

# **Evaluation of Different IPM Modules against Insect Pests and Natural Enemies in Direct Seeded Rice**

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## **ABSTRACT**

A field experiment to “Evaluate of different IPM modules against insect pests and natural enemies in direct seeded rice” was conducted at Agricultural College Farm, Bapatla during *kharif*, 2022. Four different IPM modules such as IPM module, BIO IPM module, Ecological Engineering module and Farmers practice. Were evaluated. The insect pests observed during the crop season were leaf folder and BPH. Among all the modules, IPM module has recorded the lowest leaf folder (2.94) and BPH (1.58) incidence. The highest incidence of leaf folder (13.99) and BPH (8.77) were observed in Ecological engineering module. The natural enemies such as coccinellids, mirid bugs and spiders were recorded more in Ecological engineering module. Correlation analysis for different IPM modules revealed that insect pests such as leaf folder and BPH showed a positive correlation on natural enemy incidence. The results of correlation analysis showed values 0.878 for coccinellids, 0.969 for mirid bugs and 0.958, 0.922 for spiders with leaf folder and PBH respectively. Yield in different IPM modules ranged from 10167 kg ha<sup>-1</sup> to 9366 kg ha<sup>-1</sup>. The highest yield was recorded in IPM module (10167 kg ha<sup>-1</sup> followed by Farmers practice (10088 kg ha<sup>-1</sup>), BIO IPM (9768 kg ha<sup>-1</sup>) and lowest was observed in Ecological engineering module (9366 kg ha<sup>-1</sup>).

**Keywords:** *BPH, Coccinellids, IPM modules, Mirid bug and Spider.*