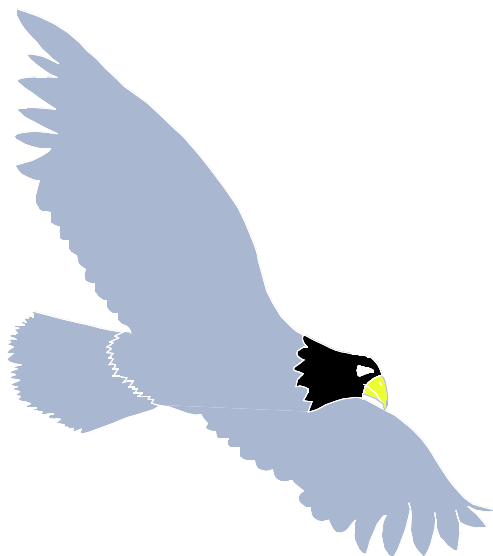


# PLANT & PEST ADVISORY

FRUIT EDITION \$1.50

AUGUST 18, 1998



## INSIDE

<b>Bird Repellent Methods, Part II</b> .....	<b>1</b>
<b>Update on Early Mid-Season and Mid-Season Yellow-Fleshed Peaches</b> .....	<b>2</b>
<b>Fruit IPM</b> .....	<b>4</b>
<b>Fruit Variety Meeting</b> .....	<b>5</b>

## Bird Repellent Methods, Part II

H. W. Fraser, P.Eng., Agricultural Engineer, OMAFRA, Vineland Station, K. H. Fisher, Ph.D., Research Scientist, Viticulture, University of Guelph, Vineland Station, and I. Frensch, P.Eng., C. Frensch Ltd., Beamsville.

The following article was adapted from Ontario FactSheet No. 98-035, June 1998. For a description of acoustical repellents, see Part I of this article in the August 11, 1998 issue of this newsletter.

### Visual Repellents

Birds generally have very good eyesight and react to both movement and things that resemble their enemies. However, birds do not react nearly as much to visual deterrents as they do to acoustical ones. Visual deterrents are usually add-ons to acoustical systems, and they rarely provide sufficient protection by themselves.

#### Scare-Eye Balloons

The beach ball size *scare-eye balloons* with their graphics depicting the gaping mouth of a hawk, have proven themselves worldwide. They are manufactured in white, black and yellow. Blackbirds do not like the color yellow. Sparrows and finches are repelled to a lesser extent, while robins and cedar waxwings are hardly repelled at all. Scare-eye balloons must be suspended above the crop and must move freely with the wind to look more realistic.

#### Streamers and Flashtape

Streamers and flashtape are strips of shiny plastic tape which are strung over crops. They move with even the slightest breath of wind and also reflect sunlight. From above, the birds view an entire vineyard or orchard that appears to be in motion. Flashtape is available in yellow for blackbird species and in a red/silver combination for repelling a broad range of species. It is especially effective to string streamers and flashtape along perimeter rows where the most severe damage occurs, or in other areas that need additional protection.

#### Flashing Lights and Mirrors

Some bird species, notably starlings, are repelled by flashing lights and mirrors. Flashing lights are only effective at dawn or dusk when the natural light is dim, and mirrors are only effective when the sun is shining. Some growers have mounted mirrors on top of rotating propane-fired cannons and from above, the mirrors appear to be moving. Farmers have reported a repelling effect on sunny days.

SEE REPELLENTS ON PAGE 3

# Update on Early Mid-Season and Mid-Season Yellow-Fleshed Peaches in SNJ

*Jerome L. Frecon, Agricultural Agent*

This is an update on commercial yellow fleshed peach varieties from Redhaven season through Loring season (not covered are fuzzless peaches, white fleshed peaches or varieties that are still experimental). Many of these varieties are listed on page 50 of the [1998 Commercial Tree Fruit production Guide for New Jersey](#). Most of the information is the result of this year's observations. Ripening dates are determined by the date the first soft peach is found and most of the fruit is highly colored and ready for harvest at a state of firm maturity. These fruit are firm yet still more mature than fruit marked "well mature" and received from shippers in California.

❖ **Blazingstar** ripens on July 12. This round variety has a nice bright red color most years; however, this year because of the intense heat we had, appeared dull. Size was disappointing on FA 12. I prefer both Redstar and Starfire both ripening in the same season.

❖ **Redhaven** ripened about July 13. Size was good but trees on both sites were not set very heavy, probably because of early April frost. Redhaven requires numerous harvests and softens more readily in the intense summer heat than some other varieties. The high temperatures were during early and mid-July.

❖ **Flamin Fury 12A** ripened on July 12. I have never gotten good size on this peach until this year. The test trees had a heavy crop but by leaving the fruit on the tree longer, the fruit size improves. It has good red overcolor and I believe growers are picking it too early. The flesh is firm and the variety hangs well. FF 12 A is a round peach. It was not equal in size to Redhaven in either the Larchmont or Mt. Pleasant Blocks but the tree had a heavier crop. It had no bacterial spot on any site.

❖ **Redstar** ripened about July 13. Size was not as good as Redhaven although the crop load was heavier. Redstar is an attractive red skinned variety with a nice orange-red undercolor. It had no bacterial spot. Redstar is a little larger than Starfire, both ripening near Redhaven. I still haven't determined whether Redstar or Starfire is better.

❖ **Starfire** ripened about July 14. Size was not as good as Redhaven but the tree had a heavier crop load. Starfire has a nice orange-red background color and holds its firmness well. It also hangs on the tree well but the harvest was completed before Redhaven because it ripens in fewer pickings. It had no bacterial spot. Because it is a round peach and not genetically large, size may be a problem.

❖ **JohnBoy** ripened about July 17. Size was good but not as large as normal because of the heavy crop load. JohnBoy is attractive with a bright red overcolor. It hangs on the tree very well and handles well because of its flesh firmness. John Boy had no bacterial spot. It is certainly one of the best peaches in its season and widely planted in southern New Jersey.

❖ **Stark Loring** about July 16. The selection I have is the one patented by Stark Bros. Nurseries in Louisiana, MO. Like JohnBoy, this is a beautiful peach. It does not appear to be quite as large and colors a little earlier. While JohnBoy is semi-clingstone, Stark Early Loring is semi-freestone like Redhaven. It had a small amount of bacterial spot on the leaves.

❖ **Bellaire** ripened about July 18 although I no longer have it in any of my test blocks. It is a mutation of Loring like Stark Early Loring and JohnBoy. It is also a beautiful peach.

❖ **Flamin Fury 15** ripened about July 18. This peach was again outstanding in all characteristics. It had excellent size, beautiful red color, very attractive and ripens very uniformly. It had a heavy crop again with no bacterial spot. Based on the four years I have observed this variety, it is recommended for planting.

❖ **Flamin Fury 15A** ripened a few days after FF15 although the trees were young and this is the first year I have seen the peach. A number of growers have fruited this variety and it has been equally attractive. I saw a lot of fruit being graded at Eastern Pro Pak and it was quite attractive, red, and firm. It had no bacterial spot.

❖ **Red Fremont** on July 18. This is the first cropping season but the fruit of Red Fremont does not appear firm enough to suggest it as a commercial variety.

❖ **Jim Dandee** ripened on July 20th. Jim Dandee continues to be a very large, attractive, red-skinned variety. Jim Dandee was a little dull because of our warm nights and also seemed to soften more quickly than JohnBoy or Flamin Fury 15. Jim Dandee has a weak tree that is susceptible to canker as it gets older. It had no bacterial spot but has had spot in some commercial plantings. I still like Jim Dandee.

❖ **Carogem** ripened on July 20th. This attractive yellowish-red peach has acceptable size and flavor. It had a good crop with slight bacterial spot. The flesh was firm, and the peach handled well. This is only the second season I have seen Carogem; however, I do not believe it has the color of other varieties in this season.

❖ **Ernie's Choice** ripened on July 21. It was attractive but did not hold up well in the heat and developed soft shoulders. While this is a nice variety, its lack of firmness will probably limit it for future commercial planting.

❖ **Flamin Fury 17** ripened about July 23. This attractive red skinned peach was very nice in 1998. The size was very good with most fruit over 2 1/2 inches in diameter on test trees with a heavy crop. The flesh is

SEE FF17 ON PAGE 3

*Hawk Silhouettes, Stuffed Owls and Snakes*

Most of these bird repellent materials have only a limited effect for a short period of time. Some farmers report they have seen birds nesting right on these devices.

*Falconry*

Trained falcons and hawks have been used successfully for many years at airports. Unfortunately, the effect only lasts as long as the falcons and hawks are airborne. The major drawback is cost, time and availability, since growers cannot do this work themselves. Trials using birds of prey tethered to a post have failed because nuisance birds quickly realize the falcon or hawk is powerless to attack.

**Physical Exclusion**

Forcibly keeping birds away from the crop using netting is the best way to ensure crop protection. Unfortunately, it is usually the most expensive option.

*Netting*

Traditionally, netting has been associated with high capital costs and high labor costs. The cost of netting materials has been dropping over the years and the systems available for applying the nets are improving. Nets are becoming especially attractive because of the high value of wine grapes. Nets offer virtually 100% bird protection and help maximize yields. Bird netting is available in a lightweight one-use formulation or heavier multi-use ultraviolet protected materials. There are rigid or stretch materials and different widths and mesh sizes. The choice of material will depend on the type of crop and layout, expected material life, and the type of equipment available for installing and retrieving the net.

There are two ways netting can be applied to crops:

- draped directly on top of the crop (or trees), or
- fastened to an overhead structure which totally encloses the vineyard, orchard or berry patch.

Draping the net directly over the crop is best suited for crops which do not require multiple pickings, such as grapes. It is labor intensive to both install and remove netting that tangles with the plant.

Overhead netting systems would be most effective for blueberries or dwarf, early variety sweet cherries. High value wine grapes in heavy bird-pressure areas would also be a logical candidate provided a method of using mechanical harvesting equipment under the structure is found. Overhead netting systems are not recommended for late harvest applications, since they are not strong enough to withstand snow or ice loading. Nets must be removed or at least retracted at the end of the season to protect them from ultraviolet degradation and snow loads.

**Chemical Repellents**

Over the years, many chemical bird repellents have come and gone, partly due to lack of effectiveness, but also because of adverse health effects. At present, there are no effective, food grade chemical bird repellents registered for use in Canada. Research and field tests on a new formulation using grape flavour extracts as the active ingredient are being undertaken in the US. Findings to date have shown that this product will not be acceptable on wine grapes due to residual flavours in the wine which arise during the fermentation process.

*Submitted by Jerome L. Frecon, Agricultural Agent. □*

firm and the fruit hangs well. A number of commercial orchards fruited FF 12 for the first time and some had considerable bacterial spot. Although bacterial spot has been observed in the past it has never been a problem. I also think some growers are picking it too early because it is red.

❖ **Harrow Fair** ripened on July 23.

This attractive red-skinned variety had a good crop on test trees in two sites. The fruit was large and of excellent quality. Harrow Fair is protected by plant breeders rights in Canada and will probably not be available in the US for a few years. I assume it was introduced because it had better size than Harrow Beauty, however, it does not appear to be as firm. No bacterial spot was observed.

❖ **Coralstar** ripens about July 23. I have lost most of my trees of this variety so reserve comment on it until trees are replanted.

❖ **Fancy Lady** ripened about July 24.

This large and very firm peach is a yellow fleshed version of White Lady except that is larger, doesn't crop as heavy, and is more susceptible to bacterial spot. I couldn't recommend it for planting in New Jersey although it is a standard for attractiveness if it doesn't have bacterial spot on the fruit.

❖ **Harrow Beauty** ripened about July 26. The variety was beautiful this year. The fruit was a bright red with bright orange-red undercolor. Harrow Beauty held up well in the heat and is still very firm after two weeks on the tree. However, Harrow Beauty is a round peach and some growers are having difficulty getting regular good size. It is a moderately weak tree that must be thinned and irrigated. No bacterial spot was observed on Harrow Beauty.

❖ **Bounty** ripened about July 26.

Bounty reminds me a lot of Loring except that it has a nice bright color and more red overcolor. It is slightly firmer than Loring. Bounty is as large as Loring and has Loring texture and flavor although the flesh is non-browning. Bounty appears to be more winter hardy than Loring. It has no bacterial spot but has a very vigorous tree like Loring.

❖ **Loring** ripened on July 27. Some orchards did not get done picking Loring

*SEE LORING ON PAGE 5*

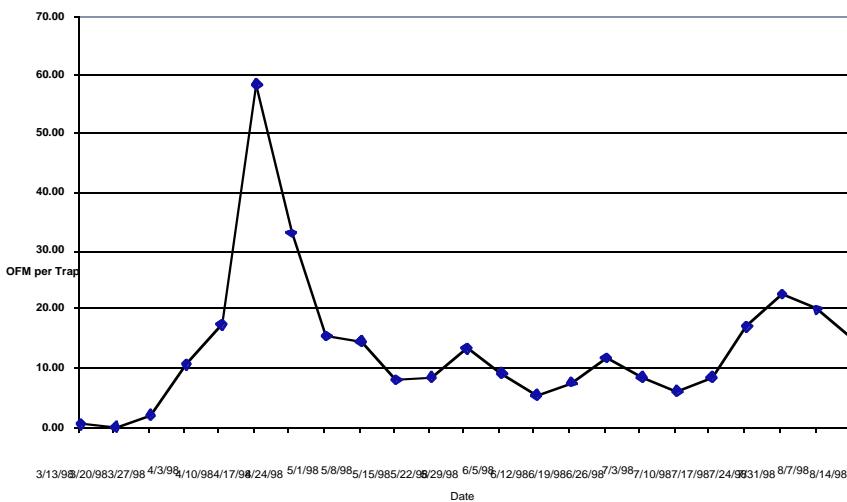
# Fruit IPM

Dean Polk, Agricultural Agent

## Peach

✓ **Oriental Fruit Moth (OFM):** Trap catches of adults have decreased again, indicating that we are now past the peak of the fourth adult flight (see graph of OFM emergence). Since OFM pressure has been higher than normal this year, and eggs continue to be laid at this time, insecticide covers should be maintained as close as possible to picking. Harvest samples are showing up to 3% OFM injury in sprayed blocks. Make sure to observe correct pre-harvest intervals.

1998 OFM Southern Counties



✓ **Tufted Apple Budmoth (TABM):** Trap captures have decreased, but remain high in many locations. Injury from TABM is evident on late varieties, and can be found in up to 15% of the fruit in southern counties. No problems have been seen in northern counties. Additional eggs will hatch and larvae emerge over the next week. Therefore, in problem areas insecticides should be applied as close as possible to the first picking. Make sure to have adequate spray volume in these cover sprays.

✓ **Disease:** Brown rot is becoming more common in pre-harvest scouting sampling. Many growers do not use a pre-harvest fungicide until one week before the first picking. Additional sprays that are started two+ weeks before harvest will increase control.

## Apple

✓ **Tufted Apple Budmoth (TABM):** While young second brood larvae are present in the field, about 50% of observed leaf shelters still have pupae from the first generation yet to emerge as adults. Older first brood larvae are also still present. This indicates that additional adults will continue to emerge over the next week to 10 days.

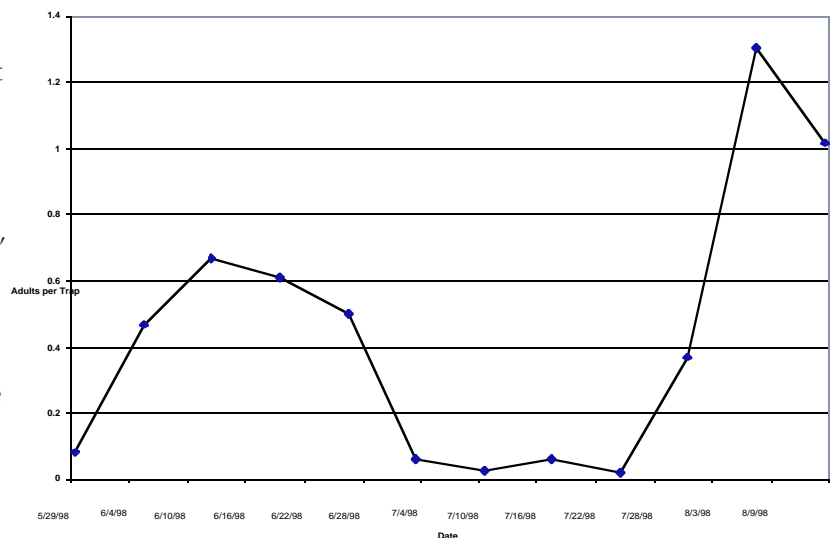
✓ **Codling Moth (CM):** Trap counts have decreased on most farms in southern counties, but insect pressure remains locally high on some farms in Gloucester County. Codling moth pressure is above treatment levels on most farms in northern counties.

## Blueberry

✓ **Sharpnosed Leafhopper (SNLH):** SNLH adult trap counts have increased in Atlantic County, but decreased slightly in Burlington County as compared to last week (see graph). This appears as the peak of the adult flight on a number of farms. Sprays for this insect will likely be applied earlier this year than during previous years. Sprays applied over the next 7 days will target this

✓ **Aphids:** Although they may not be as visible as they once were, aphids are still present in about 72% of our samples. Bushes average about 8% of terminals infested with a high of 37%.

SNLH Burl. Co. 1998



SEE TRAP CAPTURES ON PAGE 5

## Trap Captures

## Tree Fruit – South Jersey

WEEK END:	RBLR	STLM	TABM-A	CM	AM	OFM	TABM-P	LPTB	PTB
3-Jul	19.60	943	25.26	1.52	0.05	8.55	30.91	40.69	8.57
10-Jul	4.00	823.08	7.86	1.69	0.03	5.98	12.57	29.53	2.45
17-Jul	1.20	771.58	15.85	3.55	0.16	8.45	33.79	23.02	2.84
24-Jul	2.80	974.89	15.56	4.31	0.43	17.16	23.06	16.21	3.05
31-Jul	7.40	899.65	25.75	6.58	0.38	22.67	33.62	13.70	1.96
7-Aug	4.40	965.04	34.91	4.88	0.19	19.98	42.18	17.53	5.61
14-Aug	2.00	682	20.35	2.26	0.11	14.91	36.27	18.16	5.07

## Tree Fruit – North Jersey

WEEK END:	RBLR	STLM	TABM-A	CM	AM	OFM	TABM-P	LPTB	PTB
3-Jul	36.41	844	15.20	4.98	0.10	8.05	13.81	25.11	3.77
10-Jul	20.19	649	3.31	1.79	0.32	4.66	4.91	23.88	5.03
17-Jul	9.35	569.54	2.63	1.81	0.11	3.32	1.26	20.29	2.36
24-Jul	7.89	840.20	2.08	4.14	2.75	8.74	2.00	22.22	3.21
31-Jul	5.29	993.92	3.29	10.53	0.46	14.23	4.36	9.12	4.40
7-Aug	9.49	1080	4.17	11.67	0.32	9.73	6.50	7.93	5.00
14-Aug	24.52	1414	2.63	8.05	0.04	19.79	4.72	6.44	2.04

## Blueberry - Atlantic Co.

WEEK END:	RBLR	OBLR	CBFW	SNLH	BBM HIGH	BBM LOW
7/3	20.79	1.0	0.03	0.02	0.34	0.22
7/10	7.35	0.42	0	0	0.3	0.15
7/17	2.79	1.88	0	0.01	0.25	0.12
7/24	13.13	1.87	0	0.01	0.76	0.59
7/31	9.23	2.15	0.00	0.07	0.40	0.19
8/7	6.03	2.75	0.00	0.29	0.90	0.32
8/14	6.16	1.12	0.00	0.49	5.34	3.37

## Blueberry - Burlington Co.

WEEK END:	RBLR	OBLR	CBFW	SNLH	BBM HIGH	BBM LOW
7/3	23.61	1.31	0.44	0.06	0.35	0.06
7/10	6.56	0.22	0	0.03	0.51	0.16
7/17	2	0.28	0.06	0.06	0.47	0.18
7/24	1.06	2.44	0.22	0.02	0.14	0.06
7/31	1.56	3.94	0.00	0.37	0.13	0.00
8/7	3.39	2.11	0.06	1.31	0.33	0.17
8/14	3.61	1.31	0.11	1.02	0.28	0.11

## LORING FROM PAGE 3

until August 13, although many were done picking Loring during the first week of August.

❖ **Allstar** ripened on July 29. This round peach has a dark red overcolor. The color was not as attractive in 1998 because of high night temperatures. The tree had a very heavy crop but even though well thinned, Allstar only had medium size. Tested as FA 80, Allstar has good firmness but needs to be thinned hard to get good size.

❖ **Majestic** ripened on July 29. This dark red variety continues to crop well. It does have a greenish undercolor that as it brightens result in less firm fruit. Majestic is a round to oblate-shaped peach that had no bacterial spot again. With peaches like Bounty, Flamin Fury 17, and Harrow Beauty in this season, Majestic probably has no value to New Jersey growers.

❖ **Contender** ripened on July 30. Contender had its first heavy crop in 1998. It is a round, firm-fleshed variety with a dark and complete red overcolor. The color is somewhat dull making it less attractive. The fruit size was average but not large on trees heavily thinned. Its size is a major concern.

❖ **Glowingstar** ripened on August 2. Skin color was also dark but had better size than Allstar.

## Fruit Variety Meeting

Jerome L. Frecon,  
Agricultural Agent

A fruit variety meeting will be held on Wednesday evening, September 2, 1998, in the Gloucester County Office Building at 7:30 P.M.

The meeting will consist of a display and discussion of peach and early season apple varieties harvested during the month of August and kept in cold storage for evaluation.

The Gloucester County Office Building is located at 1200 N. Delsea Drive, Clayton, NJ 08312. Delsea Drive is Rt. 47 and the building is located 1 mile south of Glassboro, on left hand side. Call RCE of Gloucester County at 609-863-0110 for details. □

The flesh was firm and it hung and handled very well. Glowingstar, tested as FA 17, had a heavy crop of fruit and no bacterial spot. Glowingstar is in a season where we need a good peach.

❖ **Flamin Fury 23** ripened on August 2. This attractive peach has good red overcolor and a nice yellow undercolor even when the fruit is very firm. Size was very good this year. The tree has always been productive; however, in the past two years it has had bacterial spot, mostly on the foliage. This is one of the best peaches in this season. Even though this variety ripened earlier than a peach like Ruston Red it will hang on the tree much longer and keeps its firmness.

❖ **Ruston Red** ripened on August 6. The reddish overcolor and yellow-red undercolor made Ruston Red attractive this year. Trees are productive, fruit size is good but Ruston Red does not handle as well as many other varieties. I am afraid this will limit it in most commercial plantings.

❖ **Biscoe** ripened on August 6 and **Cresthaven** on August 10. **Flamin Fury 24-007** ripened on August 5. I do not have Flamin Fury 25 fruiting yet and FF 24-007 only had 8 fruit on the four trees I have. □

Rutgers Cooperative Extension - NJAES  
U.S. DEPARTMENT OF AGRICULTURE  
Rutgers - The State University of New Jersey  
88 Lipman Drive  
Cook College  
New Brunswick, N.J. 08901-8525

## **PLANT & PEST ADVISORY**

### **FRUIT EDITION - CONTRIBUTORS**

#### Rutgers Cooperative Extension Specialists

Robert Belding, Ph.D., Pomology  
Joseph A. Fiola, Ph.D., Small Fruit & Viticulture  
George Hamilton, Ph.D., Pest Management  
Norman Lalancette, Ph.D., Plant Pathology  
Bradley A. Majek, Ph.D., Weed Science  
Peter Oudemans, Ph.D., Plant Pathology  
Sridhar Polavarapu, Ph.D., Entomology  
Peter W. Shearer, Ph.D., Entomology  
Craig A. Storlie, Ph.D. Agricultural Engineering

#### NJAES/Cook College

Joseph Goffreda, Ph.D., Breeding  
Edward Durner, Ph.D., Plant Physiology  
Rutgers Cooperative Extension Agricultural Agents  
and Program Associates

Gloucester County, Jerome L. Frecon (609-863-0110)  
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 Peters, Program Associate (908-788-1338)  
Gene Rizio, Program Associate (609-566-2900)  
David Schmitt, Program Associate (609-863-0110)

#### Newsletter Production

Jack Rabin, Assistant Director, NJAES  
Cindy Rovins, Editor and Designer

The Plant & Pest Advisory invites reproduction use of individual articles, only in their entirety, source cited with complete article name, author name, followed by Rutgers Cooperative Extension, Plant & Pest Advisory Newsletter.

**Rutgers Cooperative Extension provides information and educational services to all people without regard to sex, race, color, national origin, disability or handicap or age. Rutgers Cooperative Extension is an Equal Opportunity Employer.**

**Pesticide User Responsibility:** Use pesticides safely and follow instructions on labels. The user is responsible for the proper use of pesticides, residues on crops, storage and disposal, as well as damages caused by drift. For specific labels, special local-needs label 24(c) registration, or section 18 exemption, contact Rutgers Cooperative Extension of your County.

**Use of Trade Names:** Trade names are used in this publication with the understanding that no discrimination is intended and no endorsement is implied. In some instances the compound may be sold under different trade names, which may vary as to label clearances.