

PLANT & PEST ADVISORY

FRUIT EDITION \$1.50

JUNE 15, 2004



Fruit Research Meeting Offers a Glimpse of Research at RAREC

Jerome L. Frecon, Agricultural Agent

It is becoming increasingly clear that as peach research funding disappears throughout the United States the work done at the Rutgers Agricultural Research and Extension Center (RAREC) in Upper Deerfield Township has far reaching impacts on the United States' peach industry. For example, Dr. Norman Lalancette's work on Phomopsis or constriction canker is not done anywhere else in the United States. Dr. Brad Majek's research and resulting cost effective recommendations on tree fruit are used and cited throughout the United States. Work on critters like white peach scale, black peach aphid, and many other insects and management under the direction of Dr. Peter Shearer are unique at RAREC. There are few peach insect management programs of the scope and size of Dr. Shearer's in the United States. Dr. Bob Belding and his program associate, Gail Lokaj, have done valuable research on post harvest chemicals like Retain and the thinner Wilthin, which has made an immediate impact on the industry. Most of their work has been done at RAREC.

The New Jersey Agricultural Experiment Station Peach Breeding Program is over 90 years old. While the program, under the direction of Dr. Joe Goffreda, is centered at the Rutgers Fruit Research and Extension Center in Cream Ridge, many of the best advanced selections are tested and evaluated at RAREC. Varieties like AutumnGlo, Encore, Ernie's Choice, Jerseyqueen, and Saturn, currently popular varieties are products of the NJAES program. Most peach variety information generated in the northeastern and other areas of the United States comes from the RAREC block and other blocks in southern New Jersey. Varieties from other public and private programs are regularly evaluated.

If there was ever a program that is important to peach growers and all minor crop growers, it is the IR-4 pesticides program. The national IR-4 program is located in New Brunswick, but much of the evaluative work for the registration of minor crops is done at outlying stations like RAREC. I don't think there would be any pesticide registrations on minor crops like fruit if it wasn't for this program and the faculty and specialists at Cooperative Extensions throughout the United States.

While you might not see all of these specific projects, you'll see others and listen to what is current on peach research if you attend the fruit research twilight meeting on June 30, 2004 at RAREC. We'll start

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Time to Treat Apples for Dogwood Borer

Win Cowgill, Agricultural Agent and Dean Polk-
IPM Agent

In recent years, the incidence of infestations by **dogwood borer** (DWB), *Synanthedon scitula*, has become a serious problem on many apple blocks containing dwarfing apple root stocks. Infestations of this clearwing moth in apples are *almost always located in burrknots or graft unions* that are planted above ground level. Burrknots are aggregations of root initials that can develop on the above-ground portion of the rootstock; all commercial dwarfing and semi-dwarfing rootstocks have a tendency to develop burrknots.

It is important that we plant dwarf apples with the graft union at least four inches out of the ground to avoid self-rooting of the scion. However the trade off is the development of burrknots, which are susceptible to the dogwood borer. Mark rootstock is known for this.

The adult dogwood borer moth seeks out these spots to lay eggs, particularly if they are surrounded by vegetation or protected by something such as mouse guards. Moreover, mouse guards may frequently house weeds, and shield the lower trunk from incidental exposure to insecticide cover sprays. Sustained feeding by dogwood borer at the graft union may severely weaken the tree at this juncture, or girdle the trunk and cause a slow decline in tree health. Orchards in which mouse guards are emplaced should be examined for signs of damage.

All apple trees in New Jersey should be periodically checked for infestation. Apple growers in our NJ IPM program have traps placed to monitor the adult moth. *We have caught moths since May 21; the last three weeks have had increasing trap counts with the highest counts in Sussex County. Egg laying is peaking so growers should consider treatment now.* Since Lorsban remains on the tissue for quite some time, you will also control the larvae from any egg laying that occurs during the rest of June and early July, as well as any that has occurred to date. A second application may be more effective according from work done in New York State than one application.

The best control is a dilute trunk application with a handgun with an insecticide with good residual activity to provide control of established infestations. Lorsban 4E now has a supplemental label for apples and is the most effective material for control. We are somewhat earlier this year compared to 2003 in borer emergence. If one application is made it should be applied now and during the next 2 weeks. Two applications are labeled and may be more effective. If populations are high, then a second application can go on prior to August 15, keeping in mind the PHI and the variety being treated.

The following directions and restrictions are from the label:

Mix with water and apply directly to trunk from a distance of no more than 4 feet using low volume handgun or shielded spray equipment.

Do not allow spray to contact foliage or fruit. Up to 2 applications may be made with a minimum spray interval of 14 days between applications.

Restrictions:

- Treat only the lower 4 feet of the apple tree trunk.
- Do not make more than two applications per year for borer control.
- Do not apply when wind speed is greater than 10 mph.
- Do not apply within 28 days of harvest.
- If the available residue data submitted in 2002 demonstrates the detection of chlorpyrifos at concentrations greater than 0.01 ppm, then Dow AgroSciences and EPA agree to discuss further mitigation.

White latex paint brushed on the exposed portion of the rootstock will prevent new infestations of the borers, and also protect against southwest injury to the bark.

Other Sources of Information

Cornell has a great fact sheet on dogwood borers in fruit trees that can be found on their IPM web site at:

<http://www.nysipm.cornell.edu/factsheets/treefruit/pests/dwb/dgwdborer.html>. □

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promptly at 5:00 to listen to a few introductory remarks and then take a wagon tour around the station and discuss major weed disease, insect, cultural, and pesticide research programs. For complete details go to <http://gloucester.rce.rutgers.edu> to get a full copy of the program.

We will have some demonstrations and lots of early fruit varieties to evaluate. We have also invited Dr. Greg Krawczyk from Penn State to discuss the reemergence of Codling Moth as a major pest on apples. New Jersey Pesticide Certification Units in Core and various categories will be provided. Once the tour is finished we will have a chicken and ribs barbecue for all attendees.

We do need to get a head count for the dinner so please call me at 856- 307-6450 Ext 1 or frecon@aesop.rutgers.edu. We hope you can attend. □

Fruit IPM

Dean Polk, Fruit IPM Agent

Peach

✓ **Bacterial Spot:** Most infections that are being seen on fruit and leaves are from the shuck split to shuck off period. However, new foliar infections are present on a number of farms. Copper sprays should be maintained and reapplied after heavy rains. Coppers are protectants only and are not systemic. If significant new growth occurs between a copper application and an infection period, then that new growth is not protected. The best protection is when fresh copper is applied 24 to 36 hr prior to an infection period.

✓ **Oriental Fruit Moth (OFM):** The second generation adults have just started to emerge. Most OFM are now late instar larvae, pupae, and emerging adults. Some flagging from mature 1st brood larvae is present in some orchards. In most cases, levels are less than 1 flag per tree when present. Degree day spray timings are as follows for the second generation:

County Area	Application and Insecticide Type	
	Standard Insecticides	Intrepid
Southern	1 st trt 6/11-13, 2 nd 6/21-24	1 st trt 6/9-11, 2 nd 6/20-22
Central	1 st trt 6/13-15, 2 nd 6/23-26	1 st trt 6/11-13, 2 nd 6/22-24
Northern	1 st 6/22-24	1 st 6/20-22

✓ **Tufted Apple Budmoth (TABM):** Timings for TABM control are in the following table, updated since last week. Larvae are still emerging and eggs are about 89% hatched in southern counties, and will be about 99% hatched by 6/21 in that area.

County Area	Spray Type		
	AM	EM	Intrepid - EM
Southern	3 rd 6/6-8, 4 th 6/8-10	2 nd 6/8-10	2 nd 6/8-10
Central	3 rd 6/11-12, 4 th 6/16-17	2 nd 6/13-15	2 nd 6/13-15
Northern	2 nd 6/10-11, 3 rd 6/15-16, 4 th 6/20-21	1 st 6/6-9, 2 nd 6/17-19	1 st 6/4-10, 2 nd 6/17-19

✓ **Thrips:** Thrips have increased in alternate hosts in hedgerows and wooded borders over the past week. We had reported last week that little movement into orchards had been seen. This week thrips are moving into orchards and starting to build in the ground cover. Spintor @ 6-8 ozs. should be included in first pre harvest sprays. Eastern glo have started to color slightly but are still about 4 weeks away.

✓ **Peach Scab:** Infections from overwintering lesions on last year's wood are just about over. Norm Lalancette reports that active twig lesions are still present in his plots at RAREC. Therefore, infections can still take place in heavily infected orchards. Captan is the principal material of choice at the present time. One early season fruit infection was seen this week.

✓ **Anthracnose:** Wet seasons are favorable for anthracnose infections. This is a disease we rarely have a problem with, but that was present last year. Since we are off to a wet season again this year, growers may find it useful to protect against anthracnose, especially in blocks that have a history of the disease. For all practical purposes this means avoiding the use of sulfur in those blocks, and continuing the Captan for the next several weeks.

Apple

✓ **Codling Moth (CM):** Degree day based spray timings are now past throughout most areas of the state, except in northern counties. The second of 2 sprays is still due in those counties on about 6/15-16 with standard insecticides. Assail, Calypso and Intrepid should have been applied by around 6/9-10 in those areas. If after about 7-10 days after an insecticide application, trap counts remain above 5 moths per trap, then additional sprays may be required. This situation is usually indicative of an unusually high insect population. Since codling moth is undergoing somewhat of a resurgence in some areas, several factors deserve attention. These include proper timing, maintaining proper dosage rates, good coverage, accurate sprayer calibration, and the maintenance of well pruned trees. The following chart updates timings outlined in last week's newsletter.

County Area	Application and Insecticide Type	
	Standard Insecticides	New Insecticides
Southern	Complete	Complete
Central	Complete	Complete
Northern	2 nd 6/15-16	2 nd 6/9-10

✓ **Tufted Apple Budmoth (TABM):** See peach section.

✓ **Aphids: Spirea and Apple (green) Aphids:** Populations continue to build, and are below or at treatment levels in many southern orchards. Populations are a little higher in northern counties, with some blocks having close to 100% of terminals infested with aphid colonies. Our treatment threshold is set at 50% of the terminals infested with healthy colonies. Since this is a critical time for mite predators to build up, try to avoid the use of Lannate. The best aphicides include Actara, Assail, and Provado. Of those, Assail has activity on both Codling Moth (CM) and Oriental Fruit Moth (OFM). Be aware though, that achieving broader spectrum control

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comes at the cost of increased rates. However, even with the increased rates, a higher rate of a single material may be more economical than a combination of 2 materials. Assail rates (oz/Ac) for various pests are as follows: Aphids: 1.1-1.7, Leafminers: 1.1, Leafhoppers: 1.1-1.7, Codling Moth: 1.7-3.4, Oriental Fruit Moth: 2.3-3.4, Apple Maggot: 3.4.

✓ **Leafhoppers and Leafhoppers and Fire Blight:**

Leafhoppers (both white apple - WALH, and potato leafhoppers - PLH) have been present in apple orchards for several weeks. Fire Blight has also been present throughout the state. Yesterday, a severe fire blight infection was examined where new infections were present on the tips of the growing terminals. Potato leafhoppers were also present. Potato leafhoppers are likely transmitters of fire blight, and feed on shoot terminals and leaf margins. Any sprays of copper, pruning or other fire blight management should also include insect control for likely insect vectors such as potato leafhopper. Whereas we can normally tolerate up to 3 leafhoppers per leaf (combined species), we cannot tolerate any leafhoppers if the majority are potato leafhoppers and fire blight is present. Be aware that if you also have a population of **Cicadas** in your orchard, the slitting of tender wood done by females for egg laying may also pose a hazard. It is possible that this action may also result in **fire blight transmission**. Therefore, if Cicadas are present in the orchard, control should be initiated if fire blight is present in the orchard.

✓ **Dogwood Borer (DWB):** Borer adults have been emerging for the past 3 weeks. Orchards on dwarfing rootstocks are susceptible to DWB infestation. Please see accompanying article on DWB for a more complete discussion.

Blueberry

✓ **Cranberry Fruitworm (CBFW):** The adult emergence is over for the season. Trap catches have decreased to 0 to .5 moths per trap on most farms. High pressure areas still have a few moths in flight. Visible feeding and larval counts did increase since last week. This is an indication that larvae have matured and are easier to find. No additional treatments are needed for CBFW, and any sprays applied at this point will have no practical effect on the insect.

✓ **Aphids:** Counts increased slightly since last week, and are present in 85% of samples taken. About 40% of samples have counts over 10% of terminals infested. Aphids are a key insect pest at this time.

✓ **Blueberry Maggot:** The first flies were caught 11 days ago (June 4). This means that growers who are on a calendar based schedule for BBM should have just applied the first insecticide spray 10 days after first catch.

Growers who are on the calendar based schedule, as part of the Blueberry Maggot Certification Program for fresh fruit export to Canada, should also continue insecticide applications at 7-10 day intervals after the first application thru last harvest. Growers who are on the BBM IPM program for export to Canada need to start sprays when they find the first maggot fly on their farm. Subsequent sprays are required when any trap in a given production unit catches 1 or more flies per trap. Growers who are on this program have used significantly less insecticide than those growers who were on the calendar based program.

While a number of insecticides are effective for BBM control (see last newsletters), growers should be careful with the amount of Lannate used if the fruit is destined for export to Canada. Lannate is not labeled in Canada, but berries are allowed in as long as residues are within Canadian tolerances. The Canadian tolerance is set as a default for non-registered pesticides in Canada, and is typically lower than if the product was registered. Therefore, minimize Lannate use and increase the PHI if berries are to be exported to Canada.

✓ **Leafrollers and Other External Worms:** Incidence of leafroller injury has increased slightly since last week. About 56% of fruit samples had some amount of injury. Actual injury levels remain very low, and averages about .3% (per cluster), with a high of 1.9%. About 36% of samples were positive for larvae, with a high of .2 larvae per 100 fruit clusters.

✓ **Thrips:** Thrips were present in about 41% of samples. No samples were above 4 thrips per cluster. Overall, thrips have decreased significantly since last week.

✓ **Bagworms:** There have been several reports and questions regarding bagworms and their control. Most of these are isolated cases, and are near woods and hedgerows. While a sighting of numerous bags may be a concern, the bags are not doing any damage. What growers are now seeing are the overwintered bags. Bagworms overwinter in the egg stage, and larvae actually start to emerge from the bag in mid to late May. Newly emerged bagworm larvae are difficult to see. Even a week after emerging from the bag, they may be only 3 – 4 mm long. If treatment is needed, then it should be initiated after all the larvae have emerged around mid to late June. Most OPs, Lannate, Sevin and Asana are effective for control. Thorough coverage is very important.

✓ **Oriental Beetle (OB):** Trap captures have increased since last week, and adults are in full emergence mode. See the Admire label and the notes from the previous newsletters for control suggestions.

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Insect Trap Captures

Tree Fruit – Southern Counties

WeekEnd	STLM	TABM-A	CM	AM	OFM-A	DWB	OFM-P	TABM-P	LPTB	PTB
14-May	446	10	7		35		13	19		
21-May	149	39	10		29		19	47	78	5
28-May	226	39	8		9	19	6	62	49	7
4-Jun	460	32	4		0	14	4	43	33	2
11-Jun	762	19	2		2	37	5	24	45	4

Tree Fruit – Northern Counties

WeekEnd	STLM	TABM-A	CM	AM	OFM-A	DWB	OFM-P	TABM- P	LPTB	PTB
14-May	1160	5.0	5.9				49.7	4.2		
21-May	128.8	14.2	14.8		7.3	2.0	25.9	13.3		
28-May	22.5	28.7	14.9		0.0	11.0	26.4	37.0		
4-Jun	32.3	45.4	5.0		0.0	16.0	6.2	42.4		
11-Jun	468.2	39.4	9.8		0.0	12.0	12.1	34.8	5.7	0.0

Blueberry – Atlantic County

Week End	CBFW	RBLR	OBLR	SNLH	OR BEET	BBM
14-May	0.22	22.3	0			
21-May	1.1	1.7	8.8		0.0	
28-May	0.8	9.8	20.7		2.2	
5-Jun	0.6	89.7	9.9	0.3	10.7	0.1
11-Jun	0.5	113.8	8.1	0.1	415.3	0.0

Blueberry – Burlington County

Week End	CBFW	RBLR	OBLR	SNLH	OR BEET	BBM
14-May	0	11.7				
21-May	0	3	0			
28-May	29.0	0.2	46.0			
5-Jun	19.8	13.6	42.0	4.6	10.2	0.2
11-Jun	1.3	21.5	15.0	1.8	20.4	0.03

Plum Pox Survey 2004

Linda Schepers, Division of Plant Industry, NJ Department of Agriculture
 linda.schepers@aphis.usda.gov

Weekly Sampling Results, Week Ending: June 11, 2004 STATE: New Jersey

Date Sampling Began	Date Sampling Completed	Laboratory Doing The Analysis	Cumulative Total of Field Samples Collected*	Cumulative Total of Lab Samples Processed*	Sampling Results
5/10/04	6/11/04	NJDA	4077	14116	negative

* 1 quadrat field sample contains 4 lab samples per USDA sampling protocol.

Submitted by Jerome L. Frecon, Agricultural Agent. □

Pesticide Safety Around the Farm

Bill Coli, UMass Extension Farm Safety Coordinator

Reprinted from *Healthy Fruit-UMASS Fruit News Letter*, Vol. 11(9) June 3, 2003, <http://www.umass.edu/fruitadvisor/>.

Those of us who use pesticides certainly make every effort to do so in accordance with label conditions regarding rates, personal protective equipment (PPE), re-entry intervals (REIs), pre-harvest intervals (PHIs) and the like, and take pains to be sure that farm workers and family members are not exposed to pesticides. With the passage in 1996 of the Food Quality Protection Act (FQPA) additional attention has been paid by the EPA to concerns about worker exposure and potential dietary effects of pesticides on children.

However, studies conducted at the Pacific Northwest Agricultural Safety and Health Center (PNASHC) have indicated that children may be exposed to pesticides in other ways (See "Pesticides and Farming: Are Children in Harm's Way?" NIOSH Ag. Research Centers Update, Spring 2003, Vol. 1, No. 2). The PNASHC found "elevated" levels of agri-chemicals in household dust in homes of agricultural workers compared to the general public. A recent report on the studies went on to add that "...children of pesticide applicators also had higher levels of pesticide metabolites" in their urine than children whose parents did not work in agriculture.

Another PNASHC study of 44 pre-school children of non-agricultural workers who live in close proximity to sprayed agricultural areas found that levels of pesticide metabolites in their urine increased during the spraying season and returned to normal after the end of the season. Of course the situation in northeast is likely very different from Washington State in terms of the size of agricultural areas being treated with pesticides. Nonetheless, as noted by the PNASHC study authors, it would still seem prudent to consider ways "to strike a proper balance between the risks and benefits of agricultural pesticide use", and minimize potential exposure of our families and our neighbors.

Laundering Clothing used During Application of Pesticides

Applicators cannot completely avoid exposure to the chemicals that they apply. Exposure occurs during any of the many activities involved in the spraying operation, including transporting the pesticide, tank filling and mixing, container rinsing, spraying, sprayer maintenance, pesticide storage and early re-entry to treated areas.

Exposure can involve contact with pesticide vapors and aerosols, the concentrated pesticide formulation in a liquid, granular, or powder form, and the spray mixture itself. Workers absorb chemicals into the body through the skin, eyes, respiratory (breathing) or digestive system (swallowing). Studies have shown that good personal hygiene practices reduce the risk of long term health effects.

General Recommendations

- Read and understand the product label and material safety data sheet before application.
- Bathe or shower after completion of pesticide application, including shampooing hair thoroughly and cleaning under nails.
- Put on clean clothing.
- Clothing worn during application must be washed daily after each use.
- Launder all clothing used for spraying separately from the family's regular clothes.
- Personal protection equipment should be cleaned daily after use.
- Discard any clothing that is heavily soiled with pesticide concentrate.

Preparation for Laundering

- Remove pesticide granules from cuffs and pockets outdoors (in the field).
- Discard (according to label instructions) any garment saturated with a full-strength chemical.
- Handle soiled clothing with chemical resistant gloves.
- Use disposable plastic garbage bags for temporary storage of pesticide-soiled clothes before washing.
- Pre-treat pesticide-soiled clothes with a laundry stain removal product intended for oily stains when an oil-base (emulsifiable) formulation has been used.
- Pre-treat heavily soiled areas.
- Read the pesticide label for information.
- Pre-rinse pesticide-soiled clothing: on pre-soak cycle of automatic washer or presoaking in a suitable container (dump water on field) or spray/ hose the garment outdoors (away from children and pets).

Laundering

- Isolate pesticide-contaminated work clothes and wash them separately from the regular family laundry to avoid contamination.
- Do not overcrowd clothes in the washing machine.
- Use hot water (140°F) setting.
- Use full water level.
- Use normal wash cycle (about 12 minutes).
- Use more detergent than recommended by product label.
- Use fabric starch. Pesticide residues cling to the starch and are removed in the subsequent wash cycle when the starch is washed away.

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- Choose a heavy-duty detergent (liquid or powder).
- Re-wash clothing two or three times.
- Line dry clothing to avoid contamination of the dryer and to allow sunlight to break down pesticide residues.
- Run the empty washer through a full wash/rinse cycle afterward.

Instructions for Cleaning Protective Equipment

- Wear rubber gloves while cleaning equipment
- Wash hard hat or waterproof hat, goggles, face shield, apron, boots with hot soapy water, rinse and dry.
- Wash the respirator face-piece only. Before cleaning, remove the cartridges.
- Wash the respirator in warm soapy water, rinse and air-dry.
- Check seals and valves for signs of damage or wear.
- Store the respirator and cartridges in a sealed plastic bag.
- Last wash your gloves with hot soapy water, rinse and dry.
- Inspect and replace any worn or damaged protective equipment.

Adapted from the Institute of Rural and Environmental Health, University of Saskatchewan by Craig Hollingsworth.

Submitted by Win Cowgill, Agricultural Agent. □

Calendar of Events

June 30, 2004 – 5:00 p.m. – Twilight Fruit Research Meeting at Rutgers Ag Research and Extension Center, 121 Northville Road, Bridgeton, NJ. Contact: Jerry Frecon, Rutgers Cooperative Extension of Gloucester County at 856-307-6450 ext 1.

July 8, 2004 – 3:30 p.m. – USDA/Rutgers University Blueberry Field Day at the Phillip E. Marucci Center for Blueberry and Cranberry Research and Extension, 125A Lake Oswego Road, Chatsworth, NJ. For additional information and directions call the research center at 609-726-1590.

July 22, 23, 24, 25, 2004 - Thursday thru Sunday – New Jersey Peach Festival and Gloucester County 4-H Fair will be held at the 4-H Fairgrounds, Rte. 77, Mullica Hill, NJ. Program information forthcoming on website <http://gloucester.rce.rutgers.edu/>

NJ Pesticide Applicator Units to be provided at each of the evening fruit meetings.

UV Rays

Jayne Sojka, Lady Bug IPM

Reprinted from Cranberry Crop Management Newsletter, Vol. XVIII, No. 2, May 20, 2004, University of Wisconsin Cooperative Extension

The sun produces both visible and invisible rays. The invisible rays, known as ultraviolet –A (UVA) and the ultraviolet-B (UVB), cause most of the problems. Both cause suntan, sunburn, and sun damage. There is no “safe” UV light.

Harmful UV rays are more intense in the summer. The sun’s harmful effects are also increased by wind and reflections from water and sand. Even on cloudy days UV radiation reaches the earth and can cause skin damage. The UV index is a prediction of ultraviolet intensity in a given location. It can be found in the weather section of most newspapers and some television weather forecasts.

A good number of growers and I have been talking about the long term effects of the sun. One gentleman shared that he has skin cancer on his nose, ears and back of his neck. These are areas that one has a more difficult time covering with clothes and may miss with sunscreen but yet these areas are the most vulnerable.

To protect your skin from the sun, the American Academy of Dermatology recommends:

- 1) Wear effective sun protective clothing
- 2) Avoid the sun between 10 A.M. and 4 P.M.
- 3) Wear a hat with a 4-inch brim and sunglasses
- 4) Use better than 25 SPF broad spectrum sunscreen
- 5) See a doctor for an annual skin exam if you have areas of concern.

Now let’s face it, avoiding the sun between 10:00 A.M. and 4:00 P.M is not practical in our line of work. So the answer for our working environment is Sunscreen and protective clothing. I came across an excellent source of information on sun protective clothing:

Sun Precautions
2515 Wetmore Avenue
Everett, Washington 98201
1-800-882-7860 or on the internet
www.sunprecautions.com

Updated Grape and Bramble Control Recs Available

The Commercial Pest Control Recommendations for New Jersey for grape and brambles have been updated on the web at: <http://www.rce.rutgers.edu/pubs/subcategory.asp?cat=3&sub=22>. For hard copies, contact your county Cooperative Extension office.

Submitted by Pete Nitzsche, Agricultural Agent. □

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Rutgers Cooperative Extension - NJAES
U.S. DEPARTMENT OF AGRICULTURE
Rutgers - The State University of New Jersey
Plant & Pest Advisory
18 College Farm Road
Cook College
New Brunswick, N.J. 08901-8551

PLANT & PEST ADVISORY FRUIT EDITION - CONTRIBUTORS

Rutgers Cooperative Extension Specialists

Robert Belding, Ph.D., Pomology
George Hamilton, Ph.D., Pest Management
Norman Lalancette, Ph.D., Plant Pathology
Peter W. Shearer, Ph.D., Entomology

NJAES/Cook College

Joseph Goffreda, Ph.D., Breeding

Rutgers Cooperative Extension Agricultural Agents and Program Associates

Atlantic County, Gary C. Pavlis, Ph.D. (609-625-0056)
Gloucester County, Jerome L. Frecon (856-307-6450)
Hunterdon County, Winfred P. Cowgill, Jr. (908-788-1338)
Morris County, Peter J. Nitzsche (973-285-8300)
Warren County, William H. Tietjen (908-475-6505)
Fruit IPM, Dean Polk (609-758-7311)

Meredith Compton, Program Associate (908-788-1338)

Gene Rizio, Program Associate (856-566-2900)

David Schmitt, Program Associate (856-307-6450)

NJAES Sustainable Agriculture Coordinator

Olga Wickerhauser

Newsletter Production

Jack Rabin, Associate Director for Farm Services, NJAES
Cindy Rovins, Crop Management Communications Editor

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