Effect of Organic and chemical Fertilization on growth and yield seeds of fennel (Foeniculumvulgare L.) And it's active ingredients

Dler J. Ramzansulaivani M
M. Duhok IRAQ,

A field experiment was carried out during the winter season 2012-2013 in fields of Agriculture College - University of Tikrit, to study the effect of addition levels of Organic and chemical Fertilization on the special characterizes for the growth, yield seeds, volatile oils, and active ingredients of fennel (Foeniculumvulgare L.) by using Organic Fertilization (sheep manure ,cow manure) with three levels (0, 6 ton. hectar-1 sheep manure, 6 ton. hectar-1 ,cow manure) and chemical Fertilization (Boron) in the form of boric acid (17% B) with two levels (0, 0.05 mg.litter-1) and it's interactions, The experiment carried out based on the system of testing the factorial experiment has been used according to randomized complete block design (R.C.B.D) with three replications. The soil was plowed grazed soothed and divided into pallets of dimensions (2 x 2 m), Organic fertilizers were added to the experimental units before a week the planting, while the boron was added to the leaves of the plant until the full wetness ,The quality and quantity of volatile oils in the samples were diagnosed using Shimladzu's HPLC-type FLC-10A, 2000, with Spectrophotometer-Spd-6A-Uv and its speed of 1.2 min / ml.

The results can be summarized as follow:

The treatment (M2) (6 ton. hectar-1 cow manure) apparent highest average in an increasing percentage on characterizes, plant height (115.9) cm, the number of flowers umbels (95.3) umbel.plant-1,Trans-Anethole (336.88) microgram.ml-1 ,alpha- pinene (74.47) microgram.ml-1. while the treatment (M1) (6 ton. hectar-1 sheep manure) gave highest percent in the fresh weight (482) gram.plant-1, Trans-Anethole(250.9) microgram.ml-1.

The addition boron during (B1) (0.05 mg. litter-1) treatments gave highest percent in the seeds yield (3753) kg.hectar-1, Limonene) 174.04) microgram.ml-,Fenchone)77.55) microgram.ml-1.