Effect of EMx foliar sprays on antioxidant defense systems in plants

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Abstract: *Research has identified the enhancement of photosynthesis, yield and quality of crops, with the application of EMx, a derivative of EM. However these studies have been limited to physiological processes. Hence experiments were conducted to ascertain the antioxidant function of EMx and investigate the response of plant antioxidant defense system when Emx is applied as a foliar spray, using spinach as the test crop.*

Continued application of EMx resulted in the enhancement of photosynthesis, while the superoxide dismutase (SOD) activity declined. This suggested that a small quantity of oxidants were emerging from the electron transport system within the plant. In addition, the Ascorbate Peroxidase (APX) activity also declined in the plants. However, the application of EMx supplemented the chelation of free iron in the plant, resulting in the accumulation of antioxidant substances. The results highlight that EMx foliar sprays enhance antioxidant properties and functions within plants. It also increases the quality of harvested products.
