

ECONOMIC GROWTH CENTER

YALE UNIVERSITY

P.O. Box 208269
New Haven, Connecticut 06520-8269

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TECHNOLOGY–CLIMATE INTERACTIONS IN THE
GREEN REVOLUTION IN INDIA

James W. McKinsey, Jr.
Bryant College

Robert E. Evenson
Yale University

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James W. McKinsey, Jr.

Robert E. Evenson

Abstract

This paper presents a model of the Green Revolution in India, in which the development and diffusion of HYVs, the expansion of irrigation and the expansion of multiple-cropping are treated as endogenous responses to more basic investments in agricultural technology and infrastructure, as well as to climate and edaphic endowments. We incorporate explicit climate-technology interactions in the model, in order to identify climate effects on the diffusion of HYVs, irrigation and multiple-cropping, and on Net Revenue to agriculture. We find that climate affects technology development and diffusion, and that technology development and diffusion affect the impacts of climate on agricultural productivity in India.

Key words: Green Revolution, India, HYV, Rice, Wheat, Climate, Agricultural Research

JEL classifications: 112, 121, 226, 620, 710

McKinsey: Department of Economics, Bryant College, Douglas Pike, Smithfield, RI
jmckinse@bryant.edu

Evenson: Economic GrowthCenter, Yale University, Box 208269, New Haven,
CT, 06520 robert.evenson@yale.edu

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