

Appendix F Absorption Times for Foliar Applied Nutrients

Nutrient	Time for 50% Absorption
Nitrogen	1/2 - 2 hours
Phosphorus	5-10 days
Calcium	1-2 days
Magnesium	2-5 hours
Sulfur	8 days
Zinc	1-2 days
Manganese	1-2 days
Iron	10-20 days
Molybdenum	10-20 days

(from A & L Agricultural Laboratories,
Resource Handbook: Foliar Applied
Nutrition)

These times for absorption should be kept in mind to achieve the goals of a foliar feeding program. Always remember that foliar fertilization is a supplement to, not a replacement for, a soil fertility building program.

- 1) Applying nutrients likely to be limiting factors in crop production.
- 2) Compensating for soil or environmentally induced nutrient deficiencies.
- 3) Augment resistance of the crop to pests and diseases during critical times.

Appendix G

Results of Fertilizer Industry Survey: 40 Dealers with 94 Employees:

Parameter	Response
Crops serviced:	Agriculture 21 Nursery/landscape 10 Both 9
1. % of companies with 1 or more with soils training:	24/40 = 60%
2. % of companies who regularly use soil testing:	20/40 = 50%
3. Of those who <u>do</u> use testing; % who have technicians to write the recommendations:	12/20 = 60%
4. % who perceive some need for training for themselves or their associates:	22/39 = 56%
5. Education of dealers and employees:	
% HS & Professional Experience	38/94 = 40.4%
% Community College	16/94 = 17.0%
% Bachelor's Degree	33/94 = 35.1%
% Post Bachelor's degree	7/94 = 7.5%
6. Estimated % of N,P & K sold by those who sell commercial fertilizers and can estimate:	N - 37.5% P - 14.3% K - 22.3% Other - 25.9%
7. Perceived limiting factors in local crops & soils (# of mentions):	
<u>N</u> <u>P</u> <u>K</u> <u>Ca</u> <u>S</u> <u>Micros</u> <u>Soil Structure</u> <u>pH</u> <u>Organic Matter</u>	
20 9 19 15 4 6 4 3 3	

Appendix H - Parts per Million Required to Achieve Optimum Soil Base Cation Saturation Ratios (BCSR)

CEC of SOIL	Ca 65%	Ca 75%	Mg 10%	Mg 15%	K 3%	K 5%	Na < 5%
2	260	300	24	37	23	39	23
3	390	450	37	55	35	59	35
4	520	600	49	73	47	78	46
5	650	750	61	92	59	98	58
6	780	900	73	110	70	118	69
7	910	1050	85	128	82	137	81
8	1040	1200	98	146	94	157	92
9	1170	1350	110	165	105	176	104
10	1300	1500	122	183	117	196	115
11	1430	1650	134	201	129	216	127
12	1560	1800	146	220	140	235	138
13	1690	1950	159	238	152	255	150
14	1820	2100	171	256	164	274	161
15	1950	2250	183	275	176	294	173
16	2080	2400	195	293	187	314	184
17	2210	2550	207	311	199	333	196
18	2340	2700	220	329	211	353	207
19	2470	2850	232	348	222	372	219
20	2600	3000	244	366	234	392	230
25	3250	3750	305	458	293	490	288
30	3900	4500	366	549	351	588	345
35	4550	5250	427	641	410	686	403
40	5200	6000	488	732	468	784	460
Total Exchange Capacity	Calcium level should be	between these levels	Magnesium level should be	between these levels	Potassium level should be above this	and near or below this	Sodium level should be below this