

Cold-Tolerant Camellias[®]

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NATURE OF WORK

The ultimate in determining a plant's local production and landscape potential is to grow it. Camellias that had been determined to have cold hardiness potential were planted in clay loam soil in full sun at the Mountain Horticultural Crops Research Station, Fletcher, North Carolina. They were 4 ft apart within the row with 6 ft between rows. There were three single plant replicates of each cultivar in a completely random design. Coldest temperature during the 3-year evaluation period was 5 °F. Plants were only irrigated during extremely dry weather. Weed management was manual plus a directed spray of Roundup or Gramoxone as needed. No fungicides or insecticides were applied at any time during the test. Fertilizer was applied at the rate of 0.5 ounces of nitrogen per plant in early spring from 17N-17P-17K.

A 10-point system was established for evaluating plant performance with 10 = dead plant and 0 = no damage to any part of any plant due to cold or wind. Stem dieback, flower bud injury thought resulting from cold, marginal necrosis, and foliar burn were the major damage types noted. Plants with a rating of 6.0 or higher failed our test. Those with a rating of 3.7 to 4.7 were considered worthy of consideration in a less exposed site since most damage was thought due to frost or wind exposure. Plants rated 2.0 to 3.0 are recommended for similar conditions and those with a rating of 1.0 to 1.7 were almost problem free.

RESULTS AND DISCUSSION

The cultivars 'Anticipation', 'Barbara Clark', 'Daintiness', 'Debbie', 'Elsie Jury', 'Paulette Goddard', and 'Winter's Fancy' displayed greater than acceptable winter injury. 'Egao', 'Jury's Yellow', 'Nicky Crisp', 'Pink Fragrance', 'Rendezvous', and 'Winter's Fire' were hardy but are suggested only for sheltered sites. 'April Dawn', 'April Kiss', 'April Rose', 'Carolina Moonmist', 'Donation', 'E.G. Waterhouse', 'Pink Butterfly', 'Ryuko', 'Snow Flurry', 'Spring Song', 'Winter's Beauty', 'Winter's Charm', 'Winter's Star', and 'Winter's Waterlily' displayed little injury while 'April Blush', 'April Remembered', 'Pink Icicle', 'Snowman', 'Spring's Promise', and 'Winter's Interlude' were nearly undamaged through three North Carolina mountain winters.

Table 1. Three-year camellia performance in the Asheville, North Carolina area. Rating scale: 10 = dead, 0= no injury.

Not Sufficiently Hardy	
'Anticipation' (10)	'Daintiness' (10)
'Winter's Fancy' (10)	'Paulette Goddard' (8.5)
'Barbara Clark' (7.0)	'Debbie' (6.0)
'Elsie Jury' (6.0)	
Hardy But Only Suggested For Sheltered Sites	
'Egao' (4.7)	'Pink Fragrance' (4.5)
'Jury's Yellow' (4.3)	'Nicky Crisp' (4.3)
'Rendezvous' (4.0)	'Winter's Fire' (4.0)
'Twilight Glow' (3.7)	
Recommended	
'Donation' (3.0)	'E.G. Waterhouse' (3.0)
'Snow Flurry' (3.0)	'Winter's Star' (3.0)
'Winter's Waterlily' (3.0)	'Winter's Charm' (2.7)
'Carolina Moonmist' (2.5)	'Winter's Beauty' (2.5)
'April Kiss' (2.3)	'April Dawn' (2.0)
'April Rose' (2.0)	'Spring Song' (2.0)
'Ryuko' (2.0)	'Pink Butterfly' (2.0)
Highly Recommended	
'Spring's Promise' (1.7)	'Winter's Interlude' (1.5)
'Pink Icicle' (1.3)	'April Blush' (1.0)
'April Remembered' (1.0)	'Snowman' (1.0)

LITERATURE CITED

- Ackerman, W.L.** 2002. Growing camellias in cold climates. Noble House, Baltimore, Maryland.
- Trehane, J.** 1998. Camellias: The complete guide to their cultivation and use. Timber Press. Portland, Oregon.