



# Plant Tissue Analysis

"Improving Growth...  
With Science"

**Waters Agricultural Laboratories, Inc**

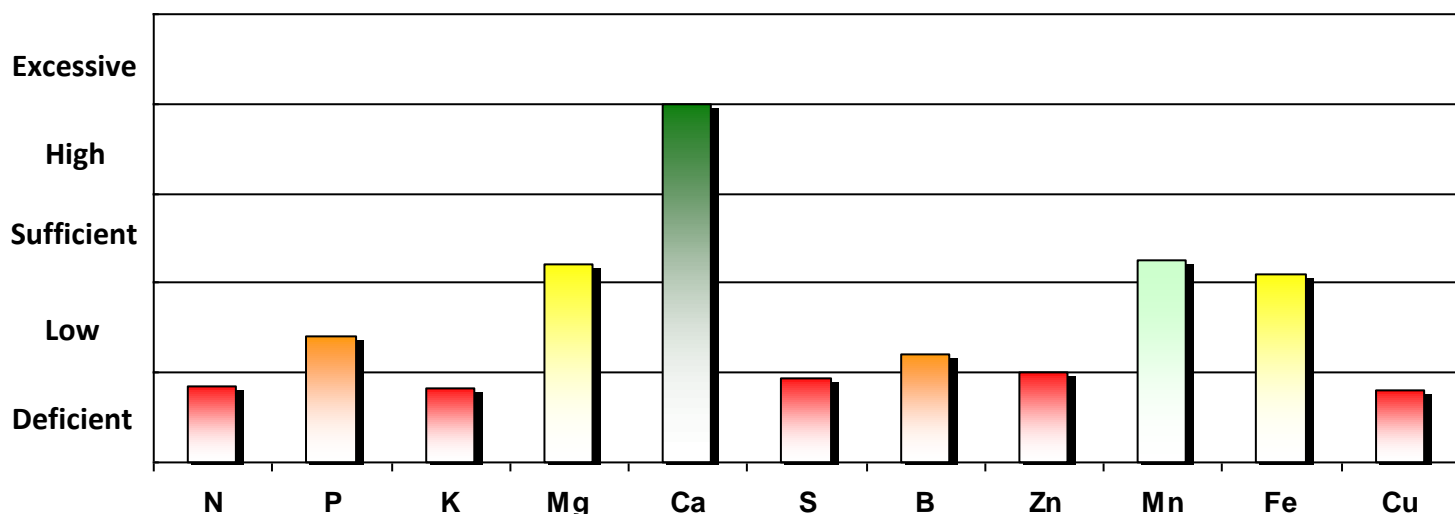
257 Newton Hwy | Camilla, GA 31730- | Phone (229) 336-7216

<b>Customer: 20140</b>	<b>Sample ID: 20V40T</b>
PHILIA FARM  134 MILLER RD JOHNSTOWN, NY 12095- UNITED STATES	Grower: PHILIA FARM FarmID: PHILIA FARM FieldID: Crop: CABBAGE Stage: HEADING Received: 10/13/2020 Processed: 10/14/2020 Lab Number: 211547PT Layer ID: Rep. Name:

**Plant Tissue Laboratory Data: 211547PT**

Element	N %	P %	K %	Mg %	Ca %	S %	B (ppm)	Zn (ppm)	Mn (ppm)	Fe (ppm)	Cu (ppm)
Result	2.53	0.22	2.07	0.38	3.62	0.28	26	20	75	46	4

## Plant Analysis Ratings



**Plant Ratios - Actual / Sufficient**

Ratio	N / S	N / K	P / S	P / Zn	K / Mg	K / Mn	Ca / B	Fe / Mn	Ca / K	Ca / Mg
Actual	9.0	1.2	0.8	110.0	5.5	276.0	1392.3	0.6	1.8	9.5
Sufficient	7.4	1.2	0.8	37.8	6.8	293.5	365.4	1.0	0.7	4.8

**Recommendation Comments**

The following Plant nutrient levels are low, deficient or borderline: Nitrogen-Phosphorus-Potassium-Sulfur-Boron-Zinc-Copper-

- ~ Apply 20 pounds of nitrogen per acre.
  - ~ Apply 100 lbs. of 10-34-0 per acre or equivalent amount of another phosphate material.
  - ~ Apply 30 lbs. of Potassium per acre.
  - ~ Apply 3 lbs. of foliar sulfur per acre. Application should be applied as a foliar spray in a minimum of 25 gallons per acre of water or applied through irrigation.
  - ~ Apply 2 lbs. of solubor per acre, application should be applied as a foliar spray in a minimum of 25 gallons per acre of water or applied through irrigation.
  - ~ Apply 1/2 gallon of zinc chelate (or comparable zinc material) per acre.
  - ~ Apply 1 quart of copper chelate (or comparable copper material) per acre, application should be applied as a foliar spray in a minimum of 25 gallons per acre of water or applied through irrigation.
  - ~Above applications should be made only if crop is NOT within 30 days of maturity. If more than one foliar application is made, suggest that 1/2 be applied now and 1/2 5-7 days later. Use only material approved for foliar application.
- Note: A soil sample was not submitted with plant tissue sample, therefore a thorough analysis is not possible. The results and recommendations are based only on the plant analysis.



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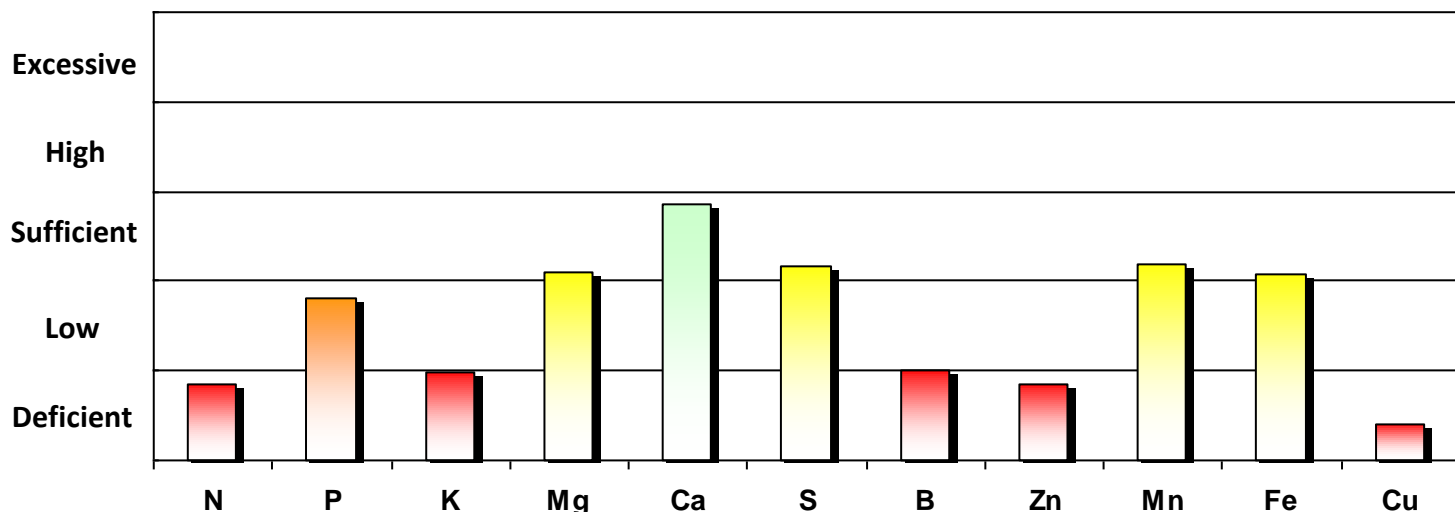
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<b>Customer: 20140</b>	<b>Sample ID: 40V80T</b>
PHILIA FARM  134 MILLER RD JOHNSTOWN, NY 12095- UNITED STATES	<b>Grower:</b> PHILIA FARM <b>FarmID:</b> PHILIA FARM <b>FieldID:</b> <b>Crop:</b> CABBAGE <b>Stage:</b> HEADING <b>Received:</b> 10/13/2020 <b>Processed:</b> 10/14/2020 <b>Lab Number:</b> 211548PT <b>Layer ID:</b> <b>Rep. Name:</b>

**Plant Tissue Laboratory Data: 211548PT**

Element	N %	P %	K %	Mg %	Ca %	S %	B (ppm)	Zn (ppm)	Mn (ppm)	Fe (ppm)	Cu (ppm)
Result	2.50	0.24	2.43	0.34	2.82	0.42	25	17	61	43	2

## Plant Analysis Ratings



**Plant Ratios - Actual / Sufficient**

Ratio	N / S	N / K	P / S	P / Zn	K / Mg	K / Mn	Ca / B	Fe / Mn	Ca / K	Ca / Mg
Actual	6.0	1.0	0.6	141.2	7.2	398.4	1128.0	0.7	1.2	8.3
Sufficient	7.4	1.2	0.8	37.8	6.8	293.5	365.4	1.0	0.7	4.8

**Recommendation Comments**

The following Plant nutrient levels are low, deficient or borderline: Nitrogen-Phosphorus-Potassium-Boron-Zinc-Copper-

- ~ Apply 20 pounds of nitrogen per acre.
  - ~ Apply 100 lbs. of 10-34-0 per acre or equivalent amount of another phosphate material.
  - ~ Apply 30 lbs. of Potassium per acre.
  - ~ Apply 2 lbs. of solubor per acre, application should be applied as a foliar spray in a minimum of 25 gallons per acre of water or applied through irrigation.
  - ~ Apply 1/2 gallon of zinc chelate (or comparable zinc material) per acre.
  - ~ Apply 1 quart of copper chelate (or comparable copper material) per acre, application should be applied as a foliar spray in a minimum of 25 gallons per acre of water or applied through irrigation.
  - ~Above applications should be made only if crop is NOT within 30 days of maturity. If more than one foliar application is made, suggest that 1/2 be applied now and 1/2 5-7 days later. Use only material approved for foliar application.
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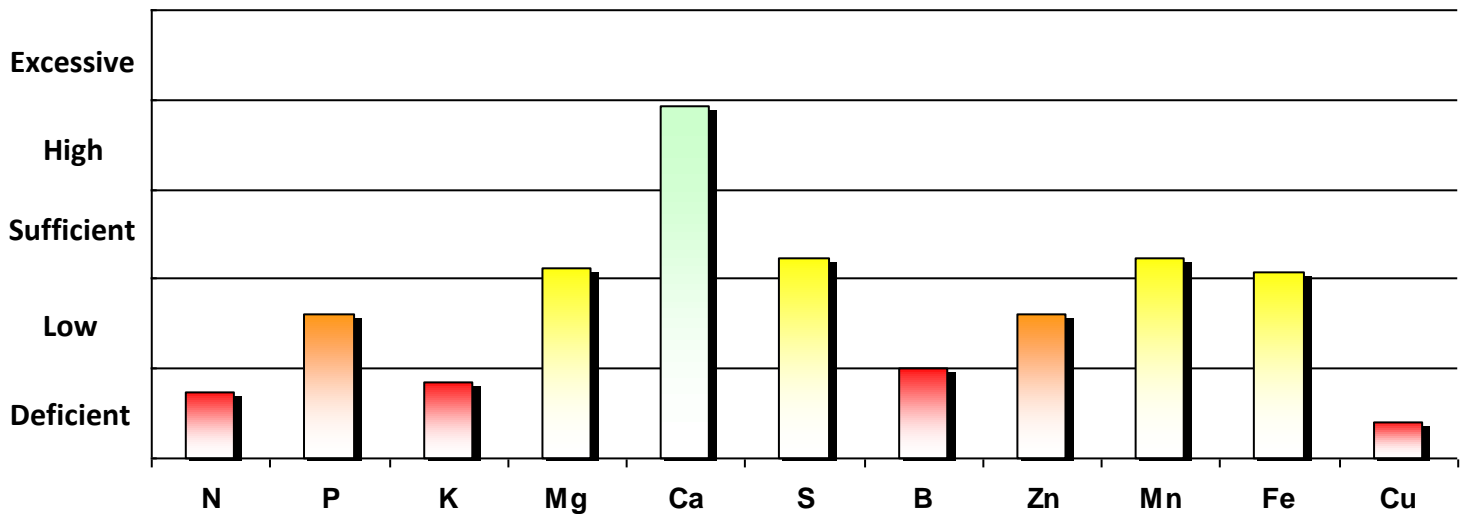
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<b>Customer: 20140</b>	<b>Sample ID: 20V80T</b>
PHILIA FARM  134 MILLER RD JOHNSTOWN, NY 12095- UNITED STATES	<b>Grower:</b> PHILIA FARM <b>FarmID:</b> PHILIA FARM <b>FieldID:</b> <b>Crop:</b> CABBAGE <b>Stage:</b> HEADING <b>Received:</b> 10/13/2020 <b>Processed:</b> 10/14/2020 <b>Lab Number:</b> 211549PT <b>Layer ID:</b> <b>Rep. Name:</b>

**Plant Tissue Laboratory Data: 211549PT**

Element	N %	P %	K %	Mg %	Ca %	S %	B (ppm)	Zn (ppm)	Mn (ppm)	Fe (ppm)	Cu (ppm)
Result	2.17	0.23	2.10	0.35	3.56	0.44	25	23	70	43	2

## Plant Analysis Ratings



**Plant Ratios - Actual / Sufficient**

Ratio	N / S	N / K	P / S	P / Zn	K / Mg	K / Mn	Ca / B	Fe / Mn	Ca / K	Ca / Mg
Actual	4.9	1.0	0.5	100.0	6.0	300.0	1424.0	0.6	1.7	10.2
Sufficient	7.4	1.2	0.8	37.8	6.8	293.5	365.4	1.0	0.7	4.8

**Recommendation Comments**

The following Plant nutrient levels are low, deficient or borderline: Nitrogen-Phosphorus-Potassium-Boron-Zinc-Copper-

- ~ Apply 20 pounds of nitrogen per acre.
  - ~ Apply 100 lbs. of 10-34-0 per acre or equivalent amount of another phosphate material.
  - ~ Apply 30 lbs. of Potassium per acre.
  - ~ Apply 2 lbs. of solubor per acre, application should be applied as a foliar spray in a minimum of 25 gallons per acre of water or applied through irrigation.
  - ~ Apply 1/2 gallon of zinc chelate (or comparable zinc material) per acre.
  - ~ Apply 1 quart of copper chelate (or comparable copper material) per acre, application should be applied as a foliar spray in a minimum of 25 gallons per acre of water or applied through irrigation.
  - ~Above applications should be made only if crop is NOT within 30 days of maturity. If more than one foliar application is made, suggest that 1/2 be applied now and 1/2 5-7 days later. Use only material approved for foliar application.
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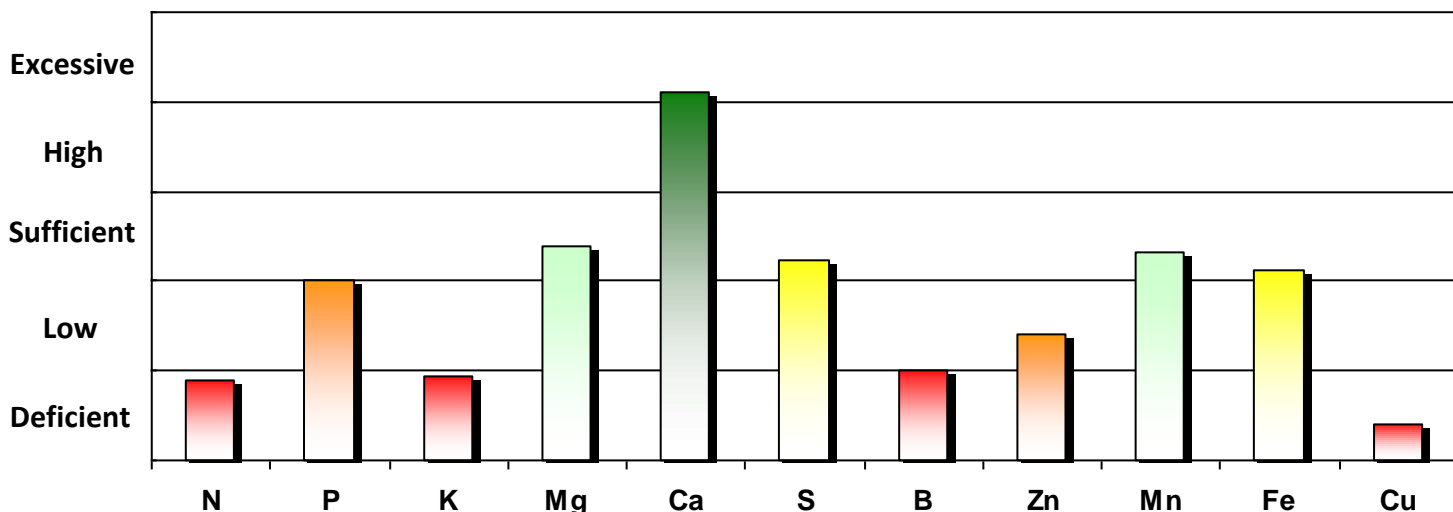
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<b>Customer: 20140</b>	<b>Sample ID: 20V20T</b>
PHILIA FARM  134 MILLER RD JOHNSTOWN, NY 12095- UNITED STATES	<b>Grower:</b> PHILIA FARM <b>FarmID:</b> PHILIA FARM <b>FieldID:</b> <b>Crop:</b> CABBAGE <b>Stage:</b> HEADING <b>Received:</b> 10/13/2020 <b>Processed:</b> 10/14/2020 <b>Lab Number:</b> 211550PT <b>Layer ID:</b> <b>Rep. Name:</b>

**Plant Tissue Laboratory Data: 211550PT**

Element	N %	P %	K %	Mg %	Ca %	S %	B (ppm)	Zn (ppm)	Mn (ppm)	Fe (ppm)	Cu (ppm)
Result	2.66	0.25	2.35	0.46	4.01	0.44	25	22	86	52	2

## Plant Analysis Ratings



**Plant Ratios - Actual / Sufficient**

Ratio	N / S	N / K	P / S	P / Zn	K / Mg	K / Mn	Ca / B	Fe / Mn	Ca / K	Ca / Mg
Actual	6.1	1.1	0.6	113.6	5.1	273.3	1604.0	0.6	1.7	8.7
Sufficient	7.4	1.2	0.8	37.8	6.8	293.5	365.4	1.0	0.7	4.8

**Recommendation Comments**

The following Plant nutrient levels are low, deficient or borderline: Nitrogen-Phosphorus-Potassium-Boron-Zinc-Copper-

- ~ Apply 20 pounds of nitrogen per acre.
- ~ Apply 100 lbs. of 10-34-0 per acre or equivalent amount of another phosphate material.
- ~ Apply 30 lbs. of Potassium per acre.
- ~ Apply 2 lbs. of solubor per acre, application should be applied as a foliar spray in a minimum of 25 gallons per acre of water or applied through irrigation.
- ~ Apply 1/2 gallon of zinc chelate (or comparable zinc material) per acre.
- ~ Apply 1 quart of copper chelate (or comparable copper material) per acre, application should be applied as a foliar spray in a minimum of 25 gallons per acre of water or applied through irrigation.
- ~Above applications should be made only if crop is NOT within 30 days of maturity. If more than one foliar application is made, suggest that 1/2 be applied now and 1/2 5-7 days later. Use only material approved for foliar application.

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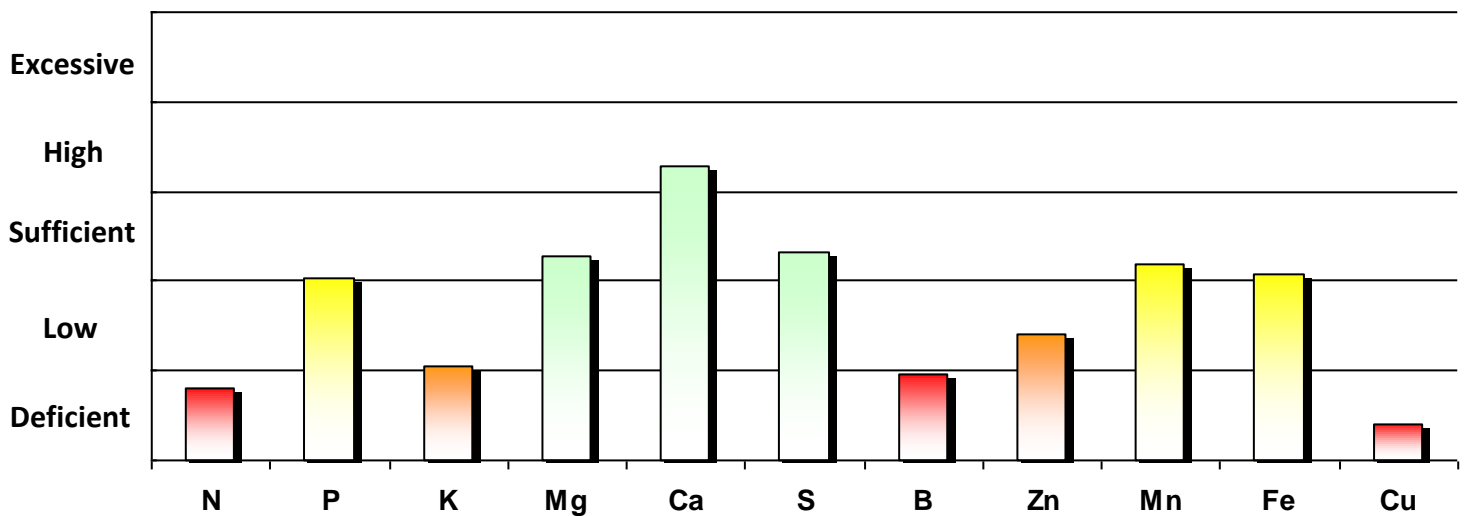
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<b>Customer: 20140</b>	<b>Sample ID: 20V60T</b>
PHILIA FARM  134 MILLER RD JOHNSTOWN, NY 12095- UNITED STATES	<b>Grower:</b> PHILIA FARM <b>FarmID:</b> PHILIA FARM <b>FieldID:</b> <b>Crop:</b> CABBAGE <b>Stage:</b> HEADING <b>Received:</b> 10/13/2020 <b>Processed:</b> 10/14/2020 <b>Lab Number:</b> 211551PT <b>Layer ID:</b> <b>Rep. Name:</b>

**Plant Tissue Laboratory Data: 211551PT**

Element	N %	P %	K %	Mg %	Ca %	S %	B (ppm)	Zn (ppm)	Mn (ppm)	Fe (ppm)	Cu (ppm)
Result	2.36	0.26	2.51	0.41	3.17	0.48	24	22	60	43	2

## Plant Analysis Ratings



**Plant Ratios - Actual / Sufficient**

Ratio	N / S	N / K	P / S	P / Zn	K / Mg	K / Mn	Ca / B	Fe / Mn	Ca / K	Ca / Mg
Actual	4.9	0.9	0.5	118.2	6.1	418.3	1320.8	0.7	1.3	7.7
Sufficient	7.4	1.2	0.8	37.8	6.8	293.5	365.4	1.0	0.7	4.8

**Recommendation Comments**

The following Plant nutrient levels are low, deficient or borderline: Nitrogen-Potassium-Boron-Zinc-Copper-

- ~ Apply 20 pounds of nitrogen per acre.
- ~ Apply 30 lbs. of Potassium per acre.
- ~ Apply 2 lbs. of solubor per acre, application should be applied as a foliar spray in a minimum of 25 gallons per acre of water or applied through irrigation.
- ~ Apply 1/2 gallon of zinc chelate (or comparable zinc material) per acre.
- ~ Apply 1 quart of copper chelate (or comparable copper material) per acre, application should be applied as a foliar spray in a minimum of 25 gallons per acre of water or applied through irrigation.
- ~Above applications should be made only if crop is NOT within 30 days of maturity. If more than one foliar application is made, suggest that 1/2 be applied now and 1/2 5-7 days later. Use only material approved for foliar application.

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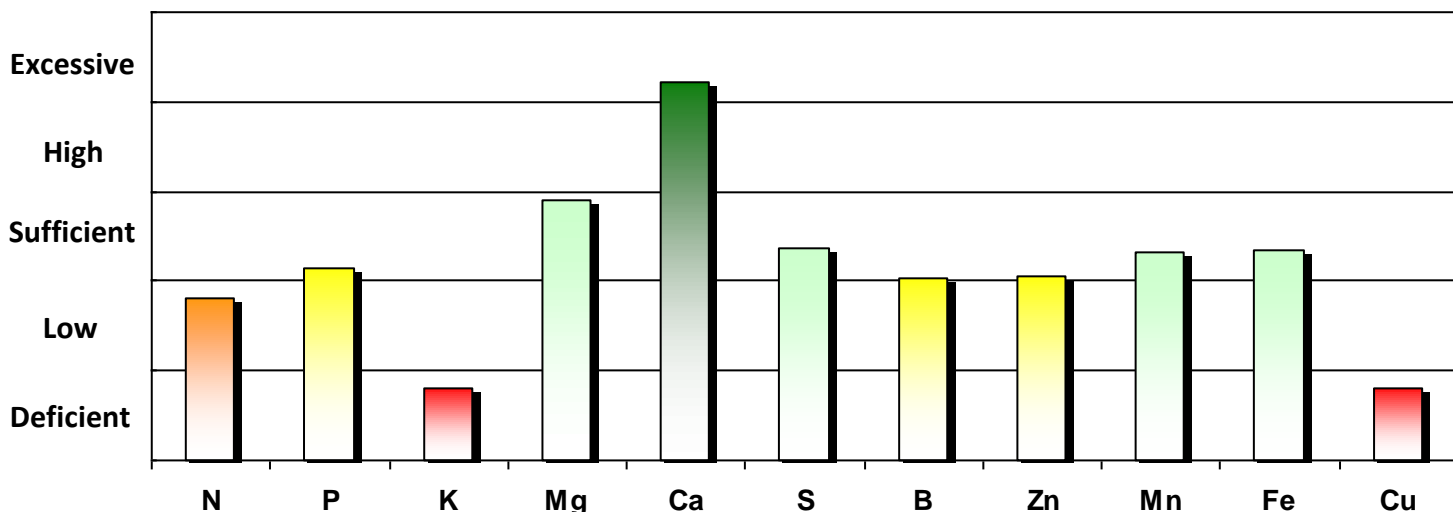
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<b>Customer: 20140</b>	<b>Sample ID: 0</b>
PHILIA FARM  134 MILLER RD JOHNSTOWN, NY 12095- UNITED STATES	Grower: PHILIA FARM FarmID: PHILIA FARM FieldID: Crop: CABBAGE Stage: HEADING
	Received: 10/13/2020 Processed: 10/14/2020 Lab Number: 211552PT Layer ID: Rep. Name:

**Plant Tissue Laboratory Data: 211552PT**

Element	N %	P %	K %	Mg %	Ca %	S %	B (ppm)	Zn (ppm)	Mn (ppm)	Fe (ppm)	Cu (ppm)
Result	3.23	0.30	2.01	0.66	4.38	0.50	32	35	84	87	4

## Plant Analysis Ratings



**Plant Ratios - Actual / Sufficient**

Ratio	N / S	N / K	P / S	P / Zn	K / Mg	K / Mn	Ca / B	Fe / Mn	Ca / K	Ca / Mg
Actual	6.5	1.6	0.6	85.7	3.1	239.3	1368.8	1.0	2.2	6.6
Sufficient	7.4	1.2	0.8	37.8	6.8	293.5	365.4	1.0	0.7	4.8

**Recommendation Comments**

The following Plant nutrient levels are low, deficient or borderline: Nitrogen-Potassium-Copper-

- ~ Apply 20 pounds of nitrogen per acre.
  - ~ Apply 30 lbs. of Potassium per acre.
  - ~ Apply 1 quart of copper chelate (or comparable copper material) per acre, application should be applied as a foliar spray in a minimum of 25 gallons per acre of water or applied through irrigation.
  - ~Above applications should be made only if crop is NOT within 30 days of maturity. If more than one foliar application is made, suggest that 1/2 be applied now and 1/2 5-7 days later. Use only material approved for foliar application.
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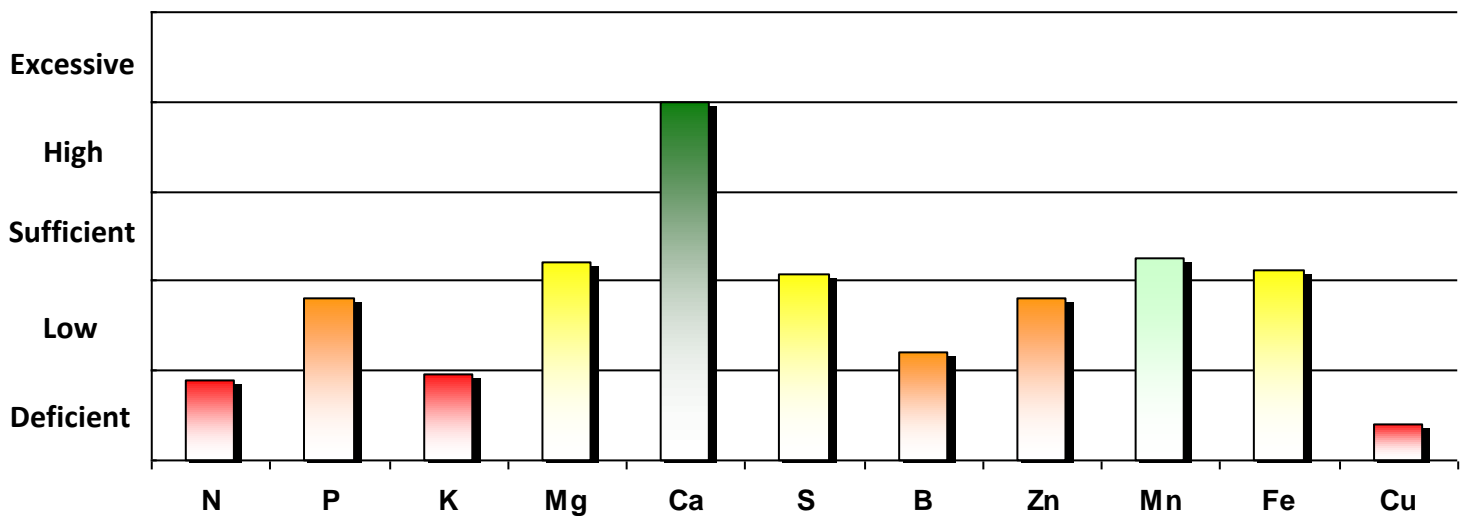
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<b>Customer: 20140</b>	<b>Sample ID: 40V20T</b>
PHILIA FARM  134 MILLER RD JOHNSTOWN, NY 12095- UNITED STATES	Grower: PHILIA FARM FarmID: PHILIA FARM FieldID: Crop: CABBAGE Stage: HEADING Received: 10/13/2020 Processed: 10/14/2020 Lab Number: 211553PT Layer ID: Rep. Name:

**Plant Tissue Laboratory Data: 211553PT**

Element	N %	P %	K %	Mg %	Ca %	S %	B (ppm)	Zn (ppm)	Mn (ppm)	Fe (ppm)	Cu (ppm)
Result	2.61	0.24	2.40	0.38	3.61	0.38	26	24	73	50	2

## Plant Analysis Ratings



### Plant Ratios - Actual / Sufficient

Ratio	N / S	N / K	P / S	P / Zn	K / Mg	K / Mn	Ca / B	Fe / Mn	Ca / K	Ca / Mg
Actual	6.9	1.1	0.6	100.0	6.3	328.8	1388.5	0.7	1.5	9.5
Sufficient	7.4	1.2	0.8	37.8	6.8	293.5	365.4	1.0	0.7	4.8

### Recommendation Comments

The following Plant nutrient levels are low, deficient or borderline: Nitrogen-Phosphorus-Potassium-Boron-Zinc-Copper-

- ~ Apply 20 pounds of nitrogen per acre.
- ~ Apply 100 lbs. of 10-34-0 per acre or equivalent amount of another phosphate material.
- ~ Apply 30 lbs. of Potassium per acre.
- ~ Apply 2 lbs. of solubor per acre, application should be applied as a foliar spray in a minimum of 25 gallons per acre of water or applied through irrigation.
- ~ Apply 1/2 gallon of zinc chelate (or comparable zinc material) per acre.
- ~ Apply 1 quart of copper chelate (or comparable copper material) per acre, application should be applied as a foliar spray in a minimum of 25 gallons per acre of water or applied through irrigation.
- ~Above applications should be made only if crop is NOT within 30 days of maturity. If more than one foliar application is made, suggest that 1/2 be applied now and 1/2 5-7 days later. Use only material approved for foliar application.

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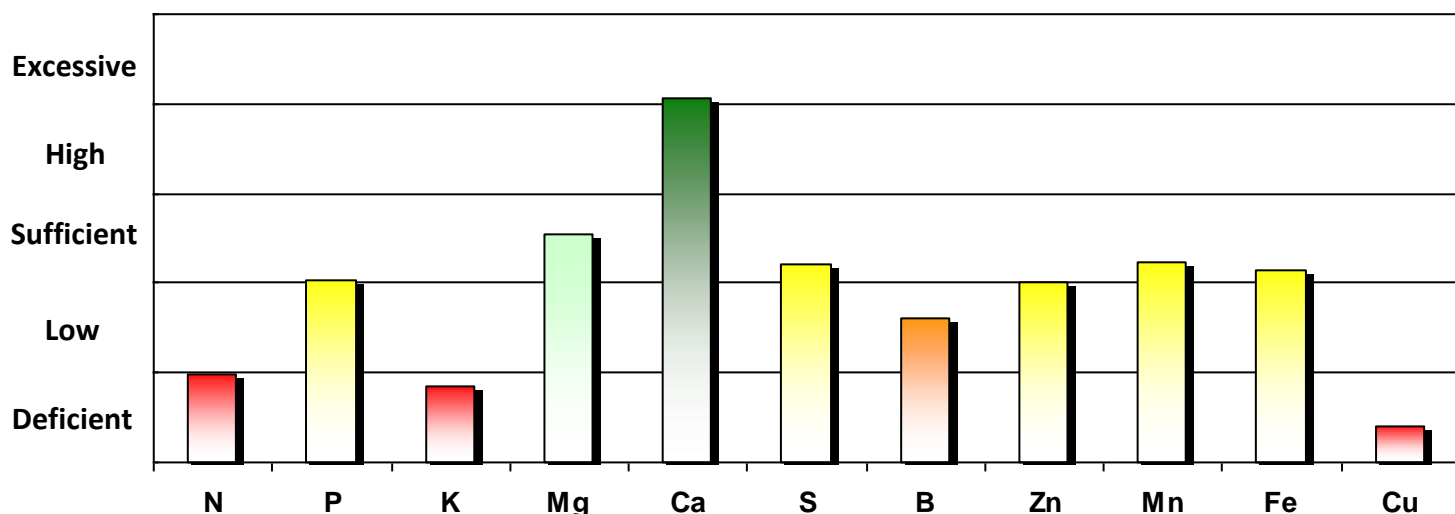
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<b>Customer: 20140</b>		<b>Sample ID: 40V60T</b>	
PHILIA FARM  134 MILLER RD JOHNSTOWN, NY 12095- UNITED STATES		Grower: PHILIA FARM FarmID: PHILIA FARM FieldID: Crop: CABBAGE Stage: HEADING	
		Received: 10/13/2020 Processed: 10/14/2020 Lab Number: 211554PT Layer ID: Rep. Name:	

**Plant Tissue Laboratory Data: 211554PT**

Element	N %	P %	K %	Mg %	Ca %	S %	B (ppm)	Zn (ppm)	Mn (ppm)	Fe (ppm)	Cu (ppm)
Result	2.88	0.26	2.13	0.52	3.86	0.43	28	27	71	54	2

## Plant Analysis Ratings



**Plant Ratios - Actual / Sufficient**

Ratio	N / S	N / K	P / S	P / Zn	K / Mg	K / Mn	Ca / B	Fe / Mn	Ca / K	Ca / Mg
Actual	6.7	1.4	0.6	96.3	4.1	300.0	1378.6	0.8	1.8	7.4
Sufficient	7.4	1.2	0.8	37.8	6.8	293.5	365.4	1.0	0.7	4.8

**Recommendation Comments**

The following Plant nutrient levels are low, deficient or borderline: Nitrogen-Potassium-Boron-Copper-

- ~ Apply 20 pounds of nitrogen per acre.
  - ~ Apply 30 lbs. of Potassium per acre.
  - ~ Apply 2 lbs. of solubor per acre, application should be applied as a foliar spray in a minimum of 25 gallons per acre of water or applied through irrigation.
  - ~ Apply 1 quart of copper chelate (or comparable copper material) per acre, application should be applied as a foliar spray in a minimum of 25 gallons per acre of water or applied through irrigation.
  - ~Above applications should be made only if crop is NOT within 30 days of maturity. If more than one foliar application is made, suggest that 1/2 be applied now and 1/2 5-7 days later. Use only material approved for foliar application.
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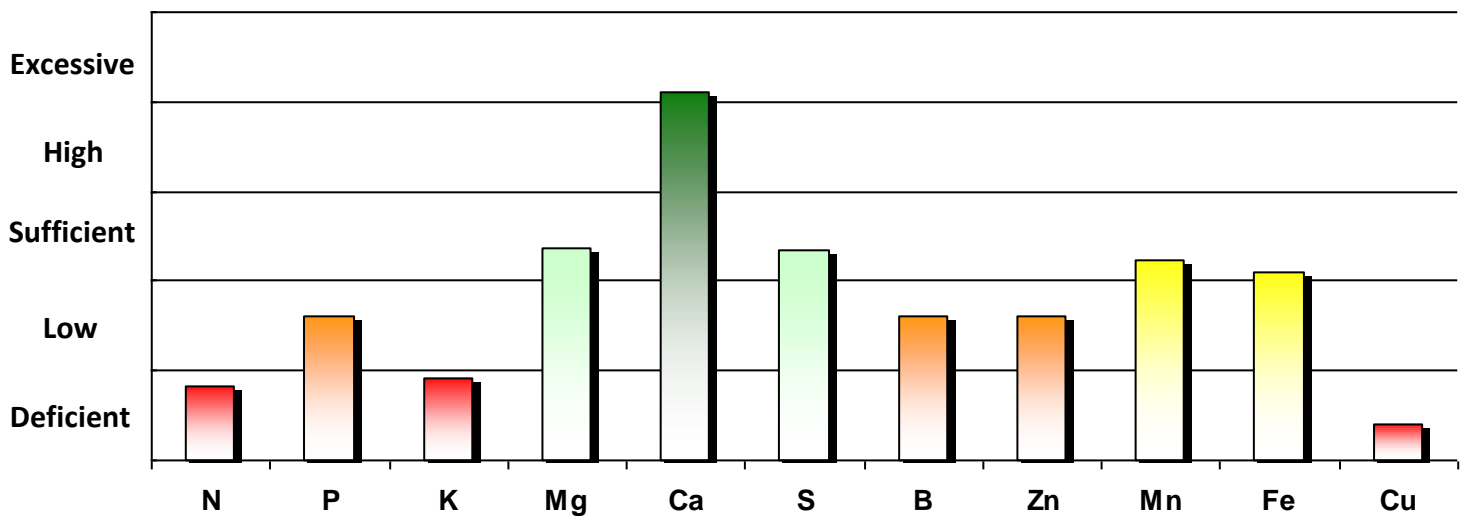
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PHILIA FARM  134 MILLER RD JOHNSTOWN, NY 12095- UNITED STATES			Grower: PHILIA FARM FarmID: PHILIA FARM FieldID:			Received: 10/13/2020 Processed: 10/14/2020 Lab Number: 211555PT			Layer ID: Rep. Name:		
Crop: CABBAGE Stage: HEADING											

**Plant Tissue Laboratory Data: 211555PT**

Element	N %	P %	K %	Mg %	Ca %	S %	B (ppm)	Zn (ppm)	Mn (ppm)	Fe (ppm)	Cu (ppm)
Result	2.44	0.23	2.31	0.45	4.02	0.49	28	23	68	46	2

## Plant Analysis Ratings



### Plant Ratios - Actual / Sufficient

Ratio	N / S	N / K	P / S	P / Zn	K / Mg	K / Mn	Ca / B	Fe / Mn	Ca / K	Ca / Mg
Actual	5.0	1.1	0.5	100.0	5.1	339.7	1435.7	0.7	1.7	8.9
Sufficient	7.4	1.2	0.8	37.8	6.8	293.5	365.4	1.0	0.7	4.8

### Recommendation Comments

The following Plant nutrient levels are low, deficient or borderline: Nitrogen-Phosphorus-Potassium-Boron-Zinc-Copper-

- ~ Apply 20 pounds of nitrogen per acre.
- ~ Apply 100 lbs. of 10-34-0 per acre or equivalent amount of another phosphate material.
- ~ Apply 30 lbs. of Potassium per acre.
- ~ Apply 2 lbs. of solubor per acre, application should be applied as a foliar spray in a minimum of 25 gallons per acre of water or applied through irrigation.
- ~ Apply 1/2 gallon of zinc chelate (or comparable zinc material) per acre.
- ~ Apply 1 quart of copper chelate (or comparable copper material) per acre, application should be applied as a foliar spray in a minimum of 25 gallons per acre of water or applied through irrigation.
- ~Above applications should be made only if crop is NOT within 30 days of maturity. If more than one foliar application is made, suggest that 1/2 be applied now and 1/2 5-7 days later. Use only material approved for foliar application.

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