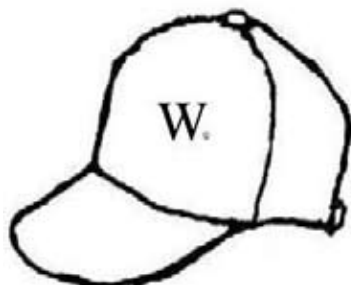


PLANT & PEST ADVISORY

VEGETABLE CROPS EDITION \$1.50

MAY 30, 2007



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Beat the WAL-MART Inside You

Much ado about big boxes moving into town, but the real challenge is pricing your goods properly.

Jhilson Ortiz, Senior Program Coordinator - Agriculture

Consumer research tells two different stories about farmers and their products in New Jersey, depending upon the client you ask. Big brokers and food distributors think of Jersey produce as necessarily cheap, and direct consumers think of it as necessarily fresh.

The second one is right, as well as the first.

Un-differentiated products ought to receive the same or lesser price; after all, it's the market that dictates the prices. But what choices do farmers have then? Packaging and post processing of fruits and vegetables is not for everyone, but there is a more affordable choice called "Customer Service", which will eventually differentiate you from the competition and bring you sales out of reliability and quality built within your system.

Customer service does not only entitle customers to a smile, but also to a clear commitment of delivery of the right product at the right time, among other things.

Contact your client to let him know you are enhancing your customer service program and start by asking what product qualities or services would they like to see in the future. Make a list of these client needs and classify them by level of difficulty.

Start by changing those client needs that are the most important for them, and easiest for you to apply. Continue moving up the list until you reach the point of fulfilling your client needs without breaking your bank (lowering your profit). When making financial calculations, take the expenses of customer service as investment in your "brand name".

Remember, low prices are not everything. Give the service and the quality, choose the right target market, plan your business strategy focusing on the unique characteristics you'll offer, and leave the low prices for Wal-Mart. □

Vegetable Disease Update

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

✓ **Cucumber/Pickles – Angular leaf spot** - Symptoms are distinct and easily diagnosed. Small water-soaked **lesions** develop on leaves and expand until they are **delimited by larger secondary veins** in leaves resulting in angular lesions. After time these lesions turn brown and infected tissue drops-off resulting in ‘shotholes’. Angular leaf spot can be spread by splashing rain, insects, on the hands of workers and on farm machinery. Working in the field when the foliage is wet favors the spread of the disease. The disease can also be spread by blowing wind and in irrigation water. Best management of Angular leaf spot begins with clean-seed and planting in fields that has been out of cucurbit production for at least 2 years. Cultivating when foliage and soil are wet and irrigating with pond water should be avoided. There are cucurbit varieties with resistance. Add label rate of fixed copper + mancozeb to fungicide maintenance program and repeat applications every 7 days.

✓ **Pepper – Phytophthora blight**

For control of the crown rot phase of blight:

Apply 1 pt Ridomil Gold 4E/A or 1 qt Ultra Flourish 2E/A (mefenoxam, 4). Apply broadcast prior to planting or in a 12- to 16-inch band over the row before or after transplanting. **Make two additional post planting** directed applications with 1 pint Ridomil Gold 4E or 1 qt Ultra Flourish 2E per acre to 6 to 10 inches of soil on either side of the plants at 30-day intervals. Use formula in the “Calibration for Changing from Broadcast to Band Application” section of Calibrating Granular Application Equipment to determine amount of Ridomil Gold needed per acre when band applications are made.

When using polyethylene mulch, apply Ridomil Gold 4E at the above rates and timing by injection through the trickle irrigation system. Dilute Ridomil Gold 4E prior to injecting to prevent damage to injector pump.

✓ **Potato – Black Leg** – The aerial phase of Black leg, also known as aerial stem rot, has shown up over the past week. Black leg is caused by *Erwinia* spp., which also cause ‘soft rot’. The bacteria which lead to the aerial phase of Blackleg are soil-borne (originate from old crop debris) and are spread by rainfall, overhead irrigation and wind. The aerial phase of Blackleg does not originate from decaying seed pieces. The bacterium can enter the plant through wounds created by cultivation or through stems damaged by blowing wind, sand or hail. Dense canopies, warm weather and prolonged periods of leaf wetness favor the spread of aerial Blackleg. Fortunately, the disease rarely extends below

ground and causes dieback of stems over time. Symptoms of the aerial phase of Blackleg first appear as an irregular, water-soaked ‘green’ decay on stems that turns light-brown to black over time. Hot, dry weather will cause infected areas to dry out and become brittle. To help suppress aerial Blackleg, avoid excessive overhead irrigation if possible. Do any cultivating when plants are dry. Cultivating in the presence of dew or wet plants may help to spread the bacterium around.

✓ **Tomato – Bacterial spot, speck and canker** – Bacterial diseases can cause serious problems in the field if infections are allowed to spread. 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 75DF 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 52.5DF/A on a 7 day schedule.

✓ **Tomato - Stem Rot/Pith Necrosis** – Symptoms begin to develop as green fruit begins to mature. Bacteria are most likely ubiquitous to tomato fields and develop when weather conditions and cultural practices lead to favorable conditions for disease development. Symptoms include the development of irregular brown lesions on main stems and branches. Late pruning (suckering) can provide entry points for both bacterial diseases, especially during wet conditions. Internally, stems will become brown and mushy. High humidity is necessary for disease development in both cases. High nitrogen and low night temperatures are associated with Pith Necrosis development. Control of both begins with cultural practices such as avoiding working in fields with wet foliage, avoiding late pruning and watching the amount of N applied to plantings.

✓ **Tomato – Buckeye Rot** – Wet weather and wet soils favor the development of Buckeye rot. Symptoms of Buckeye Rot on green fruit include brownish-tan lesions that have a **definitive concentric appearance**. As lesions form the fruit will begin to soften up, this is quite different than Late blight which will cause a dark brownish/black lesion with the fruit remaining somewhat firm. Unlike Late blight, Buckeye rot won’t attack the foliage. For more information on control please see the *2007 New Jersey Commercial Vegetable Production Recommendations*.

✓ **Tomato – White mold** - Symptoms of white mold are commonly seen around first flowering. Stems and branches become dark with water-soaked lesions which eventually turn soft. **After time, lesions turn a light tan-nish-brown and are brittle**. During cool, moist weather a white cottony mycelium may develop on infected plants. **Large, black sclerotia may develop on the inside of lesions** and are diagnostic of white mold infections. A section 18 has been granted for the use of Topsin M WSB for the control of white mold (timber rot) in tomato for the 2007 production season in New Jersey. The sec-

SEE DISEASE UPDATE ON PAGE 3

Summer Disease Control in Asparagus

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

It's not too early to think about important summer diseases of asparagus. **Purple spot** lesions can appear on the spears during the harvest season and reduce quality, as well as on fern growth later in the summer. Characteristic symptoms of Purple spot include small (1 to 2 mm) slightly, sunken elliptical reddish-purple lesions on spears and ferns. Damage to ferns can cause premature defoliation which will reduce carbohydrate flow and reduce yield for the next growing season. Chopping the fern and incorporating the debris in the fall after the fern senesces can help destroy overwintering sources of the fungus, however these practices may also lead Fusarium infection. Once fernstalks are full-size, fungicide applications should be repeated every two to four weeks until frost.

Rust is another important pathogen of asparagus. Rust can easily be diagnosed in the field early in the season by the cream-colored oval lesions (6 to 19 mm) it produces. A few weeks later these lesions will appear reddish-brown. These reddish-brown lesions can produce spores which can cause more infections leading to further disease development.

Control of Rust is extremely important and necessary in one and two year old beds, even with rust-resistant varieties. Growers need to begin scouting for symptom development in late-June in non-cutting beds and apply fungicides if necessary. In cutting beds, fungicide applications typically begin in mid-August. Fungicide applications of chlorothalonil, mancozeb or myclobutanil rotated on a 7 to 10 day schedule will help control rust. □

DISEASE UPDATE FROM PAGE 2

tion 18 label for Topsin M WSB (thiophanate-methyl, FRAC code 1) can be obtained through your county agricultural agent. The label must be in possession of the applicator at the time of application. □

Vegetable Diseases of the Week

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



Buckeye rot of tomato



White mold of tomato

Pest Notes

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

Colorado potato beetle adults are present on eggplant, white potato and tomato, and a few eggs are beginning to appear. Development will occur rapidly now that continual warm weather has arrived.

✓ **Eggplant:** In general, thresholds and spray guidelines have not been developed for eggplant, partly because any feeding damage to the fruit renders it unmarketable. If an at-plant insecticide was not used, and **beetles** are present, several neonicotinoid insecticides are very effective as a foliar spray, including Actara, Assail, Provado or any of a number of generic imidacloprids, and Venom. These materials should be used early in the season but not past early June before the second generation beetles emerge.

If an at-plant neonicotinoid insecticide was used, do **not** use a foliar spray of the same chemistry (IRAC Group 4) to reduce the potential of insecticide resistance development. Use a Bt (*Bacillus thuringiensis*) labeled for **potato beetles**, cryolite, SpinTor (or Entrust), Thionex or Vydate (**note:** Vydate will be most effective when ample foliage is present).

✓ **Potato:** Materials used at-plant for potatoes are still working, but their effectiveness will soon wane. Monitor closely for increasing populations of **beetle** adults and larvae, especially in fields adjacent to beetle overwintering sites or next to previous year's potato fields. As a general guideline, if more than 50 adults or 200 small larvae are counted per 50 stems, a treatment is recommended. Use a material **other than** one belonging to the neonicotinoid class (Class 4 on the label) as a foliar spray, which includes AgriMek or generic abamectin, Avaunt (with a tank mix of the synergist PBO), azadirachtin (such as Azatin, Ecotin, or Neemix), a Bt labeled for potato beetles, cryolite, Imidan, Rimon, SpinTor (or Entrust), Thionex or Vydate.

On any of the above crops, it is important to remember that some of these insecticides may no longer be effective in specific areas because of the development of CPB insecticide resistance. It is critical to closely monitor the fields after application for effectiveness of the spray material to ensure that results are as expected. For some materials (azadirachtin, Bt's, Avaunt, Rimon) there is a longer delay between the time of contact with the pesticide and the demise of the beetle, and often the beetles are affected but remain attached to the plant and can appear as if normal. Make sure you wait 4-5 days after application before you monitor for the spray effectiveness when you use any of these materials so a false reading is not obtained.

Climate and Farming Survey

Climate Change and Agriculture: Promoting Practical and Profitable Solutions has developed the ClimateandFarming.org website, investigating on-farm crop biofuel production and climate change issues impacting agriculture in the Northeast. With funding from the Cedar Tree Foundation, they are helping to spread knowledge about farming for fuel and local fuel production in the Northeast. The project is lead by Bill Burtis at Clean Air - Cool Planet and Dr. Vern Grubinger at the University of Vermont. Their advisory group includes faculty from University of New Hampshire and Cornell University.

A web-based survey designed to capture interest and need for information among farmers is now available through the climateandfarming.org website at the link below. The survey targets the agricultural community, and the results will be used to help us organize an educational conference that will take place later this year or early in 2008.

The survey link is:

http://climateandfarming.org/survey_all.php

✓ **Tomato:** It is recommended to begin treatments when the **CPB** population exceeds 15 potato beetle adults per 10 plants on average throughout the field. However, hot spots will develop along field edges, so be prepared to spot treat just those spots if necessary. If early treatment is not necessary and plants increase in size, monitor continuously through the season and treat if more than 20 potato beetle larvae and/or adults accumulate per 10 plants. As with eggplant and potatoes, avoid insecticides belonging to the neonicotinoid class of compounds after mid-June to reduce the potential of insecticide resistance development (also avoid using them if a neonicotinoid class of insecticide was used at plant or pre-plant). Alternative materials for CPB control include Agri-Mek (or similar generic compounds), azadirachtin (such as Neem, Azatin, Ecozin), a Bt material labeled for CPB, cryolite, SpinTor (or Entrust), Thionex, or Vydate (apply Vydate when plant has adequate foliage). □

IPM Update

Joseph Ingerson-Mahar, *Coordinator, Vegetable IPM Program*

Except for a few locations in central and southern New Jersey, the flight of 1st generation European corn borers remains light. A localized hot spot was found at Tabernacle. These moths are laying eggs and the first eggs laid should be hatching now.

Highest number per night of *European corn borer* blacklight trap catches from May 24 to 28:

Tabernacle	2.8
Shiloh	1.75
RAREC	1.75
Woodstown 2	1.5
Shirley	1.5
Halltown	1.25
Seely Lake	1.25
Crosswicks	1.0

Last Thursday and Friday a high pressure system situated mostly to our south brought warm air up from the south and with it probably our first flight of corn earworm. Blacklights at 4 locations in southern

New Jersey caught moths. Because of the nearly full moon occurring at the same time these counts may be light as the moonlight may reduce the effectiveness of the blacklight traps. Still this seems to be a small influx. Sweet corn in the whorl stage should not experience much damage from corn earworm. Anyone with green fruit on early tomatoes should scout the fruit in the next week to be sure that earworms are not causing economic damage to the fruit.

Highest number per night of *corn earworm* blacklight trap catches from May 24 to 28:

Beckett	.4
Cinnaminson	.2
Cedarville	.2
E. Vineland	.2

Another migratory pest, *potato leafhopper*, historically arrives in mid May. Numbers build up in southern New Jersey from May to July, with populations building in northern New Jersey from late June to early August. Growers with snap beans and other leguminous crops, as well as potatoes should begin scouting their crops to ensure that leafhopper damage is not occurring.

There are no pest maps this week. □

Weekly Weather Summary

Keith Arnesen, *Ph.D., Agricultural Meteorologist*

Temperatures averaged much above normal, averaging 67 degrees north, 68 degrees central and 68 degrees south. Extremes were 92 degrees at Canoe Brook on the 26th, and 38 degrees at Newton and Charlotteburg on the 22nd. Weekly rainfall averaged 0.09 inches north, 0.34 inches central, and 0.18 inches south. The heaviest 24 hour total reported was 0.60 inches at Glassboro on the 27th to 28th. Estimated soil moisture, in percent of field capacity, this past week averaged 87 percent north, 77 percent central and 68 percent south. Four inch soil temperatures averaged 62 degrees north, 64 degrees central and 64 degrees south.

Weather Summary for the Week Ending 8 am Monday 5/28/07											
WEATHER STATIONS	RAINFALL			TEMPERATURE				GDD BASE50		MON	
	WEEK	TOTAL	DEP	MX	MN	AVG	DEP	TOT	DEP	%FC	
BELVIDERE BRIDGE	.00	.00	.00	0	99	0.	0	0	0	0	
CANOE BROOK	.05	19.73	7.54	92	42	69.	6	467	200	79	
CHARLOTTEBURG	.00	14.98	2.97	88	38	66.	6	402	223	76	
FLEMINGTON	.29	18.91	7.37	89	39	68.	5	441	158	86	
NEWTON	.00	10.95	.27	87	38	65.	4	368	151	76	
FREEHOLD	.28	14.35	2.83	89	57	72.	8	604	262	74	
LONG BRANCH	.05	14.61	2.72	89	46	67.	4	419	121	60	
NEW BRUNSWICK	.37	19.17	7.84	89	43	68.	3	495	123	86	
TOMS RIVER	.81	12.49	1.00	90	44	67.	4	465	144	87	
TRENTON	.19	16.02	5.60	89	47	68.	2	519	107	60	
CAPE MAY COURT HOUSE	.00	7.80	-2.30	89	46	66.	2	452	87	55	
DOWNTOWN	.06	13.07	2.70	90	44	67.	1	531	106	58	
GLASSBORO	.84	13.14	2.12	90	49	70.	4	621	213	85	
HAMMONTON	.02	11.96	1.23	91	43	68.	2	550	150	51	
POMONA	.00	10.11	.10	91	44	68.	4	511	170	51	
SEABROOK	.17	13.46	3.96	89	49	69.	3	638	208	59	
SOUTH HARRSION	.17	14.75	3.21	89	48	68	NA	590	NA	NA	
WES KLINE -- GDD BASE 40 PINEY HOLLOW	LAST WEEK	149	(Ending 5/21/07)	THIS WEEK	194	(Ending 5/28/07)					

New Jersey Agricultural
Experiment Station
Plant & Pest Advisory
Rutgers School of Environmental
and Biological Sciences
ASB II, 57 US Hwy. 1
New Brunswick, N.J. 08901

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PLANT & PEST ADVISORY VEGETABLE CROPS EDITION CONTRIBUTORS

Rutgers Cooperative Extension (RCE) Specialists

Gerald M. Ghidui, Ph.D., Vegetable Entomology
George Hamilton, Ph.D., Pest Management
Joseph R. Heckman, Ph.D., Soil Fertility
Bradley A. Majek, Ph.D., Weed Science
Andy Wyenandt, Ph.D., Vegetable Pathology

RCRE County Agricultural Agents

Atlantic, Richard W. VanVranken (609-625-0056)
Burlington, Raymond J. Samulis (609-265-5050)
Cape May, Jenny Carleo (609-465-5115)
Cumberland, Wesley Kline, Ph.D. (856-451-2800)
Gloucester, Michelle Infante-Casella (856-307-6450)
Hunterdon, Winfred P. Cowgill, Jr. (908-788-1338)
Middlesex, William T. Hlubik (732-398-5260)
Monmouth, Bill Sciarappa, Ph.D. (732-431-7260)
Morris, Peter J. Nitzsche (973-285-8300)
Passaic, Elaine F. Barbour, Agric. Assistant (973-305-5740)
Salem (856-769-0090)
Warren, William H. Tietjen (908-475-6505)

Vegetable IPM Program (732-932-9802)

Joseph Ingerson-Mahar, Vegetable IPM Coordinator
Kristian E. Holmstrom, Research Project Coordinator II

Newsletter Production

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

Pesticide User Responsibility: Use pesticides safely and follow instructions on labels. The pesticide user is responsible 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 RCE in your County.

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