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Meeting the challenge of wastewater irrigation: economics, finance, business opportunities and methodological constraints

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Abstract

Many farmers in developing countries use treated or untreated wastewater to irrigate crops, partly in designated irrigation schemes, but mostly on large areas of small farms located along streams passing through or near cities. Much of the wastewater use is informal and unplanned, as farmers divert water from streams that carry untreated or partially treated effluent from cities and towns. The farmers generate good revenue by selling fresh produce that, otherwise, might not be available in urban markets. However, wastewater irrigation also creates health risks for farmers, their families, and consumers. Public officials must consider those risks and the values generated through wastewater irrigation, as they implement policies to protect farmers and consumers from the negative health impacts. Given the increasing scarcity of fresh water in many urban and peri-urban areas of developing countries, the increasing demand for food,

and the persistent desire to improve the livelihoods of small-scale farmers, the decisions faced by public officials will require careful analysis. To that end, we describe in this special issue the economics, finance, business opportunities, and methodological constraints that pertain to wastewater irrigation in developing countries.

Keywords:

agriculture | business models | effluent | farming | livelihoods | reuse

Notes

1.Stream water, which often is more diluted, might be less risky than water in canals and drainage ditches.