

Abstract:

Crop mixture is an important method of high production in agriculture. This technic can affect on soil environmental condition. To Study of the effect of peanut (*Arachishypogaea* L.) and maize (*Zea mays* L.) intercropping on yield, yield components and weed control, an experiment was conducted. Using planting system in four levels as first factor inclusive (sole maize, sole peanut, 50% maize + 50% peanut, 100% maize + 100% peanut) and planting design as second factor in two levels (40 and 50 Cm) and weeding as third factor in three levels inclusive (non weeding, once weeding, twice weeding) at factorial experiment in the form of RCBD with three replications at the Research Farm of Agriculture Center of Zabol University (Iran) in 2012. Characteristics as studied for Maize inclusive Plant height, Stem diameter, No. of ear.plant⁻¹, No. of row.ear⁻¹, No. of kernel.row⁻¹, No. of kernel.ear⁻¹, 1000 grain weight, Biological and Economical yield and Harvest index and for peanut inclusive No. of pod.plant⁻¹, No. of kernel.pod⁻¹, 100 grain weight, Biological and Economical yield and Harvest index. As well as, Characteristics as studied for weeds inclusive dry and fresh weight of weeds and density of monocotyledon and dicotyledon weeds. The results showed that the planting system was significant on all of the said characteristics for peanut and maize characteristics excluding of No. of row.ear⁻¹, and caused that improve the said plant characteristics. As well as, effect of weeding was significant on all of the said characteristics excluding of Biological yield, Economical yield and Harvest index of maize and Biological yield and No. of pod.plant⁻¹ of peanut. Effect of planting design was significant on Stem diameter, No. of ear.plant⁻¹, 1000 grain weight, Biological and Economical yield of maize and all of the peanut characteristics. The highest LER was obtained from 100% maize + 100% peanut that have sign of advantage of intercropping system compared to sole maize and sole peanut.

Key words:

Weeding, Planting design, Economical yield, Harvest index, LER.