

FFECT OF SPRAYING ALGATON FERTILIZER ON THE GROWTH AND YIELD AND ACTIVE COMPONENTS OF SUNFLOWER CULTIVARS *Helianthus annuus* L. UNDER DIFFERENT TILLAGE SYSTEMS

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ABSTRACT

Field experiment was conducted during the spring season 2020 at Al-Huwair area, north of Basra Governorate, Iraq with the aim of knowing the effect of spraying three concentrations of Algaton fertilizer namely (0, 2, 4 and 6 ml l⁻¹) and tillage system, on the growth and yield of three varieties of sunflower, namely (Euroflor, Shumos and Luleo).

The conventional tillage system recorded higher mean of plant height, stem diameter, leaf area, head diameter, number of seeds per head, weight of 1000 seeds, seed yield and oil percentage of 151.55 cm, 1.98 cm, 0.42 m², 16.97 cm, 1120.67 seed head⁻¹, 65.14 g, 3244.70 kg ha⁻¹ and 32.85% respectively.

Luleo cultivar recorded the highest mean of plant height, stem diameter, leaf area, head diameter, yield components, seed yield and oil percentage.

The effect of Algaton fertilizer was significant, the 6 ml l⁻¹ concentration level gave the highest mean of plant height, stem diameter, leaf area, head diameter, seed yield and oil content.

The interaction among cultivars and Algaton fertilizer was significant, as Euroflor cultivar at 6 ml l⁻¹ concentration recording the highest plant height and seed yield, the Luleo cultivar at 6 ml l⁻¹ concentration recorded the highest oil percentage.

Keywords: Algaton; concentrations; leaf area; oil content; seed yield.

INTRODUCTION

Sunflower (*Helianthus annuus* L.) belongs to the compositae family and is one of the world's most

important oil crops due to its high content of unsaturated fatty acids. Sunflower is ranked third after soybean and rapeseed in the amount of oil globally [1]. The economic importance does not