Growing CORN IN CHINA

KEY FINDINGS

7% yield increase over MOP
Balanced crop nutrition plan
14% enhanced soil K level

POLY4 BENEFITS

Source of essential nutrients
Sustained nutrient delivery rate, matching crop requirements
Excellent spreading pattern
Easy to store
Low carbon footprint

A CASE FOR POLY4

- Heilongjiang Province in China cultivates 6.6 million hectares of corn.

- This is an area of black soils with very high natural fertility. However, soil-available potassium (K) has decreased over time because of fertilizer plans often lacking K.

- POLY4 is well suited to provide not only K to the corn crop, but also sulphur (S), magnesium (Mg) and calcium (Ca), helping to meet crop demand and to build a nutrient legacy in the soil.
All treatments received 150 kg N ha$^{-1}$ and 70 Kg P$_2$O$_5$ ha$^{-1}$.

**IMPROVED YIELD**

The inclusion of POLY4 in the fertilizer plans improved corn yield. This highlights the importance of a balanced crop nutrition plan to achieving better yield results.

**ENHANCED SOIL NUTRIENT STATUS**

POLY4 helped to sustain K soil levels, supporting the efforts to ameliorate the potassium levels in the area.

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<table>
<thead>
<tr>
<th>Treatments</th>
<th>Nutrient application rate (kg ha$^{-1}$)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>K$_2$O</td>
</tr>
<tr>
<td>N + P (control)</td>
<td>0</td>
</tr>
<tr>
<td>MOP</td>
<td>70</td>
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<tr>
<td>MOP + POLY4 (50:50)</td>
<td>70</td>
</tr>
<tr>
<td>MOP + POLY4 (25:75)</td>
<td>70</td>
</tr>
<tr>
<td>POLY4</td>
<td>70</td>
</tr>
</tbody>
</table>

*All treatments received 150 kg N ha$^{-1}$ and 70 Kg P$_2$O$_5$ ha$^{-1}$.

Notes: N and P from urea and DAP at 150 kg N ha$^{-1}$ and 70 Kg P$_2$O$_5$ ha$^{-1}$; Urea split applied 40:60 base:top dress; K applied at 50, 70 and 90 Kg K$_2$O ha$^{-1}$; treatment table and results are the average; MOP to POLY4 ratios are on a K:K basis; pre-trial soil analysis: pH 5.6, 3.9% SOM, 39 mg P kg$^{-1}$, 198 mg K kg$^{-1}$; Cultivar: Demeiya 1.


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**TRIAL FOCUS**

To evaluate the performance of POLY4 in corn compared to MOP.

**PARTNER**

Northeast Institute of Geography and Agroecology

**LOCATION**

Heilongjiang, China

**DATE**

2019

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