(325) Japanese Barberry and Hybrid Cultivars Showed Various Rooting Ability from Stem Cuttings

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Forty-seven cultivars of Japanese barberry (*Berberis thunbergii* DC.) stem cuttings were collected on 9 Sept. 2006 from the Horticultural Farm of University of Connecticut. The cultivars were divided into four groups according to their foliage colors, i.e., green, purple, yellow, and bicolor foliage. Cuttings were treated with K-IBA (3000 mg·L^{-1}) and Hormodin#2 (3000 mg·L^{-1} IBA), and then placed on a mist bench in the University of Maine greenhouses. The green foliage cultivars had the highest rooting percentage of 76.3%. The next highest rooting percentage, 70.3%, was found from bicolor foliage cultivars. Half of purple foliage cultivars had been rooted and the lowest rooting percentage, 39.3%, was observed from the yellow foliage cultivars. Root quality followed the trend of the rooting percentage and decreased significantly from green and bicolor foliage cultivars to purple and yellow foliage cultivars. Cuttings treated with K-IBA had better rooting than that treated with Hormondin#2. Different cultivars had various rooting potential and no root was generated from 'Aurea Nana', 'Golden Carousel', 'Helmond Pillar', 'Rose Glow', and 'Superba'. 'JN Redleaf', 'Red Bird', 'Red Chief', and 'Tara', had less than 13% of rooting and poor root quality (the total root length was less than 2 cm). These cultivars demonstrated that their rooting ability were significantly lower than that of other cultivars. 'Concored', 'Crimson Dwarf', 'Green Pygmy', 'Inermis', 'Kobold', and Pow Wow' could be easily rooted with high quality of root systems. Donglin Zhang is also a guest professor at the Central South University of Forestry and Technology.