Growing RICE IN CHINA

KEY FINDINGS

- Up to 17% yield increase
- Improved tillering
- Reduced toxic elements uptake

A CASE FOR POLY4

- China is the world's leading rice producer with Guangdong being one of the most important rice-producing provinces.

- Low fertility red soils deficient of potassium, sulphur, magnesium and calcium are common in Guangdong.

- Potentially toxic elements (PTEs) can also be a problem in polluted, red, paddy soils including cadmium. The consumption of food contaminated with cadmium over a long period of time can cause kidney disease.

- POLY4 supplies potassium, sulphur, magnesium and calcium in one product.

poly4.com
To test the response of rice yield and heavy metals uptake to POLY4 and alternative K fertilizers.

**SIGNIFICANT YIELD INCREASE**

There was a yield increase in response to the S in SOP and POLY4. Rice fertilized with POLY4 had the greatest yield, implying a benefit of POLY4 beyond K and S.

**IMPROVEMENT IN YIELD COMPONENTS**

POLY4 and SOP fertilized crops had more tillers than MOP. POLY4 also had a greater thousand grain weight than SOP. Together these components contribute to POLY4 having the highest yield.

**REDUCED UPTAKE OF TOXIC ELEMENTS**

The trial site had a high soil cadmium (Cd) contamination with content of 1.6 mg Cd kg\(^{-1}\), which exceeded the limit in China (0.3 mg Cd kg\(^{-1}\) at pH ≤ 7.5). However, Cd content of POLY4-fertilized rice was lower than MOP and SOP, making this of interest for future research on other contaminated sites.

*All treatments received 176 kg N ha\(^{-1}\) and 76 kg P\(_2\)O\(_5\) ha\(^{-1}\) from urea and DAP.*