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Vegetative Propagation of Two Florida Native Wildflower Species: *Polygonella polygama* and *Polygonella robusta*[®]

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October flower (*Polygonella polygama*) and Sandhill wireweed (*P. robusta*) are native wildflowers with significant ornamental and landscape potential. Propagation by seed is limited by several factors including narrow collection times, seed source, storage conditions, and physiological seed dormancy. Propagation by stem cuttings may decrease production time, improve uniformity, and widen collection times. Experiments were conducted to determine the effects of α -naphthalene acetic acid (NAA) and indole-3-butyric acid (IBA) on rooting softwood cuttings of October flower and Sandhill wireweed collected from natural populations in central and south Florida. Softwood cuttings of each species were collected in the summer and quick dipped with nine different concentrations of K-NAA : K-IBA (0 : 0, 0 : 500, 0 : 1000, 250 : 0, 250 : 500, 250 : 1000, 500 : 0, 500 : 500, 1000 : 1000 ppm). Root initiation and quality were assessed after 6 weeks (Sandhill wireweed) or 8 weeks (October flower) under intermittent mist. Rooting of both species varied widely among auxin treatments and collection sites. Significant site \times NAA \times IBA interactions occurred for root index and percent rooting of Sandhill wireweed but not for October flower. Up to 63% and 80% rooting was achieved for October flower and Sandhill wireweed, respectively. However, most measured responses were not significantly different among auxin treatments. Root index and number of October flower were significantly affected by site, with greater rooting from the southern population. Root percent and number of Sandhill wireweed were significantly affected by site, with greater rooting from the central population.

INTRODUCTION

Native plants are widely recognized for their natural ability to adapt to tough conditions without substantial care once established. Native wildflowers, in particular, have an increasing role in ecological restoration, roadside beautification projects, and ornamental landscape use. The prolific white to pink flower spikes, perennial nature, and attractive foliage and form of *Polygonella polygama* (October flower) and *P. robusta* (Sandhill wireweed), both members of Polygonaceae, suggest that these wildflowers could have significant ornamental and landscape potential if an effective propagation method can be developed. October flower is typically found in sandhill and scrub habitats in the southeastern United States west to Texas. Its cream-colored flower spikes usually appear in late fall, thus earning its common name October flower. Sandhill wireweed is endemic to sandhill and scrub habitats of Florida. This mounding perennial is shorter with denser foliage and pink to cream flowers spikes that appear sporadically throughout the year. Both wildflowers typically grow in full sun and well-drained, nutrient-poor, sandy soils. They are tolerant of heat and drought, making them useful additions to natural