





Soybean

response to Anglo American's POLY4®

Trial focus

Evaluate the yield response of soybean to POLY4 program compared to MOP.

Overview

- Soybean has a high phosphorous, potassium, and sulfur demand. Typically, soybean farmers use MOP as the primary source of potassium (K) and monoammonium phosphate (MAP) as a common phosphorous source.
- POLY4 is effective at helping meet soybean's high sulfur demand. Additionally, the combination of nutrients supplied by POLY4, including soluble magnesium and calcium, not only improves soybean yields, but it also improves residual soil nutrient levels for the following rotation crop.
- POLY4's low salt index also means that it can be safely applied to crops sensitive to seedplaced fertilizers like soybean.

Treatments applied

- All treatments received standard N and P application rates.
- Standard program received all K₂O from 100 lb MOP acre⁻¹.
- MOP + POLY4 received 131 lb POLY4 acre⁻¹ and 69 lb MOP acre⁻¹.

Average nutrients applied (lb acre-1)

	K ₂ O	S	Mg	Ca
МОР	60	0	0	0
POLY4 + MOP	60	25	8	22

Trial locations



Results

POLY4 program versus MOP.



Conclusion

- Use of POLY4 as a partial K source and as a source of plant-available S in sulfate form consistently increased soybean yield compared to the MOP program.
- 2.3% or 1.2 bu/acre increase in yield with the POLY4 program over MOP. Yield was improved by at least 1 bu/acre in 16 trials and by 3 bu/acre in six trials.
- Trial results show that POLY4 successfully boosts agronomic performance by supplying potassium, sulfur, magnesium and calcium in one product. Importantly, it supports season-long crop nutrient demand while also increasing resilience to leaching.

Crop:

Soybean

Years: 2012–2020

Locations:

29 trials (Arkansas, Florida, Iowa, Illinois, Kentucky, Louisiana, Minnesota, Ontario, Tennessee, and Texas).

Data source:

Field trials conducted by third-party, independent researchers.

Up to **3.0** bn/ac

POLY4 program yield advantage over MOP

Notes: Average yield with standard practice was 52.4 bu/ac. All calculated yield results are median.

