



WEEKLY CROP UPDATE

UNIVERSITY OF DELAWARE COOPERATIVE EXTENSION

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Vegetable Crops

Watermelon Rind Necrosis -Gordon Johnson,
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I recently cut open a watermelon from a late-planted trial and found symptoms of watermelon rind necrosis (also known as internal rind necrosis or bacterial rind necrosis). In my career, I have seen this disorder or disease only two times where significant numbers of melons were affected.

Watermelon rind necrosis is characterized by the presence of a corky, red to brown layer of dead tissue that occurs on the inside of the rind of affected fruit but that does not extend into the fruit flesh. Early stages of rind necrosis can be noticed as small discolored water soaked areas in the rind. Rind necrosis can be found in immature fruit as well as mature fruit.

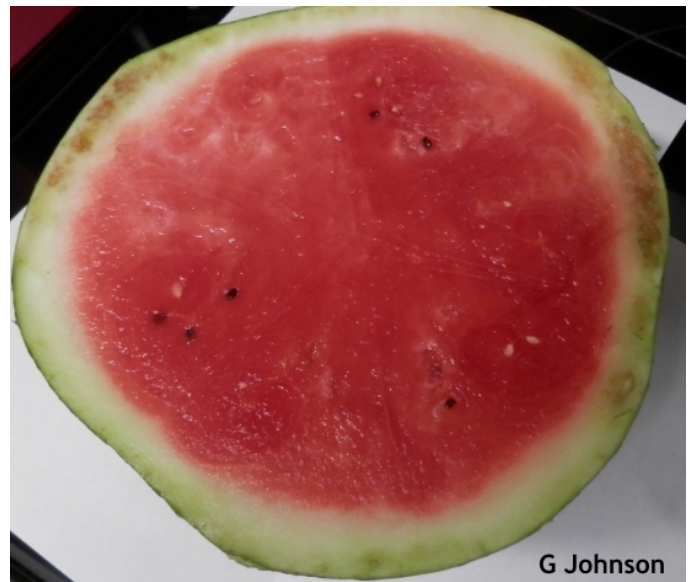
Presence of a few melons with watermelon rind necrosis (WRN) can cause rejections of the whole load as not saleable. In the US the disorder shows up sporadically but can affect significant acreage (Florida and Georgia had problems in 2011 and 2012).

Over the years plant pathologists have been able to isolate a number of different bacteria from necrotic areas in the rind and in some literature the disorder is often called bacterial rind necrosis. However, no one bacteria has been identified as the specific causal organism.

Bacteria can be isolated from healthy watermelon rinds and reside there without

causing disease. The current theory of how WRN develops is that stressful environmental conditions trigger a hypersensitive response in the fruit rind to resident bacteria and cells near bacterial populations die; however, this has not been verified experimentally. There is some evidence that water stress may be involved and some association with abnormally shaped melons (prominent lobes).

In the 2011-12 "outbreaks" in Florida and Georgia, severity differed by variety. For example in one area the seedless varieties Gypsy, Melody, and Bold Ruler as well as the seeded pollinizer Sweet Harmony had much higher severity than Crunchy Red (seedless) and Mardi Gras (seeded). Unfortunately, because the disorder cannot be established in controlled trials, the susceptibility of many newer varieties is still unknown.



G Johnson

Watermelon Rind Necrosis (variety Fascination)



G Johnson

Closeup of necrotic area in watermelon rind

Agronomic Crops

Fall Herbicide Applications for Barley and Early Planted Winter Wheat - Mark VanGessel, *Extension Weed Specialist*; mjv@udel.edu

There are three issues to consider when thinking of fall herbicide applications for small grains: herbicide effectiveness, weed emergence timing, and weed competition. Herbicides applied in October or November for barley or early planted wheat tend to be more effective than spring applications. Fall applications are made when weeds are smaller and more susceptible than spring applications. Winter annual weeds are actively growing throughout November despite heavy frosts. Soil temperatures still maintain active growth of winter annuals and seedlings have not shut down yet. Most of the common weeds have peak emergence in the fall with reduced levels of spring emergence. In addition, wheat is well established by spring — it outcompetes late emerging weeds and they are not competitive. This includes henbit, common chickweed, and annual ryegrass.

Research has shown that weed competition in the fall can reduce yields. Trials examining high weed densities that are removed in the spring resulted in lower yields, even though spring weed control was very good.

Late planted winter wheat can also benefit from fall herbicide applications since the peak emergence of weeds has already passed,

however, the crop may be as effective in competing with spring emerging weeds.

Some herbicides need to be applied in the fall due to rotational restrictions for double cropping or crop safety concerns with applications too close to nitrogen applications (i.e. Osprey, Huskie). Fall applications (same as early spring applications) may still require a spring application for garlic.

Harvest Aids for Soybeans - Mark VanGessel, *Extension Weed Specialist*; mjv@udel.edu

A few herbicides are labeled as harvest aids for soybeans. Glyphosate and paraquat will have the broadest spectrum of control, with paraquat having quicker activity on the weeds. Aim, Clarity, and Defol are also labeled, but they have a much narrower spectrum of control. Be sure to read the label of the product you are considering for all the precautions and restrictions. Application of these products is after the pods begin to lose their green color. Applications made this late in the season means they will have little to no impact on reducing weed seed production.

General

Delaware Sustainable Energy Utility and EnSave Announce New Program for Delaware Farms

The Delaware Sustainable Energy Utility is pleased to announce the launch of the Energize Delaware Farm Program to help Delaware agricultural producers reduce their energy costs.

The program will offer energy audits to identify opportunities to save energy and money. Producers can then apply for a range of services including low-interest loans, grants for energy efficiency projects, free direct-installed lighting measures and solar renewable energy credit (SREC) purchases.

A key part of the program will be connecting participants with programs that can provide additional funding — such as Delaware's Green Energy Grant, the United States Department of

Agriculture's Rural Energy for America (REAP) and Environmental Quality Incentives (EQIP) Programs. This will leverage additional funds and maximize energy and cost saving opportunities available to the farm.

"This program offers something for every producer in Delaware by providing funding options for both energy efficiency and renewable energy," says Tony DePrima, Executive Director of the Delaware Sustainable Energy Utility. "While some Delaware producers have already made great strides in reducing their energy use, there is still a great need for technical assistance and funding. By providing these services, we are helping these hard-working Delaware businesses position themselves for greater energy independence."

The DESEU has selected EnSave, Inc., an energy efficiency consulting firm dedicated to providing agricultural energy efficiency programs and energy audits, to implement the program. Many producers in the Delmarva peninsula are familiar with EnSave's work, as the firm has completed over 300 audits in Maryland and Delaware since 2009. "We are pleased to continue our long-standing relationships in Delaware by working with the Sustainable Energy Utility on this dynamic program," says Craig Metz, EnSave CEO. "Delaware has a wonderfully close-knit agricultural community, and we are looking forward to working with these farms to save energy, save money, and reduce greenhouse gas emissions."

The program is currently accepting applications on a first-come, first-served basis. To apply for the program or to learn more, call EnSave at (800) 732-1399, or visit <http://www.energizedelaware.org/Energize-Delaware-Farm-Program/>.

EnSave is a diversified energy and environmental services company specializing in turn-key program development and implementation. Since 1991, EnSave has designed and implemented energy efficiency programs for a variety of clients including state and federal agencies, investor-owned utilities, and rural electric cooperatives. Having focused heavily on the agricultural and food processing sectors, EnSave has developed a reputation as

the leader in agricultural energy efficiency. Additionally, EnSave has a rapidly growing industrial energy auditing and sustainability consulting division.

Announcements

Free Webinars in September, Sponsored by the Mid-Atlantic Women in Agriculture

9/28: SARE Farmer Grower Grants - The goal of the USDA Northeast Sustainable Agriculture Research & Education (SARE) Farmer Grant program is to help farmers explore sustainable and innovative production and marketing practices, often through an experiment, trial, or on-farm demonstration. SARE defines sustainable practices as those that are profitable, environmentally sound, and beneficial to the wider farm community. This unique grant program funds a wide variety of on-farm projects, and has a simple application process geared towards farmers. This webinar will provide insight into this specific grant program including proposal guidelines, how to apply and tips on writing a good proposal. Note: Proposal deadlines are November 29 with awards announced in March. <http://www.nesare.org/Grants/Get-a-Grant/Farmer-Grant>

To register:

<http://www.eventbrite.com/e/wednesday-webinars-registration-11452674257>

Webinars begin at noon EST. Duration is approximately 1 hour. For optimal performance we suggest using Internet Explorer as your web browser and connecting via Ethernet connection instead of wireless (wireless will work, but a hard line is more stable)

See website for more information and other upcoming topics: <https://extension.umd.edu/womeninag/webinars>

If you do not have access to high speed internet and would like to participate in one of the above webinars, contact Tracy Wootten at wootten@udel.edu.

Cover Crops Workshop & Field Day

Thursday, September 29 8:30 a.m. - 3:00 p.m.
DSU Outreach and Research Center
884 Smyrna-Leipsic Rd., Smyrna, DE

Guest Speaker: Steve Groff

Steve Groff grows 200 acres of grain crops, 30 acres of

pumpkins, and two acres of high tunnel heirloom tomatoes in Lancaster County, PA. Each year, he oversees hundreds of replicated research plots, focusing on the economics and nutritional influence of cover crops. He is a cover crop innovator who, along with Dr. Ray Weil, was instrumental in developing the Tillage Radish® over a 10-year period.

Topics:

- How to choose the right varieties to achieve your goals
- Strategies to take cover crops to the next level
- Chance to see summer cover crops
- Information for all farmers; vegetable and grain
- Cover Cropping as part of a nutrient management plan
- And much more...

Credits: 4 CEU credits for Certified Crop Advisors
4 Delaware Nutrient Management Credits

For more information, assistance due to disabilities, or to register for this free DSU Cooperative Extension workshop, which includes lunch contact Jason Challandes: jchallandes@desu.edu, 302.388.2241

**Farm Transfer Communication Webinar
The Farm Whisperer
by David Specht**

Tuesday, November 29, 2016 7:00 p.m.

More details to follow.

For more information - contact Dan Severson – severson@udel.edu or Laurie Wolinski – lgw@udel.edu.

**Delaware Beekeepers Association’s Open
Hive Event**

Saturday, September 17, 2016 8:30 a.m.-noon
Delaware State University Outreach and Research
Center

884 Smyrna-Leipsic Road Smyrna, DE 19977

(Rain Date September 24, 2016)

Please join us for educational lectures, demonstrations and a first-hand look inside a real honeybee hive. Get

your first exposure to these important and fascinating insects!

RSVP to Kathy Hossler, DBA President, dbapresidenthossler@gmail.com

Or for more information about DSU’s beekeeping program, contact: Jason Challandes, jchallandes@desu.edu or 302-388-2241

Sponsored by Delaware Beekeepers Association, Delaware State University and Northeast SARE

<h2 style="margin: 0;">Weather Summary</h2>
Carvel Research and Education Center Georgetown, DE
Week of September 8 to September 14, 2016
Readings Taken from Midnight to Midnight
Rainfall:
no rainfall recorded
Air Temperature:
Highs ranged from 93°F on September 9 to 80°F on September 12.
Lows ranged from 77°F on September 9 to 57°F on September 13
Soil Temperature:
77.3°F average
Additional Delaware weather data is available at http://www.deos.udel.edu/monthly_retrieval.html and http://www.rec.udel.edu/TopLevel/Weather.htm

Weekly Crop Update is compiled and edited by Emmalea Ernest, Associate Scientist - Vegetable Crops

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