

الملخص الإنجليزي للبحث رقم ١

عنوان البحث باللغة الإنجليزية :

Influence of supplying some safe natural honey bee products on fennel plants growth, seeds yield, oil production and its components.

Authors:

A.I.B. Abou-Sreca¹, **Safia Mahmoud Abdel-Mageed Ahmed**² and K.E. Mazrou³

¹Horticulture Department, Faculty of Agriculture, Fayoum University, Fayoum, Egypt.

²Botany Department, Faculty of Agriculture, Fayoum University, Fayoum, Egypt.

³Plant Biotechnology Department, Genetic Engineering and Biotechnology Institute, Sadat City University, Alminufiya, Egypt.

ABSTRACT:

Honeybee products as propolis (Pp) and royal jelly (RJ) are natural mixtures and powerful source of safe nutrients that could be safely used in agriculture as substitution of poisonous and dangerous chemical fertilizers. The impact of using them either solely or in combination as foliar application on some fennel morphological traits, fruit and oil yield and its essential components and chemical components was studied. RJ and Pp were foliar sprayed at three rates i.e. 0.0, 0.2, 0.4% and 0, 3, 6 g l⁻¹ respectively in sole and combination treatments. All records assured that the application of both materials (RJ, Pp) have a positive useful impact on all traits studied either used individually or in combination. The moderate concentrations of both materials individually or in combination (0.2 % RJ, 3 g l⁻¹ Pp) gave the highest records of growth and yield characters as well as anethole in the oil compared with other treatments with more superiority of RJ results over those of Pp in sole treatments even though RJ concentration is less than that of Pp especially in oil percentage and umbels number. On the other side, the highest concentration of either RJ (0.4%) or moderate one of Pp (3 g l⁻¹) as sole treatment or in combination gave the highest records of most chemical composition. Also 0.4% RJ with 6 g l⁻¹ Pp produced the highest percentage of estragole. Hence, fennel plants can be safely grown and highly produced by these safe natural materials without the help of the chemical fertilizers.