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Center of Innovation – Energy

Biomass to Jobs, It's not the Southeast's First Rodeo



Tom Vilsack, Secretary of USDA - June 22, 2011

Biomass is a vital part of America's clean energy future as we work to decrease our dependence on foreign oil. Biomass projects will help grow regional economics, create new jobs and improve and protect our environment. We will need architects and engineers to design these plants, skilled labors to build them and trained technicians to operate them.

Drivers:

From an Economic Development Standpoint

- **Economy** – Forest Industries
- **Mandates** – Europe - creating jobs in the U.S.
- **Energy Security** – Supply disruptions, Middle East



Energy

One Stop Shop

- **Forum** for new and expanding businesses
- Venue to explain state & federal **policies and procedures**
- We work to Expedite the **permitting** process
- **Matchmaking** to form successful collaborations

One Stop Shop

Georgia Offices

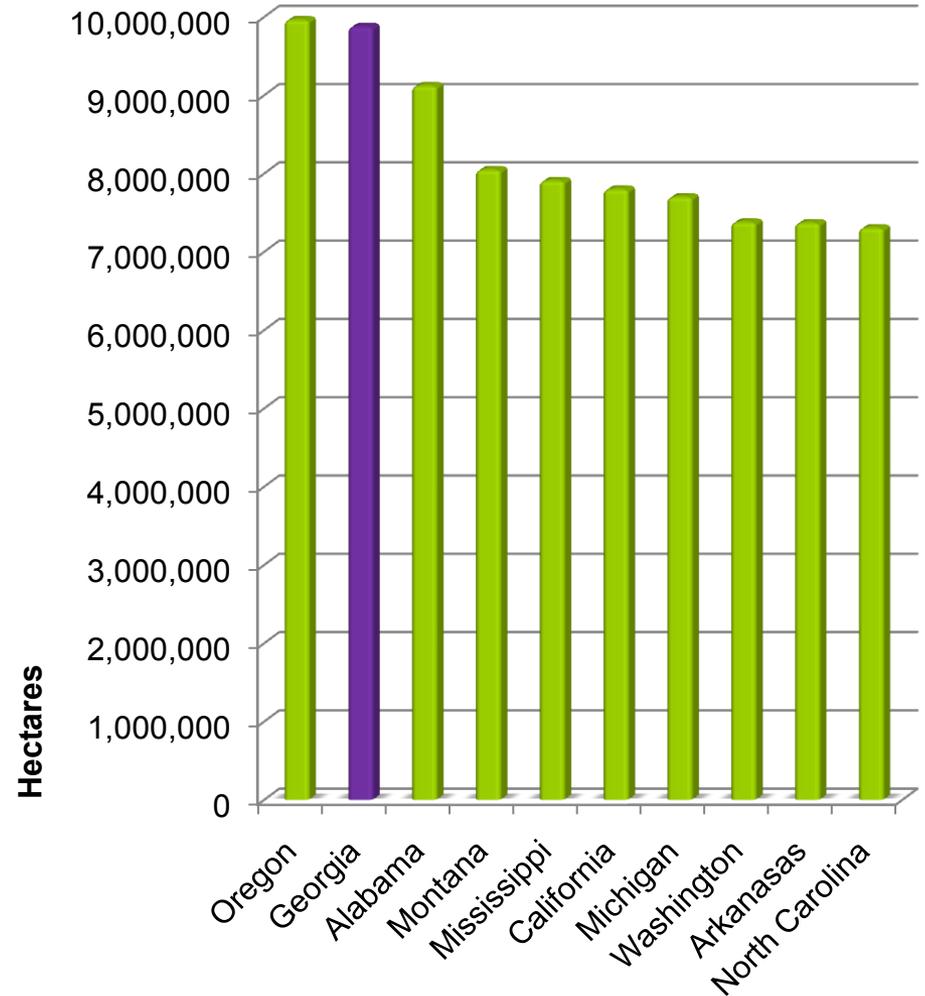
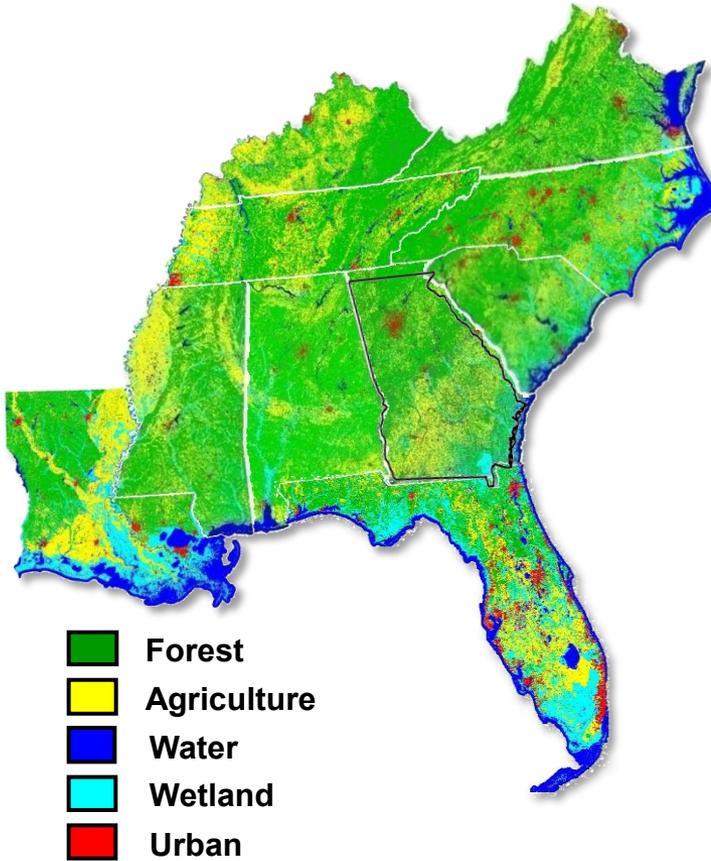
- Center of Innovation
- Governor's Office
- Agriculture
- Natural Resources
- Revenue
- Community Affairs
- Economic Development
- Herty Advanced Materials Development Center
- Fire Marshall
- Forestry Commission

Federal Offices

- Department of Agriculture
- Environmental Protection Agency

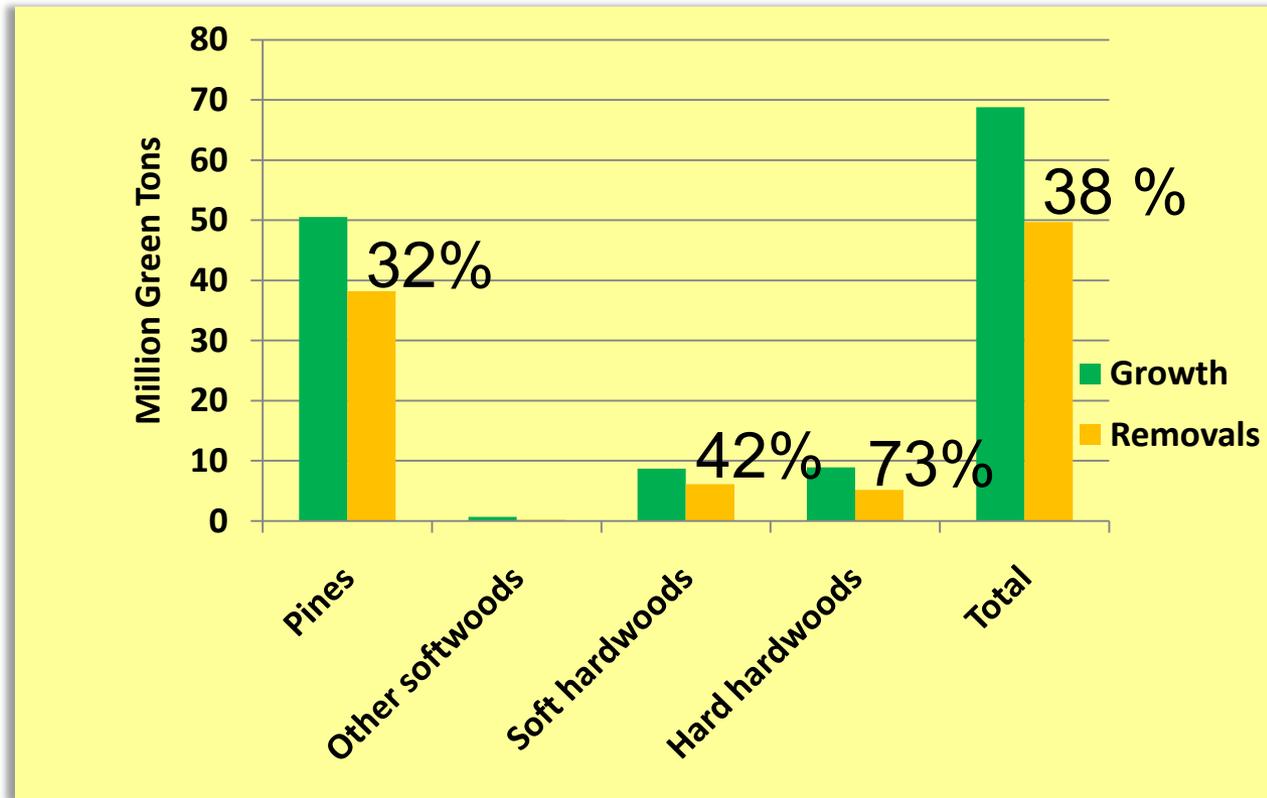
Universities

- University of Georgia
- Georgia Institute of Technology



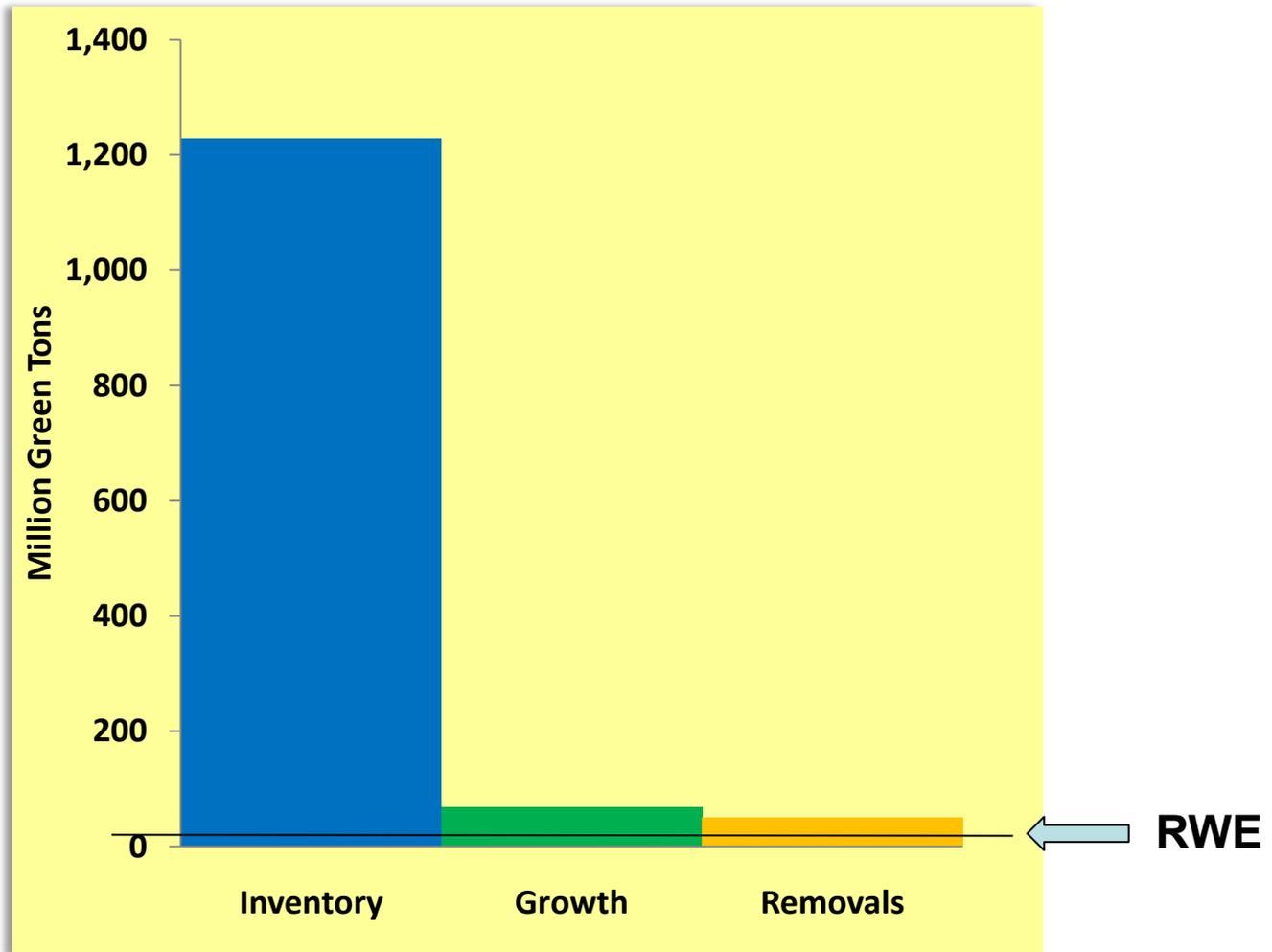
Forestry = Biomass to Energy = Jobs

Growth and Removals of Merchantable Trees



*Between 1998 and 2008 the growth of growing stock on timberland in the state has exceeded removals by an **average of 38.5%** annually or 546,086,970 cubic feet per year*

Forest Inventory



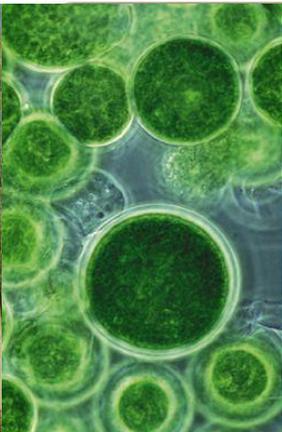
Giant Miscanthus

- Herbaceous, Deciduous, Perennial
- Rhizomes rather than seed
- 11 - 25 Dry tons/acre/year
- 27 - 62 Dry tons/hectare/year
- Height up to 15 feet
- Stems are erect, similar to thin bamboo
- Low environmental inputs
- Alternative non-food use for marginal Land
- Drought tolerant, crowds out weeds
- Carbon neutral
- Nutrients returned to the soil each year



Emerging R & D Trends = Jobs

- UGA Energy Crops
- GaTech Fiber Research



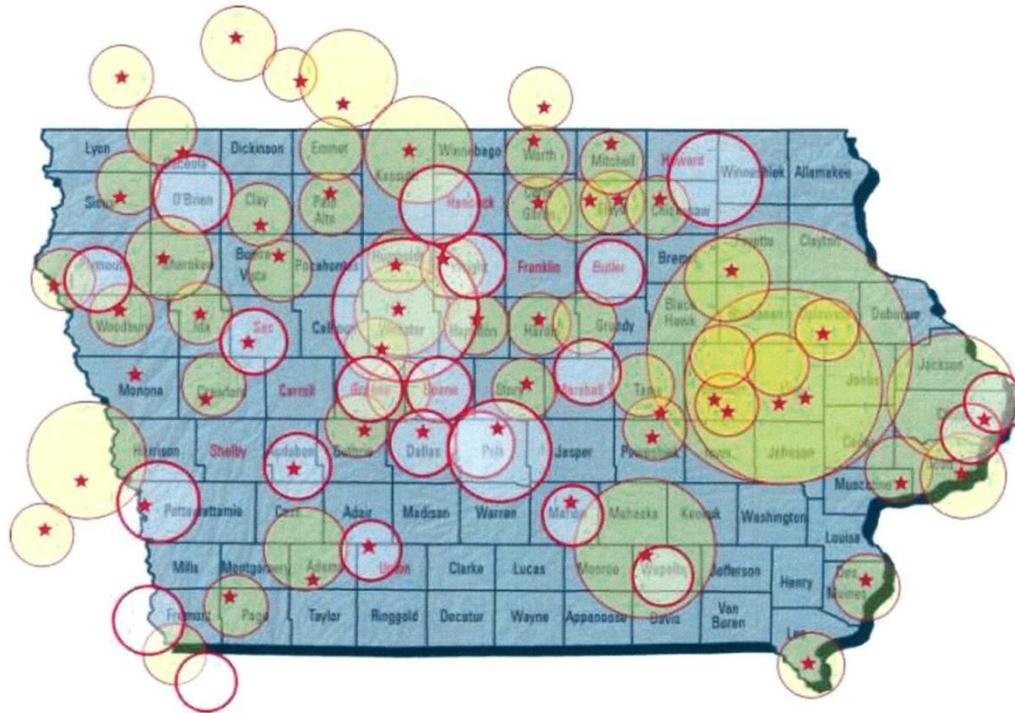
Announced Bioenergy Projects by State

State	Projects
GA	37
CA	34
FL OR PA	18
ME, MI, VA, WI	17
NY	16

Source: Forisk Consulting, LLC



2002-2008: What Happened in Iowa in re: Biofuels?



Let's Compare Today's Corn Ethanol Plant to a Biomass Drop-in Fuels Plant

Corn To Ethanol

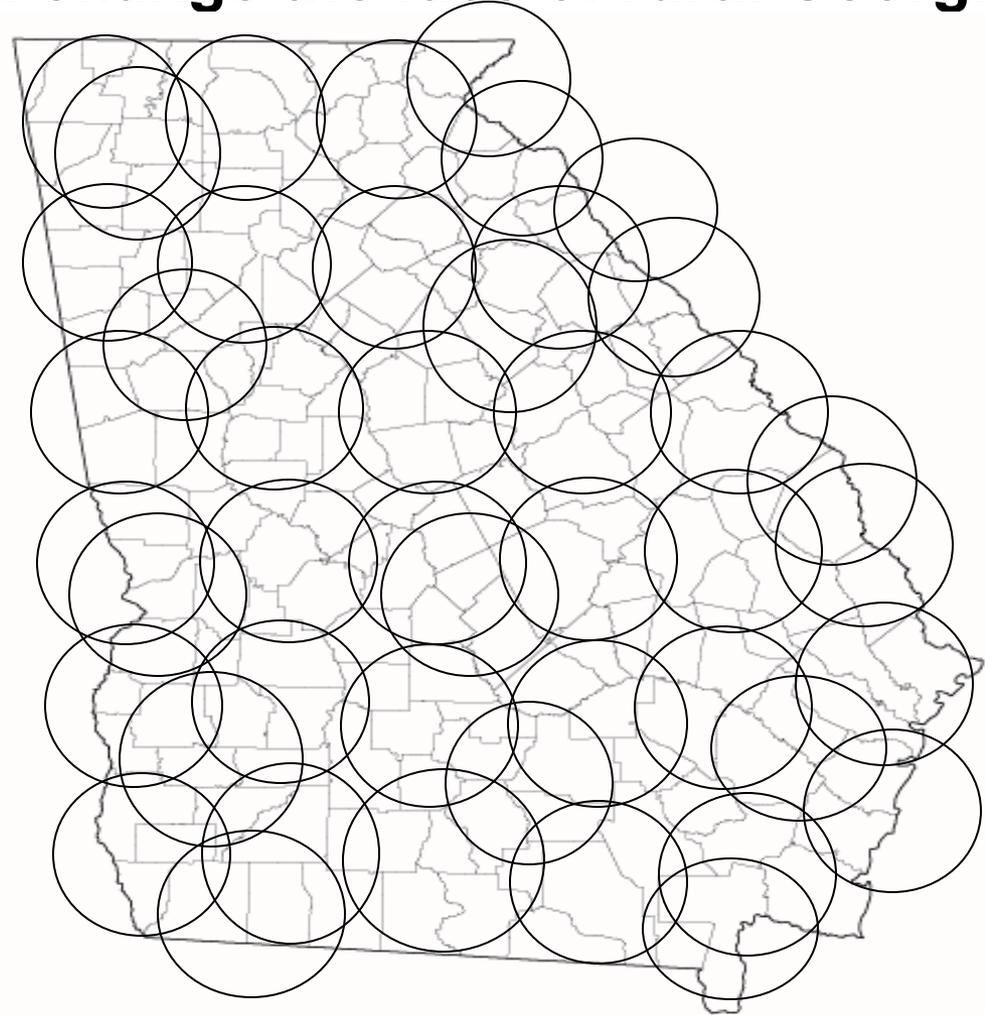
- *Brings in **\$218mil** to the Economy every yr*
- ***262** Fuel trucks leave the plant every week*
- *Employees **60** Direct Jobs*
- ***240** Indirect Jobs*

100 mil gal Biomass Plant



Bio based fuels could change the face of rural Georgia

The state has sufficient biomass to support the development of more than 45 major biomass investments of greater than \$100 Million each.



GREEN =
JOBS



For More Information Contact:



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energy.georgiainnovation.org.

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