

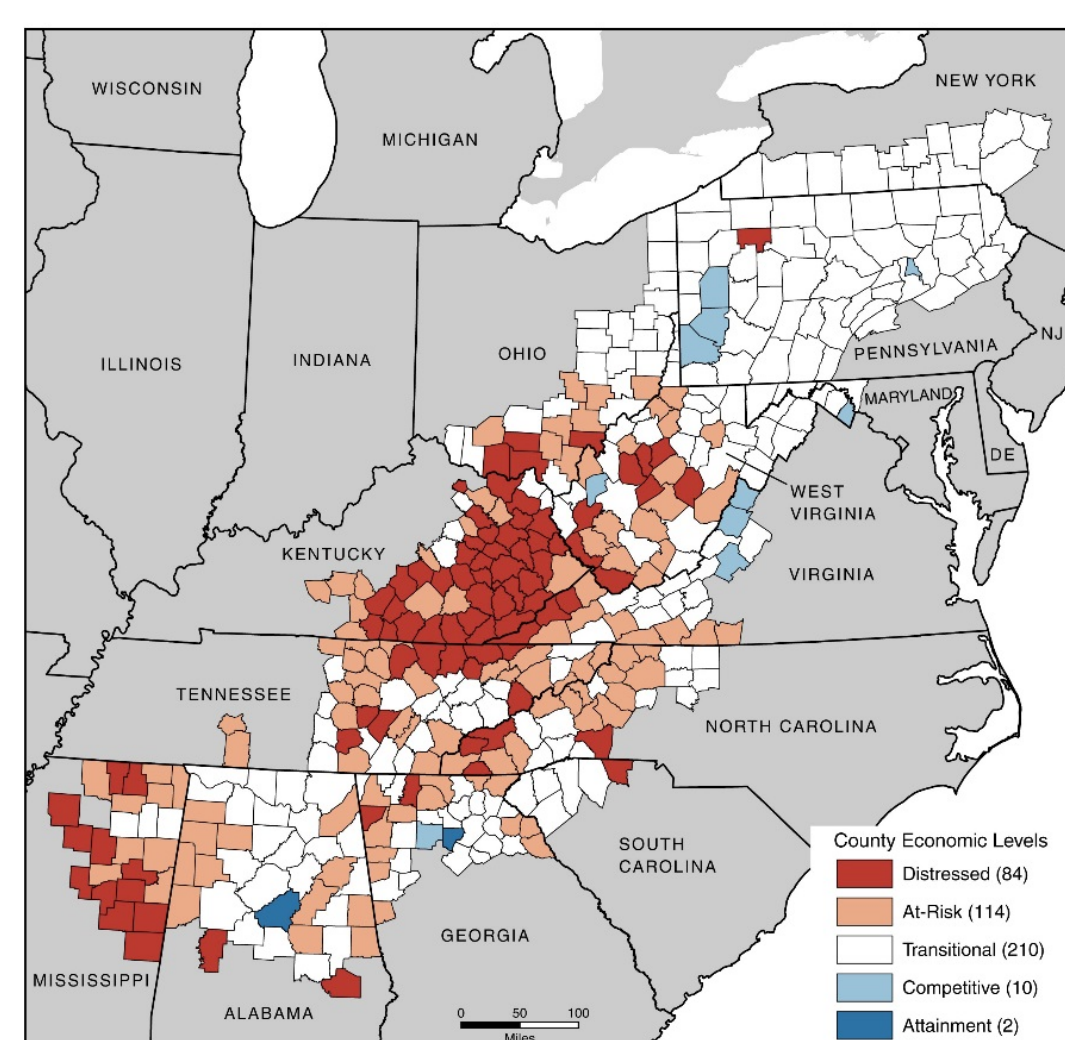
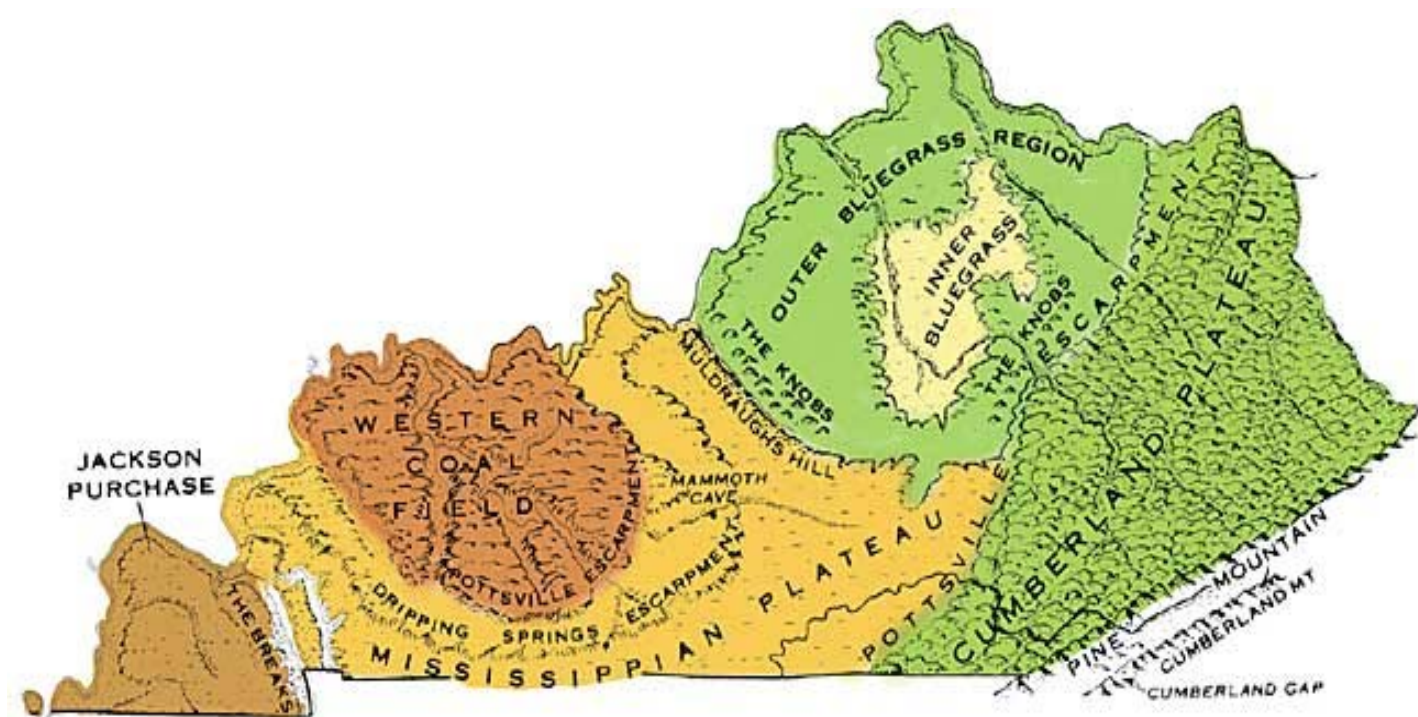
USING HORSES AND MULE LOGGING TO SUSTAINABLY MANAGE APPALACHIAN FORESTS

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CONTEXT AND LOCATION

“A thing is right if it tends to preserve the stability, integrity, and beauty of the biotic community. It is wrong if it tends otherwise.” – Aldo Leopold



Created by the Appalachian Regional Commission, March 2016
 Data Source: U.S. Bureau of Labor Statistics, LEHD, 2013-2014
 Income data: U.S. Bureau of Economic Analysis, REG, 2014
 Poverty data: U.S. Census Bureau, American Community Survey, 2010-2014
 Effective October 1, 2016 through September 30, 2017

THERE'S GOT TO BE A BETTER WAY..

Strip mine in Martin County, KY



https://ohvec.org/links/news/archive/2005/fair_use/11_09.html

Clear-cut along Kentucky/Virginia border



Photo by Clint Patterson

TRYING SOMETHING DIFFERENT ON THE BEREA COLLEGE FOREST, WITH A LITTLE HELP FROM OUR FRIENDS



Woodsman Week Event

Subsequent horse/mule logging

4 days of logging
 6 teams of horses, 3 teams of mules
 10 loggers
 47,000 bf harvested
 (111 cubic meters)
 Approx. \$14,000 to loggers
 Approx. \$14,000 to Berea College

First forest in USA managed for multiple use from the beginning for:
 Wood: Sustainable Supply
 Water: Clean, Reliable Supply
 Recreation: Enjoy, Relax, Recharge
 Education: Learn and Grow College

“...we need to be asking what the land and the people can do for each other. What could the people of eastern Kentucky do for themselves by taking the best care and making the best use of what is left of their forest? Berea College is ideally situated to ask and answer that question.”
 --Wendell Berry

RESULTS, ONGOING EFFORTS

Berea College Forest Model
 Established 1898 by Silas Mason, now 9,000 acres



Animal-powered timber extraction is integral to our ability to supply all these things in harmony with the forest and the community

Approx. 75 days of logging (intermittent)
 2 teams of horses and 2 teams of mules
 2 loggers
 120,000 bf of timber harvested
 (269 cubic meters)
 \$48,000 to loggers
 \$32,000 to Berea College
 Work College; teaching students Appalachian skills



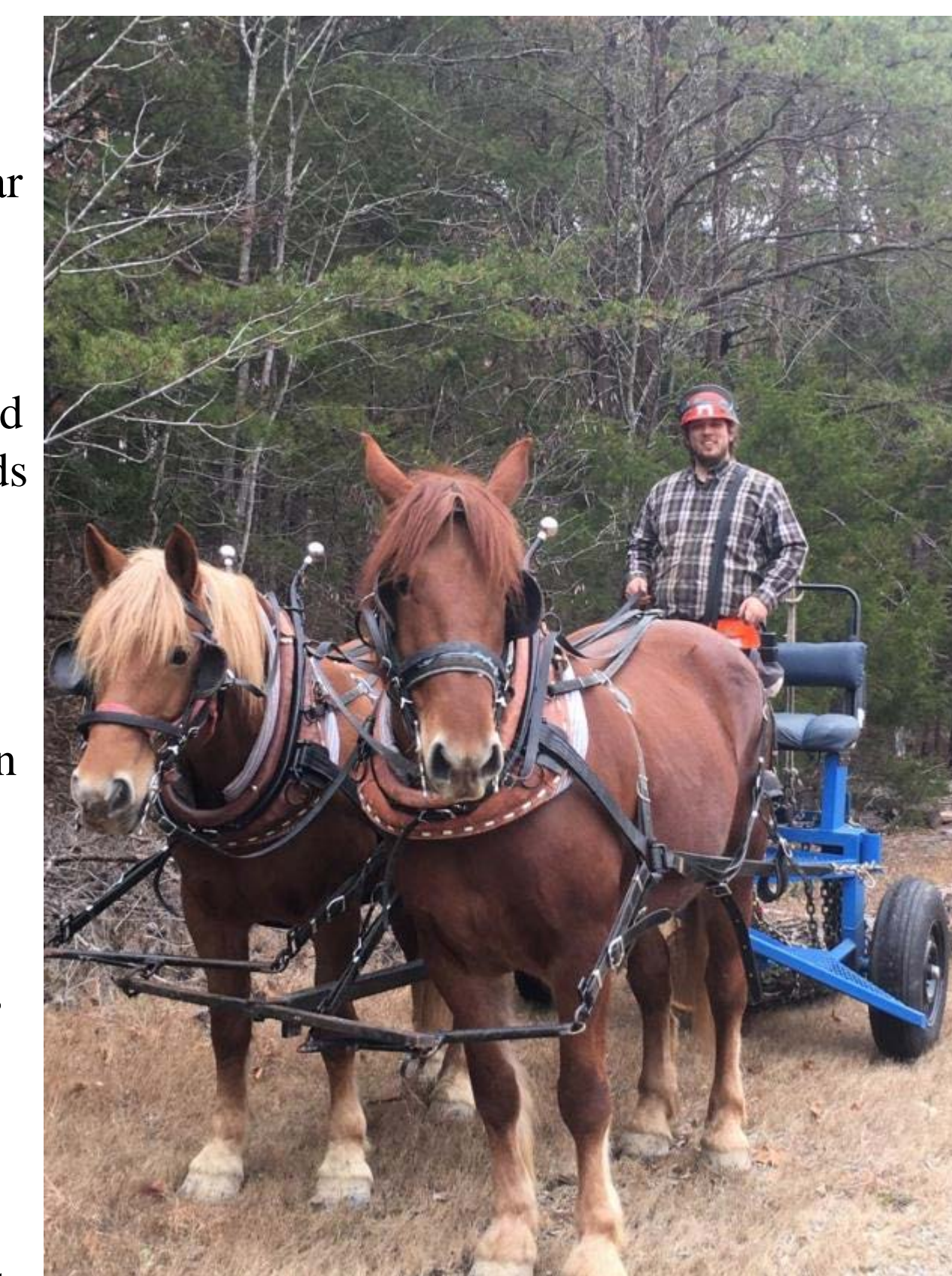
SILVI-CULTURAL IMPACTS

“Gap harvesting leaves high canopy intact



Species-diverse regeneration and early succession habitat production

Femelschlag Forestry with Animal Power:
 In contrast to even-aged systems, irregular shelterwood systems are grounded on the principles of spatial order, regeneration and tending of forest stands (Diaci 2006) to provide additional ecosystem services such as:
 water supply, retention capacity of soils, carbon storage, air filtering, erosion mitigation, recreation, and other attributes (Kovac 2016).
 With horses or mules, precision harvesting can be done using this system without ruining the trees left to grow. So, the focus is more on what we leave than what we take. Trees can be grown to their maximum potential for best end use.



John Henry Hite, former Berea College Student,
 now Forest Horse Program Director

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