

University of Arkansas Plant Evaluation Program®

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INTRODUCTION

The University of Arkansas established a Statewide Plant Evaluation Program in 1999. Over the past 10 years, the program has evaluated 118 different woody ornamental plants — some have been winners and some not so hot. As you can imagine, with thousands of different ornamental plants, just 118 plants is a drop in the bucket. However the program is trying to make an impact by providing reliable performance data for homeowners and the green industry in the MidSouth.

Because there are so many different woody ornamental plants, the Arkansas program established two general guidelines for accepting plants for evaluation. The first is to assess the suitability of broadleaf evergreens with the primary consideration being winter hardiness in Northwest Arkansas (USDA Cold Hardiness Zone 6b). The second is to assess the performance of underutilized woody ornamentals that may serve a specific landscape function such as a screen or hedge.

The program is unique among university programs in that it includes multiple sites that represent three USDA cold hardiness zones. These sites include: the Southwest Research & Extension Center at Hope (USDA Cold Hardiness Zone 8a), a trial site in Little Rock (Zone 7a), and the Horticulture Research Farm at Fayetteville (Zone 6b). The program also differs from other programs in that it uses more than one plant (4 replicates) at each test site and collects quantitative data in addition to standard qualitative observations.

Information collected from this program is invaluable in selecting and marketing ornamental plants adaptable to Arkansas and the MidSouth. Data collected from plants in the trial include survival, plant size, length of flowering, and much more. Plants are evaluated for 5 years and shrubs are never pruned so their natural growth habit can be documented. Results from the program may be found at: <http://www.aragriculture.org/horticulture/plant_evaluation/>. Some examples from the program that illustrate some winners, and some not so proven winners, will be discussed.

EVALUATIONS AND RECOMMENDATIONS

From 1999 to 2003 the program evaluated two new dwarf crapemyrtles ('Chickasaw' and 'Pocomoke') from the USDA National Arboretum. Unfortunately the ornamental appeal of the flowers on 'Chickasaw' was limited. On this cultivar, the buds are a glossy red, but the petals, when they appear in early August, barely emerge from the calyx. We referred to this as "blind" flowers. Of the two genetic dwarf cultivars, 'Pocomoke' was determined to be the superior cultivar. Both USDA crapemyrtles deserve credit for opening the door to a flood of new dwarf crapemyrtles for the marketplace. Many of these newer dwarf selections are currently under evaluation by our program (Dazzle® series out of the University of Georgia and two introductions from a breeder in Conway, Arkansas). Although the program

has only evaluated the Dazzle® series for 2 years, we question the landscape value of Raspberry (sports) and Ruby (almost no flowers). It is interesting to note that Raspberry Dazzle® was ranked 2nd (out of five) in a 2009 trial at LSU's Hammond Research Center. Another plant evaluated in the 1999–2003 trial was a heavily marketed *Abelia* (*Abelia* × *grandiflora* 'Sunrise' PP 09698) selection with white and green variegated leaves. Our results documented serious issues in Arkansas with reversion of the plant back to a green-leaf form. Significant maintenance would be required to remove this undesirable, nonvariegated growth. As expected, most flowering occurred on these nonvariegated shoots.

In our attempt to find a long-term replacement for the popular callery pears, the program evaluated *Pyrus ussuriensis*, 'Westwood', Korean Sun™ pear from 2001 to 2005. Sadly this small ornamental pear would not be recommended for Arkansas. In that same timeframe, we evaluated an oak, *Quercus* × *bimundorum* 'Crimschmidt', 'Crimson Spire™ oak, and concluded that this tree would be highly recommended for all parts of Arkansas in situations where a narrow, columnar tree is required. Before it was a HOT plant, our program evaluated 'Green Giant' arborvitae (*Thuja*). Based on the statewide results, we concluded that this needle evergreen can be highly recommended as a hedge or screen plant for all parts of Arkansas. As a sidebar to that story, at the time of this trial one of the major mail-order nurseries was promoting this plant as being free of bagworms. Our results clearing showed that this was not the case in Arkansas. Another "two thumbs up" plant from that group of plants is a broadleaf evergreen *Viburnum V. utile*. While slow to start, this shrub comes highly recommended for the entire state. A related viburnum, *V. ×burkwoodii* 'Conoy', also performed well in our statewide trial.

Other plants that performed well statewide after a 5-year evaluation include: *Ilex* 'Xia Xiang', Dixie Dream™ holly, *Itea virginica* 'Henry's Garnet', *Lagerstroemia indica* 'Velma's Royal Delight', *Quercus* × *comptonae*, *Acer buergerianum*, *Abelia chinensis*, *Chamaecyparis thyoides* 'Emily', *Ilex* × *koehneana* 'Martha Berry', *Ceanothus* × *delileanus* 'Gloire de Versailles', *Heptacodium miconioides*, and *Buddleja* 'Asian Moon'.

PLANTS NOT RECOMMENDED

On the other end of the spectrum are plants that would not be recommended for our area. These include: *Ligustrum* 'Green Meatball', *Viburnum* 'Emerald Triumph', *Itea ilicifolia*, *I. oldhamii*, *Gelsemium sempervirens* Lemon Drop™ Carolina jessamine, *Fontanesia phillyreoides* subsp. *fortunei* 'Titan', *Acer negundo* 'Sensation', *Clethra alnifolia* 'Sixteen Candles' and 'Sotitee' White Dove™ summer-sweet clethra, *Daphniphyllum himalaense* subsp. *macropodum*, *Sequoiadendron giganteum*, *Pittosporum heterophyllum*, and *Eucalyptus pauciflora* subsp. *niphophila*.

We could go on and on about other winners and losers, but the point is clearly made that there is a program in place that is working to evaluate new and under-utilized ornamental plants for MidSouth landscapes. The program hopes that this information proves useful to consumers and the green industry in the MidSouth.