



Effect of Antioxidant Reagents and Silicon Spraying on Phenol, Flavonoid and Anthocyanin in Oat Varieties

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Abstract: A field experiment was conducted during 2017 and 2018 at Bida'a-Mashrua/Babylon Governorate within 132°31' atitude north and 44°21' east latitude, to study the effect of three silicon spraying levels (0, 0.5 and 1.0 mM) and four treatments of antioxidant reagent (control, 50 mg.l⁻¹ ascorbic acid, 0.5 mMsalicylic acid and both of acids) on some active substances in two oat varieties (Shafaa and Oat 11) grain. The phenolc, flavonoids, and anthocyaninswere significantly higher in Shafaa. Both of antioxidant reagent spraying (salicylic and ascorbic acids) as single spraying were superior in increasing phenols, flavonoids, and anthocyanins contents in grains. Silicon spraying in both concentrations was superior as compared to control treatment and high concentration was superior in increasing grain content of phenols, flavonoidsand anthocyanins.

Keywords: Oats, Phenols, Flavons, Anthocyanins
