

## Adoption of indigenous plant protection practices for sustainable environment

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### ABSTRACT

An attempt was made to study the extent of adoption of indigenous agricultural practices in Cuddalore district of Tamil Nadu state in India. Three hundred respondents were selected based on 'population proportionate to size' sampling method. A well structured and pre-tested interview schedule was administered for the collection of relevant data. The results revealed that a number of indigenous agricultural practices in the study area were adopted by more than 50.00 per cent of the respondents. Most of the indigenous agricultural practices on land preparation, seeds and sowing, plant protection, harvest and post-harvest aspects were adopted by more than 40.00 per cent of the respondents in the study area.

### INTRODUCTION

'Sustainability' refers to the capacity to remain productive while, maintaining the resource base. In recent years, generally agricultural production needs are met with application of inorganic fertilizers along with improved and hybrid varieties and increased productivity. But yield levels is not sustained over years.

For achieving sustainable development, Indigenous knowledge systems play a vital role. According to Haverkort (1991), indigenous knowledge is the actual knowledge of a given population that reflects the experiences based on traditions and includes more recent experiences with modern technologies.

In India, the total use of pesticides account for about 90,000 tonnes annually, out of which 63 per cent is for agriculture. Among the pesticides used 70 per cent are insecticides, 12 – 15 per cent are fungicides and 4-5 per cent herbicides. The indiscriminate use of chemical fertilizers, pesticides and unplanned use of irrigation water have threatened the sustainability of agricultural production. They increased the health hazards and pollute soil, water and environment (Gupta, 1999).

A lot of researchers have found out that indigenous agricultural practices contribute significantly for the sustainable agriculture production and for the eco-friendly environment. (Chambers, 1990; Woodley, 1991;

Reijntjes, 1995).

Considering the significance of indigenous agricultural practices an attempt has been made to find out the extent of adoption of indigenous plant protection practices in Cuddalore district.

### METHODOLOGY

Cuddalore district in Tamil Nadu were purposively selected for the study considering the significance of the availability of large number of agricultural families in this district. Ex-post facto design was followed. Data were collected from 300 respondents identified based on simple random sampling method. Statistical tools like percentage analysis was employed for the study and the results obtained were tabulated and appropriate inferences were drawn.

### RESULTS AND DISCUSSION

The indigenous plant protection practices identified along with the extent of adoption in the study area are presented in Table 1.

It is observed from the Table 1 that a number of indigenous agricultural practices are adopted by more than 50.00 per cent of the respondents in the study area. With regard to plant protection a significant number of practices were adopted by more than 40.00 per cent of the respondents. In general it can be concluded that farmers in the study area

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