

Kennebec Woodland Partnership Handouts Friday Oct 22

Charts by MFS (mostly) for
Lloyd C. Irland

Yale Univ and The Irland Group

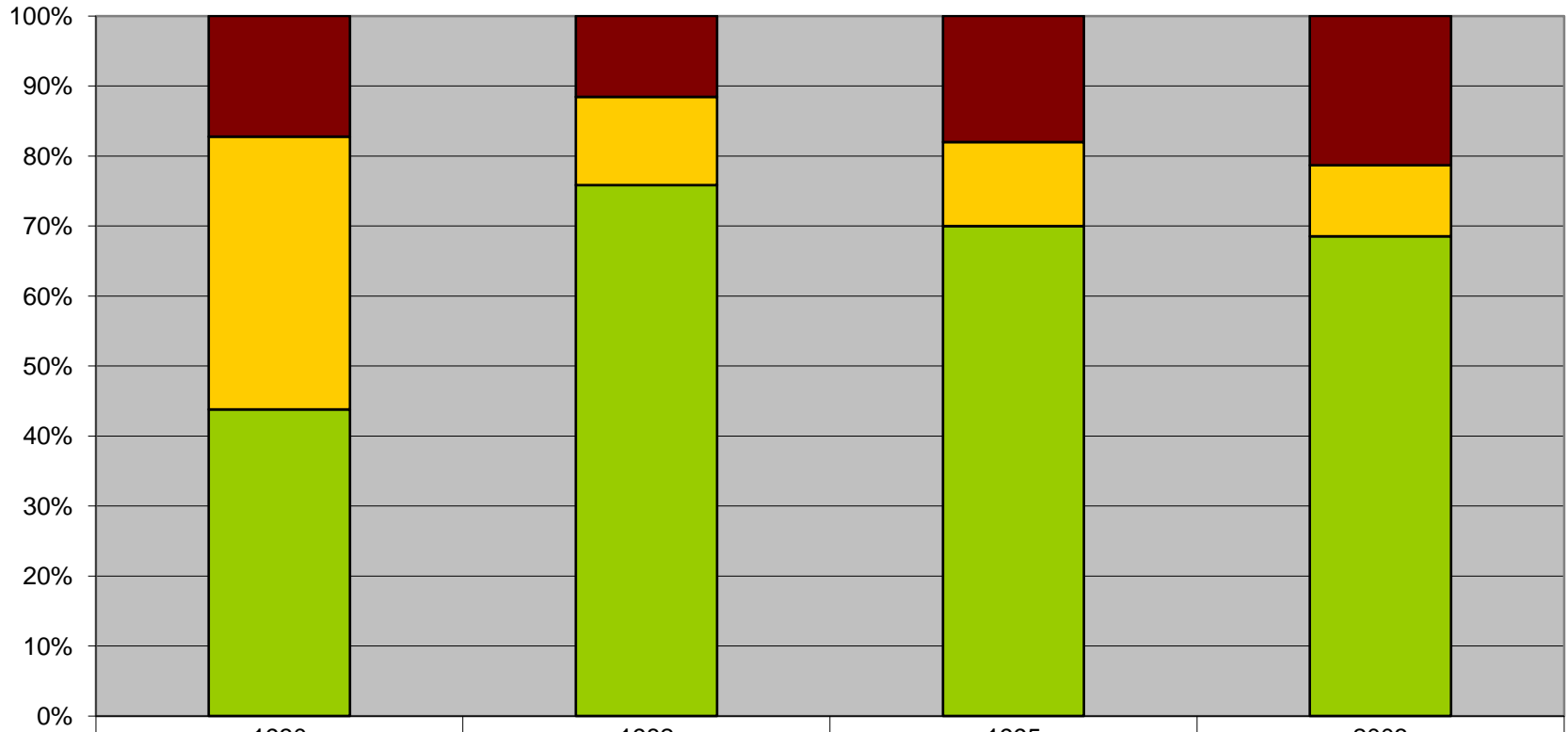
Contents

- History
- Production and Resource trends
- Global Pressures on Kennebec County
- Implications

History

- In 1880, Kennebec was one of 3 most deforested counties in Maine
 - Access--RRs crossing Rivers
 - Concentration of manufacturing
 - Early development of farming
- Result:
 - Young forest in 1900
 - Restocking as Agr declined
 - Abundant early successional species/conditions

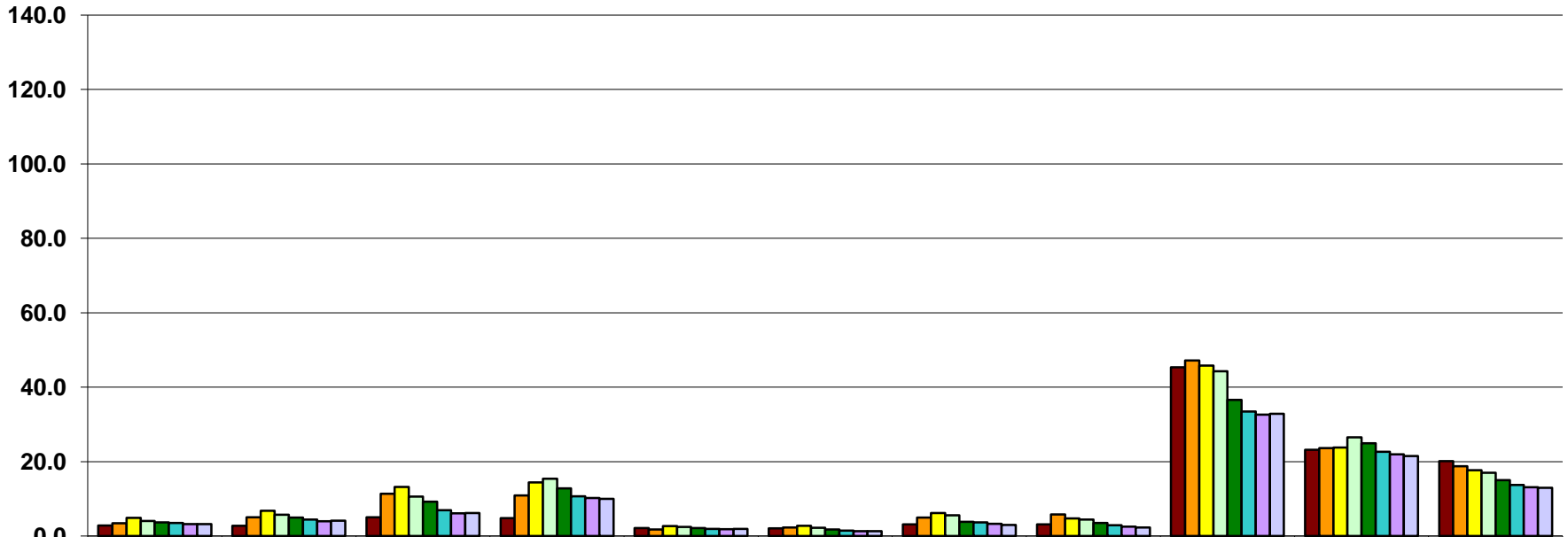
**Major land uses in Kennebec County for selected inventory years,
data table (thousand acres) and chart (percentage distribution)**



	1930	1982	1995	2003
■ Development	96	64	100	118
■ Agricultural	216	69	67	56
■ All Forestland	243	418	389	378

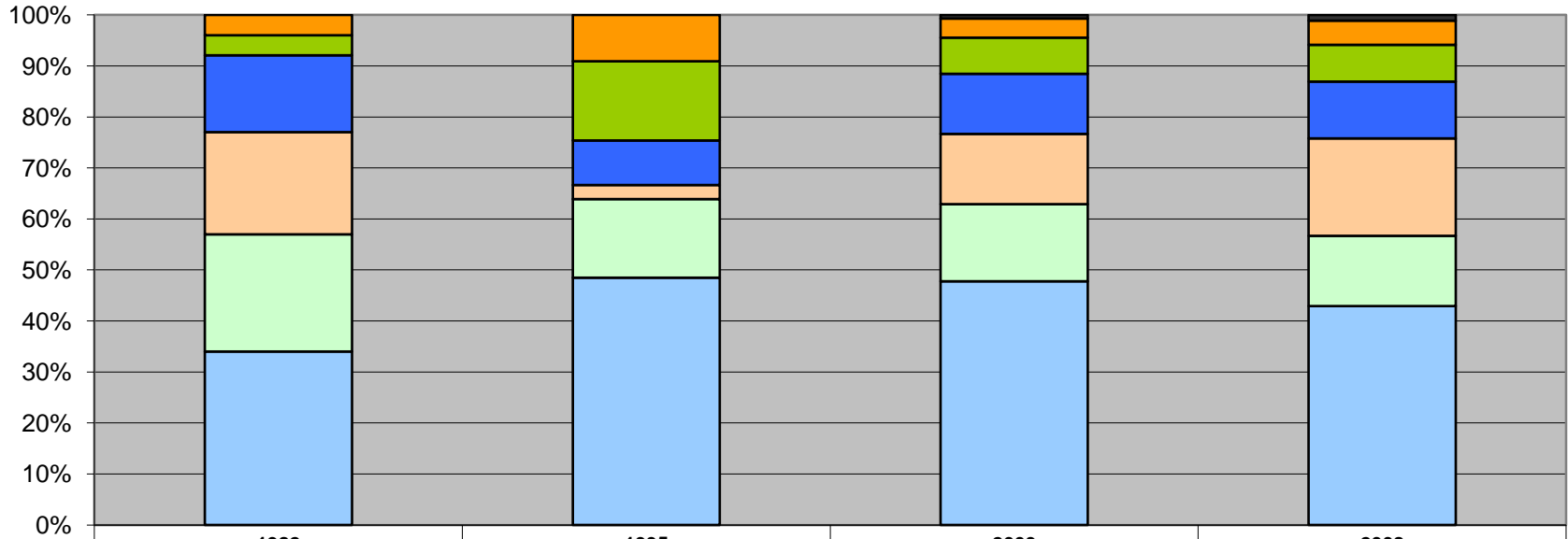
Inventory Year

Transition in Timberland acres per capita for the 10 smallest counties and statewide (1890, 1930, 1960, 1970, 1982, 1995, 2003, and 2008)



	Kennebec	Knox	Lincoln	Waldo	Androscoggin	Cumberland	Sagadahoc	York	Franklin	Oxford	Statewide
■ 1890	2.9	2.8	5.1	4.8	2.1	2.1	3.2	3.2	45.3	23.2	20.1
■ 1930	3.4	5.0	11.4	10.9	1.8	2.3	5.0	5.8	47.2	23.7	18.8
■ 1960	4.9	6.8	13.2	14.4	2.7	2.8	6.2	4.8	45.8	23.8	17.7
■ 1970	4.1	5.7	10.6	15.4	2.5	2.2	5.6	4.5	44.3	26.5	17.0
■ 1982	3.7	5.0	9.2	12.8	2.1	1.8	3.8	3.5	36.6	25.0	15.1
■ 1995	3.5	4.5	7.0	10.7	2.0	1.5	3.7	2.9	33.5	22.6	13.7
■ 2003	3.2	4.0	6.2	10.3	1.8	1.4	3.3	2.5	32.7	21.9	13.1
■ 2008	3.2	4.1	6.2	10.0	1.9	1.3	3.0	2.3	32.9	21.5	13.0

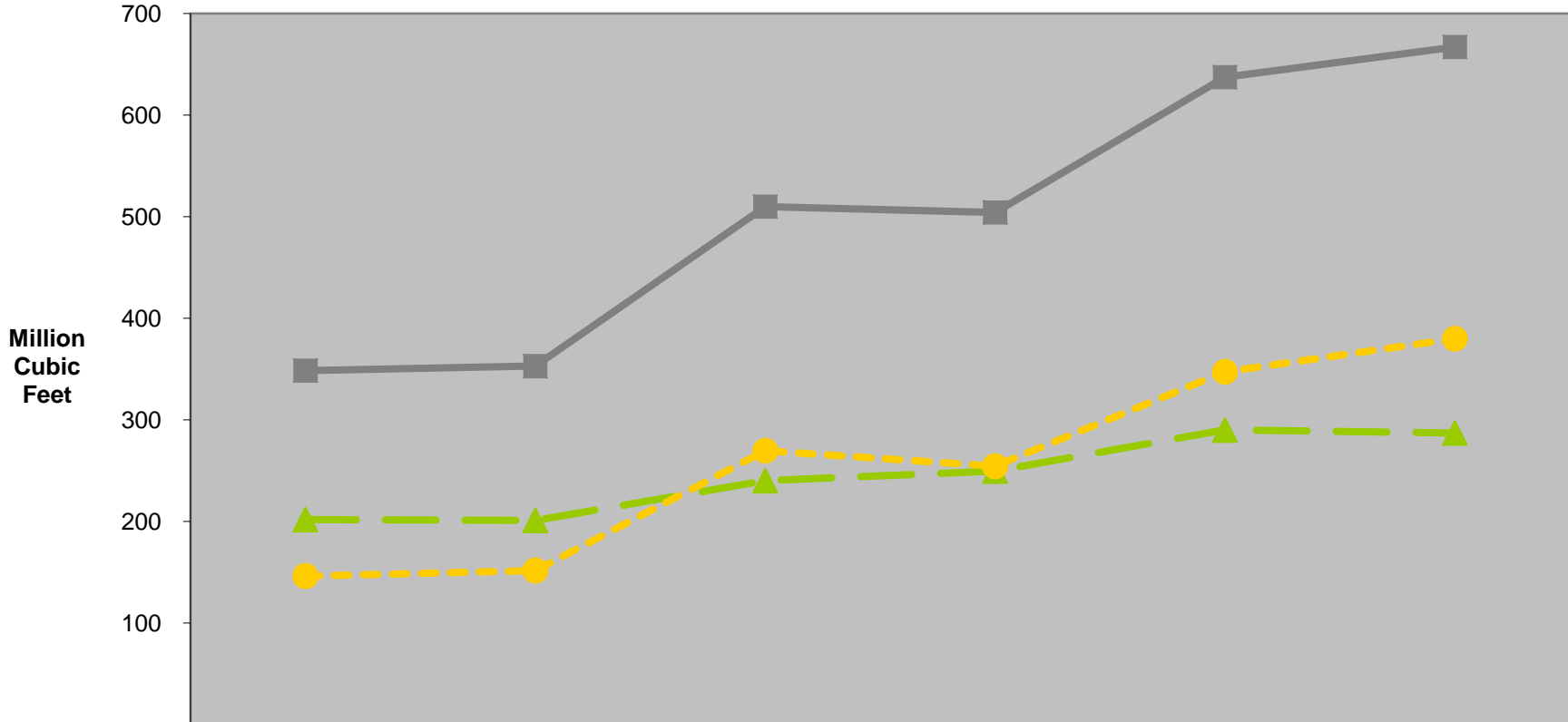
**Major forest type by inventory year for Kennebec County,
data table (thousand acres) and chart (percentage contribution)
[Same forest type classification algorithm used for all four inventory years]**



	1982	1995	2003	2008
■ Non-stocked	-	-	2.8	4.2
■ Elm/Ash/Red Maple	16.0	37.4	14.4	18.5
■ Spruce/Fir	16.0	63.9	27.3	27.9
■ Aspen/W Birch	60.7	35.8	45.4	43.1
■ Oak/Misc	81.1	11.4	53.1	74.2
■ White/Red Pine	92.7	63.1	58.2	53.6
■ Sugar Maple/Beech/Y Birch	137.3	199.4	184.2	166.3

Inventory Year

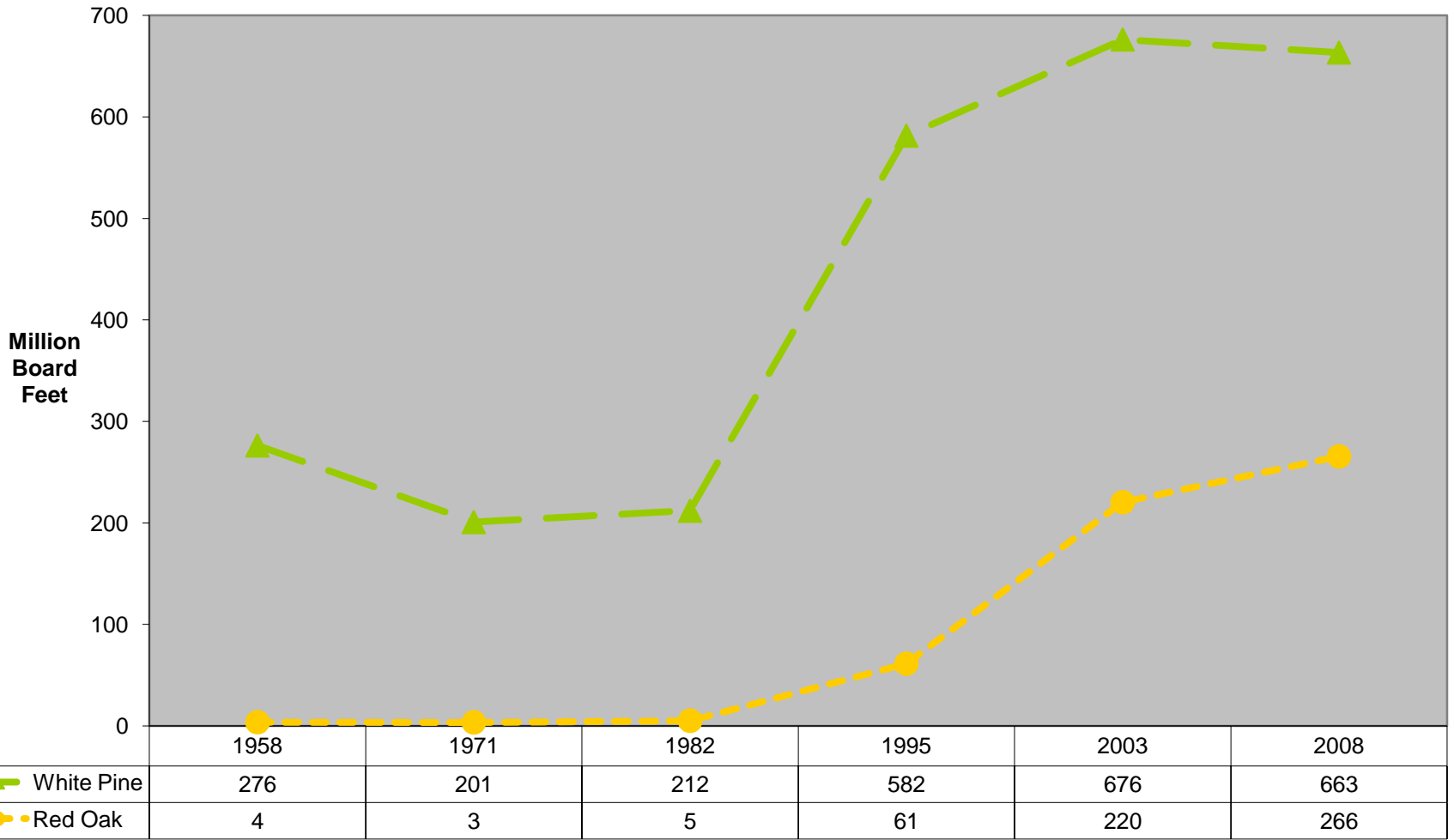
**Growing stock inventory for Kennebec County
(Source - Various FIA inventories and online data)**



	1958	1971	1982	1995	2003	2008
Softwood	202	201	240	250	290	287
Hardwood	146	152	270	254	347	380
All Species	348	353	510	504	637	667

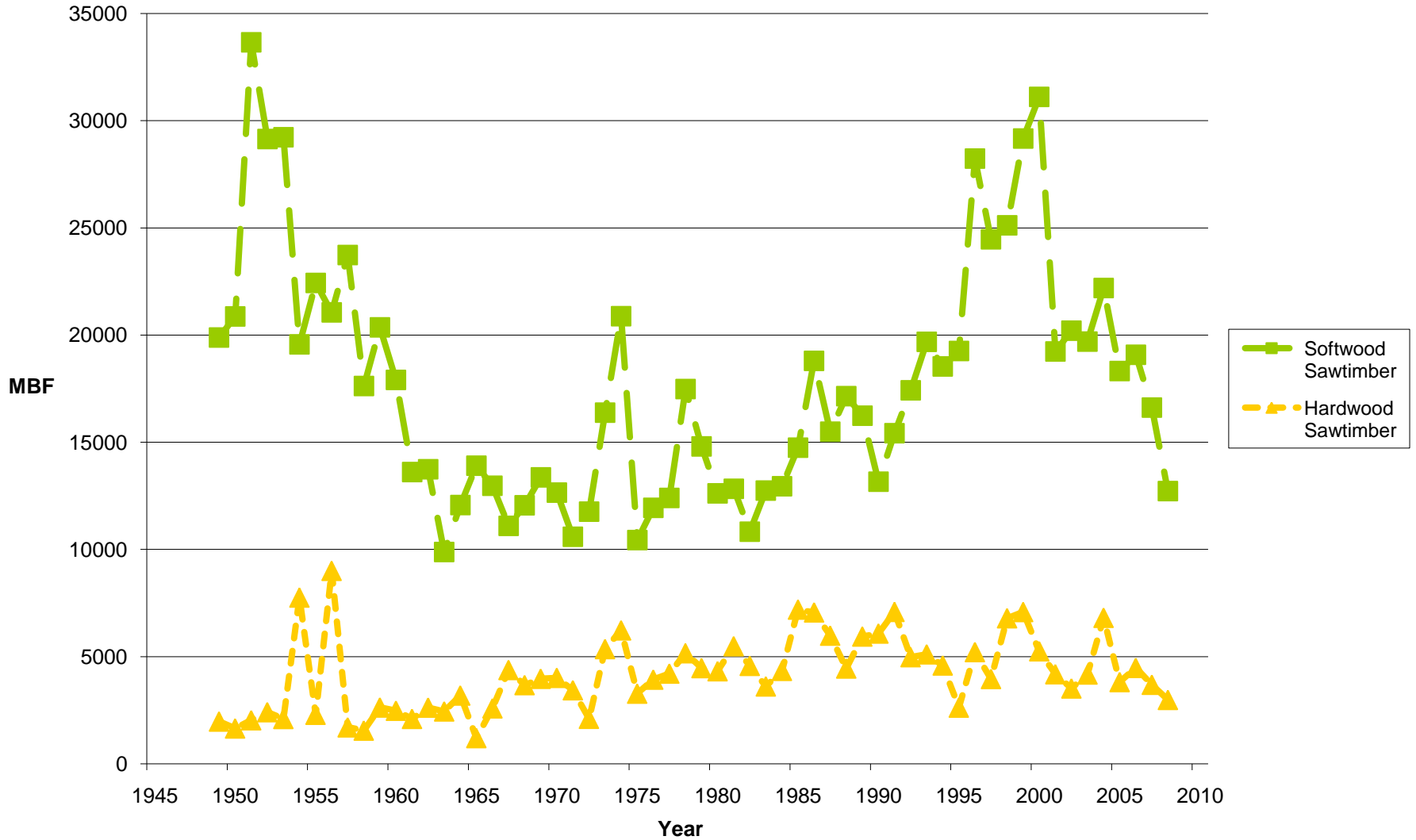
Inventory Year

White Pine and Northern Red Oak sawtimber inventory in Kennebec County
 (Source - Various FIA inventories and online data)

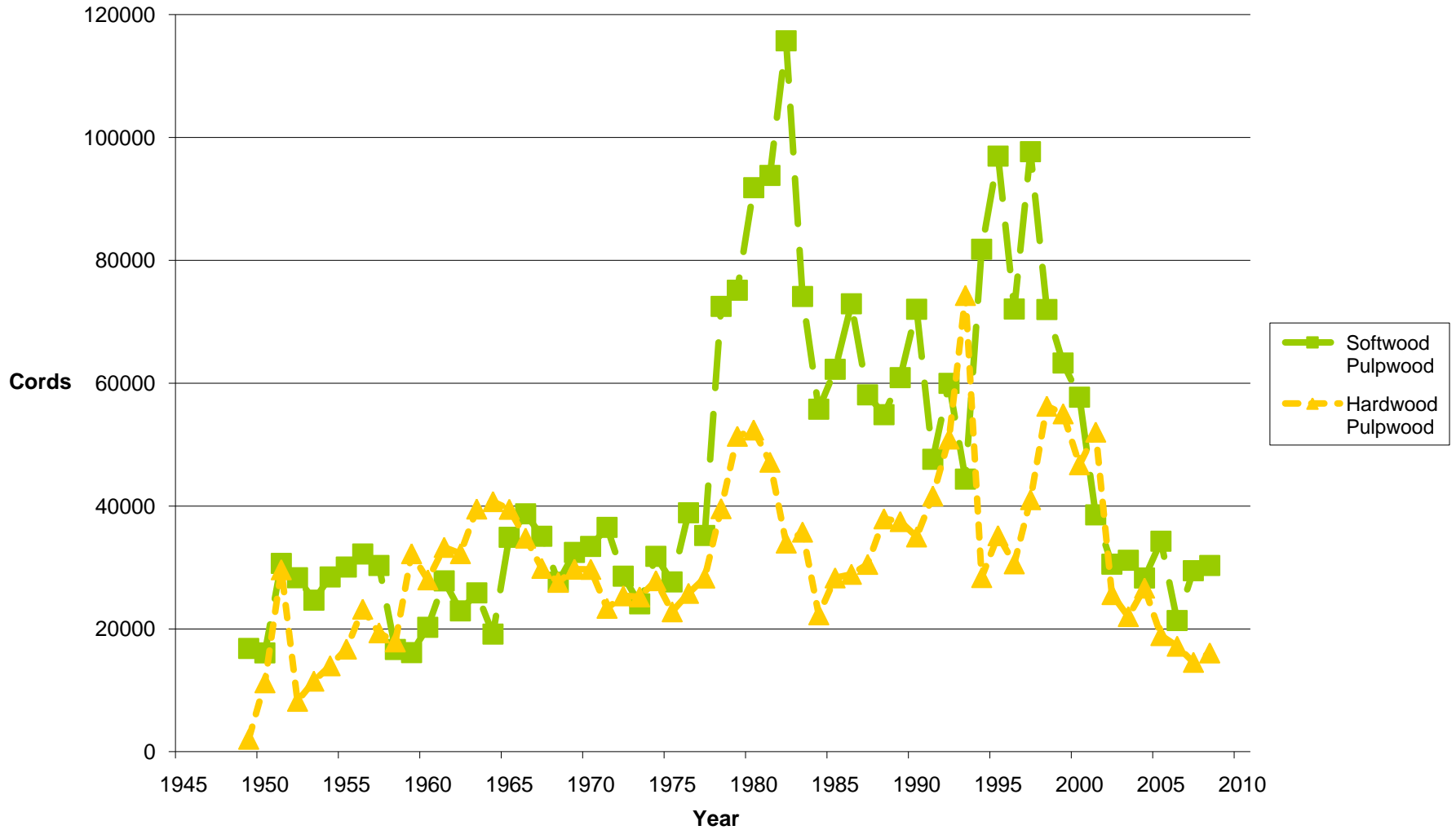


Inventory Year

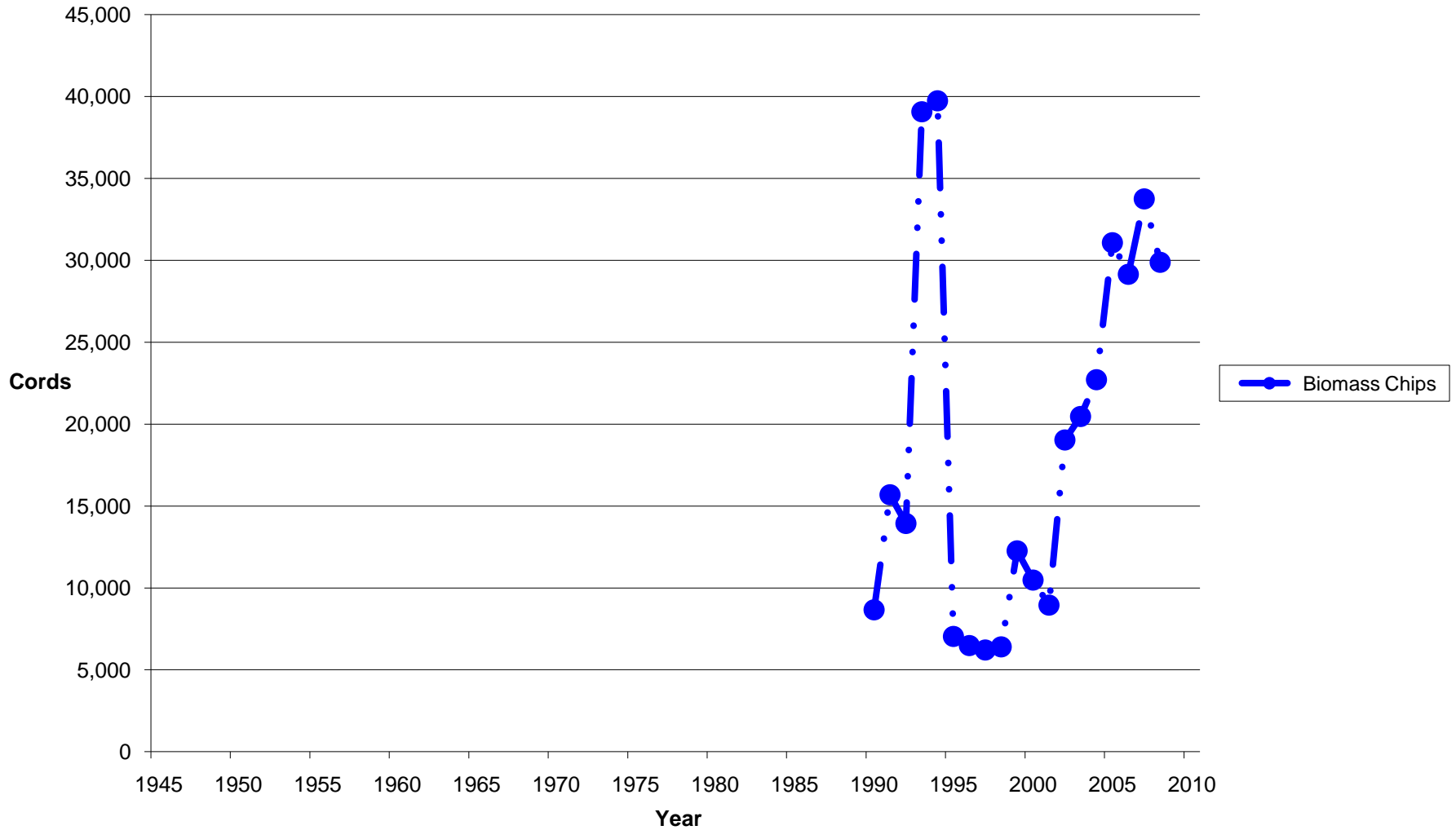
Annual reported sawlog harvest for Kennebec County
(Source - Annual MFS Wood Processor Reports)



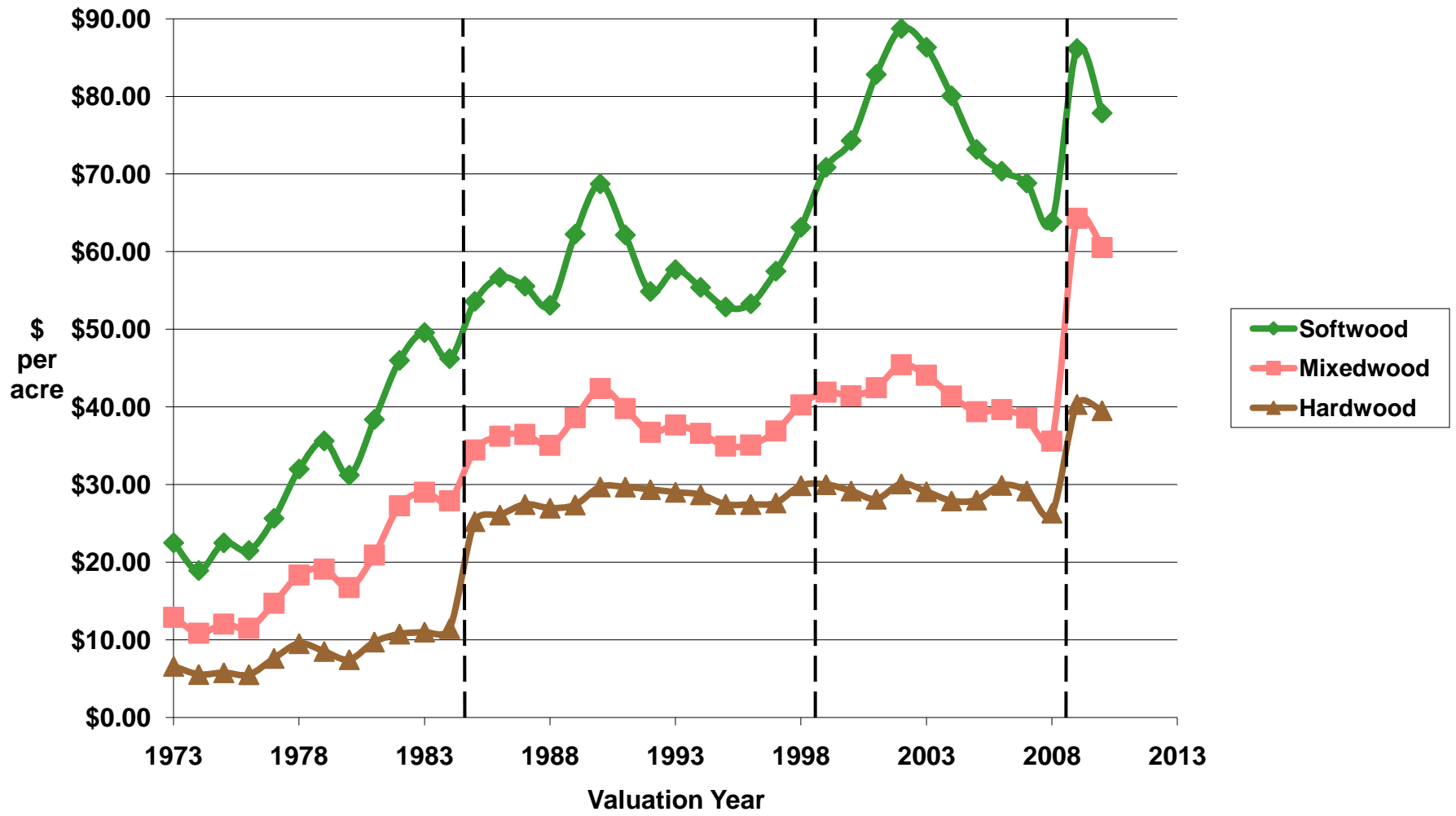
Annual reported pulpwood harvest for Kennebec County
(Source - Annual MFS Wood Processor Reports)



**Annual reported biomass harvest for Kennebec County
(Source - Annual MFS Wood Processor Reports)**



Kennebec County - real change in TGTL valuation, after adjusting for inflation with the Producer Price Index (PPI) - All Commodities (Basis Year = 1973)



Basic Financials

Growth

cd/a/yr	0.33
wtd value/cd	\$15.00
ann val grth	\$4.95

vs \$2.48 to \$3.72 in tax!

Timber Opportunity Cost(TOC)

cds / a	20	
wtd value	15	
Inv value	\$300.00	
TOC	0.05	\$15.00
	0.1	\$30.00

Global Context

- US net importer of softwood lumber
 - Structural: Canada, Europe
 - Appearance: Chile , Asia
- Losing competitiveness in Pulp/paper
 - Big new mills in China, Indonesia, So. America
- Peak oil: 5 yrs? 25 yrs? Does it matter?
- Substitute materials eroding markets
- Plantations producing more & more wood

Plantations— 60 MM ha worldwide

Oregon

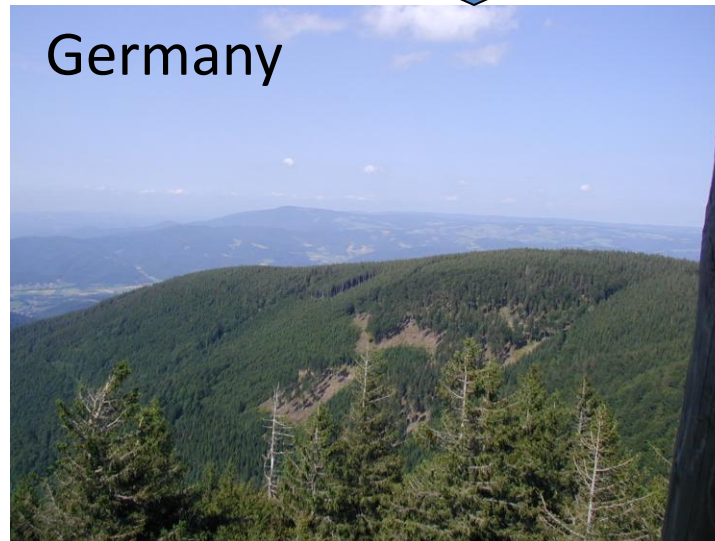


Rotation = 55

= 7 (!)

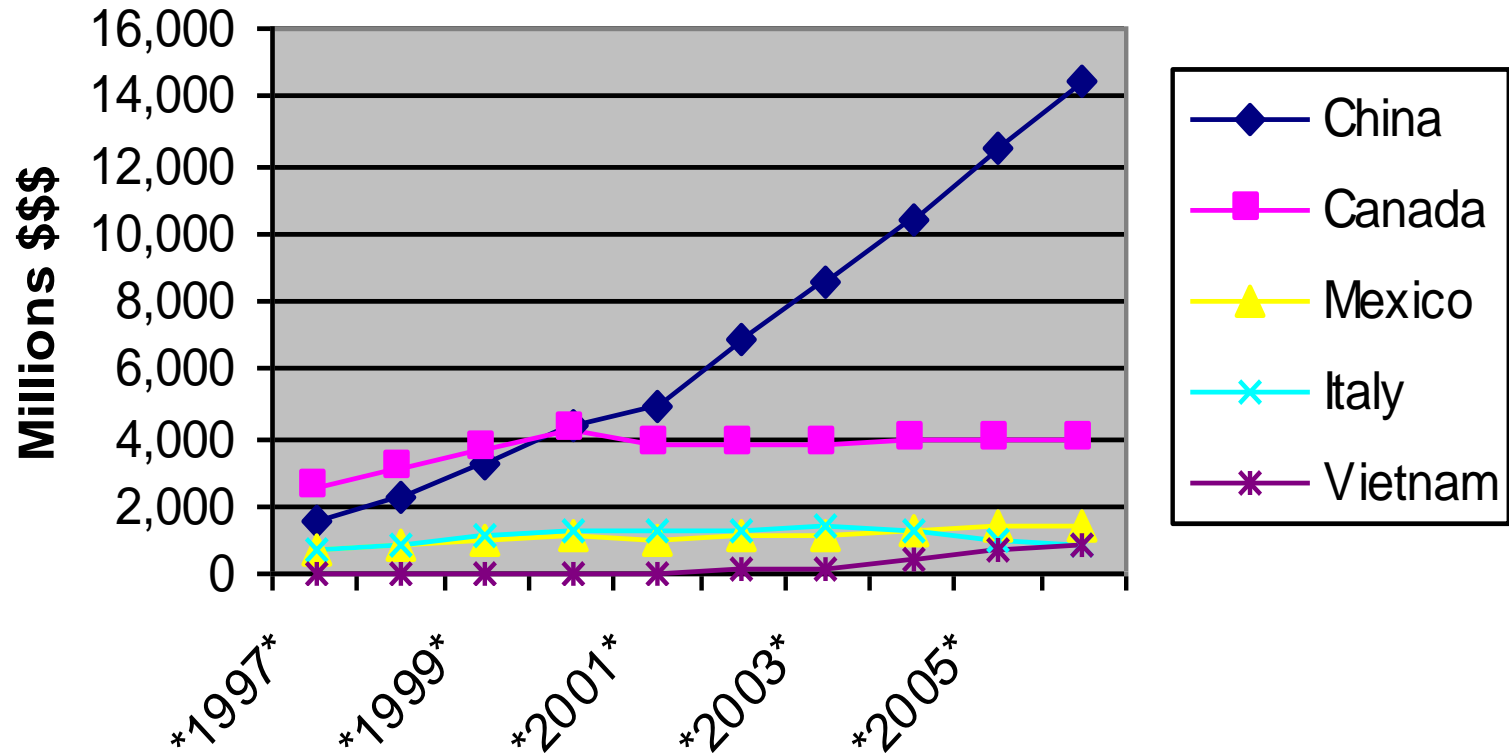
= 100 +

Germany



Indonesia

US Imports of Furniture, Top 5



Implications

- US industry in a Dark Time
- Early/strong recovery in stumpage markets cannot be predicted
- Seize every opportunity to upgrade value growth
- Keep trees thrifty and growing
- Grow quality of almost any species
- Work with a competent forester
- Have a sound estate plan