Productivity Highlights

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Nitrogen and sulfur produce high canola yields

Background

Compared to most crops, canola requires higher levels of nitrogen (N) and sulfur (S) – therefore, canola crops with N and S deficiencies are not uncommon.

- Symptoms of N deficiency include pale green older leaves with purple veins and midrib, which change from pink to purple to yellow before dying back from the tip and margins.
- Symptoms of S deficiency include purpling on the under side of younger leaves, which curl upwards and roll inwards along white or purple midribs.

CSBP has conducted trials examining the response of canola yields and oil content to the application of N and S.

Key Results

- Yield responses to high rates of N application are common. In some cases, high yields caused a small reduction in oil content.
- Timing of N application often proved to be just as important as the rate.
- Applications split between sowing and 4 weeks after sowing resulted in dramatically improved yields – especially with Flexi-N.
- Responses to sulfate S were also recorded, particularly on sandy acid soils with low organic matter contents in medium to high rainfall areas.

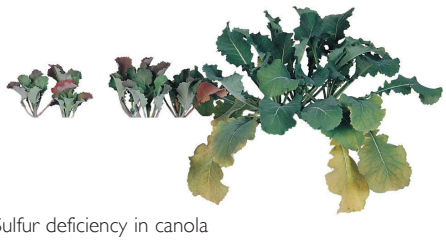
Summary

- Good supplies of N and S are essential for high canola yields.
- Both N and S are easily leached from the topsoil – therefore split applications are recommended in medium and high rainfall regions, especially on sandy soils prone to leaching.

Calingiri trial in 2002 – plot on left had 20 kg S/ha as elemental S and plot on right 10 kg S/ha as Liqui-NS.

Flexi-NS and Liqui-NS applied through a boomspray can supply N and S to canola crops.

Nitrogen deficiency in canola
– plants from left to right have had increasing N supply.



Sulfur deficiency in canola
– plants from left to right have had increasing S supply.

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