

# THE PHOENIX



TK is an innovative fertilizer developed by Verde Potash plc. Its proprietary production process gathers in a single grain a high concentration of nutrients: potassium, calcium, magnesium and silicon.

## SILICON, THERMOPOTASH AND SUSTAINABILITY

Silicon (Si) is the second most abundant element on earth and plays a key role in the biogenic processes. Silicon contributes significantly to the healthy growth of plants and is important in maintaining plant species and improved crop performance. The use of silicon has been recognized as a more sustainable environmental practice as it improves soil efficiency and increases the tolerance of plants against pests, diseases and environmental stress (drought, heat, cold, etc.). For the plant to benefit from all the advantages of silicon, the nutrient must be available in high concentrations and in the form of monosilicic acid. Several studies show the silicon use efficiency in different cultures.

“Silicon is an integral part of the soil-plant system in nature and agricultural production. Horticultural crops benefiting from silicon include apples, grapes, strawberries, melons, cucumbers, eggplants, gherkins, beans, and roses. Both plant health and soil productivity can benefit from silicon, especially under abiotic or biotic stress conditions. Some of the benefits of silicon include enhanced soil fertility, improved disease and pest resistance, increased photosynthesis and yield, improved fruit quality, improved plant architecture, regulation of transpiration, increased tolerance to toxic levels of Al, Mn and Fe, and reduced frost damage. Silicon deficiency can result in reduced pollen fertility, affecting fruit yields. Large quantities of soluble silicon removed annually during crop production can affect P, Al, heavy metals, Fe, and Mn availability, increase soil erosion, decrease microbial populations, and decrease plant silicon nutrition.

With ongoing global environmental changes, silicon will become more and more important in sustainable production of horticultural crops (Hou et al., 2006).<sup>1</sup>

Just one of many studies shows that coffee supplemented with silicon (*Arabica Coffee*) increases root silicon uptake (up to 1% dry root concentrations), increase plant growth and development, mediates resistance in controlling plant parasites by enhancing biochemical mechanisms of defense. Silicon also increased plant nutrient uptake of roots and shoots (Silva, 2009).<sup>2</sup>

## TK AND SILICON

TK is composed of more than 40% of soluble silicon (Si) thus improving the efficiency of water use conferring greater resistance to water stress and attack by fungi, bacteria and insects. TK contributes to the healthy growth of plants and improves crop performance.

<sup>1</sup> Hou, L., E. Szwonek, and S. Xing. 2006. Advances in silicon research of horticultural crops. pp. 5–17. In A. Dobrzanski, F. Adamicki, R. Kosson, J. Szwajda, K. Górecka, and B. Nowak (eds.) *Vegetable Crops Research Bulletin # 64*. Research Institute of Vegetable Crops. Skierniewice, Poland.

## Brazilian Agriculture

*“Brazil raises estimates of corn and soybean harvests, helped by late rainfall.”*

“Brazil raised estimates for both its corn and soybean harvests, citing rains which had come in time to boost yields of later planted crops, besides boosting expectations for safrinha corn. The official Conab crop bureau lifted by 1.0m tons to 94.3m tons its estimate for Brazil's soybean production in 2014-15, as late rainfall helped results “surprise positively” in particular in central areas.”

Read the full article [here](#).

## Brazil's Economy

**“BRAZIL RAISES RATES TO HIGHEST LEVEL IN 6**

**YEARS” – *Financial Times***

“Brazil has raised interest rates to the highest level in six years as the government struggles to regain investors' confidence and put Latin America's biggest economy back on the path to growth.”

Read the full article [here](#).

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FEEDBACK OR QUESTIONS,  
PLEASE EMAIL:

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Easy to apply, uniform and high agronomic efficiency, TK provides nutrients synchronously with the nutritional needs of the plant, avoiding losses and generating residual effect.

Fertilizer approved for use in organic agriculture (IBD Certifications).



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