

Int. J. Bioinformatics and Biological Sci.: Vol. 8 Special Issue, 2020 (p: 115–118)

Identification and Symptomatology of Most Prevalent Diseases of Rice (*Oryzae sativa*) in Gajapati District of Southern Odisha

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Abstract

Rice is the major crop of Southern Odisha and the losses in rice are caused mainly due to biotic factors, abiotic factors and nutritional deficiency. It is affected by many pathogens like fungi, bacteria and virus. The endemic plant pathogen of rice is causing lot of damage to the crop and which causes low production and productivity. So identification and symptomatological study of these diseases are necessary for taking proper management practices to control these diseases. In the present investigation it was found that Bacterial leaf blight, Brown spot and blast are the major diseases leading to low production and productivity in Gajapati district. The present investigation has been taken to up to evaluate different diseases on rice crop and to increase awareness among the farmers.

Keywords: Rice, Southern Odisha, Brown-spot, Blast

Rice (*Oryza sativa* L.) is the second most important cereal crop of the world. It is staple food for more than half of the world's population. Approximately 90% of global rice production is contributed by Asia continent alone15. Rice is also important staple food and cash crop of Pakistan. Rice crop is subjected to attack of 50 diseases that including 6 bacterial, 21 fungal, 4 nematodes, 12 viral and 7 miscellaneous diseases and disorders 12,31.

However, major diseases are rice blast, brown spot, bacterial leaf blight and leaf streak, sheath blight, sheath rot, Fusarium wilt or Bakanae, stem rot, Tungro virus, false smut and post-harvest diseases23. These diseases either attack at any growth stage of rice plant or infect rice grains after harvest, causing considerable losses in both quality and quantity of the produce. It is estimated that about 14-18% yield reduction was caused by these diseases worldwide Rice is the second most important cereal crop of the world (FAO, 2014). It is staple food for more than half of world population. Around 90% of the world rice contributed by asian continent alone. Rice is the most important crop of shourthen odisha. It is affected by wide variety of diseases. Disease on plant placed a great constraint on the production and productivity.

Hence, early and accurate identification of disease are essential to ensure high quality and best quality. The

How to cite this Article: Abhinandita sahoo, B. Praveen, T. Umamaheswari, Sudeepta Pattanayak, Srabani Barik, Ritesh kumar, 2020, Identification and Symptomatology of Most Prevalent Diseases of Rice (Oryzae sativa) in Gajapati District of Southern Odisha, 8(Special Issue) : p 115–118. **Source of Support:** None; **Conflict of Interest**: None