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Avery Odelle Craven: Soil Exhaustion as a Factor in the Agricultural History of Virginia and Maryland, 1606–1860

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Avery Odelle Craven's *Soil Exhaustion as a Factor in the Agricultural History of Virginia and Maryland, 1606–1860*, originally published in 1925, is a short, highly readable book with a significant place in American historiography. Craven, who died in 1980 at the ripe old age of 94, took classes as an undergraduate at Harvard with Frederick Jackson Turner, and at its core, *Soil Exhaustion* is an inversion of Turner's famous "frontier hypothesis." Whereas Turner proposed that the frontier forged key American traits such as ingenuity, hard work and self-reliance, Craven suggested that on balance, the frontier's impact on early American history was iniquitous. "Frontiers, like those who come to sudden wealth, are inclined to be spendthrifts," he observed (22). "All the natural resources of frontiers suffer… and the soils are no exception" (20).

This central paradox, which Craven takes as his starting point, will be familiar to anyone who has read at all widely in the early American literature. From the 17th century to the early 19th, travelers and residents alike lamented the profligate, destructive nature of American husbandry. "The American planters and farmers … are the greatest slovens in Christendom," ran a representative comment from 1775, "their eyes are fixed upon the present gain, and they are blind to futurity" (Anonymous 1775, 145, 148; quoted by Craven: 21).

With respect to the American South, the most common explanations offered by historians for this sorry state of affairs have been threefold, all of them morally weighted: the uniquely soil-depleting nature of tobacco; the easy-going, improvident Southern temperament; or the pernicious effects of slavery. Drawing on a wide range of primary sources, from state papers and plantation diaries to the letters of Thomas Jefferson and the writings of travelers like William Strickland and the Duc de la Rochefoucauld-Liancourt, Craven constructs a more nuanced account emphasizing the role of markets, government policies and the ever-present lure of fresh lands to the west.

Craven divides his subject into three periods: Colonial (1606–1783), Post-Revolutionary (1783–1820) and Agricultural Revival (1820–1860), with an initial chapter on "Soil Fertility and Soil Exhaustion" setting forth the terms and issues for discussion. The basic outline of this story is broadly familiar. In the colonial period, early strong markets for tobacco in England encouraged planters to develop a primary reliance on that crop; Crown policy, the use of slave and indentured labor, a scarcity of livestock, and a cycle of indebtedness to English merchants combined to transform that reliance into an absolute dependence. The most common food crop, corn (maize), was also a heavy feeder, placing additional burdens on the land. The lack of good plows led to the formation of a shallow hard pan; heavy seasonal rains washed away unprotected soil.

Tobacco was by no means consistently profitable through this period, but given poor infrastructure planters had few alternatives. The basic "rotation" was to clear the trees, plant 3–4 years of tobacco followed by 3–4 years of corn and/or wheat, and then abandon the fields to spontaneous reforestation. As a result, western expansion began early, with tobacco production constantly in search of fresh lands. A few planters experimented with alternative cash crops such as hemp, indigo and flax; others sought to supply a growing domestic and, eventually, overseas market for grain and flour. But it was not until the Napoleonic Wars that wheat became a significantly profitable crop in eastern North America.

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The post-Revolutionary period witnessed a slow turn towards new methods and crops. A fashion for forming local agricultural societies began around 1774 and continued through the 1820s. Agricultural periodicals such as John Skinner's *American Farmer* (Baltimore, 1819) and David Wiley's *Agricultural Museum* (Georgetown, 1810) helped spread new ideas. Individual improvers like John Taylor, George Washington and John Alexander Binns advocated deeper plowing, improved rotations, careful attention to manures, use of soil amendments like gypsum, and the planting of clover and other legumes.

The impact of these early efforts was mixed. A continued scarcity of capital and labor made it difficult for farmers and planters to implement recommended improvements. Some suggestions were wrong-headed or poorly suited to contemporary conditions. Market opportunities were constantly shifting with the tides of European wars and trade disputes. Above all, Craven emphasizes the massive loss of human and financial capital suffered by the older areas of Virginia and Maryland as a result of emigration to the West. Tabulating contemporary estimates, Craven values this at a clean loss of nearly $124 million for the two states together through 1850.

On the up side, this loss of population precipitated a concentration of effort among those who remained. By the mid 19th century, calls were being issued for state experiment stations and agricultural colleges; railroads and canals had been built and roads improved; excess slaves were sold off to the south and west. Baltimore and Richmond became great agricultural export centers as trade increased to the West Indies and especially to South America. Craven's leading example of the improving spirit of the later generation is Edmund Ruffin, author of the widely celebrated *Essay on Calcareous Manures*, published in progressively expanding editions from 1835 to 1852.[1] Ruffin demonstrated yield gains of 50% or more through the use of marl, utterly transforming the agriculture of the Tidewater. Attitudes shifted; land values began to rise. As Craven puts it, "The significant fact is that it had been demonstrated that soils once impoverished could be restored" (147).

While Craven's view of soil science has on the whole aged well, Douglas Helms, historian to the USDA Natural Resources Conservation Service, has recently proposed an alternative interpretation of Southern history that challenges some of Craven's positions. Observing that the majority of the soils in the Tidewater and Piedmont regions are what he calls "base-poor"—naturally acidic, granite-derived soils low in potassium, calcium and magnesium, as well as in phosphorous—Helms suggests that "The use of terms such as soil exhaustion or soil depletion erroneously implies a higher level of natural chemical fertility than actually existed" (2000, 729). In fact, he argues, the red ultisols of the Piedmont don't respond well to liming and are perhaps best managed by methods of shifting cultivation and forest grazing. Prior to the availability of cheap external inputs, in other words, Southern farming practices were dictated by "soil type, not to save scarce labor" (Helms 2000, 733).

Taken together, Helms and Craven's work suggest one final point. What Craven says of the influence of the frontier could be justly turned upon the influence of fossil fuels in the 20th century: when it becomes easier and cheaper to apply synthetic fertilizer for short-term gain than to focus on careful soil husbandry for long-term objectives, that is what most farmers will do. In Craven's words, "Men produce what they can sell and, in the long run, use those methods which yield them the greatest returns" (12). In truth, the turn to external inputs helped bring about Craven's pre-Civil War "agricultural revival:" shipments of Peruvian guano into Baltimore rose from 445 tons in 1844 to 54,134 tons in 1860. The domestic manufacture of superphosphates, along with improved plows, mechanical drills and reapers was not far behind.

Under these conditions, Craven's underlying message about the importance of soil conservation remains deeply relevant. Supplied with an excellent new introduction by Louis A. Ferleger as part of the University of South Carolina Press's Southern Classics Series, the present edition will be widely useful to students and scholars of Southern history, environmental history, agroecology and other disciplines.

References

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Author Biography

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[1] See Craven's subsequent book, *Edmund Ruffin, Southerner: A Study in Succession* (New York: Appleton-Century-Crofts, 1932).