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

PLANT & PEST ADVISORY

VEGETABLE CROPS EDITION $1.50 JUNE 1, 2005

Pepper production using staked culture, black plastic mulch and drip irrigation

INSIDE

Tips for Successful Pepper Production

Michelle Infante-Casella, Gloucester County Agricultural Agent

Successful pepper production occurs when both quality and yields reach their highest potential. So you want to grow peppers? Here are some things you will need to know.

Choosing the appropriate variety is the first step. Knowing the market will help to determine the right varieties. Some bell pepper markets prefer blocky, 4-lobed peppers, while others want elongated, 3-4 lobed peppers. The hot pepper market is extremely diversified and is generally driven by ethnic culinary preferences. See the *2005 Commercial Vegetable Production Recommendations for New Jersey* pages F63 and F64 for recommended bell and hot pepper varieties.

Transplant health is important when starting off with any vegetable crop. Make sure that transplants are strong, sturdy (not too tall or leggy), have a good green color and well developed root system (but not one that is root-bound). Additionally, make sure they are insect and disease free before planting in the field. When a plant is under stress any time during its life, yield potential is lost and those plants will not be able to produce the maximum yields they would have if not under stress. After setting transplants out in the field, reduce stress by providing adequate irrigation, fertility, and pest control to lessen any interruptions in steady growth of the pepper plants. The use of tensiometers can help measure when soil moisture is low in the root zone and can help accurately determine when irrigation is needed. After planting, peppers should be fertilized one week later in the field with completely soluble fertilizer through the drip to supply 30 pounds per acre of N, P_2O_5, and K_2O. The same rate of fertilizer should be applied every 3 weeks during the growing season for a total of 6 applications. For best result with fertility, use soil test or tissue test results to determine soil fertility levels and plant needs. Again, see the *2005 Commercial Vegetable Production Recommendations for New Jersey* for more information.

When flowers set it is pretty much up to "Mother Nature" to help with pollination. Flowers that do not pollinate properly may abort, again creating a yield loss. If temperatures are too high during flowering, flowers may abort due to plant stress. Once flowers are pollinated and fruit begin to form, this is a critical time for irrigation, fertilization and

SEE PEPPER PRODUCTION ON PAGE 2

Good Agricultural Practices Program

The following items are available from the Good Agricultural Practices Program at Rutgers Cooperative Research & Extension of Cumberland County.

Item		Price
Food Safety Begins on the Farm A Growers' Guide (in English)		$3.00
Food Safety Begins on the Farm A Growers' Guide (in Spanish)		$3.00
Reduce Microbial Risks with GAPs (in English)		$.50
Reduce Microbial Risks with GAPs (in Spanish)		$.50
Laminated Hand Washing Poster		$1.00
Laminated Toilet Use Poster		$1.00
Laminated Toilet Paper Disposal Poster		$1.00
A Growers Self Assessment of Food Safety Risks		$15.00
Fruits, Vegetables and Food Safety: Health and Hygiene on the Farm-Worker Training Video	VHS	$20.00
	DVD	$20.00

Make check payable to: Cumberland County Board of Agriculture (CCBA)
Mail to:
Wesley Kline, County Agent
GAPs Resource Materials
Rutgers Cooperative Research & Extension of Cumberland County
291 Morton Avenue
Millville, New Jersey 08332

Pepper Production from page 1

pest control. When the fruit sizing process takes place the plant uses more energy, water, and nutrients to accomplish the final product; a quality fruit. Therefore, it is at this stage when irrigation and fertilization must be done on time. Also, fruit must be protected from insects and diseases, which can injure fruit making them unmarketable. Harvest of green bell peppers in our region can occur in early July and continue through mid November with the help of row covers or if weather conditions stay mild into the fall. Red bell peppers generally aren't available in great quantity until August and up through November and can command a higher price than green peppers. When peppers are left on the plant to turn red, this adds more stress to the plant and physiologically starts the senescence (the death process) of the plant at a more rapid rate. To understand how fruit stresses a plant it is important to understand something about the "source"/"sink" relationship in plants. When a plant begins to grow, the growing tips act as the "sink" portion of the plant, the portion that demands the most water and nutrients and is the primary growth area. The older leaves are the "source", since they are actively photosynthesizing (producing energy) and would be first sacrificed if the plant were under environmental stress. This is why when a plant is under drought stress, the lower leaves may wilt and yellow first and fall off sooner, due to water and nutrients being diverted to other areas of the plant. When flowers or fruit form, they become the "sink" and the leaves, roots, and stems of the plant are their "source" of energy, water, and nutrients. Plants when under stress will form flowers, set fruit and hopefully viable seeds in order to continue the next generation. This is a survival mechanism for many plants. This is why stressed, root-bound, sickly looking transplants left over in greenhouse trays will form fruit, even when the plant is very small. Therefore, if you remove pepper fruit, you remove the "sink" or demanding portion of the plant to give energy, water, and nutrients back to the rest of the plant to produce more leaves, stems, flowers, and ultimately more fruit.

Bell peppers are typically harvested at 10-15 day intervals for green peppers. However, during these harvests some red or mixed peppers may be found in the field. Harvests of red peppers should occur at least weekly once the first flush of full red fruit are found in the field. From the time a green pepper reaches its final size it will take about 10 days for it to become fully red. Peppers should be harvested during cooler parts of the day when field heat is minimal and quickly placed in cold storage to increase shelf life. Peppers are sensitive to chilling injury and are best stored at 45°-55° F with 90-95% humidity. Temperatures below this may cause pitting or softening of the tissue. Also be sure to not store peppers with ethylene-producing fruit. This will also shorten the shelf life and may cause discoloration of the peppers.

And last but not least, the most important aspect of producing a crop is first to find a market and to determine what that market wants. For peppers find out the shape, whether long or blocky, and perhaps if a certain variety is preferred. ❑

Vegetable Disease Update

Andy Wyenandt, Ph.D., Specialist in Vegetable Pathology and Wesley Kline, Ph.D., Cumberland County Agricultural Agent

✔ **Cabbage – White mold, Bottom rot and Soft rot-** The rain and wind have created wet ground with blowing soils which can create an entry point for all three diseases on injured plant tissue. Unfortunately, little can be done to correct the problem in maturing plantings. White mold and bottom rot will cause mature outer leaves to wilt, brown out and die. White mold will produce thick, fuzzy white growth on the stem. Black fruiting bodies are produced and easily distinguishable in the fuzzy, white growth. Bottom rot will cause grayish, black lesions on the base of the mature leaves and extend upward. Grayish, brown mycelium will often be seen on these lesions when leaves are pulled apart. Soft rot will cause cabbage leaves to disintegrate quite rapidly. Leaves often look greasy and wet at first and eventually infected tissue dissolves away creating holes. Crop rotation is the best method to controlling these diseases. However, cultural practices such as avoiding late season cultivation which may cause wounding of leaves and throwing soil onto the cabbage plant may help.

✔ **Collard/Turnip – Peppery leaf spot** - Symptoms of Peppery leaf spot include water-soaked spots that turn purplish-brown surrounded by yellow 'halos'. These lesions can be up to 1/8 inch and can join together turning leaves yellow, causing them to drop off. The pathogen can survive in the soil and on debris from previous crops. During cool, wet periods, the disease can become severe and be spread by splashing rain. Best management practices for control include i) start with clean seed ii) plant in clean beds and iii) use proper crop rotation of one year or more. If Peppery leaf spot has been a problem in the past, beds should be sterilized prior to planting.

✔ **Lettuce – Bottom Rot/Drop –** Reports of lettuce drop have increased this past week, growers should take precautions to help control Bottom rot (*Rhizoctonia*) and Lettuce drop (*Sclerotinia*) which may cause potential problems. For Bottom Rot, Endura 70W (boscalid, Group 7) at 8 to 11 oz/A, or Rovral 50WP (iprodione, 2) at 1.5 to 2 lb/A or OLF should be applied one week after transplanting or thinning and 10 and 20 days later. For Lettuce drop, the biological Contans 5.3WG at 2 to 4 lbs/A pre-plant can be incorporated at a depth of 1 to 2 inches; or Ronilan 50DF (vinclozolin, 2) at 1 to 2 lbs/A or OLF, or Rovral 50WP at 1.5 to 2 lb/A beginning one week after transplanting or thinning and again at 10 and 20 days later. For more information on control of Bottom rot and Lettuce drop and other important diseases of lettuce please see the *2005 New Jersey Commercial Vegetable Production Recommendations Guide*.

✔ **Parsley – Septoria Blight /Bacterial (blight) leaf spot –** Leaf spots caused by Septoria blight are easily distinguished by small, angular to round leaf spots with grayish-brown centers with a definitive dark, brown margin. Numerous black fruiting bodies develop and are visible in the center of lesions. Spread of Septoria blight is by wind-driven rain, heavy dews and overhead irrigation. Workers and equipment may also spread the disease during wet conditions. Best management practices include i) proper crop rotations of at least 2 years and by using clean or treated seed ii) scout fields early for symptom development iii) keeping

See Disease Update on page 4

Timber Rot of Tomatoes

Andy Wyenandt, Ph.D., Specialist in Vegetable Pathology

This past week **Timber rot** (*Sclerotinia sclerotiorum*) **of tomato** has shown up in many areas. Timber rot is a soil-borne fungal disease that causes a stem rot in fresh market and processing tomatoes as plants begin to mature. Prolonged cool, wet conditions favor the development of Timber rot and it has a wide host range which includes peas and beans, cabbage and lettuce, known as **drop**; and pumpkins and squash, known as **White mold**. Symptoms of Timber rot on tomato include *brownish-tan lesions* that develop at the base of the main stem or near branching points. Lesions become *dry and brittle* with time and infected plants will begin to wilt as lesions begin to girdle the plant. A white, fluffy growth will accompany infected areas and black fruiting bodies, called sclerotia, will develop on the surface of the lesion or in the stem or branch of the plant. Sclerotia are a key diagnostic feature of Timber rot. When scouting for Timber rot growers should scout their fields and look for wilting plants with these brownish to perfectly tan lesions at the base and at branch points of tomato plants. If these lesions are *dry and brittle*, look for *white fluffy growth on the surface or in the stem*. Breaking these lesions apart will often reveal *black sclerotia*. Sclerotia can survive in the field for many years and a long, proper crop rotation is the best method of control. ❑

DISEASE UPDATE FROM PAGE 3

workers and equipment out of fields with wet foliage iv) plowing under residue of harvested crop and avoid planting in fields adjacent or near previously infected fields. Applications of azoxystrobin (Amistar or Quadris) and fixed copper can be alternated every 7 days for control. Bacterial leaf spot (*Pseudomonas syringae*) of parsley shows up at the same time as Septoria blight. Leaf spots caused by Bacterial blight appear as small brown to black spots on the leaves. It does not have the grayish brown centers or brown margins like Septoria. The pathogen can be soil or seed borne and develops during cool, moist weather. The disease spreads during cool rainy periods or under sprinkler irrigation; and a high plant density. The same control measures listed for Septoria will assist in preventing the spread of Bacterial leaf spot as long as fixed copper is included with azoxystrobin. If Oxidate is used, follow the label carefully.

✔ **Spinach (Downy mildew and White rust) -** The use of Ridomil Gold (mefenoxam, 4) at 1 to 2 pt 4E/A or Ultra Flourish (mefenoxam, 4) at 2 to 4 pt 2E/A at planting for damping-off control will provide early season disease control. Beginning 2 to 3 weeks after emergence (and prior to symptom development), apply the following on a 7 to 10 day schedule (do not use if temperature is high). Actigard (acibenzolar-S-methyl, P) at 0.75 oz 50WG/A, or Amistar (azoxystrobin, Group 11) at 2 to 5 oz 80WDG/A, or OLF. For downy mildew control use a minimum of 4 oz of Amistar 80WDG/A and do not make more than one consecutive application. Rotate to one of the following fungicides: Aliette (fosetyl Al, 33) at 3 lb 80WDG/A, or Kocide (fixed copper, M1) at 2 lb 61DF/A (Copper containing fungicides may cause some phytotoxicity), or Ridomil Gold Copper (mefenoxam + copper, 4 + M1) at 2.5 lb 70WP/A (on 14-day schedule). For more information please see the *2005 New Jersey Commercial Vegetable Production Recommendations Guide*.

✔ **Strawberry – Anthracnose fruit rot** - Strawberry anthracnose can be extremely destructive during warm, wet weather causing significant fruit rot. Symptoms of Anthracnose include blackish-brown circular spots on maturing green fruit and soft, sunken (flat) circular lesions on ripe fruit. On ripe fruit, lesions can expand rapidly and are often covered with a pinkish-orange spore mass. Spores are spread from infected to healthy fruit with splashing water. Control of Anthracnose always begins with a 7 to 10 day preventative spray program no later than 10% bloom and/or prior to disease development. For control apply the following combinations:

#1) captan (M3) at 4 lb 50WP/A plus Pristine (pyraclostrobin + boscalid, 11 +7) at 18.5 to 23.0 oz 38WG/A

#2) captan 5(M3) at 4 lb 50WP/A plus Abound (azoxystrobin, 11) at 6.2 to 15.4 oz 2.08F/A, or Cabrio (pyraclostrobin, 11) at 12 to 14 o 20EG/A

#3) Captevate (captan + fenhexamid, M3 + 17) at 3.5 to 5.25 lb 68WDG/A

For subsequent applications, alternate:

captan (M3) at 4 lb 50WP/A plus Abound (azoxystrobin, 11) at 6.2 to 15.4 oz 2.08F/A, or Cabrio (pyraclostrobin, 11) at 12 to 14 oz 20EG/A with

captan (M3) at 4 lb 50WP/A, or
Captevate (captan + fenhexamid, M3 + 17) at 3.5 to 5.25 lb 68WDG/A

To help manage fungicide resistance development, do not make more than 2 consecutive applications of either Pristine (pyraclostrobin + boscalid, 11 + 7), Cabrio (pyraclostrobin, 11) or Abound/Quadris (azoxystrobin, 11) before switching to another fungicide chemistry.

✔ **Strawberry – Botrytis (Gray Mold) and Blossom blight** – can cause serious losses in strawberry plantings if not controlled properly. Development is favored by moderate temperatures (59 to 77°F) with prolonged periods of high relative humidity and surface wetness. Control of Gray mold begins with preventative fungicide applications. Apply at 5 to 10 percent bloom and every 10 days until harvest. During periods of excessive moisture, spray intervals of 5 to 7 days may be necessary. Alternate fungicide chemistries to aid fungicide resistance management.

Application #1: captan (M3) at 4 lb 50WP/A *plus* Topsin M (thiophanate-methyl, 1) at 1 lb 70WP/A or Switch (cyprodinil, 9) at 11-14 oz. 62.5WG/A

Application #2; Elevate (fenhexamid, 17 - See restrictions) at 1.1 to 1.5 lb 50WDG/A, or Pristine (pyraclostrobin + boscalid, 11 + 7) at 18.5 to 23 oz 38 WG/A

Application #3: captan (M3) at 4 lb 50WP/A *plus* Topsin M (thiophanate-methyl, 1) at 1 lb 70WP or Switch (cyprodinil, 9) at 11 to 14 oz. 62.5WG/A

For subsequent applications, alternate:

Captan (M3) at 4 lb 50WP/A, or Captevate (captan + fenhexamid, M3 + 17) at 3.5 to 5.25 lb 68WDG/A, or Switch (cyprodinil, 9) at 11 to 14 oz. 62.5WG/A or Pristine (pyraclostrobin + boscalid, 11 +7) at 18.5 to 23 oz 38 WG/A, or Thiram (M3) at 4 to 5 lb 65WSB/A

✔ **Strawberry – Leather rot -** Leather rot is caused by *Phytophthora cactorum* and can be extremely damaging if left uncontrolled, especially if wet soil conditions and rainy weather persist for extended periods. Weather

SEE STRAWBERRY LEATHER ROT ON PAGE 5

Vegetable Disease of the Week

Andy Wyenandt, Ph.D., Specialist in Vegetable Pathology

Dry, brittle light tan lesion on tomato stem caused by Timber rot.

Strawberry Leather Rot from page 4

conditions which favor Gray mold development may also favor Leather rot. *Fungicides effective against Gray mold are not highly effective against Leather rot* (i.e. Captan, Topsin-M). Symptoms of Leather rot begin to develop as green fruit begins to develop and mature. On green fruit, infected areas often turn a dark-brown. As infection spreads, entire fruit may turn dark-brown and become 'leathery'. However, some fruit may remain mostly green with only dark-brown margins developing around point of infection. Importantly, infection may cause fully mature fruit to turn reddish-brown to dark purple *or cause no distinct symptoms*. These 'healthy-looking' fruit have a very unpleasant taste and may be unintentionally harvested for sale. For control of Leather rot in:

New Plantings:

Aliette (fosetyl-Al, 33) at 2.5 to 5.0 lb 80WDG/A. Begin 14 to 21 days after planting and continue on a 30 to 60 day interval as long as favorable disease conditions occur, or

Ridomil Gold (mefenoxam, 4) at 1 pt 4E/A. Make one application at transplanting plus an additional application at fruit set or 30 days before harvest.

Established Plantings:

Aliette (fosetyl-Al, 33) at 2.5 to 5 lb 80WDG/A, or

Ridomil Gold (mefenoxam, 4) at 1 pt 4E/A. Apply in spring before first bloom and repeat once in the fall. ❑

Pest Notes

Gerald M. Ghidiu, Ph.D., Specialist in Vegetable Entomology

✔ **Potato: Colorado potato beetles** have emerged in high numbers throughout the southern portion of the state. Although later in the season than usual, it is likely that the populations will reach normal levels. If low rates of either Admire 2F or Platinum 2SC were applied pre-plant or at-plant, potato beetles may be controlled for a shorter time period than expected because of the earlier wet weather and the late beetle emergence. Closely monitor fields to determine if beetle populations are surviving earlier treatments. If no insecticide has been applied yet, follow the IPM guidelines on pages F132-133 of the *2005 Commercial Vegetable Production Recommendations for NJ* as to proper timing of pesticide applications.

Regardless if an at-plant insecticide was used or not, remember to rotate class of insecticides during the season and avoid using any insecticide of the neonicotinoid class after mid-June (Actara, Admire, Assail, Platimum, Provado) to reduce or delay insecticide resistance by the beetle to these materials. As an alternate treatment, consider Agri-Mek, Avaunt plus PBO, azadirachtin (neem products), Bt's (Novodor, Raven, for larvae only), cryolite, Imidan, Rimon, SpinTor, Thionex (ex-Thiodan), or Vydate. Several of these are very good selections for **potato leafhopper** control, such as Imidan, Thionex, and Vydate.

It is most likely that **European corn borer** will not be a problem in potato this year because of the cool, wet spring and delayed warm temperatures. Borers are only becoming active now, and it is getting late in the season for the population to develop. It would be best to follow the borer activity via the IPM newsletter, Plant Pest Advisory, black light or pheromone traps to determine population trends.

✔ **Tomato/Eggplant: Colorado potato beetles** have started emergence in high numbers in tomato and eggplant fields throughout the southern areas of the state. Pre-plant or at-plant applications of Admire or Platinum may not protect the plant for as long a period of time as expected because of the extended wet, cool spring and the delayed beetle emergence. See the 'Potato' notes in this section for more information concerning the use of neonicotinoid-class insecticides and the potato beetle. Alternative-class insecticides for potato beetle include Agri-Mek, azadirachtin (neem products), Bt's (Novodor, Raven), cryolite, SpinTor, Thionex, and Vydate. Remember to rotate classes of insecticides for, including the non-neonicotinoids, to reduce or delay the development of insecticide resistance by the potato beetle.

Eggplants are still susceptible to **flea beetle** damage, and can be a problem in untreated fields now that warm days have arrived. If damage is evident, or flea beetle populations are increasing, treat with cryolite, Thionex, Vydate L, or a pyrethroid such as Mustang MAX or Warrior. Apply flea beetle sprays early in the morning before beetles become active. ❑

IPM Update

Kristian Holmstrom, Program Associate in Vegetable IPM

Sweet Corn

Warmer temperatures over the weekend have resulted in slight increases in **European corn borer** (ECB) adult trap catches throughout the southern counties (see ECB map). Minor catches are also occurring north through Mercer County, but these remain very light as yet. If warmer evening temperatures persist, we can expect to see increased ECB adult activity throughout southern New Jersey and ultimately progressing northward over the next 3 weeks. Some of the earliest plantings, including those under plastic, will be at vulnerable whorl and pretassel stages. As weather warms, it is important to begin scouting these plantings. Check 5 consecutive plants each in 10 random locations throughout the planting. Look for the characteristic groups of small holes ("shot-hole") in the leaves. Typically these holes will be found on the outer whorl leaves and also on consecutively younger leaves as the tiny ECB bore into the plant. To date, feeding as high as 8% has been reported in Burlington County by Garden State Pest Management. Consider treating if 12% or more plants are infested with ECB. While plants are in the whorl stage, it is possible to allow the feeding to increase prior to treating, although it is advisable to use an insecticide prior to tassel emergence. After treating, continue scouting regularly to assess infestations levels at the pretassel and tassel stages. ECB larvae will be evident by the discoloration they cause in the tassels. Consider treating as long as the infestation remains over 12%. Be sure to make one insecticide application at the full tassel stage (when the tassel spreads just prior to silking) to clean up ECB larvae moving down the stalks. This is critical to minimize damage to ears. The highest average nightly ECB blacklight trap catches are:

Seeley Lake	3	Tabernacle	2	Elm	1
Woodstown	3	Beckett	1	Hammonton	1
Bayside	2	Cohansey	1	Mullica Hill	1
Shirley	2	Downer	1	Sergeantsville	1

Corn earworm (CEW) catches are not occurring with any consistency as yet. As they do, CEW maps will be included.

Tomatoes

Field plantings of tomatoes in the RCE scouting program in the northern counties are beginning to see increases in the number of **aphid** colonies. Most often, the species involved is the **green peach aphid**. When deciding whether or not to treat for aphids, consider the age of the plant and the presence of predators and parasites. Aphids are often controlled naturally by syrphid fly (flower fly) maggots and *Aphidiid* wasps. The former is a colorful maggot that may be found feeding among the aphid colonies, and the latter causes the aphids to become bloated and golden in color as parasitism occurs. If these antagonists are found among aphids, control may be delayed as long as fruit are not affected directly by aphid droppings. Later in the season, as fruit begin to size, large aphid colonies will affect fruit quality as their droppings fall on the fruit surface. If this condition is occurring, treatment should not be delayed.

Peppers

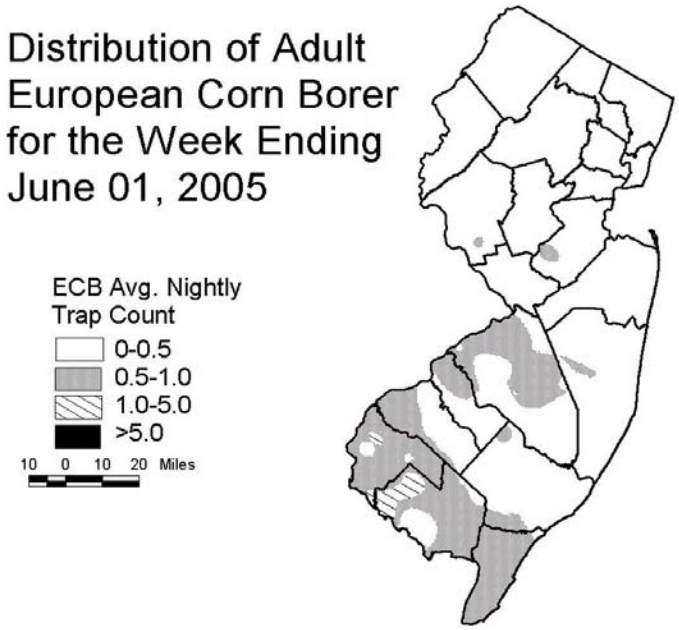
With warmer weather and increased **ECB** activity, peppers will be at some risk from infestation. Although the first ECB flight is not commonly associated with fruit damage, they will lay eggs on young plants. The resulting larvae will tunnel into the main stem of the plant, causing death above the point of entry and delaying development. It is advisable to scout the fields weekly, looking at 2 leaves per plant on 5 consecutive plants in 10 random locations. Consider treating if 2 or more plants are found to have ECB egg masses on them. The ECB egg mass is a flat, pale colored group of 15-30 eggs, and resembles fish scales. They will commonly be found on the underside of leaves.

Aphids have begun to appear in some pepper plantings. These pests are often managed by natural predators and parasites (see tomato section) if insecticides are not used for other reasons. If insecticide sprays are needed for ECB control, aphid populations can become quite heavy. This is particularly the case if synthetic pyrethroid materials are used. Aphids are especially damaging when their numbers increase while fruit are present on the plants. Their droppings fall on the lower fruit, resulting in a sticky residue and subsequent sooty mold growth. If aphid numbers increase to over 1 per leaf on average in a 100 leaf sample, or if their sticky droppings appear in more than one location in the field, consider treating.

Cole crops

Crucifer flea beetles are still being found in some cole crop plantings (direct seeded and transplanted) throughout the state recently. This pest is capable of causing significant damage to young plants, and plantings should be monitored regularly. Consider treating if flea beetles are found on greater than 50% of plants in a 50 plant sample, and damage is occurring. While looking for beetles, also check for the presence of **diamondback moth larvae (DBM)** and **imported cabbage worms (ICW)**. Both pests may be present in cole crops at this time. In Middlesex County, diamondback moth larvae are present at near threshold levels. Consider treating when greater than 20% of plants are infested prior to heading or 5% are infested when heads are present. It is important to check the youngest leaves, as this is often where ICW are found. For collards, kale and mustard, consider treating if greater than 10% of the plants are infested at any time.

See ECB Map on page 7



Data collected and processed by: Kris Holmstrom, Marilyn Hughes
Rutgers Cooperative Extension & Center for Remote Sensing

Weekly Weather Summary

Keith Arnesen, Ph.D., Agricultural Meteorologist

Temperatures averaged much below normal averaging 58 degrees north, 59 degrees central and 59 degrees south. Extremes were 83 degrees at New Brunswick and Toms River on the 28th, and 42 degrees at Freehold on the 24th. Weekly rainfall averaged 0.65 inches north, 0.81 inches central, and 0.35 inches south. The heaviest 24 hour total reported was 0.66 inches at Toms River on the 25th to 26th. Estimated soil moisture, in percent of field capacity, this past week averaged 82 percent north, 94 percent central and 88 percent south. Four inch soil temperatures averaged 56 degrees north, 57 degrees central and 58 degrees south.

Weather Summary for the Week Ending 8 am Monday 5/30/ 5

	RAINFALL			TEMPERATURE				GDD BASE50		MON
WEATHER STATIONS	WEEK	TOTAL	DEP	MX	MN	AVG	DEP	TOT	DEP	%FC
BELVIDERE BRIDGE missing										
CANOE BROOK	.49	10.11	-2.34	78	47	58.	-5	382	89	82
CHARLOTTEBURG	.81	12.96	.70	80	43	57.	-4	277	77	76
FLEMINGTON	.55	12.36	.58	82	47	58.	-6	330	20	87
NEWTON	.77	10.96	.05	79	46	58.	-4	297	56	80
FREEHOLD	.97	13.51	1.75	82	42	59.	-6	370	-2	93
LONG BRANCH	missing									
NEW BRUNSWICK	.86	11.08	-.50	83	47	60.	-6	363	-40	96
TOMS RIVER	1.04	12.22	.50	83	48	58.	-5	289	-58	82
TRENTON	.37	9.54	-1.10	82	45	59.	-7	367	-77	80
CAPE MAY COURT HOUSE	.33	11.02	.71	80	47	58.	-7	234	-161	79
DOWNSTOWN	.25	10.68	.10	81	46	58.	-9	324	-134	80
GLASSBORO	.33	11.53	.28	81	48	60.	-6	429	-11	79
HAMMONTON	.41	10.78	-.18	82	48	59.	-7	354	-78	78
POMONA	.57	11.16	.95	82	48	59.	-6	275	-95	86
SEABROOK	.21	11.36	1.65	82	49	60.	-7	465	2	71
SOUTH HARRISON	.46	11.66	.60	80	48	59	NA	408	NA	NA

WES KLINE — GDD BASE 40 PINEY HOLLOW Last Week* 118 (Ending 5/23/05) This Week 127 (Ending 5/30/05)

* February total base 40 equals 32 units

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