

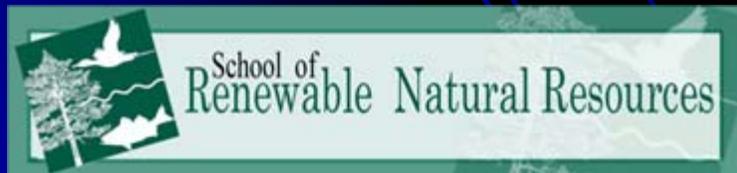
# An Overview of the Louisiana Forest Products Development Center & The Forest Products Industry in Louisiana



Mike Dunn  
Matt Fannin  
Rich Vlosky



SWLA Partnership for  
Economic Development Meeting  
October 27, 2004

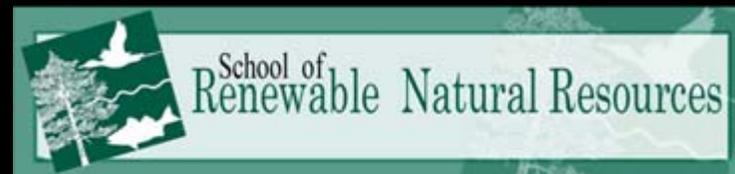


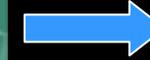


# The Louisiana Forest Products Development Center



School of Renewable Natural Resources  
LSU Agricultural Center





## Objectives

to better address the needs of Louisiana, the scope of the Center was broadened to include the *whole value chain* from the forest to the consumer.

*provide technical assistance* and help in *development of processing industries.*

Overall, the goal of the LFPDC is to *aid the state's economy and well-being of its people* through forest sector development.

Todd Shupe



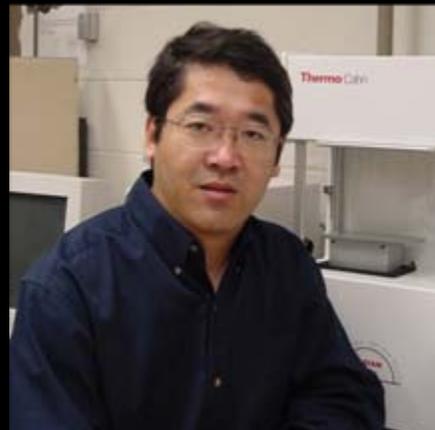
Niels deHoop



Ramsay Smith



Qinglin Wu



Richard Vlosky



# Faculty—Louisiana Tech

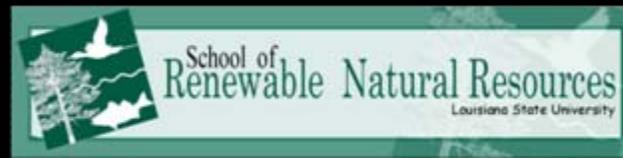
Mark Gibson



George Grozdits



# Teaching



- Faculty teach graduate and undergraduate courses
- Faculty chair or are members of graduate student committees
- New Forest Products Area of Concentration at School of Renewable Natural Resources

# Research



Science



Louisiana  
Forest  
Products  
Development  
Center

# LFPDC Program Areas

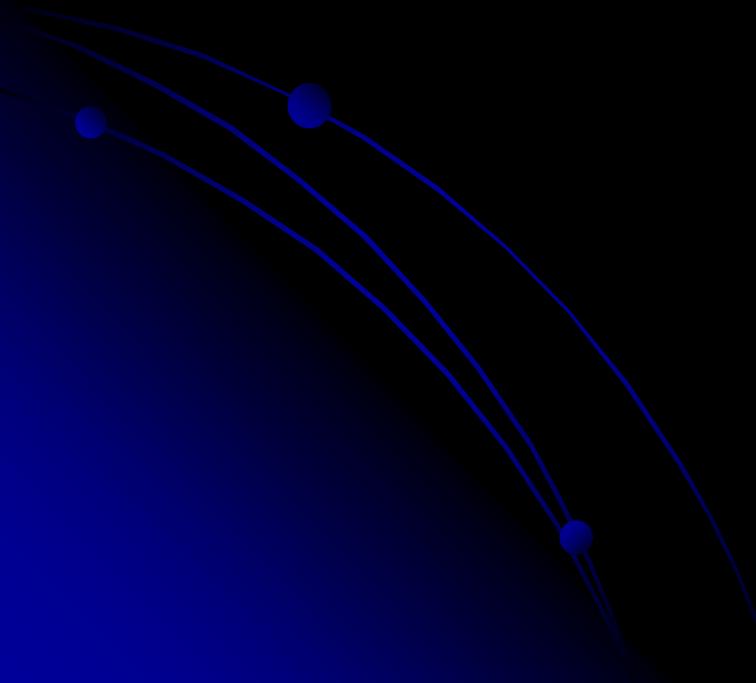


- Environmental Assessment and Improvement
- Business and Economic Development
- Industrial Process Improvement
- New Product Development
- Durability of Wood-Based Building Products

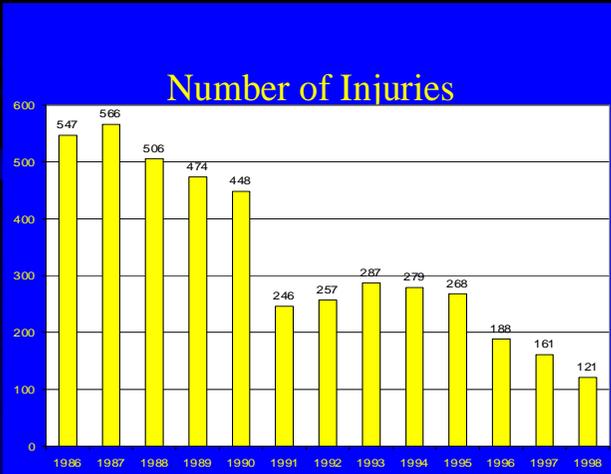


# Environmental Assessment and Improvement

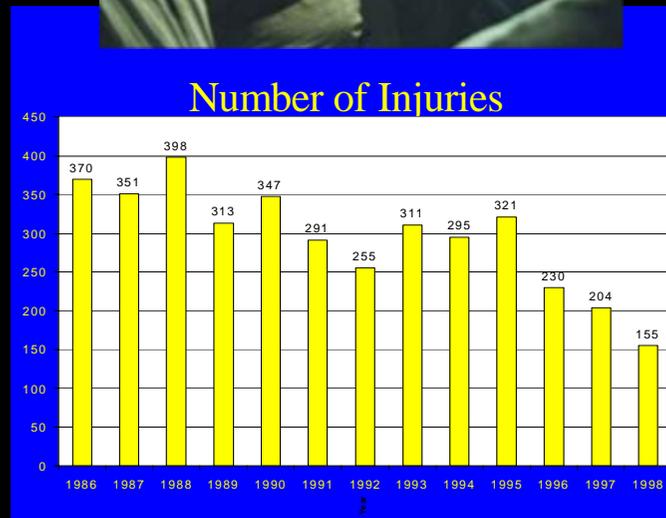
Niels deHoop



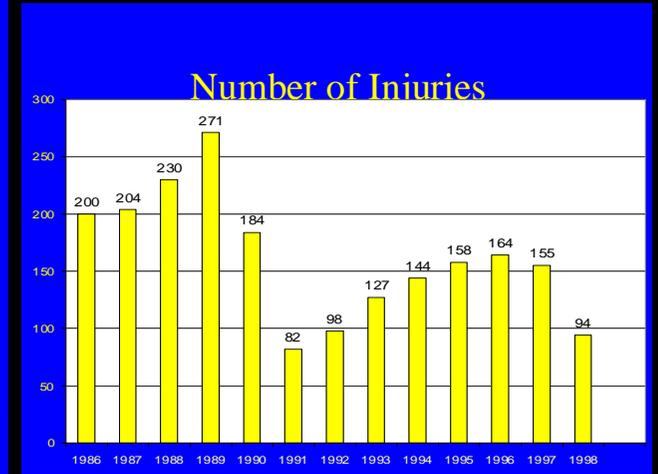
# Reducing Worker Injuries



Logging

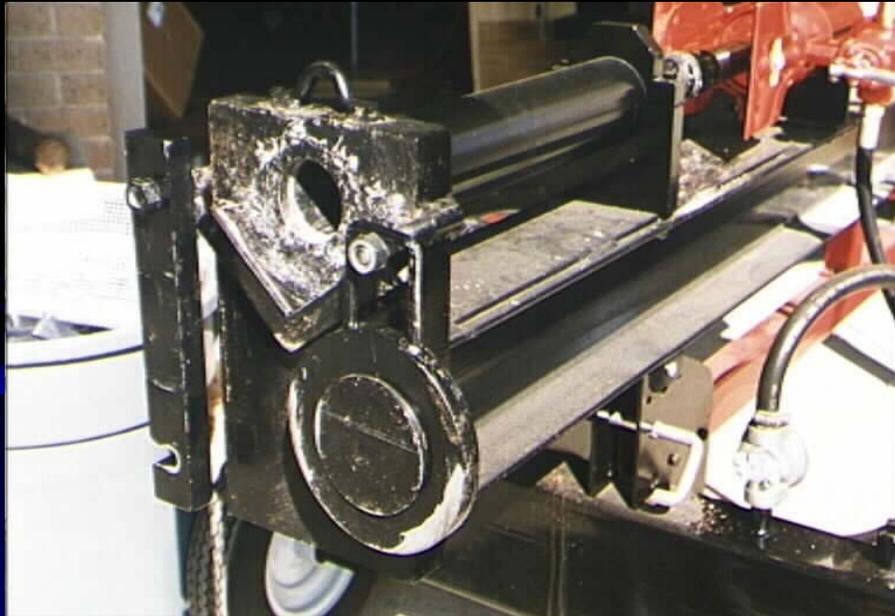


Primary

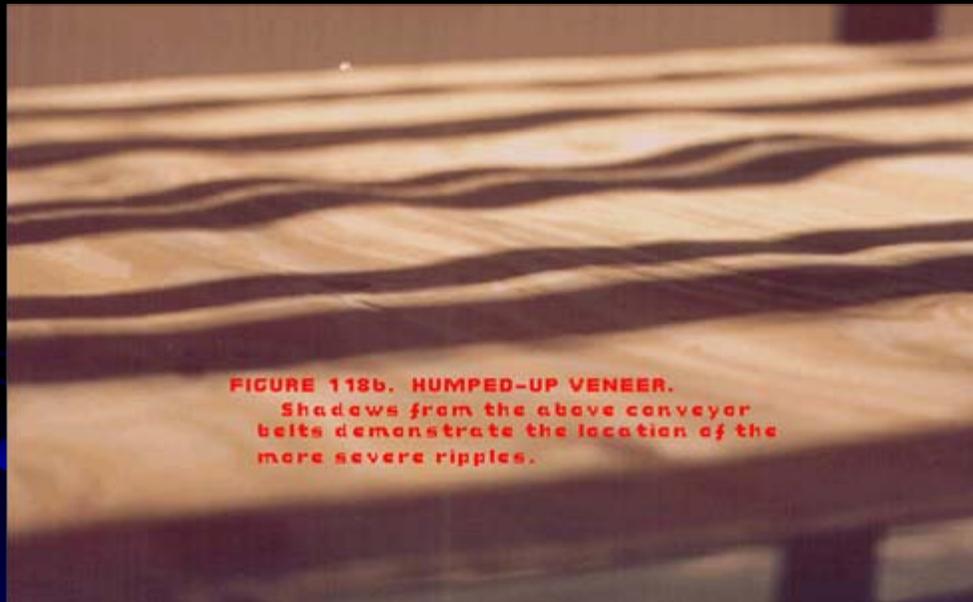


Secondary

# Environmentally Friendly Firelogs



# Logging & Mill Productivity



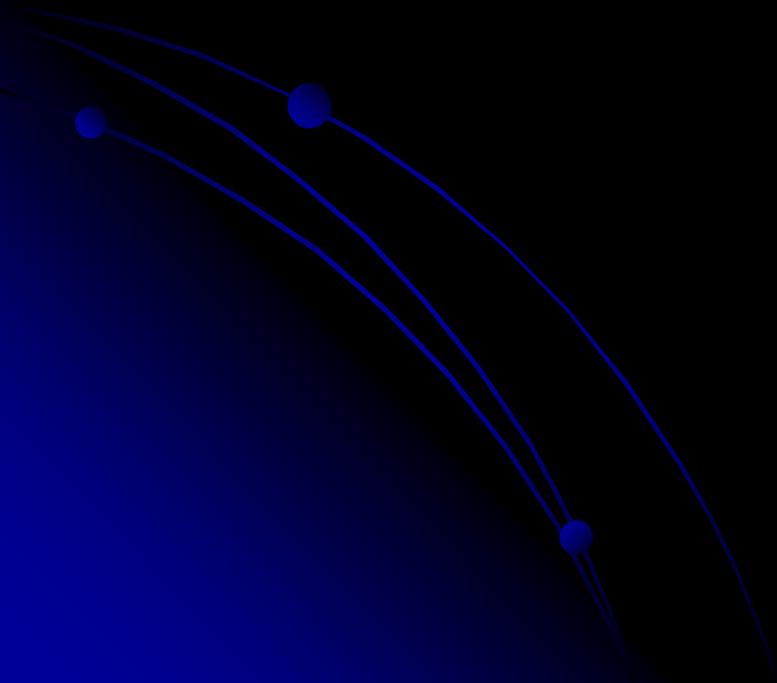
# Forest Fuels Utilization





# Business and Economic Development

Richard Vlosky



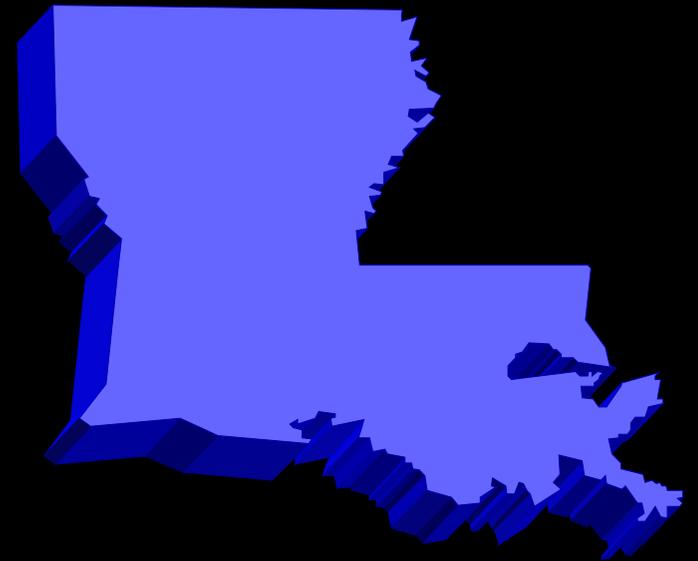
# Business and Economic Development

- Forest Sector-Based Economic Development
- Certification
- eBusiness/eCommerce
- New Markets, New Products



# Business and Economic Development

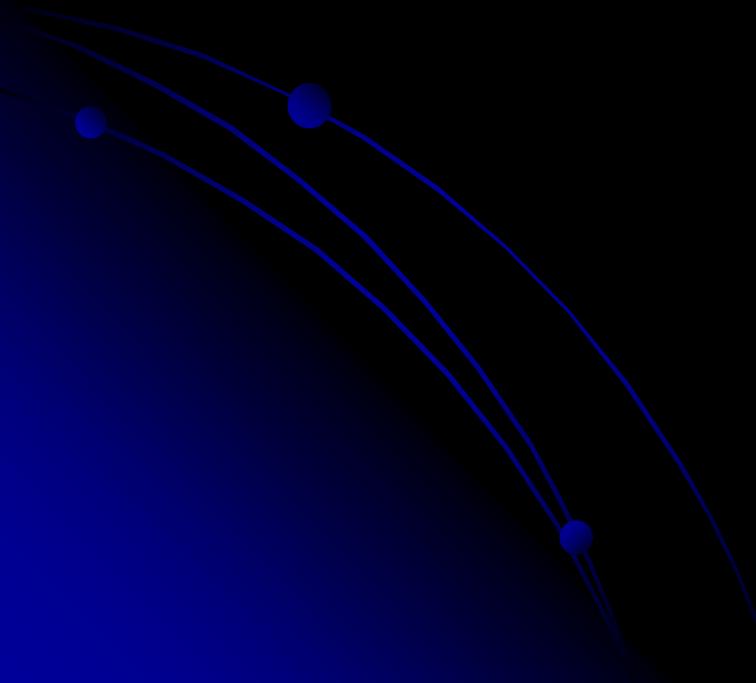
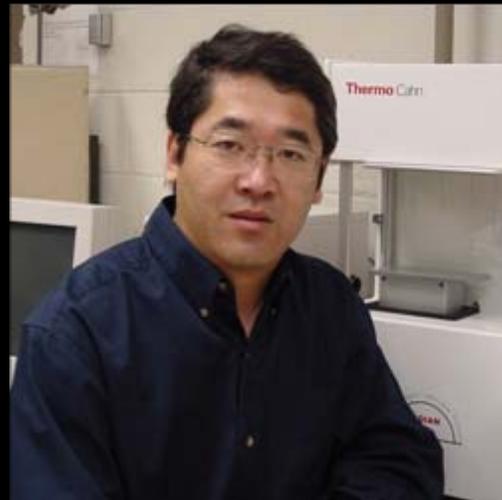
- Treated Wood
- Sugarcane-Wood Composites
- eBusiness for Small Manufacturers
- SYP Competitiveness



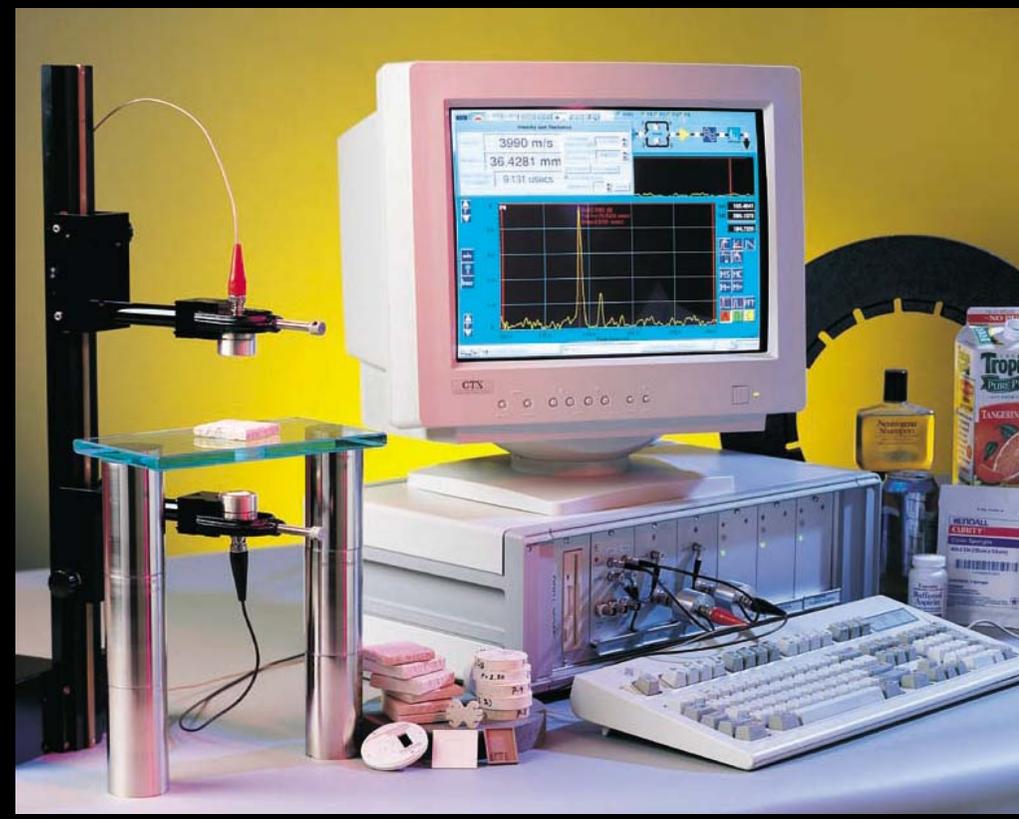


# Industrial Process Improvement

Qinglin Wu



# State-of-the-Art Research Facility



# Wood Composites and Engineered Wood Products



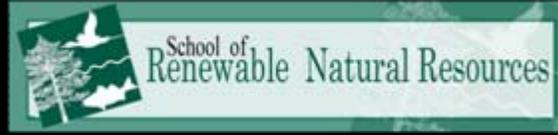
# Bio-Fiber/ Polymer Composites



Thermal-bonded Wood/  
Bagasse Nonwoven

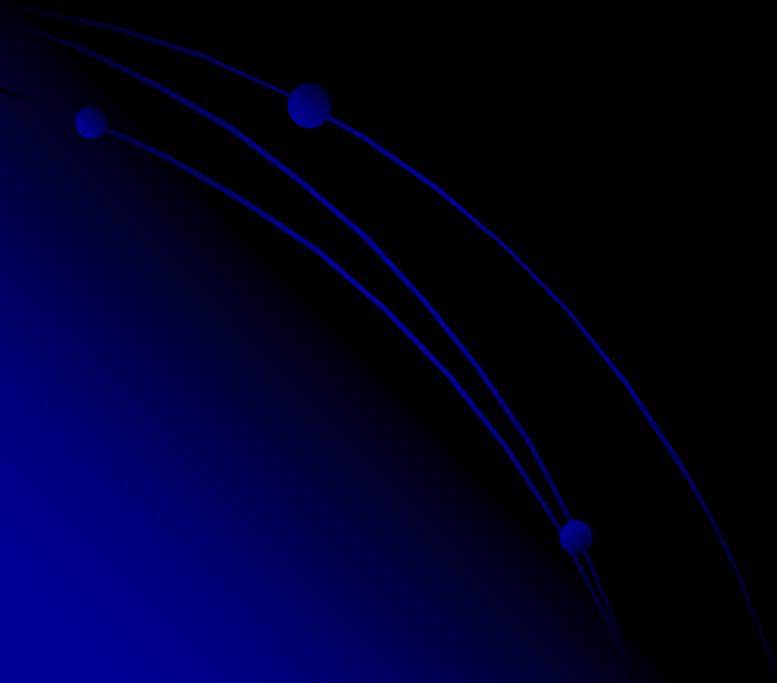


Thermal-bonded Wood/Bagasse  
Composite with Vinyl Decorating  
Layer



# New Product Development

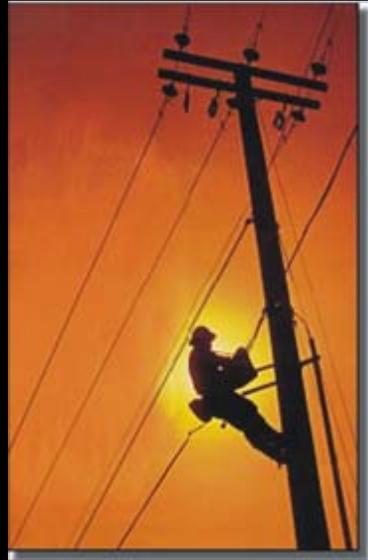
Todd Shupe



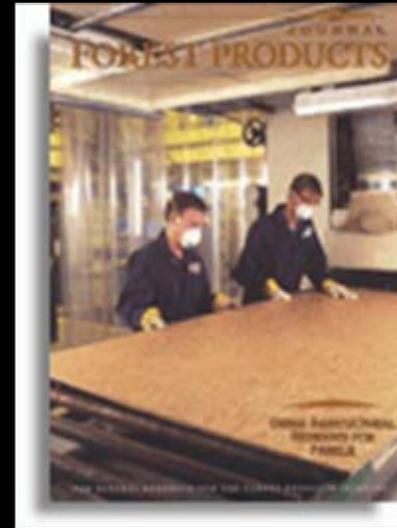
# Wood Quality



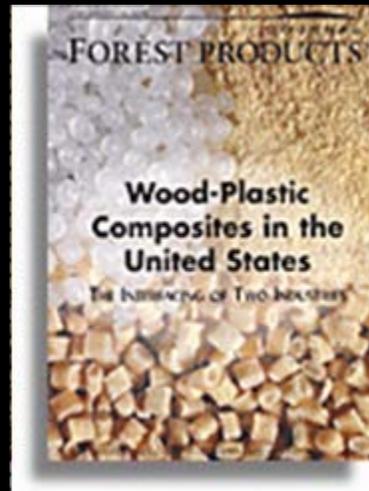
# Recycling Treated Wood



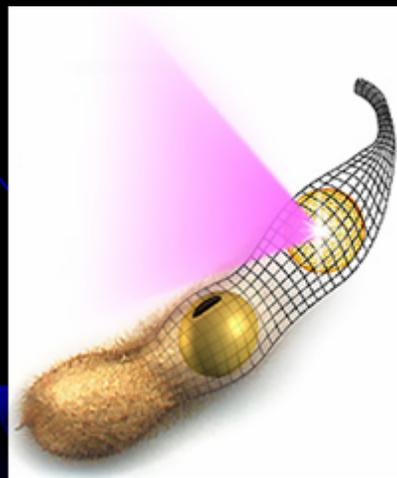
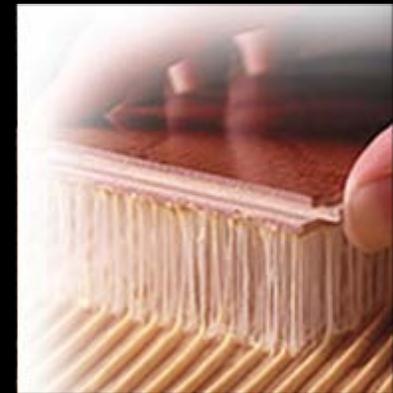
# Recycling Agricultural/ Wood Residues



# Wood/Plastic Composites



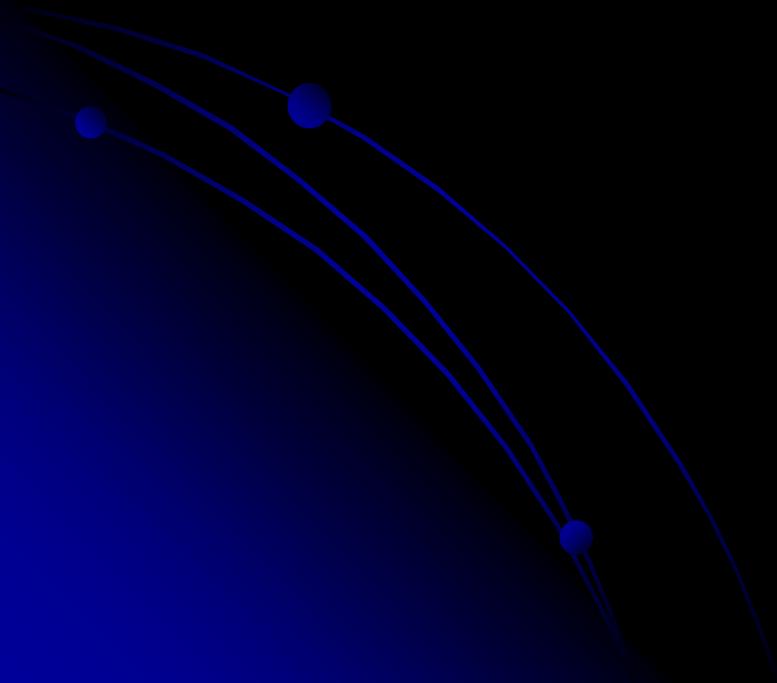
# Adhesives Research





# Durability of Wood-Based Building Products

Ramsay Smith



# Formosan Subterranean Termites



# Housing Durability



## Louisiana House



# Louisiana Tech/ LFPDC Research

## Wood Quality

- Southern pine and hardwood wood properties
- Effects of intensive forest management on product quality, yield, and mechanical properties in hardwoods and softwoods



# Louisiana Tech/ LFPDC Research

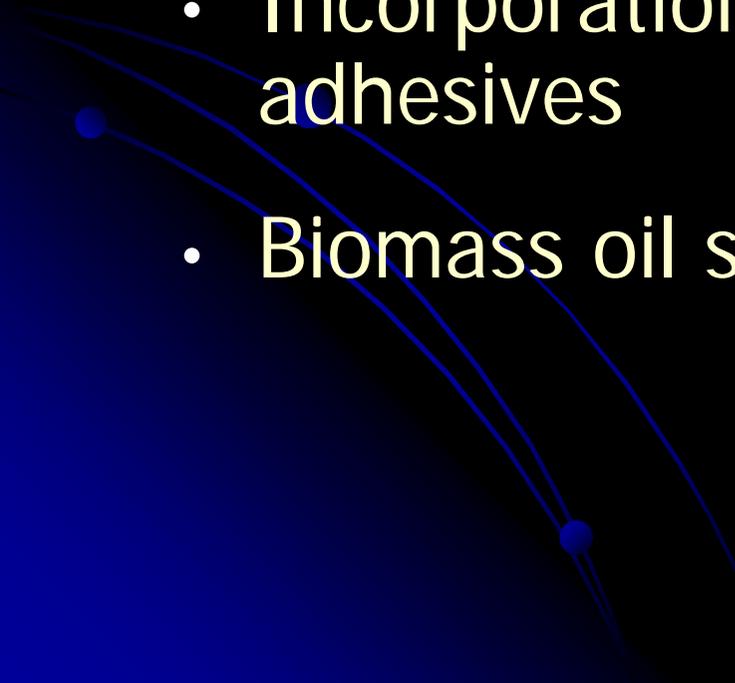
## Wood Quality

- Small bandmill yield studies
- Air-drying lumber
- Dry-kiln monitoring and improvement



# Louisiana Tech/ LFPDC Research

## Adhesives and Residue Utilization

- Improved durability of bagasse-based and wood-based composites
  - Incorporation of chemical plant waste into adhesives
  - Biomass oil substitution in adhesives
- 

# Extension/Outreach



Louisiana Cooperative  
Extension Service

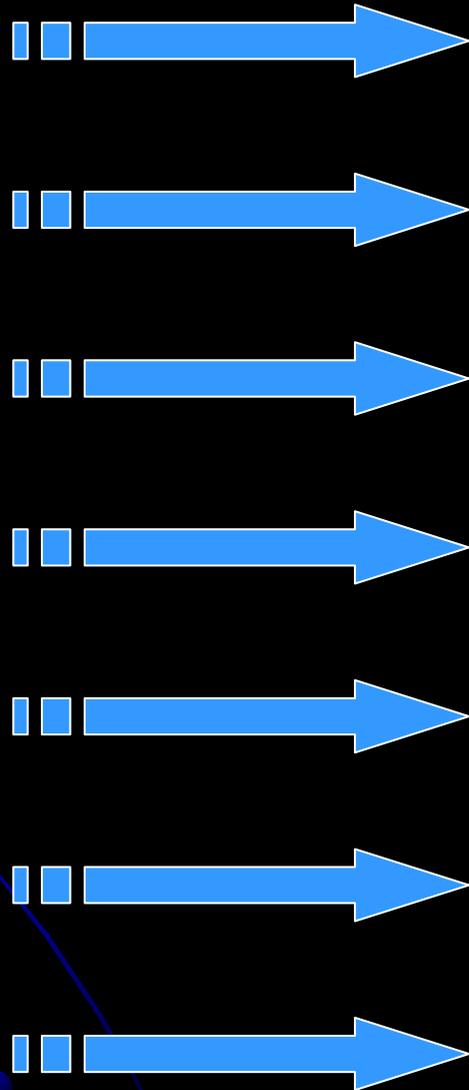


# Making the Connection

Research



Science



Louisiana Clients

Shreve

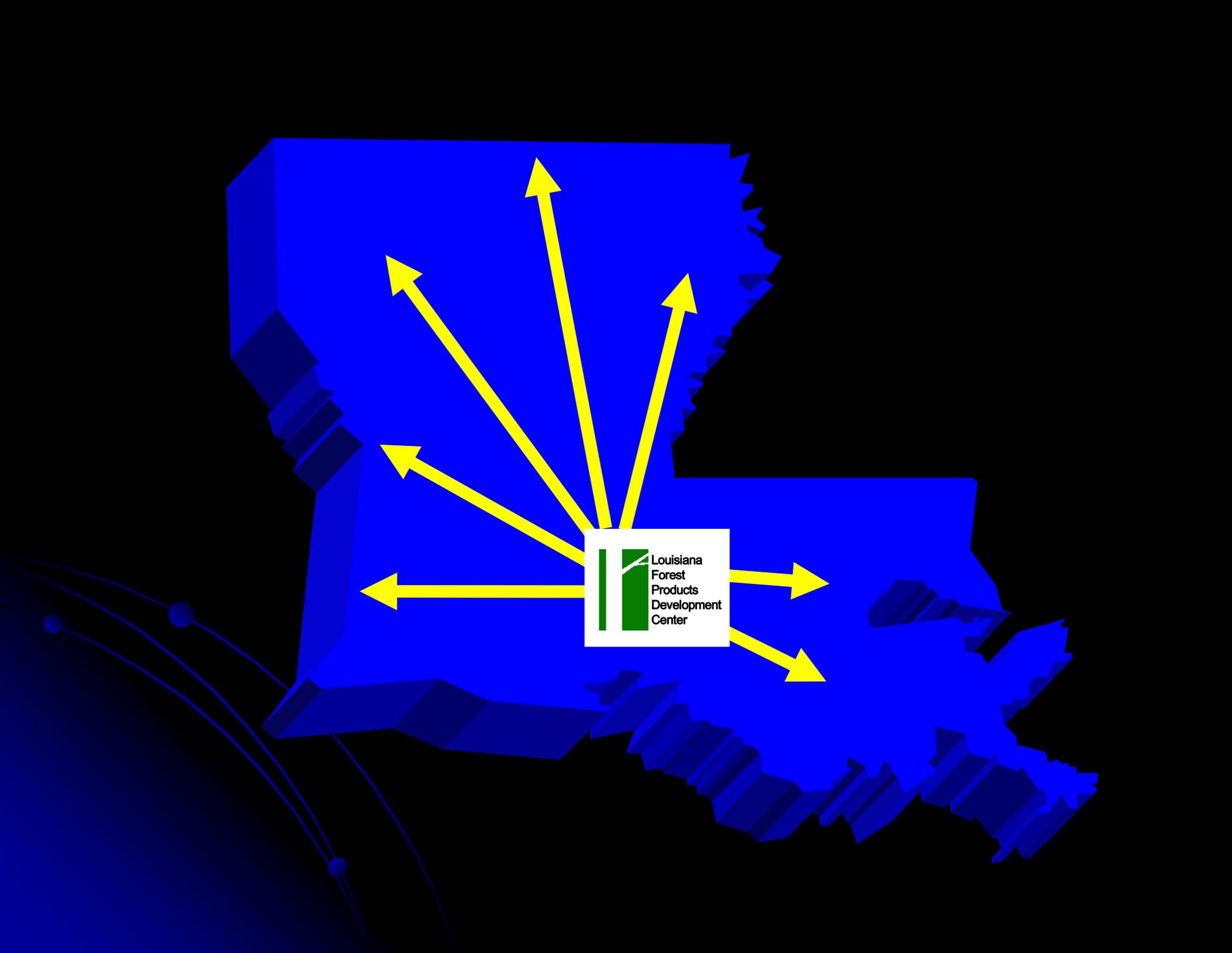
Monroe



Baton Rouge

New Orleans





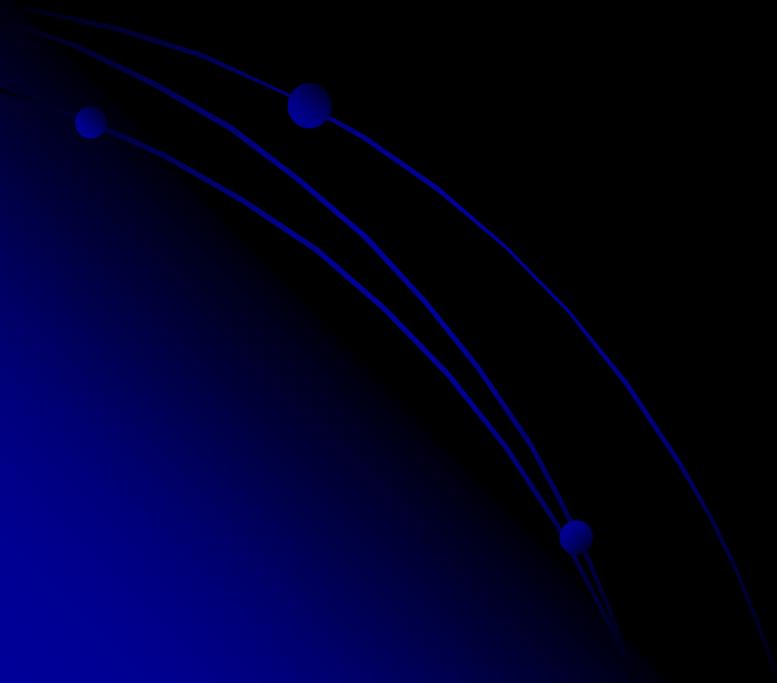
Louisiana  
Forest  
Products  
Development  
Center

# Extension/Outreach Programs

- Wood identification
  - Lumber drying
  - Basic wood properties
  - Small business management
  - Marketing & business development
- 

# Clientele

- Homeowners and consumers
- Primary and secondary wood products industry
- Hobbyists
- Policymakers



# Getting The Word Out

- Workshops
- On-site visit
- Personal communication
- Parish forestry meeting/forum/field tours
- Newsletters
- LCES publications
- LFPDC publications
- Websites

# Extension/Outreach Programs

## Industry Technical Assistance





# Extension/Outreach Programs

eCommerce/eBusiness



What to do with your  
products  
by  
John Nwoha – La Tech  
George Grodzits – La Tech



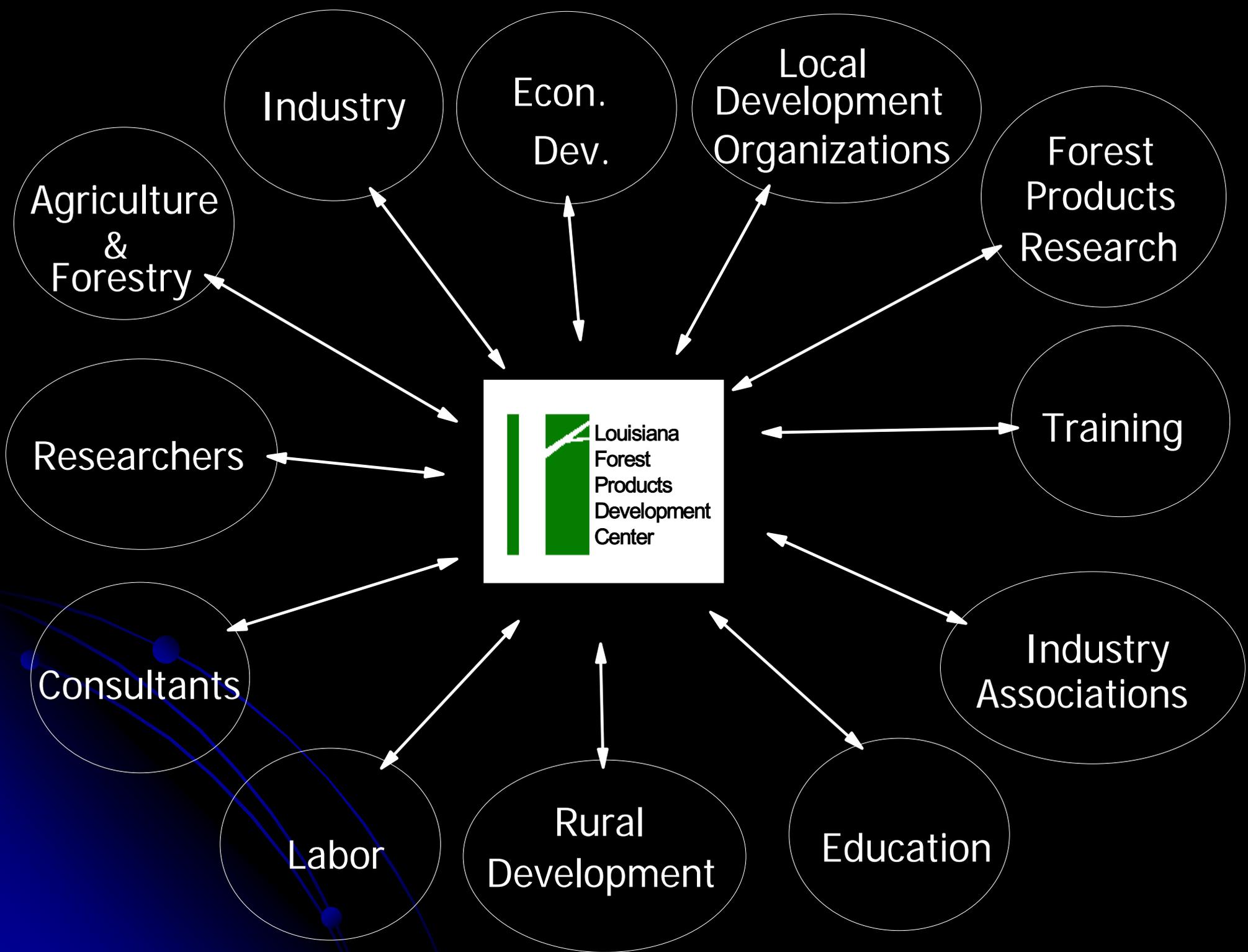


# Welcome To.....

# The Louisiana Forest Products Community



[www.Laforestproducts.org](http://www.Laforestproducts.org)



# The Forest Sector in Louisiana

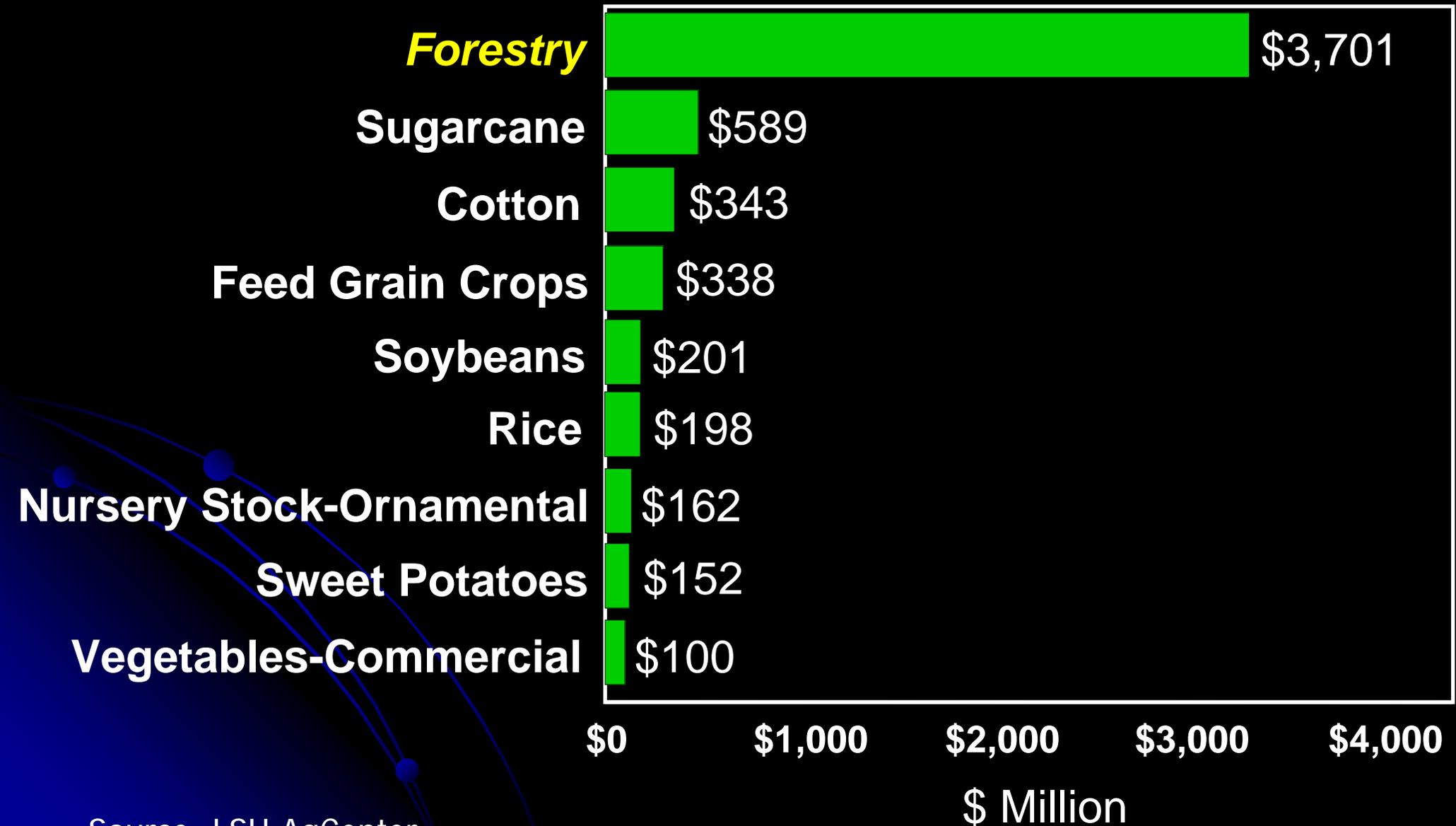


# Key Louisiana Forest Sector Facts

- 13.8 million acres of forests (48% of Louisiana land area)
- ½ Pine: ½ Hardwoods
- 59 of 64 parishes contain forest land
- 148,000 forest landowners
- 180 Primary manufacturers
- 750 Secondary manufacturers
- Louisiana's 2<sup>nd</sup> largest employer
  - 19,703 manufacturing jobs
  - 8,000 harvesting/transportation

# Louisiana

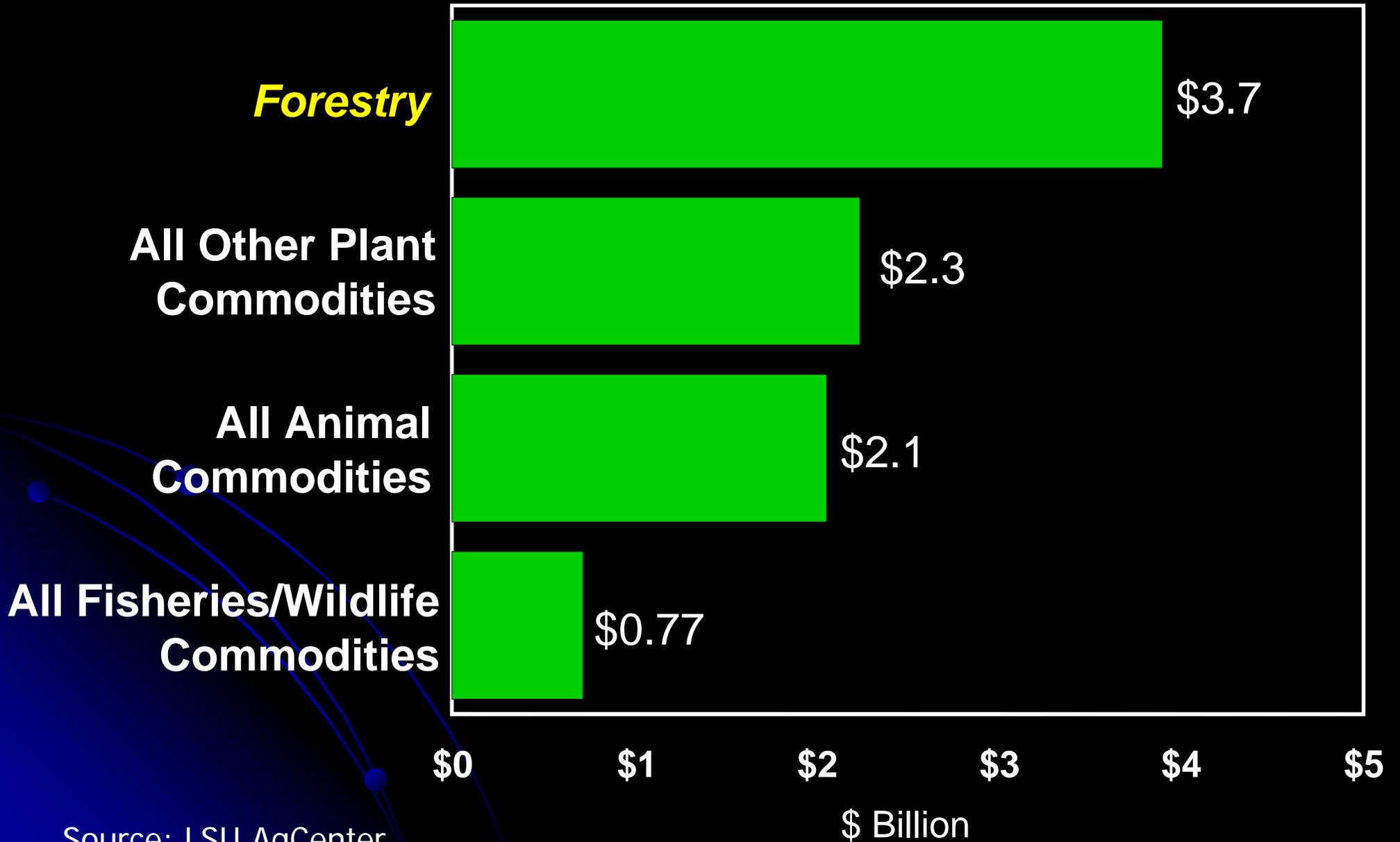
## Agricultural Commodity Economic Contribution (2003)



Source: LSU AgCenter

# Louisiana

## Agricultural Commodity Economic Contribution (2003)



Source: LSU AgCenter

# Adding Value to Louisiana's Forest Sector



# Traditional Perspective: Primary vs. Secondary (Value-Added) Wood Products

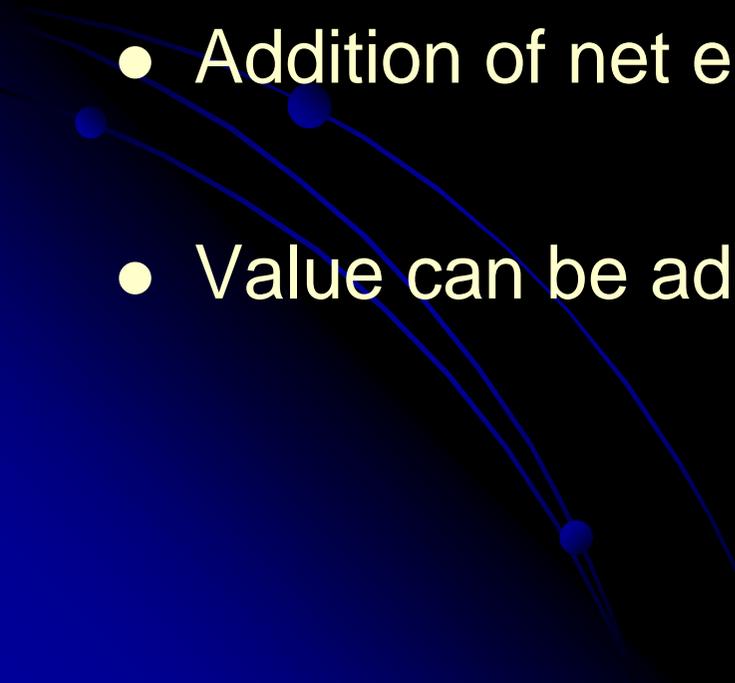
- ***Primary products:***

- produced directly from raw timber input. Examples include chips, lumber, veneer, plywood and their by-products

- ***Secondary (value-added) products:***

- use primary products as input for remanufacturing
- includes intermediate products and final consumer products such as furniture, cabinets, flooring, etc.

# What is Value-Added?

- The increased value at each stage of a manufacturing assembly process
  - Activities or steps that *the market* views as important and necessary
  - Addition of net economic value
  - Value can be added through manufacturing or marketing
- 

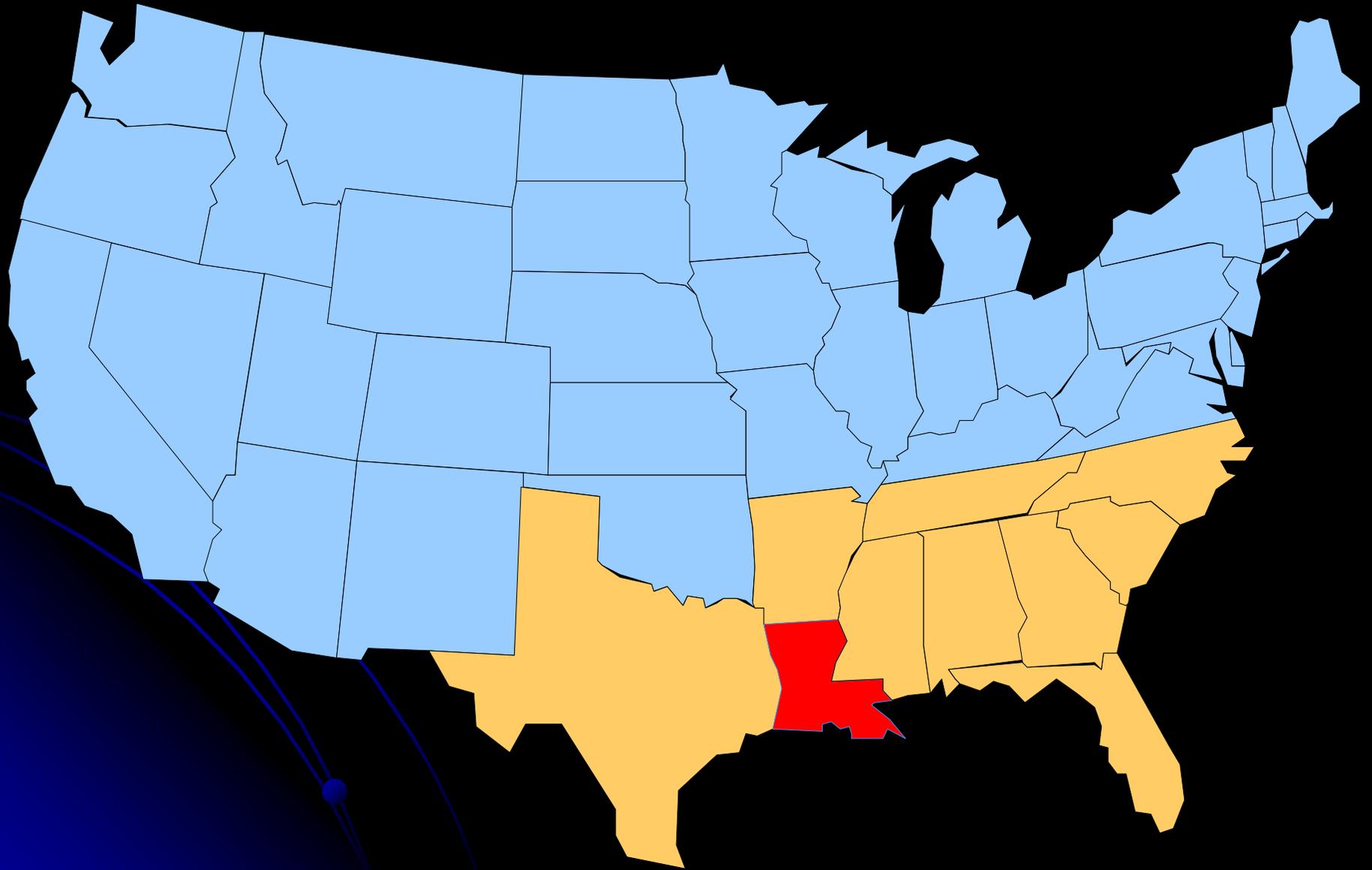
# Why Add Value?

- Value-added wood products typically require more employees than primary products -- that means more jobs.
- They usually require more than one mill to complete the process-- that means more companies.
- The added processing typically means higher valued products -- that means more money stays in-state.
- For these reasons, value-added wood products are an important link between the timber harvested from the forest and the wood products consumers buy in stores.

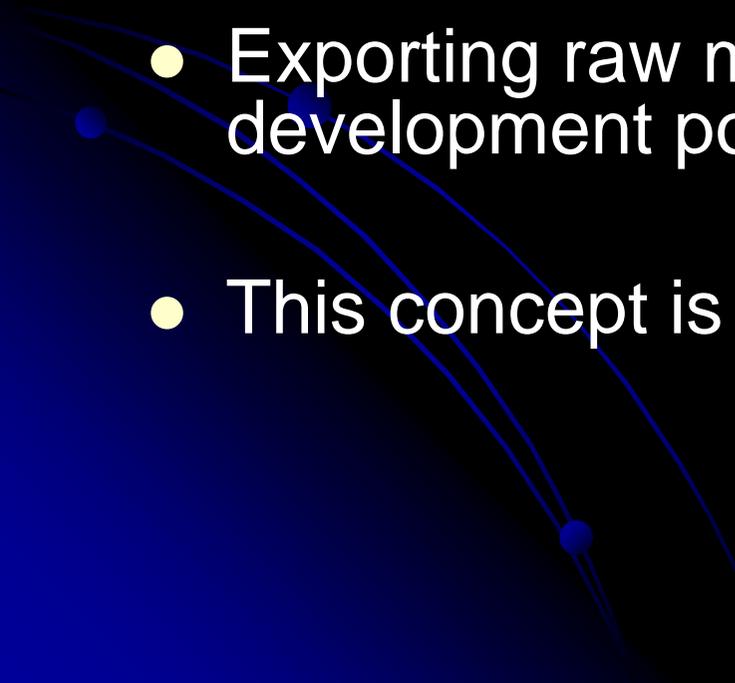
# Many Ways to Add Value



# Where is Louisiana Positioned?

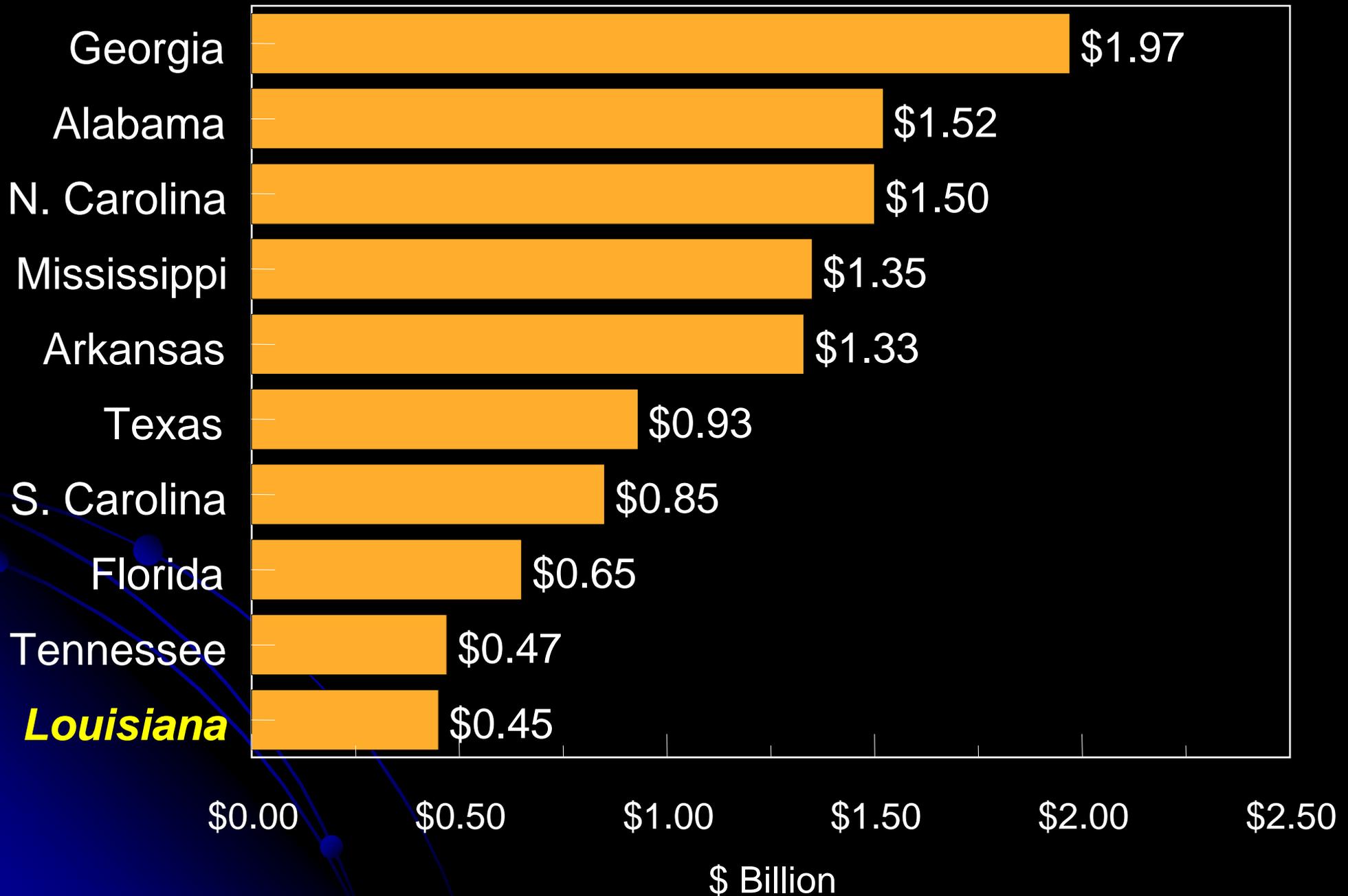


# Is Louisiana Adding Value?

- Yes, but.....
  - Although timber is the number one agricultural crop in Louisiana, much of our harvested wood leaves the state in a raw form allowing value to be added elsewhere.
  - Exporting raw materials reduces economic development potential from value-added industries.
  - This concept is not unique to the forest sector.
- 

# Lumber Industry

Value of Shipments-\$ Billion  
2001



# Lumber Value-Added \$/\$1 of Log Input

2001

**Louisiana**

\$0.56

N. Carolina

\$0.50

Tennessee

\$0.47

Texas

\$0.42

Mississippi

\$0.39

S. Carolina

\$0.38

Florida

\$0.36

Georgia

\$0.36

Alabama

\$0.31

Arkansas

\$0.28

\$0.00

\$0.10

\$0.20

\$0.30

\$0.40

\$0.50

\$0.60

\$0.70

Data source: US Department of Commerce, Census of Manufacturers

# Lumber Value-Added \$/Employee

2001

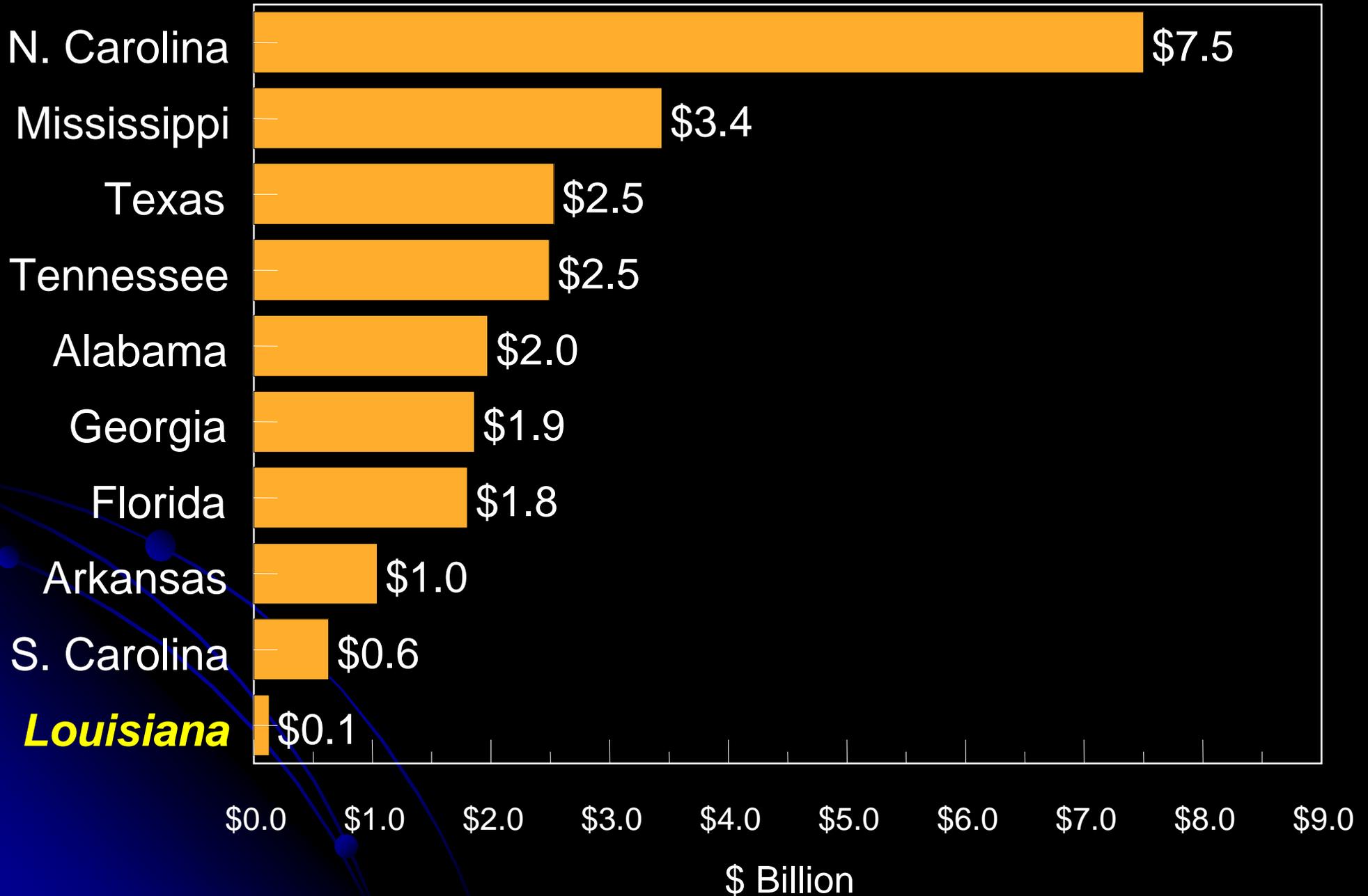


Data source: US Department of Commerce, Census of Manufacturers

# Furniture Industry

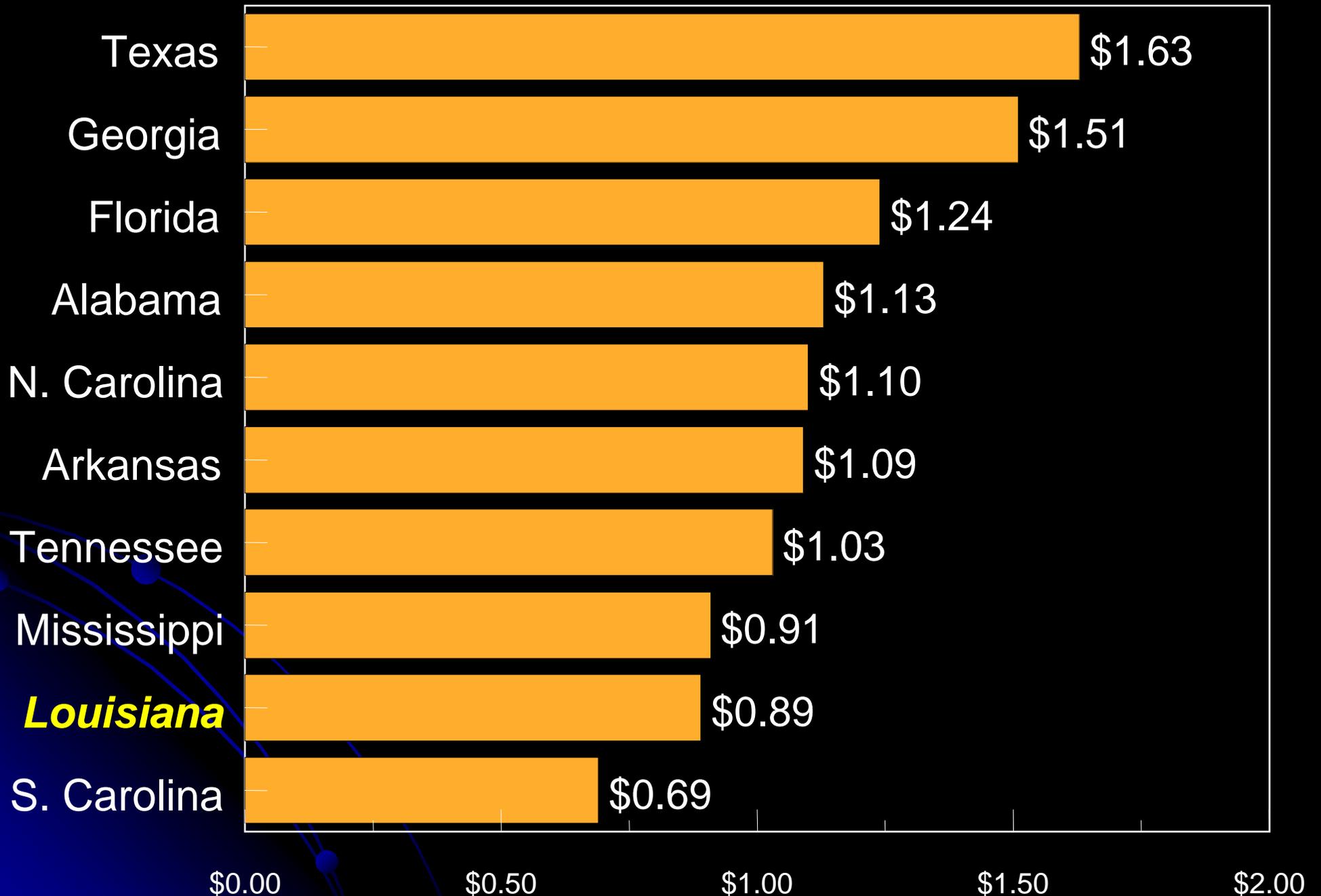
Value of Shipments-\$ Billion

2001



# Furniture Value-Added \$/\$1 of Raw Materials

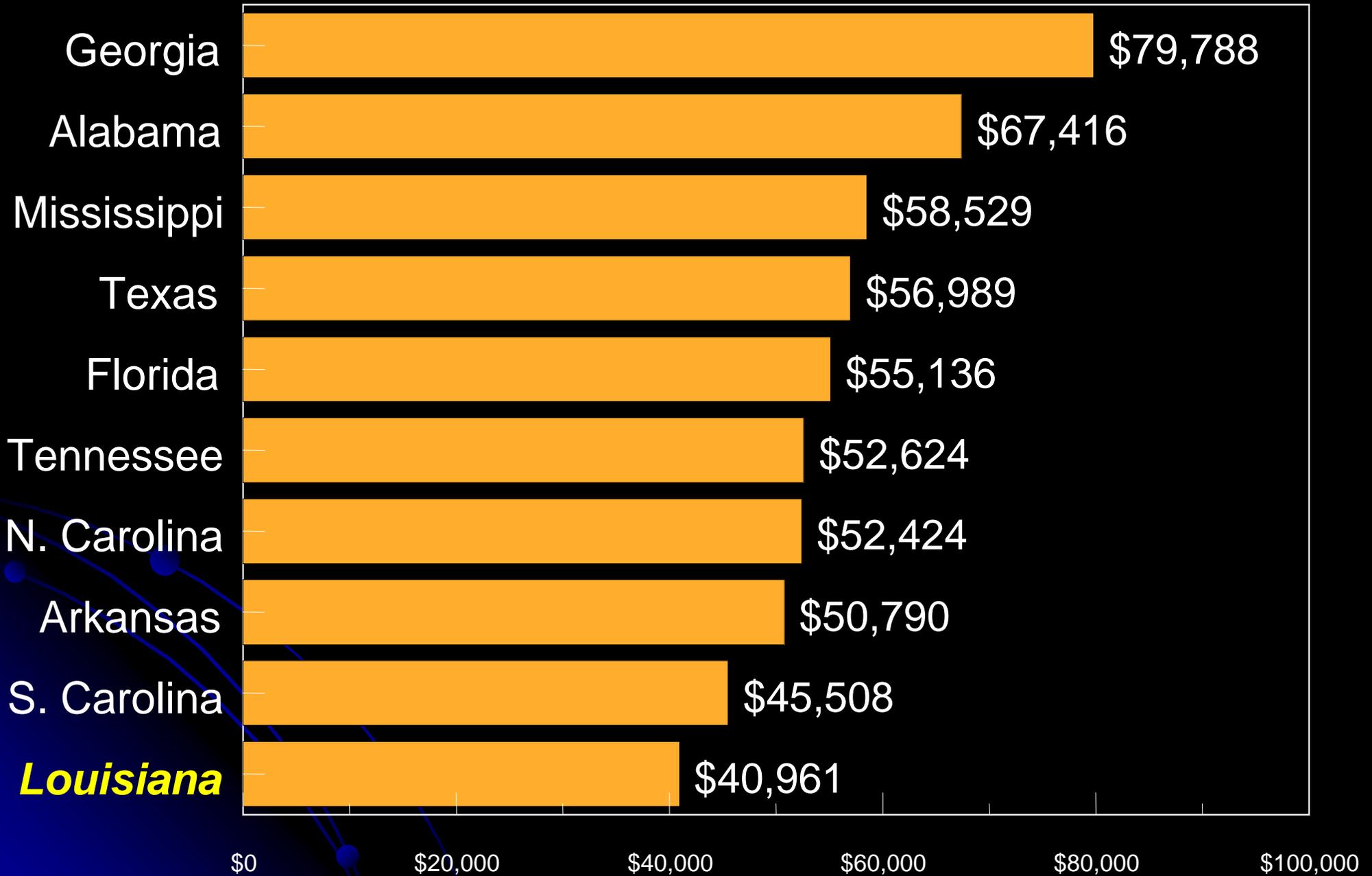
2001



Data source: US Department of Commerce, Census of Manufacturers

# Furniture Value-Added \$/Employee

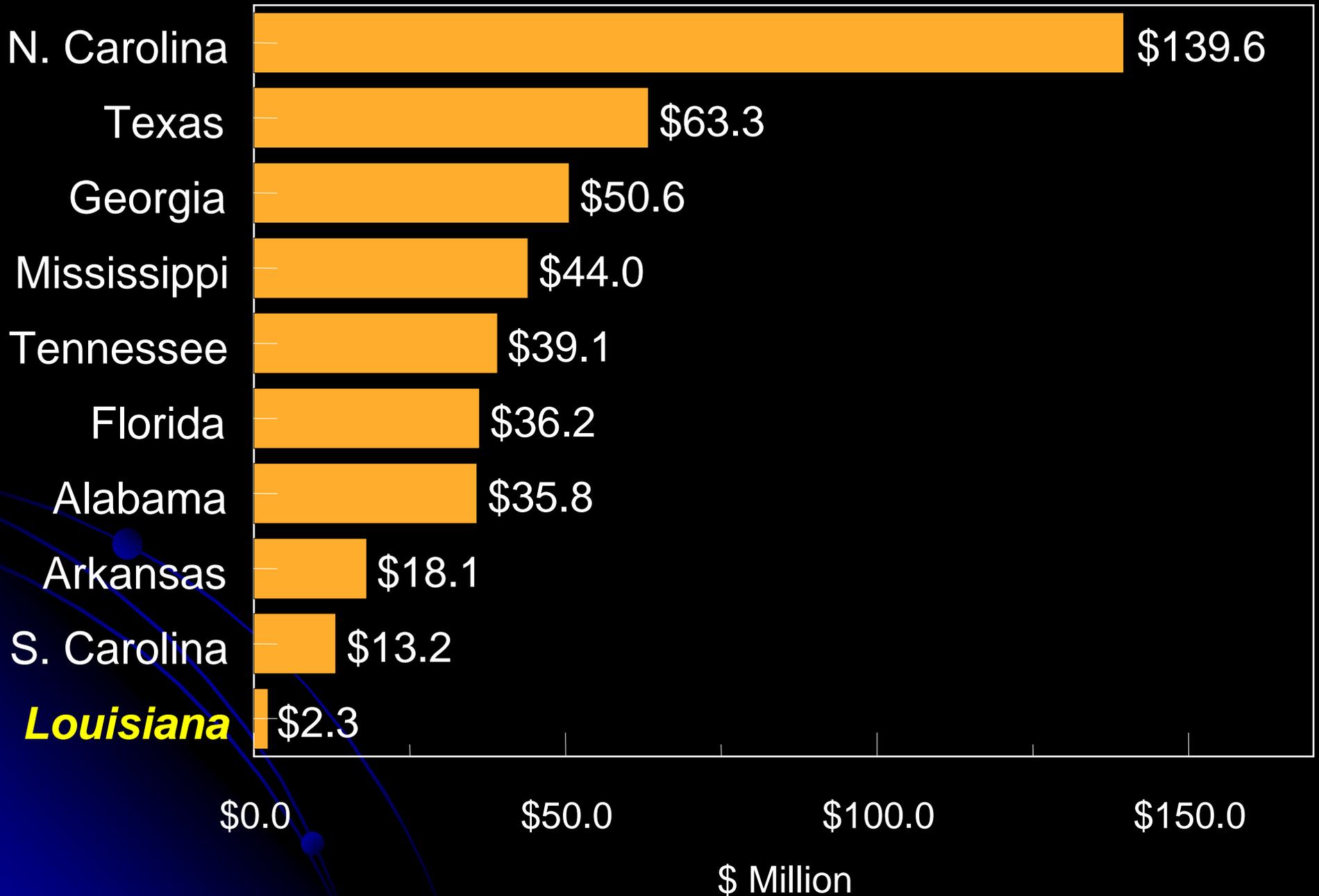
2001



Data source: US Department of Commerce, Census of Manufacturers

# Furniture Industry

Capital Expenditures-\$ Million  
2001



# Summary

- The forest sector is a leading contributor to Louisiana's economy
- We lead other Southern states in adding value to logs in making lumber
- We lag other Southern states in adding value in manufacturing furniture
- Furniture "per se" is **NOT** the answer; niches should be explored
- We can and should do better at adding value to our forest resources
- Innovation and a rational, systematic, strategic orientation **IS** the answer

# The Forest Sector in Southwest Louisiana

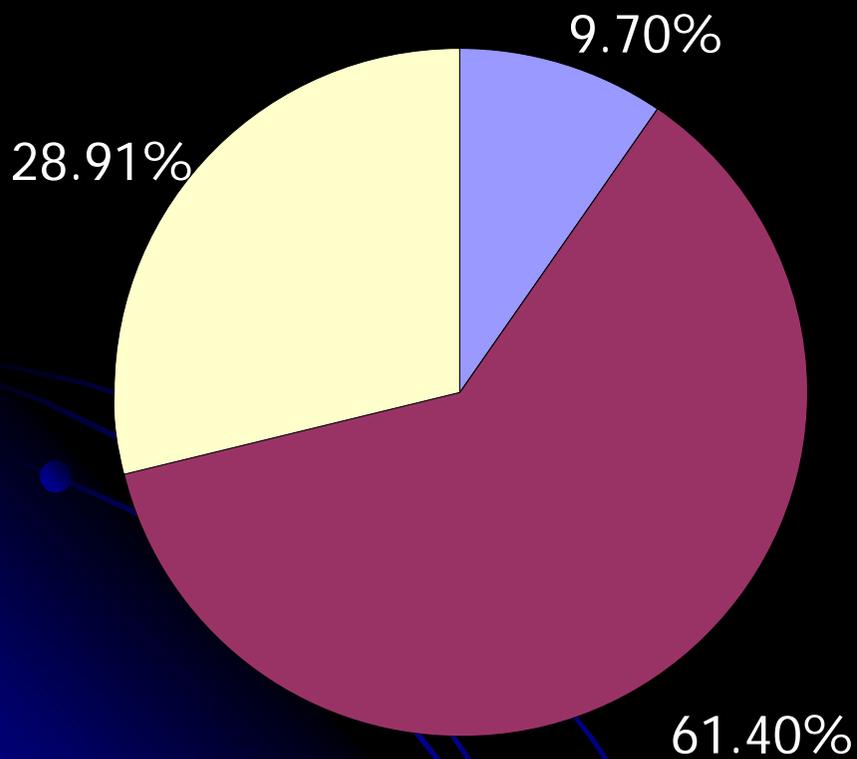


# Population Change Southwest Region

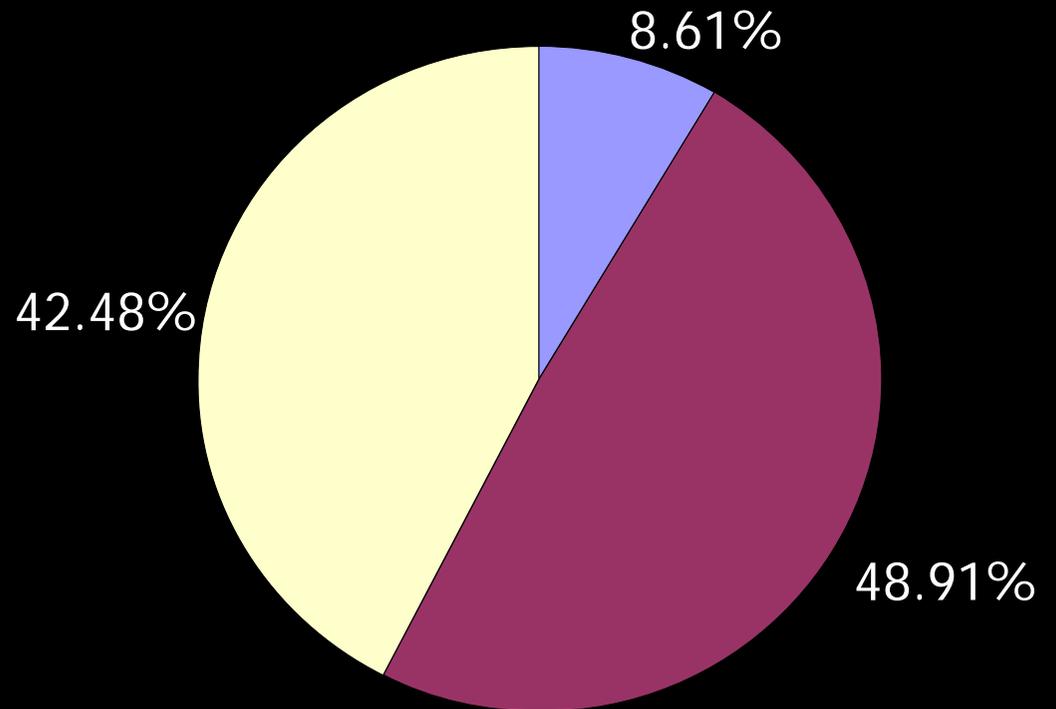
Region	1950-2000	1970-2000	1990-2000
<b>Allen Parish</b>	35.07%	22.34%	19.85%
<b>Beauregard Parish</b>	85.67%	44.12%	9.65%
<b>Calcasieu Parish</b>	104.81%	26.24%	9.18%
<b>Cameron Parish</b>	60.01%	21.93%	7.89%
<b>Jefferson Davis Parish</b>	19.53%	6.36%	2.32%
<b>SW Region</b>	78.51%	24.94%	9.25%
<b>Louisiana</b>	66.53%	22.73%	5.90%

# Distribution of Earnings

Southwest Region - 1970



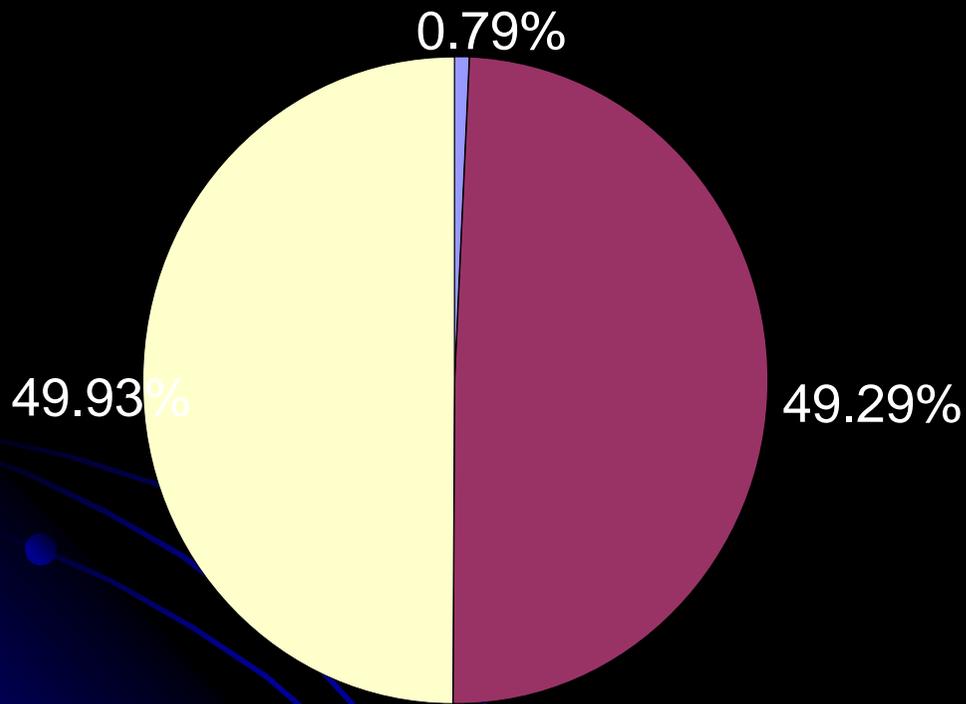
State - 1970



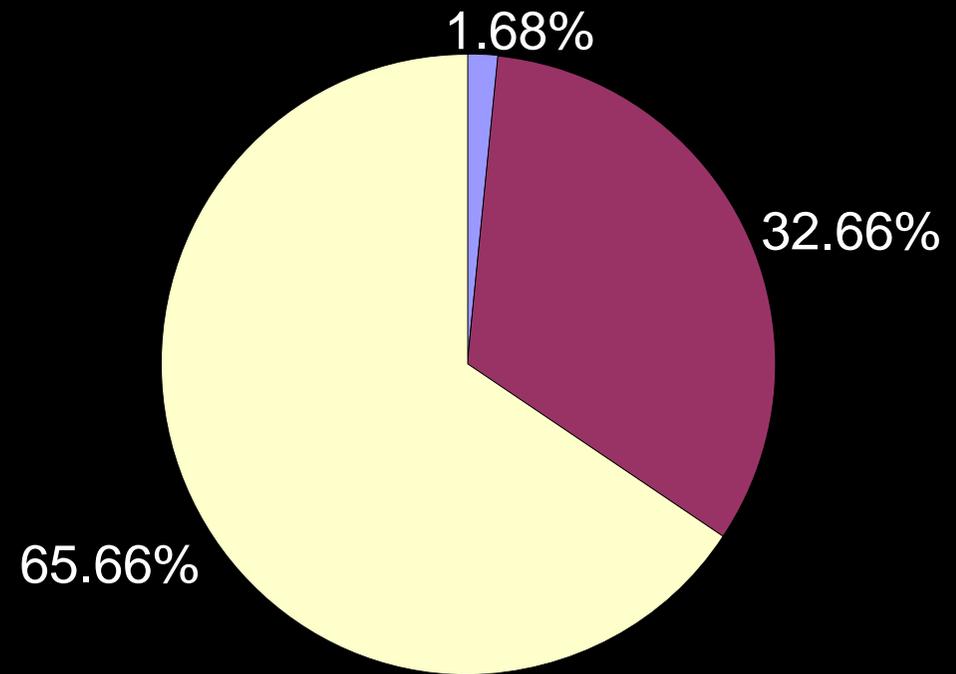
■ Farm ■ Manufacturing ■ Services

# Distribution of Earnings

Southwest Region - 2000

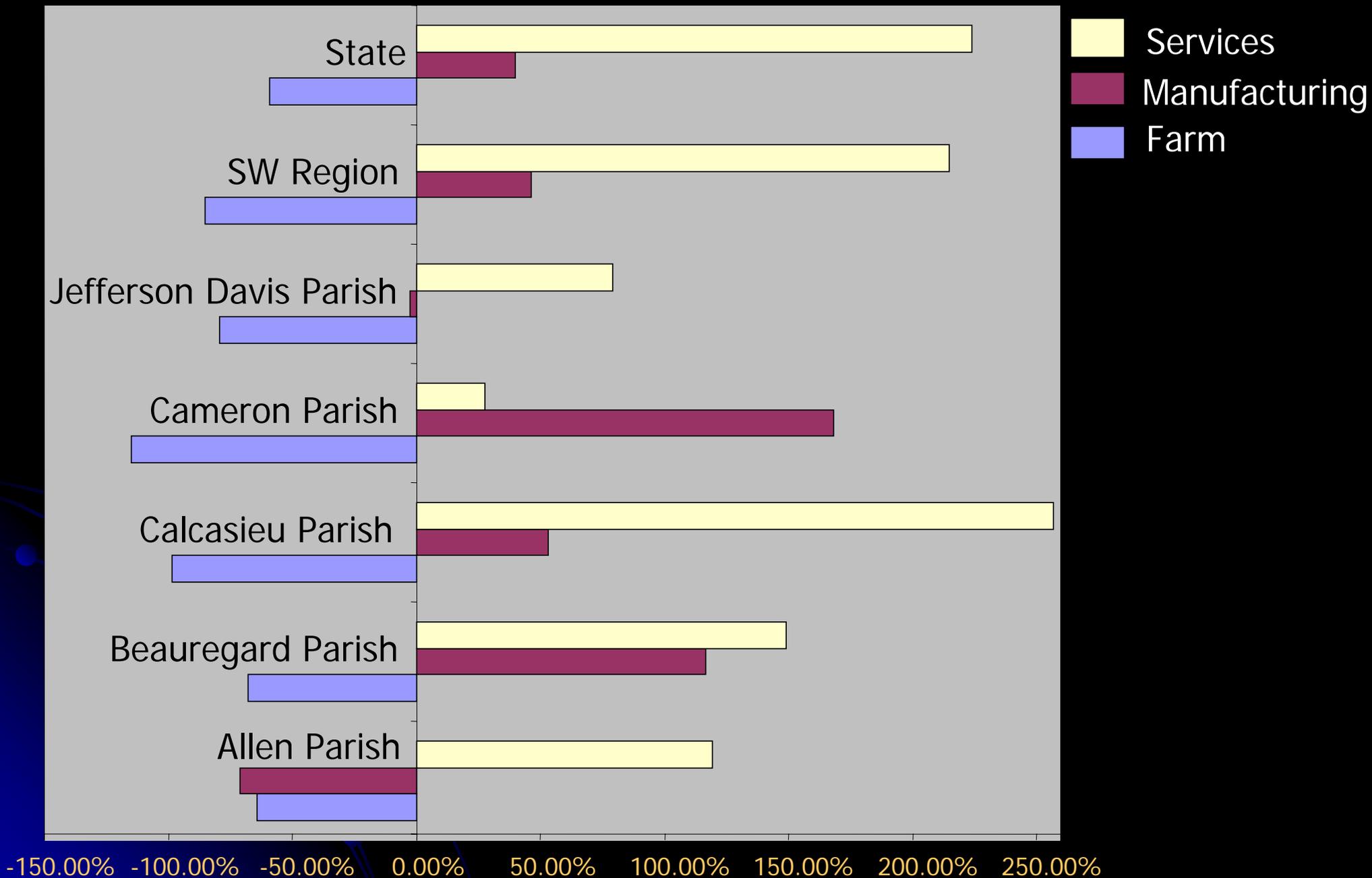


State - 2000



■ Farm ■ Manufacturing ■ Services

# Change in Earnings 1970-2000



Note: Adjusted for Inflation; Source: Bureau of Economic Analysis

# Selected Forest Product Sector Employment

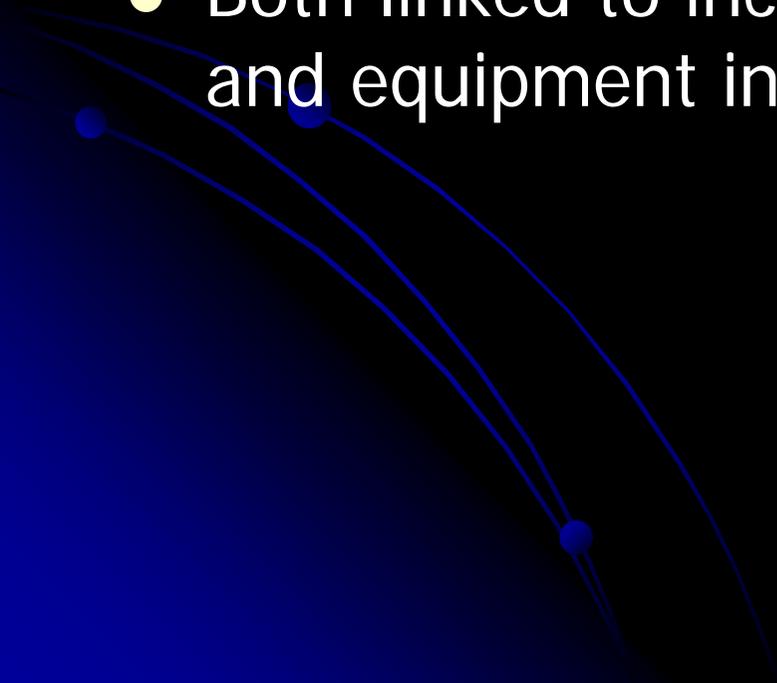
## SIC 24 Lumber and Wood Products

Parish	1970		2000	
	Est.	Emp.	Est.	Emp.
Allen	8	569	10	418
Beauregard	15	166	46	454
Calcasieu	21	659	13	92
Cameron	0	0	1	20-99
Jefferson Davis	4	20-99	1	20-99

## SIC 26 Paper and Allied Products

Parish	1970		2000	
	Est.	Emp.	Est.	Emp.
Allen	1	250-499	0	0
Beauregard	1	250-499	1	500-999
Calcasieu	1	1-4	1	20-99
Cameron	0	0	0	0
Jefferson Davis	0	0	0	0

# Forest Product Sector Summary

- Lumber and Wood Products sector increased number of establishments while decreasing employment
  - Paper and Allied Products sector saw consolidation and stagnant employment
  - Both linked to increased productivity from machinery and equipment in these sectors
- 

# New Forest Product Sector Growth

- Employment Growth of 5% or greater (1998 – 2001) in Forest Product Sectors in the U.S.
  - Wood Preservation
  - Truss Manufacturing
  - Wood Window and Door Manufacturing
  - Other Millwork (including flooring)
  - Prefabricated Wood Building Manufacturing
  - Setup Paperboard Box Manufacturing
  - Coated and Laminated Pkg Paper and Plastic Film Manufacturing
  - Laminated Aluminum Foil Manufacturing for Flexible Manufacturing
- Southwest region contained only 6 establishments in these growth sectors generating less than 15% of total wood and paper product manufacturing employment



Mike Dunn, Phone: (225) 578-0344  
Email: [mdunn@agcenter.lsu.edu](mailto:mdunn@agcenter.lsu.edu)

Matt Fannin, Phone: (225) 578-0346  
Email: [mfannin@agcenter.lsu.edu](mailto:mfannin@agcenter.lsu.edu)

Rich Vlosky, Phone: (225) 578-4527  
Email: [rvlosky@agcenter.lsu.edu](mailto:rvlosky@agcenter.lsu.edu)

Questions????

