

Preface

World-wide integrated pest management (IPM) is the accepted policy decision for pest management. However, in reality this often becomes “integrated pesticide management”. There is also debate and confusion about the primary quantifiable objective of IPM. The strategy of IPM and its implementation and evaluation has always struggled with interpretation and true progress. There are different schools of thoughts: one promoting the integrated pesticide management, thus training farmers in right use of pesticides to minimize selection for resistance, conserve beneficials and reduce health and pollution risks. Second: integrated pest management incorporating ecologically sound pest management tactics so that pesticides are essentially a last resort. Third: propagating pesticide free pest management. Fourth: over-relying on Bt crops to reduce insecticide use. However, use of pesticides should be limited to where no effective alternatives are available.

World pesticide use stabilized in the last two decades. The insect resistant transgenic crops, IPM and pesticide use reduction programs, and low volume pesticides were the drivers for stabilizing the pesticide use in China, United States of America and India. But lately there has been an increase in the pesticide use in these countries. Introduction of herbicide resistant crops in Canada and United States has increased herbicide use in the US and Canada. European countries, namely Denmark, Netherlands and Sweden, have halved the pesticide use in the last two decades by introducing pesticide action plans, implementing IPM programs and use of low dosage highly toxic pesticides compared with say, DDT (Chap. 19, 20, 21 and 22).

Bt crops are compatible with IPM strategies but Bt crops alone are not sustainable. Overreliance on transgenic crops has already led to the weed and insect resistance (Chap. 4) which may lead farmers into a transgenic-cum-pesticide treadmill. Experiences with implementation of pesticide action plans and IPM programs around the world confirm that reduction in pesticide use by mass is not the robust indicator to measure success of IPM. Low volume pesticides propelled the pesticide use reduction in many countries (Chap. 11, 22). The pesticide treatment frequency index and the environmental impact quotient are better evaluation indicators to measure the impact of IPM programs.

What experiences with IPM technology and IPM extension that are documented in this book can be bracketed successful and viable? In many instances IPM

technologies developed at the research level have not been effectively scaled up to industry-wide practice because of the lack of a well conceived and evaluated extension process. Different extension approaches are needed in different situations for greater adoption of IPM by the farmers. IPM practices in most cases are tested for success at pilot scale but fail to factor in the constraints, mainly the IPM attributes, for replication in large scale. The authorities in IPM research and extension throughout the world have contributed to the book and covered the experiences with different IPM approaches and implementation in North America, South America, Africa, Europe, Asia and Australia.

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