

Honeycrisp Apples, Japanese Beetles, and Sunburn

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Honeycrisp apples have turned out to be one of the most difficult apples to grow. Japanese beetles and deer prefer it, and every disease-causing organism in the book seems attracted to it, but the bottom line is that the consumer loves it and continues to pay a premium price for it, \$3 a pound in New York City and select markets. Wholesale prices remain strong as well, commanding \$40 per bushel box.

Honeycrisp is an indicator crop for Japanese beetle emergence. Japanese Beetles are slow to emerge in cool wet weather may have reduced the population. In the year that this article was written, we saw the first ones on Honeycrisp on July 13. Hudson Valley growers saw their first Japanese beetle the week before. Note that Liberty apple is a close second as an indicator plant for Japanese beetle.

Control of Japanese beetle can be difficult on apple; Imidan is not particularly effective. Japanese beetles can reduce the leaf foliage significantly on Honeycrisp, leaving them predisposed to sunburn on the skin of the fruit. I believe that they can destroy enough foliage to reduce fruit set the following year.

In my HoneyCrisp blocks at the Rutgers Snyder Farm, I have used *Surround WP (Kaolin Clay)* from *NovaSource Corp* to assist greatly with control of Japanese Beetles. I have used this product for 4 years very successfully against beetles. The side benefit is that I have had very little sunburn and very little disease on my Honeycrisp for the past 3 years. Washington State Apple growers have used Surround for years to prevent sunburn, which is a labeled use. Consider using Surround WP next year in your spray control of Japanese beetle and sunburn on Honeycrisp.

Surround WP, Tips on Use

Apply as soon as you see the first beetles. Use 50 pounds per 100 gallons for the first two applications

to get a good coating. Apply at 7- to 14-day intervals, and make sure that both sides of leaves are covered. If coverage is not thick enough to coat the fruit and leaves, double the concentration to 100 pounds per 100 gallons. Use adequate water to get good coverage. Do not use de-foaming agents. Surround is generally compatible with other pesticides but jar test first. Add the Surround to the spray tank first and agitate before adding other materials. When applied at labeled rates fruit color may be improved and tree vigor enhanced, both important on Honeycrisp. Read the label for more information.

Other Japanese Beetle Controls for Apple

Other States need to check their state labels, but the following are viable options in New Jersey: Provado 1.6F at 6-8 ounces per acre (7-day preharvest interval), Assail (30S) at 6-8 ounces per acre (7-day preharvest interval), Calypso at 2-4 ounces per acre (30-day preharvest interval), Avaunt at 5-6 ounces per acre (14-day preharvest interval), Sevin, and various pyrethroids. I would not use Sevin or pyrethroids on apples at this time, since they will likely cause mite problems.

More on Sunburn

Dr. Rosenberger wrote the following in a 2008 Scaffolds Newsletter (<http://www.nysaes.cornell.edu/ent/scaffolds/>). “Most growers recognize sunburn when it shows up as browning or bleaching of the skin on the sunward faces of apple fruits growing in exposed positions within the tree canopy. However, internal fruit damage caused by high temperatures is less common. High ambient temperatures combined with solar heating of exposed fruit can cause breakdown of cells in the fruit flesh. The injury first appears as water-

soaked areas on the fruit surface. Water-soaking is also evident in the fruit flesh if fruit are inspected soon after the injury has occurred. Because the damaged cells die and collapse, whereas non-killed cells in the fruit continue to grow, fruit soon become misshapen. Sections through the damaged fruit then reveal necrotic and collapsed tissues.”

Dr. Rosenberger reports, “that Honeycrisp fruit damaged by sunburn or heat injury are especially susceptible to black rot, white rot, and bitter rot. The heat-damaged skin can no longer maintain the natural defense mechanisms that normally help to protect apple fruit from infection by these pathogens, so summer fruit rots may appear even where reasonable fungicide protection has been maintained through summer.”

In New Jersey, we know that sunburn followed by infection with both bitter rot and or white rot is a given on Honeycrisp. The goal is to prevent sunburn and maintain adequate fungicide coverage to prevent bitter rot and white rot.

Jon Clements of the UMass Fruit Program put together an excellent web page on Honeycrisp disorders: <http://www.fruitadvisor.info/honeycrisp/honeycrisp.html>. To watch a movie clip online of David Bedford, University of Minnesota, (entitled Honeycrisp — is it right for you?) tune your web browser to the Virtual Orchard Movie Theater at: <http://virtualorchard.net/video/qtss/honeycrisp2.htm>. You will need a broadband connection and the Quick Time plug (available free from www.apple.com).

