

## **Abstract**

Application of animal manure and biological fertilizer to reduce chemical fertilizer application and soil physic-chemical properties is one of the newest methods in sustainable agriculture. Regarding important of barley and its role in food supply research on different aspect of barley has great important. This experiment was conducted to examine effects of animal manure and biological fertilizer on yield and yield components of some varieties of barley as split plot design with three replications in Zabol university research farm during 2014. The results showed that plant height, number of leaves per plant, number of grains per spike, number of spikes per plant, number of tillers per plant, grain and biological yield, seed weight, seed nitrogen and phosphorus concentrations, as most of the characteristics of treated manure application of 20 t ha fertilizer that is not significantly greater than the control. Mycorrhiza also had a significant impact on all components of the study. The results showed that application of manure and biological (mycorrhizal strains), by improving some soil properties such as porosity, permeability, air and soil structure, causing the atmosphere to be better developed root system, but, according to Although there was no significant difference between strains of mycorrhiza, conducting further research to identify the best mycorrhizal for crop barley and other crops seem necessary.

**Keywords:** Organic fertilizer, Mycorrhiza, Barley, Protein



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Thesis Submitted in Partial Fulfillment of the Requirement for the degree of Master  
of Science (M. Sc) in Agroecology

**Title**

**Effects of mycorrhizal inoculation and manure on  
the growth and yield of barley**

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**Dec. 2014**