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

PLANT & PEST ADVISORY

VEGETABLE CROPS EDITION $1.50 MAY 11, 2005

INSIDE

Restore NJ Produce Price Reporting to USDA AMS Market News

Jack Rabin, Associate Director for Farm Services, NJAES

The Day Free Produce Promotion Visibility Died

New Jersey's wholesale produce industry gave up millions in free produce marketing visibility on Tuesday, November 24, 1998. This was the last day New Jersey wholesale produce prices were sent out over USDA's Agricultural Marketing Service (AMS) Market News Service. What did New Jersey produce growers and shippers lose? Probably the most valuable free promotion they ever had. They lost "visibility" and recognition in regional and national wholesale produce markets.

After spending the last 15 months examining factors resulting in New Jersey growers losing their position in regional wholesale markets, I have concluded our absence from participating in USDA Market News is likely a significant factor reducing the viability of this $100+ million component of our agricultural industry.

Re-enter Market News with the Right Prices

Instead of quitting the system–losing free market visibility promotion–New Jersey should make a commitment to re-enter the AMS Market News Service with the correct pricing information provided by shippers. The correct prices for New Jersey's participation in Market News Service reporting are 1st handler FOB prices one level up from growers: from buyers, shippers, and distributors.

Lost Market Visibility Worth Millions

While NJDA and Market News continue to collect and report NJ blueberry and peach wholesale FOB price information, the lack of comprehensive FOB wholesale prices reduces our visibility to customers. How much visibility is New Jersey's produce industry losing? The USDA Market News web site receives some 22 million hits a year from industry participants checking produce prices and availability! (Terry Long, USDA, personal communication.). Additionally, the USDA AMS Market News is the most popularly read section of the national Packer trade paper.

New Jersey produce supplies, quality, and prices are no longer visible to Packer readers. Produce supplies, quality, and prices are no longer visible to market participants the 22 million times a year they look for them on the USDA's web site. As an industry, New Jersey growers and shippers do not have a visible presence in this market.

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MARKET NEWS FROM PAGE 1

What else are growers and shippers losing by opting out of the Market News system? When no pricing information is reported, New Jersey farmers are more vulnerable because they lose the ability to know if they are being treated fairly.

The Wrong Prices

New Jersey's produce growers and shippers stopped providing Vineland Cooperative Produce Auction wholesale grower prices for sound reasons. The wholesale prices collected and released were the wrong prices to report, hurting Jersey growers and shippers in their markets. Other regions supply 1st handler FOB prices, not grower prices. The Jersey grower prices released were having a negative impact because they were not comparable to the higher FOB shipping point prices collected and released from other regions. These artificially low prices had a negative impact on New Jersey shippers and farmers when communicating with customers because it set artificially low prices.

Here are some reasons why the New Jersey's produce grower industry may have chosen to not provide daily prices to USDA Market News:

1. As mentioned above, other growing regions post "1st handler FOB prices," which frequently include commissions or add-on costs, not the prices paid to farmers. Posting farmers prices through Market News made New Jersey prices appear artificially low, hurting farmers and shippers alike. Auction prices are not always a true indication of average wholesale FOB prices for any given item. Frequently, they are more volatile than weighted average prices.
2. Because not all items from the south Jersey area are sold at the Auction, posting only Auction prices would not give proper exposure to everything available.
3. Auction prices do not distinguish levels of quality, placing quality growers and shippers at a disadvantage.
4. Places like terminal market houses can quote artificially low prices reported by Market News for Jersey items to protect the low prices paid to farmers. Surprise, surprise: market participants are not always open and honest.
5. Shippers need pricing confidentiality protection. This only happens when Market News gathers a broader scope of sample prices. Otherwise, customers can force individual shippers into downward pricing competition with one another.

I urge NJDA to begin working with New Jersey produce buyers and shippers to reinstate collecting and disseminating 1st handler wholesale prices through Market News. Together with the industry, the New Jersey Department of Agriculture can help restore New Jersey's visible, viable position in the produce trade. ❑

State of the Union in the Sweet Corn Fields

Raymond J. Samulis, Burlington County Agricultural Agent

This year, as in most years, weather conditions have been less than cooperative for early sweet corn growth. Some fields that are planted under plastic mulch are growing fairly well, although they exhibit some leaf burn and wind damage. Fortunately, despite the unseasonably cold weather, the growing point of sweet corn is still below the soil line and somewhat protected. Sweet corn does have the ability to survive cold weather as was evidenced in some of my field plots about 15 years ago. After a 1 to 2 inch snow, the emerged plants not only survived, they went on to produce a crop. The problem for the most part is that although growth of the plants was slow to nonexistent for 2 to 3 weeks, the actual days to maturity remains the same. This resulted in shorter plants with smaller ears because the biological clock of the plant was still ticking, and slow growth days are still calculated into the estimated days to harvest. Fortunately, some varieties like Ice Queen and Sweet Ice to name a few, can grow under less than ideal conditions particularly when soil temperature hover around 50 to 55 degrees F.

Slower growth also creates other issues besides simply smaller ears and stalks. Weakened plants are definitely more susceptible to seedling diseases such as *Fusarium*, and although currently there are some very effective fungicides applied by the seed companies, under sever disease conditions they are never 100% effective. I think this scenario was evident last season in the case of phytopthora on pumpkins and tomatoes. Slower growth predisposes the emerging seedling to particular insects like **seed corn maggot** and **wireworms**. Many fields I look at have skips that are often written off

SEE SWEET CORN ON PAGE 3

Early season sweet corn under clear plastic

Pest Notes

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

✔ **Eggplant** – **Colorado potato beetles** are not reported yet, and soil temperatures are not quite warm enough for beetle emergence in most areas. With the current warm daytime temperatures, beetles should be out very soon. One of the most effective treatments for eggplant is a pre-plant treatment or at-plant treatment of either Admire 2F or Platinum 2SC. Pre-plant treatments protect the seedling before it gets to the field, which may be necessary in some fields. If nothing was used before planting, monitor fields closely for emerging beetles.

✔ **Cucurbits** – **Seed corn maggot flies** are still active, and if growers have had problems with maggots in the past, they should consider using either pre-treated seed, or using an at-plant insecticide such as diazinon or Lorsban. Daytime temperatures are predicted to be in the 70's and 80's for the next week or more, low evening temperatures and occasional showers. These conditions are ideal for maggot oviposition and development. Once seeds are damaged, no rescue treatments are available.

✔ **Onions** – **Onion maggot** flies are still active, and are ovipositing at the base of seedlings. Most states (Michigan, New York) do not recommend foliar sprays for adult onion maggot flies. These foliar sprays are considered to be ineffective because flies spend so little time in onion fields. Also, flies have or can develop a high level of resistance to the insecticides (also, such sprays may force an increase in insecticide resistance by other pests, such as **onion thrips**). It is best to use either a treated seed, or a directed spray of chlorpyrifos (Lorsban) applied at the bases of the onion plants to help control onion maggot larvae. Lorsban is relatively insoluble, and thus stable even after the spring rain showers, so it should still be effective through the growth of the seedling.

✔ **Tomatoes** – **Colorado potato beetles** are the most important pest of tomatoes, but are not out quite yet. Preplant or at-plant treatments of either Admire 2F or Platinum 2SC are the most effective treatments for protecting tomato seedlings from beetle damage. If nothing is used at planting, it is often difficult to control potato beetles because there is so little foliage on the plants for the spray materials to adhere to, and new foliage appears rapidly (all new foliage after a spray is applied is untreated, and quickly damaged by beetles). It's best to use a preplant treatment, and if not, an at-plant treatment, for management of potato beetles in tomatoes. ❑

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as a planter problem or poor seed quality when the real cause is insects below ground. Problems are even more exaggerated for newer, super sweet varieties because the seedling strength is weaker due to the limited food reserves in the shriveled seed.

Two other problem areas I often see are low soil pH and not using the proper ratio fertilizers. Some growers have used a calendar basis for applying lime. Unfortunately, this is not adequate because of the use of acidifying fertilizers and the natural weather related drop in pH. Fields that test in the mid 5's or below will never realize their full yield potentials regardless of how much nitrogen is added. Remember that pH and the addition of lime is the overall regulator of nutrient availability in the soil. Soil tests are needed to evaluate the need for additional phosphorous after banded fertilizer at planting. Many soil tests show high P levels and thus require only marginal or no additions of phosphorous. The contrary is true with potassium or potash. The sandy nature of our soils can result in medium to low potassium, and thus, the usage of standard 1-1-1 ratio fertilizers do not address this shortage. Soil testing is the only way to determine the need for both of these elements.

Despite the trials and tribulations of insects, diseases, soil fertility and the weather, I still expect to see good sweet corn supplies due to the diligence and dedication of growers throughout New Jersey. ❑

IPM Update

Kristian Holmstrom, Program Associate in Vegetable IPM and Joseph Ingerson-Mahar, Vegetable IPM Coordinator

Sweet Corn

In the northern counties, recent warmer day temperatures have caused **flea beetles** to become active in seedling stage sweet corn. This insect is a potential carrier of the bacterial organism that causes **Stewart's Wilt** in sweet corn. When it is warm during the day, check ten consecutive plants each in ten locations throughout the field. Look for the small, black flea beetles on the corn seedlings and count all that are found on 100 plants. If more than six are found, control may be warranted if the variety is susceptible to Stewart's Wilt (check the seed source for disease resistance). When seed is treated with a systemic insecticide, or such a material is used with the seed at planting, flea beetles are typically controlled. Foliar damage by flea beetles appears as pale strips on the leaf surface, where tissue has been scraped away. Rain events tend to suppress flea beetles temporarily.

Cole Crops

Imported cabbageworm eggs are now being laid on small cabbage, broccoli, and kale transplants in the northern areas. This situation has likely been going on for some time in the southern counties, when days were warm. Small green caterpillars will hatch from these individual white or yellow, spindle shaped eggs. Initially, the larvae will feed on the leaf where the egg was laid, but as they grow, they will often seed the more tender foliage in the center of the plant. This can be quite damaging if the growing point is damaged. Scout fields weekly, and consider treating if more than 5% of plants are infested and heads are present, or if 20% of plants are infested prior to heading. In leafy greens, consider treating if 10% or more plants are infested.

Flea beetles can be a problem on cole crops. This is particularly true for direct seeded plants as they first emerge. While scouting for caterpillars, note the presence of flea beetles and their damage (small holes and dry areas at the leaf margins). Consider treating if flea beetles are present on 50% or more plants and damage is occurring. Scout the young plants twice a week if possible.

Wireworms

As soon as the soil temperatures warm up to over 50 degrees F, **wireworms** will begin feeding on plants. Small grains both as cover crops and full season grains are susceptible and in heavily infested fields there may be some stand reduction due to their feeding. Look for tillers that are yellow. These will pull easily out of the ground and usually have a frayed appearance on the soil end. While wireworms are seldom an economic concern in small grains in New Jersey, looking for the damaged tillers is a good way to get a relative idea of abundance and whether wireworm susceptible crops such white and sweet potatoes, corn and other vegetable crops should be planted in the field. ❑

Vegetable Disease Update

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

✔ **Cole crops – Downy Mildew and Alternaria –** Symptoms of Downy Mildew include purple to yellowish-brown spots on upper leaf surfaces. A grayish-white spore mass will develop and cover the underside of leaves under ideal temperatures (night temperatures of 46 to 61°F and day temperatures below 75°F. Downy mildew can kill young plants. Heavily infected leaves may drop providing entry points for bacterial infections (**Black rot and Soft rot**). Symptoms of Alternaria on infected leaves include small, expanding circular lesions with concentric rings that may have a 'shot-hole' appearance as lesions age. Heavily infected seedlings may result in damping-off. Control of Downy mildew and Alternaria begin with preventative fungicide applications. Use one of the following at the first sign of disease and continue every 7 to 10 days (Please refer to the pesticide table on page F17 of the *NJ Commercial Vegetable Production Recommendations* to determine which fungicide is labeled for each specific crop): Amistar (azoxystrobin, 11) at 2.0 to 5.0 oz 80 WDG/A (Alternaria only; labeled for use on leafy greens only), or Bravo, Echo, Equus (chlorothalonil, M4) at 1.5 pt 6F/A or OLF, or maneb (M2) at 1.5 to 2 lb 80WP/A or OLF, or Ridomil Gold Bravo (mefenoxam + chlorothalonil, 4 + M4) at 1.5 lb 76.5WP/A (14-day schedule), or Switch (cyprodinil, 9) at 11 to 14 oz 62.5WG/A (Alternaria only). For downy mildew only, apply Actigard (acibenzolar-S-methyl, P) at 1 oz 50WG/A (begin applications 7-10 days after thinning and re-apply every 7 days for a total of 4 applications per season.), or Aliette (fosetyl Al, 33) at 3 to 5 lb 80WDG/A (on 14-day schedule). For more information please see *2005 New Jersey Commercial Vegetable Production Recommendations Guide*.

✔ **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

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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 workers and equipment out of fields with wet foliage; and 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 showed 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 spread of Bacterial leaf spot as long as the fixed copper is included with the azoxystrobin. If Oxidate is used, follow the label carefully.

✔ **Spinach (Downy mildew and White rust) –** *Reports of Downy mildew have occurred this past week.* 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 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

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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

✔ **Tomato – Bacterial spot and speck –** Both bacterial diseases can cause serious problems in the field if infections begin in the greenhouse prior to transplanting. Symptoms of spot and speck look very similar on infected leaves. Lesions are small, circular, blackish-brown and with time develop a halo, or yellowing of tissue surrounding the lesion. As lesions develop they can coalesce (join together) and can cause premature death. Since sources for these diseases include weed hosts, volunteer plants and contaminated wood (benches or stakes) make sure production or holding areas are disinfested, weed free and clean prior to introducing transplants, and inspect all seedlings prior to holding and transplanting. Infections can occur on all parts of the tomato plant and can easily be spread during transplant trimming with contaminated equipment and by workers' hands. Tomato plants with suspected symptoms can be treated with streptomycin (Agri-Mycin 17, Agri-Strep, 25) at 1 lb/100 gallons, or 1.25 teaspoon per gallon prior to transplanting every 4 to 5 days. After transplanting apply Actigard (P) at 0.33 oz 50 WG/A, or fixed copper (M1) at 1 lb a.i./A ***plus*** a mancozeb (Dithane, Manex II, Manzate, Penncozeb, M3) at 1.5 lb 75WP or OLF, or ManKocide (M1 + M3) at 2.5 to 5.0 lb 61WP/A, or Cuprofix MZ (M1 + M3) at 1.75 to 7.25 lb 52.5 DF/A on a 7 day schedule. ❑

Growers Guide to Understanding the DMI or SBI Fungicides

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

The **DMI** (**D**e**M**ethylation **I**nhibitors) or **S**terol **B**iosynthesis **I**nhibiting (**SBI**'s) **fungicides belong to FRAC group 3** which include the triazoles and imidazoles. Some of these fungicides are commonly known as Tilt (propiconazole), Nova (myclobutanil) and Procure (triflumizole). ***SBI's work by inhibiting the biosynthesis of ergosterol*** which is a major component of the plasma membrane of certain fungi and needed for fungal growth.

Resistance by fungi to the SBI fungicides has been characterized and is generally known to be controlled by the accumulation of several independent mutations, or what is known as 'continuous selection' or 'shifting', in the fungus. Such that in any given field population the sensitivity to the SBI fungicide by the fungus may range from extremely high (highly sensitive, i.e. will be controlled by fungicide) to moderate (partially sensitive) or low (mostly resistant to fungicide). This type of resistance is also known as quantitative resistance. With quantitative resistance there are different levels of resistance to the fungicide due to independent mutations, which is unlike the target mutations that occur in qualitative resistance associated with the QoI fungicides (Group 11) (*Plant & Pest Advisory 5/4/05*). Because different levels of resistance to the SBI fungicide may exist in the field, the fungal population may behave differently to different rates of the SBI fungicide being applied. Hence, it is suggested that using a higher rate of a SBI fungicide may improve control when lower rates have failed.

For example, let's say that a Powdery mildew population on pumpkin has 25% high, 50% moderate, and 25% low sensitivity to a SBI fungicide. If fungicide is applied at the low rate, only 25% of the population (highly sensitive) may be controlled. Whereas, if the high rate was used, 75% of population may have been controlled. The main point here is that if low rates of SBI fungicides have been used and control seems to be weakening, bumping to a higher rate may improve control.

Unfortunately, it is difficult to determine what proportion of the powdery mildew population is sensitive or not sensitive by looking at the field until you have begun spraying. The best advise, if you are using low rates and think those rates are not working like you feel they should, move up to the high rate the next time the fungicide is sprayed, and if the high rate doesn't work it may be safe to assume the fungal population has grown mostly resistant. Importantly, if the high rate fails, whether you bumped up to a high rate or started with one, and control does not seem adequate ***do not continue*** to use the fungicide. ***Recognizing if and when fungicide chemistries are failing and when fungicide resistance is developing is critical*** to producing successful crops and why ***scouting*** on a regular basis, at least before and after each fungicide application, is important. Regular scouting can help reduce unwarranted and ineffective fungicide costs. Remember to always tank mix SBI fungicides with protectant (M) fungicides (i.e. chlorothalonil) to help reduce the chances for fungicide resistance developing and never apply SBI fungicides in consecutive applications and always be aware of the fungicide rates you are applying. ❑

Weekly Weather Summary

Keith Arnesen, Ph.D., Agricultural Meteorologist

Temperatures averaged much below normal, averaging 50 degrees north, 51 degrees central and 51 degrees south. Extremes were 73 degrees at Belvidere, West Deptford and Seabrook on the 9th, and 31 degrees at Charlotteburg on the 5th. Weekly rainfall averaged 0.09 inches north, 0.20 inches central, and 0.29 inches south. The heaviest 24 hour total reported was 0.41 inches at Cape May Courthouse on the 6th to 7th. Estimated soil moisture, in percent of field capacity, this past week averaged 90 percent north, 96 percent central and 91 percent south. Four inch soil temperatures averaged 50 degrees north, 52 degrees central and 52 degrees south.

Weather Summary for the Week Ending 8 am Monday 5/ 9/ 5

	RAINFALL			TEMPERATURE				GDD BASE50		MON
WEATHER STATIONS	WEEK	TOTAL	DEP	MX	MN	AVG	DEP	TOT	DEP	%FC
BELVIDERE BRIDGE	.08	9.08	.24	73	33	51.	-7	148	56	83
CANOE BROOK	.04	9.09	-.64	66	33	51.	-6	177	100	86
CHARLOTTEBURG	.12	11.29	1.70	69	31	49.	-6	109	74	86
FLEMINGTON	.06	10.93	1.64	70	31	50.	-7	139	55	89
NEWTON	.10	9.54	1.00	64	34	49.	-7	126	75	84
FREEHOLD	.15	11.25	2.03	68	36	52.	-7	172	54	94
LONG BRANCH	MISSING									
NEW BRUNSWICK	.13	9.26	.32	67	35	50.	-10	155	15	95
TOMS RIVER	.47	9.97	.69	68	35	50.	-9	127	24	95
TRENTON	.05	8.29	-.06	70	35	51.	-9	164	2	83
CAPE MAY COURT HOUSE	.60	7.51	-.59	65	36	49.	-10	95	-45	84
DOWNSTOWN	.27	8.96	.62	71	35	50.	-10	145	-26	92
GLASSBORO	.00	9.89	1.07	73	33	53.	-7	198	36	77
HAMMONTON	.29	8.82	.24	71	35	50.	-10	160	4	90
POMONA	.46	8.58	.45	71	33	49.	-10	116	-5	95
SEABROOK	.14	9.38	1.86	73	37	54.	-6	233	59	86
SOUTH HARRISON	.01	9.63	1.14	71	38	53	NA	203	NA	NA

WES KLINE — GDD BASE 40 PINEY HOLLOW

Last Week* 101 (Ending 5/2/05)

This Week 74 (Ending 5/9/05)

* February total base 40 equals 32 units

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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.

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