



## Tea Field Results from China

The following written report was prepared by a Chinese government agency in cooperation with a Chinese university. The conclusion in the report stated, "...all parameters related to plant growth vigor increased by more than 25% as compared with those of untreated tea trees" and the product "produces positive effect on the soil."

While the report presents raw data, it does not calculate the yield increase. The yield increase calculations below are Bio Soil's interpretation of the numbers.

The harvest-able parts of a tea tree are the leaves and buds. The report did not give enough detail on the leaves, but yield increase can be inferred by the increase in growth of the trees as measured by the tree height and crown. Moreover, the buds become leaves, so given time; the bud count is the leaf count.

The correct formula is pi times radius squared times length, but length times width is very close to the correct answer and length and width are the numbers provided in the report so they are easily compared for accuracy.

### **Plot A**

Untreated --  $57.3 \text{ (height)} \times 62.5 \text{ (width)} = 3581.25 \text{ (plant mass)}$

Treated --  $71.3 \text{ (height)} \times 74.5 \text{ (width)} = 5311.85 \text{ (plant mass)}$ , an increase of 48.3%

### **Plot B**

Untreated -  $56.8 \times 50 = 2840$

Treated -  $72.8 \times 70.3 = 5117.84$ , an increase of 80.2%, and average, with Plot A, of 64.3% increase for the plant mass

It is assumed the leaves per square centimeter would be equal; however, this is unlikely as other crops grown with SumaGrow products have denser plant mass so the number of leaves in the treated trees should be greater, and therefore, the yield increase even higher. This is

confirmed by the number of buds per plant increasing by an average of 83.8% while the plant mass averaged an increase of 64.3%.

There was adequate data for calculating an exact increase in the extra weight of the buds on the tea trees:

### **Plot A**

Untreated 34 (average buds per plant) x 0.14 (average weight of buds) = 0.476 (total bud weight per plant)

Treated 48 x 0.022 = 1.056, an increase of 121.8% in bud weight

### **Plot B –**

Untreated 44 x 0.014 = 0.616

Treated 77 x 0.015 = 1.155, an increase of 87.5%, and average, with Plot A, of 104.7% increase for the bud weight per plant

It is interesting to note the average weight of untreated buds was exactly the same (0.014) for both plots.

Assuming a 50/50 mix of leaves and buds, the average yield increase for the treated trees is 84.4%.

***CAUTION: The report is silent on fertilizer. If the control would normally be fertilized, and have a higher yield, then the increase would not be as sizable.***

Some interesting data applicable to ALL crops grown with SumaGrow products include the soil analysis which shows the available nutrient content increasing significantly -- Phosphorous - 31.9%, carbon 27.2% and sulfur 14.6%. Apparently, nitrogen and potassium were also measured but no data is listed.

The carbon increase in the soil could be extremely significant in determining carbon credits.

Additionally, there was a wide variation in the pH of the soil between the test plots; Plot A was 4.64 while Plot B was 7.63

And finally, the leaves being "shiny" are probably an indication of higher nutrient value. Other crops grown with SumaGrow products have shown higher protein levels, higher brix levels, and higher chlorophyll levels, so we should expect a higher nutrient value in the tea, but no quality testing is presented in the report.