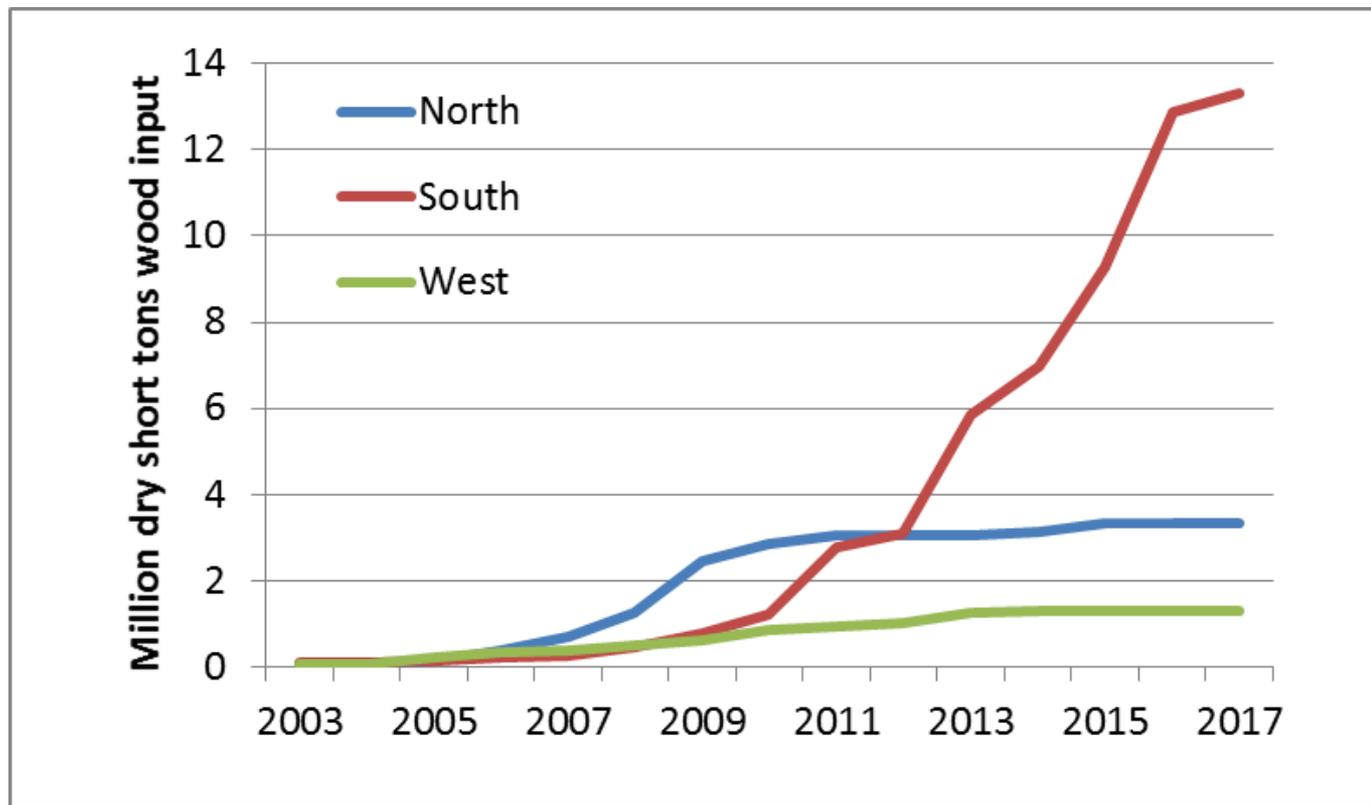


# Economic Perspectives on Pellet Production in the US South

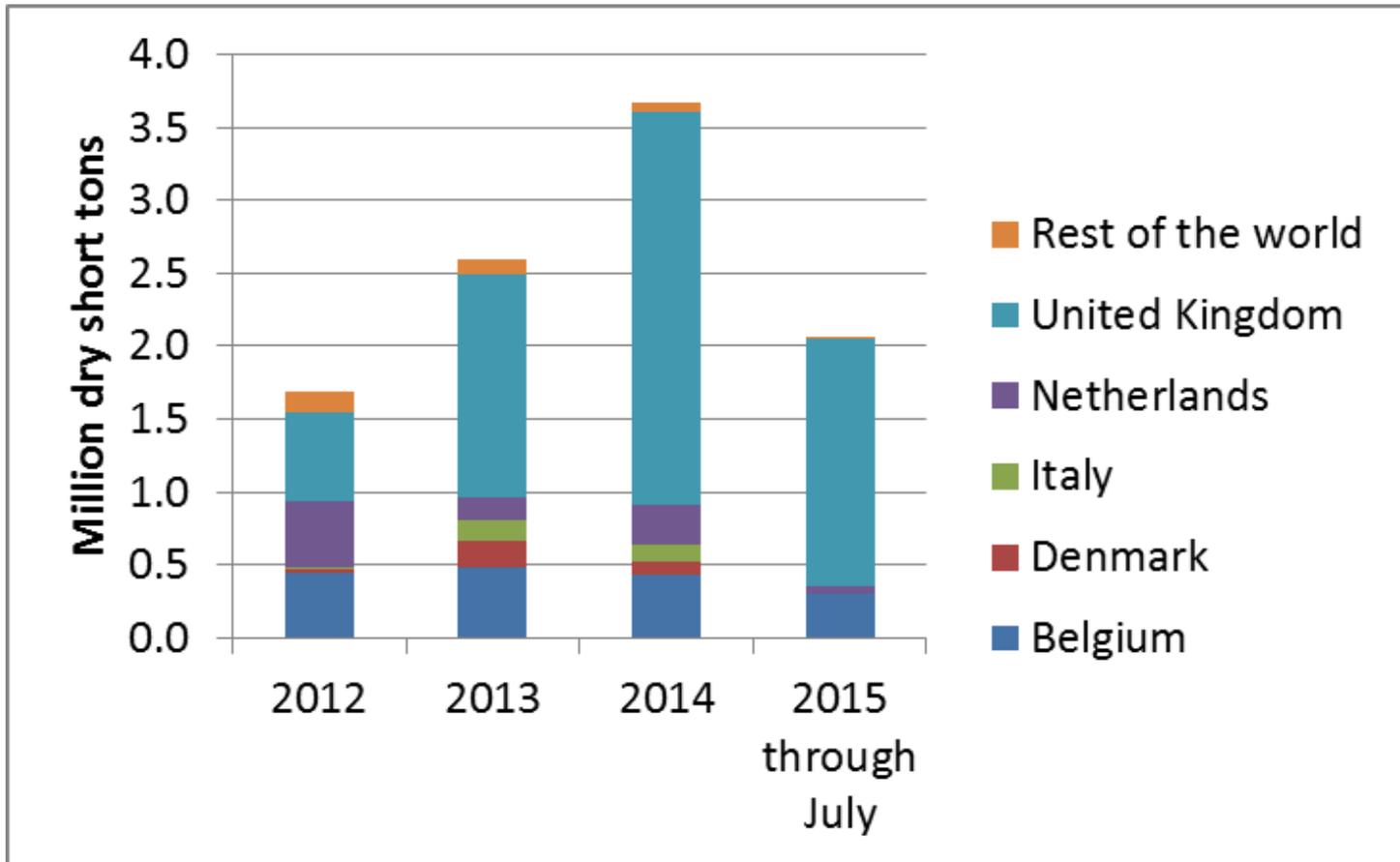
Karen L. Abt  
Research Economist  
Southern Research  
Station  
US Forest Service



# Pellet production actual and projected



# Pellet exports to country by year



# Not talking about...

- Jobs
- Neither an advocate nor a critic
- Normative analysis

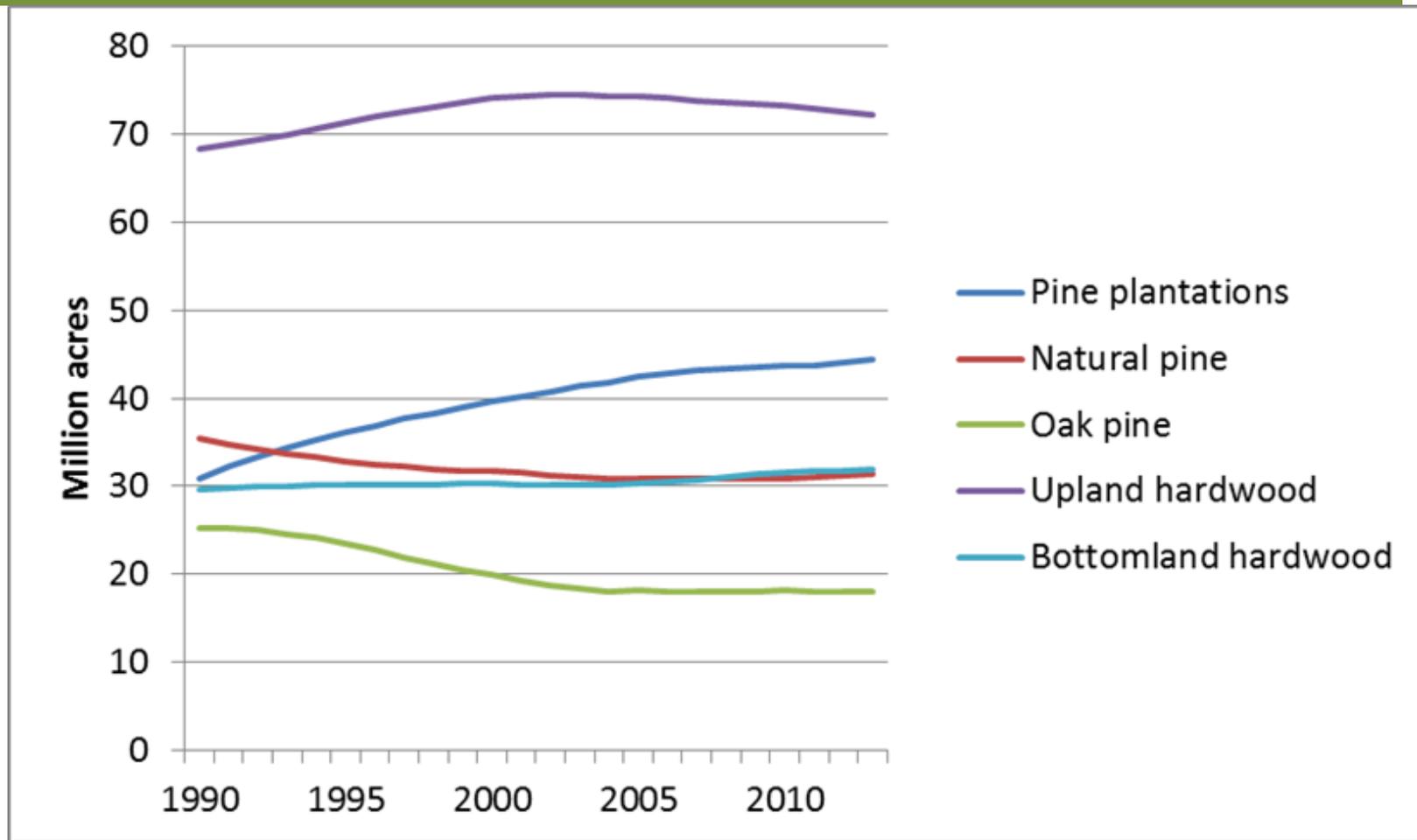
# Talking about Timber Supply...

- Land use choice (agriculture, natural forest, plantation forest, development)
  - Conversion or reversion
  - Delayed sawtimber harvest affecting reforestation
- Age class distribution— affects inventory

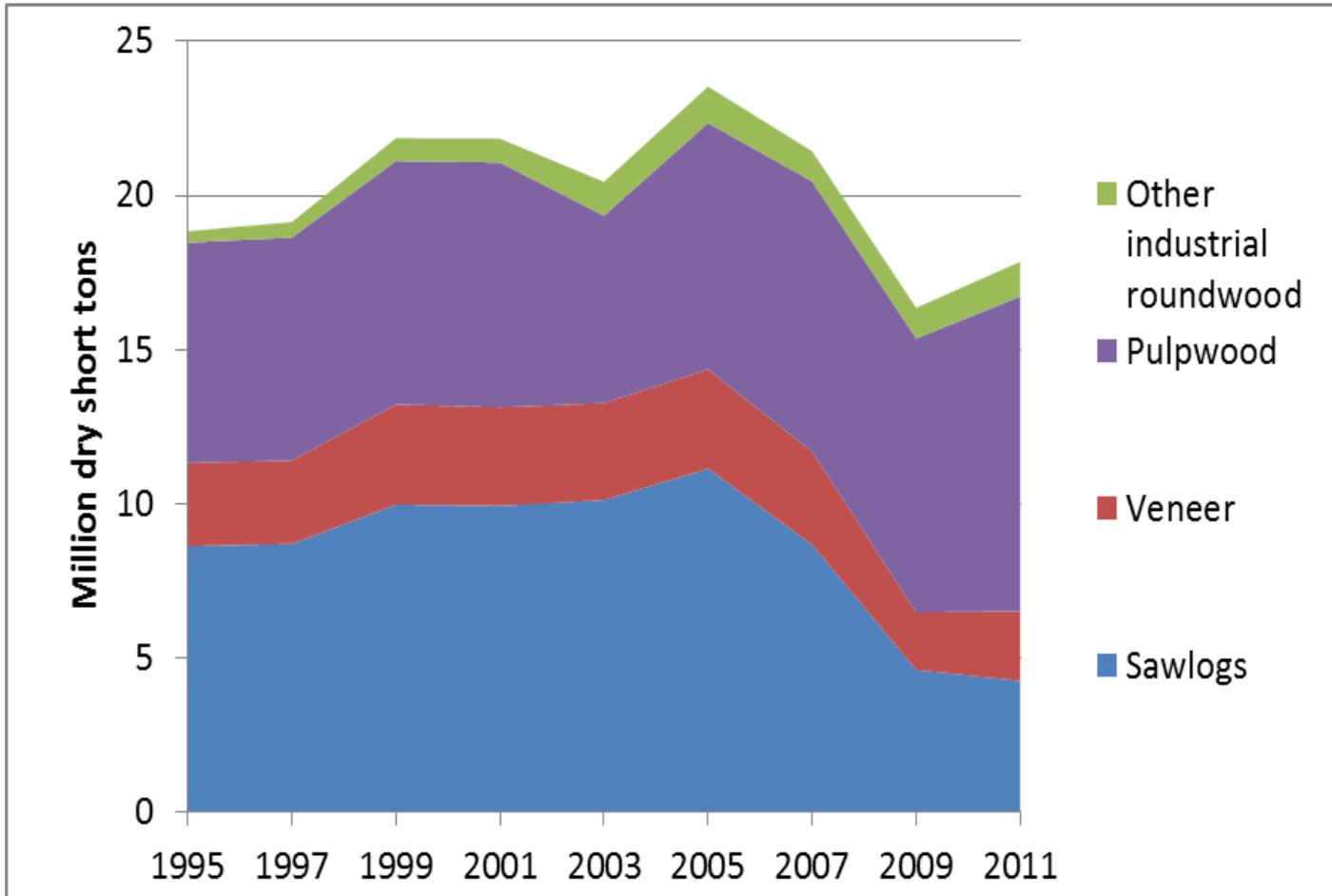
# ...and Competing/Complementary Timber Demand

- Logging residue demand
- Increased softwood pulpwood demand
- Decreased hardwood pulpwood demand

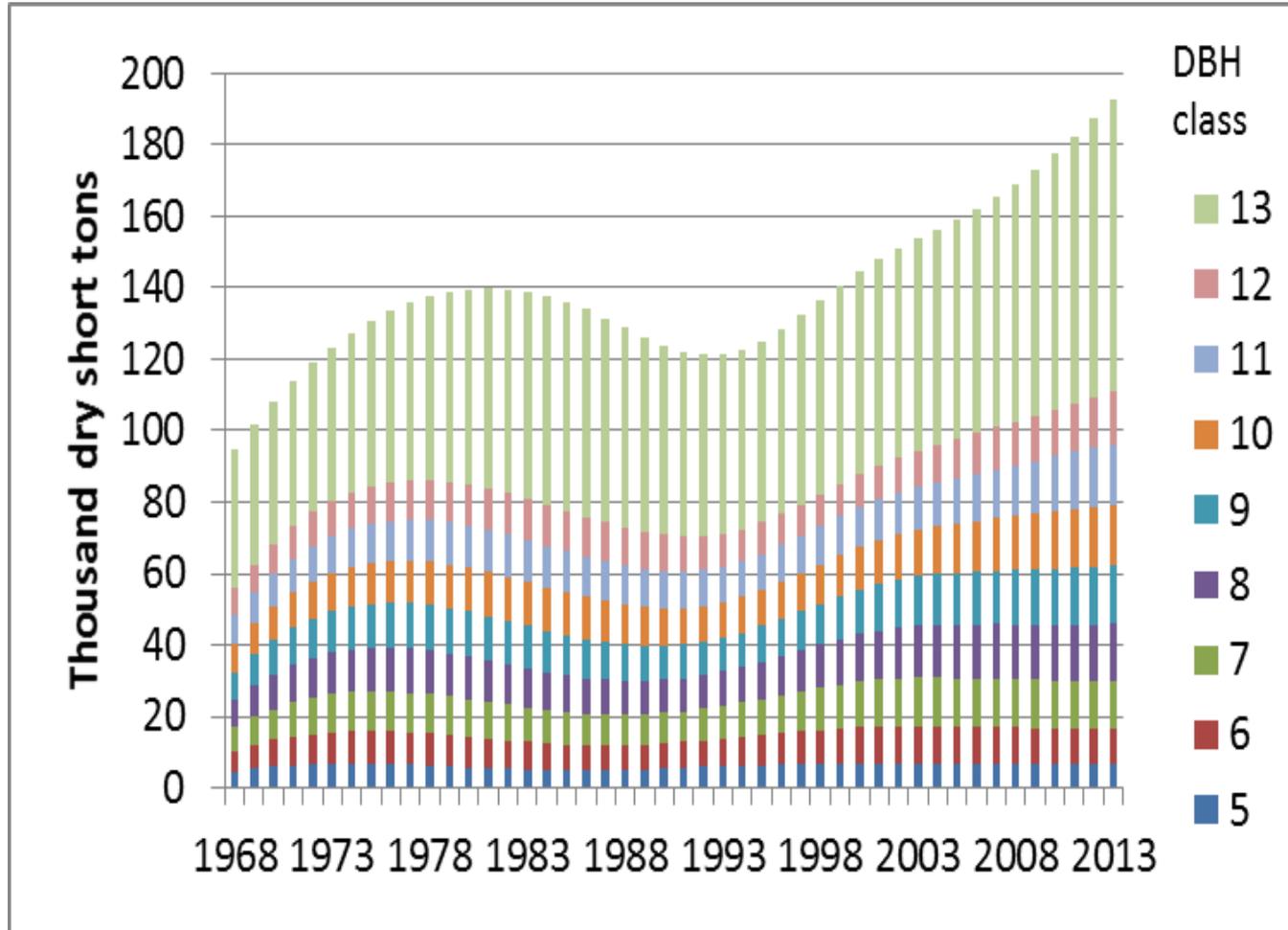
# Supply: Land Use Choice—Planting decisions



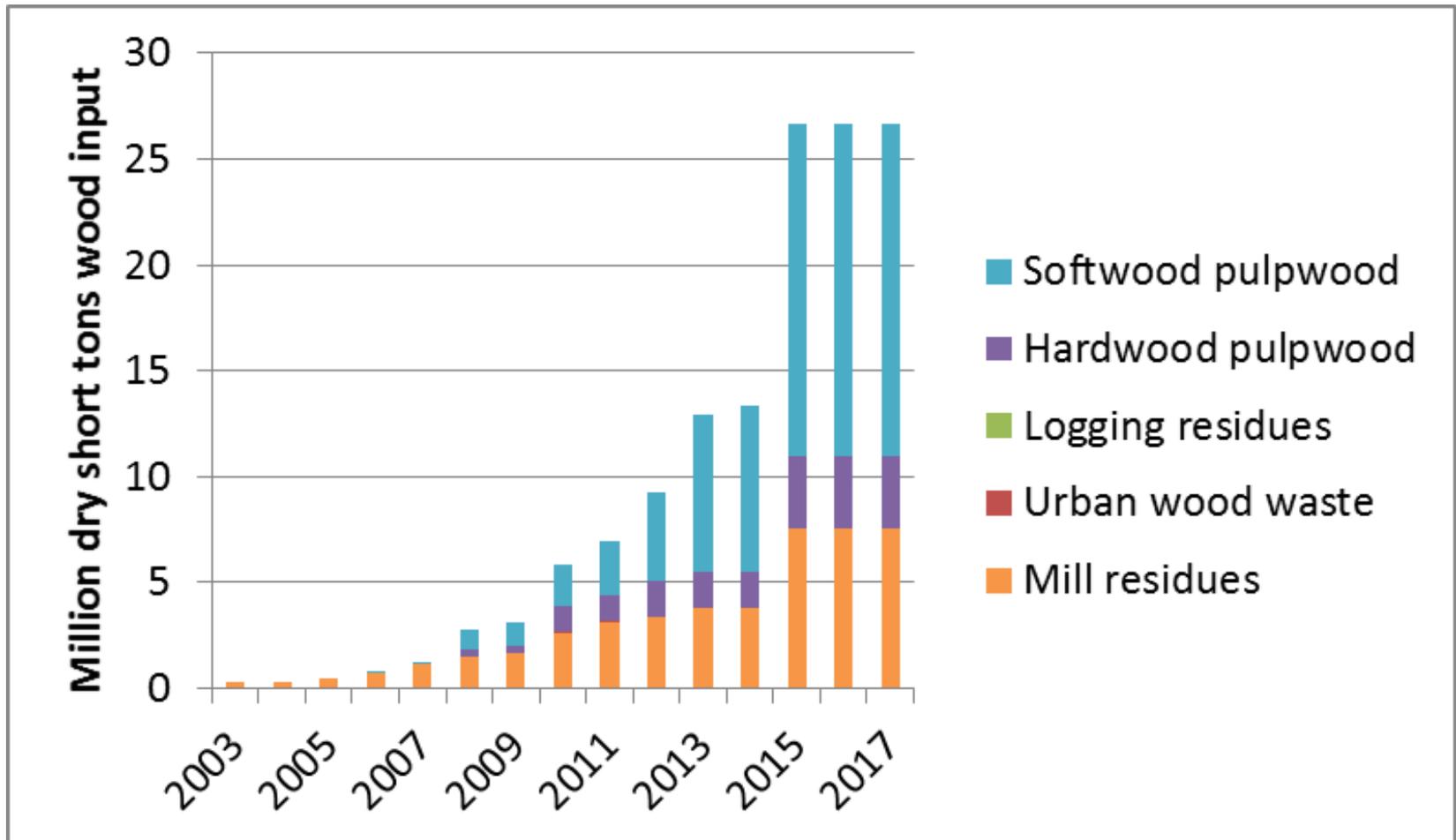
# Supply: Land Use Choice—Delayed Final Harvest



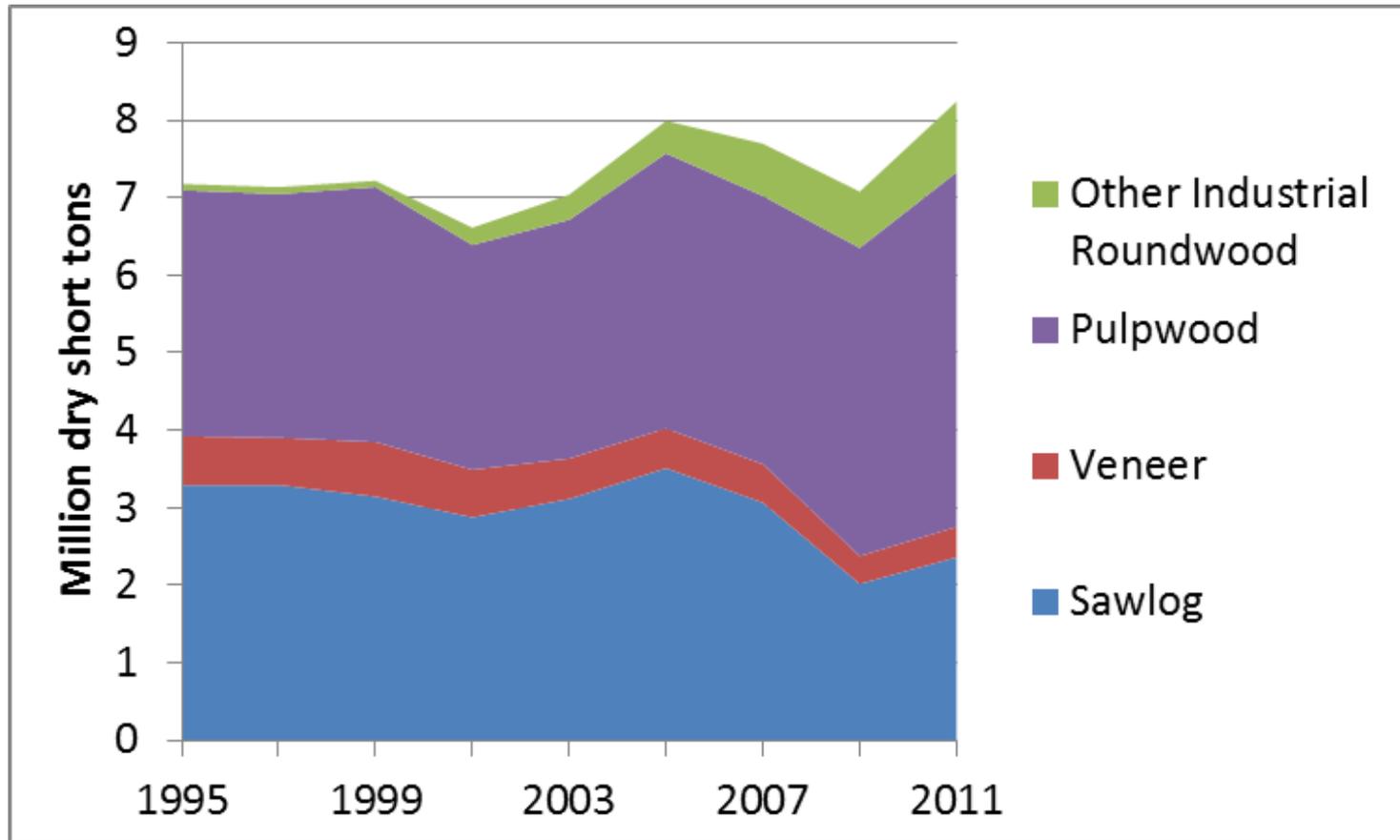
# Supply—Age class distribution (Hugo)



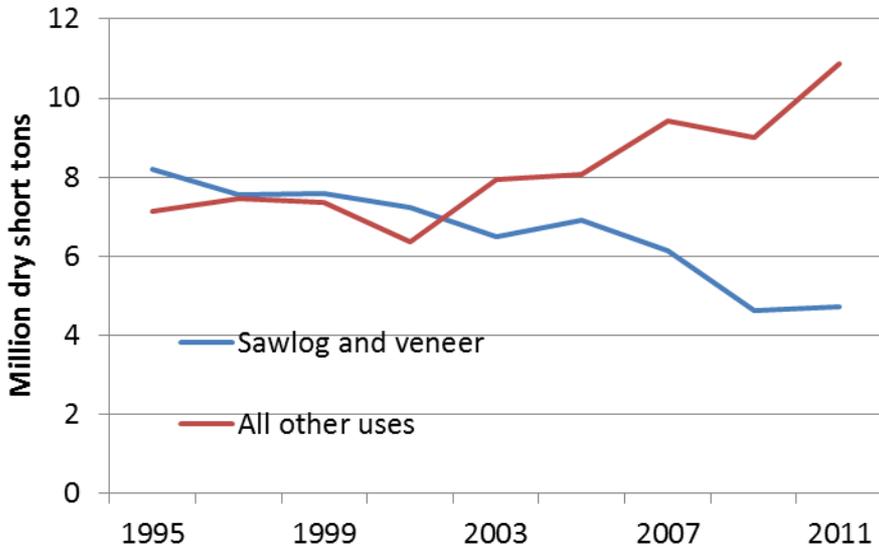
# Demand—Logging Residue



# Demand—Increased Softwood Pulpwood Demand(output effect--OSB)

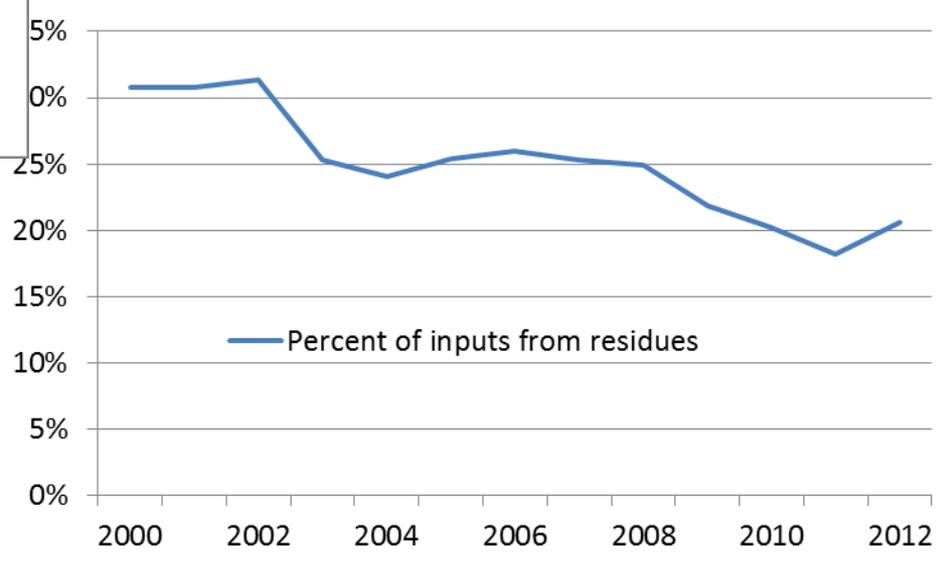


# Demand—Increased Softwood Pulpwood Demand(substitution effect)



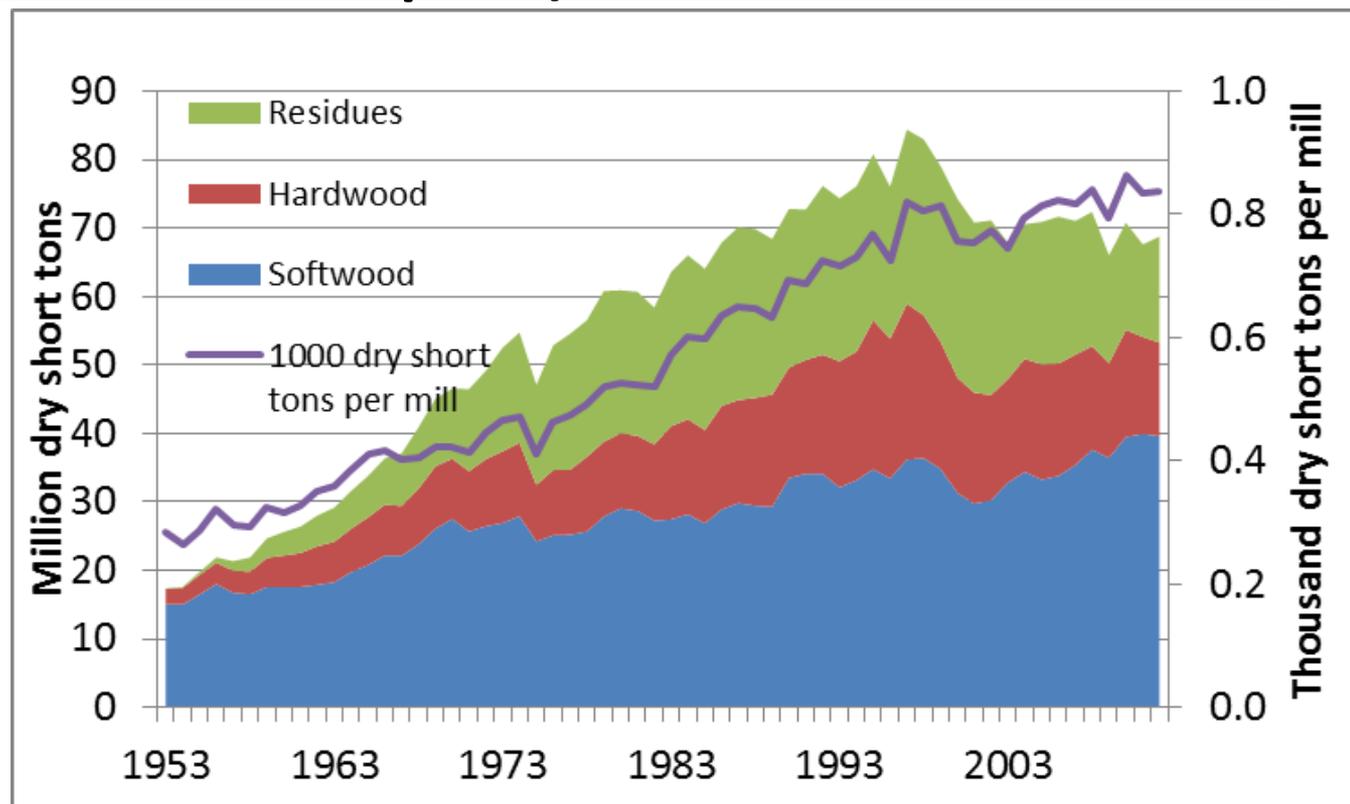
Softwood timber use—note the increase in pulpwood is offset by decrease in sawlog harvest

Percent of pulpmill use from mill residues—note the parallel with sawlog use above



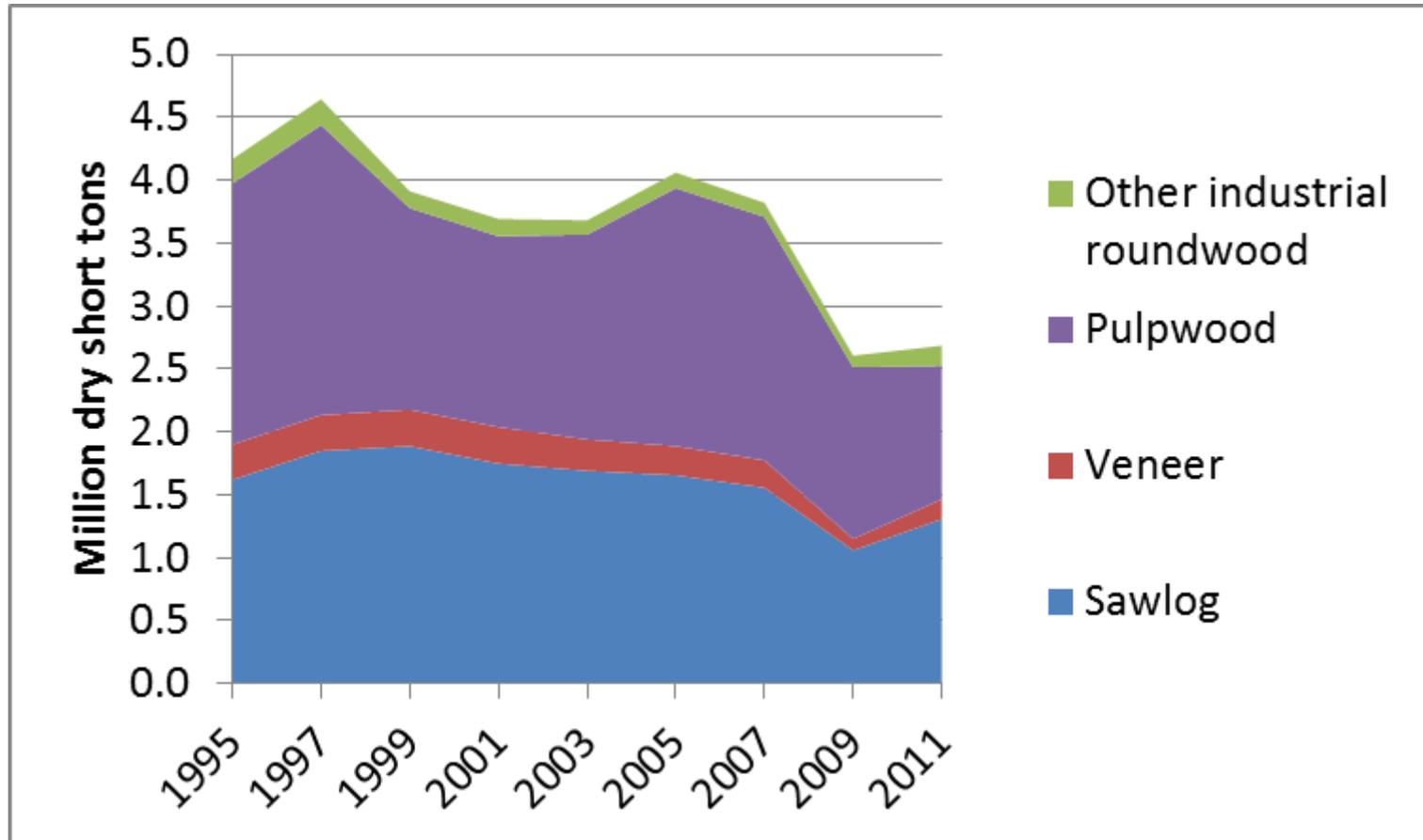
# Demand—Increased Softwood Pulpwood Demand(substitution and output)

- Paper production flat
- HW down after 1999 due to electronic media
- SW up due to increased demand for packaging and fluff pulp



Pulp mill inputs 1953-2012

# Demand—Decreased Hardwood Pulpwood Demand (NC hw)



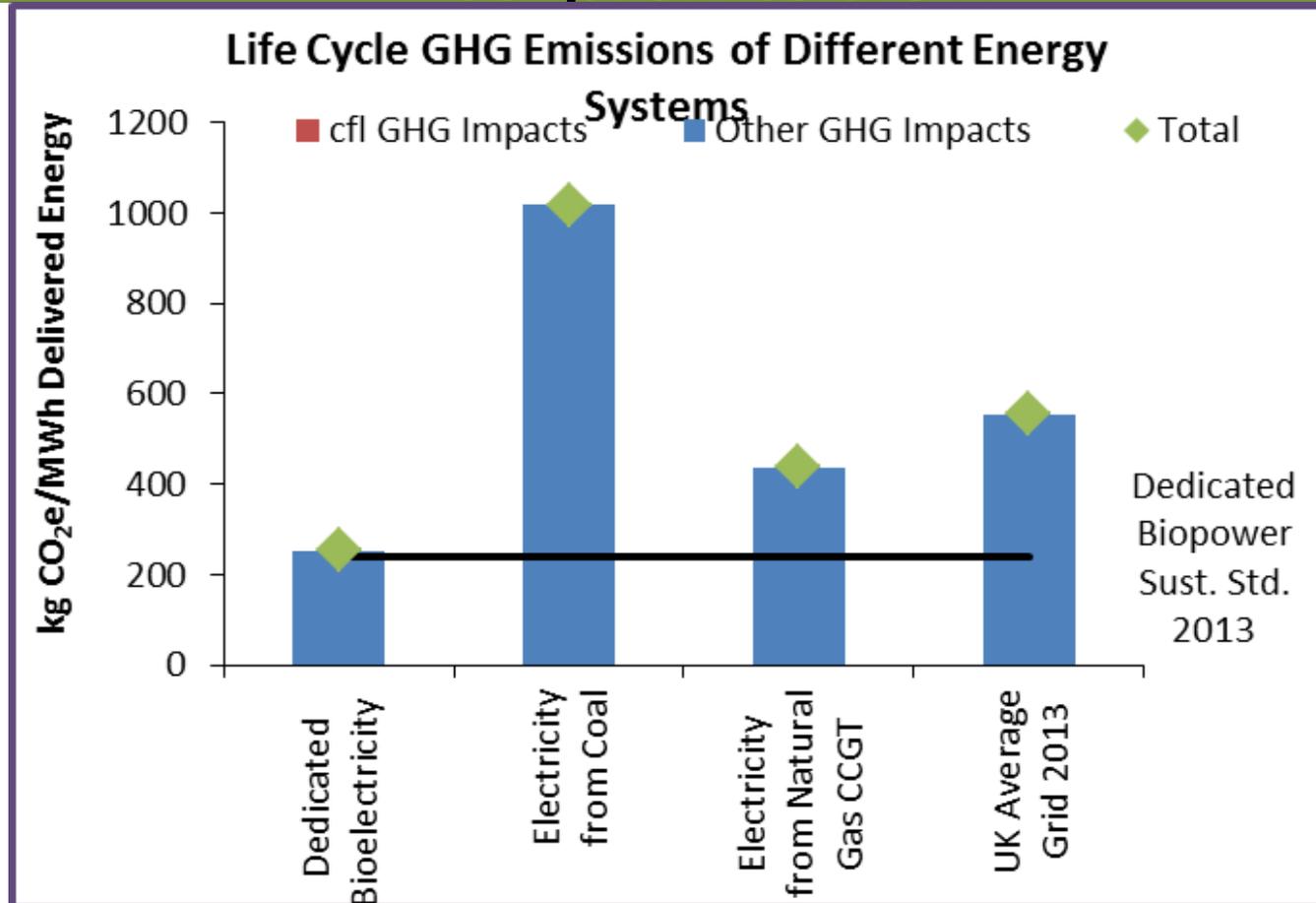
# Market Responses

- Included in market models
- Increased pulpwood demand for pellets will lead to price increases—how much depends on the land and inventory available, which depends on past and present pulpwood demand for nonpellets
- Effects are long lasting, but assumed increased planting eventually brings prices down

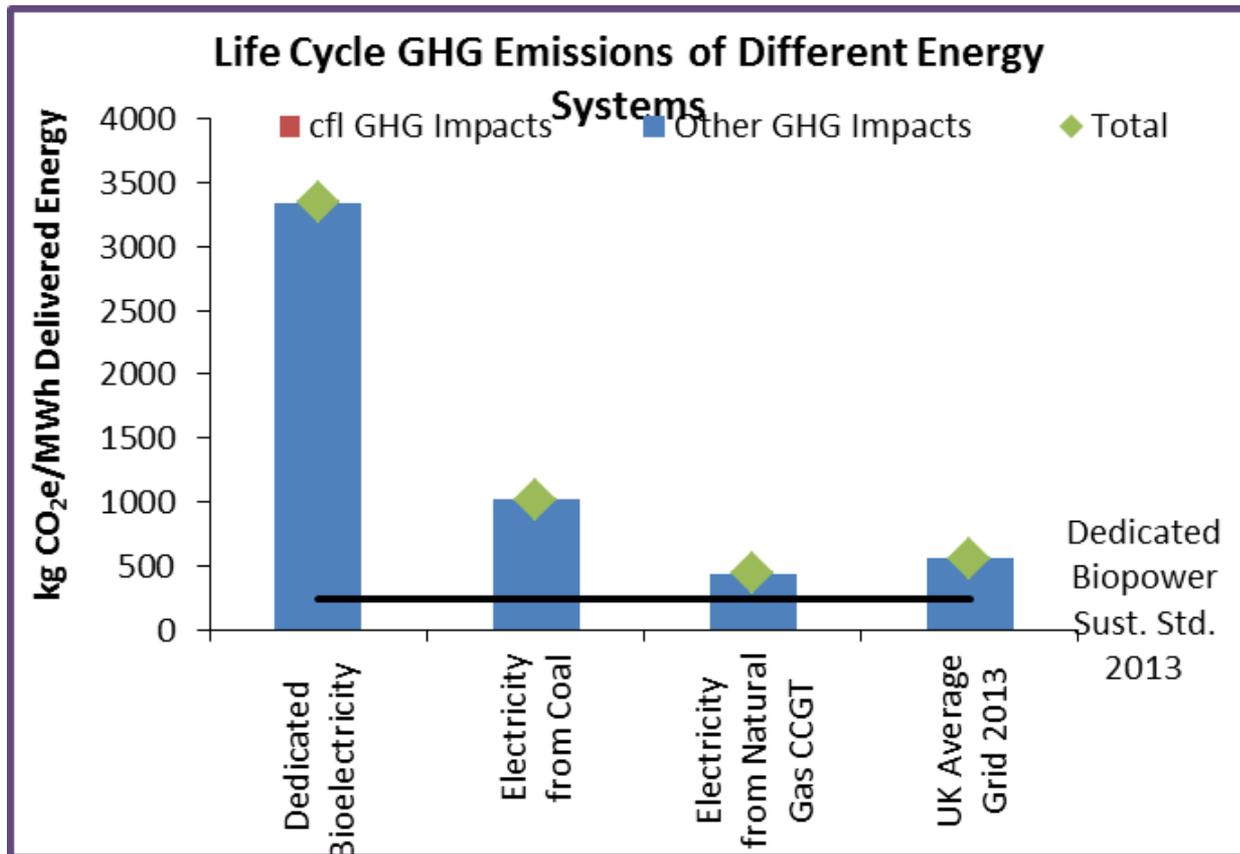
# Elephant in the Room—GHG emissions

- If residues only, then lower emissions, but no land use response.
- SW pulpwood use—GHG reduction of plantations is favorable and reflects a land use response. But, this could lead to indirect land use change elsewhere. Some displacement of existing uses.
- HW pulpwood use—GHG reduction of hardwood harvest (and other sustainability measures) are debatable. No land use response expected. Little displacement of existing uses.
- Domestic GHG emissions likely lower than exported pellets.

# Is wood good enough? Yes, if harvesting natural pine and converting to plantation



# Is wood good enough? Not if harvesting hardwood stands at 60 years old rather than 70 years old



# Summary of Economic Perspectives

- Supply matters (land area and age class)
- Demand matters (logging residues, softwood pulpwood, hardwood pulpwood)
- Harvest for pellets will affect timber markets (price, inventory and land area) but effects will be scaled to size of pellet market
- Local effects now; regional effects if pellet production increases
- Effect on land area and broad management type is crucial for evaluation of GHG impacts (and perhaps other sustainability criteria)

# Questions?

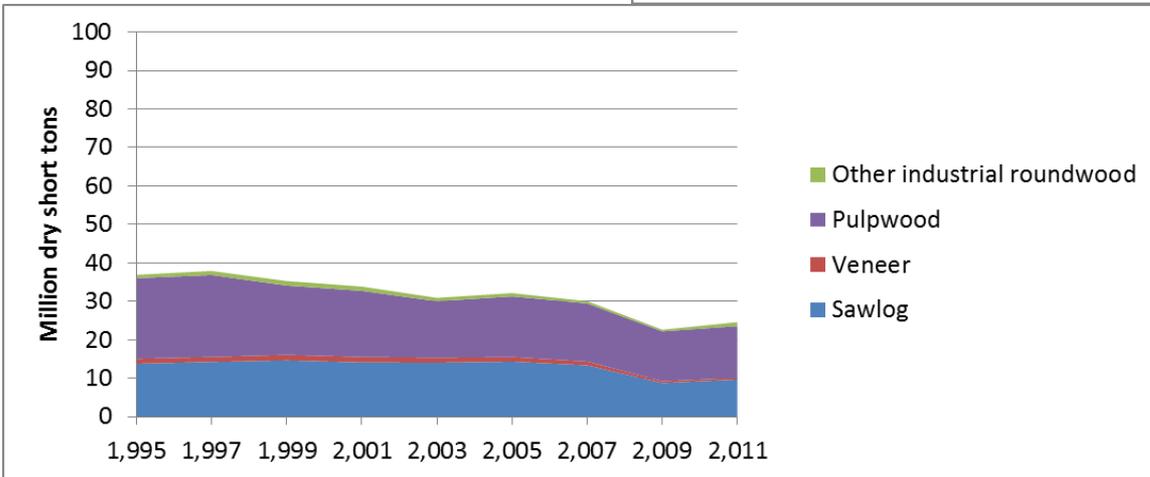
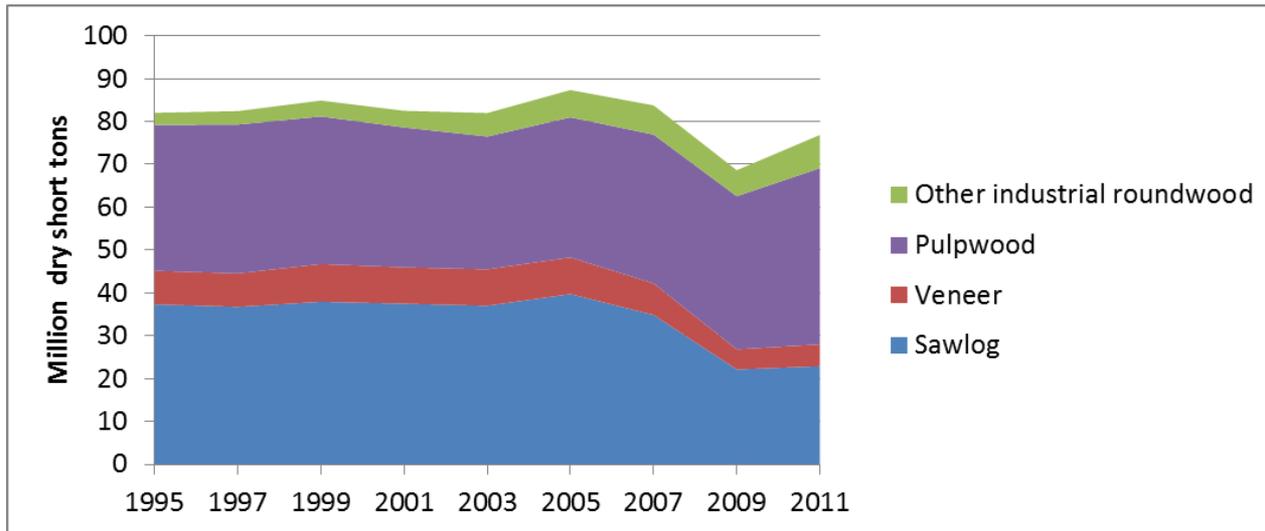
Thanks for listening.

Karen Abt

kabt@fs.fed.us

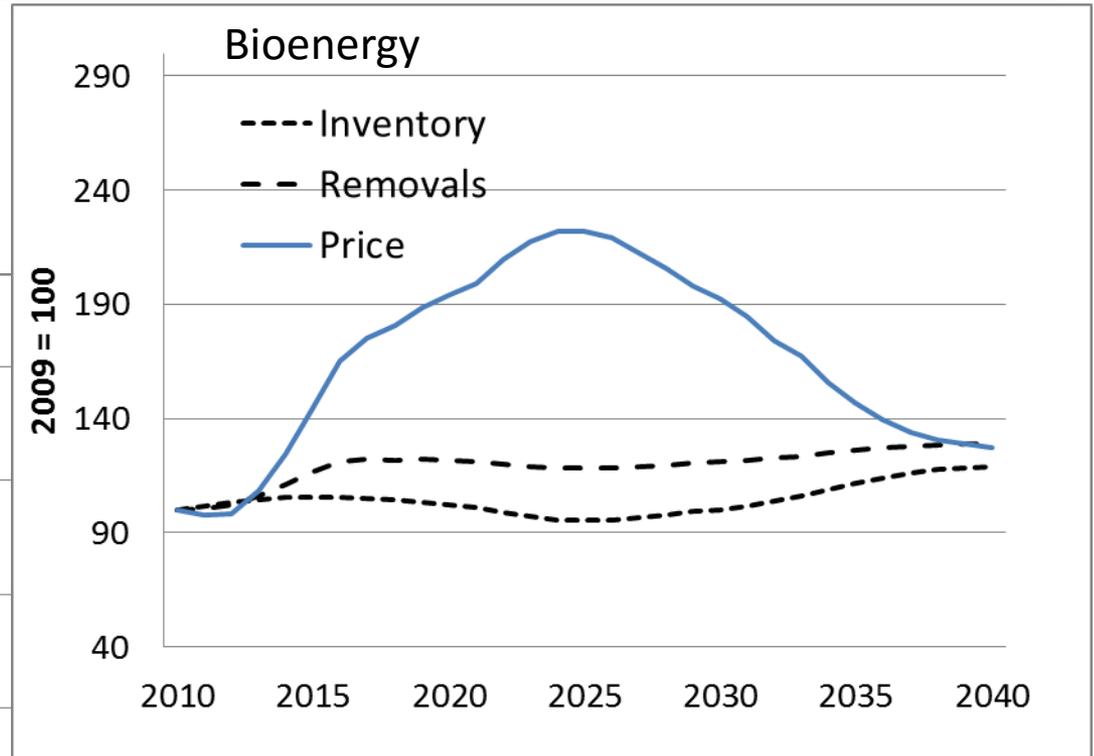
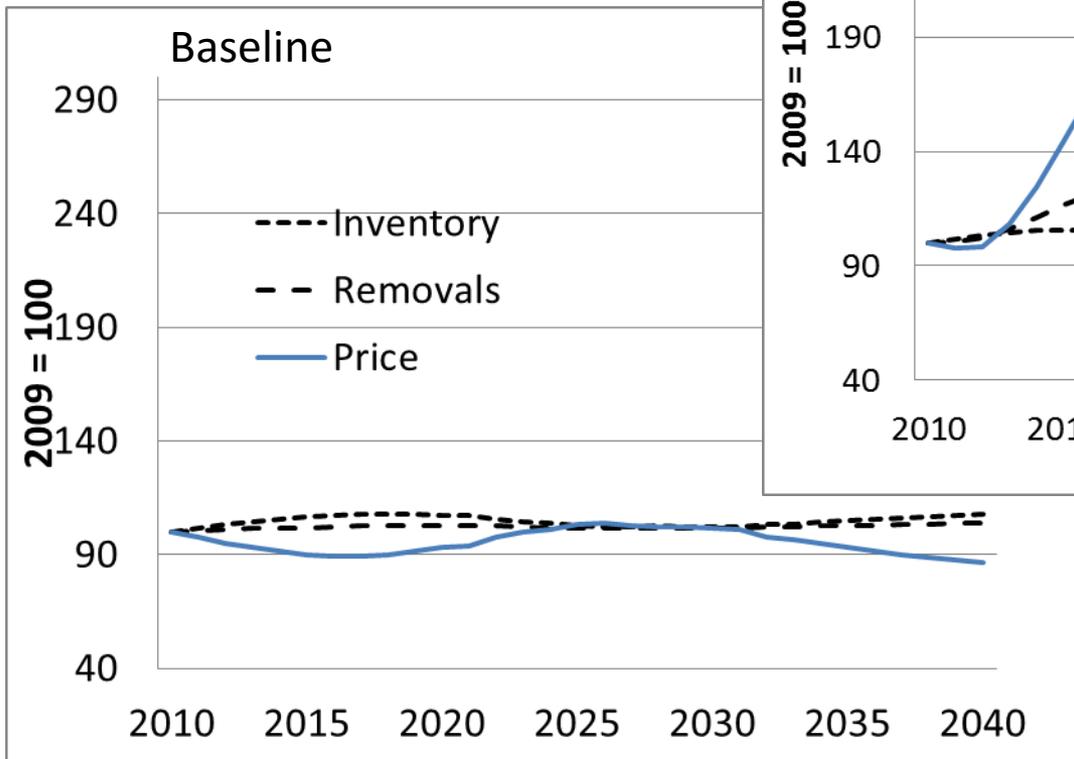
# Southwide Timber Production

Softwood sawlog production shows the drop from the housing crisis



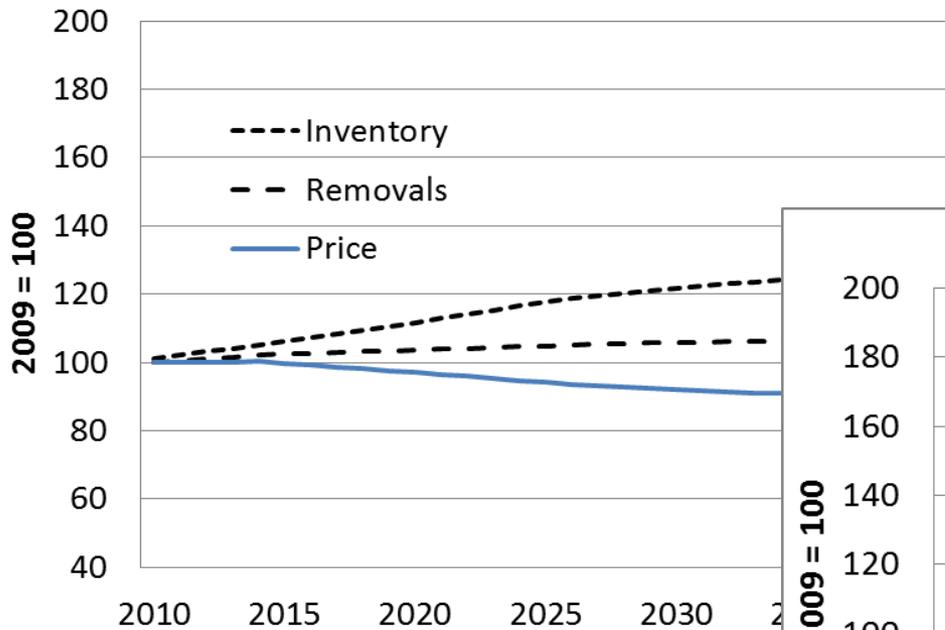
Hardwood pulpwood production shows the decline due to computer use

# Southwide Projections of Pine Pulpwood Market

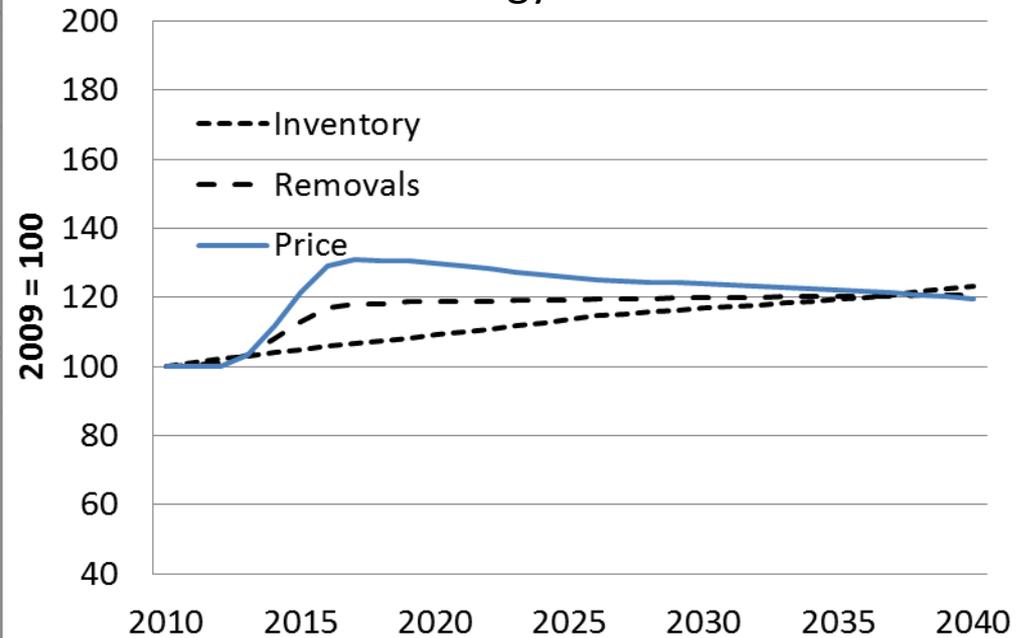


# Southwide Projections of Hardwood Pulpwood Market

## Baseline Scenario



## Bioenergy Scenario



# Projections of Timberland Area and Type

