

Our mission

To optimize productivity, health, and sustainability of intensively-managed forest ecosystems by investigating the interactions among genetics, silviculture, insects and disease, competition, nutrition, and soils.

Integrative Research for Forest Productivity & Sustainability



FBRC team

Co-Directors:

Tim Martin – Tree Physiology

Gary Peter – Genetics

Cooperating Faculty and Staff

Jason Vogel – Silviculture and Forest Ecology

Tania Quesada – Genetics and Forest Pathology

Dan Johnson – Silviculture, Stand Dynamics, and Big Data

Jiri Hulcr – Forest Entomology

Jason Smith – Forest Pathology

Jeremy Brawner – Genetics and Forest Pathology

John Davis – Genetics and Molecular Biology

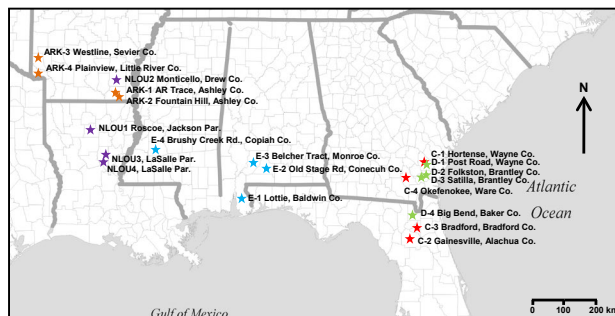
Our studies

Our studies on loblolly and slash pine are designed to address issues on forest management, stand dynamics, productivity, and forest health. These are located on cooperator land and UF property throughout the southeast United States: Lower Coastal Plain (LCP) and Western Gulf (WG).

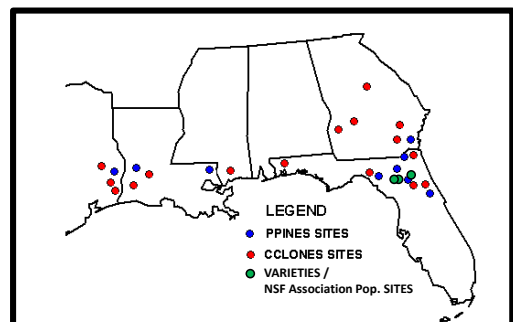
Summary of current FBRC trials.

Study*	Established	No. Sites	Design	Treatments	Main Focus	Data
PPINES	2000 (LCP); 2003 (WG)	8	factorial full-sib family block plot	spacing, culture	genotype-by-environment (GXE) interactions, self-thinning	growth, crown traits, disease
CCLONES	Series 1-LCP (2002); Series 2-Slash (2002); Series 3 – WG (2006)	22	single-tree-plot clonal	culture, genetics, propagule type	clonal biology, quantitative genetics, genomics, GXE interactions, response to thinning	growth, crown traits, disease, shoot phenology, wood properties, SNP markers (> 67,000)
VARIETIES	2009, 2010	2	factorial clonal block plot	genetics, spacing, thinning	competition dynamics, thinning	growth, crown traits
IMPAC II	2009	1	2 x 2 x 2 factorial	culture, weed control, thinning	multi-rotation carryover effects	growth, crown traits
SSPS	2013	1	randomized complete block	culture, weed control	multi-rotation carryover effects	growth, crown traits
DH2	2013	1	single-tree plot with Latinized row-columns	treatment, genetics, culture	identify beneficial introgressions for genetic improvement	growth, nutrient response, disease
SSIGNS	2013, 2014, 2016, 2017	20	split-plot randomized complete block	soil type, culture, genetics, thinning	understand soil x nutrition x genetic interactions in elite full-sib families	growth, nutrient response, disease, thinning

* Study acronyms: PPINES (Pine Productivity Interactions on Experimental Sites), CCLONES (Comparing Clonal Lines ON Experimental Sites), VARIETIES (Varietal Architecture Investigations Examining Tree Interactions on Experimental Sites), SSPS (Silvicultural Sustainable Productivity Study), DH2 (Double Hybrid backcross), SSIGNS (Site Specific Interactions of Genetics, Nutrition, and Soils).



Location of the SSIGNS field trials, color-coded to represent different soil types.



Location of the PPINES, CCLONES, and VARIETIES field trials.

Our impact

- FBRC studies have provided research platforms for 23 Masters and 23 Ph.D. graduate students from UF and through collaborations with Texas A&M University, University of California at Davis, and Virginia Tech.
- Over 100 peer-reviewed publications based on FBRC studies on disease resistance, physiology, quantitative genetics, wood quality, water use efficiency, production ecology, and remote sensing.
- Leadership in University-led forest biology research in the USA.
- Production of high-quality data for improving productivity, genetics, and forest health.
- Over \$25 million generated from funding from Federal and internal grants based on FBRC studies in the past 5 years, complementing cooperators' contributions.

Our members

Full members:

- ArborGen, Inc.
- Rayonier, Inc.
- Weyerhaeuser Co.

Contributing members:

- F & W Forestry Services, Inc.
- Nutrien Ag Solutions
- Resource Management Service, LLC

Funding sources

- Membership dues
- Membership in-kind
- IFAS in-kind, Seed Grants
- External funds (USDA, NSF, DOE)

Contact us

352 Newins-Ziegler Hall
PO Box 110410
University of Florida
Gainesville, FL 32611-0410
Tel. (352) 846-0871
Fax: (352) 846- 1707



Forest Biology Research Cooperative