1995 TRIALS / NEW REDS (Summer raspbérries)

DATE	BASE SAT.	pН	K/ppm	K%	P/ppm	Ca/ppm	CaX	Mg/ppm	Mg%	OMX	CEC
1992	53.6%	5.9	40	1.2	2	684	39.7	132	12.8		8.6
1993	70.7%	6.4	104	2.6	141	1196	58.4	120	9.8	5.7	10.2
1995	100%	7.4	220	4.0	162	2316	82	238	14.0	5.2	14.1

The Ca:Mg:K saturation % ratio is based on Ca>65-80%, Mg>5-15%, K>2-5% as being the desirable range.

DATE	Ca% :	Mg% · · · ·	K% ratio
1992	39.7	12.8	1.2
	low	good	low
1993	58.4	g.8	2.6 ,
	low	good	good
1995	82.0	14.0	4.0
	good .	good	good

SOIL TEST REPORT

Client copy

2715

Client:

THE RASPBERRY FARM
C/O MARK TOWLE
9 ROBERTS ROAD
SOUTH BERWICK, ME 03908

1995

Received January 19, 1996 Reported January 23, 1996

Form: 21

Report program: Form21 Report route: Direct

Copies to:

Rockingham County Extension Nada Haddad 113 North Road

Brentwood, NH 03833 603-679-5616

Test Results for New Reds (Lab number 2715)

.

Optimum

High \

Very High

рH	7.4	
SMP Buffer pH	7.2	
Texture		Loam
Magnesium (Mehlich 3)	238	ppm
Calcium (Mehlich 3)	2316	ppm
Potassium (Mehlich 3)	220	ppm
Phosphorus (Mehlich 3)	162	ppm
Org. Matter (LOI-360)	5.2	ł
Cation Exchange	14.1	*
Base saturation	100.0	*
Calcium saturation	82.0	¥
Magnesium saturation	14.0	¥
Potassium saturation	4.0	*

VH VH VH VH

Lime and Fertilizer Recommendations

Raspberries -----

The pH of 7.4 is in the desired range. Do not add lime or sulfur containing materials.

Pre-plant fertility levels are adequate for this crop and no additional pre-plant fertilizer application is recommended.

(Dairy and well-rotted horse and poultry manures may be used pre-plant to supply essential plant nutrients as well as improve soil tilth. Adjust fertilizer rates according to the amount and type of manure used.)

After new growth starts, apply 0.5 to 1 ounce of ammonium nitrate per plant. In succeeding years apply 45 lbs of N per acre (3 lbs of ammonium nitrate or 6 lbs of 15-15-15 per 100 feet of row) before growth starts in the spring. Use the complete fertilizer (i.e. 15-15-15) when phosphorus level is less than 50 ppm and the potassium level is less than 200 ppm. Band applications down the plant rows.

For questions on the above contact: Nada Haddad, Rockingham County Extension 113 North Road, Brentwood, NH 03833 603-679-5616

1995 Trials

SOIL TEST REPORT

Client: The Raspberry Farm

PO Box 700

Lab Number: 1019

Form: Fruit Crops

Received: September 15, 1993

Reported: September 17, 1993

Hampton Falls, NH 03844

Sample ID: Black Raspberries

Copies to:

Routing: Specialist

Recommendations contact:

Bill Lord

Nesmith Hall

University of New Hampshire

Durham, NX 03824 603-862-3200

Mail to:

The Raspberry Farm

PO Box 700

Hampton Falls, NH 03844

Now Reds

Magnesium saturation

Potassium saturation

Laboratory Test Results

Optimum*

High

Very High

6.4 SMP Buffer pH 6.8 Texture Loam Magnesium (Mehlich 3 120 ppm Calcium (Mehlich 3) 1196 ppm Potassium (Mehlich 3 104 ppn Phosphorus (Mehlich 141 ppm Org. Matter (LOI-360 5.7 X Cation Exchange 10.2 meg/100g Base saturation 70.7 % Calcium saturation 58.4 X

9.8 %

240 lbs Mg/acre 2392 lbs Ca/acre 250 lbs K20/acre

648 lbs P205/acre

* The Optimum range for pH and nutrients may differ from crop to crop. The ranges shown are generally applicable to agronomic crops and home garden crops. These ranges are intended for general reference and may not be applicable to specific crops (especially floriculture and horticulture crops.) Soil micro-nutrient values (if reported) must be interpreted carefully for the crop of interest. Plant tissue tests are recommended to confirm any suspected deficiencies or excesses.

0 2.5 lh arimonium vitrate (33,-0-0) per 100 ft of now; 1.5 lb April 15, 1.0 ll May 15-20

· 25 d menate of potash (0-0-60) per 100 ft of now applied in early spring.

SOIL TEST REPORT

Client: Mark Towle

30 Clarks Lane

South Berwick, ME 03908

Lab Number: 3903

Form: Fruit Crops

Sample ID: Jewel/Allen 2

Routing: Computer

Received: June 5, 1992 Reported: June 5, 1992

Recommendations by Computer

Copies to:

Recommendations contact:

Bill Lord Nesmith Hall

University of New Hampshire

Durham, NH 03824 603-862-3200

Mail to:

Mark Towle 30 Clarks Lane

South Berwick, ME 03908

New Reds

Laboratory Test Results

Very Low

Low

Medium

High

Very High

5.9 SMP Buffer pH 6.6

Texture

Magnesium (Morgans) 132 ppm Calcium (Morgans) 684 ррт

Potassium)(Morgans) Phosphorus (Morgans)

2 ppm Cation Exchange 8.6 meq/100g 53.6 %

Base saturation Calcium saturation

Magnesium saturation 12.8 % Potassium saturation 1.2 % 264 lbs Mg/acre

96 lbs K20/acre

1368 lbs Ca/acre 10 lbs P205/acr

Š

Lime and Fertilizer Recommendations

Raspberries -----

Apply 1.5 tons per acre of calcitic limestone to raise the pH to the desired level of 6.5.

For pre-plant fertilizer, apply 500 lbs of 10-20-20 fertilizer per acre.

40 ppm

39.7 %

(Dairy and well-rotted horse and poultry manures may be used pre-plant to supply essential plant nutrients as well as improve soil tilth. Adjust fertilizer rates according to the amount and type of manure used.)

After new growth starts, apply 0.5 to 1 ounce of ammonium nitrate per plant. In succeeding years apply 45 lbs of N per acre (3 lbs of ammonium nitrate or 6 lbs of 15-15-15 per 100 feet of row) before growth starts in the spring. Use the complete fertilizer (i.e. 15-15-15) when phosphorus level is less than 7 ppm and the potassium level is less than 200 ppm. Band applications down the plant rows.

1995 TRIALS/ ILLINI (Blackberries)

DATE	BASE SAT.	рΗ	K/ppm	K%	P/ppm	Ca/ppm	Ca%	Mg∕ppm	MgZ	OM%	CEC
1993	69.9%	6.1	80	1.5	178	1678	63.2	82	5.1	6.2	13.3
1994	71.1%	6.2	42	1.0	124	1278	61.7	104	8.4	5.1	10.4
1995	100%	7.0	192	5.1	142	1540	80.4	1,66	14.4	5.4	9.€

The Ca:Mg:K saturation ratio is based on Ca>65-80%, Mg>5-15%, K>2-5% as being the desirable range.

DATE	CaX	: Mg%	, k 2	K	ratio
1993	63.2 low	5.1 good		1.5 low	
1994,	61.7 low	8.4 good		1.0 low	
1995	80.4 good	14.4 good		5.1 . good	

UNIVERSITY OF NEW HAMPSHIRE
Analytical Services Lab, Nesmith Hall
Durham, New Hampshire 03824

SOIL TEST REPORT

Client copy

Telephone 603-862-3210

2717

Client:

Received January 19, 1996

THE RASPBERRY FARM
C/O MARK TOWLE
9 ROBERTS ROAD
SOUTH BERWICK, ME 03908

Reported January 23, 1996 Form: 21

Report program: Form21
Report route: Direct

Copies to:

Rockingham County Extension Nada Haddad 113 North Road

Brentwood, NH 03833 603-679-5616

Test Results for [Illini]	(Lab number 2717)							
					Low	Optimum	High	Very High
pН	7.0		4		***************************************			*
SMP Buffer pH	7.0		ş.*·					
Texture	L	oam						
Magnesium (Mehlich 3)	166 ppr	n .		VH	***********		***************************************	******
Calcium (Mehlich 3)	1540 pp	n		н	***************************************		***************************************	***
Potassium (Mehlich 3)	192 ppr	n		0	***********	***********		
Phosphorus (Mehlich 3)	142 pp	n		VH	***************************************			
Org. Matter (LOI-360)	5,4 %							
Cation Exchange	9,6 %							
Base saturation	100.0 %							
Calcium saturation	80,4 %	✓						
Magnesium saturation	14.4 %	/						
Potassium saturation	5.1 %	J						

Lime and Fertilizer Recommendations

Raspberries -----

The pH of 7 is in the desired range. Do not add lime or sulfur containing materials.

For pre-plant fertilizer, apply 200 lbs of 10-20-20 fertilizer per acre.

(Dairy and well-rotted horse and poultry manures may be used pre-plant to supply essential plant nutrients as well as improve soil tilth. Adjust fertilizer rates according to the amount and type of manure used.)

After new growth starts, apply 0.5 to 1 ounce of ammonium nitrate per plant. In succeeding years apply 45 lbs of N per acre (3 lbs of ammonium nitrate or 6 lbs of 15-15-15 per 100 feet of row) before growth starts in the spring. Use the complete fertilizer (i.e. 15-15-15) when phosphorus level is less than 50 ppm and the potassium level is less than 200 ppm. Band applications down the plant rows.

Other small fruit -----

The pH of 7 is in the desired range. Do not add lime or sulfur containing materials.

1995 Trials

SOIL TEST REPORT

Client copy

2824

Client:

The Raspberry Farm PO Box 700

Hampton Falls, NH 03844

. Received November 15 Reported November 17

Form: 21

Report program: Form21 Report route: Direct

Copies to:

Rockingham County Extension Nada Haddad 113 North Road

Brentwood, NH 03833 603-679-5616

Test Results for X-Boyne

(Lab number

Optimum Law

High

Very High

pН 6.2 SMP Buffer pH Texture Loam 104 ppm Magnesium (Mehlich 3) Calcium (Mehlich 3) 1278 ppm Potassium (Mehlich 3) 42 ppm Phosphorus (Mehlich 3) 124 ppm Org. Matter (LOI-360) 5.1 * Cation Exchange 10.4 mag/100g Base saturation 71.1 * 61.7 % Calcium saturation Magnesium saturation 8.4 % Potassium saturation 1.0 %

Lime and Fertilizer Recommendations

Raspberries -----

Apply 46 lbs per 1000 SF of calcitic limestone to raise the pH to the desired level of 6.5.

For pre-plant fertilizer, apply 135 lbs of 0-0-60 per acre, or if not available, apply 400 lbs of 10-20-20 per acre.

(Dairy and well-rotted horse and poultry manures may be used pre-plant to supply essential plant nutrients as well as improve soil tilth. Adjust fertilizer rates according to the amount and type of manure used.)

After new growth starts, apply 0.5 to 1 ounce of ammonium nitrate per plant. In succeeding years apply 45 lbs of N per acre (3 lbs of ammonium mitrate or 6 lbs of 15-15-15 per 100 feet of row) before growth starts in the spring. Use the complete fertilizer (i.e. 15-15-15) when phosphorus level is less than 50 ppm and the potassium level is less than 200 ppm. Band applications down the plant rows.

For questions regarding the above results or recommendations contact:

Nada Haddad

SOIL TEST REPORT

Client:

The Raspberry Farm

PO Box 700

Lab Number: 1014 Form: Fruit Crops Received: September 15 1993

Reported: September 17, 1993

Hampton Falls, NH 03844

Sample ID: Boyne

Copies to:

Mail to:

The Raspberry Farm

PO Box 700

Hampton Falls, NH 03844

Routing: Specialist

Recommendations contact:

Bill Lord Nesmith Hall .

University of New Hampshire

Durham, NK 03824 603-862-3200

Laboratory Test Results

Low

High

PΗ 6.1 SMP Buffer pH 6.7 Loam

Texture

82 ppm Magnesium (Mehlich 3 1678 ppm Calcium (Mehlich 3) 80 ppm

Potassium (Mehlich 3 Phosphorus (Mehlich >

3356 lbs Ca/acre

Optimum*

Very High

		•		
164	lbs	Mg/acre	٥	
356	lbs	Ca/acre	H	
192	lbs	K20/acre	Ļ	
821	lb	P2O5/acre	VX	

178 ррп Org. Matter (LOI-360 6.2 X 13.3 meq/100g Cation Exchange Base saturation 69.9 % Calcium saturation 63.2 % Magnesium saturation 5.1 % 1.5 X Potassium saturation

Same : Go 1012

0 3.0 It announ retente

5 * 0:000

^{*} The Optimum range for pH and nutrients may differ from crop to crop. The ranges shown are generally applicable to agronomi crops and home garden crops. These ranges are intended for general reference and may not be applicable to specific crops (especially floriculture and horticulture crops.) Soil micro-nutrient values (if reported) must be interpreted carefully f the crop of interest. Plant tissue tests are recommended to confirm any suspected deficiencies or excesses.

1994 TRIALS/FALL RASPBERRIES

	BASE SAT. 84.5%	•	K/ppm 74			Ca/ppm _. 2010					CEC 12.9
1994a	100%	8.0	880	8.1	176	4400	78.8	440	13.1	9.5	27.9
1994b	100%	7.3	204 .	3.8	176	2350	87.2	148	9.0	6.4	13.7
1995	100%	7.6	290	3.0	146	4400	88.4	258	8.6	5.9	24.9

1994a> Soil sample taken from area composted with woodash/manure for weed control.

1994b) Soil sample taken from area where straw was used for weed control

The Ca:Mg:K saturation % ratio is based on Ca>65-80%, Mg>5-15%, K>2-5% as being the desirable range.

DATE	Ca%	:	MgZ	:	KZ .	ratio
1993	78.1 good		4.9 °		1.5 low	
1994a	78.8 good		13.1 good		8.1 high	
1994b	87.2 high		9.0 good .		3.8 good	
1995	88.4 high		8.6 good		3.0 good	

Leaf andlysic

LAB TEST REPORT

Client copy

10052

Client:

THE RASPBERRY FARM P.O. BOX 700

HAMPTON FALLS, NH 03844

Received October 31, 1995 Reported January 18, 1996 Form: 521

Report program: General

Report route:

Sample ID - AUTUMN BLISS (Lab number 10052, Sample 1)

2-3 1.90 & LOW Nitrogen ,25-.40 Phosphorus (Dry ash) .25 * 1 .60 - 2.50 Calcium (Dry ash) 1.4 % .30 - .90 .33 4 🗸 Magnesium (Dry ash) 1.0 % LOW 1.5 - 2.5 Potassium (Dry ash) 2 -- 50 Zinc (Dry ash) 20 ppm 🗸 50-20D 297 ppm 4/6H Iron (Dry ash) 85 ppm / Manganese (Dry ash) Cu-200 7 ppm 🗸 Copper (Dry ash) 7-50 57 ppm H/FA 30-50 Boron (Dry ash)

The above results are reported on an "as received" basis unless otherwise noted.

Fall Rusp 1994 Trials

UNIVERSITY OF NEW HAMPSHIRE
Analytical Services Lab, Nesmith Hall
Durham, New Hampshire 03824

Leuf Analysis

LAB TEST REPORT

Client copy

Telephone 603-862-3210

10051

Client:

THE RASPBERRY PARM

P.O. BOX 700

HAMPTON FALLS, NH 03844

Received October 31, 1995 Reported January 18, 1996 Form: 521

Report program: General

Report route:

Sample ID - SUMMIT (Lab number 10051, Sample

Nitrogen
Phosphorus (Dry ash)
Calcium (Dry ash)
Magnesium (Dry ash)
Potassium (Dry ash)
Zinc (Dry ash)
26-50

Iron (Dry ash)
Manganese (Dry ash)
Copper (Dry ash)
Boron (Dry ash)

2.12 % 2-3 .26 % .27-.40 1.3 % .6-250 .42 % .30-.50 .8 % LOW [.5-2.5] 20-50 15 ppm LOW 58-100 235 ppm HIPH 50-100 87 ppm 7.50 7 ppm

1)

The above results are reported on an "as received" basis unless otherwise noted.

30-50 62 ppm HIFR

Fall Rasp 1994 Trials

SOIL TEST REPORT

Client copy

2716

Client:

THE RASPBERRY FARM
C/O MARK TOWLE
9 ROBERTS ROAD
SOUTH BERWICK, ME 03908

Fall 1995

Received January 19, 1996 Reported January 23, 1996

Form: 21

Report program: Form21
Report route: Direct

Copies to:

Rockingham County Extension Nada Haddad 113 North Road

Brentwood, NH 03833 603-679-5616

Test Results for Fall Rasps (Lab number 2716).

7.6 SMP Buffer pH Texture Loam Magnesium (Mehlich 3) 258 ppm Calcium (Mehlich 3) 4400 ppm 290 ppm Potassium (Mehlich 3) Phosphorus (Mehlich 3) 146 ppm 5.9 % Org. Matter (LOI-360) 24.9 % Cation Exchange Base saturation 100.0 % RR 4 % Calcium saturation 8.6 % Magnesium saturation 3.0 % Potassium saturation

Low Optimum High Very High

Lime and Fertilizer Recommendations

Raspberries -----

The pH level of 7.6 is higher than desired. Apply wettable sulfur at the rate of 0 lbs per 1000 SF to lower the pH to the desired level of 6.5. Aluminum sulfate may be substituted for sulfur at 6.94 times the above rate for sulfur or iron sulfate may be substituted at 8.96 times the above rate for sulfur.

Pre-plant fertility levels are adequate for this crop and no additional pre-plant fertilizer application is recommended.

(Dairy and well-rotted horse and poultry manures may be used pre-plant to supply essential plant nutrients as well as improve soil tilth. Adjust fertilizer rates according to the amount and type of manure used.)

After new growth starts, apply 0.5 to 1 cunce of ammonium nitrate per plant. In succeeding years apply 45 1bs of N per acre (3 lbs of ammonium nitrate or 6 lbs of 15-15-15 per 100 feet of row) before growth starts in the spring. Use the complete fertilizer (i.e. 15-15-15) when phosphorus level is less than 50 ppm and the potassium level is less than 200 ppm. Band applications down the plant rows.

For questions on the above contact: Nada Haddad, Rockingham County Extension 113 North Road, Brentwood, NH 03833 603-679-5616

SOIL TEST REPORT

Client copy

2823

Client:

The Raspberry Farm PO Box 700

Hampton Falls, NH 03844

Received November 15, 1994 Reported November 17, 1994

Form: 21

Report program: Form21
Report route: Direct

Copies to:

Rockingham County Extension Nada Haddad 113 North Road

Brentwood, NH 03833 603-679-5616

Test Results for Fall Rasp/Compost

(Lab number 2823)

Low

Optimum

High

Very High

8.0 рH 7.4 SMP Buffer pH Texture Loam Magnesium (Mehlich 3) 440 ppm Calcium (Mehlich 3) 4400 ppm B80 ppm Potassium (Mehlich 3) 176 ppm Phosphorus (Mehlich 3) 9.5 % Org. Matter (LOI-360) 27.9 meq/100g Cation Exchange Base saturation 100.0 % 78.8 % Calcium saturation 13.1 % Magnesium saturation 8.1 % Potassium saturation

VH VH VH

Lime and Fertilizer Recommendations

Raspberries -----

The pH level of 8 is higher than desired. Apply wettable sulfur at the rate of 0 lbs per 1000 SF to lower the pH to the desired level of 6.5. Aluminum sulfate may be substituted for sulfur at 6.94 times the above rate for sulfur or iron sulfate may be substituted at 8.96 times the above rate for sulfur.

Pre-plant fertility levels are adequate for this crop and no additional pre-plant fertilizer application is recommended.

(Dairy and well-rotted horse and poultry manures may be used pre-plant to supply essential plant nutrients as well as improve soil tilth. Adjust fertilizer rates according to the amount and type of manure used.)

After new growth starts, apply 0.5 to 1 ounce of ammonium nitrate per plant. In succeeding years apply 45 lbs of N per acre (3 lbs of ammonium nitrate or 6 lbs of 15-15-15 per 100 feet of row) before growth starts in the spring. Use the complete fertilizer (1.e. 15-15-15) when phosphorus level is less than 50 ppm and the potassium level is less than 200 ppm. Band applications down the plant rows.

For questions regarding the above results or recommendations contact:

SOIL TEST REPORT

Client copy

Optimum

Hich

Very High

2822

Client:

The Raspberry Farm PO Box 700

Hampton Falls, NH 03844

Received November 15, 1994 Reported November 17, 1994 Form: 21

Report program: Form21
Report route: Direct

Copies to:

Rockingham County Extension Nada Haddad 113 North Road

Brentwood, NH 03833 603-679-5616

Test Results for Fall Rasp/Straw (Lab number 2822)

 pH
 7.3

 SMP Buffer pH
 7.2

 Texture
 Loam

 Magnesium (Mehlich 3)
 148 ppm

 Calcium (Mehlich 3)
 2390 ppm

 Potassium (Mehlich 3)
 204 ppm

Phosphorus (Mehlich 3) > 176 ppm

Org. Matter (LOI-360) 6.4 %

Cation Exchange 13.7 meq/100g

Base saturation 100.0 %

Calcium saturation 87.2 %

9.0 % 3.8 %

Lime and Fertilizer Recommendations

Low

Raspberries -----

Magnesium saturation Potassium saturation

The pH of 7.3 is in the desired range. Do not add lime or sulfur containing materials.

Pre-plant fertility levels are adequate for this crop and no additional pre-plant fertilizer application is recommended.

(Dairy and well-rotted horse and poultry manures may be used pre-plant to supply essential plant nutrients as well as improve soil tilth. Adjust fertilizer rates according to the amount and type of manure used.)

After new growth starts, apply 0.5 to 1 cunce of ammonium nitrate per plant. In succeeding years apply 45 lbs of N per acre (3 lbs of ammonium nitrate or 6 lbs of 15-15-15 per 100 feet of row) before growth starts in the spring. Use the complete fertilizer (i.e. 15-15-15) when phosphorus level is less than 50 ppm and the potassium level is less than 200 ppm. Band applications down the plant rows.

For questions regarding the above results or recommendations contact:

Nada Haddad

SOIL TEST REPORT

Client:

The Raspberry Farm

PO Box 700

Hampton Falls, NH 03844

Lab Number: 1013

Form: Fruit Crops

Sample ID: Latham Fall

Routing: Specialist

Received: September 15, 1993

Reported: September 17, 1993

Copies to:

Mail to:

The Raspberry Farm

PO Box 700

Hampton Falls, NH 03844

Recommendations contact:

Bill Lord Nesmith Hall

University of New Hampshire

Durham, NH 03824 603-862-3200

Laboratory Test Results

Low

Optimum*

High

Very High

pН	6.2	
SMP Buffer pH	6.9	
Texture	Loam	
Magnesium (Mehlich 3	76	ppm
Calcium (Mehlich 3)	2010	ppm
Potassium (Mehlich 3	74	ppm
Phosphorus (Mehlich	137	ppm
Org. Matter (LOI-360	6.5	×
Cation Exchange	12.9	meq/100
Base saturation	84.5	X
Calcium saturation	78.1	X
Magnesium saturation	4.9	*
Potassium saturation	1.5	×

* The Optimum range for pH and nutrients may differ from crop to crop. The ranges shown are generally applicable to agronomic crops and home garden crops. These ranges are intended for general reference and may not be applicable to specific crops (especially floriculture and horticulture crops.) Soil micro-nutrient values (if reported) must be interpreted carefully for the crop of interest. Plant tissue tests are recommended to confirm any suspected deficiencies or excesses.

2.5 lk harviste of potask (0-0-60) per 100 fot of rows early spring 1.5 th 200 yours 100 fot of rows early spring 1.5 th 200 yours 100 for 100 fot of rows early spring 1.5 th 200 yours 100 for 100 f