

research highlights

FOOD SECURITY

Ghana rice revolution falters

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Amidst dramatic increases in rice consumption and imports in sub-Saharan Africa in recent decades, efforts to stimulate domestic rice production have stumbled despite tariffs and development strategies. Catherine Ragasa and Antony Chapoto's investigation of Ghana shows that hopes of a Green Revolution stall if technology is brought in without regard to local conditions.

In 2009, the Ghana National Rice Development Strategy was developed with the aim of doubling rice production by 2018, reducing imports and increasing income. However, to date, rice yields have remained at 2.2–2.5 tonnes per hectare, well short of calculated potentials. Ragasa and Chapoto studied ten major rice-producing areas of Ghana, comparing the effects of irrigation, fertilizer use, and a host of additional factors. Of these, the use of irrigation was far more effective than any other intervention. Lowland areas without irrigation could see improved yields with the use of fertilizer, certified seeds, and so on, but the increase did not match what irrigation alone could achieve.

Improvements in rice varieties, increased demand for local rice from informed consumers, and fertilizer subsidies could augment the technologies and methods typically associated with the Green Revolution, but a large expansion of irrigation systems, especially in lowland areas, may be the only way to substantially expand the country's rice production to meet future needs.

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