Foreword

The last decade of the twentieth century will be a challenging and exciting period for international agricultural research. Scientists are only beginning to glimpse the revolutionary technical breakthroughs in genetic engineering and biological pest control that will help feed an increasingly hungry world. Simultaneously, we have become painfully aware of the negative pressure that the growing global population is placing on the earth's natural resources. This concern is encapsulated in the theme of sustainability, a still vague but increasingly powerful force in remaking our agricultural research agendas.

This book argues that, along with biological science, past and present indigenous farmer knowledge can play a key role in sustainability. The authors of the chapters—many of whom are Rockefeller Foundation Social Science Fellows, from both developed and developing countries—all work closely with plant breeders and crop production scientists. By tackling the links between farmer knowledge, technology development, and sustainability, they have carried their research skills into largely uncharted waters. Their research empirically demonstrates that farmers are active experimenters, plant experts, and local soil scientists in their own right. These findings, in turn, illustrate the practical feasibility of incorporating farmers' knowledge into the design of sustainable food systems. Above all, as applied social scientists, the authors have shown how the reality at the farm level—in fields, households, and markets—is important to research priorities of national and international organizations. No matter how much science and technology investment is made in laboratories or experiment stations,

payoffs must ultimately come through the effectiveness and sustainability of local food systems, particularly those located in marginal environments where infusion of new technologies has been slow. Future science and farmer sciences, as this volume demonstrates, can be complementary in the coming struggle to develop self-sufficient and sustainable livelihoods for all peoples of the human family.

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