ABSTRACT:

In order to study effect of biofertilizers and manure on yield and yield components of barley *(Hordeum vulgare)* an experiment was conducted in research farm of University of Zabol, Iran at cropping season of the year 2012-2013. Experimental treatments were arranged as a factorial in base of randomized complete block design with three replications. Treatments included; three manure levels; control, 20 ton/h^{-1}, 30 ton/h^{-1} and four levels of biofertilizers, include (control, Azospirillum, Azotobacter and Azospyrilium + Azotobacter). Results indicated that manure levels had a significant effect on hight plant, hight stem, number of seed in spike, number of spike in plant in barley. Meanwhile biofertilizers caused significant differences on all mentioned traits. The interaction effects showed that integrated application of manure and biofertilizers were more effective on barley growth. Therefore, the highest economical yield (2.6 ton/h^{-1}) obtioned by applying 20 ton/h^{-1}manure + Azospirillum *and* Azotobacter. Generally, integrated application of manure and biofertilizers could play important increasing yield and yield components of barley.

Key words: Barley, manure, biofertilizers, economical yield.

واژه‌های کلیدی: جو، کود دامی ،کودهای زیستی، عملکرد اقتصادی.

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The Thesis for Master's degree courses in Agroecology (pardis 2)

Effects of azotobacter and azospirillium bacteria combined with manure on quantity and quality yields of barley

(Hordeum vulgare* L.*)

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