

Pest Resistant Landscape Plants

Richard E. Bir and Thomas G. Ranney

North Carolina State University, 2016 Fanning Bridge Road, Fletcher, North Carolina 28732

Reducing pesticide usage while utilizing attractive landscape plants has been the goal of many research programs. At the Mountain Horticultural Crops Research and Extension Center, we have been evaluating landscape plants for pest resistance under the high pest pressure conditions of the southern Blue Ridge Mountains. Resistance to Japanese beetle foliar feeding and depredations from eastern tent caterpillar on flowering trees plus disease resistance on *Cornus kousa* and allegedly pest-resistant shrub roses revealed plants displaying a wide range of pest resistance.

Eighty-five different taxa of woody plants were included in these tests. Tables shown here include a representative sample of those plants. For a complete listing of these plants as well as experimental methods, please consult the research papers referenced. The relative terms: poor, fair, good, and excellent were developed for ease of comparison. Poor resistance to disease indicates that the test plant became infested with the disease. Poor resistance to an insect indicates that the insect ate significant portions of foliage, caterpillars grew and developed both normally and rapidly, or the plant was a preferred site for egg deposition. Excellent resistance indicates that little or no problem from the pest evaluated occurred on the cultivar or species listed. Excellent and good ratings for resistance to a particular pest are those that should result in reduced pesticide application by the landscape and nursery industries.

ADDITIONAL READING

- Bir, R. E., T. G. Ranney, and R. K. Jones.** 1996. Pest resistant shrub roses: The rest of the story. Proc. SNA Res. Conf. 41: (in press).
- Ranney, T. G., L. F. Grand, and J. L. Knighten.** 1995. Susceptibility of cultivars and hybrids of kousa dogwood to dogwood anthracnose and powdery mildew. J. Arbor. 21(1): 11-16.
- Ranney, T. G. and J. F. Walgenbach.** 1992. Feeding preference of Japanese beetles for taxa of birch, cherry, and crabapple. J. Environ. Hort. 10(3):177-180.
- Ranney, T. G., J. F. Walgenbach, J. D. Burton, E. P. Maness, and D. M. Pharr.** 1995. Natural resistance to Eastern tent caterpillar among rosaceous trees. Proc. SNA Res. Conf. 40:201-204.

Table 1. Crabapple (*Malus*) resistance to Japanese beetle foliar feeding as well as eastern tent caterpillar growth and egg deposition.

Species/cultivar	Eastern tent caterpillar		
	Japanese beetle	Growth	Egg deposition
'Baskatong'	Excellent	Poor	Excellent
'Callaway'	Good	Poor	Excellent
'Donald Wyman'	Good	Poor	Fair
<i>floribunda</i>	Excellent	Fair	Excellent
'Golden Raindrops'	Excellent	Excellent	Excellent
<i>hupehensis</i>	Excellent	Poor	Poor
'Molazam', Molten Lava [®] crabapple	Excellent	Fair	Excellent
'Naragansett'	Excellent	Good	Good
'Radiant'	Poor	Poor	Fair
'Snowdrift'	Fair	Poor	Fair
Sutyzam', Sugar Tyme [®] crabapple	Good	Poor	Poor

Table 2. *Prunus* species and cultivars resistance to Japanese beetle foliar feeding as well as eastern tent caterpillar growth and egg deposition.

Cultivar	Eastern tent caterpillar		
	Japanese beetle	Growth	Egg deposition
'Hally Jolivette'	Fair	Poor	Excellent
'Kwanzan'	Good	Fair	Excellent
'Okame'	Poor	Poor	Excellent
<i>sargentii</i>	Poor	Good	Excellent
'Snofozam', Snow Fountains [®] cherry	Fair	Poor	Excellent
'Snow Goose'	Fair	Fair	Excellent
'Spire'	Poor	Poor	Excellent
<i>subhirtella</i> 'Autumn Rosea'	Fair	Poor	Excellent
<i>virginiana</i> 'Canada Red'	Excellent	Poor	Good
<i>xyedoensis</i> 'Afterglow'	Good	Fair	Good
<i>xyedoensis</i> 'Akebono'	Good	Fair	Good