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'Sun Valley' Red Maple¹

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Red maple (*Acer rubrum* L.) has become quite popular as an urban and suburban tree for a variety of reasons, based generally on its adaptability and aesthetic qualities. The U.S. Department of Agriculture has carried out an extensive study of geographically dispersed provenances and open-pollinated progenies of this species (2, 3, 4, 6, 8). In addition, a series of controlled pollinations between selections and cultivars have been made (7). Progenies from these controlled crosses have yielded several superior clonal selections. This article describes one such selection that has been named 'Sun Valley' (NA 59906, PI 583790) and released by the U.S. Department of Agriculture.

Origin

As part of a larger crossing study (7), controlled pollinations were made in April 1982 between 'Franksred' (the female parent) and 'Autumn Flame' (the male parent) red maples. Mature fruits from this cross and other crosses were collected in May 1982 and planted in flats. The seedlings that germinated were grown on in containers until April 1983 when they were transplanted to a replicated field trial near Delaware, OH. Young trees were evaluated for potato leafhopper (PLH) tolerance, red autumn foliage color, symmetry of form, and growth rate between 1983 and 1988. The first selections were then made, including the clone eventually to be named 'Sun Valley,' propagated by softwood cuttings, and shipped to nursery cooperators as part of our national tree evaluation program. Trees were also planted in a replicated clonal trial at Glenn Dale, MD, and data collected over a period of several years on its performance compared to other clones and cultivars (5). Because of its high level of PLH tolerance, exceptional red fall color, and other fine attributes, 'Sun Valley' was named and officially released to wholesale nurserymen in 1995.

Description

'Sun Valley' has a symmetrical, broadly columnar crown with strong, upright branching (Fig. 1). Leaves have three prominent lobes, typical of the species, and average 9.7 cm (3.8 in) long × 9.6 cm (3.8 in) wide. Summer leaf color is green (RHS 137B) (1) and autumn color peaks as a red (RHS 46A), with most leaves gradually maturing to a red purple (RHS 59A) (1). Autumn foliage color reaches its maximum about mid-October in Delaware, OH, and by the third week

in October in Glenn Dale, MD. Good red autumn color usually persists about two weeks. Bark color of the main trunk is grey (RHS 201B) (1); color of one-year-old twigs is greyed red (RHS 178A). The bark and flower are typical for the species, and the sex is male. Sixteen years after transplanting as a one-year-old seedling, the parent tree growing in an unmowed meadow in Ohio was 7.9 m (26 ft) tall with a crown spread of 4.6 m (15 ft), and diameter at breast height (dbh) was 13.2 cm (5.2 in).

Adaptability

Propagules of 'Sun Valley' have been successfully grown in Alabama, Georgia, Illinois, Maryland, Michigan, Minnesota, New Jersey, North Carolina, Ohio, Oregon, and Tennessee. It appears to have reliable cold hardiness through USDA Zone 4 (9), and adapts to summer conditions through USDA Zone 8a.



Fig. 1. The 'Sun Valley' red maple.

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Cultural Conditions

'Sun Valley' tolerates wet and dry soils, but grows best on moist, well-drained sites. It prefers slightly acid to acid soils, but will tolerate neutral soils. Performance in soils of high pH is unknown. This cultivar grows well under both shade and sun conditions, a general characteristic of red maple. Under optimal conditions, it can be expected to grow 60–100 cm (24–39 in) a year.

Performance

This particular selection has shown outstanding and consistent autumn color wherever it has been grown. Its red color is equal to and in some locations better than that of many of the commercially available cultivars (5). 'Sun Valley' shows above-average tolerance to potato leafhopper (*Empoasca fabae* (Harris)) injury. The average percentage of the individual tree's foliage showing PLH injury in Glenn Dale, MD, was only 3% in 1990 through 1995, compared to 15–21% in unselected controls, and 8–10% in some older, well-established cultivars (5). Ramets of 'Sun Valley' planted in 1989 in Maryland averaged 108 cm (3.5 ft) in November of 1990, and 514 cm (16.9 ft) in November of 1996; growth rate was comparable to that of other named cultivars (5).

Propagation

Propagation of this cultivar can be achieved from softwood cuttings taken in the spring and early summer, dipped in 0.8% indolebutyric acid, and placed under intermittent mist in a mixture of peat:perlite (1:1) or other similar medium. Rooting usually takes less than 4 weeks.

Landscape Uses

'Sun Valley' red maple offers a unique combination of insect tolerance, outstanding and consistent autumn color, symmetrical growth form, and adaptation to a wide variety of environmental conditions. This cultivar appears to have suitability for use as a landscape, street, or park tree. It could prove especially valuable for use in parks or tree lawns, or as a shade tree for residential properties.

Availability

The U.S. National Arboretum, Agricultural Research Service, U.S. Department of Agriculture, released this cultivar to wholesale nurserymen in 1995. The U.S. National Arboretum does not have stock of these plants available for general distribution. The following commercial sources are growing and selling 'Sun Valley.'

Arborvillage Farm Nursery, 15604 County Road "CC," Holt, MO 64048.

The Botany Shop, Inc., 710 Minnesota Street, Joplin, MO 64801.

John Holmlund Nursery, 29285 S. E. Highway 212, Boring, OR 97009.

Klyn Nurseries, 3322 South Ridge Road, P. O. Box 343, Perry, OH 44081.

Johnathon Lee Nursery, 1118 Lancaster Drive NE #409, Salem, OR 97301.

McGill & Son Wholesale Nursery, P. O. 967, Canby, OR 97013.

Meadow Lake Nursery, McMinnville, OR 97128.

Microplant Nurseries, Inc., 13357 Portland Road, N. E., Gervais, OR 97026.

Phytotektor, Inc., 730 Rattlesnake Branch Circle, Huntland, TN 37345.

Riverbend Nurseries, 2850 E. Thompson's Station Road, Thompson's Station, TN 37179.

J. Frank Schmidt and Son, Inc., 9500 S. E. 327th Avenue, Boring, OR 97009.

Timberlake Tree Co., 2708 North Maiden Highway, Lincolnton, NC 28092.

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