

## Appendix II: Land Use Data

**Table II: Average Pennsylvania Wheat Farm, ca. 1770, over Twenty-Six Years**

Total Acreage Available: 125 acres

Adult Agricultural Laborers: 3

Land Use	Acreage in Use	Emission Factors (E.F.) Applied: E.F. Value (in parentheses), as Metric tons of Carbon (MtC) <u>per acre</u>	Average Emissions (MtC)	Description
Cropland	31	Above-Ground Biomass in Forest (24.3) Below-Ground Biomass in Forest (11.7) Dead Wood Biomass (3.6) Litter Biomass (9.7) Soil Organic Carbon Stock, applied 26 times (1.3) Carbon drawdown in cropland (-1.9)	2,370	Combines 26 acres in corn, wheat, and other grains (13 acres of grains for export, 13 for subsistence), with another 5 acres for flax, hemp, potatoes, and turnips. Soil emission factor applied 26 times to account for 26 years of cropland being tilled.
Pasture and meadow	33	Above-Ground Biomass in Forest (24.3) Below-Ground Biomass in Forest (11.7) Dead Wood Biomass (3.6) Litter Biomass (9.7) Carbon drawdown in grassland, above- and below-ground (-5.5)	1,443	Combines 13 acres for meadows and 20 acres for pastures
Household	5	Above-Ground Biomass in Forest (24.3) Below-Ground Biomass in Forest (11.7) Dead Wood Biomass (3.6) Litter Biomass (9.7)	246	Area cleared for household, barn, kitchen garden, and orchard
Fuelwood (26 years)	26	Above-Ground Biomass in Forest (24.3) Below-Ground Biomass in Forest (11.7) Dead Wood Biomass (3.6) Litter Biomass (9.7) Carbon drawdown in grassland, above- and below-ground (-5.5)	1,137	Assumes 1 acre of fuelwood to heat home per year, for 26 years
<i>Remaining woodlands after 26 years</i>	30	<i>n/a</i>	<i>n/a</i>	
<b>Total (26 years)</b>	<b>95</b>		<b>5,196</b>	

*Sources and Notes:* All acreage derived from James T. Lemon, *The Best Poor Man’s Country: A Geographical Study of Early Southeastern Pennsylvania* (Baltimore, 1972), 152–53 (table 27). To account for a twenty-six-year period, we assume a slightly higher rate of annual clearance than Lemon suggests—1 acre cleared per year for fuelwood needs, derived from Cronon, *Changes in the Land*, 120—as opposed to the 0.625-acre annual clearance rate suggested by Lemon, *Best Poor Man’s Country*, 168. We assume that the cleared fuelwood lot could also be used as cropland when grain fields needed to be rested. Though Pennsylvania farmers did not follow a strict crop rotation pattern, they did manure their fields and did not engage in the aggressive shifting long-fallow agriculture that characterized the typical tobacco plantation. Pennsylvania farms were thus cleared at a slower rate than common tobacco plantations. Adult agricultural laborers derived by dividing in half the average household size for New York and New Jersey (1701-25; 1772), found in Robert V. Wells, “Household Size and Composition in the British Colonies in America, 1675–1775,” *Journal of Interdisciplinary History* 4, no. 4 (Spring 1974): 543–70, esp. 548 (table 1). For sources of emission factors, see Appendix I: Table A.I.1.