



BioGro Inc. - Field Trial Research

Premium 21 on Watermelon

Objective: To evaluate the impacts of Premium 21 on plant nutrient uptake and mobility of cation nutrients in melons.

Conclusions:

The vines in blocks that had Premium 21 applied exhibited significantly higher tissue concentration calcium. As a follow-up test, Ca sap analysis revealed a 66% higher concentration of calcium in the sap. These results suggest that the organic acids in Premium 21 have an effect on the dissolution of calcium-containing compounds in the soil and/or improved calcium mobilization once in the plant.

Cooperator(s): Futch Farms LLC

Location: Zolfo Springs, FL

Date: 2019 Spring Season

Test Crop: Watermelon

Treatments:

1. UTC – Untreated Control
2. Premium 21 applied through fertigation @ 13gpa steadily throughout season

Trial Layout:

38A (Treeline + South Pond) received 500gal of Premium 21 applied steadily throughout season (13.16gpa). For comparison purposes, a 40A untreated control (UTC) was also established combining two 20A fields (Barn + East Block). Tissue samples were taken at the end of vegetative growth on 04/19/19. Ca sap test analysis was performed on the last 6” of vine tips during mid-harvest on 05/07/19.



Results:

Tissue Analysis:

	K	Ca	Mg	Mn	Zn	Fe
UTC (Barn)	1.79	1.35	0.29	47.00	42.00	77.00
UTC (East Block)	2.02	1.17	0.29	42.00	38.00	75.00
UTC Avg	1.91	1.26	0.29	44.50	40.00	76.00
P21 (Treeline)	1.88	1.49	0.33	41.00	36.00	67.00
P21 (South Pond)	1.98	1.54	0.33	52.00	36.00	64.00
P21 Avg	1.93	1.52	0.33	46.50	36.00	65.50
P21/UTC	+1%	+20%	+14%	+4%	-10%	-14%
	K	Ca	Mg	Mn	Zn	Fe

Ca Sap Analysis:

	Ca ppm
UTC (Barn)	170
UTC (East Block)	150
UTC Avg	160
P21 (Treeline)	210
P21 (South Pond)	320
P21 Avg	265
P21/UTC	+66%

