Onions 2019

John P. Taberna - Soil Scientist - Western Laboratories, Inc.

It is going to be difficult to get maximum yields in 2019. If you don't believe me, wait until June 21st and count the leaves. You have to be at the 8th leaf stage on that date for maximum yield. 8 leaves includes the 2 cotyledons that have dried up. From the 8th leaf each new leaf is shorter. Starting June 1st, you must be heading towards curve on both roots and soil. If you come in too hot your onions won't store. This is going to be a great year for winter returns!

Irrigation schedule with dehydrated onions starts with reducing your water starting August 1st. On fresh onions, sometime between August 1st through August 5th you'll need to get a handle on your moisture. There is a good chance mineralization of Nitrogen will go up from mid July to August 1st. Observe the root Nitrate levels on this Secret Vault onion report. You can see that the Nitrate levels stayed high. The soil Nitrogen levels increased due to mineralization. The only way you can get the onions to cure is through moisture deficit. If your Nitrogen is too high, you need to over irrigate in mid-July so that you don't antagonize onions maturing in August and September.

Western Laboratories, Inc.
211 Highway 95 • Parma, ID 83660 • 208-649-4360
800-658-3858 •westernl@westernlaboratories.com

Dealer:

8/6/20

SV No: 20230

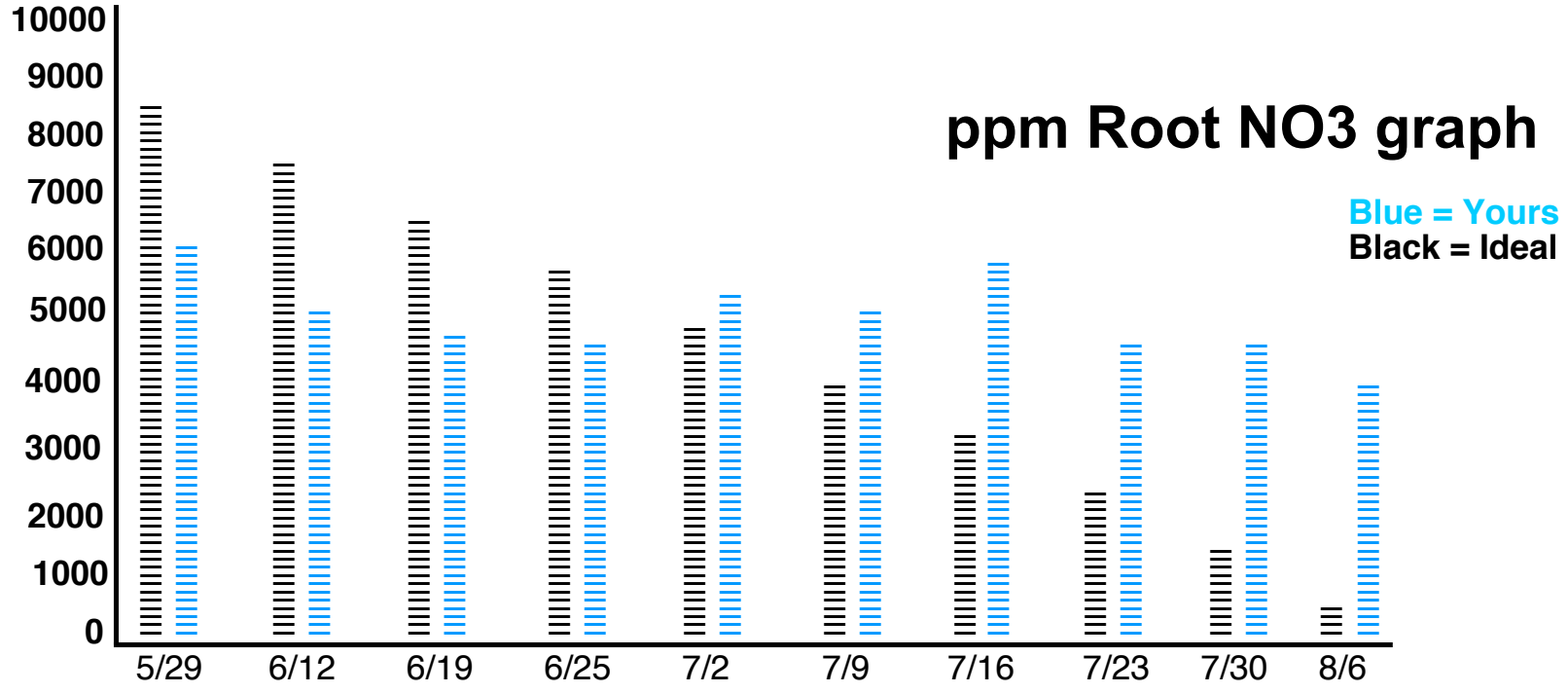
Grower:

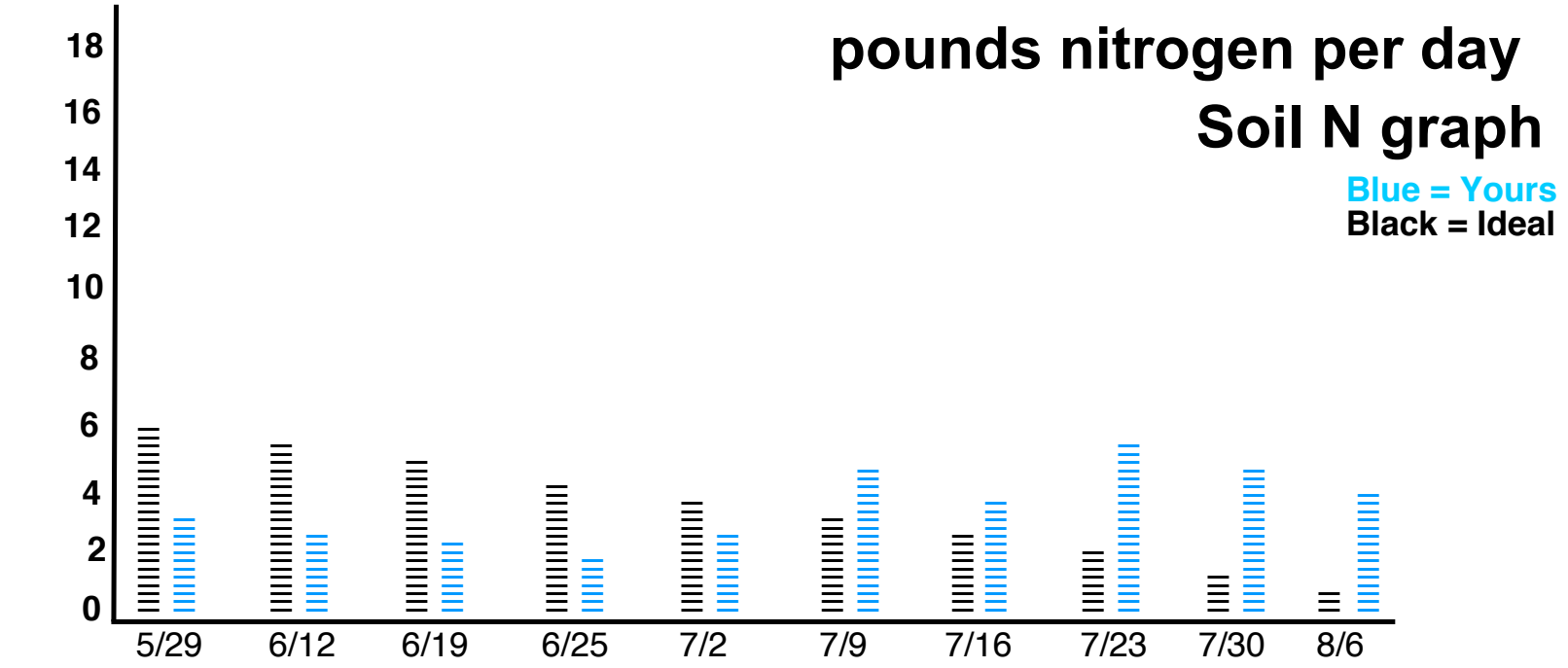
Variety: Onions

Acres:

Secret Vault - Onion 2018

WEEK			Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
LABORATORY NO			108	682	972	1738	2625	3579	4731	5788	6789	7737
DATE			5/29	6/12	6/19	6/25	7/2	7/9	7/16	7/23	7/30	8/6
		IDEAL	YOURS	YOURS	YOURS	YOURS	YOURS	YOURS	YOURS	YOURS	YOURS	YOURS
PLANT	Nitrates-ppm	1000	6344	5320	4892	4797	5585	5261	6078	4784	4693	4145
SOIL SOL'N	Nitrogen-lbs	> 1.5	4.6	3.7	3.4	2.9	3.7	6.9	5.4	7.7	6.6	5.7
PLANT	% Phosphorus	> 0.32	0.31	0.39	0.39	0.36	0.30	0.29	0.29	0.26	0.29	0.27
SOIL SOL'N	Phosphorus-lbs	> 0.7	1.2	0.9	1.0	1.5	1.7	1.5	1.2	1.6	1.5	1.6
PLANT	% Potassium	> 2.7	3.33	4.59	3.97	4.00	3.34	2.49	2.72	2.27	1.73	1.76
SOIL SOL'N	Potassium-lbs	> 5.0	3.7	4.6	3.8	4.5	3.8	4.7	5.5	5.8	4.6	4.3
PLANT	% Sulfur	> .24	0.92	1.21	1.14	1.22	1.23	1.09	0.80	0.82	0.80	0.70
SOIL SOL'N	Sulfur-lbs	> 1.5	2.8	3.0	1.8	2.4	2.6	3.2	3.9	4.5	4.7	4.2
PLANT	% Calcium	> .4	1.22	1.04	1.30	1.66	1.26	1.03	1.28	1.43	1.44	1.50
SOIL SOL'N	Calcium-lbs	> 3.0	6.7	7.5	5.3	4.6	5.9	7.0	7.0	5.7	6.2	6.0
PLANT	% Magnesium	> .3	0.42	0.41	0.46	0.53	0.47	0.40	0.35	0.38	0.39	0.40
SOIL SOL'N	Magnesium-lbs	> 0.8	1.1	1.2	0.9	0.9	1.1	1.0	1.1	1.2	1.0	0.9
PLANT	ppm Zinc	> 25	84	68	74	76	66	51	43	50	58	51
SOIL SOL'N	Zinc-grams	> 28	36	30	30	36	33	39	36	45	33	33
PLANT	ppm Manganese	> 35	118	132	147	112	105	121	102	99	117	94
SOIL SOL'N	Manganese-grams	> 28	27	21	15	15	21	27	27	33	27	27
PLANT	ppm Copper	> 6	27	19	24	21	18	20	18	20	19	20
SOIL SOL'N	Copper-grams	> 12	9	12	15	12	15	18	21	24	21	15
PLANT	ppm Boron	> 19	9	11	14	12	11	13	16	19	18	15
SOIL SOL'N	Boron-grams	> 20	15	12	15	12	15	20	23	21	21	20


ppm Root NO3 graph
Blue = Yours
Black = Ideal
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
5/29
6/12
6/19
6/25
7/2
7/9
7/16
7/23
7/30
8/6


pounds nitrogen per day
Soil N graph
Blue = Yours
Black = Ideal
18
16
14
12
10
8
6
4
2
0
5/29
6/12
6/19
6/25
7/2
7/9
7/16
7/23
7/30
8/6

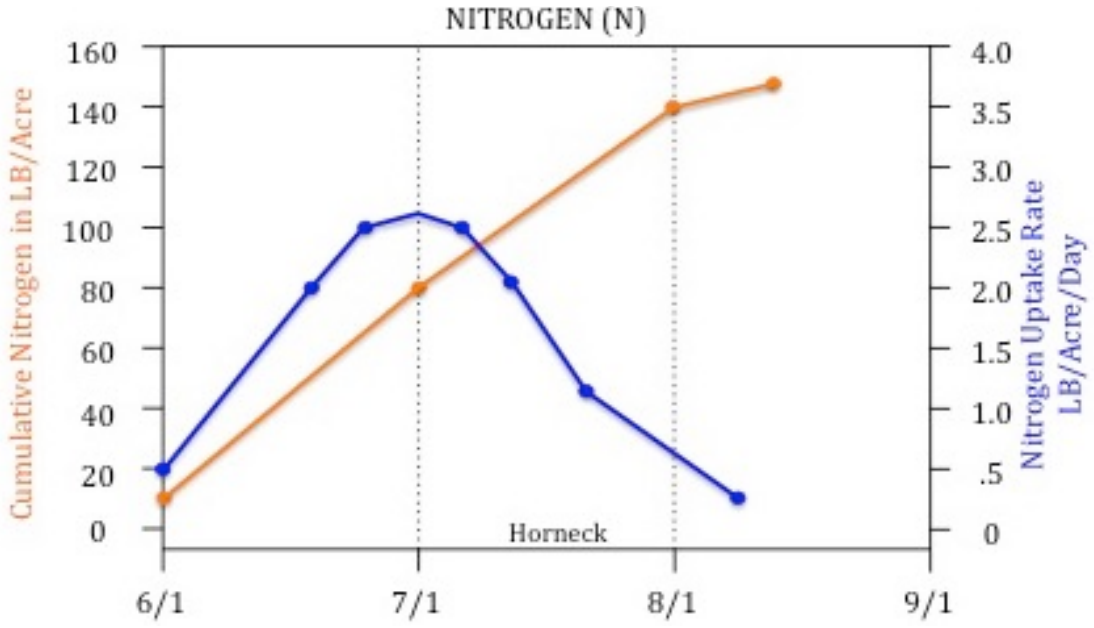
SOIL TEST REPORT	pH and Soluble Salts									
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
LABORATORY NUMBER	108	682	972	1738	2625	3579	4731	5788	6789	7737
DATE	5/29	6/12	6/19	6/25	7/2	7/9	7/16	7/23	7/30	8/6
pH	8.2	8.4	8.0	5.7	6.1	6.5	6.8	7.1	7.4	7.6
Soluble salts	0.17	0.14	0.23	0.39	0.41	0.38	0.47	0.44	0.35	0.27

SOIL TEST REPORT	NITROGEN IN POUNDS PER ACRE FOOT									
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
LABORATORY NUMBER	108	682	972	1738	2625	3579	4731	5788	6789	7737
DATE	5/29	6/12	6/19	6/25	7/2	7/9	7/16	7/23	7/30	8/6
Nitrates - lbs	24	20	18	14	22	42	38	46	40	36
Ammonium - lbs	8	6	6	6	4	6		8	6	4
Total Nitrogen - lbs	32	26	24	20	26	48	38	54	46	40

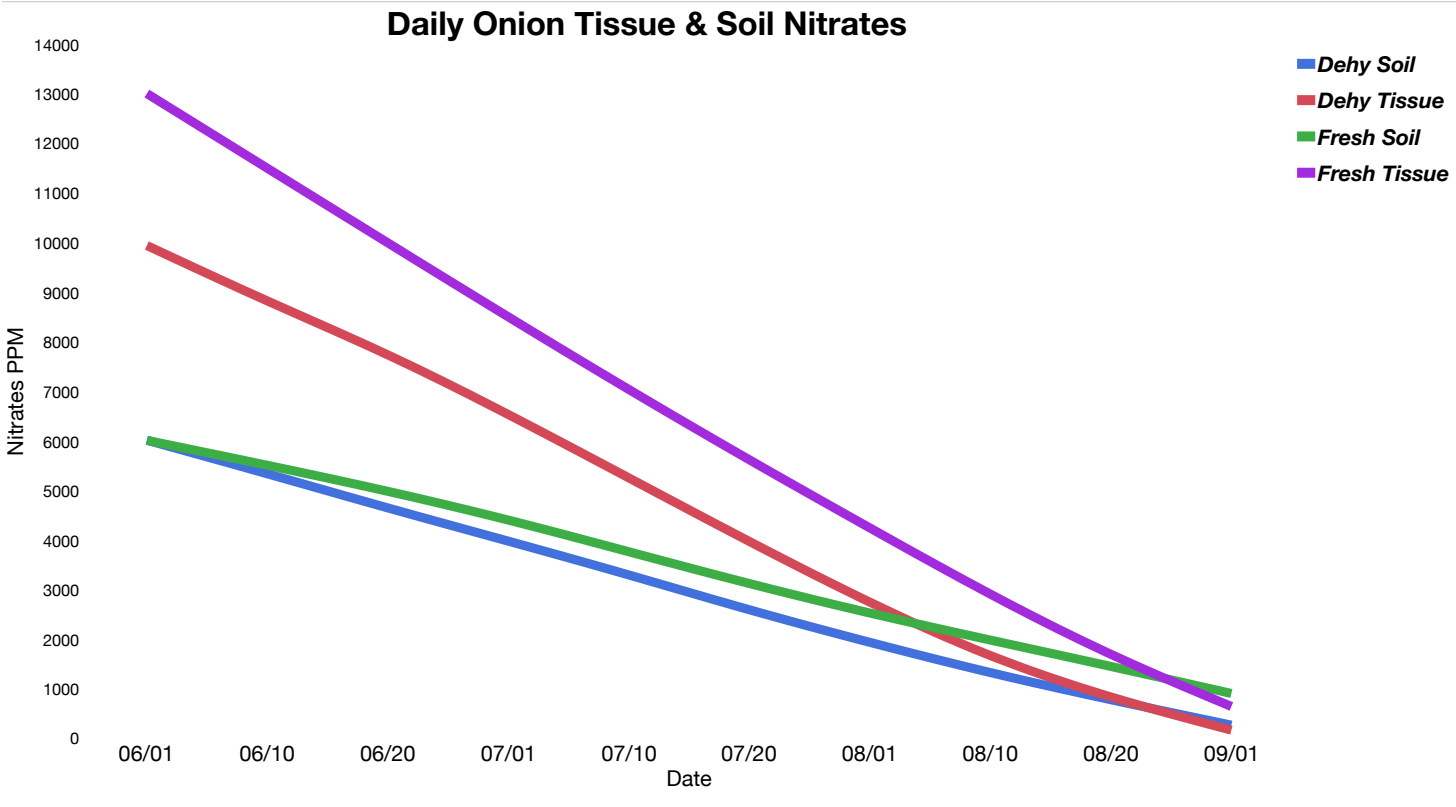
	FERTILIZER RECOMMENDATIONS IN POUNDS ACTUAL PER ACRE									
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
LAB NO	108	682	972	1738	2625	3579	4731	5788	6789	7737
DATE	5/29	6/12	6/19	6/25	7/2	7/9	7/16	7/23	7/30	8/6
ELEMENT	INJECT	INJECT	INJECT	INJECT	INJECT	INJECT	INJECT	INJECT	INJECT	INJECT
Nitrogen										
Phosphate	10				10	10	10	10	10	10
Potash	9	3	8	4	8	22		10	23	25
Sulfur										
Calcium										
Magnesium						2	2	2	2	2
Zinc										
Manganese	0.3	0.3	0.3	0.3	0.3	0.3	0.3		0.3	0.3
Copper										
Boron	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

2

The graph below is the late Dr. Don Horneck's (OSU) work in 1999. He averaged 30 tons on pivot. Onions today are using 180-220 pounds of Nitrogen per acre on 65 ton yields.



The graph below is by John Taberna.



Follow this graphic to properly collect onions for testing!

How to submit onions for testing:

1: Cut onions at the bulb plate with the roots attached (you'll need a small handful)
2: Wash roots with water
3: Place in a paper bag
4: Mail or deliver to Western Laboratories

For soil Nitrogen and Soil Solution testing:

1) Collect 12-15 cores 10"-12" deep in the onion root zone
2) Monitor the same area all season
3) Collect roots and soils on a 45 degree monitored strip
4) Place washed root samples in paper bags (not plastic)

Join us for our 2019 Secret Vault!

For questions or comments contact John at
john@westernlaboratories.com