

Center Specs

Name: Center for Advanced Forestry Systems (CAFS)

Lead Institution: North Carolina State University

Partner Institutions: Virginia Polytechnic Institute and State University, Purdue University, and Oregon State University

Principal Investigator(s): Barry Goldfarb, Lee Allen, Charles H. Michler, Thomas R. Fox, Glenn T. Howe, Harold E. Burkhart, Richard Meilan, Keith J. Jayawickrama, Steven H. Strauss

Center Mission

To optimize genetic and cultural systems to produce high-quality raw forest materials for new and existing products by conducting collaborative research that transcends traditional species and disciplinary boundaries.

Overview of Research Activities

Titles of current or pending projects, description of research thrusts or foci.

CAFS builds on the strengths of four of the top forestry research programs in the United States to create a multi-university, interdisciplinary I/UCRC that works to solve industry-wide problems through multi-faceted approaches. CAFS scientists approach research questions on multiple scales, including the molecular, cellular, individual-tree, stand, and ecosystem. This effort includes the participation of scientists with expertise in biological sciences (biotechnology, genomics, ecology, physiology, and soils) and management and processing (silviculture, bioinformatics, modeling, remote sensing, and spatial analysis). Initial projects for the center could include:

- Use of Crown Ideotypes to Evaluate Clone x Silviculture Interactions
- Causes and Impacts of Stem Sinuosity in Intensively Managed Plantations
- Development of a Resource-driven Hybrid Process Growth and Yield Models for Loblolly Pine and Douglas-Fir
- Incorporating Intensive Silviculture into a Decision Support System
- Assessing Trees Containing Sterility Genes
- New Containment Genes for Trees
- Mechanisms controlling heartwood formation

Other Areas of Interest for Collaboration

What research areas interest you for potential collaboration with your fellow Centers that complements your Center's goals?

- Various properties of woody materials produced and their effects on biofuel and bioenergy feedstocks.
- New computer programming and information processing tools for use in spatially and temporally explicit models of forests.
- Systems approaches to understanding molecular, biochemical and metabolic networks in trees.

Directors, these are the specifications for putting together a simple overview of your current or pending research. Please submit the overview to Kate Ryan at kryan@abecker.com by December 10, 2007.

1. The overview should be no more than one page, single- or double-spaced.
2. Text should be understandable to non-specialists in your field.
3. Graphics are acceptable, but they should not substitute for text.

Thank you!