Growing TOMATOES IN BRAZIL

POLY4
A SIRIUS MINERALS PRODUCT

K_2O 14% | S 19% | MgO 6% | CaO 17%

KEY FINDINGS

6% higher marketable fruit yield

Improved economic return

Enhanced soil nutrient legacy

A CASE FOR POLY4

- São Paulo state is the second largest tomato producer in Brazil.
- Tomatoes are a high-value crop that can respond to K, Ca, Mg and S contained in POLY4 to produce optimal yield and quality.
- POLY4 contains 17% CaO, which helps reinforce cell walls and improve fruit firmness. Ca is also essential for supporting soil health.

POLY4 BENEFITS

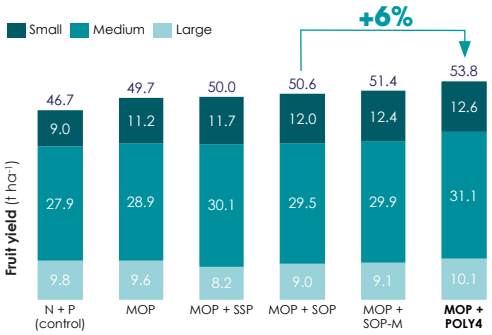
- Source of macro and micro nutrients
- Low in chloride
- Sustained nutrient release profile
- Suitable for organic farming

Treatments	Average nutrients applied (kg ha^{-1})				
	K_2O	MgO	S	CaO	Cl
N + P (control)	0	0	0	0	0
MOP	300	0	0	0	230
MOP + SSP	300	0	40	59	230
MOP + SOP	300	0	40	0	134
MOP + SOP-M	300	33	40	0	201
MOP + POLY4	300	13	41	36	207

*All treatments received standard applications of N and P fertilizer.

HIGHEST MARKETABLE FRUIT YIELD

The POLY4 fertilizer plan delivered the highest marketable fruit yield across the three sites improving the yield of all size grades. The increased yield improved economic return by up to 11%.

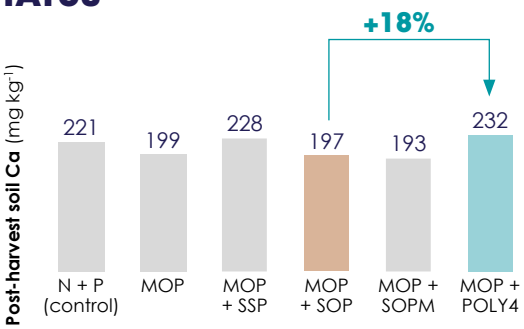


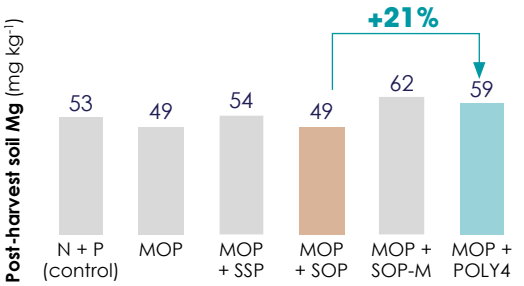
MAINTAINING FRUIT QUALITY

Firmness and taste characteristics of tomatoes grown with POLY4 were maintained at harvest and during storage compared to other treatments. Maintaining these characteristics during storage is important for ensuring crop quality.

ENHANCED SOIL NUTRIENT STATUS

Fertilizing with POLY4 supports a sustainable soil nutrient legacy. The post-harvest soil Ca was highest after the POLY4 treatment. Calcium and magnesium fertility are particularly important in Brazilian agriculture.





Notes: 1) https://www.dinheirorural.com.br/secao/agronegocios/profissionalizacao-do-tomate; 2) Calagem e adubação do tomate de mesa / Paulo Espíndola Trani Edson Akira Kariya; Sérgio Minoru Hanai; et al. Campinas: Instituto Agronômico, 2015. 35 p. online. (Série Tecnologia Apta. Boletim Técnico IAC, 215) ISSN 1809-7936 3) Initial soil analysis: Site 1 (Cerquilho): pH 5.5, 10 mg P kg^{-1}, 81 mg K kg^{-1}, 62 mg Mg kg^{-1}, 253 mg Ca kg^{-1}, 7 mg S kg^{-1}; Site 2 (Cerquilho): pH 5.4, 10 mg P kg^{-1}, 61 mg K kg^{-1}, 51 mg Mg kg^{-1}, 202 mg Ca kg^{-1}, 6 mg S kg^{-1}; Site 3 (Conchal): pH 5.0, 9 mg P kg^{-1}, 84 mg K kg^{-1}, 115 mg Mg kg^{-1}, 320 mg Ca kg^{-1}, 8 mg S kg^{-1}; 4) All plots received 300 kg N ha^{-1} and 500 kg P_2O_5 ha^{-1} from urea and MAP.

Source: University of São Paulo (2017), 4000-USP-4024-17 (tomatoes).

TRIAL FOCUS

To compare POLY4 effect on tomato yield and quality with other fertilizers.

PARTNER

University of São Paulo

LOCATION

São Paulo, Brazil

DATE

2017

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