

# Useful Observations/Information from Our 2012 Fungicide Trials & Extension Queries

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# Unusual Developments and/or Observations

## 1. Postharvest disorder of CA-stored Red Delicious



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## 1. Postharvest disorder of CA-stored Red Delicious

Conclusion from Dr. Chris Watkins in Ithaca:

- Damage is from bitter pit exacerbated by 1-MCP treatment after harvest.
- Bitter pit in the 2011 crop may have been triggered by 15 inches rain in late-Aug and early Sept.



# Unusual Developments and/or Observations

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2. Fire blight inoculations of shoots in a meadow orchard of Lady Apples on MM.111 rootstocks.





# Unusual Developments and/or Observations

2. Fire blight inoculations of shoots: some scissors inoculated leaves developed symptoms but abscised before the disease spread to shoots (right photo).



# Unusual Developments and/or Observations

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## 2. Fire blight inoculations of shoots

- Tree age seems to impact susceptibility more than shoot vigor.
- Infected leaves abscise before the bacteria move into shoots in some cases.





# Unusual Developments and/or Observations

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## 3. Thrips on sweet cherries





# Unusual Developments and/or Observations

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4. Topguard was associated with phytotoxicity when applied after strep + LI-700: Injury on Redcort.



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4. Topguard was associated with phytotoxicity when applied after strep + LI-700:  
injury on Golden Delicious.





# Unusual Developments and/or Observations

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5. Glomerella leaf spot in the last week of August:  
zonated spots yielded Glomerella.



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5. Glomerella leaf spot in the last week of August:  
Not all yellowing was from Glomerella;  
some was traditional necrotic leaf blotch.









# Unusual Developments and/or Observations

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## 5. *Glomerella* leaf spot: last week of August

### Hypotheses:

- A. Necrotic leaf blotch (NLB) develops when environmental conditions allow *Aureobasidium pullulans* to build to toxic levels on leaf surfaces.
- B. *Glomerella cingulata* can colonize leaves weakened by the *A. pullulans* toxin.
- C. The *G. cingulata* found in the Hudson Valley is not the same as the strains that cause damage in Brazil and NC.



# Unusual Developments and/or Observations

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## 6. Bitter rot following heat damage in June



6. Bitter rot following heat damage in June:  
was bitter rot on Honeycrisp at harvest related to  
heat injury in late June??





# Unusual Developments and/or Observations

## 7. Cankers on G.11 rootstocks: 3-yr-old trees





# Unusual Developments

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7. Cankers on G.11 rootstocks: 3-yr-old trees at the Hudson Valley Lab.

Some trees were in plots with landscape cloth that had received no herbicide for the past two years.





# Unusual Developments and/or Observations

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## 7. Canker on G.11 rootstock

### Hypotheses:

1. Canker is probably caused by *Botryosphaeria dothidea*, an opportunistic pathogen long associated with drought stress in many crops.
2. G.11 may be especially susceptible.
3. **IF** the above are correct, then G.11 may also act like Macoun when exposed to glyphosate??

Conclusion: G.11 (and other super spindle plantings??) may need more irrigation than older systems.

# Unusual Developments and/or Observations

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## 8. Goldrush fruit can crack in fall rains.





# Unusual Developments and/or Observations

9. *Schyzophyllum commune* on thinned apple fruit left on the ground.



# Unusual Developments and/or Observations

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9. *Schyzophyllum commune* on apple fruit ?  
Photos of Mutsu from 2006.





# Unusual Developments and/or Observations

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## 10. Frost injury on Shiro plums



# Research results from field trials: Item #1

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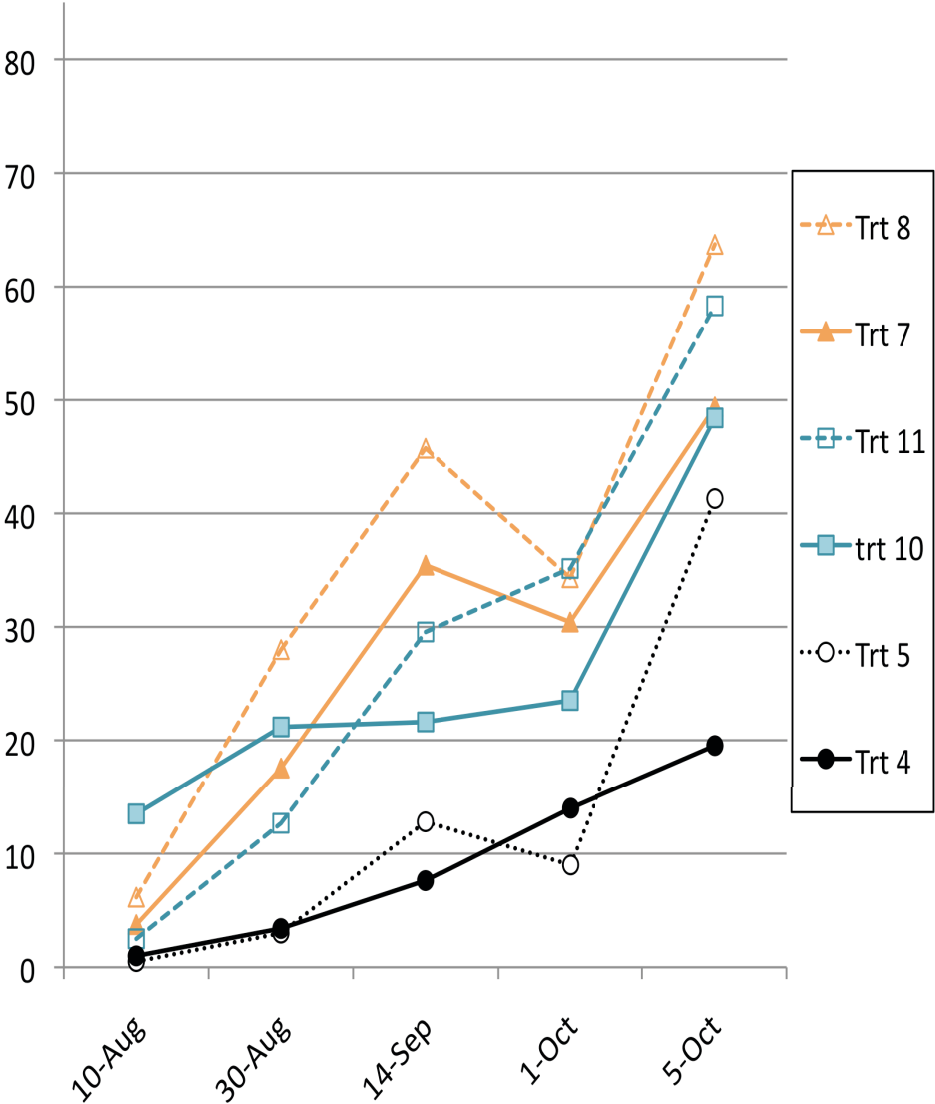
Inspire Super controls flyspeck better than Pristine.

Pristine is slightly better on sooty blotch.

Pristine controls fruit rots (especially bitter rot) but Inspire Super does not !!!

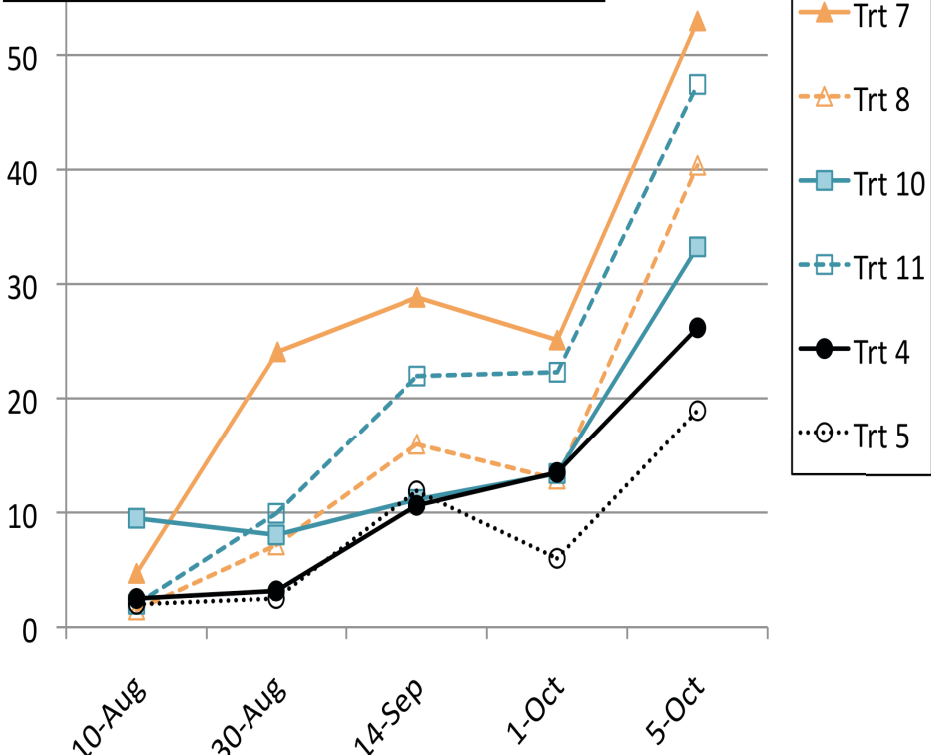


Percent Fruit with Flyspeck



Percent Fruit with Sooty Blotch

Fungicide and rate (per 100 gal)	Treatment dates for Cameo						
	Jun 22	Jul 6	Jul 24	Aug 8	Aug 22	Sep 6	Sep 21
4. Inspire Super 4 fl oz	X	X	X	X	X		
5. Pristine 5 oz	X	X	X	X	X		
7. Inspire Super 4 fl oz				X	X	X	X
8. Pristine 5 oz				X	X	X	X
10. Inspire Super 4 fl oz		X		X	X		X
11. Pristine 5 oz		X		X	X		X



# Research results from field trials: Item #2

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In comparison of SDHI's for apple scab:

- All SDHI's work well if you mix them with mancozeb plus a stroby!
- Based on evidence to date: SDHI's be routinely end up in 3-way mixes?
- Fontelis is probably a bit weaker than Luna Sensation, but Luna has never been tested alone.
- Luna Sensation is great for mildew.
- Never use Fontelis alone!
- Never use Luna Tranquility after pink.



# Research results from field trials: Item #1

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New strategies for controlling *Fabraea* on pears.



## Research results from field trials: Item #3

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**Syllit at the top label rate was effective against Fabraea leaf spot; so was Flint.**

Inspire Super was NOT effective.

Controlling Fabraea requires covering with mancozeb weekly with until 7 sprays are used, then biweekly with Syllit (3 sprays), followed by Flint (3 sprays), then a final spray of Pristine.

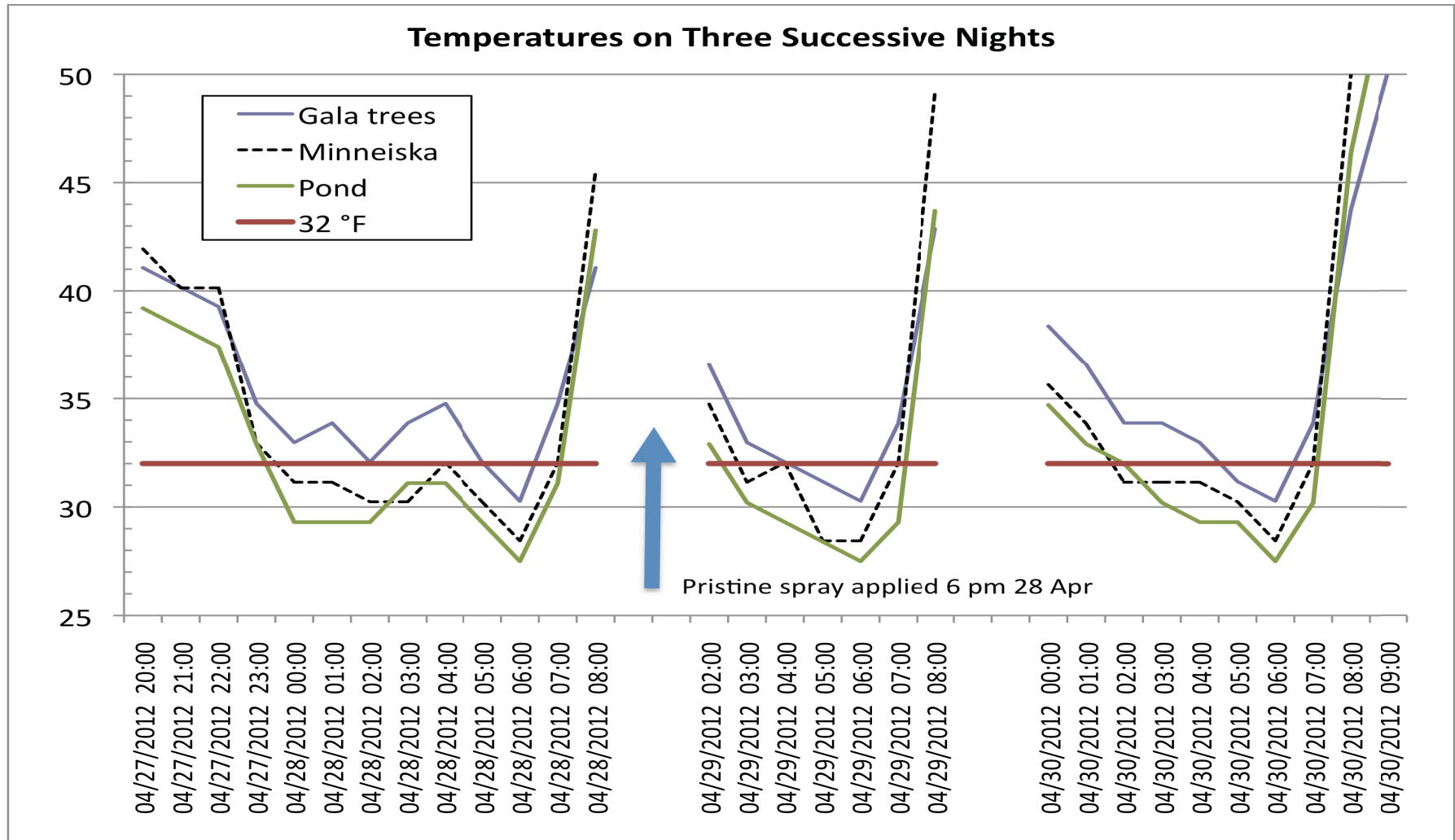
Tighten intervals if  $> 2$  inches rain.





# Research results from field trials: Item #4

Pristine did not impact fruit set/quality after frost.



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Pristine did not impact fruit set/quality after frost.

However, it had a statistical impact on seed count.

Table 1: Effects of Pristine on frost damage as determined by evaluating various indicators on two paired sets of Gala trees and one pair of Minneiska for a total of three replications.

Formulated product applied per 100 gal <sup>z</sup>	Mean fruitlet diameter on 8 May (mm) <sup>y</sup>	Percent fruit on 8 May with: <sup>v</sup>				Mean seed count in Gala on 12 July <sup>u</sup>
		Normal seed count	No seeds	No internal browning	Complete browning	
Control .....	5.1	<b>63.3 b</b>	3.3	13.0	30.6	4.97
Pristine 38W 5 oz .....	6.0	<b>90.6 a</b>	1.2	30.3	26.2	4.91
P value.....	0.082	<b>0.026</b>	0.288	0.120	0.288	

<sup>z</sup> Pristine was applied to drip using a handgun 5:30-6:30 pm on Sat, April 28 .

<sup>y</sup> Fifty randomly-selected fruitlets per tree were harvested and measured.

<sup>v</sup> Based on evaluation of 50 fruitlets per tree harvested on 8 May.

<sup>u</sup> Based on counting seeds in 50 Gala fruit from each of two trees/treatment.

