

## FRESH MARKET WHITE SKIN POTATO TRIAL IN CHILE

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### INTRODUCTION

The potato tuber has proven a difficult area to successfully increase calcium content by making foliar applications of calcium. A trial completed by the Metalosate® distributor in Chile showed success at increasing calcium levels in potato tubers as well as showing an increase in overall yields. The potatoes in this trial were a white fresh market variety.

### MATERIALS AND METHODS

The trial was comprised of a control field that received the growers standard fertility program. The Metalosate treated fields were all in the same local area farmed by the same grower. They all received the growers standard fertility program and in addition they received a Metalosate program. The Metalosate program is represented in Table 1.

Growth Stage	Metalosate product	Application rate	Number of applications
Emergence to flowering	Multimineral	1 L/Ha (14 oz/acre)	2
	Zinc	1 L/Ha (14 oz/acre)	2
	Potassium	1 L/Ha (14 oz/acre)	2
Flowering to harvest	Calcium	1 L/Ha (14 oz/acre)	2
	Boron	0.5 L/Ha (7 oz/acre)	2
Emergence to harvest	Copper	0.25 L/Ha (3.5 oz/acre)	6

### RESULTS AND DISCUSSION

When the fields reached maturity they were harvested and yield data was recorded from each of the five fields. The first field was the Growers standard fertility program with the next four being Metalosate treated fields. The yields of each are represented in Table 2. Figure 1 shows the percent increase in yield of the Metalosate treated fields compared to the Growers standard fertility program. It can be seen that in all of the Metalosate treated fields there was an increase in overall yield.

Field Name	Potato Yield	Yield Increase
Growers Standard	50.76 T/Ha (22.66 US Ton/acre)	
Metalosate 1	54.11 T/Ha (24.16 US Ton/acre)	3.35 T/Ha (1.49 US Ton/acre)
Metalosate 2	53.85 T/Ha (24.04 US Ton/acre)	3.09 T/Ha (1.38 US Ton/acre)
Metalosate 3	60.53 T/Ha (27.02 US Ton/acre)	9.77 T/Ha (4.36 US Ton/acre)
Metalosate 4	57.50 T/Ha (25.67 US Ton/acre)	6.74 T/Ha (3.00 US Ton/acre)

The analyzed level of calcium in the growers standard fertility program potato tuber was measured to be 0.02%, with the analyzed calcium level in the Metalosate treated tubers being 0.03%. This represents a considerable difference in levels and has the potential to increase the quality and shelf life of the tubers.

This trial showed that it is possible to increase calcium levels in potato tubers by making foliar applications of Metalosate calcium. It also shows that it is possible to significantly increase overall yields when the Metalosate products are applied as part of the overall fertility program. For more information regarding the Metalosate products please contact your local Albion Plant Nutrition representative, or Albion Plant Nutrition directly.

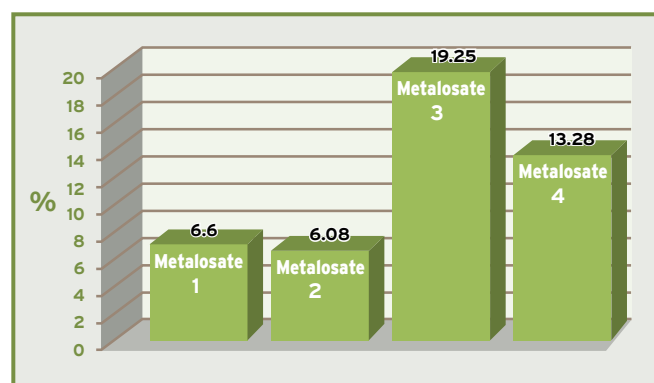


Figure 1. Percent increase in yield in Metalosate treated potato fields when compared to the growers standard fertility program.