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Scientists: Their Rewards and Humanity

s a rule, the accomplishments of outstanding agricultural scientists are rewarded primarily by such things as peer recognition, plaques, and honorary degrees, not prizes convertible into dollars. The first, and until now only, exception to this generality was Norman Borlaug, wheat breeder at the International Maize and Wheat Improvement Center in Mexico, 1970 winner of the Nobel Peace Prize. His contribution to the advancement of science came through breeding short, stiff-strawed, fertilizer-responsive wheat varieties and developing the production agronomy that permitted them to express their high genetic yield potential. His scientific contribution was significantly complemented by his leadership in gaining rapid adaptation and adoption of the new wheats and accompanying technology, particularly in Mexico, India, and Pakistan.

A key scientist in that technology-adaptation and -adoption process in India—M. S. Swaminathan, now director general of the International Rice Research Institute (IRRI) in the Philippines—was recently named the first winner of the \$200,000 General Foods World Food Prize, to be awarded during ceremonies at the Smithsonian Institution on 6 October 1987. For over a quarter century, Swaminathan has been a major force in shaping India's policies in agriculture on an ecologically and economically sustainable basis. As a geneticist, he worked on the development of strains of wheat, rice, and coarse grains that would grow well in the ecological settings of India. His untiring work and dedication to prevent famine and ameliorate hunger in his homeland and the Third World have helped to generate selfconfidence in the agricultural capabilities of the Third World. Just as Borlaug is regarded as the father of the Green Revolution worldwide, Swaminathan has been called the father of India's Green Revolution.

Establishment of the World Food Prize did not just happen. Following his worldwide recognition as a Nobel laureate, Borlaug worked diligently to get appropriate monetary recognition for other scientists working in the field of food and agriculture. He first tried the Nobel governing group but found that, after establishing the Nobel Prize in Economics, the group resisted awarding further specialized prizes. Undeterred, Borlaug continued to seek support for a major prize that would recognize other food and agricultural scientists and was rewarded by the initiation of the World Food Prize by the General Foods Fund, Inc. The purpose of the prize is twofold: (i) to give recognition to scientists for outstanding contributions to the quantity, quality, or availability of food and (ii) to stimulate talented young women and men to seek careers in some link of the food chain.

Swaminathan has effectively championed causes beyond the realm of science. For example, he has recognized the important role of women in agriculture in developing countries. "In the ultimate analysis," he wrote, "the goal of scientific research is to enhance human happiness. This is why IRRI accords importance to equity issues in technology generation and transfer. An important initiative in this field is greater attention to the problems of women farmers as well as women laborers in rice farming areas. Evidence suggests that when women have independent access to income, child nutrition is improved. The poorer the household, the greater the need to increase total family income by enhancing the earning capacity of women.'

Swaminathan followed up his words, establishing the Asian Rice Farming Network, which has examined the effects on women of technological change in rice-based farming systems; designed, tested, and adapted technologies to reduce drudgery and increase women's incomes by creating more opportunities for them to earn money; and identified gaps in input-delivery systems and government policies that hamper women's full participation in developing and adapting technology.

With establishment of the World Food Prize, exceptional scientists such as Borlaug and Swaminathan can be properly recognized for their achievements and for extending their influence for the benefit of humanity.—ROBERT D. HAVENER, President, Winrock International Institute for Agricultural Development, Morrilton, AR 72110

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