

# Weekly Berry Call – June 16, 2010

**Participants:** Pam Fisher (Ontario, Canada), Laura McDermott (greater Capital District), Marvin Pritts (Ithaca/Finger Lakes area), Colleen Cavagna (Allegany/Cattaraugus Counties), Jeff Miller (Mohawk Valley/Oneida County), Dale Ila Riggs (Stephentown/Northern Hudson Valley), Cathy Heidenreich (Geneva/Finger Lakes region).

## **GROWING CONDITIONS** (courtesy NY NASS)

**Week ending June 20, 2010:** Temperatures averaged above normal by as much as 5 degrees in Jamestown. The high for the week was 89 degrees in Syracuse while the low was 43 degrees at Glens Falls. Growing degree accumulations were all on the plus side by as much as 389 since April 1. Precipitation was mostly below normal. Amounts ranged from 0.02 inch in Bridgehampton to 1.56 inch at Massena.

Strawberries were 10 percent poor, 38 percent fair, 44 percent good, and 8 percent excellent. In Ontario County, harvest continued for strawberries, raspberries, and cherries. The Cayuga County strawberry harvest was winding down for most farmers. In Albany County, the strawberry crop was good, and pick your own operations were in full swing. Local raspberry and small fruit growers reported good crops in the making.

## **REPORTS FROM THE FIELD**

**Allegany/Cattaraugus:** *Strawberries* - berry size a problem; berries not ripening as quickly as expected/normal.

**Greater Capital District:** *Strawberries* - as above, small berry size; berries not ripening very quickly; lots of Botrytis. Already picking 'Ovation'; harvest winding down by the weekend. *Blueberries* - Cranberry and Cherry fruitworm damage in blueberries already evident in one planting; grower is no-spray; pickers remove and destroy infested berries. This method may not always provide acceptable levels of control.

**Mohawk Valley/Oneida:** 1.27" of rain last week (mostly Wednesday) with an addition of 121 GDD making the seasonal total for that area 744. Current weather trend seems to be one major rain a week with occasional "dust-settlers" in between. *Strawberries* – are winding down, *summer raspberries* just starting. Have had some gray molds in strawberries this season.

**Geneva:** *Strawberries* - Strawberry harvest winding down. *Raspberries* early summer red raspberries being harvested. *Blueberries* 'First Ivanhoe' blueberries harvested. Other blueberry varieties continuing to color. *Ribes*: Red currants almost ready for harvest, also gooseberries; black currants not far behind. One report of raspberry fruitworm problems in Steuben County.

**Stephentown/Upper Hudson:** *Strawberries* - holding well, still picking through this weekend but may not make it to July 4<sup>th</sup> weekend.

**Ontario, Canada:** Wet and rainy – strawberry harvest ongoing. Significant botrytis in Mira and later varieties. LOTS of slugs and snails and also millipedes and wireworms. Raspberry sawfly and cane borer evident.

## **DISCUSSION:**

### *Berry Nutrients*

First it is important to recognize availability of soil nutrients changes with soil pH. Figure 7-2 below shows relative availability of nutrients at various pH levels. When soil pH is in the correct range for the berry crop in question then it is also important to look at plant response to soil nutrient levels. Often growers are under the interpretation that "more is better" in terms of nutrients. Too much of a good thing can be just that, too much of a good thing (as shown in Figure 7-3).

A more precise method of nutrient management than is basing applications of soil and foliar analysis results. A soil test for commercial berry crops should include Boron as well as other standard tests. Foliar analysis is best done in strawberries at the end of July after renovation (newest growth). Foliar analysis for raspberries and blueberries should be done after harvest if possible (August).

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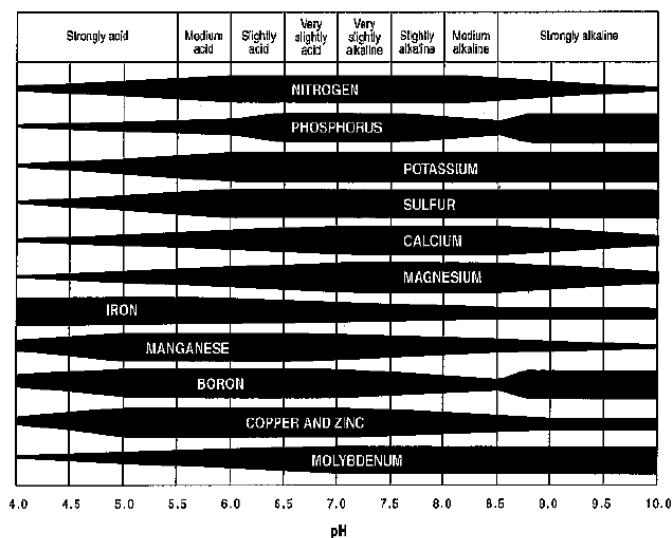


FIGURE 7-2. Nutrient availability as affected by soil pH

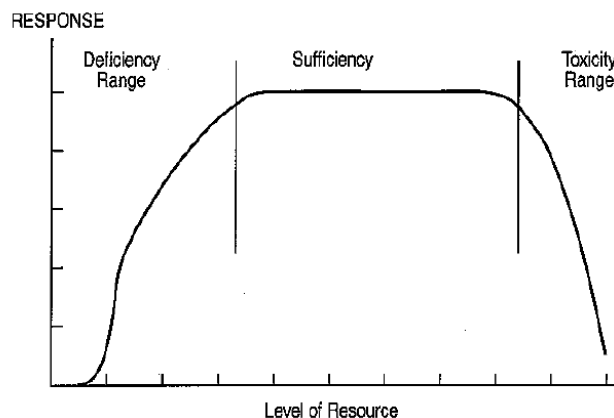


FIGURE 7-3. Response of a plant to increasing levels of a resource

Uptake of foliar macronutrients (N,P,K) is not particularly high in berry crops. You would need to feed almost every day to meet the plant's total need for N,P or K. Therefore, foliar nutrient applications of N,P and K make most sense during dry cold periods when soil nutrient uptake is greatly reduced. Application of micronutrients, needed in much smaller amounts, can be effectively applied through foliar treatments.

Correction of micronutrient deficiencies, where desired levels typically ranging between 3 to 350 ppm, are probably a more appropriate use of foliar applications. Table 7-2 below provides foliar nutrient ranges for strawberries.

Table 7-2 Sufficiency Ranges for foliar nutrient levels in strawberry leaves in midsummer (perennial systems). *From: Strawberry Production Guide for the Northeast, Midwest, and Eastern Canada, pg.55)*

Nutrient*	Deficient Below	Sufficient	Excess
N (%)	1.90	2.00 – 2.80	4.00
P (%)	0.20	0.25 – 0.40	0.50
K (%)	1.30	1.50 – 2.50	3.50
Ca (%)	0.50	0.70 – 1.70	2.00
Mg (%)	0.25	0.30 – 0.50	0.80
S (%)	0.35	0.40 – 0.60	0.80
B (ppm)	23	30 – 70	90
Fe (ppm)	40	60 – 250	350
Mn (ppm)	35	50 – 200	350
Cu (ppm)	3	6 – 20	30
Zn (ppm)	10	20 - 50	80

\*Note: multiply % by 10,000 to get ppm. (Source for figures and table above: *Strawberry Production Guide for the Northeast, Midwest, and Eastern Canada*)

Phosphorus (P) is rarely ever low in berry crops. If K levels are too low, apply preplant at a rate of 500 lb or more per acre; do not apply as KCl (muriate of potash) because high rates of chloride fertilizers can damage berry crops.

Depending on cropping history (i.e. previously vegetables, etc.), P levels often in fact may be too high. Depending on cropping history (i.e. previously vegetables, etc.), P levels often in fact may be too high from fertilizer, manure or compost applications. In such cases, leaf analysis may indicate low or deficiency levels of several nutrients even as soil tests indicate that soil nutrient levels are adequate. Boron plays a role in auxin synthesis. This plant hormone is necessary for root elongation, which in turn provides sufficient root surface for uptake of nutrients. For this reason, where foliar test results indicate several micronutrients including B appear deficient, correction of the B deficiency first may result in correction of the other micronutrient problems at the same time without the need to apply additional amounts of them. If a B deficiency is occurring, apply 2 lb Ai/acre.

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Low Zn levels may be a problem but it is very difficult to get good uptake of zinc for most crops. Soils with low preplant Zn levels should be amended with zinc sulfate. Foliar applications of Zn chelate may be applied to established plantings. Zn chelate should be applied at a rate of 2lb product/100 gal/acre after renovation, again in late summer, and in early May of the following year. Alternatively, zinc sulfate may be applied at a rate of 10lb/A in fall either as a granular formulation or through fertigation.

Chelated (“claw”) micronutrients are more soluble in water than their some salt forms of the nutrient. That said, the bigger the molecule, the more difficult the uptake into the plant (true of chelates). The smaller the molecule, the faster the uptake, but the more likelihood of phytotoxicity (tissue burn). Chelated forms of micronutrients are usually the safest forms to use, while still being small enough to get absorbed into the plant leaf. Chelates (Zn, FE, Zn, Cu) must often be standalone applications as they usually may not be mixed with other chelates or nutrient products. Foliar testing is the best method to determine which micronutrients may be low.

**Brambles:** Boron deficiency may also occur in raspberries, resulting in incomplete drupelet set. (Be sure to check for high P)

**Blueberries:** Foliar Iron (Fe) chelate may be applied for temporary mitigation of Fe deficiencies in young plantings where pH has not yet dropped to desired levels. This product must be applied periodically throughout the season. One source for this product is listed below:

NACHURS ALPINE SOLUTIONS  
421 Leader Street  
Marion, Ohio 43302  
Toll Free: (800) 622-4877  
e-mail at [info@nachurs.com](mailto:info@nachurs.com).  
[www.nachurs.com](http://www.nachurs.com)

Sulfur – does it take as long as lime to act in soil? The more finely ground the sulfur the faster it acts. Powdered sulfur takes about 3 months, however, it is not particularly user friendly, being dusty, irritating, and odoriferous to the applicator. Prilled (granular) sulfur is more applicator-friendly but takes longer to act (7-8 months).

**For more information on this topic:** [Nutrient Guidelines](#) in: [Cornell Berry Pest Management Guidelines](#).

*Strawberry Varieties* – Many growers seem to like ‘Annapolis’ and ‘Jewel’. ‘Cabot’ seems to be somewhat problematic; appears to be more susceptible to gray mold, does not hold as well as other strawberry varieties; berry necks have a tendency to split with too much rain. Growers doing taste tests in the Capital District preferred ‘Albion’ over ‘Clancy’. Both are very firm berries so the preference is probably not one of firmness but perhaps texture. Achenes on ‘Clancy’ tend to be somewhat prominent, giving it a more rough feel in the mouth, while ‘Albion’, whose achenes are less prominent, has a more smooth feel. They were really impressed with ‘Valley Sunset,’ a late season California variety fruiting between ‘Clancy’ and ‘Ovation’.

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NY NASS Weather Data for Week Ending Sunday, June 20<sup>th</sup>, 2010

Station	Temperature (°F)				Growing Degree Days Base 50° <sup>1/2</sup>			Precipitation (Inches) <sup>1/2</sup>			
	High	Low	Avg	Dep. from Norm	Week	Season	Dep. from Norm	Week	Dep. from Norm	Season	Dep. from Norm
<b>Hudson Valley</b>											
Albany	85	49	67	-1	118	844	+251	0.41	-0.43	6.62	-2.22
Glens Falls	84	43	64	-3	97	677	+185	0.26	-0.48	5.86	-2.90
Poughkeepsie	86	50	68	+0	128	906	+263	0.06	-0.81	4.98	-5.41
<b>Mohawk Valley</b>											
Boonville	80	47	63	+2	89	541	+181	1.02	-0.08	9.92	-2.24
<b>Champlain Valley</b>											
Plattsburgh	84	43	64	-3	96	621	+117	0.27	-0.48	6.62	-1.13
<b>St. Lawrence Valley</b>											
Canton	83	46	64	+1	102	660	+229	0.79	+0.02	7.93	-0.08
Massena	85	44	66	+3	113	694	+226	1.56	+0.79	6.11	-1.13
<b>Great Lakes</b>											
Buffalo	83	54	69	+3	132	819	+265	0.33	-0.51	11.05	+2.64
Wales	83	50	65	+2	105	649	+222	0.71	-0.27	9.17	-0.98
Niagara Falls	83	57	70	+4	140	845	+273	0.38	-0.45	8.50	+0.08
Rochester	87	53	68	+4	128	856	+296	0.96	+0.26	8.31	+0.98
Watertown	82	44	66	+4	115	695	+268	0.28	-0.35	6.48	-0.61
<b>Central Lakes</b>											
Dansville	85	50	66	+1	116	812	+262	0.94	+0.03	8.06	-0.21
Geneva	87	51	67	+2	122	802	+273	1.43	+0.52	9.75	+1.35
Honeoye	86	49	66	-1	112	800	+252	1.32	+0.41	9.72	+1.42
Ithaca	84	47	65	+2	109	739	+265	0.48	-0.43	7.44	-1.30
Penn Yan	87	49	67	+2	122	863	+334	0.51	-0.40	7.81	-0.59
Syracuse	89	51	69	+4	133	877	+310	1.54	+0.63	8.70	-0.40
Warsaw	81	51	64	+2	100	642	+252	1.18	+0.15	12.86	+3.10
<b>Western Plateau</b>											
Angelica	84	50	67	+5	117	711	+330	0.90	-0.22	9.90	+1.07
Elmira	87	47	66	+2	116	805	+297	0.38	-0.53	8.37	-0.03
Franklinville	83	47	65	+4	106	593	+259	0.95	-0.09	9.82	+0.14
Jamestown	84	50	67	+5	118	701	+306	0.57	-0.54	10.03	-0.79
<b>Eastern Plateau</b>											
Binghamton	82	51	66	+2	114	821	+332	0.44	-0.40	9.07	+0.18
Cobleskill	84	50	65	+2	108	663	+216	0.80	-0.18	8.46	-1.28
Morrisville	85	50	65	+3	108	681	+263	1.27	+0.29	11.31	+1.76
Norwich	85	50	64	+1	100	654	+206	1.09	+0.11	10.25	+0.37
Oneonta	84	50	65	+3	107	688	+282	0.56	-0.42	9.39	-1.20
<b>Coastal</b>											
Bridgehamton	85	51	69	+3	133	801	+290	0.02	-0.82	5.92	-4.32
New York	87	65	73	+2	162	1238	+389	0.53	-0.31	6.88	-3.10

## **Weekly Berry Call – June 16, 2010**

1/ Season accumulations are for April 1<sup>st</sup> to date. Weekly accumulations are through 7:00 AM Sunday Morning. The information contained in this weekly release is obtained in cooperation with Cornell Cooperative Extension, USDA Farm Service Agency, the National Weather Service, Agricultural Weather Information Service and other knowledgeable persons associated with New York agriculture. Their cooperation is greatly appreciated. **Visit our website at [www.nass.usda.gov/ny](http://www.nass.usda.gov/ny) and click on “subscribe to NY reports” for instructions on subscribing electronically. You may also visit our website to access all our reports which are available for free online.**