

## CASE STUDY - Chamber Research (T011-potassium)

Location                   Brendale  
 Researcher               Gary Murdoch-Brown

Variety                    Radish - "Cherry Belle"  
*Raphanus raphanistrum*



Row Size (m<sup>2</sup>)            0.1           x 8

Planting                   20/07/2018 20-22 seeds per row, seed tape  
 Application               29/07/2018  
 Harvest                   17/08/2018  
 Irrigation                 10ml/plant, 3-5 days

Chamber  
 Lights                    18 hours  
 Temperature             24°C day / 16°C night  
 Humidity                 70%

Soil Type                 sandy clay loam, leached

Fertiliser                in irrigation, prior to planting. Zero potassium (K) applied

Bang N (42 N)            12.5 ml/m<sup>2</sup>

Bang P (13 N, 19 P)     6 ml/m<sup>2</sup>

Advanced Trace         6 ml/m<sup>2</sup>

(8 N, 3 S, Fe 4, Zn 2, Mn 2,  
 Cu 1, 0.5 B, 0.1 Mo)

### Treatments (=10L/ha, dilution 10:1)

**KNO<sub>3</sub> (T3)**               1 g/m<sup>2</sup> foliar 7 DAE

**KNO<sub>3</sub>/C-Lift (T5)**       1g+1ml/m<sup>2</sup> foliar 7 DAE

**Komplete (T6)**           1 ml/m<sup>2</sup> foliar 7 DAE

**Control (T8)**             0 ml/m<sup>2</sup> foliar 7 DAE

Germination            **Treatment(s) did not affect germination as application was one week after germination**

	KNO <sub>3</sub>	KNO <sub>3</sub> /C-Lift	Komplete	Control
plants	15	15	16	20
<b>Yield (av.g/plant)</b>	<b>KNO<sub>3</sub></b>	<b>KNO<sub>3</sub>/C-Lift</b>	<b>Komplete</b>	<b>Control</b>
Radish Root	6.81	12.92	10.88	3.62
<i>increase over Ctrl</i>	188%	<b>357%</b>	301%	100%
Root/Shoot Ratio	2.05	3.05	2.56	1.28
<i>increase over Ctrl</i>	160%	<b>238%</b>	200%	100%

### Notes:

Across the trial, data is skewed by poor seed spacing in the seed tape. This caused undue competition amongst some plants leading to a wide variance in the data of all treatments.

**RESULTS:**

All potassium foliar treatments produced a higher root/shoot ratio with significant increases in root mass (yield) over the Control.

Potassium nitrate (KNO<sub>3</sub>) significantly increased yield over the Control, however this was further improved (additional 190%) by the addition of C-Lift in the application which recorded the trials highest production increase over the Control (357%).

Komplete (5-15-35-0) proved significantly more effective than KNO<sub>3</sub> (13-0-38-0) alone, raising production 301% to 188% respectively. Further studies will include the addition to C-Lift to Komplete for possible synergies.



