

Indonesia: BioAktiv increases sweet potato yield by 25%

MEDAN, 2 December 2013: PT WGM conducted a study on its company's one-hectare crop of sweet potato in Sidikalang district near Medan, Sumatra, Indonesia. The effects of using three plant growth enhancers, two microbial products A1 and A2, and *BioAktiv for Plants*, were studied and compared and it was found that despite BioAktiv was applied on the worst soil, it performed better than the microbial products and has increased yield by 25%.

The Study

A one-hectare sweet potato field planted in April 2013 was selected for the study. It was divided into four 2,500m² trial plots but they were of different soil types. The trial plots were treated as follows:

- Plot A1: 2.5l of A1 applied to the soil and 150ml of A1 for soaking vine cuttings before planting
- Plot A1+2: 1.25l of A1 and 1.25l of A2 applied to the soil and 75ml of A1 and 75ml of A2 for soaking vine cuttings before planting
- Plot B: 250g (1 kg/ha) of BioAktiv for Plants applied to the soil one week before planting
- Plot C: No treatment of A1, A2 or BioAktiv to serve as control plot

All other treatments to the four trial plots were the same.

Results

At harvest on 19 November, 100 evenly distributed (5m x 5m) samples of originally planted cuttings were taken from each of the four trial plots for comparison on survival rate and yield. The yields of the four plots were also recorded. The results were as follows:

Trial Plot	Soil Type	Treated with	Survival Rate (%)	Sample Yield (kg)	Plot Yield (tons)
Plot A1	Black loamy	A1	72 (+33.3%)	22.0 (+33.4%)	2.16 (+50.0%)
Plot A1+2	Sandy (yellow)	A1 + A2	68 (+25.9)	22.7 (+37.7%)	1.68 (+16.7%)
Plot B	Sandy (white & yellow)	BioAktiv	58 (+7.4%)	24.9 (+51.0%)	1.80 (+25.0%)
Plot C	Black loamy	None	54	16.49	1.44

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The photos above show the actual harvested produce of the surviving sampled plants of the four trial plots. It can be seen that Plot B treated with BioAktiv produced more big tubers than other trial plots hence resulted in the highest yield.

Conclusions

From the results, we note that despite being applied on Plot B with the worst sandy soil type, BioAktiv provided a plot yield which was 25% higher than that of control Plot C with black loamy soil. If Plot B was of the better black loamy soil, the yield increased by BioAktiv would be higher. Comparing the sample and plot yields of Plot A1+2 and Plot B (1.80 tons) of similar sandy soil type, it is obvious that BioAktiv had increased yield better than the microbial products. The microbial products (27-33%) increased survival rate better than BioAktiv (7%) which contains no microbes. But the microbial products could only increase sample yield of similar percentage (33-38%), this shows that they were ineffective in increasing yield. On the other hand, BioAktiv only marginally increased the survival rate (7%), it achieved an outstanding sample yield increase of 51%, this shows that BioAktiv which is loaded with bioactive 'oxygen information' provides a sustained growth-enhancing effect until harvest of the crop.