

ALBION®

Metalosate® Plant Nutrition News

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Effect of the Application of Metalosate® Products on Yield, and Fruit Quality of Strawberries in Ahus, Sweden

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Introduction

The purpose of this trial was to evaluate the efficacy of the Metalosate® products when applied to strawberries. The parameters observed were weight, firmness, and sugar content (Brix) of the berries. Total number of berries per plant was also observed. The total yield per treatment was also calculated based on averages taken from the test plots.



Figure 1. Strawberries

Metalosate Crop-Up® was used to supply a range of minerals to the plants at the flowering stage. Metalosate Boron was also applied at the flowering stage. The application of Metalosate Calcium and Metalosate Potassium from the onset of flowering through harvest was made to help reduce flower drop and also to increase berry firmness and sugar content.

Materials and Methods

This trial took place in Ahus, Sweden, on the "Honeoye" variety of strawberry. One hectare (2.5 acres) was treated with the Metalosate program and another hectare (2.5 acres) was treated with the grower's traditional program which consisted of

Magnesium, Boron, and Potassium sprayed on May 17 and 26, June 6 and 21.

The Metalosate program applied was as follows:

- Metalosate Crop-Up 2.0 liter/hectare (27.4 oz/acre) and Metalosate Boron 1.0 liter/hectare (13.7 oz/acre) at the flowering stage (May 17, 2005).
- Metalosate Calcium and Metalosate Potassium both at 1.5 liter/hectare (20.5 oz/acre) at fruit set (May 26, 2005).
- Two additional applications prior to harvest on June 6 and 21 of Metalosate Calcium and Metalosate Potassium at 1.5 liter/hectare (20.5 oz/acre).

Four sets of 10 plants per treatment were measured on June 20. Brix value, weight, and firmness were measured for each berry collected. The number of berries per plant was also recorded. All red berries on the plants were picked, with pale unripe ones being left on the plant.

Results and Discussion

Table 1 shows the results of the fruit weight, firmness, and sugar content measurements. There was not a difference in the total number of berries per plant.

Table 1. Average Wt./Berry, Firmness, and Sugar Content (Brix)

Treatment	Wt/Berry	Firmness	Brix
Control	13.58g	0.54	7.60
Metalosate®	20.18g a	1.31 a	9.26 a

^a Indicates very strong statistical significance $p < 0.001$.

The average weight of the berries increased by 32.7 percent, the firmness increased by 59 percent, and the Brix value showed an 18-percent increase.

Under these growing conditions, the effect of the Metalosate products on the overall yield was calculated. Considering there is an average of 20,000 plants/hectare (8,097 plants/acre) and using the average weight per berry and average number of plants, it was estimated that the average yield per acre for this harvest increased by 35 percent in the Metalosate-treated berries. This is shown in Figure 2.

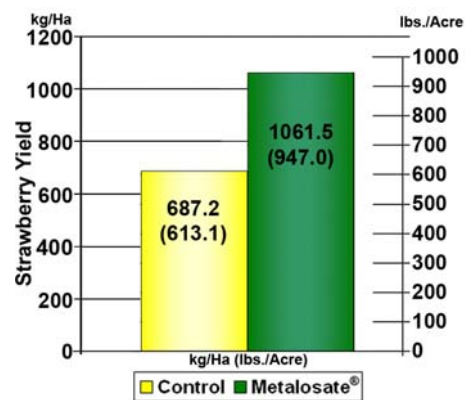


Figure 2. Calculated Yield

The increases in yield and berry quality in this project were considerable. If you would like the full text of this project, please contact your local Albion representative. ☞