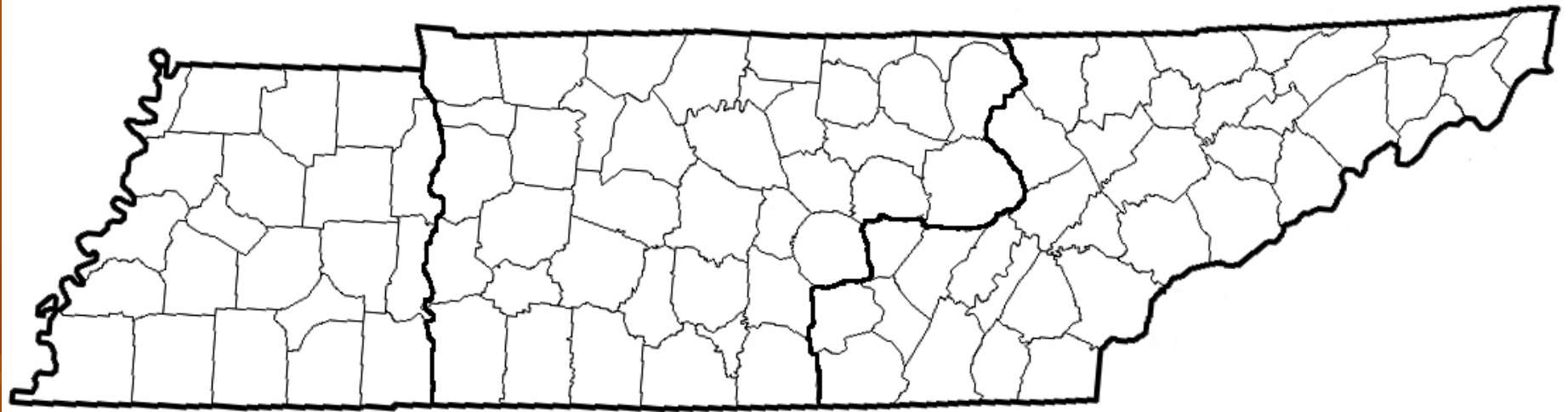


**Changes in the Tennessee
Hardwood Sawmilling Industry,
1979 to 2004**

William Luppold
and
Matthew Bumgardner
USDA Forest Service

Production Regions of TN



Western

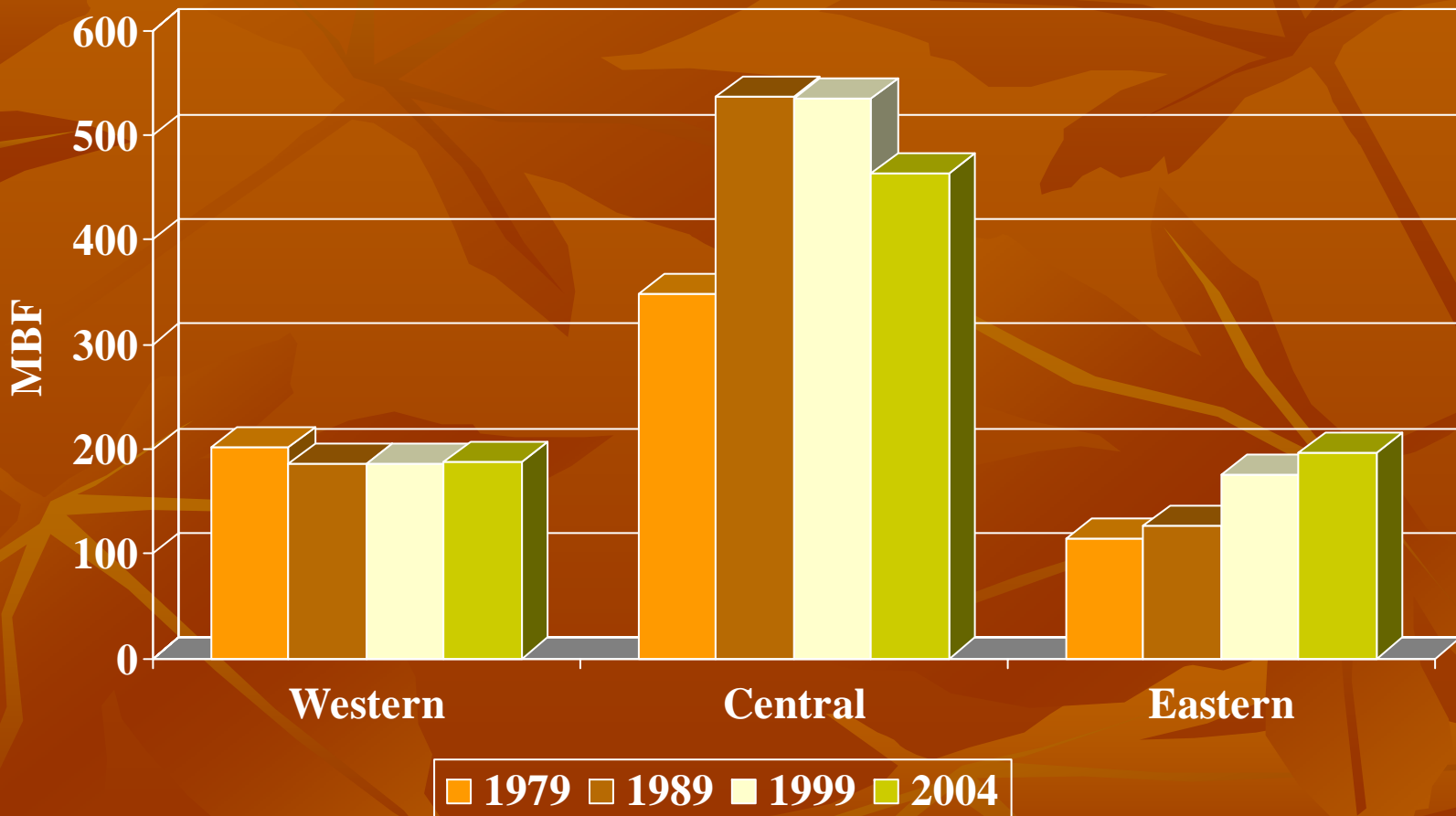
Central

Eastern

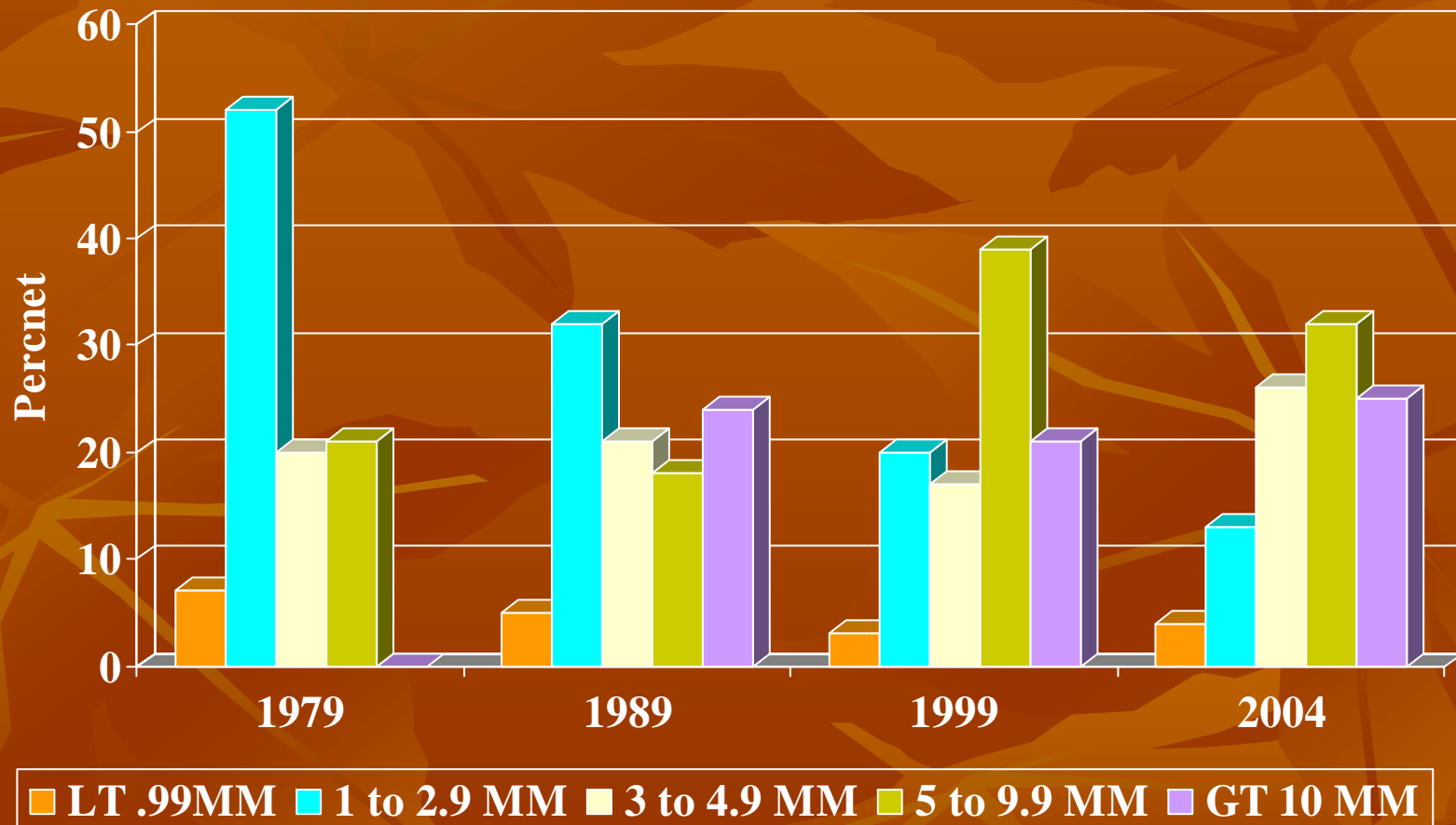
Characteristics of Three Regions

- The western region is primarily comprised of timberland under 1,000 feet in elevation with flat to moderate slope.
- The central region of Tennessee is primarily comprised of timberland under 2000 feet in elevation and with slope ranging from 0 to 40 percent.
- Nearly 60 percent of the timberland in the eastern region of Tennessee is over 1000 feet in elevation and nearly one third of this land has slope in excess of 40 percent.

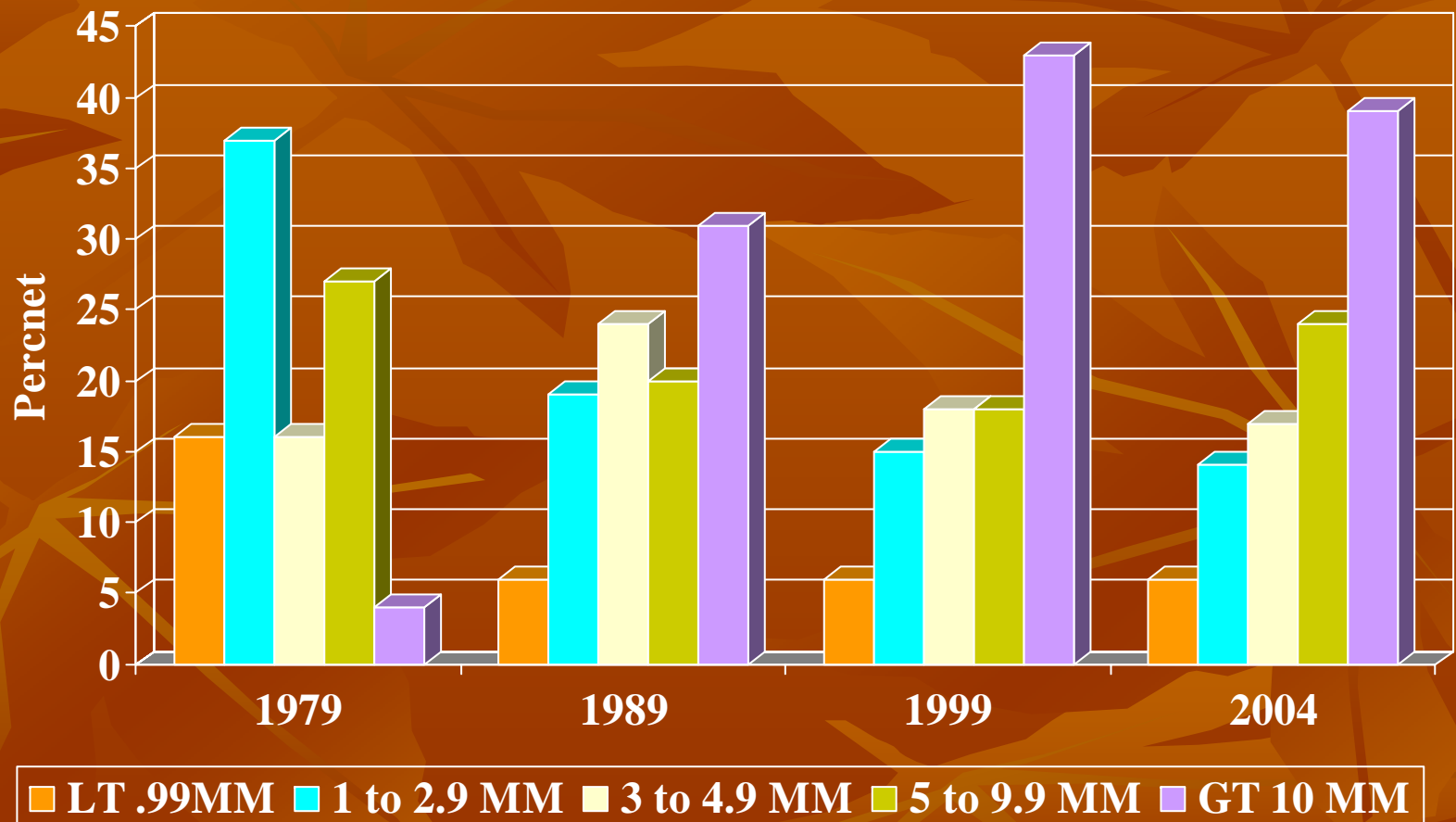
Regional Hardwood Lumber Production



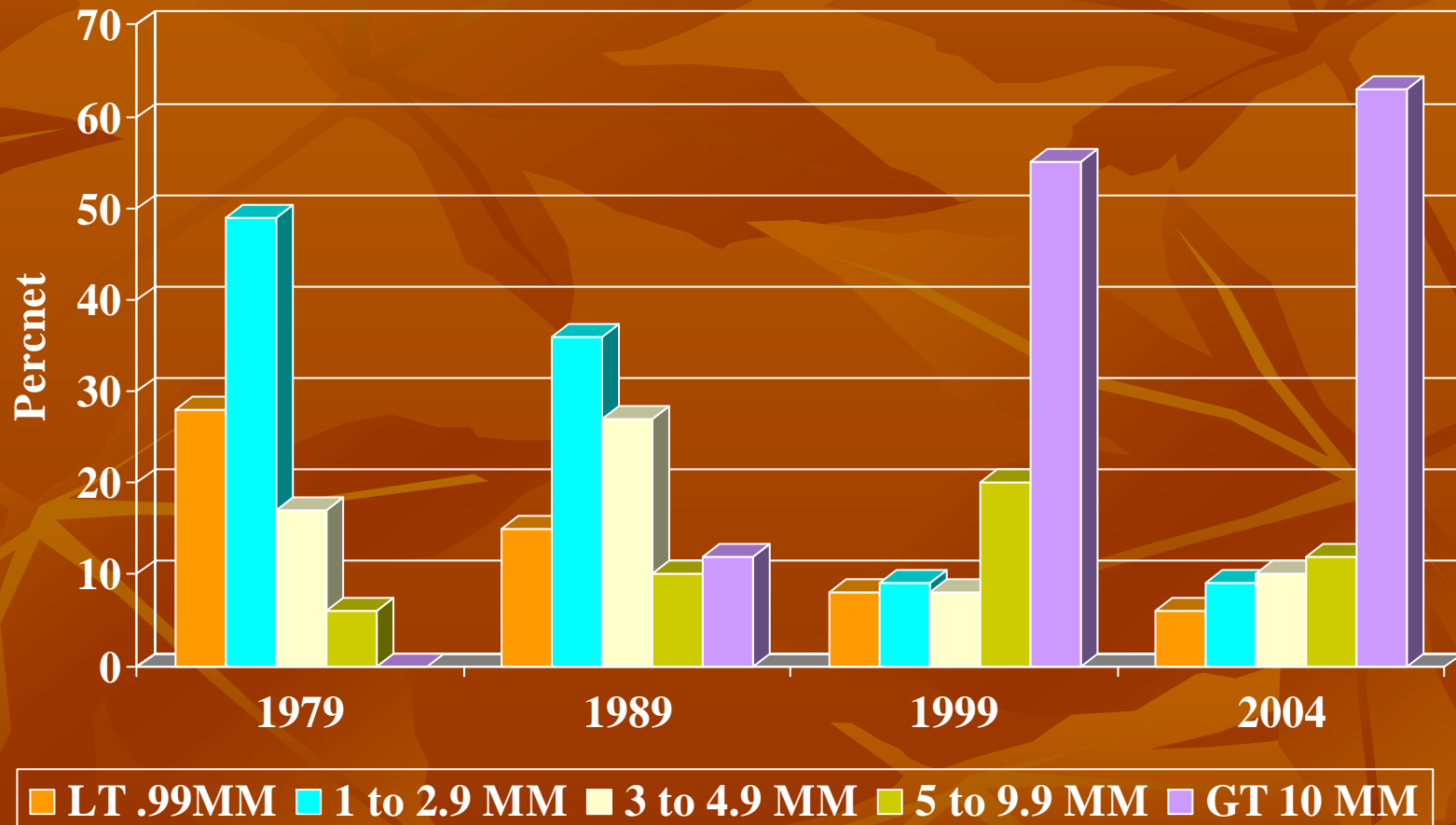
Percent of Lumber Produced in The Western Region by Mill Size



Percent of Lumber Produced in The Central Region by Mill Size



Percent of Lumber Produced in The Eastern Region by Mill Size



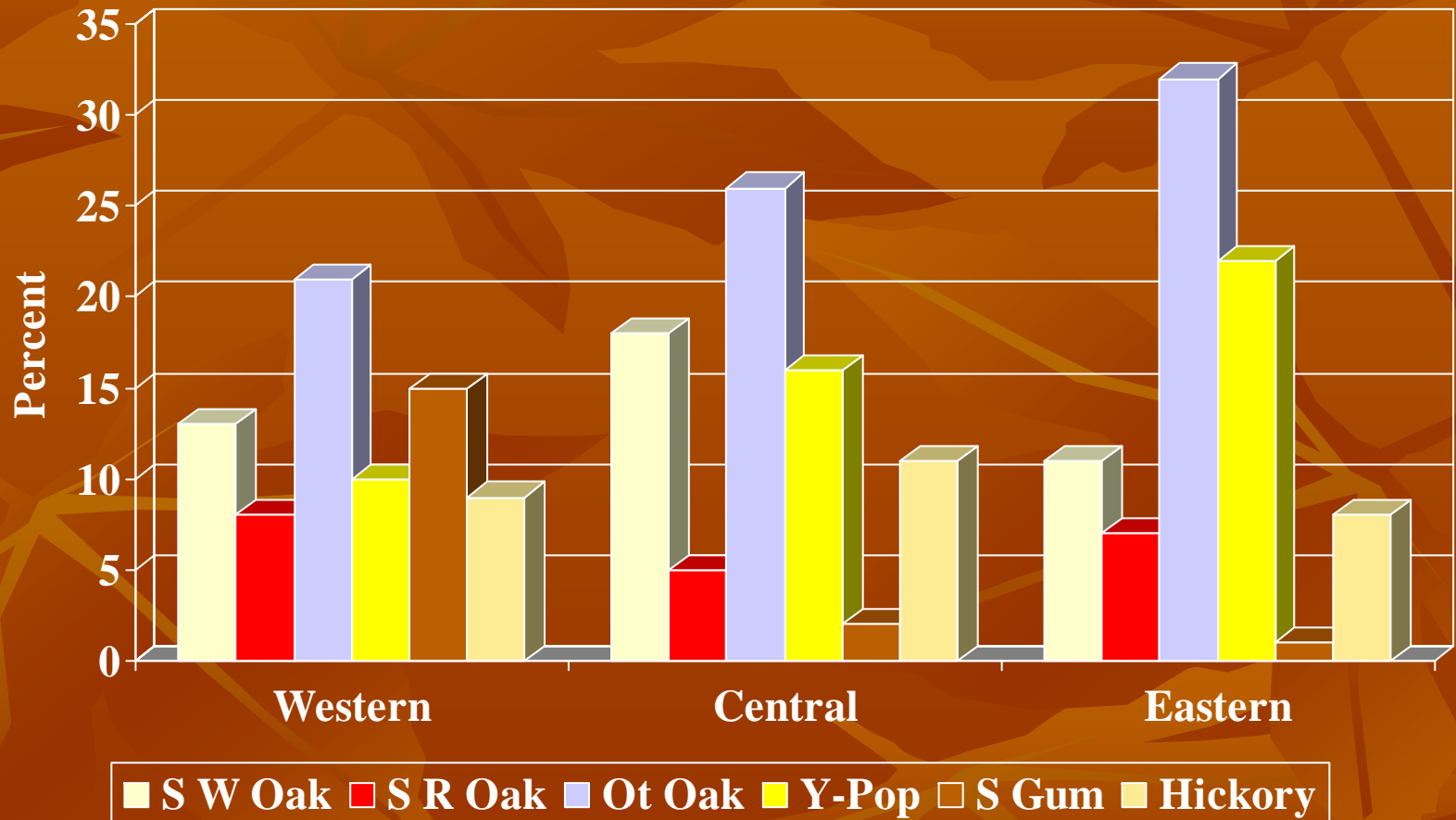
Other Differences

- While large mills in the Central and Western regions are found clustered in a small number of counties, the large mills in the Eastern exist in separate counties
- Most mills in the Central and Western regions have grown over time while 7 of the 8 large mills in the eastern region were large when built and were built after 1979.

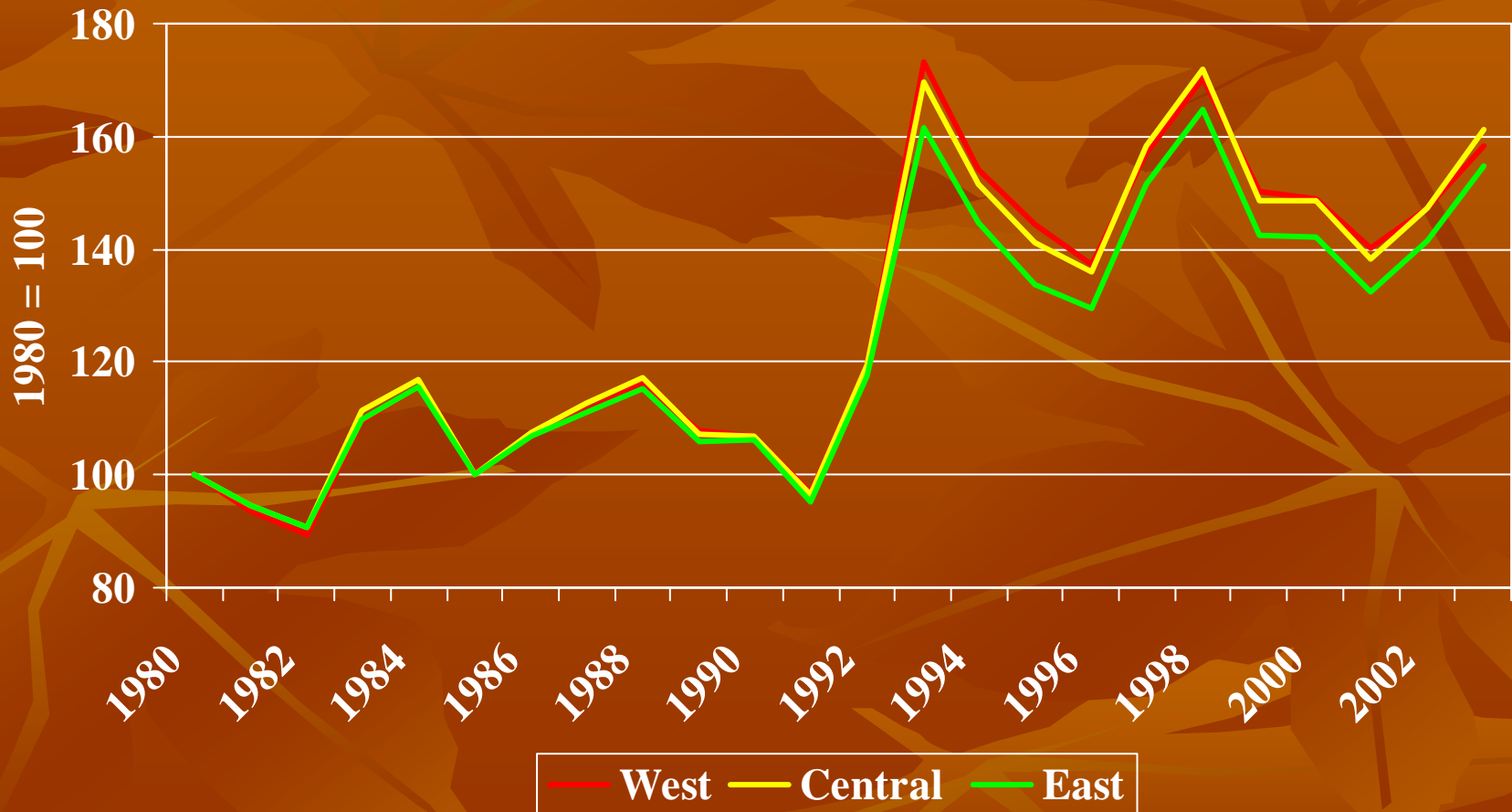
Potential Reasons For Regional Differences

- Timber base and relative value of the timber base
- Regional differences in log cost
- Secondary Industries
- Totally exogenous factors

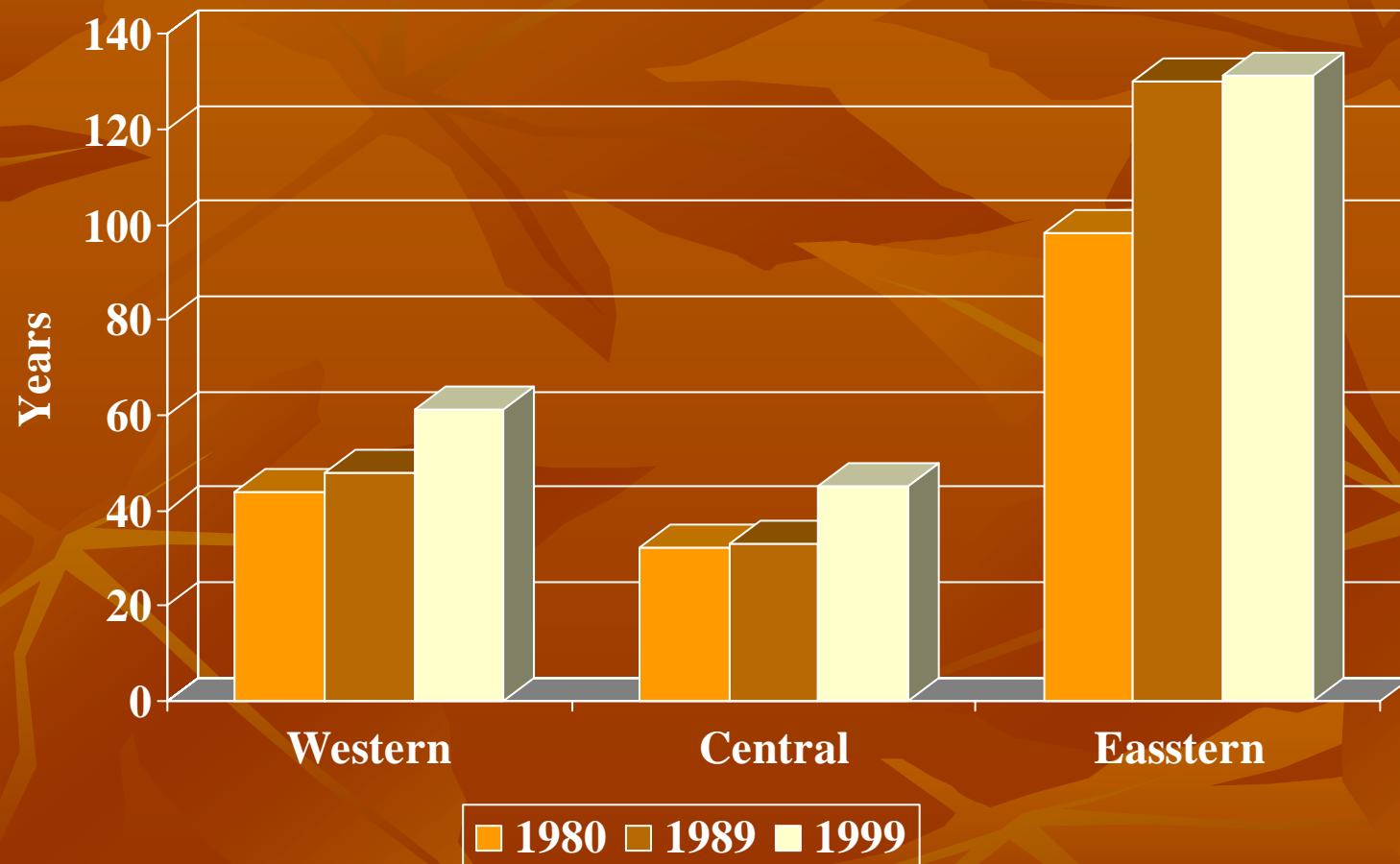
Regional Species Distribution



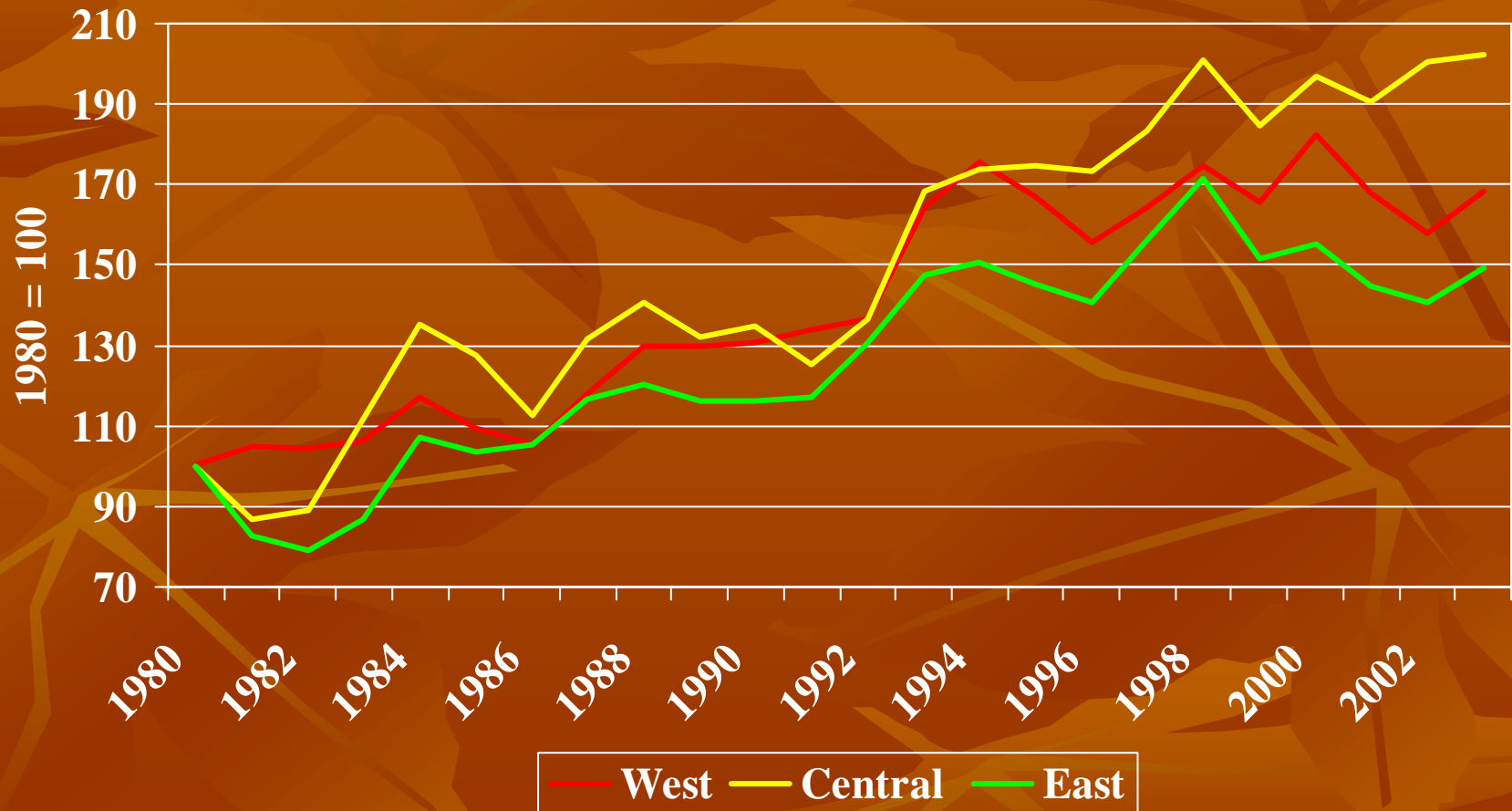
Regional Index of Hardwood Lumber Prices Weighted for Sawtimber Composition



Regional Relative Utilization Coefficients



Regional Index of Hardwood Log Prices Weighted for Sawtimber Composition



Employment In Secondary Forest Based Industries in TN (2004)

	Flooring	Furniture	Cabinets	Millwork	Pallets	Other
West	563	973	82	795	495	64
Central	1332	656	564	686	324	666
East	704	6650	67	554	254	137

The Furniture Industry in Eastern TN

- Has been there since before 1979 and has actually declined as major producers, such as Athens Bed, Gordon's, and Forest Products of Morristown have gone out of business
- The largest 2 producers (Lazy Boy and Berkline) are action furniture producers that do not use much hardwood lumber (plywood and steel)
- Two other major furniture manufacturers are producers in this region produce commercial and institutional furniture and are not large users of wood.

There is No Unifying Reason(s) for Changes Among Regions

- The expand or exit explanation appears to be the reason for increased concentration western and central regions.
- The topography of Eastern TN is steep, so steep that the interstate system was not completed in this region until the late 1970s.
- A much older explanation - if timber can be economically transported it will be severed and sawn. Just as the Shay locomotive allowed large sawmills to be built in West Virginia in the early 20th century, the improvement of transportation system allowed large mills to be re-established in eastern Tennessee in the late 20th century.