

Dual Banding Boot Performance in Sandy-Loam Soils

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Agricultural Machinery
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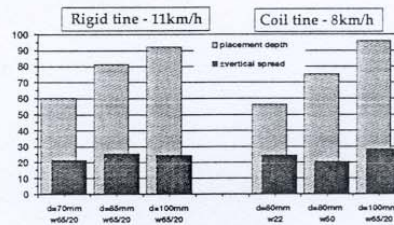


PRIMARY
SALES AUSTRALIA

Fertiliser Placement Observations

- Point working depth is the main factor influencing fertiliser banding depth.
- Narrower points decrease the ability to band fertiliser at depth.
- Deeper working depth, narrower point width, higher and wider boot outlet typically create greater vertical spread of fertiliser, which effectively reduces its concentration in the soil.
- Operating speed has little influence on fertiliser placement.

Fertiliser Placement Results



Seed Placement Observations

- Point working depth is the most significant factor controlling seed placement.
- With rigid tines, greater operating speeds result in deeper, less uniform seeding depth. This effect is typically compensated for with coil tines.
- Wider points comparatively achieve deeper seed placement.
- Straight steeply inclined seed boots provide the least control over seed placement, regardless of boot height settings.
- Seed trajectory is an important parameter influencing final seed placement, often interacting with operating speed.
- The performance of seed boot re-openers or scraper plates is dictated by the availability of tilth within the furrow, being sensitive to point design and operating speed.
- Bent re-opener tails provide shallower seed placement at the cost of a poorer seeding uniformity.
- While deep tilling, shallower seeding depths can be achieved with a combination of i) curved, split row or bent re-opener tails, ii) higher boot position, iii) lateral boot offset and iv) a lower operating speed.

Seed Placement Results

Conclusions

- A great number of factors can influence seed and fertiliser placement results which bear a significant effect on final crop yield.
- Inaccurate seed and fertiliser placement can very easily occur with below optimum combinations of narrow point, seeding boot and operating parameters.
- The performance of dual banding boot systems is primarily governed by the amount of soil tilth left available in the furrow.

