Digital Picture Tree Crown Evaluation Software

Matthew F. Winn, Sang-Mook Lee, Philip A. Araman

ABSTRACT

The USDA Forest Service Southern Research Station in Blacksburg, Virginia is developing stand-alone software to analyze digital pictures of tree crowns, partial tree crowns, or groupings of tree crowns for foliage transparency. One program called URBANCROWNS can be used to evaluate density and transparency of complete or partial trees in an urban setting from digital pictures. We are also developing software to determine leaf area estimates. The second program called FORESTCROWNS can be used to evaluate digital pictures of crowns from below in forested settings. Single trees, multiple intersecting trees, or canopy areas pictures can be analyzed to determine transparency. Examples will be presented. The software packages are not complete but they are usable and will be made available for trial use.

This abstract was published in: Dykstra, D.P.; Monserud, R.A., tech. eds. 2009. Forest growth and timber quality: Crown models and simulation methods for sustainable forest management. Proceedings of an international conference. Gen. Tech. Rep. PNW-GTR-791. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. p. 267.

Matthew F. Winn is a forestry technician, **Sang-Mook Lee** is a postdoctoral fellow, and **Philip A. Araman** (presenter; paraman@fs.fed.us) is a research team leader at the Southern Research Station, USDA Forest Service, 1650 Ramble Road, Blacksburg, VA 24060, USA.