The Vegetable & Small Fruit Gazette

December 2007
Volume 11, No. 12

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Know Your Customers

John Berry, Penn State Cooperative Extension Educator

Do you know who your customers are today; who they will be ten years from now? Successful marketers do. Consumers are constantly changing, from their ages and attitudes, to their incomes and ethnic mix. In order to successfully meet consumers' wants and needs, you must anticipate and respond to them before a demand for a product or service even exists.

Keep In Touch

An advantage of direct marketing is contact with your customers. People seek the personal attention that is available from most farm retailers. The benefit to the grower is first hand knowledge of customer wants. Make the most of this direct customer contact. Ask your customers to record their name and address in a notebook that is kept near the check out. Once a notebook is started, you now have a mailing list. You can readily identify where your customer base comes from. This helps maximize promotional efforts.

Customers will develop a personal connection to your market if they are kept informed through the use of a mailing list; either a post card or email. Is there a huge crop of melons coming ripe? Why not send an announcement to your regular customers? Offer a discount on quantity purchases. This type of effort is well received. It helps you move product and it establishes loyalty in your customers.

Keep Ahead

One way to prepare for tomorrow is to study changes in consumer demographics. What do households look like? What do consumers like to do with their free time? Which consumers have the highest disposable income? What would they be willing to spend it on? How are these factors expected to change in the future?

Planning for the future is usually a guess. To increase confidence in this guess, try to base it on as much fact as possible. The amount of information already gathered and analyzed is staggering. The local library, township authorities, the department of transportation, and your Extension office can be possible sources of trend information.

Did You Know?

Here are general statistics from the Census Bureau. Remember, these are for the entire population. Try to answer some of these questions with the data that is specific to your customers. By the year 2010, households without children under 18 will outnumber those with kids by 9 million. The projections for the types of households we can expect are as follows: Couples without children, 32%; Women living alone, 17%; Men living alone, 14%.

Household income is highest for those aged 45 to 54. This age group also has the highest discretionary income, estimated at $19,200 in 2004. While many marketers target the ‘younger' generation, they may be missing the group which has the most money to spend.

Moms are getting older. The number of births to women under age 30 declined 15% between 1980 and 2004, from 2,887,000 to 2,096,000. During that same period, births to women aged 30 and older increased 88%, from 714,000 to 1,342,000.

The average person spends less than 50 minutes a day preparing meals. Those with a microwave oven spend 45 minutes, while those without a microwave spend 59 minutes. Clean up time averaged 7.7 minutes each day. How do you fit your product into microwave preparation and easy clean up?

The popularity of home gardening (flowers and vegetables) is expected to increase nearly 20% over the next 15 years. Baby boomers are the most likely to pick up this hobby as they age -- the number of gardeners aged 45 to 54 will increase 45% by 2010, while those aged 55 to 64 will increase 66%. At the same time, the number of gardeners aged 25 to 34 will drop 17%.

I like doing what I know how to do. I find adapting to change is seldom comfortable. The efficiency of adapting can be increased by considering the possible developments of the future before they arrive.

Chateau, a New Herbicide for Strawberries

Scott Guiser, Bucks County Extension, Penn State University

Chateau 51 SW or WDG (flumioxazin) is a new herbicide that is labeled for matted row and plasticulture strawberry production. Let’s look at how it might fit in a strawberry weed control program.

Chateau is primarily a pre-emergent herbicide but will control some small emerged weeds if a non-ionic surfactant is added. It may be used with hooded and shielded application equipment in strawberry row middles, broadcast over dormant plants, or applied 30 days pre-plant and before laying plastic for plasticulture systems. The application rate for all uses and soil types is 3 ounces per acre.
Some important winter annual weeds that are controlled include chickweed, henbit, horseweed (also known as marestail) and Shepherd’s purse. So, a fall cleanup spray to dormant matted row berries may be a good fit for this product. Plants should be fully dormant which means that we should have experienced several hard frosts. Be sure not to apply Chateau to frozen ground. So, these applications will be restricted to that narrow ‘window of opportunity’ in late fall.

For plasticulture growers, the pre-plant or shielded applications may be a good substitute for the standard pre-emerge products. The label requires that pre-plant application be made a minimum of 30 days before planting and may be tank mixed with a post-emerge product to control emerged weeds. Shielded applications can be made to row middles only and should not be made after fruit set.

Note that Chateau is also labeled for pome (apple and pear) and stone fruits (peaches, cherries,) and grapes at higher labeled rates for long term residual weed control. It should be tank mixed with a post emerge herbicide if established weeds are present. See the supplemental label for details.
For more detailed information and a label for Chateau consult the manufacturer's Web site, www.valent.com. You will have to download or request the supplemental label for Chateau use on strawberries.

Census Gives Farmers a Voice in Their Future

Marc Tosiano, director of the Pennsylvania Field Office of USDA's National Agricultural Statistics Service (NASS)

America's farmers and ranchers will soon have the opportunity to make their voices heard and help shape the future of agriculture for years to come. That opportunity will come to their mailboxes in the form of the 2007 Census of Agriculture.

Conducted every five years by the U.S. Department of Agriculture, the Census is a complete count of the nation's farms and ranches and the people who operate them. The Census looks at land use and ownership, operator characteristics, production practices, income and expenditures and other topics. It provides the only source of uniform, comprehensive agricultural data for every county in the nation.

"The Census of Agriculture provides information that is not available anywhere else – information that benefits agricultural producers and their communities in myriad ways," said Marc Tosiano, director of the Pennsylvania Field Office of USDA's National Agricultural Statistics Service (NASS).

"For instance, policy-makers factor Census data into decisions concerning agricultural and rural programs. Community planners use Census to target needed services to rural residents. Companies rely on Census data when determining where to locate their operations. And farmers themselves can use Census data to help make critical decisions about their businesses," he explained.

NASS will mail out Census forms on December 28, 2007 to collect data for the 2007 calendar year. Completed forms are due by February 4, 2008. Producers can return their forms by mail or, for the first time, they have the convenient option of filling out the Census online via a secure web site.

"We're committed to making this Census the best count ever. It's about the future of agriculture and rural communities in our state," Tosiano said. "Regardless of how large or small their operation is or what kinds of products they produce, Pennsylvania farmers and ranchers will help themselves and their communities by filling out the Census of Agriculture and returning it promptly," he added.

"We want farmers and ranchers to know: the Census of Agriculture is their voice, their future and their responsibility."

For more information about the 2007 Census of Agriculture, please contact the NASS Pennsylvania Field Office at 1-800-498-1518 or visit the Ag Census website at www.agcensus.usda.gov.

New Cucurbit IPM Modules Available for 2007/2008 Extension Meetings

Mike Orzolek, Horticulture, Penn State University

The Great Lakes Vegetable Working Group (WG) at its February, 2007 at annual meeting decided to put together some Cucurbit IPM modules for a workshop to be held at the Great Lakes Expo in December in Michigan. The topics were Soil & Fertility, Insect, Disease, and Weed Management. The following individuals were involved in the production of these modules: Darryl Warncke – Michigan State Univ., Elaine Roddy – Ontario Ministry of Agriculture and Food, Harrow, Ontario, Bernie Zandstra – Michigan State University, Meg McGrath – Cornell Univ. , Rick Weinzierl – Illinois Univ. , Rick Foster – Purdue Univ., Mohammad Babadoost – Illinois Univ., and Leslie Huffman - Ontario Ministry of Agriculture and Food, Ridgetown College

Jim Jasinski, Ohio State IPM Program leader announced that the modules have been completed, and both the speaker's "talking head" and their PowerPoint presentations have been merged into a streaming video available at http://clickvideo.ag.ohio-state.edu/ipm_workshop/menu.html. Each presentation is 30-60 minutes long.

He also announced that they are pressing 300 DVD's with these presentations to be handed out at the Workshop in Michigan and other similar venues. Currently, 146 growers have indicated on their pre-registration that they are likely to attend the workshop!

If any PA Extension Educator would like to use these IPM Modules in their winter meetings, either access the website that Jim has sent or contact Jim Jasinski at jasinski.4@osu.edu.

Know Your Enemy: The Ragweeds

Dave Johnson, Crop and Soil Sciences, Penn State University

Ragweeds are somewhat unique in that they are one of the few groups of problem weeds that are native to North America. Most of us are familiar with two species: common ragweed (*Ambrosia artemisiifolia*) and giant ragweed (*A. trifida*). These plants are one of the main causes of hay fever, as many people have allergic reactions to the copious amounts of pollen they produce. These plants are in the Asteraceae family (formerly called Compositeae), which also includes several other plants such as sunflowers, asters, and thistles.

Both common and giant ragweeds are summer annuals. The seeds germinate in early spring, and plants can grow rapidly, competing with our crop plants for water, nutrients, and sunlight. Common ragweed leaves are finely lobed, almost feathery in appearance, and giant ragweed leaves generally have three large lobes (see photos in online version). However, the lower-most few leaves of giant ragweed sometimes are not lobed, leading to confusion in identification with sunflowers and cocklebur. Common ragweed can grow to 3-4 feet tall, and grows mostly in disturbed sites, agricultural fields, and roadsides. Giant ragweed tends to prefer wetter, lower lying areas, and can grow up to 6-8 feet tall.

Both ragweed species, but especially giant ragweed, can be very competitive to crop plants, and given sufficient light and water, can grow very fast. I have seen giant ragweed grow 6 inches in a day in hot weather. Their seed can remain viable in soil for several years, and continue to cause problems for growers even if seed production is prevented. Seed can also be spread easily by water, and new seed are often introduced into low-lying fields by flooding. Seed are also commonly spread in harvesting equipment. Cleaning harvesting equipment between fields can go a long way towards preventing the spread of ragweeds.

In addition to causing yield loss due to direct competition with the crop plants, these weeds, especially giant ragweed, can interfere with harvesting procedures, including mechanical pickers. Harvesters will often go around areas with large ragweed plants.

Ragweeds are fairly easy to control when they are small (<3-4 inches), and cultivation is a very effective method for killing seedling plants. They do form fairly strong tap roots, and so cultivation should be done early to uproot these plants. Organic growers should stay on top of this weed with frequent, early season cultivation. There is some interest among organic growers on weed control with vinegar, clove oil, and OMRI-approved pelargonic acid sprays. Ragweeds are generally fairly tolerant of these sprays. Best results are achieved with higher concentrations, higher spray volumes, and good plant coverage. The weeds **must** be small. Also note that these products will damage the crop plants if any spray hits them.

Non-organic growers have some herbicide options. In sweet corn, atrazine has been a good product for ragweed control; although, there is some indication that common ragweed is showing higher tolerance to this herbicide. Atrazine rates have decreased over the past decade, and this may be leading to less control. The atrazine premix products (Bicep II Magnum, Guardsman Max, Keystone (newly registered for sweet corn), Lariat, etc.) are good foundation products for controlling ragweeds. The higher-atrazine-containing versions of these products will give better control than the “Lite” versions. However, these products often do not provide complete, full-season control. Newer

products such as Lumax and Lexar, which contain mesotrione, will do better, but the Lumax label only claims partial control. Postemergence control is usually good from Callisto and Impact, although the weeds must be small, and atrazine should be added to the tank. Also, be aware that some sweet corn varieties may not have sufficient tolerance to Callisto. Stinger is very effective on both ragweed species up to the 5-leaf growth stage. Laddok S-12, an older product, will also control ragweeds if they are small.

Options are more limited in other vegetable crops. The best practice is to prevent these weeds from getting into your fields in the first place, and not to plant vegetables in fields with high infestations of these weeds. Sandea, which is labeled in several vegetable crops such as tomatoes, peppers, cucurbits, and snap beans, can control both ragweeds if they are small (1-3 inches). Matrix, for potatoes and tomatoes, lists common ragweed under "partial control", and does not claim any giant ragweed control. Sencor controls common ragweed in tomatoes and potatoes.

Overall, common and giant ragweed can cause significant yield reduction and interfere with harvesting operations. Preventing these weeds from becoming established on your farm is the best practice, as chemical control options are fairly limited for vegetable growers.


Young common ragweed plant (D. Johnson photo)


Giant ragweed plant seedling (D. Johnson photo)

Yields of Edible Ginger in a Pennsylvania High Tunnel

Bernie Kratky, University of Hawaii, Mike Orzolek and Bill Lamont, Horticulture, Penn State University

Edible ginger (*Zingiber officinale* Roscoe) experiments were conducted in a high tunnel at the Rock Springs Horticultural Farm near State College, Pennsylvania. Ginger rhizome (2 ounce) 'seed pieces' were sent from Hawaii.

Sub-irrigated trial

Ginger seed pieces were planted in black plastic pots (3 gallons) containing peat-perlite growing medium on May 14, 2007 and top watered on a greenhouse bench until July 2 when the pots were placed in a 4 ft x 10 ft tank such that there were 2 rows with a 1 ft spacing between pot centers within rows. The pots rested on 1-inch high soft nursery trays which were supported by a polyethylene-lined tank floor. A constant 2-inch level of water was maintained with a float valve such that the pots were watered by sub-irrigation. The nutrient solution was checked weekly with an electrical conductivity meter and replenished with equal amounts of 2 stock nutrient solutions to maintain an electrical conductivity level of 1.5 to 2.0 mS. One nutrient stock solution consisted of 1.0 lb soluble greenhouse grade calcium nitrate per gallon of water, and the other stock solution consisted of a mixture of 0.6 lbs magnesium sulfate and 1.0 lb Chem-Gro 8-15-36 Lettuce Formula (Hydro-Gardens, Colorado) per gallon of water. The Chem-Gro formulation also contained micronutrients. There were 8 fertilizer stock solution applications such that a total of 0.28 lb of nitrogen plus the accompanying nutrients were applied. Growing tanks were covered with reflective aluminized plastic mulch which maintained a cool surface such that leaves did not burn when they contacted the mulch.

Peat-perlite bed trial

In a second experiment, 14 ginger seed pieces were planted on June 14 in a drip-irrigated, 4 ft x 10 ft peat-perlite bed which was 10 inches deep. The growing medium was trenched to a 4 inch depth and seed pieces were planted 1 to 2 inches deep. As the season progressed, the growing medium was hilled twice to promote vertical, rather than horizontal growth of the rhizomes. There were 10 fertilizer applications of a 20-10-20 fertilizer such that 0.26 lbs of nitrogen plus the accompanying nutrients were applied.

Harvesting

The harvest date decision was made by Mother Nature. On the early morning of October 29, 2007, the ambient temperature reached 22^{o}F causing the unheated high tunnel temperature to reach 30^{o}F. Visible frost damage was observed on the ginger leaves, but no damage was evident to the root portions. Ginger was harvested on October 29-30, 2007 by removing the foliage at a 2 inch height above the surface of the growing medium and emptying the pots in a large plastic tray. Since this ginger was harvested early, it was somewhat immature and the epidermis was still fragile requiring careful handling when harvesting and washing. The rhizomes were then moved into a greenhouse to air dry by placing a single layer of rhizomes on screened racks which were covered with a polypropylene row cover. In Hawaii, ginger optimally requires a 10 month growing season to produce mature ginger rhizomes. Ginger would normally be harvested in December through February after the leaves turn yellow and dry down and the stems fall over.

Harvest data from ginger grown in sub-irrigated 3-gallon pots of growing medium are shown in Table 1.

Table 1. Shoot number, tallest shoot height, shoot fresh weight and rhizome fresh weight immediately after harvesting and after air drying for 4 days from edible ginger grown in sub-irrigated 3-gallon pots of peat-perlite growing medium[z].

Parameter	Average[y]	Range
Shoots		
Number	19	4-28
Tallest height (in)	30	27-35
Fresh weight (lb)	1.40	0.40-2.20
Rhizomes		
Harvest weight (lb)	3.09	0.70-4.80
Air dry for 4 days (lb)	2.33	0.51-3.58

[z] Planted – May 14; Transplanted – July 2; Harvested – October 29, 2007
[y] From 20 plants

There was an average of 19 shoots from each pot which originated from a 2-ounce seed piece. The fresh harvest weight included a 2 inch height of shoots above the surface of the growing medium, because trimming the shoots stimulates a natural abscission zone between the rhizome and pseudostem. Cutting the shoot at the rhizome junction might have increased the entry of disease organisms into the rhizome. An abscission zone was developing after 4 days of air-drying. Ginger which had air dried for 4 days averaged 2.33 lbs per pot. Both the interior flesh and the epidermis were lighter colored than the mother seed piece, but there was fiber development in the interior flesh. There was pungency with a distinctive ginger flavor and the rhizomes were marketable as fresh ginger. It was not clear if the ginger maturity stage and shelf life will allow good quality seed pieces for next year's crop.

Harvest data from ginger grown in a 25 cm deep bed of peat-perlite are shown in Table 2.

Table 2. Shoot number, tallest shoot length, shoot fresh weight and rhizome fresh weight immediately after harvesting and after air drying for 3 days from edible ginger grown in a 10-inch deep bed of peat-perlite growing medium[z].

Parameter	Average[y]	Range
Shoots		
Number	11	5-18
Tallest height (in)	19	15-23
Fresh weight (lb)	0.56	0.20-0.90
Rhizomes		
Harvest weight (lb)	1.24	0.60-1.90
Air dry for 3 days (lb)	0.90	0.47-1.42

[z] Planted June 14 and harvested on October 30, 2007
[y] From 14 plants

This experiment was planted one month later than the previous experiment. The shorter growing season resulted in less shoots, shorter shoots and a lower harvest weight than ginger in the previous experiment. However, it is not possible to determine if crop performance was affected by the 2 different growing methods. This ginger had a low fiber texture and might be classified as baby ginger

which may also be used for pickling. Both the interior flesh and the epidermis were lighter colored than the mother seed piece, but there was a distinctive ginger flavor. The epidermis was more fragile than rhizomes from the previous experiment. It would not be recommended to save this ginger for next year's seed.

These experiments demonstrate that ginger can produce a salable crop in a temperate located high tunnel, but the yields were much lower than those normally harvested in Hawaii. It is being suggested that ginger should be planted in growing medium in a heated greenhouse at about April 1 and the sprouting plants be transferred to the tanks or beds in an unheated high tunnel about May 15 to May 30. This would add another 44 days of growing season to the conditions of the first experiment. Increasing the growing season should greatly increase the yield potential of ginger in Pennsylvania. Certainly, baby ginger is a candidate as a specialty crop for high tunnels. Although, it may not be possible to obtain equivalent mature ginger yields as from a tropical region, there remains potential for ginger to be a profitable niche market crop, especially if the growing season can be extended by several months in high tunnels.

Tips for Using Compost

Elsa Sánchez, Horticulture, Penn State University

Soil and plant health can be improved by the use of compost. Nutrients released from compost can be made available for plant uptake. Soil structure can be improved along with the ability of the soil to hold water and air. Using compost can also provide habitat for beneficial soil microorganisms. A healthy soil is better able to tolerate adverse conditions. For example, during drought conditions or when excess water is supplied, a healthy soil will rebound quicker than an unhealthy one.

Most often organic amendments, like compost, are applied to meet the nitrogen needs of the plant. Determining how much compost to apply can be challenging for a two main reasons: 1) it is difficult to predict the amount of nitrogen made available for plant use and 2) it is difficult to synchronize the release of nitrogen to when the plants need it.

Nitrogen for plant use is released from compost as it is broken down by soil microorganisms, formally called mineralization. The rate of mineralization is influenced by many factors including environmental factors (soil temperature, soil moisture, light levels, etc.), tillage practices (soil incorporation, depth of incorporation, timing of tillage, etc.), soil microorganism populations and the carbon:nitrogen ratio, composition and particle size of the compost. To complicate matters, these factors also interact. Through research we know that mineralization rates vary between 10 and 50% a year. Which means that in some years only 10% of the nitrogen applied through a compost will be made available for plant uptake, while in other years 50% of the nitrogen will be made available. Additionally, because nutrient release is dependent environmental factors nutrients can be released at times when plant need is not high.

A group of specialists and educators at Penn State, the University of New Hampshire and the Rodale Institute have been meeting to discuss the issues relating to applying compost (and other organic nutrient sources) to develop best management practices for its use. In studying this issue, we've talked with numerous organic growers in Pennsylvania about how they are using compost including examining compost and soil test analysis. We were also provided access to a survey of eleven growers in the northeast using organic nutrient sources. We're finding that compost is commonly being applied based on the amount on hand or using a standard rate, for example 20 tons/acre, perhaps to compensate for unpredictable nutrient availability. This is a good strategy for short-term use but, yearly use of compost is resulting in a build-up of nutrients and salts in the soil.

Compost contains other nutrients often not in balance with plant needs. A typical compost might have an analysis of 1-0.7-1. Using 12.5 tons/acre applies 250 lbs of nitrogen, 175 lbs of phosphate and 250 lbs of potassium. Nutrient levels can quickly surpass optimum levels when using compost yearly.

This is a problem for several reasons. Yields can be below optimum as a result of nutrient imbalances in the soil. Research has also shown that different weeds proliferate when certain nutrients are available in excess. Nitrogen and phosphorus build-up can also be an environmental hazard.

Here are some tips for using compost:

1. Avoid the continuous use compost or any single organic nutrient source containing more than one nutrient. Instead use a variety of nutrient sources. This will help to avoid reaching above optimum nutrient levels.

2. Use soil testing to keep track of soil nutrient levels. If levels are above optimum, avoid using compost. Instead use a nutrient source that has no or minimal levels of the nutrient(s) in excess. Some organic options for providing nitrogen that meet this criterion are nitrogen-fixing legume green manure crops, Nitro Powder 8-1-1, Chilean nitrate 16-0-0, dried blood 12-1.5-0.57, blood meal and soybean meal. As always, check with your certifying agency to confirm that the option you select will not compromise your organic certification. Inorganic fertilizers are another option. One exception to this tip is that starter phosphorus may be needed for some crops when soils are cold in early spring even when soil phosphorus levels are above optimum.

3. Use compost testing. Composts differ in their chemical analysis. By having it tested, it can be more accurately applied.

4. Calculate the amount of compost to apply. This is commonly based on the nitrogen needs of the crop. This practice will help avoid over application and the costs associated with over application: the cost of the compost, environmental costs and loss of profits due to compromised plant health. Next month, the calculation for determining how much compost to apply based on supplying nitrogen will be included in the Gazette.

5. Soil incorporate compost. This will promote the mineralization process and minimize runoff and erosion losses.

6. If phosphorus levels are above optimum or it is suspected that nitrogen levels are high, minimize losses through erosion, runoff and leaching. Environmental concerns develop when phosphorus and nitrogen reach bodies of water. Minimizing erosion by planting a cover crop, using reduced tillage practices or using grass waterways can minimize movement of these nutrients.

Buy This 40-Page Booklet for Your Cucurbit and Berry Pollinators

Shelby Fleischer, Entomology, Penn State University

Never heard of the Xerces Society? Well, it's not a widely publicized group, but it is an excellent, small society devoted to conservation of one segment of biological diversity: insects! And they just updated an excellent, inexpensive booklet that can help guide your farm through the many challenges that are facing honey bees. The booklet is called "Farming for Bees: Guidelines for Providing Native Bee Habitat on Farms", by M. Vaughn, M. Shepherd, C. Kremen, and S. H. Black. First published in 2004, the 2007 expanded and updated version is a free download from www.xerces.org, but I found the ~$15 for the bound copy well worth the price. To buy the bound copy, call 503-232-6639 (in Portland, Oregon, Pacific Time Zone) and have your credit card ready.

You already know that the honey bee, *Apis mellifera*, has now added colony collapse disorder to a host of viruses, two species of mites, an invasive beetle pest, and changes in how beekeeping and agriculture works. Solutions are needed for beekeeping and pollination with the honey bee.

Meanwhile, for your farm, you should realize that *A. mellifera* is only one of multitudes of bees that can be extremely important, and at times primary pollinators, of cucurbits and certain small fruit. We in the northeast, especially, may have some of the best pollination services from conservation of a guild of solitary bees. This is probably due to factors such as our landscapes, the patch size of our fields, the times pollination is needed, our proximity to forest edges, our adoption rate of no-till.

Who are the solitary bees in your farming landscape? How much pollination services are they currently providing, when, and in which crops? How can we conserve the ones that are there? Which floral resources should we encourage for these beneficial species? This book is your easy-to-read primer, from which answers to these questions will emerge as common sense. From that, we can get more specific, and build programs to conserve specific species, such as the squash bee. But first, read over the primer. You'll have it read within the time it takes to enjoy a few cups of coffee.

Upcoming Meetings

If you have a meeting you would like to announce, please send the meeting title, date, location and contact information to esanchez@psu.edu.

Local

Regional

- ✓ Jan 15-17, 2008. **NJ Annual Vegetable Meeting** at the Taj Mahal in Atlantic City. For more information contract Mel Henninger at henninger@aesop.rutgers.edu.
- ✓ Jan 29-31, 2008. **2008 Mid-Atlantic Fruit and Vegetable Convention**, Hershey Lodge and Convention Center, Hershey, PA. For more information contact William Troxell at 717-694-3596 or visit www.mafvc.org
- ✓ Feb 7-9, 2008. **Pennsylvania Association for Sustainable Agriculture (PASA) 17th Annual Farming for the Future Conference**. Penn Stater Conference Center, State College, PA. For more information visit www.pasafarming.org.

National

- ✓ Jan 23-26, 2008. **Ecological Farming Conference**. Asilomar Conference Grounds, Pacific Grove, CA. For more information visit www.eco-farm.org or call (813) 763-2111.

International

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The newsletter is also posted within three days on the Department of Horticulture Vegetable program website at: http://hortweb.cas.psu.edu/extension/vegcrops/newsletterlist.html.