

Phonolite as source of potash with results comparable to high water soluble potash

Rafael Curimbaba Ferreira^{1*}, Yuji Ieri² and Rafael Montes³

¹ Grupo Curimbaba, Brazil

² Yoorin Fertilizantes, Brazil

³ Universidade Estadual Paulista, Departamento de Solos e Adubos, Brazil

*Presenting author and correspondence: rafael@grupocurimbaba.com.br

Abstract

Yoorin Fertilizantes (Yoorin) is a fertilizer company in Brazil with more than 50 years of operation focused on thermophosphate products. Since 2012, Yoorin added to its portfolio a milled potash silicate rock with high potash solubility called phonolite, Yoorin named it Ekosil as the commercial brand.

Based on prior studies at UNESP, Ekosil showed excellent results for the same amount of K_2O in comparison with KCl. Considering the recommended dosage of K_2O per hectare, Ekosil showed an incremental yield of 10%, 9.7%, 7.2%, and 8.3% for corn, soy bean, coffee, and sugar cane respectively. As a result, Yoorin decided to launch this product in Brazil. For sugar cane, Ekosil also increased BRIX (quantity of sugar in the sugar cane) results in comparison to KCl.

Since Ekosil became a commercial product, sales in Brazil have increased every year, reaching more than 34,000 metric tons in 2016 coming from zero in 2012. The primary reason for Ekosil sales performance is due to its efficiency. After more than 200 experiments and based on Yoorin database, 95% of these experiments had better results using Ekosil in comparison with KCl. In average, yields increased by 10% for soy bean, 22% for coffee, and 4% for corn.

Another advantage that was observed with Ekosil is related to black sigatoka disease in banana crops. According to banana farmers who used Ekosil, the product drastically reduced this disease. We believe the soluble silica content on Ekosil would be the cause of this event; however, this assumption should be investigated.

In conclusion, Ekosil is a reliable source of potash with results proven better than KCl. Ekosil may also bring some extra benefits such as the BRIX for sugar cane or disease control.