

The Blueberry Bulletin

A Weekly Update to Growers

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- ❖ Visit the Blueberry Bulletin webpage at njaes.rutgers.edu/blueberry-bulletin
- ❖ The 2024 Commercial Blueberry Pest Control Recommendations for New Jersey is available on <https://njaes.rutgers.edu/pubs/>

BLUEBERRY CULTURE

Dr. Gary C. Pavlis, Ph.D , Atlantic County Agriculture Agent

Field visits this week have come up with a few things to discuss. First, it appears pollination was not as good as we had hoped. I saw many green berries which still had the dead corollas attached. When pollination is optimum, the corollas drop to the ground while they are still white. I believe the erratic weather we have experienced reduced the honeybee activity. This may result in smaller berries and a somewhat smaller crop.

I also noticed on Wednesday that new growth was flagging which indicates water stress. Storms are forecasted on Thursday so hopefully we will get enough water to remedy the situation however if that is not the case in your particular area, irrigation is warranted. Water uptake by the blueberry plant is at a maximum at this time because of plant growth and fruit sizing.

Lastly, growers may notice that the new growth is lighter green than the rest of the plant. This may be interpreted that an application of nitrogen is warranted however that is usually not the case. Given a little time this growth will green up. The growth is just happening faster than the uptake of nutrients.



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Atlantic County Agricultural Agent

PEST MANAGEMENT

Dr. Cesar Rodriguez-Saona, Extension Specialist in Blueberry Entomology, Rutgers University

Dr. Janine Spies, IPM Agent – Fruit

Carrie Mansue, Senior Program Coordinator

During the week of May 13th-17th, 149 fields were scouted throughout Burlington and Atlantic Counties.

Leafrollers (LR), Spongy Moth (SM), and Plum Curculio (PC). The numbers of caterpillars (LR and SM) were minimal in the beating tray sampling. The majority of caterpillars found on the beating tray sampling were Green Fruitworms. Plum Curculio (PC) activity has decreased this week, with an average count of 0.04 PC per bush for the week and a maximum count of .80 per field site.

Week Ending	LR/Tray		SM/Tray		PC/Tray		Thrips/Tray	
	Average	Maximum	Average	Maximum	Average	Maximum	Average	Maximum
4/6	.	.	.	.	.	.	.	.
4/13	.	.	.	.	.	.	.	.
4/19	0.01	0.2	0.006	0.2	0.03	0.3	.	.
4/26	0.02	0.3	0.01	0.2	0.03	0.5	0	0
5/4	0.06	0.4	0.008	0.4	0.11	1.1	0.05	4
5/11	0.06	0.4	0.005	0.2	0.10	3	0.41	8
5/17	0.04	1.0	0.002	0.10	0.04	0.80	0.58	1

LR = Leafrollers, SM = Spongy Moth, PC = Plum Curculio

% injury to infested fruit. This week, scouting observations included percent injury to developing berries. Significant injury to the berries from LR and PC was noted. Scarring from both old and new PC injury was recorded.

Week Ending	% Injury of Fruit by LR		% Injury of Fruit by PC	
	Average	Maximum	Average	Maximum
5/11	0.17	3.9	0.80	12.7
5/17	0.23	3.0	1.25	13.20

LR = Leafroller, PC = Plum Curculio

Cranberry Fruitworm (CBFW) and Cherry Fruitworm (CFW). Traps for CBFW and CFW were inspected this past week. There has been a notable decrease in the number of moths entering fields, particularly for CFW in Atlantic (AC) and Burlington Counties (BC).

Week Ending	CBFW Traps				CFW Traps			
	AC AVG	AC Max	BC AVG	BC Max	AC AVG	AC Max	BC AVG	BC MAX
4/19	0	0	0	0	0.44	2	0	0
4/26	0.4	3	1	2	0.1	1	0	0
5/4	0	0	0	0	12.1	25	9.5	14
5/11	0	0	0	0	17.25	44	20	24
5/17	0.031	1	0	0	2.25	4	8.25	14

AC = Atlantic County, BC = Burlington County, CBFW = Cranberry Fruitworm, CFW = Cherry Fruitworm

Scale Traps. Scale traps were inspected this week. There were no signs of scale activity, and no crawlers were detected at this time.

Aphids: In the coming weeks we will be scouting for aphids on the lower shoots of the plants.

Oriental Beetle (OB)

Life cycle. OB completes a single generation per year. Adults (Fig. 1) start to emerge in early June, and flight peaks in early July. Females lay eggs in the soil at the base of bushes. Most larvae reach first and second instars by the end of July. Third-instars (Fig. 1) appear by the end of August, they remain in the soil during winter, resume feeding the following spring, and enter the pre-pupal stage in late May.



Fig. 1. Oriental beetle adult (left) and larva (right). Photo credit: Robert Holdcraft.

Monitoring. Japanese beetle sex pheromone traps (Trécé, Adair, OK), baited with septalures containing the sex pheromone are used to monitor OB populations and initiation of male flight (Fig. 2).

Fig. 2. Japanese beetle trap used for monitoring OB populations. Photo credit: Robert Holdcraft.



Control. Imidacloprid is recommended for managing OB grubs infesting blueberries in New Jersey. Several formulations are available, including Admire Pro, Alias, Nuprid, Couraze, and others. Imidacloprid is most effective when targeted against early instar grubs.

It should be applied from June to mid-July, at least 7 days before the first picking, or used as a post-harvest material. Grubs should be targeted at their youngest stage or as they hatch and are in the 1st and 2nd instars, while still close to the soil surface. Imidacloprid has little effect on 3rd instars and older larvae. Older 3rd instars start to appear by early to mid-August. Therefore, applications should be made well in advance of that date. Applications will degrade if exposed to the sun, so imidacloprid should be immediately irrigated into the soil to form a layer of insecticide just below the soil surface. Imidacloprid has a long residual activity (>100 days) as long as the insecticide is not directly exposed to the sun. If Duke picks by the 2nd-3rd week of June, then application should be conducted during the 1st-2nd week of June or after harvest, between mid to the end of July. Applications for Bluecrop are recommended 7 days before the first picking, in mid- to late-June. Similarly, applications for late-season varieties like Elliott should be conducted no later than the end of July. Imidacloprid is most effective when applied as eggs hatch and grubs are still near the soil surface. Please read and follow all the conditions and restrictions on the container label for these insecticides. Remember to irrigate the field with at least 0.5 to 1 inch of water immediately after application. If the soil is dry, then water just prior to application. Begin applications late in the evening because this insecticide is sensitive to breakdown by UV radiation. No more than one application of Imidacloprid can be used per season.

OB Mating Disruption

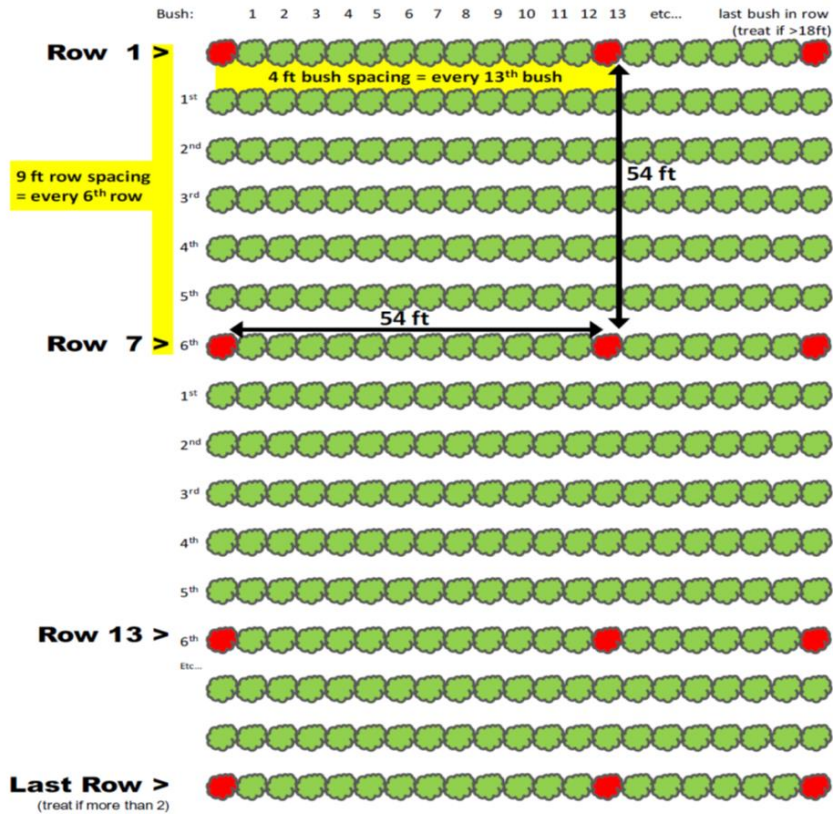
As an alternative to insecticides, we recommend the use of mating disruption for oriental beetle control. Dispensers (Fig. 3), containing the OB sex pheromone, are available to growers. These dispensers should be placed at the time of OB adult emergence, i.e., by early June. They are being sold by AgBio:

Mr. Jan Meneley, Ph.D.
AgBio Inc.
9915 Raleigh St.
Westminster, CO 80031
www.agbio-inc.com
ph 303-469-9221
fx 303-469-9598

To use, simply attach the dispensers to a lower blueberry branch at a density of 20-40 dispensers per acre in a grid pattern, depending on the size of the area to be treated. Please see label for information on restrictions, spacing, timing, etc. at <http://www.agbio-inc.com/oriental-beetle-md-label.html>. Below are instructions on how to space the disruptors through blueberry fields (red dots represent the dispensers).



Fig. 3. Retrievable AgBio dispensers. Photo credit: Robert Holdcraft.



SCOUTING REPORT FOR DISEASES

During the week of May 17th, scouting was conducted in 149 blueberry fields to evaluate disease presence. Observations revealed minimal instances of Phomopsis twig blight and Botrytis blossom blight.