Abstract

Studies of fertilizer use in sub-Saharan Africa have been dominated by analyses of economic and market factors having to do with infrastructure, institutions, and incentives that prevent or foster increased fertilizer demand, largely ignoring how soil fertility status conditions farmer demand for fertilizer. We apply a switching regression model to data from 260 farm households in western Kenya in order to allow for the possibility of discontinuities in fertilizer demand based on a soil carbon content (SCC) threshold. We find that the usual factors reflecting liquidity and quasi-fixed inputs are important on high-SCC plots but not on those with poorer soils. External inputs become less effective on soils with low SCC, hence the discernible shift in behaviors across soil quality regimes. For many farmers, improved fertilizer market conditions alone may be insufficient to stimulate increased fertilizer use without complementary improvements in the biophysical conditions that affect conditional factor demand.