Chapter 2
Evaluation Research: Methodologies for Evaluation of IPM Programs

Rajinder Peshin, K. S. U. Jayaratne and Gurdeep Singh

Abstract Evaluation is a systematic approach by which the program process and results are compared with set goals and objectives to make value judgments about the program. In this regard, the evaluation of integrated pest management programs (IPM) is vital for making proper programmatic decisions. Formative and summative evaluations are the two major types of evaluation. Formative evaluation is used to assess the program process for its improvement. Summative evaluation is used to assess the program results for accountability. Institutions around the world are giving greater attention to the evaluation of extension programs. However, the evaluation of IPM programs is generally not up to the level it should be in terms of quality and rigour of evaluation research. The purpose of this chapter is to provide basic knowledge to the personnel involved in the evaluation about concept and purpose of evaluation, and appropriate research methods for conducting IPM evaluation studies. The theory based evaluation is helpful in designing the meaningful and rigorous studies. There are evaluation standards to guide the evaluators in this process. Before conducting IPM evaluation studies, it is important to review the practical considerations to ensure the quality and the usefulness of the study. Currently the evaluation of IPM programs lack consensus in selection of the indicators, research designs and adoption of appropriate methodologies. The social, economic and environmental indicators are taken into account while carrying out the IPM evaluation. The quality of an IPM evaluation can be improved by proper planning and selection of appropriate research design. Planning is helpful for achieving the evaluation objectives cost effectively. When the IPM evaluation studies are planned, it is important to consider the social, economic and environmental context of the farming community for achieving the practicality and the usefulness of the evaluation study. The IPM program evaluation is meaningful only if the results are communicated and utilized to achieve the evaluation objectives.
Keywords Evaluation research · formative and summative evaluation · evaluation models · evaluation of IPM programs · evaluation indicators of IPM programs

2.1 Introduction

There is no uniformly accepted definition of what constitutes evaluation research (Kosloski, 2000). The concept of evaluation research has been an issue of debate among academicians. The academicians consider that evaluation research differs from both basic research as well as applied research. Some consider evaluation as research and applied science. Evaluation research is a form of applied social science which intends to assist in improving the quality of human services (Posavac and Carey, 1989). According to Douglah (1996) “Research and evaluation both are mode of inquiry.” Alkin and Christie (2004) have discussed theories of evaluation in their paper “An evaluation theory tree.” They explained that evaluation has grown on three pillars of orientation i.e. research orientation, decision making orientation and assessing worth. (i) Tyler (1942), Campbell and Stanley (1966) and many other prominent scientists emphasized well designed experimental and quasi-experimental designs for doing evaluation. They had more methodological orientation. (ii) Theorists having decision making orientation emphasized that evaluation is done to improve the program thus the major role of evaluation is to give feedback to program stakeholders to make better decisions. But it is not its only function. Program evaluation provides useful, objective, and timely information about the extent to which desired program results are being achieved. Stufflebeam’s (2003) CIPP (Context, Input, Process and Product evaluation) model is one of the famous models for its decision making orientation. The model has been employed in many countries in short-term and long-term investigations. (iii) According to the third orientation, assessing worth or value is the main role of evaluation and the role of an evaluator is to give value to evaluation findings. Shadish et al. (1991) deems Scriven as “the first and only major evaluation theorist to have an explicit and general theory of valuing”. After, that many other theorists emphasized value orientation of evaluation.

The field of evaluation research can be defined as “the use of scientific methods to measure the implementation and outcome of programs for decision-making purposes” (Rutman, 1984). A broader and more widely accepted definition is “the systematic application of social research procedures for assessing the conceptualization, design, implementation, and utilization of social intervention programs” (Rossi and Freeman, 1993). A much broader definition was offered by Scriven (1991) who defined evaluation as “the process of determining the merit, worth and value of things”. It does not limit to a social program or specific type of intervention but encompasses everything. The object can be a program, a project, a product, a policy, or a one-off event. According to Scriven (1999) the discipline of evaluation has some more than 20 recognized fields including program evaluation, personnel evaluation, performance evaluation, product evaluation, training evaluation etc. Evaluation as such should start with a close examination of the purpose of the evaluation, and clear understanding of the Program and target clientele. It is not until the purpose and