

## **(342) Growing Sonora Red Poinsettia with Various Growth Retardants**

Youping Sun\*, Univ. of Maine, Orono, ME, [youping.sun@umit.maine.edu](mailto:youping.sun@umit.maine.edu)

Donglin Zhang, Univ. of Maine, Orono, ME, [donglin@maine.edu](mailto:donglin@maine.edu)

Lois Berg Stack, Univ. of Maine, Orono, ME, [lstack@umex.maine.edu](mailto:lstack@umex.maine.edu)

Bixia Xie, Professor, Central South Forestry Univ., Changsha, HN, [sinous@163.com](mailto:sinous@163.com)

*Euphorbia pulcherrima* Willd. ex Klotzsch Sonora Red is a recently available poinsettia cultivar. To produce high-quality potted plants, effective growing methods must be determined, including height control. Potted plants were sprayed two times (at 31 and 63 days) with 500 mg/L ethephon (A); 500 mg/L chlormequat plus 1000 mg/L daminozide (B); 500 mg/L ethephon the first time, followed by 1000 mg/L ethephon (C); 500 mg/L ethephon the first time, followed by 500 mg/L chlormequat plus 1000 mg/L daminozide (D). Plants were also

treated with 500 mg/L ethephon sprayed three times at 31, 53 and 76 days (E) and no growth retardant (control). Compared to the control, all treatments were significantly shorter. Total height reduction was 17.3%, 26.6, 19.0%, 26.2%, and 23.6% for Treatment A, B, C, D and E, respectively, with no significant differences among these treatments. Chemical costs for Treatment A, B, C, D, and E were \$0.025, \$0.038, \$0.044, \$0.043, \$0.029 per pot. Flowering time did not differ significantly among treatments and control. Bract sizes of treated plants, with exception of treatment E, were also not significantly different from the control. To produce compact *Euphorbia pulcherrima* 'Sonora Red' with least-number and least-costly plant growth regulator applications, 500 mg/L ethephon should be sprayed at 31 days and 63 days after rooted cuttings are transplanted.

**Note:** Donglin Zhang is also a guest professor at Central South University of Forestry and Technology, Changsha, Hunan, China.