Foreword to Cornell Paperbacks Edition

Gordon Conway poses an exceedingly difficult challenge. The “doubly green” revolution needs to provide the world’s farmers with the means to meet the increasing demands of society, while also addressing the economic concerns of the producers and the environmental impact of the technologies. Although societal needs continue to be as great as they were in the past, the sources for potential growth and improvements in agricultural production in the future are not as apparent as they were in the early 1960s as the “green revolution” evolved.

The achievement of the first green revolution was increased food production, which has more than kept pace with the growing demands associated with population and income growth in most areas of the developing world over the last two generations. This improvement in agricultural production can be linked to the proliferation of irrigation, the more intensive use of fertilizer and plant protection chemicals, along with the development of new crop varieties. These simultaneous developments resulted in cropping systems that are capable of responding to higher levels of inputs and management.

The higher crop yields attained during the first green revolution were most readily achieved in robust soil areas. In those areas where agricultural production expanded most rapidly, the rural poor benefited; but, overall, it was the urban poor who were clearly the beneficiaries of the green revolution. Conway now calls for technologies that will enhance the productivity and the incomes of farmers living in poorer soil and resource locations. Areas bypassed by the green revolution have not only failed to realize gains from higher yields, they have also experienced price declines for their commodities on the local and world market. This doubly green revolution must provide greater benefits to the world’s poor.

Conway also proposes the doubly green revolution will be more “green.” The intensive agricultural production associated with the green revolution has left a negative impact on human health and the environment. For example, pesticide poisoning and nitrates in the drinking water have...
proved to be detrimental to human and animal health. Damaging environmental effects include increased salinization of irrigated land, nitrous oxides and methane contributing to global climate change, and the resurgence of pests and pathogens resistant to available control methods. Some of these negative spillovers eventually have a depressing effect on agricultural production, the very thing they were intended to improve.

_The Doubly Green Revolution_ is a remarkably useful book in which Conway explores why, and how, this new revolution must go beyond simply responding to aggregate food demand. This book is the place to start for those seeking to understand agricultural development in poor countries during the era of the first green revolution and the challenges to sustainable development over the next several decades.

Vernon W. Ruttan
Regents Professor
Department of Applied Economics
University of Minnesota