Growing TANGERINES IN CHINA

KEY FINDINGS
6% yield increase
Enhanced fruit nutrition
Improved vitamin C content

POLY4 BENEFITS
- Source of macro and micro nutrients
- Extended nutrient delivery
- Calcium supports soil and plant health
- Compatible in NPK blends
- Blends, stores and spreads well with conventional equipment

A CASE FOR POLY4
- China was the largest single citrus producer.
- Citrus trees need K, Ca and Mg but farmers in this region rarely apply Mg and Ca fertilizers.
- Citrus trees are susceptible to Cl toxicity, causing long-term injury or death. Farmers therefore typically use SOP as a low-Cl fertilizer to supply K.
- POLY4 has a very low Cl content and contains plant available K, S, Ca and Mg.

poly4.com
SIGNIFICANTLY GREATER YIELD

The POLY4 fertilized tangerines had significantly greater yield than SOP.

IMPROVED NUTRITION

POLY4-fertilized citrus had the greatest fruit Ca and Mg concentrations. Ca and Mg are important for citrus fruit development. Ca deficiencies can cause the skin of citrus fruit to crack. Mg deficiency causes leaf chlorosis and has been reported to decrease yield and give poorer quality fruit with reduced soluble solids and vitamin C.

BOOSTED FRUIT QUALITY

POLY4 improved vitamin C content, which is symptomatic of good K nutrition. POLY4 also maintained the total sugar content.

ENHANCED SOIL NUTRIENT LEVEL

The post-harvest soil Ca and soil Mg levels were greater with POLY4. These nutrients can continue to be utilised by the citrus trees in the subsequent season.

Notes: 1) Citrus production stats [source provided]; 2) Tangerine trees of 'Chunjian' variety were four years old; each treatment received 216 kg N ha\(^{-1}\) and 135 kg P\(_2\)O\(_5\) ha\(^{-1}\) from urea and MAP; 3) Treatment table is based on the average K\(_2\)O applied (113, 169, and 225 K\(_2\)O ha\(^{-1}\)); initial soil analysis: pH 5.8, EC 115 μS cm\(^{-1}\), 50 mg P kg\(^{-1}\), 89 mg K kg\(^{-1}\), 134 mg S kg\(^{-1}\), 500 mg Ca kg\(^{-1}\), 80 mg Mg kg\(^{-1}\); 4) Significance tested at 5% level; Darwood et al. (2001) Response of Washington Navel orange trees grown on slightly alkaline-clay soils to magnesium rate, methods and number of applications, Egyptian Journal of Agricultural Research.

Source: Sichuan Academy of Agricultural Science (2017), 19000-SAAS-19018-17 (citrus).

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Nutrients applied (kg ha(^{-1}))</th>
<th>K(_2)O</th>
<th>S</th>
<th>CaO</th>
<th>MgO</th>
</tr>
</thead>
<tbody>
<tr>
<td>N + P (control)</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>SOP</td>
<td></td>
<td>169</td>
<td>57</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>POLY4</td>
<td></td>
<td>169</td>
<td>229</td>
<td>205</td>
<td>72</td>
</tr>
</tbody>
</table>

*Each treatment received 216 kg N ha\(^{-1}\) and 135 kg P\(_2\)O\(_5\) ha\(^{-1}\).*