Making your life easy and getting great results is what Growth Products is all about. Growth Products is also all about the science behind our products. Here we offer a brief primer on phosphite and how it differs from phosphate.

Phosphorus (P) is essential element for plant photosynthesis, root growth, energy storage and protein formation. The most common form of P in fertilizers is phosphate, which is a chemically stable molecule with four oxygen atoms. Because of its rock-like nature, the phosphate in traditional granular fertilizers often becomes bound in soils and is not fully available to plants.

Phosphite is also a form of P, but it has one less oxygen atom than phosphate. Being “lighter” by one oxygen atom than phosphate makes a tremendous difference. Phosphite is less chemically stable, and therefore more agile than its staid cousin. It also has certain benefits that phosphate never dreamed of.

Phosphite is highly water soluble, and when applied to plants is quickly absorbed by leaves, roots, and branches. Once in plants, it is extremely mobile, exhibiting “symplastic ambimobility,” meaning that it is uniquely able to move in both xylem and phloem.

Phosphite also boosts a crop’s resistance to stress and fungal disease. Interestingly, phosphite ions unlike elemental phosphate have fungitoxic effects on several plant pathogens. EPA labeled fungicides with phosphite as an active ingredient have been proven effective against root rots such as Pythium and Phytophthora. (Note: Many phosphite fungicides and phosphite fertilizers have the same active ingredient, but only those products with an EPA fungicide label can claim any fungicidal properties or benefits. This News As It Happens discusses published reports on phosphite, and does not make any fungicidal claims for Growth Products’ phosphite products.)

Scientists find phosphites both fascinating and a fertile source of ongoing debate and research. The growth stimulating and other beneficial effects of phosphite are well documented, even if they are not fully understood.

To learn more about any of the products in the Growth Products Line, contact us at (800) 648-7626 or questions@growthproducts.com. Or visit us online at www.growthproducts.com.

TKO Phosphite (0-29-26) is a highly concentrated P/K solution containing mono- and di-potassium salts of phosphorous acid. A clear liquid, TKO Phosphite is easy to mix and easy to use.

1 Understanding Phosphonate Products, prepared by Peter Landschoot, Professor and Joshua Cook, Dept. of Crop and Soil Sciences, The Pennsylvania State University.