Fertilizer policies in Africa in the context of global supply disruptions and economic crises

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October 26, 2023

Introduction

- Inorganic fertilizer has been strongly associated with successful efforts to accelerate agricultural production and productivity growth in LMICs.
- But emerging evidence document the unintended consequences of inorganic fertilizer use, including on human and soil health, water and environmental health (e.g., Sutton et al., 2011; Zhang et al., 2013; Sterner et al., 2019).
- These patterns are reinforcing calls for more judicious use of inorganic fertilizers (Dobermann et al., 2002; Jat and Gerard, 2014) as well as better integration of organic and inorganic fertilizer management (Snapp et al., 2022).
- National policies, including subsidies remain contested and are usually associated with leakages, crowding-out and deforestation (e.g., Morgan et al., 2019; Pelletier et al., 2020), and socio-political conflict (Ricker-Gilbert et al., 2013; Birner et al., 2011).

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Global food-fuel and-fertilizer crisis

- The global economy is still reeling from the dramatic increase in energy and fertilizer prices fueled by the Russia-Ukraine war
  - The price of urea doubled from about US$ 483/ton in 2021 to US$ 850/ton in the first quarter of 2022 (World Bank, 2023).
- Even with recent stabilization in global fertilizer prices, domestic prices of fertilizer remain high in many African countries because of continuing issues in foreign trade and currency markets.
- Fertilizer-importing countries in Africa such as Ethiopia, Malawi, Rwanda, and Zambia had to contend with shocks to both fertilizer and fuel prices while fertilizer-exporting countries such as Egypt and Morocco experienced windfall gains
- Besides the high price of fertilizer, several countries in Africa (e.g., Ethiopia) experienced shortage/supply disruption in fertilizer
- Recent LSMS-ISA surveys show that these are being translated into lower adoption of inorganic fertilizers in Africa

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Policy options for sustainable fertilizer adoption

- As crises become increasingly common, there is a need for short-term and long-term policy options to diversify fertilizer trade, production, and use.
  - African countries need to diversify trade, production and reliance on inorganic fertilizer
- Fertilizer policies should target achieving resilient agricultural systems while protecting the environment and adapting to climate change
  - Fertilizer policies that fail to address integrated soil fertility management and soil health are eventually doomed to fail (Zhang et al., 2015; Holden, 2018).
- Economic assessments of inorganic fertilizer should consider broader soil health and integrated soil fertility management.
- Policy interventions that can successfully curtail the adverse environmental effects of inorganic fertilizers, by internalizing the cost of externalities
  - Fertilizer policies should be complemented by interventions that encourage more sustainable, resource-conserving, and climate-resilient agricultural practices.
- Support for emerging innovations that aim to improve crop nutrient management, including the use of recycled food and animal waste as organic soil amendments

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