Potato Trial with Mobilizer in Pukekohe 2013

A trial was undertaken to determine if the addition of Mobilizer (fulvic acid) would give an increase in yield weight over a control.

The potatoes (Osprey variety) were planted on the 14th July.

Two times applications of Mobilizer at 2L per hectare were applied alone as a foliar spray.

The first application took place when the potatoes were between the shoot and vegetative phenological stage on the 5th August 2013.

The second application of Mobilizer at 2L per hectare was carried out at tuber initiation on the 24th September 2013.

The final measurements were carried out on the 16th December 2013.

Two replicates of 3 metre length rows of potatoes were dug and organised into size ranges.

Smallest 20-50mm, Medium 50-65mm and 65+

Table 1: The total number, size and weight of potatoes for Plot 1 and Plot 2.

Plot 1		Control			Mobilizer		
	20-50mm	50-65mm	65+		20-50mm	50-65mm	65+
Total weight	1468	11115	4621		1501	12506	6232
Average weight	47.35	132.32	243.21		46.91	150.67	270.96
Total Number	31	84	19		32	83	23
% diff Average					-0.95%	13.87%	11.41%
% diff total weight					2.25%	12.51%	34.86%

Plot 2	Control				Mobilizer		
	20-50mm	50-65mm	65+		20-50mm	50-65mm	65+
Total weight	2586	9056	5249		1536	8538	8642
Average weight	60.14	141.50	228.22		45.18	142.30	270.06
Total Number	43	64	23		34	60	32
% diff Average					-24.88%	0.57%	18.34%
% diff total weight					-40.60%	-5.72%	64.64%

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There were a similar amount of small potatoes in Plot 1 in both the Control and the Mobilizer trial plots. However in Plot 2 the Control contained 24% more small potatoes over the Mobilizer.

Both Plot 1 and 2 recorded more of the larger potatoes in the Mobilizer areas, with Plot 1 recording a 35% difference in weight and Plot 2 Mobilizer recording 64% difference in the largest category of 65+ mm.

Table 2: The total overall weight of the Potatoes in each of the Plots.

Totals	Control	Mobilizer		Control	Mobilizer
	17204	20239		16891	18716
		17.64%			10.80%

When combining the total weight of the potatoes in each Plot the Mobilizer plots both gave a higher weight of 17% and 10% respectively.

Table 3: The overall total weight of potatoes in combined Control and Mobilizer plots.

Totals	
Control	Mobilizer
34095	38955
	14.25%

When Plot 1 and Plot 2 were combined and the totals calculated the Mobilizer plots contained overall increase of 14% in weight over the Control plots.

The average weight yield is 40tonne per hectare in NZ (according to potatoes NZ) and the average price is $400 per tonne. The grower on average would receive around $16000 per hectare at present. However if Mobilizer was added the additional 14% increase in tonnage would give 45.6 tonne per hectare, increasing the overall price per hectare to $18,240 per hectare. This is an increase of $2,040 per hectare to the Grower. This is a conservative estimate and would likely be more as the sizes of the potatoes would generally give higher payments.

This result gives significant value to the grower with a very small outlay of $50 per hectare for the Mobilizer product. The benefit of Mobilizer will also carry on in the soil improving soil health for future cropping,

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