



Tropentag, September 14-16, 2010, Zurich

“World Food System —
A Contribution from Europe”

Transforming Global Rice Research to Meet Future Needs

ACHIM DOBERMANN¹, MARCO WOPEREIS², JOE TOHME³

¹*International Rice Research Institute (IRRI), Philippines*

²*Africa Rice Center (AfricaRice), Benin*

³*International Center for Tropical Agriculture (CIAT), Colombia*

Abstract

Rice farming has an annual value of over \$150 billion, and directly or indirectly affects over 2 billion people who either depend on rice as their food staple or are involved in the production or processing of it. Rice provides 20% of the world's food calories. Some 400 million chronically hungry people depend on rice for their livelihood. Rice is also rapidly rising in its importance as a food staple in Africa and Latin America.

The Green Revolution in Asia had its origins in major scientific advances, which primarily benefited small holders that produce the bulk of rice consumed in Asia, but also raised questions about the sustainability of such intensive agriculture. Research in the past three decades has greatly expanded to also address critical needs in crop and natural resources management, environmental issues, and human health and nutrition through a combination of crop improvement and good agronomic practices. Documented annual economic benefits from past rice productivity-enhancing research exceed \$19.5 billion.

Changing environmental, economic, demographic and social landscapes will change the way rice will be grown in the future, towards eco-efficient production systems, including diversified cropping systems and value chains. This will require innovations derived from strategic, increased R&D investments. It will also require a transformation of the agricultural research and extension systems to ensure that these innovations are what farmers and others in the value chain need, and to get them to these users faster.

This paper will review trends in world rice production and priorities for rice research. We will present a strategic vision and plan for a Global Rice Science Partnership (GRiSP) through which we propose to re-focus and align research for development activities. We will provide innovative examples of how agricultural R&D in such a context could change to become more effective, thus serve the needs of rice producers and consumers better, and also make major contributions to the world's pressing environmental and social issues. We will also provide examples of innovative public-private sector partnerships and end with a set of recommendations for policy makers and for the rice research and development community in Europe.

Keywords: Drivers of change, food security, R&D strategy, rice