



University of Zabol  
Graduate School  
Faculty of Water & Soil  
Department of Soil Sciencee

**The Thesis Submitted for the Degree of Master of Science  
( in the field of Soil Science)**

**Effect of biological and organic fertilizers on Wheat  
(*Shiroudi cultivar*) yield susceptible to scab disease**

**Supervisors:**

Dr. A. Gholamalizadeh  
Dr. S.K. Sabbagh

**Advisors:**

Dr. A. Sirusmehr  
Dr. S. Esmailzadeh

**By:**

A. Pourabdolah

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## Abstract

Fusarium Head Blight or Scab is one of the most important disease of wheat and other small grains, which reduces the quantity and quality of the product. it is very dangerous to humans and animals. As a result finding a way to prevent the disease and improve quality and quantity as well as the performance of the product is important. This research to study the effects of organic fertilizers and bio- fertilizers and effects on FHB, ability to be evaluated fertilizers as a defensive to disease. this study done on November 91 in zabol greenhouse to completely randomized design and independent on two wheat cultivars (Tajan and Shirudi) respectively resistant and sasceptible to FHB. First experiment's treatment related to Shirudi cultivar include: Mycorrhiza (My), Nitroxin (N), Municipal Solid Waste Compost (CO), sulfur granular organic (S), mycorrhiza + Nitroxin (My+N), organic granulated sulfur + Nitroxin (N+S), Mycorrhiza + compost (My+Co), compost + Nitroxin (Co+N), organic granulated sulfur + Nitroxin + Mycorrhiza (My+N+S) and control (C). second experiment's treatment related to Tajan cultivar include: Mycorrhiza (My), Nitroxin (N), Vermicompost (Verm), Nitroxin+Vermicompost, Mycorrhizal+Vermicompost, Mycorrhizal+Nitroxin and control (C). after heading two wheat, fusarium disease were inoculated artificially to wheat cultivar heading. After 24 hours storage under plastic to retain moisture overall impression was performed after completion of the period of growth. The first test result's showed that the highest grain yield and chlorophyll a and b respectively obtained 0.14 (g. pot), 23.5 and 8.74 related to control. It appears (Shirudi cultivar) organic fertilizers and biological infection in coping with their illness the highest percentage of nitrogen uptake by plants at condition to artificial inoculation of FHB was related to fertilizer's treatment (My+N+S) to the 1.48 percentage.the second study showed that contrary Shirudi cultivar, the highest of grain yield and chlorophyll a and b was related to fertilizer's treatment (My+V) to Compared to the control respectively increased 74.62 and 86.95 percentage. It seems that the positive impact of the use of Vermicompost applied on Mycorrhizal symbiosis and expansion of external hyphae and the impact of Mycorrhizal fungi on growth, development and prosperity of the host plant roots improved plant growthed and ultimately increased the yield. In general, organic and biological fertilizers on Tajan Cultivar better than Shirudi Cultivar has reaction against Fusarium disease in terms of quantity and quality.

**Key words:** Fusarium Head Blight, Organic fertilizers, biological fertilizers, application, wheat