

METALOSATE® TRIAL TO CONTROL TIPBURN IN ‘BUSKARU’ RED CABBAGE

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Purpose

The purpose of the trial was to reduce the number of heads with internal tipburn. The problem is that it is not possible to see whether the heads have internal tipburn. The threshold for culling is 6 out of 10 heads with tipburn.



Figure 1. Tipburn in ‘Buskaru’ Red Cabbage

Trial Plan

Four plots per treatment with 10 red cabbage per plot.

Dosage: 3 litres/hectare (41 fluid ounces/acre) Metalosate® Calcium

Treatments: July 30, 2003
August 8, 2003
August 17, 2003
August 25, 2003

Harvest: September 16, 2003

Trial Results

Unfortunately the red cabbage heads were lost during transport; therefore there is no leaf analysis.

Table 1 Number of Plants Out of 10 Plants per Plot with Internal Tipburn				
Treatment	Plot 1	Plot 2	Plot 3	Plot 4
Untreated	1	1	3	3
Calcium	1	1	1	1

Treatment	Weight (kg) ± Confidence Level (95%)	No. with Tipburn	Red Cabbage with Tipburn
Untreated	3.42 ± 0.25**	8 ns	20%
Calcium	2.96 ± 0.21	4 ns	10%

Statistic: ANOVA 95% level.

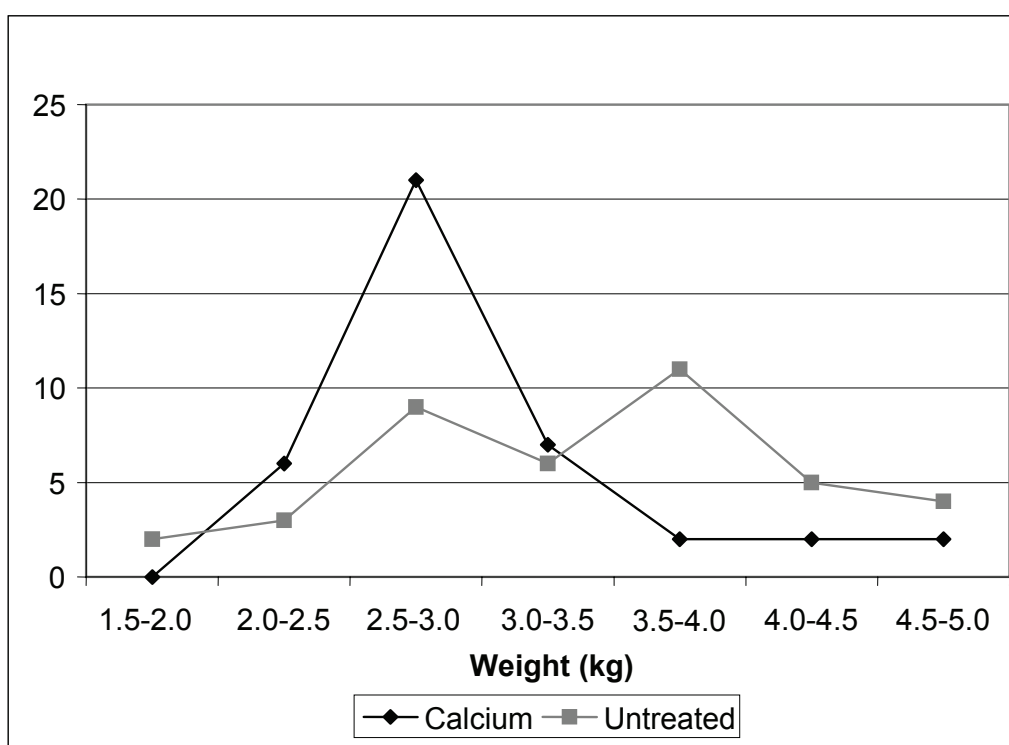


Figure 2. Numbers of Red Cabbage Heads Arranged by Weight.

The weight of red cabbage heads treated with calcium were very uniform and ranged about 2.0 to 3.5 kg (4.4 to 7.7 lb) per head with the majority of heads within the range 2.5 to 3 kg (5.5 to 6.6 lb). The untreated heads were less uniform and ranged in weight from 2 to 4.5 kg (4.4 to 9.9 lb)/head.

Discussion & Conclusion

There were no difference on plots 1 and 2 between the untreated and treated. The numbers of heads with tipburn were equal. In plots 3 and 4 the untreated cabbage had 3 times as many heads with tipburn as the calcium treated plants.

The statistical analysis showed no significant difference between untreated and calcium treated plants. There were too few heads per plot to show a significant difference.

The calcium treated red cabbage weight averaged 400 gram (14.1 oz) less than the untreated. The calcium treated heads were very uniform—there were no extremely small heads and no extremely big heads. All the heads were in the range of 2.5 to 3.5 kg (5.5 to 7.7 lb). The variation was much bigger for the untreated cabbage which ranged from 1.5 to 4.5 kg (3.3 to 9.9 lb) (Figure 1).

In the 2002 trial with red cabbage the weight of the heads increased by almost 1 kg when they were treated with T.E.A.M.® recommendations. In this trial we only applied calcium. It has been observed in other plant species that if the plants are not treated with the nutrients that limit growth, calcium can delay the time of harvest.



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