

Mass screening of various non-hardy species for cold hardy variants is ongoing at the Horticultural Research Center and at the North Central Research and Outreach Center in Grand Rapids (Zone 3). Individual seedlings that exhibit exceptional hardiness are propagated and evaluated in additional trials.



'St. Croix' American Elm parent tree

Elm

Selected from a massive parent tree in Afton, Minn., the 'St. Croix' American elm joins the ranks of Dutch elm disease-tolerant elms with a Minnesota twist. Since its discovery by U of M alumnus Mark Stennes, researchers in the Departments of Plant Pathology and Forest Resources have cloned and screened the tree for Dutch elm disease tolerance. Young specimens grow at an incredible pace and have gracefully arching branches and dark green leaves. Like all American elms, 'St. Croix' can thrive in tough environmental conditions.



The focus is on overall environmental adaptability—improved cold hardiness, drought tolerance, heat tolerance, and disease and insect resistance.

White Pine

White pine blister rust threatens to destroy native

white pines, but some trees are more resistant than others. 'Patton's Silver Splendor' white pine was selected after a decade of screening by U of M researchers following propagation by Robert F. Patton at the University of Wisconsin-Madison. Patton initially discovered and investigated the waxy deposits that make the tree exceptionally resistant to blister rust. Thicker than usual waxy deposits inhibit the disease and give the blue-green needles a distinctive silvery look. Cones develop with age and enhance the tree's ornamental and wildlife value.



'Patton's Silver Splendor'

CULTIVAR TYPE & NAME	YEAR	SIZE	FEATURES
AMERICAN ELM , <i>Ulmus americana</i> St. Croix	2015	60-75'	Broadly vase-shaped. Dark green foliage, turns yellow in fall.
RED MAPLE , <i>Acer rubrum</i> Autumn Spire	1992	40'	Upright form. Good red fall color.
Firefall™ Freeman	2005	50'	Early fall color, orange to scarlet.
Northwood	1980	50'	Bright orange fall color.
WHITE PINE , <i>Pinus strobus</i> Patton's Silver Splendor	2011	100'	Fast-growing white pine that is resistant to blister rust disease, due to waxy needles.

- 1923: 'Newport' flowering plum released
- 1992: 'Autumn Spire' maple released
- 1992: 'Minnesota Strain' redbud released
- 2002: 'Stately Manor' Kentucky coffeetree released
- 2005: Firefall™ Freeman maple, a cross of 'Autumn Spire,' released
- 2015: 'St. Croix' American Elm released

Trees

Redbud



Buckeye



Flowering Plum



'Princess Kay'



'Minnesota Strain'

A hardy variant of redbud appeared in a mass screening of seedlings planted at the Horticultural Research Center many years ago. Before the 'Minnesota Strain' was developed in 1992, few large specimens survived as far north as Minnesota. Flowers are rosy pink and open before leaves appear.

'Newport' and 'Princess Kay' flowering plums are fragrant ornamental trees in the spring. Plums can produce fruit that is attractive to wildlife and useful for making jelly.

Amur Maackia



Summertime™

'Autumn Splendor'

silvery spring foliage and unusual creamy white flowers in July and August.



The 'Autumn Splendor' buckeye is popular for its stunning maroon fall color, and its tolerance of de-icing salts makes it a good boulevard tree. It has showy flowers in late spring and shiny nutlike buckeyes in fall.

The 'Stately Manor' Kentucky coffeetree is a male selection, with no pods, that offers interesting gray bark and yellow fall color. A good shade tree with a narrow, upright form and large leaves, it could be a suitable replacement for ash in Minnesota.

The little-known Summertime™ Amur maackia is a small, tough tree that glows with

CULTIVAR TYPE & NAME	SIZE	FEATURES	YEAR
BUCKEYE , <i>Aesculus</i> Autumn Splendor	35'	Clusters of large yellow flowers followed by shiny, nut-like fruits and brilliant maroon fall color. Resists leaf scorch diseases.	1980
KENTUCKY COFFEETREE , <i>Gymnocladus dioica</i> Stately Manor	50' x 40'	Male selection; no seed pods. Tolerates a wide variety of soil conditions. Unusual, deeply furrowed bark adds winter interest.	2002
CORKTREE , <i>Phellodendron amurense</i> His Majesty	40' x 35'	Fast-growing, open-spreading, male selection producing no fruit, has interesting corky bark. Tolerates alkaline soils. Resistant to insects and diseases.	1996
AMUR MAACKIA , <i>Maackia amurensis</i> Summertime™	18'	Silvery leaves in spring turn deep green until leaf fall. Blooms late July-early August with small bottlebrush-like cream-colored flowers. Mottled bark provides winter interest.	2001

Kentucky Coffeetree Flowering Crab



'Stately Manor'



Crabapples bloom abundantly in spring and have attractive displays of fruit. The ornamental U of M cultivars get no taller

than 20 feet, with foliage colors that vary from light, bright green to deep maroon or silvery red. Forms may be horizontal, oval, rounded, or vase-shaped.



'Sparkler'

Sometimes thought of as a novelty tree due to its irregular growth habit, fast-growing jack pines can grow well on impoverished, sandy sites with acidic soil. 'Uncle Fogey' is an exceptionally hardy, prostrate, drooping tree that does well in urban settings.

The 'Wissota' red pine is a dwarf version of a tall native tree, and is a hardy, diminutive landscape tree.

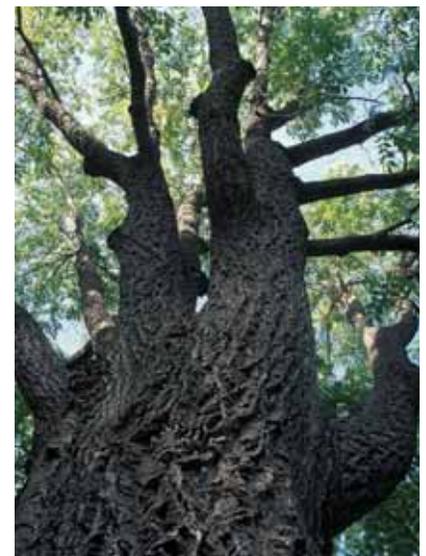
Corktrees get their name from the deeply furrowed and soft corky bark. The fast-growing 'His Majesty' develops an open, spreading crown with coarse branches and dark green foliage. This male selection produces no seeds or fruit and so is not spread by birds.

Jack Pine



'Uncle Fogey'

Corktree



'His Majesty'

CULTIVAR TYPE & NAME	SIZE	FEATURES	YEAR
FLOWERING PLUM , <i>Prunus</i> Princess Kay Newport	20' x 15' 20' x 20'	White double blossom. Smooth trunk and branches. Red fall foliage. Pink flowers followed by purple fruit. Dark purple foliage.	1986 1923
REDBUD , <i>Cercis canadensis</i> Minnesota Strain	12' x 12'	Dark pink to purple flowers open in early May before leaves appear.	1992
CRABAPPLE , <i>Malus</i> Flame Radiant Sparkler Vanguard	20' x 15' 20' x 20' 15' x 15' 18' x 12'	White double flowers. Red fruits. Green foliage. Red flowers. Red fruits. Purple/green foliage. Oval shape. Pink flowers. Deep red fruits. Red/green foliage. Flat-topped tree. Red flowers. Red fruits. Green foliage. Vase-shaped tree.	1934 1958 1969 1963
JACK PINE , <i>Pinus Banksiana</i> Uncle Fogey	6'	Prostrate, drooping habit. Hardy to Zone 2.	1971
RED PINE , <i>Pinus resinosa</i> Wissota	6'	A landscape-friendly dwarf form of a tree that otherwise reaches 100'.	1998