

Abstract

Intercropping is an important way to increase agricultural production. This could have a favorable impact on soil conditions. In order to study the yield and yield components in intercropping garlic and canola an experiment was conducted at the 2013 growing season in the experimental field of the Institute of Agriculture, University of Zabol at a split plot based on randomized complete block with 3 replications. Factors studied include the net garlic cultivation, a net culture of canola, 100% of garlic + 95% of canola, 100% of garlic + 85% of canola, 100% of garlic + 75% of canola, 100% of garlic + 65% of canola, 100% of garlic + 55 % of canola , rapeseed 100% of garlic + 45% of canola, 100% of garlic + 35% of canola, and 100% garlic + 25% of canola were considered. The characteristics that was examined in this study for canola include: plant height, number of lateral branches of canola, number of pod, number of seeds in pod, the weight of one thousand seeds, protein, oil, economic yield, biological yield and harvest index. and characteristics that was examined in this study for garlic include: The number of garlic leaves, Number of bulb, Anthocyanin contents, Allicin contents, economic yield, biological yield and harvest index, and to compare to between intercropping and Monoculture applied by Land equivalent ratio. The results showed intercropping caused significant height, number of branches, the oil percent and in this experiment also found some canola characteristics were significantly influenced by intercropping much as the: number of pods, harvest index, biological yield, protein percent. Of 1%: seed in pod, the weight of one thousand seeds and economic yield, in the experiment did not find significant differences. In The garlic on the intercropping caused: leaf number, biologyc yield, economic yield is very significant. The number of bulb and allicin were significantly influenced by intercropping at 5% level and harvest index and anthocyanins not find significant difference In this experiment. Also greatest of equality of cultures (1/77) was in the intercorpping.

Key words:

Intercropping, Garlic, Canola, Yield



University of Zabol

Department of Agronomy

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

**Evaluation of yield and yield components of Garlic (*Allium sativum L.*)
(in intercropping with Canola (*Brassica napus L.*))**

Supervisor:

Dr. M. Dahmardeh

Advisors:

Dr .I. kammari

. By:

F. Panahi.

September 2015