

## Appendix II: Land Use Data

**Table V: Average Enslaved Labor Tobacco Plantation with Surplus Corn, ca. 1770, over Twenty-Six Years**

Total Available Acreage: 250–300

Adult Agricultural Laborers: 5.5

Land Use	Acreage in Use	Emission Factors (E.F.) Applied: E.F. Value (in parentheses), as Metric tons of Carbon (MtC) <i>per acre</i>	Average Emissions (MtC)	Description
Cropland	190	Above-Ground Biomass in Forest (34.2) Below-Ground Biomass in Forest (6.0) Dead Wood Biomass (3.4) Litter Biomass (2.5) Soil Organic Carbon Stock, applied 26 times (0.9) Carbon drawdown in cropland (-1.9)	9,382	16.5 acres for tobacco (@ 3 acres tob./worker) and 25 acres for corn (@ 4.5 acres corn/worker, with 3 acres for subsistence and 1.5 acres for market corn). Assumes new tobacco land cleared every 3 years, with used tobacco land shifting to corn production for another 3 years, then fallowed for 20 years. Assumes corn acreage needs beyond what former tobacco lands provided required new land that was planted in corn for 6 years before being fallowed for 20 years. Soil emission factor applied 26 times to account for 26 years of cropland being tilled.
Pasture and meadow	0	<i>n/a</i>	0	Assumes livestock foraged in forest, on fallowed croplands, and in natural meadows, plus winter corn fodder.
Household	3-5	Above-Ground Biomass in Forest (34.2) Below-Ground Biomass in Forest (6.0) Dead Wood Biomass (3.4) Litter Biomass (2.5)	184	Area cleared for enslaved quarters (1.5 acres, at 0.25 acres per enslaved person) and enslaver home, kitchen garden, and orchard (2 acres).
<i>Remaining woodlands after 26 years</i>	<i>106.5</i>	<i>n/a</i>	<i>n/a</i>	
<b>Total (26 years)</b>	<b>193.5</b>		<b>9,566</b>	

*Sources and Notes:* Average number of enslaved people per household (5–6) is derived from Allan Kulikoff, *Tobacco and Slaves: The Development of Southern Cultures in the Chesapeake, 1680-1800* (Williamsburg, Va., and Chapel Hill, N.C., 1986), 137, 153–54, and averages the piedmont and tidewater regions—5 and 6 enslaved people, respectively—for the 1770s-to-1780s period, when ownership of enslaved people was at its peak before the founding era. On plantations of this size, the tobacco planter typically worked in the fields alongside enslaved workers, but we decided to exclude this laborer due to the uncertainty around the age of enslaved laborers. If too young or too old, enslaved workers would not have been performing at the capacity of a full adult laborer; therefore, excluding the owner makes for a more conservative estimate. Total acreage available derived from assumption of 50 acres needed per enslaved worker; see *American Husbandry*. . . (London, 1775), 1: 231; Kulikoff, *Tobacco and Slaves*, 48. Enslaved cabin and garden plot size (0.25 per enslaved adult) from Philip D. Morgan, *Slave Counterpoint: Black Culture in the Eighteenth-Century Chesapeake and Lowcountry* (Williamsburg, Va., and Chapel Hill, N.C., 1998), 186–87. Planter home acreage and orchard adopted from Robert Cole’s indentured plantation and applied to the slavery era; see Lois Green Carr, Russell R. Menard, and Lorena S. Walsh, *Robert Cole’s World: Agriculture and Society in Early Maryland* (Williamsburg, Va., and Chapel Hill, N.C., 1991), 35–38. For three acres in tobacco per enslaved worker and 4.5 acres in corn per enslaved worker producing for grain market, see Carr and Menard, “Land, Labor, and Economies of Scale in Early Maryland: Some Limits to Growth in the Chesapeake System of Husbandry,” *Journal of Economic History* 49, no. 2 (June 1989): 407–18, esp. 416 (table 5, note). For sources of emission factors, see Appendix I: Table A.I.1.