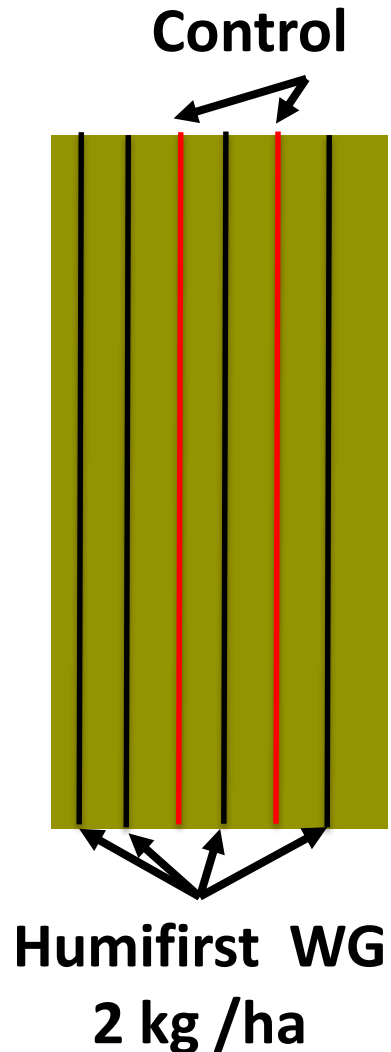


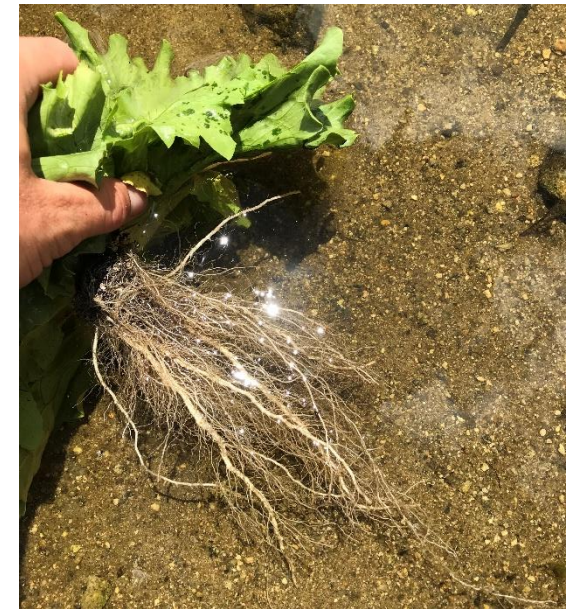
## Trial: **Humifirst WG on Lettuce**

<b>Crop:</b>	<b>Lettuce</b> var. Green Moon
<b>Product:</b>	<b>Humifirst WG</b>
<b>Location:</b>	Stanthorpe
<b>Aim:</b>	Higher Yield & Quality
<b>Rate:</b>	2 kg /ha
<b>Application:</b>	Drip application
<b>Timing:</b>	First watering after planting
<b>Planting Date:</b>	30/10/17
<b>Harvest Date:</b>	06/12/2017
<b>Assessment:</b>	More roots, head dimension

# Design



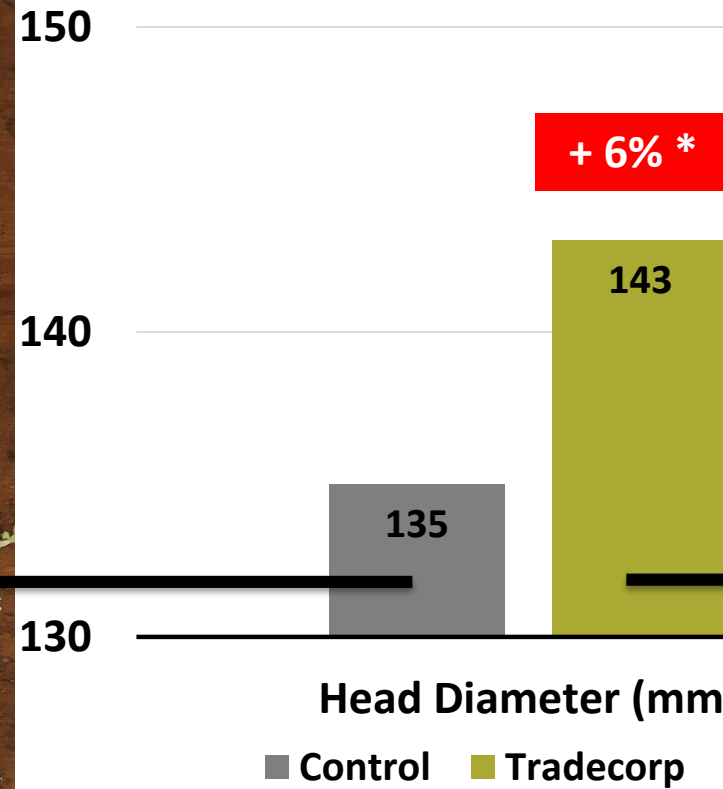
- The Humifirst WG was fertigated into the drip tape
- 2 tapes were blocked while the Humifirst WG was being applied to give a 2 Control Beds
- Bed spacing 1.5 M centres
- Light granite based soil, free draining
- Low salinity, low chlorides
- 40,000 plants /ha



Early Root Development (9/11/17)

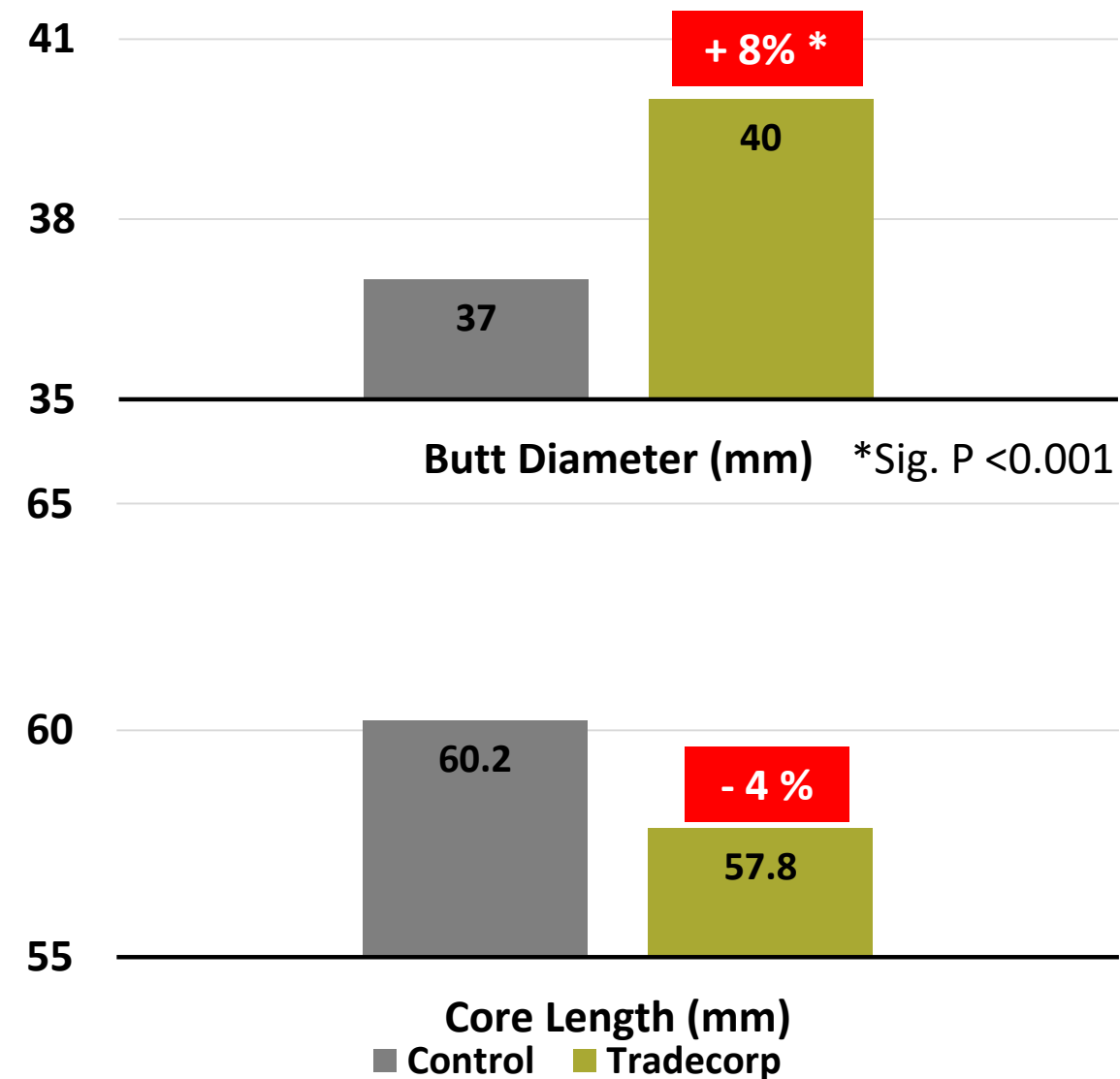


## Results – Head Diameter (36 days)



\*Sig.  $P < 0.0002$

## Results – Butt Diameter & Core Length (36 DAP, 3 Days before harvest)



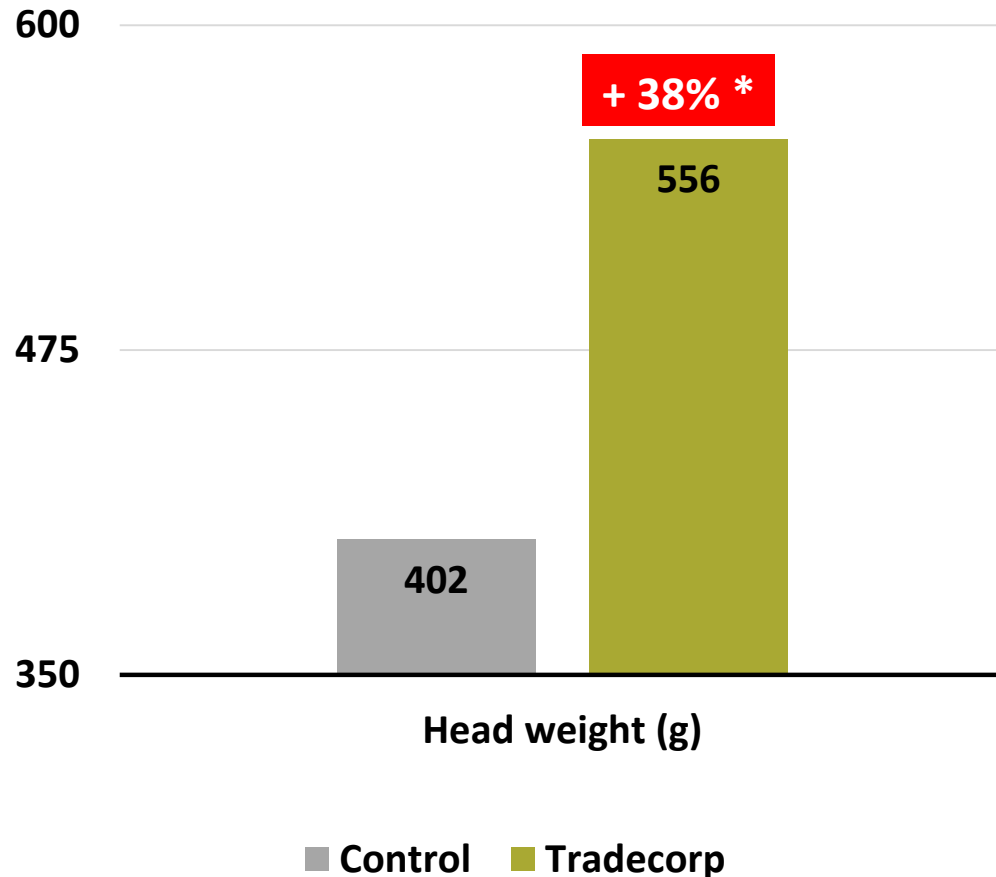
- Larger Butts are desired by the client
- Consumers associate a larger butt with a larger heavier head

### Smaller cores are desirable:

Indicates:

- denser head
- less likelihood of bolting
- less stressed plant

## Results - Head Weight

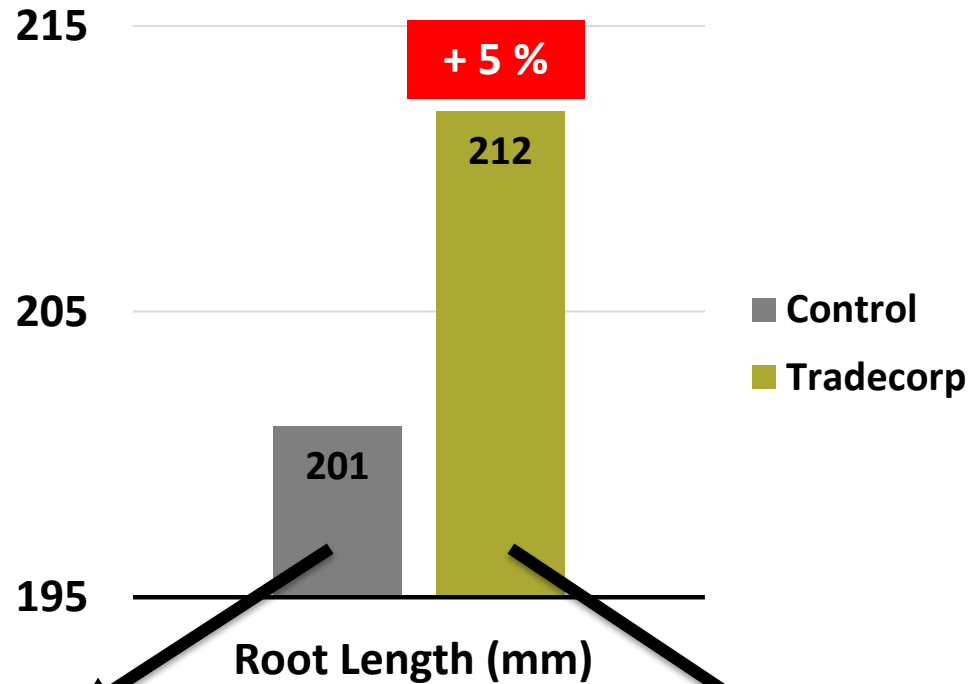


\*Sig. P <0.0002

- More **Heads** are above the **Minimum Weight** threshold set by the contract
- For **Box Lettuce** the increased Head Weight is not as important as lettuce are sold by the 12 head box
- For **Processed Heads** increased Head Weight contributes directly to bottom line
- Fresh Yield of 40,000 heads increased from 16T to 22.2T /ha



# Results – Root Length



**Increased Root Length & Biomass contributed directly to:**

- Head Weight
- Butt Diameter
- Core Length





## Results: Root Biomass - Visual



**Control**

**Humifirst WG**

# ROI effect on Harvest of Humifirst at 2 kg /ha by drip at first watering

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- Typical planting is 40,000 heads /ha, two cutting models are operated in the area:
- **Very Large Growers**
  - Total Cut-out of the crop from the field or paddock
  - Saleable Heads are packed into 12 head boxes
  - Below specification heads are used for processing
  - These growers can expect a higher % of heads to meet the 12 head criteria (ca 100 boxes) and still have equal or higher weight of processed lettuce due to higher overall head weight
- **Other Growers**
  - Cut-out of the Box saleable heads only, the rest is left in the paddock
  - Typically 65 – 75% of heads are cut, the rest are left in the field
  - We can assume a 3-5% increase in cut-out
  - This equates to ca 1200 heads or about 100 boxes



# Conclusion

## Humifirst WG @ 2kg /ha:

- increased **Head Weight** by +38 %
- increased **Butt Diameter** by +8 %
- decreased **Core Length** by -4%
- greater **Uniformity**



## Humifirst WG @ 2 kg /ha by drip after planting increased:

- Head Weight
- Butt Diameter
- Reduced Core Length
- Total Root Biomass