

**Document Type** : Thesis

**Document Title** : ON THE AUTECOLOGY OF CITRULLUS COLOCYNTHIS (L.)SCHRAD  
(CUCURBITACEAE)

"(جوانب من البيئة الذاتية لنبات الحنظل) (القرعية)"

**Document Language** : Arabic

**Abstract** : This investigation aims to study the autecology of Citrullus colosynthis (L.) Schard, which characterized by wide geographic distribution. The study took place on a big area extended about 330 km long, which cover the area from the Red Sea coast up to the tops of Al-sarawat mountains, seven sites were chosen, which are : AL-Shoaibah lies about 3km from the red sea coast and 25 m above sea level, Wadi-Fatima 140 m above sea level, AL-Sharai 420 m above sea level, Al-yamanyah 770 m above sea level), AL-Hawyah 1400 m above sea level, AL-Shafa 1900 m above sea level. Finally, AL-Dar AL-Hamra 2220 m above sea level. The vegetation had been studied for each location and the companied plants of C. colosynthis were recorded, six species belong to 6 families were recorded in AL-Shoaiba site, there were 44 species belong to 24 families in Wadi-Fatima, AL-Sharai has 27 species belong to 17 families, there were 19 species belong to 14 families recorded in AL-Yamaanyah, 35 species belong to 17 families recorded in AL-Hawyah, 57 species belong to 26 families recorded in AL-Shafa, Finally, 68 species belong to 27 families recorded in AL-Dar AL-Hamra. In addition, C. colosynthis-were recorded in all previous locations. The longest shoot system extension were recorded in AL-Sharai location, then the length decreased in Al-yamaanyah and Wadi-Fatima. So, both the mountains slopes and the foothills are the convenient places for plant growth while growth of the shoot system decrease in the locations near to the sea due to the effect of salinity. The soil analysis show that the soil is alkalinity (PH 7.1-7.7) in the lowland sites ,such as:(al-shoaiba - Wadi Fatima - Al- sharai), while it was acidic (PH 6.4 - 6.9) in the high sites, such as:( Al-hawyah- Al-shafa - Aldar Alhamra ). However al-yamanyah is a medium location between the two previous groups which have a neutral medium soil. The soil contain high concentrations of N and K, the former amount increases by the highest, while the latter has a high accumulations range in the shoot system more than the roots due to the plant necessity to it in the biological activities. The results show that Fe concentrations were too low in soil and plant of all study sites.

**Supervisor** : د/حسن بن سعيد الزهراني

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