Harvesting the power of technology

- Models for spray deposition and drift
- Tools for managing landscapes
- Computer visualizations

Plus: A look ahead at forestry operations
WHAT WILL YOU MAP TODAY?

The Trimble GPS Pathfinder product family provides solutions for any mapping application. With Trimble's GPS technology, you can map with confidence, knowing that you have the best tools for the job. Whether you're mapping for urban planning, agricultural applications, or any other industry, Trimble has the GPS solutions you need. Contact Trimble today to learn more about our GPS mapping products and how they can help you achieve your mapping goals.

Trimble
4 Information Technologies:
Overcoming Challenges, Capturing Opportunities
Stephen K. Nodine
Emerging technologies are fast changing the work that foresters do. Remaining competitive means welcoming the changes as opportunities rather than viewing them as obstacles.

9 Techniques for Visualizing the Appearance of Forestry Operations
Robert J. McGaughey
Computer images showing the effects of forestry practices can let specialists compare alternatives, permit public review of proposed timber harvests, and educate citizens about forestry. Which technique is best depends on the intended use of the visualizations.

15 Honesty and Foresight in Computer Visualizations
Alan G. McQuillan
New technologies have the potential to both inform and mislead citizens about the appearance of forestry operations. Acknowledging the limitations of computer images will help maintain the honesty of our presentations.
17 Landscape Management through Integration of Existing Tools and Emerging Technologies
James B. McCarter, Jeremy S. Wilson, Patrick J. Baker, Jeffrey L. Moffett, and Chadwick D. Oliver

A computer program called Landscape Management System facilitates landscape planning by integrating forest inventory and spatial information, growth models, visualization, and analysis. A case study demonstrates landscape-scale implications of alternative treatments.

25 New Ways to Predict Aerial Spray Deposition and Drift
Milton E. Teske, Harold W. Thistle, and Bov Eav

Computer models can follow the behavior of pesticide sprays as the droplets descend through the atmosphere and deposit on the target site—or drift downwind. Their accuracy can improve application practices.

32 Forestry Operations in the Next Century: A Canadian Perspective
Daniel Y. Guimier

Predicting the future is a difficult necessity for forestry managers. An analysis of current trends provides some hints of where we’re headed.
The following articles appear in the May 1998 issue of the Southern Journal of Applied Forestry

**Prediction and Error of Baldcypress Stem Volume from Stump Diameter**
By B.R. Parresol

A logarithmic model is presented for prediction of baldcypress total stem cubic foot volume using stump diameter as the independent variable. Because the error of prediction is as important as the volume estimate, construction and use of simple and joint confidence intervals about the mean and individual predictions are demonstrated.

**The Role of Assistance Foresters in Nonindustrial Private Forest Management: Alabama Landowners’ Perspectives**
By D. Zhang, S. Warren, and C. Bailey

Nonindustrial private forest landowners in Alabama were surveyed and assistance foresters’ involvement in their management activities determined. Overall, assistance foresters have participated in some 58 percent of all forest management activities.

**Implementation Monitoring of Forestry Best Management Practices for Site Preparation in South Carolina**
By T.O. Adams

Evaluating 177 sites for compliance with site preparation BMPs, South Carolina Forestry Commission foresters found 92.0 percent were in compliance for mechanical treatments, 88.3 percent for herbicide applications, 76.9 percent for prescribed burning, and 70.4 percent for minor drainages.

**Field and Computer Application of Mesavage and Girard Form Class Volume Tables**
By R.C. Parker

Mesavage and Girard form class volume tables for estimating board foot volume of standing trees are widely used in the East and South. These volume tables are being used because the merchantability standards of the average, upper log taper table used to derive the volume tables do not show merchantable top diameters, and form class applications require appropriate sampling and accurate measurement of form on selected trees. A taper equation is fitted to the original taper table to analyze taper changes.

**A Southwide Rate Test of Azinphosmethyl (Guthion®) for Cone and Seed Insect Control in Loblolly Pine Seed Orchards**

An efficacy test of reduced rates of azinphosmethyl for control of seed and cone insects in loblolly pine seed orchards was conducted in 1992. Insecticide treatments improved first-year conelet survival, second-year cone survival, sound seeds per cone, and sound seeds per conelet at nearly every rate. The 1.0 lb ai/ac rate was as efficacious as the EPA-registered maximum aerial rate of 3.0 lb ai/ac.

**Fall-Application Nitrogen Improves Performance of 1-0 Slash Pine Nursery Seedlings after Outplanting**
By K.M. Irwin, M.L. Duryea, and E.L. Stone

Supplemental nitrogen (N) was applied to slash pine seedlings in a north-central Florida nursery during a four-week period in November and December 1989, as follows: control, low N (one application of NH₄NO₃ at 57 kg N/ha), and high N (three applications at the same rate). First-year survival of high N and low N treatments were 15 percent and 12 percent greater, respectively, than unfertilized.

**Immature Loblolly Pine Growth and Biomass Accumulation: Correlations with Seedlings’ Initial First-Order Lateral Roots**
By P.P. Kormanik, S-J.S. Sung, and S.J. Zarnoch

Five to seven years after being graded by first-order lateral root numbers and outplanted, loblolly pine seedlings were excavated using a commercial tree spade, and root systems were reevaluated. Current FOLR numbers were comparable among tree size classes, but root diameters where the spade severed the roots were different.

---

To order this issue of SFA, contact Linda O’Keefe (301) 897-8720, ext. 106; e-mail: okeefel@safnet.org.
To subscribe to the Western, Northern, or Southern Journals of Applied Forestry, contact Amy Ziadi (301) 897-8720, ext. 102; e-mail: ziadia@safnet.org.
Visit our website for abstracts of all SAF publications: www.safnet.org
Sustainable forestry is about so much more than forests. At the American Cyanamid Forestry Group, we take an active role in supporting the foresters and consultants that help comprise the “other” half of the forestry equation. While sustaining our treasured forest resource is vital, it is the people — and the products, technology and knowledge they use to manage our forests — that represent our biggest assets.

FIELD SUPPORT
American Cyanamid’s Forestry Group employs the largest force of forestry product specialists and technical experts of any company of its kind. Half of us work with industrial companies while the rest are dedicated to serving private landowners and forestry consultants. It’s the best way to share information with the entire industry. To stay informed, we stay in touch.

TECHNOLOGICAL SUPPORT
We combine our face-to-face emphasis with an advanced computer analysis program. American Cyanamid Optimal
Reforestation Manager (ACORM™) software helps determine the most cost-effective approach to forest management, calculating the future value and the rate of return of the investment.

EDUCATIONAL SUPPORT

American Cyanamid supports the advancement and dissemination of a rapidly evolving body of knowledge through the support of university and cooperative research, grants to organizations such as the American Forest Foundation, brochures, newsletters, videotapes, seminars and releases of technical information. The best information is shared information.

Our role in sustainable forestry extends beyond offering some of the industry's finest products. We see sustaining the people, who in the end are our true business partners, as our primary responsibility. To learn more about sustainable forestry, call 1-800-545-9525, ext. 1005 for a FREE video.