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Responses of indole-3-butyric acid and triazole compounds on the non-enzymatic antioxidant constituents of *Withania somnifera* (L.) Dunal

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W*ithania somnifera* (L.) Dunal, belongs to the family Solanaceae and commonly known as Ashwagandha, Indian ginseng and Winter cherry is one of the major medicinal plant and extensively used in Indian traditional system of medicines. Ashwagandha roots are important ingredients for various form of herbal medicine are prepared, that reason about due to the presence of natural antioxidant constituents and clinically important active bioactive compounds. In the present investigation was undertaken to enhance the non-enzymatic antioxidant constituents of *Withania somnifera* under the Indole-3-Butyric Acid (IBA) and triazole compounds viz., Triadimefon (TDM) and Propiconazole (PCZ). Plants were treated with IBA 2.5 mgL⁻¹, TDM 20 mgL⁻¹ and PCZ 20 mgL⁻¹ separately by soil drenching on 50, 90 and 130 Days After Sowing (DAS). Plants were analyzed on 60, 100 and 140 DAS and its non-enzymatic antioxidants constituents such as reduced glutathione, riboflavin and total flavonoids content were determined. It was observed that IBA, TDM and PCZ treatments significantly increased the non-enzymatic antioxidants content when compared to control. Among the treatments, TDM and PCZ caused pronounced effects to increased higher level when compared to IBA treatment. This finding suggests that, the triazole compounds shows great significant for enhanced the antioxidants production in medicinally important root crop of Ashwagandha.

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