



University of Zabol  
Graduate school  
Faculty of Agriculture  
Department of Agriculture

**Thesis Submitted in Partial Fulfillment of the Requirement  
for the degree of Master of Science (M. Sc) in the field of  
Plant Pathology**

**Evaluation Of Biological Control Of Wheat Flag Smut  
Using *Fluorescent pseudomonas* Isolates from Wheat Fields**

**Supervisor**

Dr. N.Panjehkeh

Dr. M.R Eslahi

**Advisors**

Dr. M. Salari

Dr.k. Sabagh

**By**

S. Yousefi

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## **Abstract**

In this study, firstly, soil samples were collected from wheat fields and then *Pseudomonas fluorescens* bacteria were isolated using specific media. The antagonistic properties of this isolates and mechanism of their antagonistic activity was studied in the laboratory and isolates that showed the ability for antagonist activity were selected for the test greenhouse. In the greenhouse, wheat seeds cv. Chamran initially were moistened with this bacteria and then inoculated with spores of leaf smut fungus and were planted at a completely randomized design with four replications. The ability to control leaf smut by these bacteria was investigated to count the infected and healthy plants, and comparing them with the control plants, which are without inoculation with bacteria and analyzed with SPSS statistical software. The results show that the level of virulence and the stem length in between treatments were significant at  $P \leq 0.01$ .

**Key words:** *Urocystis agropyri*, *Siderophor*, *antibiotic production*, *chamran cultivar*