

## عنوان مقاله:

(Combined bio-chemical fertilizers ameliorate antioxidants attributes of (*Nigella sativa* L

## محل انتشار:

سومین کنگره بین المللی و چهارمین همایش ملی زیست فناوری گیاهان دارویی و قارچهای کوهی (مجازی) (سال: 1400)

تعداد صفحات اصل مقاله: 1

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## خلاصه مقاله:

*Nigella sativa* L. is a nutraceutical herb with extensive pharmaceutical and biological properties. Currently, reducing the application of chemical fertilizers (synthetic fertilizers) causes serious problems to environmental pollution and human health. Therefore, the combined effect of urea and biofertilizers was studied on the antioxidants traits of *N. sativa* L. in a randomized complete block design with 10 treatments and three replications. The treatments included control (no fertilization), U (100% chemical fertilizer as urea), Nb (Nitrogen biofertilizer), Pb (Phosphate biofertilizer), Kb (Potash biofertilizer), NPKb (NPK biofertilizer), Nb+ 50% U, Pb + 50% U, Kb + 50%U and NPKb + 50%U. The analysis of variance revealed that the treatments affected all the traits significantly ( $P < 0.01$ ). The highest total DPPH free radical scavenging (33.47%), Superoxide radical scavenging (59.50%) and chain-breaking activity (1.02%) were related to the treatment of NPKb + U50%. There is, therefore, a definite need for applying combined fertilizer system as a method to achieve sustainable agriculture. In sum up, the application of NPKb + U50% as bio-chemical fertilizers improved *N. sativa* L antioxidants attributes.

## کلمات کلیدی:

Synthetic fertilizer, Biofertilizer, Antioxidants, Black cumin

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