EVALUATION OF ANTIBACTERIAL EFFECT OF ETHANOLIC EXTRACTS OF THE LEAVES, FRUIT PULP AND THIN STEM OF *OLEA EUROPAEA* AGAINST SIX BACTERIAL STRAIN.

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Medicinal plants are the oldest known source for treatment of disease. In this research, the antibacterial activity of the ethanolic extracts of the leaves, fruit pulp and thin stem of *Olea europaea* were evaluated against *Staphylococcus epidermidis* (ATCC *1228*), *Staphylococcus aureus* (ATCC6538), *pseudomonas aeruginosa* (ATCC9027), *Escherichia coli (ATCC 8439)*, *Salmonella typhimurium (ATCC 14028)*, *Klebsiella pneumoniae* (ATCC *10031)*. The minimum inhibitory concentration (MIC) values for each part of plant were determined by agar dilution method. The maximum antimicrobial activity of ethanolic extracts was exhibited by thin stem and for all extracts was less than 5 mg/ml which shows good track of antimicrobial effect which may lead to the use of extracts as a preservative in food or template of new generation of antibacterial material after further more evaluation about the composition of extracts.

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EFFECTS OF CHEMICAL AND BIOLOGICAL FERTILIZER ON YIELD COMPONENTS IN THE CUMIN (*CUMINUM CYMINUM* L.)

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Cumin (*Cuminum cyminum* L.), a member of apiaceae, is an annual plant which is originated from Egypt and East Mediterranean. but it is widely cultivated in Iran, Japan, China and Turkey. At the present, Iran is an important cumin exporter in the world market and cumin production of Iran is approximately 20- 40 percent of world market. Biological fertilizer application in medicinal plants production in sustainable agriculture with aim of remove or reduce the chemical input in order to reach to quality increasing and sustainability of yield is very important. Therefore experimental research based on randomized complete block design with four factor of biological phosphorus (Barvar-2) at two levels (a_1= inoculated, a_2= non-inoculated), chemical phosphorus at three levels (b_1=0, b_2=40, b_3=80 kg.ha^{-1} from triple super phosphate), biological nitrogen (Azotobacter) with trade name Nitroxine with two levels (c_1= inoculated, c_2= non-inoculated) and chemical nitrogen at three levels (d_1= 0, d_2= 25, d_3= 50 kg.ha^{-1} from urea) with three replicates carried out during 2010-2011. The effects of treatments on number of umbels per plant were statistically significant at P=0.01, and the maximum ($a_1b_3c_1d_2$) and minimum ($a_2b_1c_1d_1$) corresponding values were 45 and 3, respectively. Plant height was also significantly affected by different treatments at P=0.01, as the maximum and minimum values were related to treatment "$a_1b_3c_1d_2$" and "$a_2b_1c_1d_1$", respectively. The effects of different treatments on the number of seed per umbel significantly were different at P = 0.01 and the maximum and minimum values were related to treatment "$a_2b_1c_2d_3$" at 12.75 and "$a_1b_2c_2d_3$" at 3.83, respectively. 1000 seeds weight was also significantly affected by different treatments at P=0.01, as the maximum and minimum values were related to treatment "$a_2b_2c_1d_2$" and "$a_2b_3c_2d_2$", respectively.

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