RUTGERS COOPERATIVE RESEARCH & EXTENSION AT THE NEW JERSEY AGRICULTURAL EXPERIMENT STATION

PLANT & PEST ADVISORY

FRUIT EDITION $1.50 MAY 10, 2005

INSIDE

Canada Goose Management Options for Grounds Managers

Joseph B. Paulin, Program Associate in Wildlife Management

There are a wide variety of non-lethal and lethal options available to grounds managers for Canada goose management. Each option has associated advantages, disadvantages, and costs. Please keep in mind that each particular situation where conflict exists between people and geese is unique and usually involves the integration of more than one management option. More importantly, resolution of the conflict often requires support from residents of the community where the problem is occurring. The following will discuss the differences between migratory and resident Canada geese and specific management options available to grounds managers. For more complete information on each option including associated advantages, disadvantages, costs, materials suppliers, and when necessary, permitting information, visit the Rutgers Cooperative Research and Extension website at www.rcre.rutgers.edu, click on extension, then publications, then natural resources and the environment, and then wildlife.

Migratory vs. Resident Canada Geese

Two distinct populations of Canada geese can be found in New Jersey and throughout the continental United States. 1) ***Migratory Canada geese*** nest in localized areas throughout Canada, Newfoundland, Labrador, and Alaska and migrate annually to winter in the continental United States with some reaching as far south as northern Mexico. 2) ***Resident Canada geese*** nest and/or reside predominantly within the continental United States and typically do not migrate to annual wintering grounds. As the name suggests, they are usually permanent residents of the area in which they are found. In New Jersey, negative impacts are often attributed primarily to the resident Canada goose population. *Both migratory and resident Canada geese are legally considered migratory waterfowl and are afforded protection under the Migratory Bird Treaty Act*. (For more information see: Drake, D. and J. B. Paulin. 2003. FS1024. *"A Goose is a Goose? Identifying Differences Between Migratory and Resident Canada Geese."* Rutgers University, Rutgers Cooperative Research and Extension).

Modifying Human Behavior

Preventing people from feeding geese and other waterfowl is one of the most important steps in alleviating goose damage problems. An

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ordinance should be passed that prohibits the feeding of all wildlife. Ideally, a county-wide ordinance should be enacted to ensure consistency across municipal boundaries. However, when writing the ordinance, make sure that it is worded in a way that will not prohibit feeding backyard birds such as songbirds, and woodpeckers. Signs prohibiting the feeding of waterfowl should be posted in plain view in areas where Canada geese are present. As people often ignore these signs, it will be extremely important that the ordinance is enforced to ensure effectiveness. This will involve warning as well as ticketing violators. (For more information see: Drake, D. and J. B. Paulin. 2004. FS1028. *"Canada goose Management Series: Modifying human behavior."* Rutgers University, Rutgers Cooperative Research and Extension).

Exclusion

Exclusion techniques such as fencing or overhead grids utilizing Mylar tape can be effective management tools for reducing or eliminating Canada goose damage to residential and commercial landscaping, agricultural crops, recreation areas, golf courses, and water bodies. (For more information see: Drake, D. and J. B. Paulin. 2003. FS1025 *"Canada goose Management Series: Exclusion."* Rutgers University, Rutgers Cooperative Research and Extension).

Repellents

When applying Canada goose repellents, all manufacturers' suggested guidelines should be followed. Most repellents for Canada geese are taste-based and are intended to decrease goose feeding by reducing palatability of the treated vegetation. Taste-based repellents typically contain the active ingredient methyl anthranilate or anthraquinone. Both ingredients are registered with the United States Environmental Protection Agency as Canada goose taste-based repellents. Products with names like RejeX-itã, Bird Shieldêø, and Goose Chase utilize methyl anthranilate as an active ingredient. Anthraquinone is the active ingredient in the product Flight Controlã. (For more information see: Drake, D. and J. B. Paulin. 2004. FS1031. *"Canada goose Management Series: Repellents."* Rutgers University, Rutgers Cooperative Research and Extension).

Habitat Modification

Populations of Canada geese can cause serious problems when congregating in mowed areas such as private lawns, recreational and industrial parks, athletic fields, cemeteries, and golf courses. Habitat modification involves changing the landscape where geese reside in a manner that alters the patterns of goose movement and decreases food availability, thereby reducing or eliminating the number of geese present. This technique usually involves elimination or modification of vegetation, planting of nonpalatable ("goose-resistant") species, or creating cover or foraging areas to draw geese away from specific areas. Modifying a small area of habitat to ensure satisfaction prior to implementing a large-scale modification is recommended. (For more information see: Paulin, J. B. and D. Drake. 2003. FS1026 *"Canada goose Management Series: Habitat Modification."* Rutgers University, Rutgers Cooperative Research and Extension).

Harassment

Harassment techniques such as pyrotechnics, propane cannons, properly trained dogs, and visual deterrents such as flagging and Mylar "eye-scare" balloons can be effective in deterring Canada geese from entering a particular area. Success of the technique utilized will vary depending upon location, size of the property, size of the goose population, time of year, and vigilance with which the harassment technique is implemented. No state or federal permits are required to use harassment techniques provided geese are not handled, harmed, or killed. However, in New Jersey, a state permit is required to operate a propane cannon on agricultural land (contact the New Jersey Division of Fish and Wildlife to obtain a permit). Furthermore, noise ordinances may exist in certain municipalities. Prior to employing a noise-making device, check with your local police or municipal officials.

Nest and Egg Destruction

It is illegal to possess or physically contact goose nests or eggs under the Migratory Bird Treaty Act without a federal depredation permit. Special Canada goose permit applications can be obtained from the United States Department of Agriculture Animal and Plant Health Inspection Service-Wildlife Services [(USDA-APHIS-WS) 908-735-5654] or the United States Fish and Wildlife Service (http:// forms.fws.gov/3-200-67.pdf). You must have a copy of the permit on your person when engaging in nest and egg destruction. Nest and egg destruction is used to prevent goslings from hatching out and increasing local goose populations. (For more information see: Paulin, J. B. and D. Drake. 2004. FS1030. *"Canada goose Management Series: Nest and Egg Destruction."* Rutgers University, Rutgers Cooperative Research and Extension).

Capture and Euthanasia

It is necessary to secure and have on your person a federal depredation permit in order to capture and euthanize geese. Special Canada goose permit applications can be obtained from the United States Department of Agriculture-Animal and Plant Health Inspection Service-Wildlife Services [(USDA-APHISWS) 908-735-5654] and the United States Fish and Wildlife Service (http://forms.fws.gov/3-200-67.pdf). Capture and euthanasia involves trapping and euthanizing captured geese according to methods approved by the American Veterinary Medical Association (AVMA). An example of a commonly used AVMA-approved method is a carbon

SEE CAPTURE ON PAGE 3

Fruit IPM

Dean Polk, Fruit IPM Agent and David Schmitt and Eugene Rizio, Program Associates in Tree Fruit IPM

Peach

✔ **Oriental Fruit Moth (OFM):** According to the Skybit degree day accumulations, spray dates for the first generation are as follows, revised since last week:

County / Region	1st Spray Date	2nd Spray Date
Gloucester – Southern	past	5/14-16
Monmouth – Central	past	5/15-17
Hunterdon - Northern	5/7-8	5/18-19

✔ **Green Peach Aphid (GPA):** The first noticeable colonies were found in southern orchards last week. Aphids are below treatment threshold in peaches, but growers should not tolerate more than 1 colony/tree in nectarines. Please see last newsletter for treatment options.

✔ **Stink Bugs and Other Catfacing Insects:** Some plant bug activity is present but levels are low in most orchards. These pests will become more of an issue as temperatures warm and mowing and other ground cover activities become more common. General spray timing at this time of year should still be targeted for **Oriental Fruit Moth.**

Apple

✔ **Apple Scab and Cedar Apple Rust (CAR):** Primary scab infections are still possible as we pass through the peak spore discharge. CAR galls are still being found on wild cedar trees. Therefore, sporulation and spread of the disease into neighboring apple orchards is still a concern. Growers should maintain the use of materials effective for CAR control.

✔ **Fire Blight:** Blossom sprays using antibiotics should be applied on a 3-7 day schedule or anytime temperatures are 65° F or above and the relative humidity is 60% or above. Refer to the production guide for recommended materials and rates.

✔ **European Apple Sawfly (EAS) and Plum Curculio (PC):** In years such as this when bloom is prolonged, significant EAS damage can occur. In orchards where sawfly has been a problem, it is important to apply an effective insecticide as soon as possible after the bloom is off. PC adults are present in orchards at bloom and will begin to cause injury sometime after petal fall. PC egg laying activity usually begins about early to mid-May (see scouting calendar below), and lasts into mid to late June.

Blueberry

✔ **Leafrollers and Other Lep. Larvae:** Various species of worm larvae have been seen in our samples this week. The majority of these have been **Gypsy moth** with a few **spanworms** and **redbanded leafroller** larvae. Very little feeding injury has been seen to date. About 36% of all samples show low levels of larvae. Typical level being seen is 1 or 2 per 1000 clusters, or well below treatment levels.

✔ **Thrips:** Only 2 thrips have been seen through the week. Extensive searching under warm conditions on May 9 revealed no activity among hundreds of open flowers. Of the 2 seen, 1 was in the larval stage. Some curled and crinkled leaves were also seen in expanding shoot tips in Duke plantings, but no thrips were present.

See IPM on page 4

Capture from page 2

dioxide gas chamber. (For more information see: Paulin, J. B. and D. Drake. 2004. FS1029 *"Canada goose Management Series: Capture and Euthanasia."* Rutgers University, Rutgers Cooperative Research and Extension).

Additional Sources Of Information Available Through Rutgers Cooperative Research And Extension

Note: Many of the Rutgers Cooperative Research and Extension Factsheets and Publications mentioned above and below are available through county Extension offices or on the web at:

http://www.rcre.rutgers.edu/pubs/ under Natural Resources and the Environment.

Drake, D. and J. B. Paulin. 2003. FS1027. *"Positive benefits and negative impacts of Canada geese."* Rutgers University, Rutgers Cooperative Research and Extension

Paulin, J. B., D. Drake and J. L. Bucknall. 2003. FS1017. *"Regulations Governing the Management of New Jersey wildlife."* 4pp. Rutgers University, Rutgers Cooperative Research and Extension

"Canada Goose Damage Management Resource Guide." NJAES/Center for Wildlife Damage Control at Snyder Research and Extension Farm in partnership with United States Department of Agriculture and Animal Plant Health Inspection Service, Wildlife Services

Contact Information

• Your local Rutgers Cooperative Research and Extension County Agent. Refer to the blue pages of your local phone book for listings.

• Rutgers Cooperative Research and Extension, Wildlife Extension Program, 732-932-1509

• New Jersey Division of Fish and Wildlife, 609-292-2965.

• United States Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services, 908-735-5654.

• United States Fish and Wildlife Service, Migratory Bird Permits, 413-253-8643.

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✔ **Plum Curculio (PC):** Adults have been seen in tray samples at 5 farms. Levels seen have been low, but upcoming fruit set and warmer temperatures may make conditions more suitable for greater activity. 10% of our samples have been positive with 2 adults/bush being the highest level seen.

As the temperatures warm, and growers prepare for the first post pollination spray, keep in mind that the primary insect pests at this time can be **plum curculio**, any **leafrollers** if present, **aphids** if present, and **cranberry fruitworm**. We have not yet caught any cranberry fruitworm adults in traps, but first emergence should be very soon.

✔ **Mummy Berry:** Primary leaf strikes have been seen with greater frequency this week. 12% of our samples have been positive and the highest level seen thus far has been about 6 strikes/bush.

Scouting Calendar

The following table is intended as an aid for orchard scouting. It should *not* be used to time pesticide applications. Median dates for pest events and crop phenology are displayed. These dates are compiled from observations made over the past 5-10 years in Gloucester County. Events in northern New Jersey should occur 7-10 days later.

Pest Event or Growth Stage	Approximate Date	2005 Observed Date
Green Peach Aphid in Beating Trays	April 15 +/- 14 Days	May 5
Rosy Aphid colonies visible	April 19 +/- 4 Days	Not yet observed
Petal Fall Red Delicious	April 27 +/- 13 Days	Not yet observed
Apple Scab Lesions visible	April 28 +/- 7 days	Not yet observed
Shuck Split Peach	April 29 +/- 7 Days	May 8
Tufted Apple Budmoth Biofix	May 1 +/- 7 Days	Not yet observed
Codling Moth Biofix	May 3 +/- 5 Days	Not yet observed
Oriental Fruit Moth - 375 DD	May 10 +/- 8 Days	May 15
Plum Curculio Oviposition Injury - Apple	May 10 +/- 11 Days	
Oriental Fruit Moth – Shoot Flagging	May 13 +/- 2 days	
White Peach Scale Crawlers	May 19 +/- 4 Days	
Codling Moth -150 DD Timing	May 19 +/- 3 Days	

Insect Trap Counts

Tree Fruit Southern Counties

Week ending	STLM	TABM-A	CM	AM	OFM-A	DWB	OFM-P	TABM-P	LPTB	PTB
4/15/05	170									
4/22/05	500	0			12		35	0		
4/29/05	430	0			0		17	0		
5/6/05	118	0			30		9	0	0	0

Northern Counties

Week ending	STLM	TABM-A	CM	AM	OFM-A	DWB	OFM-P	TABM-P	LPTB	PTB
4/15/05										
4/22/05	140				0		4			
4/29/05	550				0		9			
5/6/05	230				0		33			

Key: STLM = Spotted Tentiform Leafminer, TABM = Tufted Apple Budmoth (A – apple, P – Peach), CM = Codling Moth, AM = Apple Maggot, OFM = Oriental Fruit Moth (A – apple, P – Peach), LPTB = Lesser Peachtree Borer, PTB = Peachtree Borer

Blueberry Trap Counts – Atlantic County

Week Ending	CBFW	RBLR	OBLR	SNLH	OB	BBM
4/15		125				
4/22		95				
4/29		137				
5/6	0	125				

Blueberry Trap Counts – Burlington County

Week Ending	CBFW	RBLR	OBLR	SNLH	OB	BBM
4/15		69				
4/22		63				
4/29		28				
5/6	0	20				

Key: CBFW = Cranberry Fruitworm, RBLR = Redbanded Leafroller, OBLR = Obliquebanded Leafroller, SNLH = Sharpnosed Leafhopper, OB = Oriental Beetle, BBM = Blueberry Maggot

Twilight Fruit Meeting

Tuesday May 17, 2005 at 6:00 p.m.
Marino Bros. Sun Valley Orchards
32 Vestry Road, Swedesboro, NJ
Phone 856 769-3468

The meeting will include a tour of part of Marino's 450 acres of peaches around their modern packing and storage facilities for vegetables. We will not be visiting their peach packing operation which is on another location. A demonstration audit for certification under the NJDA's "Farm Certification Program" will be conducted to show growers how to be approved for the Premium Labeling Program, and a review of a pesticide compliance audit will be discussed.

6:00 pm - Welcome and Introduction by Marino Bros. Organization
6:15:pm - Scouting Report and Introduction of Latest Monitoring Techniques by Dave Schmitt, Fruit IPM Program Associate, and Dean Polk IPM Fruit Agent, Rutgers Cooperative Research and Extension.
6:45 pm - Major Disease Management Problems by Dr. Norman Lalancette, Specialist in Tree Fruit Pathology, Rutgers Cooperative Research and Extension.
7:00 pm - Late Spring and Summer Weed Control in Fruit by Dr. Brad Majek, Extension Specialist in Weed Science, Rutgers Cooperative Research and Extension.
7:15 pm - Promising Peach Rootstocks and Varieties by Gail Lokaj, Program Associate and Jerry Frecon Agricultural Agent, Rutgers Cooperative Research and Extension.
7:30 pm - Transitioning Towards Reduced-Risk Peach Arthropod IPM, by Dr. Peter Shearer, Specialist in Fruit Entomology, Rutgers Cooperative Research and Extension.
7:45 pm - Compliance Inspection for Pesticide Standards Discussion by Nancy Santiago, WPS Coordinator, Pesticide Control Program, NJDEP.
8:15 pm - A Demonstration of Meeting the Requirements of the NJDA Farm Certification Program by Alan Novakowski, Agricultural Products Agent, Division of Marketing and Development, NJDA.
9:30 pm - Adjourn Meeting

N.J. PESTICIDE CREDITS: Core – 1 Unit, 1A, PP2, 3A & 10 – 3 Units each.

This meeting is not accessible for the physically disabled or handicapped, however special accommodations can be made by calling Jerome L. Frecon at 856 307-6450 ext 1, prior to the meeting.

See website for map and directions: http://gloucester.rce.rutgers.edu

Calendar of Events

May 11, 2005, 6-9:00 pm - 2nd North Jersey Twilight Fruit Meeting. Best's Fruit Farm,Rt. 46, Hackettstown,NJ. Contact Win Cowgill at 908-788-1339 or cowgill@aesop.rutgers.edu. Pesticide credits will be awarded.

May 17, 2005 - 6:00 p.m. Twilight Tree Fruit Meeting, Marino's Sun Valley Orchard, Swedesboro, NJ. For information contact: Jerry Frecon 856-307-6450 Ext 1. frecon@rcre.rutgers.edu or website: http://gloucester.rce.rutgers.edu

May 25, 2005 – 6:30 p.m. Twilight Blueberry Meeting, Atlantic Blueberry Company, Inc., 7201 Weymouth Road, Hammonton, NJ 08037. Contact: Gary Pavlis 609-625-0056 pavlis@rcre.rutgers.edu

May 31, 2005 – 6:15 p.m. Twilight Wine Grape Meeting at A. L. Gaventa & Son, 192 Repaupo Station Road, Logan Township, NJ. Contact: Jerome L. Frecon 856-307-6450 Ext 1. frecon@rcre.rutgers.edu

June 29, 2005 - 5:00 p.m. Fruit Research and Picnic, Rutgers Agricultural Research and Extension Center, Centerton, NJ. For information contact: Jerry Frecon 856-307-6450 Ext 1. frecon@rcre.rutgers.edu Pre-registration is requested.

July 28, 29, 30, & 31, 2005 – New Jersey Peach Festival at the Gloucester County 4-H Fairgrounds, Rte. 77, Mullica Hill, NJ. For information contact: Jerry Frecon 856-307-6450 Ext 1 frecon@rcre.rutgers.edu.

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For back issues, visit our web site at:
www.rce.rutgers.edu/pubs/plantandpestadvisory.

Pesticide User Responsibility: Use pesticides safely and follow instructions on labels. The pesticide user is reponsible for proper use, storage and disposal, residues on crops, and damage caused by drift. For specific labels, special local-needs label 24(c) registration, or section 18 exemption, contact RCRE in your County.

Use of Trade Names: No discrimination or endorsement is intended in the use of trade names in this publication. In some instances a compound may be sold under different trade names and may vary as to label clearances.

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