

## Review

## Influence of phytosiderophore on iron and zinc uptake and rhizospheric microbial activity

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Micronutrients play a vital role in crop production and sustainable crop yield. High crop yield varieties make soil micronutrients deficient, without incorporating external inputs. Due to deficiency of micronutrients such as iron (Fe) and zinc (Zn), yield decline drastically. It limits more than macronutrients, but requirements of these plant nutrients are very less, but plants have self regulated mechanism, which secrete the phytosiderophore (PS) and mobilize the lower concentration of these metals to soil solution for easy uptake by plants. Phytosiderophore production is a general response of plants to Fe and Zn deficiency in particular. The uptake rate of PS-chelated Fe and Zn is 100 and 5 to 10 times higher than that of free Fe and Zn, respectively. Higher amount of carbon containing organic compounds enhanced the microbial activities in rhizosphere and alter the plant nutrient chemistry in soil. This article discussed the importance of PS in microbial activity in soil and nutrient uptake mechanism in plants.