



pH TRIAL FROM CLONES

PURPOSE

To understand the impact of growing cannabis with solution at conventional pH levels (5.6 – 5.8), versus the impact of growing cannabis with solution that is not pH adjusted at all by measuring plant yield.

SUMMARY

We compared cannabis plants that were grown with a nutrient solution that had pH adjusted to conventional levels (5.6 – 5.8) to cannabis plants whose nutrient solution had not been pH adjusted. We found it to be much more effective to not pH the solution at all, as these plants showed an increase in wet weight, dry bud weight and trim weight and were healthier, larger plants overall.

PROTOCOL

One test group was pH adjusted to conventional levels (5.6 during the vegetative stage and 5.8 during the flower stage), while the other group was not pH adjusted at all. All other factors in the trial were the same. The plants in the trial were fed according to the same feeding schedule (Rx Green Technologies' Grow A & B, Bloom A & B, and Axiom), and they were grown using the same growing procedures, treatments, and were grown in the same environment (including, but not limited to, pruning, watering and IPM). We tested with the Sour Diesel and OG strains; both groups had an equal number of plants tested with each strain. All plants were grown in a coco/perlite media.

FEEDING SCHEDULES & PH LEVELS

■ pH Group ■ Non-pH Group

	Veg Stage											Flower Stage									
Weeks	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5	6	7	8	9	
Date	3/7	3/14	3/21	3/28	4/5	4/12	4/19	4/26	5/4	5/11	5/18	5/26	6/2	6/9	6/16	6/23	7/1	7/8	7/15	7/22	
ml/gal	GROW A	11	11	11	11	11	11	11	11	11	11										
	GROW B	11	11	11	11	11	11	11	11	11	11										
	BLOOM A											12	13	14	15	14	12	F	F	F	
	BLOOM B											12	13	14	15	14	12	F	F	F	
AXIOM	2g		2g		2g		2g		2g		2g		2g		2g		2g		2g		
pH	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.8	5.8	5.8	5.8	5.8	5.8	7.5	7.5	7.5	
PPM's	910	900	910	920	910	900	910	920	900	910	910	890	930	1030	1100	1030	890	150	150	150	
pH	4.3	4.3	4.3	4.4	4.3	4.4	4.3	4.4	4.3	4.4	4.4	4.8	4.9	4.9	5.0	4.9	4.8	7.5	7.5	7.5	
PPM's	850	850	840	850	830	850	850	840	860	850	850	860	890	990	1010	990	860	150	150	150	
Pot Sizes	1gal	1gal	1gal	1gal	1gal	1gal	1gal	1gal	1gal	1gal	1gal	7gal	7gal	7gal	7gal	7gal	7gal	7gal	7gal	7gal	
# of pots	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	

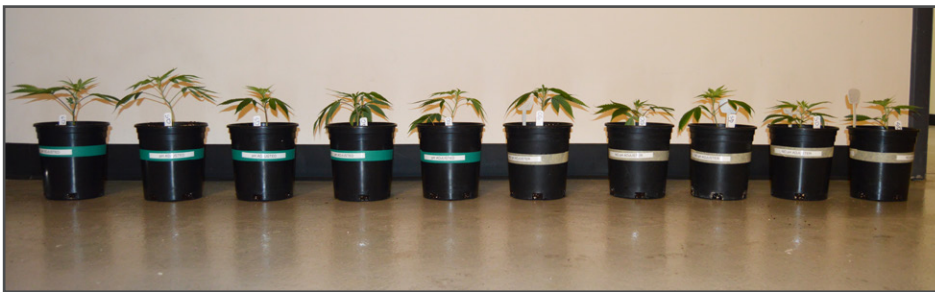
F = Flush

FEEDING SCHEDULE NOTES:

Our vegetative growth cycle was abnormally long, as we wanted to make sure the plant could sustain growth at such a low pH level. Once we were able to make sure the plants could thrive at this low pH level for an extended period of time, we moved the plants into flower to finish the growth cycle.

PICTURES

- Pots with green label (on the left) were pH adjusted
- Pots with yellow label (on the right) were not pH adjusted



(3.7.15)



(5.21.15)



(7.24.15)

YIELD DATA

The plants that were not pH adjusted showed a 12.64% increase in average wet weight, a 11.60% increase in average dry bud weight, a 20.26% increase in average trim weight, and a 0.96% increase in THC content over the control group that was pH adjusted.

CONCLUSION

The plants with no pH adjustment showed a slightly larger canopy and shorter internodes than the pH-adjusted plants. These plants also showed a significant increase in yield: increase in average wet weight was 12.64%, increase in average dry bud weight was 11.6% and increase in average trim weight was 20.26%. There was also a 0.96% increase in THC content. Because the plants in this trial were treated identically in all respects, except for pH adjustment, we believe the increase in performance can be attributed to the plants' ability to absorb micronutrients more easily at a lower pH. Also, the coco/perlite media works as a good buffer, wherein the macronutrients will be more available for the plants.

This trial was just tested with Rx Green Technologies' nutrients; using other nutrients without pH-ing your solution may not yield the same results.