

Artichokes			
	Low-Def <	Sufficient Range	High >
N		5	
P		1	
K		5	
Ca%		1.83	
Mg		0.4	
S			
B		39	
Cu		14	
Fe		300	
Mn ppm		160	
Zn		54	
Mo			
Al			

Beets (Sugar Beets) Midgrowth			
	Low-Def <	Sufficient Range	High >
N	2.5-3.0	3.03-4.5	
P	0.19-.25	.27-.51	
K	1.3-2.0	2.0-6.0	
Ca%	.25-.36	.38-1.25	
Mg	.25-.35	.38-1.10	
S	0.09	.09-1.4	
B	18	25-80	
Cu	8	13-40	
Fe	40	50-200	
Mn ppm	17	23-150	
Zn	16	20-60	
Mo	0.15	.18-5.0	
Al			

Broccoli

	Low-Def <	Sufficient Range	High >
N		3.2-5.5	
P		.30-.70	
K		2.0-4.0	
Ca%		1.2-2.5	
Mg		.23-.40	
S			
B		30-100	
Cu		1-5	
Fe		100-300	
Mn ppm		25-150	
Zn		45-95	
Mo			
Al			

Cabbage Head Half Grown (Young Wrapper Leaf)

	Low-Def <	Sufficient Range	High >
N		3.0-4.0	
P		.30-.50	
K		3.0-4.0	
Ca%		1.5-3.5	
Mg		.25-.45	
S			
B		30-60	
Cu		7-40	
Fe		40-250	
Mn ppm		40-200	
Zn		20-30	
Mo			
Al			

Cantaloupe (Muskmelon) 12 Unfurled leaves (5th leaf from tip)

	Low-Def <	Sufficient Range	High >
N		3.0-4.0	
P		.30-.50	
K		3.0-4.0	
Ca%		1.5-3.5	
Mg		.25-.45	
S			
B		30-60	
Cu		7-40	
Fe		40-250	
Mn ppm		40-200	
Zn		20-30	
Mo			
Al			

Cauliflower Mature leaf with Stem Removed

	Low-Def <	Sufficient Range	High >
N		4.50-5.50	
P		0.30-0.80	
K		4.00-5.00	
Ca%		2.30-3.00	
Mg		0.35-0.80	
S		0.25-1.40	
B		25-60	
Cu		7-30	
Fe		50-300	
Mn ppm		50-250	
Zn		20-200	
Mo			
Al			

Collards	Almost Mature leaves		
	Low-Def <	Sufficient Range	High >
N		4.0-5.0	
P		0.30-0.60	
K		3.0-4.0	
Ca%		3.0-4.0	
Mg			
S			
B		50-70	
Cu			
Fe			
Mn ppm			
Zn			
Mo			
Al			

Garlic	Bulbing		
	Low-Def <	Sufficient Range	High >
N		3.4-4.5	
P		0.28-0.5	
K		3.00-4.5	
Ca%		1.00-1.8	
Mg		0.23-0.3	
S			
B			
Cu			
Fe			
Mn ppm			
Zn			
Mo			
Al			

Kale			
	Low-Def <	Sufficient Range	High >
N		4.0-5.0	
P		.30-.60	
K		3.0-4.0	
Ca%		3.0-4.0	
Mg			
S			
B		50-80	
Cu			
Fe			
Mn ppm			
Zn			
Mo			
Al			

Lettuce Boston type			
	Low-Def <	Sufficient Range	High >
N		2.0-3.0	
P		.40-.80	
K		6-11	
Ca%		1-3	
Mg		.27-.90	
S			
B		25-80	
Cu		7-50	
Fe		50-100	
Mn ppm		25-150	
Zn		25-200	
Mo			
Al		750	

Peas

	Low-Def <	Sufficient Range	High >
N		3.1-3.7	
P		.30-.36	
K		2.3-2.9	
Ca%		1.3-1.7	
Mg		.29-.36	
S			
B		25-60	
Cu			
Fe			
Mn ppm			
Zn			
Mo			
Al			

Asparagus

	Low-Def <	Sufficient Range	High >
N		2.4-3.8	
P		.30-.35	
K		1.5-2.4	
Ca%		.4-.5	
Mg		.15-.20	
S			
B		50-100	
Cu			
Fe			
Mn ppm		10-100	
Zn		20-60	
Mo			
Al			

Beets			
	Low-Def <	Sufficient Range	High >
N		3.5-5.0	
P		.20-.30	
K		2.0-4.0	
Ca%		2.5-3.5	
Mg		.30-.80	
S			
B		60-80	
Cu		70-200	
Fe		15-30	
Mn ppm			
Zn			
Mo			
Al			

Brussel Sprouts Midgrowth/Young Mature Leaves			
	Low-Def <	Sufficient Range	High >
N		2.2-4.2	
P		0.26-.45	
K		2.4-3.4	
Ca%		.30-2.2	
Mg		.23-.40	
S			
B		30-40	
Cu			
Fe			
Mn ppm			
Zn			
Mo			
Al			

Chinese Cabbage Mature Entire Leaf			
	Low-Def <	Sufficient Range	High >
N		.40-.60	
P		4.5-7.5	
K		2.0-6.0	
Ca%		.30-.50	
Mg			
S			
B		30-50	
Cu		4-6	
Fe			
Mn ppm		8-20	
Zn		20-40	
Mo			
Al			

Carrots			
	Low-Def <	Sufficient Range	High >
N		2.3-3.5	
P		.20-.36	
K		2.5-4.0	
Ca%		1.4-3.0	
Mg		.40-.50	
S			
B		30-36	
Cu		5-8	
Fe		120-300	
Mn ppm		190-300	
Zn		20-50	
Mo			
Al			

Celery			
	Low-Def <	Sufficient Range	High >
N		2.4-3.4	
P		.30-.50	
K		4.0-7.0	
Ca%		.70-3.0	
Mg		.20-.40	
S			
B		30-40	
Cu		5-8	
Fe		20-40	
Mn ppm		200-300	
Zn		20-50	
Mo			
Al			

Garlic 2			
	Low-Def <	Sufficient Range	High >
N		4.40-5.00	
P		0.30-0.60	
K		3.90-4.80	
Ca%		0.80-1.50	
Mg		0.15-0.25	
S			
B			
Cu			
Fe			
Mn ppm			
Zn			
Mo			
Al			

Horseradish

	Low-Def <	Sufficient Range	High >
N		2.0-3.0	
P		.20-.30	
K		2.4-4.0	
Ca%		2.4-3.0	
Mg		.25-.31	
S			
B		25-60	
Cu		10-20	
Fe		50-150	
Mn ppm		50-250	
Zn		25-200	
Mo			
Al			

Lettuce Minetto & Ithaca types

	Low-Def <	Sufficient Range	High >
N		1.5-2.0	
P		.40-.60	
K		3.5-9.4	
Ca%		1.0-1.9	
Mg		.5-1.0	
S			
B			
Cu			
Fe			
Mn ppm			
Zn			
Mo			
Al			

Onions			
	Low-Def <	Sufficent Range	High >
N		1.5-2.5	
P		.25-.40	
K			
Ca%			
Mg			
S			
B		30-45	
Cu			
Fe			
Mn ppm			
Zn		10-15	
Mo			
Al			

Whole Pea Sweet type			
	Low-Def <	Sufficent Range	High >
N		3.3	
P		0.3	
K		1.6	
Ca%		1.80	
Mg		0.39	
S			
B			
Cu			
Fe			
Mn ppm			
Zn			
Mo			
Al			

Peppers

	Low-Def <	Sufficient Range	High >
N		3.5	
P		.35-.90	
K		3.5	
Ca%		1-2.5	
Mg		.30-.40	
S			
B	23	25-70	
Cu	6	8-40	
Fe	55	60-200	
Mn ppm	55	60-200	
Zn	17	20-160	
Mo			
Al			

Potatoes Irish

	Low-Def <	Sufficient Range	High >
N	2.9	3.0-5.0	
P	0.2	.20-.40	
K	2.7	4.0-8.0	
Ca%	0.9	1.8-4.0	
Mg	0.26	.45-.80	
S			
B	20	25-45	
Cu	4	6-25	
Fe	40	65-200	
Mn ppm	37	37-65	
Zn	18	20-40	
Mo			
Al			

Sweet Potatoes

	Low-Def <	Sufficient Range	High >
N		3.2-4.2	
P		.20-.30	
K		2.9-4.3	
Ca%		.73-.95	
Mg		.40-.80	
S			
B			
Cu			
Fe			
Mn ppm		45-100	
Zn			
Mo			
Al			

Radish

	Low-Def <	Sufficient Range	High >
N		3.0-6.0	
P		.25-.7	
K		4.0-7.0	
Ca%		1.0-3.0	
Mg		.25-1.0	
S			
B		25-75	
Cu		6-60	
Fe		50-200	
Mn ppm		50-300	
Zn		25-200	
Mo			
Al			

Snapbeans

	Low-Def <	Sufficent Range	High >
N	4.25	5.0-6.0	
P	0.25	.30-.40	
K	2	2.25-4.0	
Ca%	1	1.5-2.5	
Mg	0.25	.3-1.0	
S			
B	15	20-75	
Cu	5	8-200	
Fe	40	50-300	
Mn ppm	5	50-300	
Zn	18	20-100	
Mo			
Al			

Green Beans

	Low-Def <	Sufficent Range	High >
N		3.0-6.0	
P		.25-.50	
K		1.8-2.5	
Ca%		.8-3.0	
Mg		.25-.70	
S			
B		40-60	
Cu		15-30	
Fe		300-450	
Mn ppm		30-300	
Zn		30-60	
Mo			
Al			

Spinach			
	Low-Def <	Sufficent Range	High >
N		4.2-6.0	
P		.30-.55	
K		3.0-4.0	
Ca%		.65-1.3	
Mg		.85-1.2	
S			
B	20	40-60	
Cu	4	6-8	
Fe	200	220-400	
Mn ppm	25	35-65	
Zn	35	50-75	
Mo			
Al			

Tomatoes			
	Low-Def <	Sufficent Range	High >
N	3	3.0-6.0	
P	0.5	.75-1.25	
K	3	3.0-6.0	
Ca%	1.2	1.5-2.6	
Mg	0.35	.40-1.0	
S			
B	25	35-100	
Cu	4	5-12	
Fe	45	50-300	
Mn ppm	35	40-350	
Zn	20	30-100	
Mo			
Al		<500	

Tomatoes Greenhouse			
	Low-Def	Sufficient Range	High
	<		>
N		3.75-5.0	
P	0.35	.50-1.0	
K	2.9	3.5-4.5	
Ca%	1	1.0-3.0	
Mg	0.4	.5-1.0	
S	0.4	.40-.70	
B	20-30	35-60	
Cu	8	8-20	
Fe	30-45	50-300	
Mn ppm	25-50	50-400	
Zn	15-20	20-100	
Mo			
Al		<200	

Turnip Greens			
	Low-Def	Sufficient Range	High
	<		>
N		3.5-5.0	
P		.35-.60	
K		3.0-6.0	
Ca%			
Mg			
S			
B		30-60	
Cu			
Fe			
Mn ppm		60-80	
Zn			
Mo			
Al			

Vine Crops-General

	Low-Def <	Sufficient Range	High >
N		4.0-6.5	
P		.30-1.0	
K		2.0-3.5	
Ca%		2.0-7.0	
Mg		.30-.90	
S		.20-.70	
B		20-70	
Cu		8-20	
Fe		60-400	
Mn ppm		30-160	
Zn		20-80	
Mo			
Al			

Vine Crops-Cantaloupe

	Low-Def <	Sufficient Range	High >
N		2.5-3.0	
P		.25-.50	
K		2.0-3.0	
Ca%		4.0-7.0	
Mg		.9-1.5	
S			
B		30-80	
Cu			
Fe			
Mn ppm			
Zn		30-50	
Mo			
Al			

Vine Crops-Watermelon

	Low-Def <	Sufficient Range	High >
N		2.0-3.0	
P		.20-.30	
K		2.5-3.5	
Ca%		2.5-3.5	
Mg		.6-.8	
S			
B		20-40	
Cu		4-8	
Fe			
Mn ppm			
Zn		20-50	
Mo			
Al			

Vine Crops-Cucumber

	Low-Def <	Sufficient Range	High >
N		4.5-6.5	
P		.30-1.0	
K		3.0-6.0	
Ca%		1.3-3.0	
Mg		.30-1.0	
S		1.0-2.0	
B		25-80	
Cu		7-50	
Fe		50-300	
Mn ppm		50-300	
Zn		25-250	
Mo			
Al		<500	

Vine Crops-Water Cress

	Low-Def <	Sufficient Range	High >
N		4.2-6.0	
P		.8-1.8	
K		4-8	
Ca%		1-2	
Mg		.25-.45	
S			
B		.25	
Cu		10	
Fe		50	
Mn ppm		50-250	
Zn		3	
Mo			
Al			