



POLY4

An Anglo American PLC Product

K₂O
14%

S
19%

MgO
6%

CaO
17%



Coffee

response to Anglo American's POLY4

Trial focus

Evaluate the yield response of Brazilian coffee to standard NPK practice and POLY4 programme.

Overview

- Coffee crops demand a large supply of nutrients. Usually, 200 kg of potassium (K₂O) is applied per hectare – more than two times soybean's requirement.
- Magnesium (Mg) deficiency is common in the main coffee producing areas, which demands the use of Mg sources. Currently kieserite is added to meet the crop's Mg demand.
- Gypsum is also applied where soil aluminium levels are high.
- High levels of chloride in currently used fertilizer sources negatively affect the size and density of coffee fruit.

Crop:

Coffee

Year:

2016–2019

Location:

Three two-year-long trials in Minas Gerais, Brazil

Data source:

Trials conducted by third-party, independent researcher



2.8

bags/ha

Low-chloride POLY4 programme yield advantage over standard NPK

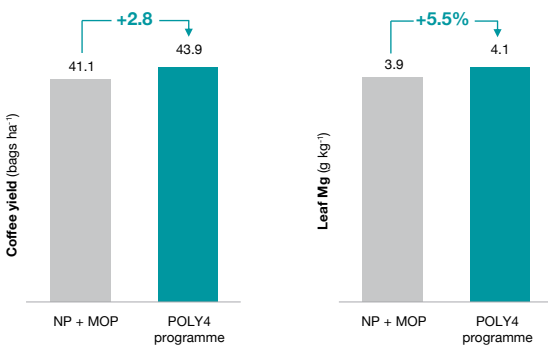
Treatments applied

- All treatments received N and P applications at recommended rates.
- Standard practice received 230 kg ha⁻¹ of K₂O from MOP.
- POLY4 application rate was 546 kg POLY4 ha⁻¹ which supplied 76 kg K₂O ha⁻¹, 104 kg S ha⁻¹, 33 kg MgO ha⁻¹, and 93 kg CaO ha⁻¹. N and P were applied at recommended rates.

Average nutrients applied (kg ha⁻¹)

	K ₂ O	S	MgO	CaO
NP + MOP	230	0	0	0
POLY4 programme	230	104	33	93

Results



Conclusion

- The results demonstrate that POLY4 offers the benefits of a balanced, season-long crop nutrition helping to increase yield potential.
- Across the six harvests the POLY4 programme increased coffee yield over standard NPK practices outperforming it by 168 kg ha⁻¹.
- In addition, POLY4 improved leaf Mg by 5.5% helping to improve coffee productivity and maintain the coffee cup quality.
- POLY4 also helps to achieve higher quality coffee by providing low-chloride potassium as well as balanced nutrition of soluble magnesium, sulphur and calcium.



Notes: Two trials were irrigated, one trial rainfed. All calculated yield results are median. A standard bag of coffee is 60 kg/ha. Each of the three trials were harvested for two consecutive years for a total of six harvest