Abstract:

In order to evaluate the effect of planting directions (North-South, East-West) and nitrogen split on the ecomorphological traits, yield and yield components of Roselle a split plot experiment was conducted in a randomized complete block design with three replications at the Research Institute of Zabol University during growing season of 2016-2017.Treatments experiment included of planting directions at two levels (North-South, East-West) As the main plot and nitrogen fertilizer split from the source of urea in 4 levels (1/3 per planting, 1/3 four leaf stage, 1/3 stemlongation; 1/2 post planting, 1/2 four leaf stage; 1/2 four leaf stage, 1/2 stemlongation; 1/3 four leaf stage, 1/3 stemlongation, 1/3 Flowering stage) As a sub plot . The results of analysis of variance showed that the planting directions and split of nitrogen fertilizer and interaction was significant on all traits different. Based on the results of mean comparison treatments showed that all traits measured except number of Lateral branch and sodium Sepal in the planting directions (north-south) had the highest amount. The highest economical yield (784 kg.ha-1) and anthocyanin (2.98 mg/g) were obtained from north-south planting.The correct timing of fertilizer use is more important than the total amount of fertilizer used. In this study, Split timing of nitrogen application for the use of 1/3 four-leaf stage, 1/3 stemlongation stage, 1/3 flowering stage, was increases the qualitative and quantitative traits of roselle. Which can result in reduced fertilizer costs and environmental pollution.

Keywords: Ecological factors, Sepals yield, Medicinal plant

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The Thesis Submitted for the Degree of Master of Science
In the field of Horticultural Science-Medicinal Plants

Evaluation of nitrogen optimize management and planting directions (North-South , East-West) on ecophysiological traits of roselle *(Hibiscus sabdariffa* L.)

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Summer 2018