

PESTICIDES

Ever-increasing use

Rural Sociol. <http://doi.org/dfk8> (2019).



Credit: Florian Gaertner / Photothek / Getty Images

Two of the most important, yet opposing, concepts to come from environmental sociology are the ‘treadmill of production’, which postulates that economic growth demands continued, even increasing, use of natural resources, and the ‘environmental Kuznets curve’, which asserts that as countries become richer, their ecological impacts take a curvilinear path where they peak and then go down.

John Hedlund, Stefano Longo and Richard York tested these concepts with pesticide and herbicide use at the national level, looking at FAO and World Bank data from 1990–2014 to establish relationships between the use of these substances and economic development. Their models found statistically significant results

where a 1% increase in GDP per capita in a country resulted in a 1.38% increase in insecticide use and a 1.17% increase in herbicides, but using a squared term for GDP per capita (necessary for establishing a Kuznets curve) did not generate results that were statistically significant. This indicates that the broad use of pesticides is not decoupled from economic development but is in fact increasing as countries get richer, with no evidence of a decline once development and population reach a certain point.

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