RUTGERS COOPERATIVE EXTENSION AT THE NEW JERSEY AGRICULTURAL EXPERIMENT STATION

PLANT & PEST ADVISORY

VEGETABLE CROPS EDITION $1.50 SEPTEMBER 1, 1999

INSIDE

Financial Survival Tips For Drought-Stricken New Jersey Farmers

Dan Wunderlich, Agricultural Agent and Barbara O'Neill, Ph.D., Family & Consumer Sciences Educator, Rutgers Cooperative Extension of Sussex County

For a farm family, the financial stress resulting from a drought is similar to a period of unemployment experienced by salaried workers. Your income is significantly reduced while household and farm expenses continue as before. The key to survival during this period is expense reduction, debt restructuring, and/or finding alternative sources of income. Below are some ideas to consider during this time of extreme financial stress:

- Contact your creditors and service providers (e.g., feed, fertilizer, machinery, utilities) ASAP and explain the situation. Don't wait for them to contact you. Explain the impact that the drought has had on your farm income and request a reduced monthly payment or a reduced interest rate. Get all payment reductions in writing and write down the names of the people you speak to.
- Apply for all public benefits that you or your family may be eligible for (e.g., Food Stamps, WIC, reduced price school lunches, the NJ Kid Care health insurance program for children). These benefits aren't "charity." You've worked hard for years to pay the taxes that provide them.
- Closely track monthly spending and reduce or eliminate unnecessary expenses. Also consider ways to reduce fixed monthly payments (e.g., refinancing mortgage with a lower rate loan). Keep insurance policies, especially health insurance, in force if possible. Studies show that people under stress experience more accidents and require more medical attention than others. Uninsured medical expenses will only further worsen your financial situation.
- Consider alternative income sources. Perhaps your spouse can work outside the home or increase hours spent in paid employment. You, too, may be able to find a full- or part-time job, temporarily, or as a long-term career move. Other ways to increase income are to: sell assets (e.g., an extra car or farm land or equipment that is seldom used), borrow from a life insurance policy or retirement plan, request money that was loaned to others, charge adult children room and board, adjust income tax withholding and/or make smaller quarterly withholding payments in anticipation of a reduced income, and

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increase yields on existing savings (e.g., a 5% CD instead of a 2% passbook bank account).

- Determine spending priorities if you can't pay all your bills. Basic needs always come first: your house, utilities, food, and health insurance. After that, ask yourself which debts and expenses affect your farm and personal security the most. Also, which debts are secured with collateral and which are unsecured?
- Conduct a thorough risk assessment. Consider reducing the farming enterprise to a level that doesn't require large amounts of risk capital. Or diversify your farming activities. Produce crops that yield a higher profit margin and a good return on investment. Develop new marketing strategies and explore agritourism and/or direct marketing possibilities. Work out advance payments from processors and dealers to cover short-term cash flow problems.
- **Consider contacting the Consumer Credit Counseling Service (call 1-800-388-CCCS for the office nearest you) for assistance with budgeting and debt repayment. CCCS has the ability to negotiate with creditors and restructure your personal debt load. A nominal counseling fee (generally about $35) may be charged. There are also several national financial counseling agencies that operate via telephone and the Internet, including Money Management International** (www.mmintl.org)**, Debt Counselors of America** (www.dca.org)**, and Genus Credit Management** (www.genus.org)**.**
- Contact Rutgers Cooperative Extension to access FINPACK, a comprehensive farm financial analysis system. This computer software program is available to financially distressed producers to assist with short-run survival and long term profitability. Information about obtaining a FINPACK analysis can be obtained from Dave Lee (609-769-0090), Salem County Agricultural Agent and program coordinator for the Garden State Agriculture Re-Engineering Initiative, and Dan Wunderlich (973-579-0985), Sussex County Agricultural Agent.
- Compare the total cost and affordability of various farm loan alternatives. For example, let's say you need $100,000 to cover farm expenses (e.g., feed, seed, fertilizer, loan payments, etc.) through next year.

If you took a 10%, unsecured personal or business loan for two years, the monthly payment would be $4,614.50, for a total of $110,748 repaid over 24 months. The government low-cost loan rate is 3.75% and loans can be repaid for up to seven years. With this scenario, the monthly payment would be $1,355.40 for 84 months or a total cost of $113,853.60. That's $3,105.60 more than the shorter 10% loan.

A better alternative may be to take the lower cost loan and prepay principal. That way, the monthly payment remains affordable, you reduce the cost of interest, and you decrease the term of the loan. According to calculations made with the mortgage amortization software program, *Banker's Secret*, a regular monthly principal prepayment of $335 on the low-cost loan would eliminate 18 payments and save $3,112.32 in interest, slightly more than the difference in costs between the two loan options described above. Yet, the payment is almost $3,000 per month less than the shorter-term loan. If you have a "difficult month" financially and can't prepay, the lender only expects the $1,355.40 due.

In summary, having outstanding bills and not enough money to pay them is a very frightening experience. When you don't have enough money to pay what you owe, some difficult financial decisions (e.g., selling assets, seeking alternative employment) may be necessary. When a drought or any other reason reduces income, changes in spending must be made. The sooner that options to increase income and reduce spending are explored, the better.

Also, be sure to involve the entire family in discussions of how to make ends meet. Cooperation and support from everyone during this time of crisis will reduce family stress. It will also bring you together as you seek solutions to meet your financial challenges. And one final thought. Consider this quote from the FFA creed: "Less dependence on begging and more power in bargaining and a life abundant." The suggestions listed above are sound, proven management tools utilized daily in most businesses. Use these practices to pull through this disaster and show that no one should doubt the ability of American agriculture to recover and survive. ❑

Vegetable Crops Diseases

Stephen A. Johnston, Ph.D., Plant Pathology

✔ **Asparagus:** Maintain applications of mancozeb every 10 days for the control of **rust.**

✔ **Bean (snap & lima):** Fungicide applications are needed for the control of **white mold (Sclerotinia)** when the soil has been wet for 6 to 10 days before bloom. Make the first fungicide application when 70-80% of the plants has one or more open blossoms. If the soil remains wet and blossoms are still present, a second application should be made 5-6 days later.

✔ **Cole crops:** Maintain applications of Bravo or maneb as a foliar spray every 7-10 days for control of **Alternaria leaf spot & downy mildew.**

✔ **Carrot:** Maintain a 10-day fungicide schedule by alternating Bravo and Benlate for control of **leaf blights**.

✔ **Corn (sweet):** If **rust** is present on plants in the whorl stage or younger, apply a fungicide every 7-10 days for control.

✔ **Cucumber:** Maintain applications of Bravo + Benlate or Topsin M alternated with Quadris every 7-10 days for control of **foliar diseases**.

✔ **Eggplant: Phomopsis fruit rot** is present in some fields at this time. Maintain applications of a copper fungicide + maneb every 7-10 days for control of **Phomopsis fruit rot** and the foliar and fruit rot phases of **Phytophthora blight**.

✔ **Greens (mustard & turnip):** After seeding apply Ridomil Gold 4E as a soil surface application for control of **damping-off**.

✔ **Leeks:** Maintain applications of Bravo every 10 days for the control of **purple blotch**.

✔ **Lettuce:** Shortly after thinning, apply a fungicide application (Ronilan or Rovral) to the base of the plants and surrounding soil for the control of **drop**. Repeat 10 & 20 days later.

✔ **Pepper:** Maintain foliar applications of a copper fungicide + maneb every 10 days for the control of **bacterial leaf spot, anthracnose & Phytophthora blight**.

✔ **Pumpkin & winter squash:** There are reports of **downy mildew** present on winter squash in South Jersey at this time, and **powdery mildew** is prevalent throughout the state. Maintain foliar applications of Bravo alternated with Quadris every 7-10 days for control of both mildew diseases.

✔ **Spinach:** After seeding apply Ridomil Gold 4E as soil surface application for the control of **damping-off** and early season control of **blue mold & white rust**.

✔ **Squash (summer):** Maintain applications of Ridomil Gold/Bravo alternated with Quadris every 7-10 days for the control of **downy & powdery mildews**.

✔ **Tomato:** Maintain applications of Bravo alternated with Quadris every 7 days for the control **foliar & fruit diseases**. ❑

Pest Notes

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

✔ **Bean (snap):** It is important to follow the Rutgers IPM guidelines for pesticide applications in snap beans to prevent **European corn borer** damage. Make a first application at 50% bud-early bloom if **corn borers** are active (and they are active at this time), and a second application during the late bloom-early pin stage. Other sprays should be applied, if needed, based on the thresholds presented in the table on page 76 of the *1999 Commercial Vegetable Production Recommendations for New Jersey*. Asana, Orthene and Penncap-M are recommended materials for corn borer control in snap beans.

✔ **Cabbage: Cabbage looper moths** are ovipositing on various cole crops. **Cabbage loopers** are more easily controlled when treatments are applied while larvae are still small. Biopesticides (*Bt* insecticides) such as Agree, Biobit, Cutlass, Crymax, Dipel, Javelin, Mattch, and XenTari are effective against **loopers** on cole crops. Also, the new insect-growth-regulator, Confirm 2F, is labeled for **worm** pests on cole crops and leafy vegetables. Pyrethroids such as Ammo, Warrior, Ambush and Pounce are effective with a quick knockdown mode of action. SpinTor is a new chemistry (naturalyte class) material that is highly effective against **worm** pests on cole crops, including **diamondback moth** larvae. Other labeled materials include Lannate, Larvin, Lorsban, Orthene, and Thiodan. Consult label for rates and restrictions, and crop use (not all cole crops are listed on all of the above materials).

✔ **Lettuce: Corn earworm moths** are still active, and lettuce plants in the 7 - 18-leaf stage of plant development are susceptible to **earworm** damage. Control of **earworm** must be obtained before center leaves start to form a head. Materials recommended and spray schedules of these materials are listed on pages 102-103 of the *1999 Commercial Vegetable Production Recommendations for New Jersey*.

✔ **Pepper: European corn borers** are still active, and small larvae are still a threat to pepper fruit. **Corn earworms** are still being caught in the blacklight traps in relatively high numbers, and **earworm** larvae will also invade the fruit. For **corn earworm**, the most effective materials include Asana XL and Baythroid EC. Materials generally listed for **European corn borer** control will not be very effective against **corn earworm**. If **earworm** activity is high in your farm area, it is best to use a material that is effective against **earworms** at this time.

Pepper plants at the RAREC research farm are showing damage characteristic of **beet armyworm** feeding. **Beet armyworms** feed first on the foliage, leaving large gaping holes in the leaves, and then feed in the fruit. Control is obtained using an application of an insecticide such as Asana, Ambush, Pounce, Baythroid, or SpinTor while larvae are still small and feeding on the leaves. ❑

IPM Update

Kristian Holmstrom and Sarah Walker, Program Associates in Vegetable IPM

CORN EARWORM AND EUROPEAN CORN BORER ALERT

Even with the cooler temperatures, the adult **corn earworm (CEW)** population continues to be at very high levels in many locations. The **European corn borer (ECB)** adult population has also increased to very high numbers in the southern counties, indicating that a third generation of moths is now active there. See the statewide population distribution map and the sweet corn section for the locations with the highest nightly blacklight trap catches. Consult the *1999 Commercial Vegetable Production Recommendations* for appropriate control measures.

Lima and Snap Beans

CEW and **ECB** adult populations are very high in the southern counties. Following the pin spray, snap beans should be treated on a 4-6 day spray depending on the local blacklight trap counts (see page 76 of the *1999 Commercial Vegetable Production Recommendations*). A 5 to 7 day spray schedule is recommended for **CEW** in snap beans in areas with trap counts averaging 20 or more per night. Check lima bean fields twice a week for the presence of **CEW** larvae, and consider treatment if 1-2 larvae are found in 6 row feet.

Peppers

The **ECB** adult population has rebounded to moderate to very high levels in many southern locations (see distribution maps and the sweet corn section for counts), indicating that a third generation is now active. Also, **CEW** adult populations are very high at this time and eggs and adults were observed in fields this week. These two pests cannot be detected by scouting until it is too late for control, so maintain 5 to 7 day spray schedules to prevent fruit infestation. Some **ECB** materials are not effective against **CEW** larvae so make sure to consult the *1999 Commercial Vegetable Production Recommendations* book for appropriate control measures for both of these pests.

Beet armyworms (BAW) were found feeding in the canopy at low levels in a field in Atlantic County. The **BAW** adult pheromone trap catches are variable in the southern counties, but generally the population is much lower than last year at this time.

A large number of fruit are rotting in the field, primarily due to the last few weeks of heavy rains. Bacterial soft rot is naturally present in the soil, and will enter fruit through any crack or wound. Cooler dry weather should slow bacterial infections.

Tomatoes

Both fresh-market and processing tomatoes are at risk from **CEW** infestation due to the continued high adult populations. Fields will need preventative control measures in areas where adult counts are high, greater than 20 per night in local blacklight traps (see the sweet corn section) or averaging greater than 8 per night on the distribution maps. Monitor fields for evidence of fruit damage and larvae in order to evaluate control effectiveness.

A low level **powdery mildew** infection was spotted in one field in Hunterdon County. Although this disease is not widespread in New Jersey, it can result in yellowing of foliage, and ultimately death of leaves. It is similar in appearance to **powdery mildew** on other crops. A regular fungicide program designed to prevent early blight should control this disease.

Spinach

As soon as plants emerge begin monitoring fields at least weekly for the presence of **BAW**, **cabbage loopers (CL)**, and **webworms**. The **BAW** adult populations in southern area pheromone traps have been low to moderate. Overall the pressure appears to be much lower than last year.

Sweet Corn

Adult catches of **ECB** have increased to moderate to very high levels (see distribution map) in the southern blacklight traps. Continue to monitor remaining fields through the pre-tassel stage for the presence of fresh feeding damage and treat when 12% of the plants are infested with either **ECB** or **fall armyworm (FAW)** larvae. Scout fields within a week after treatment to determine if re-infestation is occurring. Due to the high moth pressure multiple treatments will likely be necessary prior to silk.

The highest average nightly **ECB** blacklight trap catches are as follows:

Elm	19	Hammonton	9	Mullica Hill	7
Folsom	18	Laurel Hills	8	Porchtown	6
Woodstown	14	Tabernacle	8	East Vineland	5
Medford	11	Indian Mills	7	Sewell	5

Adult **CEW** blacklight trap catches continue to remain at very high levels in most areas. Some growers are reporting difficulty in controlling this pest despite tight silk spray schedules. Keep in mind that a single female can lay 500 to 3,000 eggs. Under this pressure, spray schedules may minimize damage, but may not completely prevent it.

The highest average nightly **CEW** blacklight trap catches are as follows:

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Woodstown	101	Medford	35	Mullica Hill	25
Elm	62	Porchtown	29	Cranbury	23
E. Vineland	43	Hammonton	25	Denville	23
Folsom	43	Millstone	25	Crosswicks	21

General Sweet Corn Silking Spray Schedule

South	2-3 days
Central	2-3 days
North	3 days

*These are general spray recommendations for large areas of the state. Growers can increase or decrease the intervals based on their own local situations.

NOTE: There will be no ECB and CEW distribution maps for the 9/8/99 newsletter. Maps will resume on 9/15/99.

SEE ECB AND CEW DISTRIBUTION MAPS PAGE 6

Weekly Weather Summary

Keith Arnesen, Ph.D., Agricultural Meteorologist

Temperatures averaged much above normal. Extremes were 95 degrees at Canoe Brook on the 30th and 47 degrees at Charlotteburg on the 30th. Weekly rainfall averaged 1.76 inches north, 2.01 inches central, and 1.46 inches south. The heaviest 24 hour total was 2.60 inches at Canoe Brook on the 25th to the 26th. Estimated soil moisture, in percent of field capacity, this past week averaged 83 percent north, 83 percent central and 71 percent south. Four inch soil temperatures averaged 69 degrees north, 72 degrees central and 73 degrees south.

The latest 6 to 10 day outlook for the period September 2nd to 6th is calling for temperatures to average above normal and precipitation to total near normal. The outlook for September is calling for temperatures and precipitation to both be near normal.

Weather Summary for the Week Ending 8 am Monday 8/30/99

	RAINFALL			TEMPERATURE				GDD BASE50		MON
WEATHER STATIONS	WEEK	TOTAL	DEP	MX	MN	AVG	DEP	TOT	DEP	%FC
BELVIDERE BRIDGE	1.82	15.53	-8.71	90	53	72.	5	2522	350	87
CANOE BROOK	3.27	18.00	-7.40	95	50	73.	5	2835	647	92
CHARLOTTEBURG	1.40	17.62	-8.04	87	47	68.	3	2145	409	83
FLEMINGTON	1.98	13.96	-10.50	87	52	73.	4	2627	382	89
LONG VALLEY	.33	13.94	-12.53	83	54	71.	5	2281	343	65
LONG BRANCH	1.36	16.97	-7.24	88	60	74.	4	2575	263	71
NEW BRUNSWICK	2.70	18.04	-6.06	89	56	74.	2	2773	282	91
PEMBERTON	2.29	20.33	-4.20	90	55	75.	5	2854	417	77
TOMS RIVER	1.78	11.54	-13.18	89	57	74.	4	2573	277	84
TRENTON	1.94	20.31	-2.56	87	52	72.	1	2553	-41	81
CAPE MAY COURT HOUSE	.81	12.11	-9.25	88	56	76.	4	2763	481	41
DOWNSTOWN	1.29	20.10	-2.50	87	55	75.	4	2774	175	86
HAMMONTON	2.90	19.95	-3.60	89	54	74.	3	2764	183	84
POMONA	.98	17.15	-4.65	87	61	75.	5	2736	329	56
SEABROOK	1.27	20.01	-1.58	87	59	75.	4	2931	317	80
ATLANTIC CITY MARINA	1.52	16.06	-4.84	88	57	77.	6	2784	441	72
WOODSTOWN	3.62	22.93	-0.30	91	54	76	NA	2941	NA	NA
WES KLINE — GDD BASE 40 PINEY HOLLOW										
Last Week	234	(Ending 8/23/99)								
This Week	243	(Ending 8/30/99)								

Strawberry Update

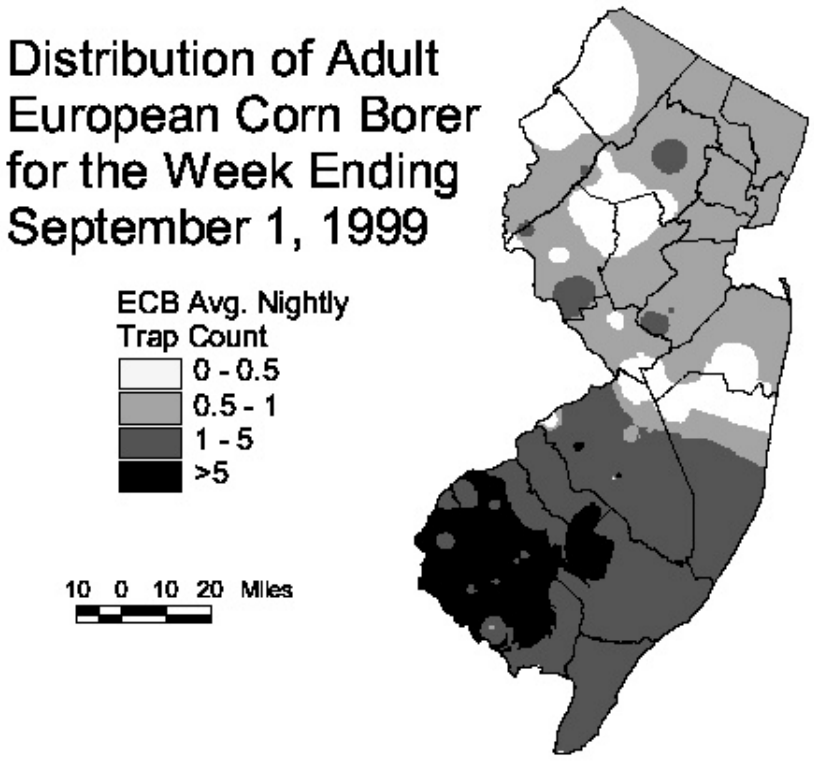
Pete Probasco, Agricultural Agent

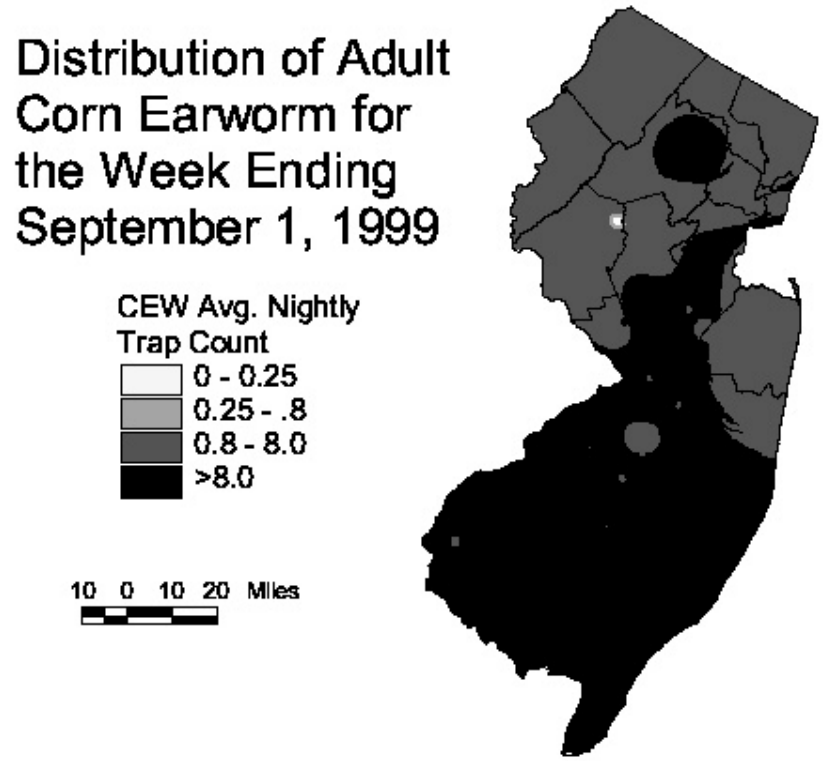
Growers will be planting new fields of strawberries after Labor Day and are preparing fields now. Wind protected sites of high organic matter make the best strawberry fields. The rows should be planted in a North-South direction so that the berries are set on each side of the bed.

We had our highest yields (22,000 lbs/A) with Chandler strawberries on 8-inch high beds last spring at the research farm. The Sweet Charlie variety yields less but should also be planted since it is 10 days earlier and will be easier to sell.

Growers who are growing their own plugs should have them rooted by now. Keep spraying the plugs with a fungicide of Captan and Benlate once a week until planted. The plugs should be kept on the dry side of the final week so they are hardened and less likely to develop phytophthora. After planting in the field, water lightly with solid set sprinklers. Disease has developed in fields that are over-watered the first week.

Deer control is a must in most areas, so be prepared to use electric fences. We have also had good results using the new deer repellents for about two weeks. ❑





Data collected and processed by: Kris Holmstrom, Sally Walker, Marilyn Hughes
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