

ORIGINAL ARTICLE

Studying Integrated Pest Management (IPM) Rice farming Practices in Marvdasht County, Iran: a baseline survey

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ABSTRACT

Integrated pest management (IPM), as one of sustainable agricultural development components, is based on synergy of empowering farmers, environmental friendly technology and integrated farm management. Effective IPM extension needs identification and analysis of related principal components with aim to policy making and planning by farmers' participation. Along with this comment, this research was done based on survey research. The main purpose of this study was to investigate rice farmer's practices relating to integrated pest management (IPM) in Fars province, in Iran. The statistical population included 1145 of rice farmers. A sample of 90 farmers was selected by the use of proportional random sampling methods. Questionnaire was used to collect data. For determining the validity of questionnaires, the content validity was used. Cronbach's alpha was used to measure reliability of the instrument, which was 0.87 and showed the instrument reliability. SPSS/win software was used for data analyzing. The result of factor analysis showed that three components were extracted of IPM practices. The first factor called the optimal cultivation practices that explained 26% of the total variance and others were biological practices and physical-mechanical practices.

Key words: Sustainable Agriculture, Rice, Integrated Pest Management (IPM), Factor Analysis, and baseline survey

Introduction

Sustainable agriculture is a key element of sustainable development and essential to the future well being of the planet. Sustainability aims to achieve adequate safe and healthy food production, improved livelihoods of food producers and the preservation of non-renewable resources.

One of the major objectives of sustainable agricultural systems is to reduce inputs into crop production. One way in which this objective can be achieved is through integrated pest management (IPM), rather than sole reliance on pesticides (Conway, 1996). IPM is a strategy which encourages the reduction of pesticide use by employing a variety of pest control options in combination to contain or manage pests below their economic injury levels. IPM is a vital component of agro-ecological engineering for sustainable development of agriculture. IPM programs utilize all possible control strategies, including biological control, cultural control, environmentally sound chemical control and ecosystem health techniques, with the goal of reducing purchased inputs while maintaining the yield, quality and profit of crops.

There are a large number of conceptual definitions of IPM. Everybody, well almost everybody, has had a shot at defining IPM. For all referring to the same topic, the definitions are amazingly varied, doubtlessly reflecting each definer's background and philosophy. Most definitions include using natural or ecologically

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