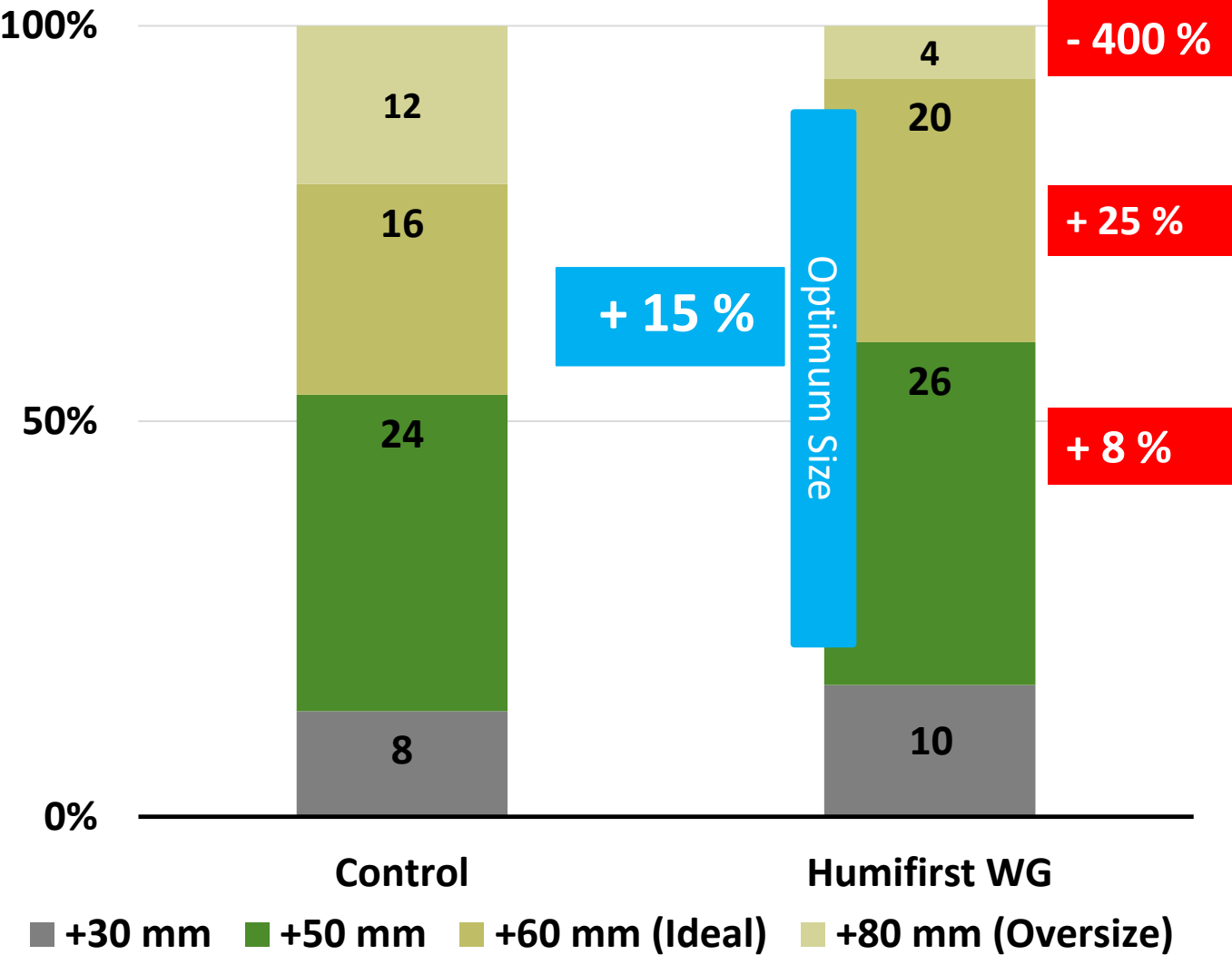


Trial: **Humifirst WG Broccoli**

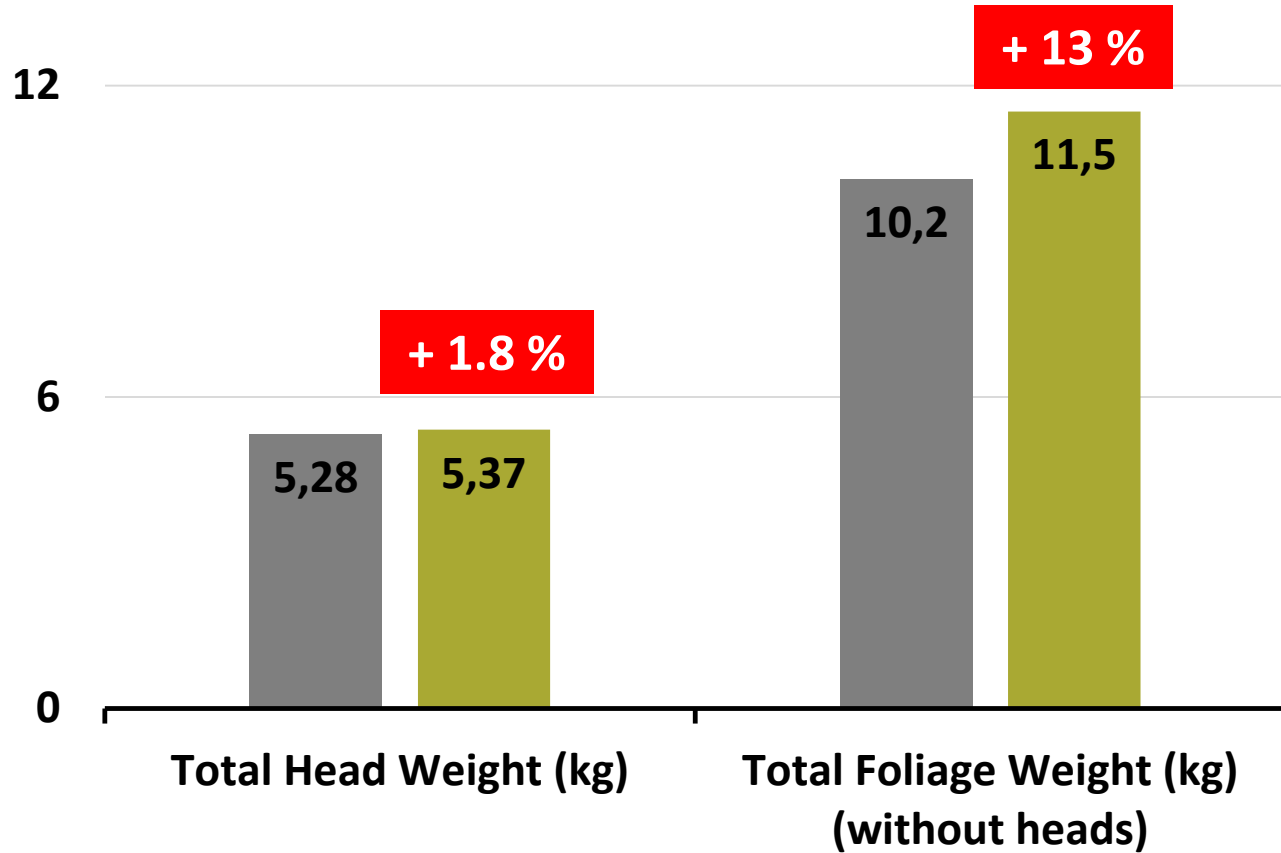
- Crop:** Broccoli var. Aurora
- Product:** Humifirst WG
- Location:** Gatton, QLD
- Aim:** Increase Yield, Roots & Uniformity
- Rate:** 5.5 kg /ha, (0.15 g /plant), commercial sized blocks
- Application:** Automatic injection into transplant hole at Transplant
- Timing:** Planting, 40,000 plants /ha density, 3500 plants treated
- Transplanting Date:** 24/01/2018, 1st Harvest 31/03/2018
- Assessment:** Visual assessment, Measurements, ROI
- Notes:** 1.5 m bed spacing

Results – Head Diameter (17/04/18)



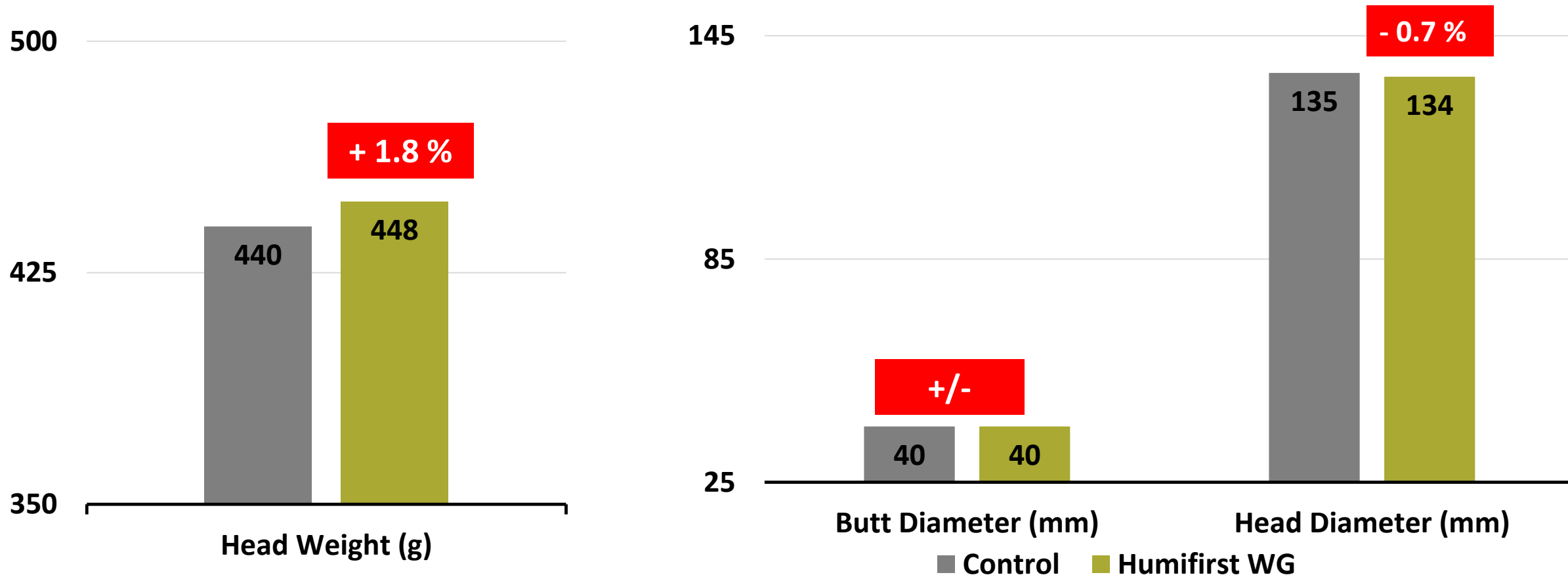
- A more even crop is clearly evident
- **Oversizes Heads** reduced by **-400%**
- **Heads in the Desired Categories +15%**
- *The crop is developing more evenly which will lead to a more even harvest*

Results – Pre Harvest Assessment, 1 Day before harvest



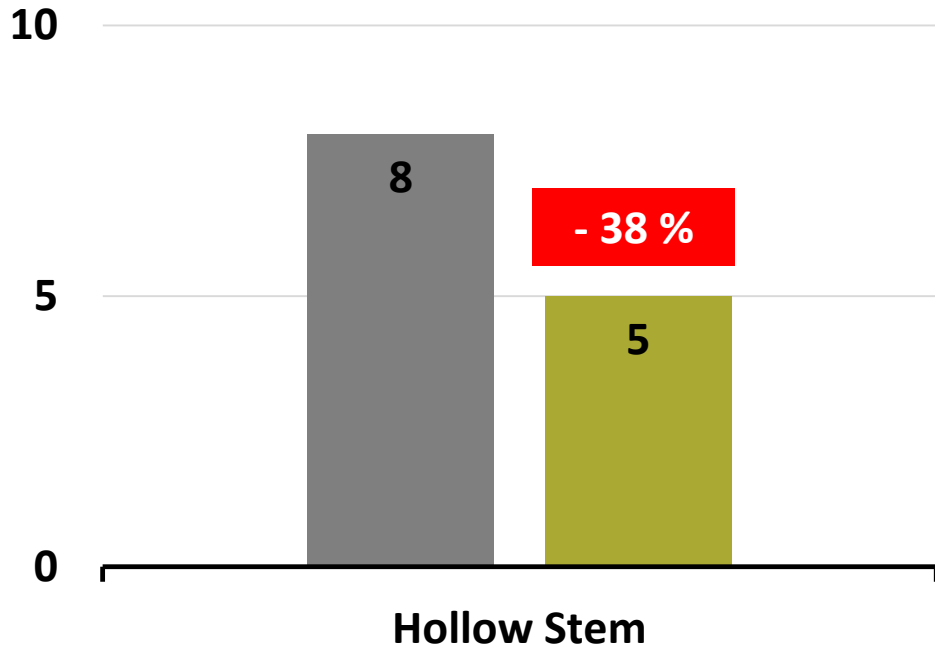
- Humifirst WG increases the **Total Crop Biomass**

Results – Pre Harvest Assessment, 1 Day before harvest



- Heads are **Denser** as they are slightly **Heavier** while also slightly more **Compact**
- Some of the extra head density is a result of **less Hollow-Stem** (next Slide)

Results – Incidence of Hollow Stem



Control



Humifirst WG



Hollow stem is not desired:

- Caused by Rapid & Uneven Growth
- Uneven watering
- A lack of Boron can cause stems to crack

Results – % Percent of Heads left after 1st harvest

After each cut, 100 plants in a row were counted (x10 times) and the number of heads left was calculated

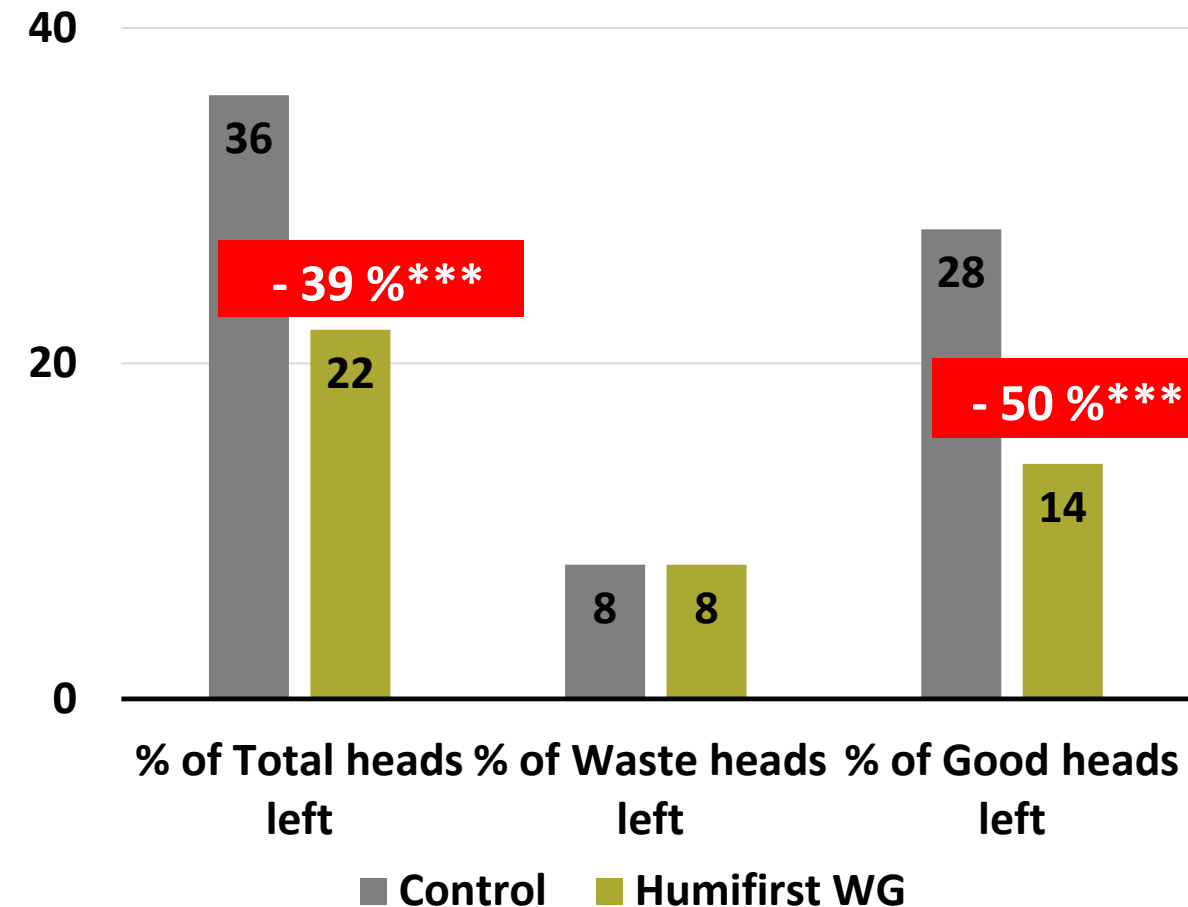
Total Number of Heads:

- 78 % heads in the **Humifirst** Treatment were Cut-Out
- 64 % of heads in the **Control** were Cut-Out
- **Humifirst Treatment +21% more Cut Out (Sig.)**

However some head will never mature (blanks)

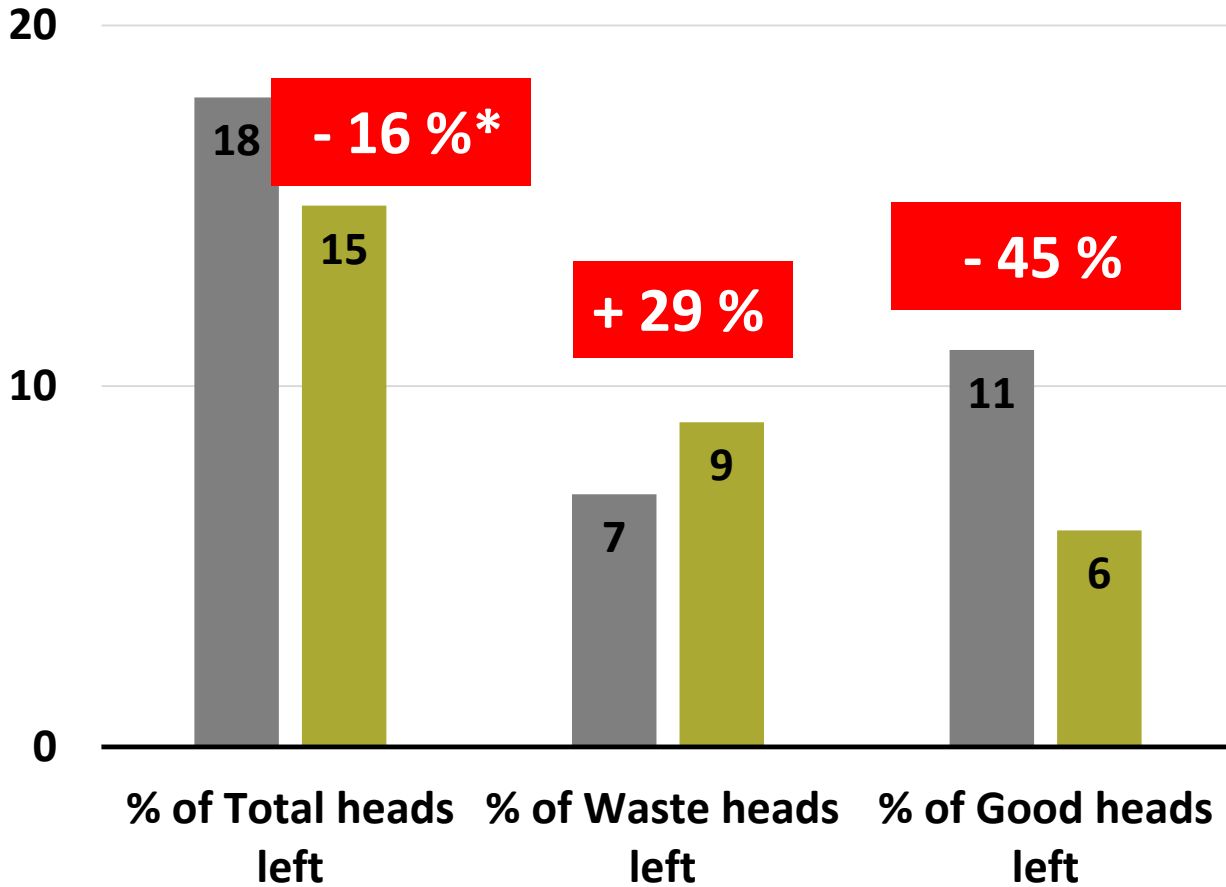
Total Number of Heads that can ever be Harvested

- 86 % of **Viable Heads** in the **Humifirst** Treatment were Cut-Out
- 72 % of **Viable Heads** were cut in the **Control**
- **Viable Head Cut Out in Humifirst Treatment +19.4% (Sig.)**



Sig. P <0.001

Results – % Percent of Heads left after 2nd harvest 1 Day after 1st



Sig. P <0.05

■ Control ■ Humifirst WG

Total number of Heads:

- 85 % heads in **Humifirst Treatment**
- 82 % of heads were cut in the **Control**
- **Humifirst Treatment Cut Out +3.6% (Sig.)**

However some Heads will never mature

Only Analysing % of Good heads:

- 94% of Good Heads in the Humifirst Cut-Out
- 89 % of Good Heads in the Control CutOut
- **Good Head Cut-Out Humifirst Treatment (+5.3%)**

ROI: Constant Head Weight Basis

Assumptions:

- 8 kg box
- Ave. head weight 0.440 g
- Average \$12 per 8kg box
- 550 heads per bin
- Waste 5%

- **Control:** $5.21 \text{ bins} \times 550 \text{ heads} \times \$12 / 8\text{kg} \times 0.44 \text{ kg /head} / 0.0875 \text{ Ha} \times 95\% = \text{Control: } \20533 /ha Gross

- **Tradecorp:** $5.41 \text{ bins} \times 550 \text{ heads} \times \$12 / 8\text{kg} \times 0.44 \text{ kg /head} / 0.0875 \text{ Ha} \times 95\% =$
Gross **Tradecorp: \$21321 /ha**

ROI 1:7.7 every \$1 spent on Product increased Profit after Product Cost by \$7.7

ROI: Real Head Weight Basis

Assumptions:

- 8 kg box
- Control Heads: 440g, Humifirst Heads 448g
- Average \$15 per 8kg box
- 550 heads per bin
- Waste 5%

- **Control:** $5.21 \text{ bins} \times 550 \text{ heads} \times \$12 / 8\text{kg} \times 0.440 \text{ kg /head} / 0.0875 \text{ Ha} \times 95\% = \text{Control: } \20533 /ha Gross

- **Tradecorp:** $5.41 \text{ bins} \times 550 \text{ heads} \times \$12 / 8\text{kg} \times 0.448 \text{ kg /head} / 0.0875 \text{ Ha} \times 95\% = \text{Yield } +5.7\%$
Tradecorp: \$21709 /ha Gross

- **ROI 1:23.8 every \$1 spent on Product increased Profit after Product Cost by \$12.8**

Results – Harvest & Yield

- **Humifirst WG** trial was conducted in Commercial sized blocks:
 - **First Cut Cut-Out** was increased **+21%** (Sig.)
 - **Second Cut Good Head Yield** was increased **+3.6%** (Sig.)
 - **Humifirst WG** increased **Paddock Yield** by **+5%**
 - **Hollow Stem** reduced by **38%**
 - **Heads were slightly denser**



Conclusion

**Humifirst WG @ 5.5 kg /ha
by waterwheel at transplanting**

- Increased Crop evenness
- Increased First-Cut Out +21%
- Packout Yield +5.7%

ROI to Grower 1:12.8

- For every \$1 spent on Humifirst WG the cost was recovered and the profit to farmer was \$12.8 on real Head Basis

