

Representing all Blueberry Growers in N.C.
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Highbush Blueberry Council, Lewis & Neal promote consumption with unique marketing concepts

By Susie Cable

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The U.S. Highbush Blueberry Council, Folsom, Calif., works with communications agency Lewis & Neale Inc., New York, to encourage blueberry consumption.

This summer, the council and the agency are working on multiple promotions designed to reach a broad base of consumers through schools, media and other channels.

During the week of July 12, the council announced its sponsorship of the School Nutrition Association's National School Breakfast Week 2011, said Ruth Lowenberg, senior vice president of Lewis & Neale and a spokeswoman for the council.

The School Breakfast Detectives-themed campaign will run from January to March, and will culminate in National School Breakfast Week in March. The week's menu lists pancakes with blueberry topping.

Frozen blueberries are a U.S. Department of Agriculture commodity item that's available at low cost to schools participating in the National School Lunch Program, sponsorship of the Breakfast Week is an opportunity to encourage school food service managers to use more of them.

The agency and council piloted a program with seven schools in the Los Angeles Unified School District to encourage foodservice managers to use more blueberries.

As part of the program, children took home a

council brochure, "Get On Board with Blueberries," which featured child-friendly recipes, games and information, said Kathy Blake, associate vice president of Lewis & Neale and a council spokeswoman.

Blake said they also work with university foodservice directors to develop ways to use more blueberries on their menus.

Mark Villata, the council's executive director, said

another pilot program involved donating blueberry bushes to elementary schools in March and April. Lowenberg said 20 schools received a bush from a local grower who provided planting instructions and other information.

Web promos

Villata said *EatingWell* magazine's website,

www.eatingwell.com, is one forum the council uses to reach consumers who are interested in being healthy.

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The site has more than 700,000 unique visitors per month, he said.

The council sponsored an EatingWell blueberry advertorial that includes serving suggestions and nutritional information.

The advertorial contains a link to the council's own website, www.blueberrycouncil.org. In June, the council's website had more than 17,000 unique visitors, Lowenberg said. In mid-July, she predicted July's number of visitors would be closer to 20,000.

The council also placed banner advertisements in six *EatingWell* electronic newsletters, Villata said. There also is an editorial piece on the *EatingWell* webpage "Blueberries Healthy Food Guide" with nutritional information, shopping and storage tips, and recipes.

Social media sites Facebook and Twitter deliver the blueberry message to other audiences. The council's Facebook page (<http://bit.ly/facebookblueberries>) had been "liked" by nearly 7,800 people as of mid-July. The site contains recipes, photos and links to the council's website, where visitors can enter recipe contests.

The July contest, Kids-Love-Blueberries Recipe Contest, offers a \$500 first-place prize and five \$250 runners-up prizes for simple kid-friendly recipes. Another contest is planned for September, but the theme hadn't been determined as of mid-July, Lowenberg said.

The council's Twitter account, blueberry411, had about 1,200 followers as of mid-July. The recipe contests also are announced on Twitter. "We're trying to create a buzz in social media through a variety of ways," Lowenberg said.

Traditional media

In late May, the council distributed a summer press kit to about 800 lifestyle and food editors at newspapers throughout the U.S., Blake said. The kit contained a CD-ROM with blueberry resources for journalists, including recipes and a photo library.

The CD is updated annually with new recipes, information and photos, Lowenberg said. By July, there had been 150 related placements in print versions of newspapers. "We expect 10 (million) to 15 million

impressions from one press kit," she said.

The council also is a sponsor of a television and radio media tour of 11 major metropolitan areas, including Minneapolis, Chicago, Phoenix and Denver.

The theme for the tour is "Lighten up Your Summertime BBQ," Lowenberg said. A pair of registered dietitians goes on air to prepare barbecue-themed recipes, including a blueberry parfait. Lewis & Neale does press outreach year-round on behalf of the council, Blake said.

Foodservice

The council recently started a promotion with McCormick & Schmick's seafood restaurants, Villata said. The 88-unit chain from through Sept. 30 features a blueberry cocktail and blueberry cheesecake as seasonal specials, Blake said. The council's logo is on table tent signs advertising the items and on menu inserts.

Lewis & Neale also works on behalf of the council with dining services companies such as New York-based Restaurant Associates, a subsidiary of foodservice company Compass Group, The Americas Division, Lowenberg said.

Restaurant Associates operates corporate and educational cafeterias in major metropolitan areas, including those at the Washington, D.C.-based The World Bank Group, New York-based Morgan Stanley, and the U.S. House of Representatives in Washington, D.C., Blake said.

The agency also worked with dining services company CulinArt Inc., Plainview, N.Y., to get blueberries onto menus for about 125 business or education facilities across the country, Blake said. CulinArt celebrated July as Blueberry Month by adding blueberry items to its menus, Lowenberg said.

The council is a mandated national research and promotion program for the U.S. blueberry industry. In addition to promoting blueberries directly to consumers, it also targets promotions to the export market and to food manufacturers, Villata said.

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Berries Unlimited Announces USDA Release of Re-Fruiting 'Sweetheart'

Prairie Grove, AR (Vocus) August 31, 2010

Berry lovers who think only one harvest a year just isn't enough have a new plant to swoon over courtesy of the recent release of the "Sweetheart." "This new super blueberry delivers outstanding flavor, very good firmness and excellent productivity with large fruits," said Lidia Shakhova, a propagator at Berries Unlimited.

"These blueberry plants yield as much as 25 percent more than the Duke. This equates to roughly 15 pounds, per bush, per year."

The Sweetheart variety of blueberry plants is the culmination of a decade's work on the part of the U.S. Department of Agriculture's Research, Education and Economics Research Service. The plant's grandfather is the Patriot berry and it is suitable for growth in a number of zones. These blueberry plants are a cross between Northern and Southern high bushes. At this time, Berries Unlimited recommends growth zones that fall approximately between Zones 4 and 8. While Berries Unlimited does have quite an inventory of Sweethearts, Shakhova doesn't expect it will last long.

"When people find out that this exciting new super blueberry is finally on the market, they will flock to get their hands on it so they can enjoy not one, but two harvests a year," she explained.

"Considering this, we are limiting customers to six plants per order on a first-come, first-served basis. Don't worry though; we will have tissue cultured blueberry bushes available in spring 2011."

To order the new Sweetheart, just visit Berries Unlimited online at www.berriesunlimited.com. Customers can place orders directly on the company's website for delivery to their homes.



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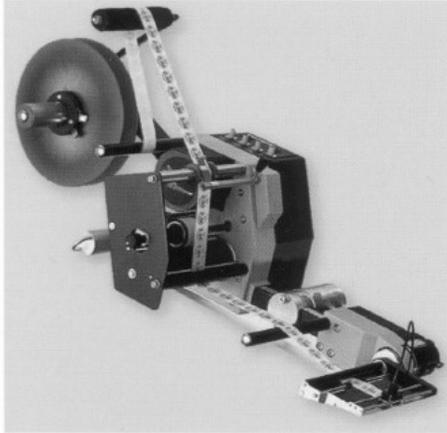
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ALERT FROM NABC

The Alliance for Food and Farming is a non-profit organization made up of farmers and farm groups from throughout the United States of which the North American Blueberry Council (NABC) is a member. The mission of the Alliance for Food and Farming is to provide a voice for farmers to communicate their commitment to food safety and care for the land.

The Alliance for Food and Farming was formed in 1989 and currently has a membership of approximately 50 farmers or farm groups who represent producers of U.S. fruit, vegetable and other specialty crops. The membership includes a wide range of operations from very large to very small and farmers who incorporate a wide range of farming methods including conventional and organic. More information about the Alliance can be found on their website at:

<http://www.foodandfarming.info/>

To ensure their products are as safe as pos-

sible and in response to the Environmental Working Group “Dirty Dozen” list, the Alliance has commissioned a comprehensive study titled “Review of the Potential Health Effects of Pesticide Residues on Food”. A panel of five scientists with expertise in toxicology, nutrition and risk assessment were involved in this review. As noted by the Alliance, “Their findings conclude that the Dirty Dozen list is an impediment to good health because it discourages consumption of fruits and vegetables; the list is misleading to consumers; and there is no scientific evidence the levels of pesticide residues found on produce pose a health risk”.

The Alliance has established a new website dealing with this issue and where you can read the full report and obtain more information on this important issue. We suggest that you visit their website at:

www.safefruitsandveggies.com

Source: North American Blueberry Council

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Going rates

Retail prices for blueberries per pint in eighty markets across the United States averaged \$3.06 in mid-August. Prices were averaged from four grocery chains.

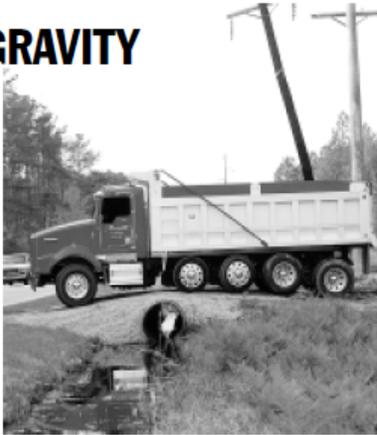
- Seattle: \$3.62 avg (\$4.99 high; \$2.50 low)
- Los Angeles: \$3.49 avg (\$3.99 high; \$2.99 low)
- Dallas: \$3.37 avg (\$4.99 high; \$2.50 low)
- Detroit: \$1.92 avg (\$2.50 high; \$1.50 low)
- Chicago: \$2.75 avg \$3.00 high; \$2.00 low)
- Atlanta: \$3.49 avg (\$4.99 high; \$2.48 low)
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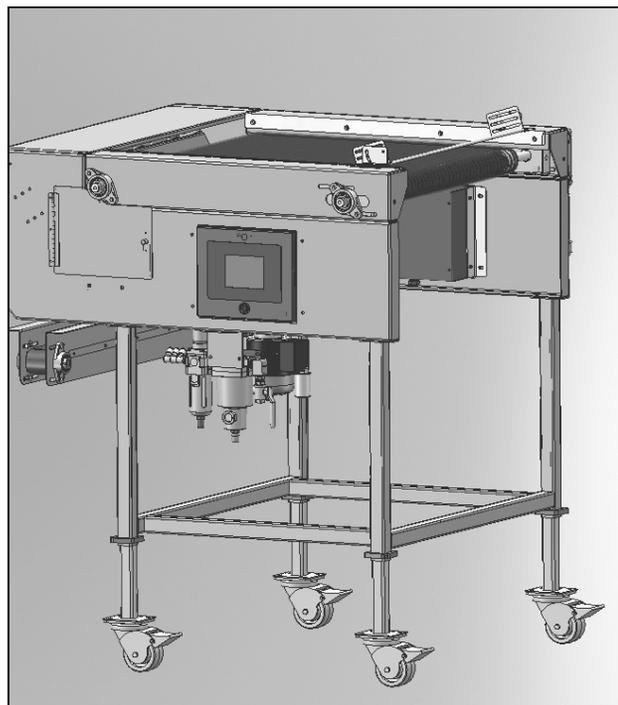
WECO Sorting and Automation has completed a very successful field trial over the last several months of the new IMPULSE Soft Sorter for blueberry packing, and is now offering the low-cost, small footprint sorter for the upcoming season.

The IMPULSE Soft Sorter uses a series of 40 dynamic inline sensors that detect soft, over-ripe and damaged blueberries. The new IMPULSE SOFT SORTER introduces a brand new sensing technology that are made with a durable FDA approved, antimicrobial polymer that requires no special care, can be scrubbed and washed daily.

The IMPULSE is a standalone unit or can be used in conjunction with the BerryTek two-view optical sorter, giving packers multiple levels of sorting.

Combining both the IMPULSE and the BerryTek allows for the berries to be viewed three times for soft and two times for color in one pass dramatically reducing the need for human handling of the fruit. The BerryTek is still the only two view sorter for fresh market packers that see two sides of the berry at the same time.

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portant topics in the berry industry. WECO is proud to be at the forefront of technology innovation, helping our customers reduce labor cost and increase pack out quality.

Video of the new sorter can be viewed at www.wecotek.com

Results & Discussion

A total of 3 flies (2 males and 1 female) were captured at all southeastern sites. (Table 1) A total of 165 flies were captured at our western NC validation site, which suggests that our monitoring methods were effective. Pesticide records for cooperating growers are still being compiled, but those collected to date report 3-4 malathion applications (Sites 4, 5, 6, and 9) or no pesticide applications (Sites 13, 14, and 15). One *R. mendax* fly was captured at Site 5 on May 21st, the day before malathion applications began at this location. The fly captures at Sites 2 and 12 both occurred on July 14th. Trap captures at Site 15 began on June 14th and are ongoing as of July 21st.

Scheduled aerial applications of malathion have been the standard management method for *R. mendax* in southeastern NC since at least 1999. Because of the concentrated blueberry acreage and uniform management practices, growers in this area have engaged in a de facto area wide control program for *R. mendax*. This management strategy has been extremely effective in reducing the populations of *R. mendax* to below detectable levels in most fields. There is now potential to more judiciously time pesticide applications in light of the lower fly populations. There is also rising concern about the use of organophosphate insecticides in fruit production and increasing interest in alternative management methods.

Site	Size (acres)	County	Number of traps	Weeks observed	Total <i>R. mendax</i> captured
1	270	Bladen	20	12	0
2	300	Bladen	26	13	1
3	40	Bladen	5	13	0
4	73	Bladen	9	13	0
5	153	Bladen	13	13	1
6	55	Bladen	7	13	0
7	27	Bladen	5	11	0
8	80	Bladen	9	12	0
9	165	Bladen	13	13	0
10	80	Pender	9	12	0
11	30	Pender	5	10	0
12	220	Pender	16	13	1
13	65	Pender*	9	11	0
14	1	NewHanover*	3	13	0
Total	1559		149		3
15 (validation site)	5	Rockingham*	4	8	165

* No insecticides applied during trapping period

Future Directions

In 2011, we plan to do the following:

1. Conduct pilot scale testing of the IPM method with interested grower cooperators
2. Begin to identify possible non target impacts & benefits of pesticide applications for *R. mendax*

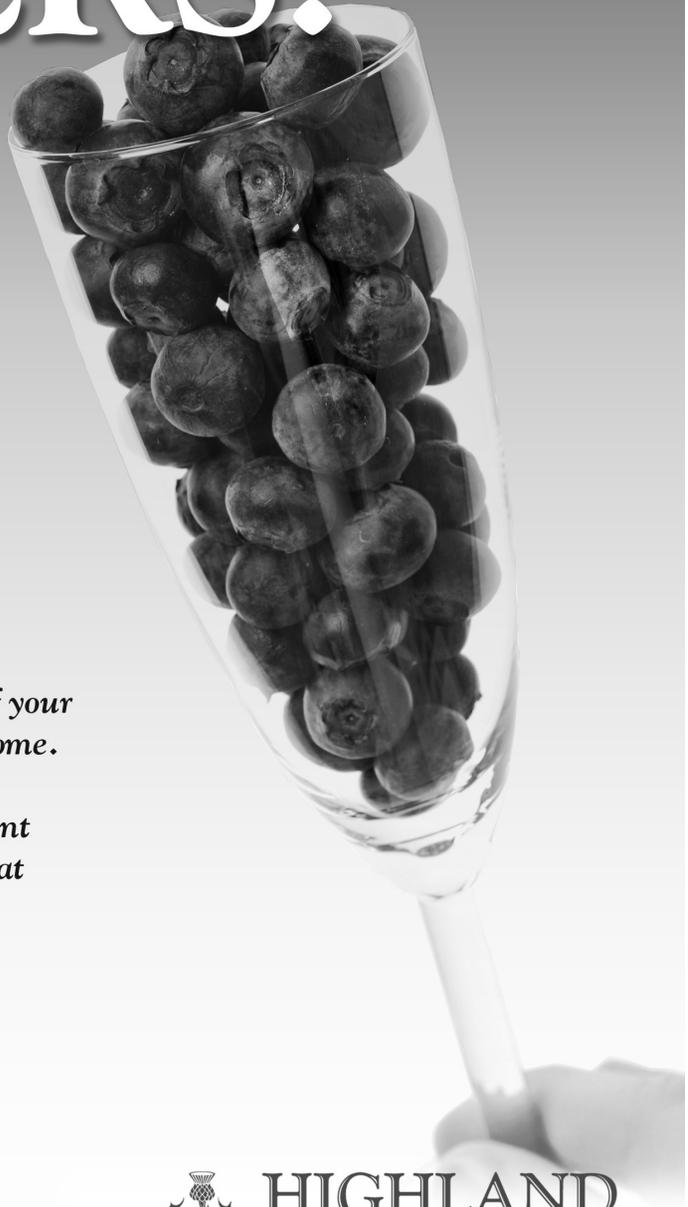
Implementation of a monitoring based management program (IPM control program) for *R. mendax* in North Carolina blueberries has the potential to greatly reduce pesticide applications compared to the calendar program. Calendar based insecticide applications, particularly broad spectrum materials, may also be impacting insects other than *R. mendax*, including sharp nosed leafhoppers (*Scaphytopius magdalenensis*), plum curculio (*Conotrachelus nenuphar*), blueberry flea beetle (*Altica sylvia*), Japanese beetles (*Papillia japonica*), leafroller caterpillars, and whiteflies (Aleyrodidae).

Acknowledgements: This project was conducted with the generous support of the North Carolina Blueberry Council, Inc. We also thank the blueberry growers who allowed access to their farms for monitoring efforts.

Contact: Hannah J. Burrack, Asst. Professor & Extension Specialist, Dept. of Entomology, North Carolina State University, Research Annex West, Campus Box 7630, Raleigh, NC 27695-7630, Office 919-513-4344 Cell 919-208-7494, Blog: www.ncsmallfruitsipm.blogspot.com

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Rethinking blueberry maggot (*Rhagoletis mendax*) distribution and abundance in North Carolina: When area wide management is unintentional

Hannah J. Burrack and Kevin E. Littlejohn, Department of Entomology, North Carolina State University

Background

Blueberry maggot

Blueberry maggot (*Rhagoletis mendax*) is a potentially severe pest of blueberries throughout the eastern United States, and North Carolina is no exception. *R. mendax* has the potential to survive and reproduce throughout NC, but its current distribution has not been recently studied. *R. mendax* management relies primarily on aerial applications of insecticides, primarily malathion. Growers typically make 3 to 5 applications of malathion per field per season.

Blueberry production in NC

Blueberries are grown on an estimated 6,075 acres in NC, the majority of which are in Bladen, Duplin, Pender, and Sampson Counties in the southeastern part of the state. Field size in this area ranges from approximately 40 acres to over 500 acres. A single field often includes several varieties, both southern highbush and rabbiteye. Fruit susceptible to *R. mendax* infestation are available from mid May through the end of July.

Canadian quarantine

A portion of the wholesale marketed blueberries grown in NC are shipped to Canada, and therefore, are subject to quarantine regulations for *R. mendax*, because the fly is not present in all Canadian blueberry growing regions. Virtually all of NC blueberry growers who export a portion of their crop treat **all** of it for *R. mendax* to ensure they meet Canadian import requirement. The Canadian Food Inspection Agency document, "D-02-04: Phytosanitary requirements for the importation from the continental United States and for domestic movement of commodities regulated for blueberry maggot" (<http://www.inspection.gc.ca/english/plaveg/protect/dir/d-02-04e.shtml>) details on-farm management and product inspection protocols for blueberries to be imported to Canada. The Blueberry Certification Program (BCP) governed by this document has been in place since 1999. The phytosanitary protocol specifies two *R. mendax* management strategies, the Calendar method and the IPM method:

Calendar method	IPM method
Chemical treatment (any registered/recommended insecticide for <i>R. mendax</i>) begins at 1 st trap capture in the area and continues every 7-10 days through the end of harvest	Chemical treatment begins at first trap capture at the farm and is repeated 7-10 days later. Treatment continues only if additional flies are caught.

The North Carolina Department of Agriculture & Consumer Services (NCDA &CS) certifies blueberries for export to Canada. To date, no NC grower has been certified using the IPM method.

Purpose

NCDA & CS does not monitor for *R. mendax* in southeastern NC because **no flies have been caught for at least 5 years** and no farms have had maggots in sampled fruit. Calendar program treatment dates are based on a historic 1st trap capture date of May 20th. A preliminary monitoring program conducted by our laboratory in 2008 also captured no *R. mendax* in 4 trap types deployed (Rebel, AM-NB, AM + ammonium bicarbonate, and McPhail). This program included 2 locations, one with a history of *R. mendax* captures and one abandoned planting for which the history was unknown.

The purpose of our current project is:

1. To establish a monitoring program for *R. mendax* in the main blueberry producing counties and determine population densities
2. To relate pesticide applications to *R. mendax* trap captures
3. To determine the feasibility of the IPM method for NC blueberry growers

Long term goals

The long term goal of this project are:

1. To implement biologically based management programs for *R. mendax*
2. To reduce pesticide applications for *R. mendax*

Methods

Fourteen (14) trapping locations were established in southeastern NC (Figure 1a). Our monitoring program covered 1,559 acres in total, 25% of the total blueberry acreage in NC. We also established a validation trapping site (Site 15) in western NC at a location with a history of high *R. mendax* populations to ensure that our monitoring methods were effective. Sites 13, 14, and 15 received no insecticide applications during the monitoring period. All other locations followed the Calendar method and began aerial applications of malathion during the week of May 17th.

Pherocon AM-NB traps (Figure 2) and external ammonium bicarbonate food lures were randomly distributed throughout each site along accessible pathways (Figure 1b). Traps were placed in a v-shape with the opening upward and in the upper 3rd of fruiting bushes. Each trap was checked weekly, and lures were replaced. Any traps containing *R. mendax* were removed and returned to the laboratory. If no *R. mendax* were caught, traps were changed every 4 weeks or when soiled.

The number of traps per site was determined by following the recommended trap density required by the Canadian BCP (adapted from D-02-04):

Monitored Area (acres)	Number of Traps
5 or less	3
6-15	4
16-40	2
41-70	7
71-100	9
over 100	9 + 1 trap for every additional 15 acres

Data were entered in a Google Documents spreadsheet and the resulting chart was published as a webpage (Figure 3). This allowed for real-time data sharing with grower cooperators, NCDA & CS, and other interested parties (Figure 4).

Fruit (20 berries per trap) were collected from plants containing or adjacent to each trap on June 17th at Sites 1-14. These fruit were dissected to check for *R. mendax* larvae, and no larvae were found.

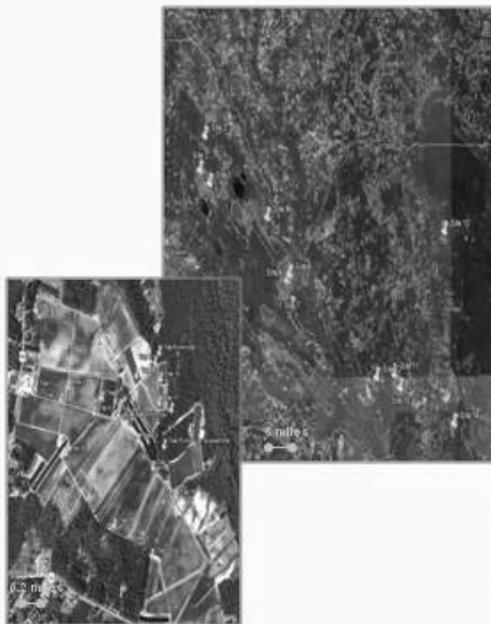


Figure 1a (top). Trapping locations. Blue areas indicate known blueberry fields. Figure 1b (bottom). Trap arrangement at Site 1. At least 10% of the traps at each location were placed outside of the blueberry field, indicated as "non crop".



Figure 2. Pherocon AM trap at Site 15 in Rockingham County, NC and *R. mendax* on a trap from this location.

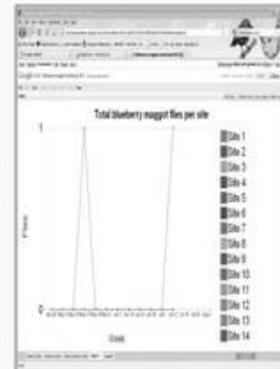


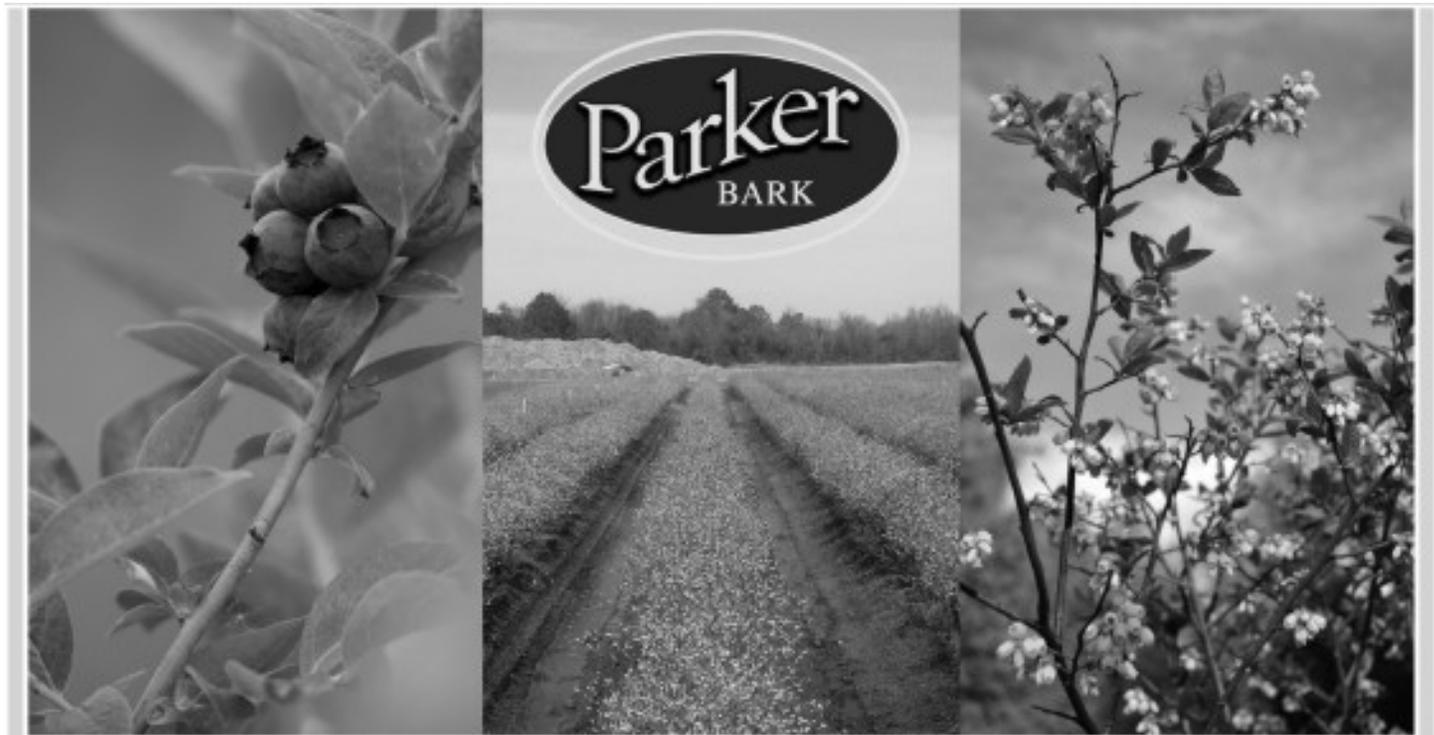
Figure 3. *R. mendax* trapping data as displayed in published Google chart.



Figure 4. *R. mendax* trap captures posted as part of a blog entry at NC Small Fruits, Specialty Crop, and Tobacco IPM, written by Hannah Burrack



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