

COMPARING TWO CUCUMBER PLANTINGS

RLF Crop Nutrition Program versus Traditional Fertiliser Management

Authorised for release by:

Melanie Wu,
Deputy General Manager, RLF China,
and translated by Echo Dong

'Fruit cucumber', as it is known, has been increasing in consumer popularity in recent years. It brings high prices if high quality benefits can be demonstrated and more and more vegetable farmers have begun trying their hand at growing this vegetable crop.

In order to help the growers increase yield and economic benefits, the RLF Technology Team established a standard demonstration field in a greenhouse in Ruian, Wenzhou to gauge and measure the application effects of an RLF nutrition program for cucumber.



Demonstration Trial Details

Crop Type	Fruit Cucumber			
Planting Dates	9 th October – 17 th November 2019			
Trial Location	Fengshe Village, Tongpu Town, Ruian, Wenzhou			
Products Applied	RLF Program		Control Program	
	Growth Period		Growth Period	
	Blooming stage (9th October)	Foliar spray with Fruits & Veggies Plus at 800 times dilution, and Fertigation with Plant Milk High-N at 200 times dilution	Blooming stage (9th October)	Foliar spray with Amino-acid fertilizer at 500 times dilution, Fertigation with 20-20-20 powder water soluble fertiliser
	Melon bearing stage (25th October)	Fertigation RLF Plant Milk High-K at 200 times dilution	Melon bearing stage (25th October)	Fertigation with 10-9-40 powder water soluble fertiliser
Trial Setup	The Control and RLF program cucumbers were planted in the same greenhouse, with same test area size (0.15mu land respectively), growth environment and management to ensure the objective test results.			



Measurement of the Leaf



On 9th October 2019, twenty cucumbers were randomly selected from both the Control and RLF-treated fields and marked. Measurements were taken by plant height, leaf thickness at the same position (the fifth leaf from bottom to top) and chlorophyll content.

Leaf measurement data (before applying crop nutrition fertilisers)

Program	Average plant height(cm)	Average leaf thickness(cm)	Chlorophyll content
Control	101.4	0.48	34.1
RLF-treated	99.6	0.46	33.9

The plant height and leaves of the test group were slightly weaker than that of the Control group, but the difference was not significant.

On October 25th, measure the related statistics again according to the previous marks:

Leaf measurement data (after applying crop nutrition programs)

Program	Average plant height (cm)	Average leaf thickness (cm)	Chlorophyll content
Control	196.4	0.62	48.5
RLF-treated	202.1	0.74	54.7

All three indicators showed that the crop treated with an RLF crop nutrition program were better than that of the Control crop. In terms of leaf colour, the leaves of the RLF-treated crop were thicker and greener.



Observation 25th October 2019



Observation 17th November 2019

Measurement of the Fruit

Ten cucumbers were randomly selected from both the Control crop and the RLF-treated crop. The length, diameter and weight of each single cucumber was measured individually.



Cucumber measurement data taken on day-1, 1st November 2019

Treatment	Average length (cm)	Average diameter (cm)	Average weight (g)
Control	174.6	32.9	143.7
RLF-treated	176.1	34.1	145.2

Cucumber measurement data continued on day-2, 2nd November 2019

Treatment	Average length (cm)	Average diameter (cm)	Average weight (g)
Control	174.1	32.7	149.6
RLF-treated	175.3	33.9	158.5

After two days of measurement and comparison, the results showed that the advantages of cucumbers treated with an RLF crop nutrition program were obvious. The cucumber sticks were longer and thicker, the single fruit was heavier, and the economic benefits from the marketplace were better.

Measurement of Weight

From 1st – 17th November 2019 commercial cucumbers were picked and measured a total of eleven times.



At the same time defective and deformed cucumbers were picked and measured a total of seven times.



The schedule of the weight measurement data is as follows:

Date	Commercial cucumber weight(kg)		Defective cucumber weight(g)	
	Control	RLF-treated	Control	RLF-treated
1 st November	4.6	5.8	1260	611
2 nd November	10.2	10.3	1051	816
4 th November	30.3	31.5	----	----
6 th November	22.8	25.7	----	----
8 th November	21.9	26.3	----	----
10 th November	17.2	20.9	----	----
12 th November	14.8	17.9	1011.5	545.8
14 th November	13.9	14.3	804.4	491.0
15 th November	4.8	6.1	434.1	242.7
16 th November	4.6	5.2	477.2	213.3
17 th November	2.1	2.3	185.7	85.1
Total	147.2	166.3	5,223.9	3,004.9

Measurement Financial Returns

The income comparison data is as follows:

Treatment	Yield (kg)	Commodity rate	Income (Yuan)	Value-added (Yuan)
Control	147.2	96.5%	824.32	107
RLF treated	166.3	98.2%	931.28	

Based on the purchase price of 5.6 yuan/kg, and using the 11 times measurement comparisons, the yield of cucumbers treated with RLF products increased by 19.1 kg, the commercial rate increased by 1.7%, and the income increased by 107 yuan.

Measurement of Overall Trial

In the greenhouse cucumber cultivation environment, the RLF nutrition program has demonstrated the following characteristics:

1. Preservation of green leaves and prevention of premature aging
2. Improved qualities of the single cucumber, such as weight, thickness and length
3. Reduced rate of malformed and inferior fruits, and
4. Increased production and overall income

The Products Used



The content of this media page was accurate and current at the time that it was written. This media release is provided for interested customers and other parties, and will remain a matter of RLF's historical record. Viewed in this context RLF therefore undertakes no obligation to update either material or content.