New York Berry News

CORNELL UNIVERSITY

Volume 09, Number 3 March 11, 2010

What's Inside

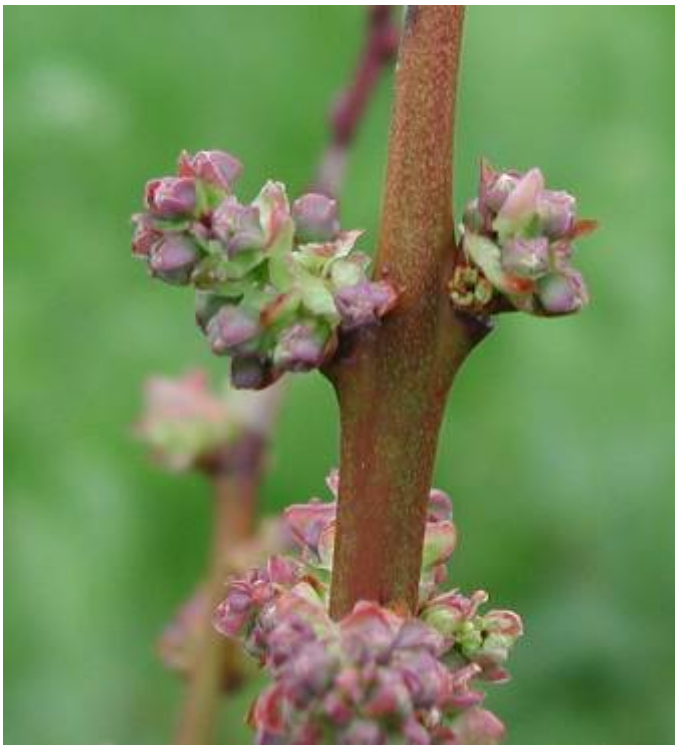
CURRANT EVENTS

March 30, 2010. *2010 Ontario Strawberry School,* Newtonville, Ontario, Canada. More information: news brief below or email info@ontarioberries.com. By phone: 613-258-4587.

April 6, 2010. *Blueberry Pruning Workshop*, Baldwinsville, NY. See news brief below for more information.

June 22-26, 2011. *10th International Rubus and Ribes Symposium, Zlatibor, Serbia***.** For more information contact: Prof. Dr. Mihailo Nikolic, Faculty of Agriculture, University of Belgr, Belgrade, Serbia. Phone: (381)63 801 99 23. Or contact Brankica Tanovic, Pesticide & Environment Research Inst., Belgrade, Serbia. Phone: (381) 11-31-61-773.

July 29, 2010. *2010 Cornell Fruit Field Day*, Geneva, NY. Save the Date! Program details and registration information forthcoming.



Blueberry Pruning Workshop

Hosted by: Reeves Farms, Baldwinsville, NY

April 6, 2010

1:00 to 4:00 PM

The information presented in this workshop is a return to the fundamentals of blueberry growing. Understanding pruning fundamentals can mean significant savings in pest control expenses, while also seeing more consistent and increased yield and vigor of plants. Bring your employees and focus on the fundamentals!

Agenda

Pruning Blueberries

Dr. Marvin Pritts, Cornell.

Pruning encourages yield and reduces disease and insect pressure and impacts pest control product distribution in the canopy. Pruning techniques will be described in detail and demonstrated in field. Bring your own pruners, and dress appropriately for the weather.

Pruning and Pests—A Closer Look

Cathy Heidenreich, Berry Ext. Support Specialist, Cornell.

Understand the life cycles of pests deterred and eliminated by pruning. Cathy will focus on selected blueberry pests.

Directions to the workshop: Reeves farm is located 4 miles west of Routes 690 and 370 on the corner of West Genesee Road (Route 370) and Mills Road, Baldwinsville NY.

To register: Cathy Heidenreich, 315-787-2367 or mcm4@cornell.edu.

CORNELL FRUIT FIELD DAY 2010 – SAVE THE DATE!

Thursday, July 29, 2010 is the date set for the 2010 Cornell Fruit Field Day. The triennial event, hosted by the NY State Agricultural Experiment Station, Geneva, NY, occurs in alternation with Western NY regional fruit tours. The program will include bus tours with educational stops to hear updates on cutting edge fruit research, a trade show, equipment demonstrations, and chicken barbecue lunch for attendees. Program information and registration materials will be forthcoming. Plan now to attend.

CORNELL BERRY AND SMALL FRUIT NURSERY GUIDE NOW INCLUDES CRANBERRY, LIGONBERRY, ELDERBERRY AND HARDY KIWIFRUIT VARIETIES

The Cornell Berry Program began hosting an on line nursery guide for berry and small fruit crops in 2002 as a service to commercial small fruit growers. The original version consisted of a list of nurseries and their contact information. Shortly thereafter, the listing was expanded to reflect commercial varieties of the big three berry crops (strawberries, blueberries and brambles), along with nurseries which offered them for sale.

Today, the two-part nursery guide for berry growers cross references scores of cultivars with the nurseries that sell them. The nurseries page contains an alphabetized listing of businesses throughout the United States and Canada. Cultivar pages for each crop list specific cultivars followed by the nurseries that sell them.

Annual updates to the listing are provided to keep information current. The 2010 edition includes 28 commercial small fruit nurseries from across the US and Canada along with listings for 411 commercial varieties of berries. It also provides nursery sources for 20 other miscellaneous small fruits. New varieties for 2010 are listed in red.

Variety listings include:

- 115 strawberries: 66 June-bearing , 34 day neutral and 34 alpine strawberries;
- 100 vacciniums: 78 blueberry varieties - 52 northern highbush blueberries, 5 low bush blueberries, 21 southern highbush blueberries, 22 other vacciniums – 8 cranberries, 10 lingon berries, 2 huckleberries, and 2 bearberries;
- 112 brambles: 64 raspberries - 29 summer red raspberries, 10 black raspberries, 2 purple raspberries, 20 fall red raspberries, 3 yellow raspberries, 38 blackberries – 10 thorny blackberries, 22 thornless blackberries, 2 fall-bearing blackberries, 4 trailing blackberries, 10 blackberry/raspberry hybrids (tayberry, loganberry, dewberry, etc.);
- 43 ribes:17 black, 8 red, 2 pink, and 5 white currants, 18 gooseberries and Jostaberry;
- 17 elderberries: 5 American and 12 European elderberries;
- 24 hardy kiwifruit: 18 hardy and 6 arctic beauty kiwifruit;
- 20 miscellaneous other small fruit from A to Z!

Note: For advice on cultivars best suited for your area and needs visit Cornell's cultivar review pages (strawberries, raspberries, and blueberries or currants and gooseberries) or contact your local office of Cornell Cooperative Extension. (Outside New York, check your phone book or browse the USDA/CSREES directory.)

MARCH 15th IS DEADLINE FOR 2010 CROP INSURANCE

Commissioner Encourages Coverage for Insurance & Potential Disaster Payments

Jessica Chittenden Ziehm, Director of Communications, NYS Department of Agriculture & Markets, 10B Airline Drive, Albany, NY 12235, 518-457-3136, www.agmkt.state.ny.us

New York State Agriculture Commissioner Patrick Hooker today reminded producers of the upcoming March 15 deadline for purchasing or modifying crop insurance policies for the 2010 growing season. Crop insurance provides farmers with a level of assurance against weather, disease and market risk as it relates to the crops produced on their farms.

I urge all producers to discuss crop insurance coverage with a crop insurance agent to help plan for the bottom line at the end of the year, said Commissioner Hooker. Crop insurance can protect farm revenue or crop yields, depending on your need. In addition, crop insurance coverage is now required for farmers to qualify for federal disaster payments, should a weather disaster occur in your growing area. With the help of an agent, you can review your risk exposure and determine the strategy that is best for you; just be sure to do so before March 15.

The March 15 crop insurance deadline applies to most spring-planted field crops including corn, dry beans, green beans, barley, oats, soybeans, fresh market sweet corn, grain sorghum, potatoes, spring forage seeding, processing beans, and processing sweet corn.

The March 15 deadline also applies to first-time buyers of Adjusted Gross Revenue-Lite (AGR-Lite). AGR-Lite is a revenue insurance plan for diversified growers that provides whole farm production coverage. Due to increases in the USDA Farm Service Agency's Non-Insured Crop Disaster Assistance Program (NAP) fees this year, AGR-Lite coverage is similarly priced, but can provide more coverage than NAP. Producers who purchase AGR-Lite may still enroll in NAP on selected crops if necessary.

It is important for producers to know that in order to be eligible for federal agricultural disaster payments in 2010, most crops must be enrolled with crop insurance or USDA's NAP Program. The higher the insurance coverage level, the greater the guarantee that your crops will be covered in the event of an agricultural disaster.

A list of crop insurance agents is available at your local Farm Service Agency office or on the web at http://www3.rma.usda.gov/apps/agents/. Producers without internet access can call the Department at 800-554-4501 to request a mailed list. The Departments staff person, Sarah Johnston, will also be happy to answer any questions about the process.

USDA WITHDRAWS PROPOSAL TO INCREASE THE ASSESSMENT RATE OF HIGHBUSH BLUEBERRIES

WASHINGTON, Feb. 19, 2010 -- The U.S. Department of Agriculture today announced that it is withdrawing a proposal to amend the Blueberry Promotion, Research, and Information Order.

The proposed rule, published in the Federal Register on July 27, 2009, would have increased the assessment rate annually from $12 to $24 per ton on growers who produce or import more than 2,000 pounds of highbush blueberries. The U.S. Highbush Blueberry Council recommended increasing the assessment rate to expand its promotional and research activities to bridge the potential gap between demand and future supply.

Several comments were received in opposition to the proposed increase in the assessment rate, so the proposal is being withdrawn.

This withdrawal rule will be published in the Feb. 23, 2010, Federal Register. Copies of the withdrawal rule may be requested in writing to: USDA, Agricultural Marketing Service (AMS), Fruit and Vegetable Programs, Research and Promotion Branch, Stop 0244, 1400 Independence Avenue, SW, Room 0632, Washington, DC 20250-0244; or faxed to (202) 205-2800. The withdrawal rule is also available on www.regulations.gov or AMS's Web site at http://www.ams.usda.gov/FVPromotion.

USDA's Agricultural Marketing Service monitors the operations of the U.S. Highbush Blueberry Council in accordance with the Commodity Promotion, Research, and Information Act of 1996. The council administers an industry-funded national research and promotion program to maintain and expand markets for highbush blueberries.

UPGRADED CORNELL ORGANIC AGRICULTURE WEBSITE

Organic at Cornell, the portal to all organic production information, is now newly revised with the latest information and important resources about organic agriculture. The Cornell University Agricultural Experiment Station (CUAES) launched the upgraded, user-friendly website in late 2009 to enhance community access to Cornell affiliated organic events, research and teaching.
This website features all of Cornell's organic farms, facilities and research projects, and is a valuable resource for farmers, growers, researchers, educators, students and anyone interested in organic agriculture. Take a look at:
www.organic.cornell.edu

NEW YORK FARM NUMBERS HOLD STEADY

After two years of increasing, the number of farms in New York for 2009 was unchanged from a year earlier, reports Stephen Ropel, Director of USDA's National Agricultural Statistics Service, New York Field Office. The number of farms for 2009 is estimated at 36,600. Land in farms remained at 7.10 million acres. Farms with sales over $500,000 decreased by 300 to 2,000 while farms with sales between $250,000 and $499,999 fell by 100 to 1,600. The area of land operated by farms in these two groups totaled 2.84 million acres, 7 percent below a year ago. The next smaller

sales class, farms with sales between $100,000 and $249,999 increased by 100 to 3,200 while land operated by these farms held at 960 thousand acres. There were 10,900 farms with sales between $10,000 and $99,999 compared with 10,800 a year earlier. Land they operated totaled 1.80 million acres. There were 200 more small farms with sales between $1,000 and $9,999 in 2009, at 18,900. Land in farms for this class increased 100,000 acres from the previous year to 1.50 million acres.

The number of farms in the United States in 2009 is estimated at 2.2 million, virtually unchanged from 2008. Total land in farms, at 919.8 million acres, decreased 110 thousand acres from 2007. The average farm size was 418 acres, unchanged from the previous year.

Farm numbers declined slightly in the $10,000-$99,999, and $500,000 and over sales classes. Lower commodity prices and smaller value of sales contributed to changes in the number of farms within these sales classes. Farm numbers increased 0.5 percent, to 1.23 million farms, in the $1,000 - $9,999 sales class. Meanwhile, the number of farms in the $500,000 and over sales class decreased by 1.0 percent to 124,720 farms.

Land in farms decreased in the smallest and largest sales classes. In the $1,000 - $9,999 sales class, land in farms dropped 1.1 percent, to 105.5 million acres. Land operated by farms in the $500,000 & over in sales class decreased 1.0 percent, to 290.0 million acres. Land operated by farms with $250,000-$499,999 in sales increased by 4.1 percent.

NEW USDA DATA OFFERS IN-DEPTH LOOK AT ORGANIC FARMING

WASHINGTON, Feb. 3, 2010 – The nation's organic farms and ranches have higher average sales and higher average production expenses than U.S. farms overall, according to results of the 2008 Organic Production Survey released today by the U.S. Department of Agriculture's National Agricultural Statistics Service.

"This was USDA's first wide-scale survey of organic producers, and it was undertaken in direct response to the growing interest in organics among consumers, farmers, businesses, policymakers and others," said Agriculture Deputy Secretary Kathleen Merrigan. "The information being released today will be an important building block for future program and policy development."

The survey counted 14,540 U.S. farms and ranches that were either USDA certified organic or were exempt from certification because their sales totaled less than $5,000. These operations comprised 4.1 million acres of land, of which 1.6 million acres were harvested cropland and 1.8 million acres were pasture or rangeland.

While there were organic farms or ranches in all 50 states, nearly 20 percent of the operations were in California. California also led the nation in organic sales, with $1.15 billion – or 36 percent of all U.S. sales. Nationwide, 2008 organic sales totaled $3.16 billion, including $1.94 billion in crops sales and $1.22 billion in sales of livestock, poultry and their products.

The nation's certified and exempt organic farms had average sales and production expenses that were higher than those of U.S. farms overall. Organic operations had an average of $217,675 in sales, compared with $134,807 for all farms as reported in the 2007 Census of Agriculture. Production expenditures averaged $171,978 per organic farm, compared with the nationwide average of $109,359 for all farms.

Most U.S. organic producers sold their products locally, with 44 percent of sales taking place less than 100 miles from the farm. Nearly 83 percent of organic sales were to wholesale channels, including processors, millers and packers. Just over 10 percent of sales were direct to retail operations, including supermarkets. Only 7 percent of sales were direct to consumers, via farm stands, farmers' markets, community supported agriculture and other arrangements.

Survey respondents indicated that they face various challenges, including regulatory, production, management and marketing issues. Despite these challenges, more than 78 percent indicated that they plan to maintain or increase their organic production over the next five years.

Complete results of the 2008 Organic Production Survey are available at
http://www.agcensus.usda.gov/Publications/2007/Online_Highlights/Organics/

GETTING THE JUMP ON MUMMY BERRY IN 2010

Kerik Cox, Assistant Professor, Department of Plant Pathology and Plant-Microbe Biology, Cornell University's NY State Agricultural Experiment Station, Geneva, NY 14456.

The 2009 blueberry season was characterized by a surprising number of mummy berry disease outbreaks in NY. During the late spring and summer months, there was considerable rainfall and some fairly long wetting periods. Moreover, the cool weather during spring and summer likely extended the bloom to petal fall period, exacerbating an already devastating situation for mummy berry disease.

Extension educators and extension faculty alike received numerous reports of unstoppable mummy berry disease throughout the state in 2009. The disease even overwhelmed a demo trial we'd set up in the Catskills. The weather conditions were so conducive for infection and inoculum pressures so high as to completely overwhelm chemical management practices in most production operations with a history of mummy berry disease. Many blueberry farms devastated by mummy berry in 2009 now face levels of mummy berry inoculum that may still overwhelm the best chemical management practices in 2010.

Figure 1. Apothecia produced on mature mummy berries hidden and protected by ground cover.

Mummy berry disease is caused by a fungus belonging to a genus responsible for many fruit diseases. Unlike the species causing other fruit diseases, the species of *Monilinia* causing mummy berry disease in blueberries is unique in that it has evolved the ability to mimic flowering, a process that is important to both the plant and the blueberry producer. Fortunately, it is possible to stop the mummy berry fungus from 'mimicking' flowers and tricking bumble bees into perpetuating its devastating life cycle.

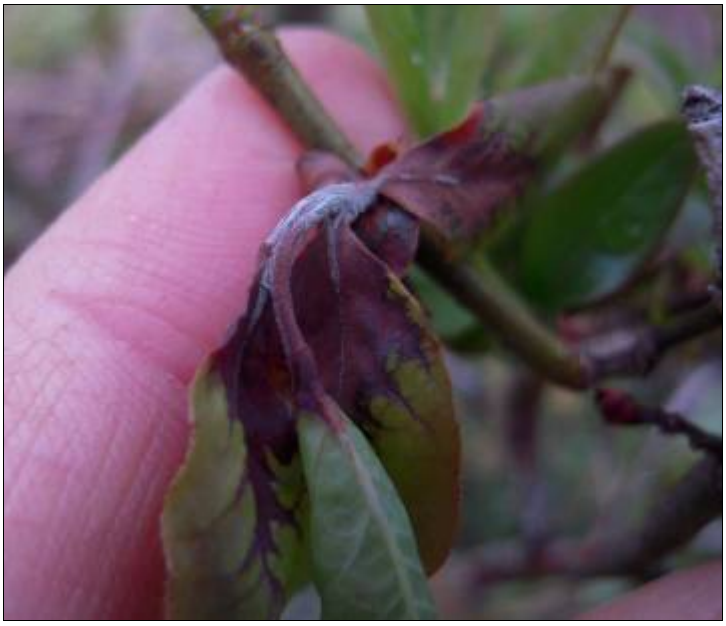


Figure 2. Blight leaf tissue "strikes" with powdery grey infective spores that are attractive to bumblebees.

The first step in breaking the cycle of infection is to develop an understanding of how it occurs. The process begins with mummy berries present on the orchard floor or in a nearby planting. As early as April in NY, these germinate to form little trumpet shaped mushrooms called apothecia (Fig. 1). The apothecia emerge at time when the predominately-affected cultivar at the operation is at green tip. These apothecia release ascospores, which are capable of traveling great distances to infect young leaf buds.

The blighted leaf buds, referred to as strikes, become transformed by the fungus to appear like a flower to pollinating bumblebees (Fig. 2). The fungus causes the tissue to reflect in the UV spectrum in a pattern similar to that of flowers. Moreover, the sporulating tissues on these strikes (Fig. 2) produce sweet odorous chemicals that "smell" and "taste" like the floral nectar that bumblebees are seeking during pollination. Bumblebees visit both mummy berry strikes and flowers as they forage, and during this process spores from strikes are transferred like pollen grains to the stigmatic surface of open flowers. These spores germinate like pollen grains and infect the ovaries through the stylar canal. Unlike flowers fertilized by pollen grains, flowers infected by spores from strikes develop into a mummy berry (Figs. 3A, 3B) instead of a blueberry.

Figure 3A. Developing mummy berries (A) cut at 50 to 75% coloring to reveal infection of ovaries.

The mummy berry disease cycle can be stopped at two places: the mummy, and the leaf strikes. Because elimination of flowers is not an option for blueberry producers, fungicides are the most logical means of killing mummy berry spores and leaving pollen grains unaffected. Unfortunately, the spring rains can wash off fungicide residues and cause strikes to sporulate with increasing abundance. In order to give fungicides a chance, one must try to reduce the numbers of spores available to infect flowers by targeting the mummies and protecting young leaf tissue. In operations that were greatly impacted by mummy berry in 2009 there will simply be too many mummies for fungicides to prevent leaf and subsequent flower infections.

Figure 3B. Mature mummy berries (B) that have fallen to orchard floor in autumn and overwintered to spring.

In order reduce the number of mummy berries with apothecia at leaf bud break there are a few options. One option is the use of urea fertilization. This typically involves the application of a high rate of urea (200 lbs/A) to the planting floor to burn apothecia after emergence. This option is high risk because apothecia emerge over a fairly long period and the application would have to be timed just right to affect the majority of apothecia. An alternative is to try a lower rate (40 lbs/A) application of feed grade urea to the row middles and area under the bushes. This should be done before leaf bud break and as soon as you can get the spray equipment into the field. This practice is meant to enhance microbial degradation of the mummies instead of burning the apothecia, which is why the application needs to be made as soon as possible in the spring. This practice is quite successful for reducing apple scab inoculum in apple orchards and could promote reduction of mummy berry inoculum as the mummies are quite susceptible to microbial degradation, which is enhanced by available nitrogen.

Another option is the use of fresh mulch to cover mummy berries and smother emerging apothecia. Applying 2-3 inches of mulch as soon as the snow melts should be sufficient to cover mummies and prevent apothecia from emerging. The mulch helps to increase the distance that emerging apothecia would need to extend to eject spores and limits light exposure, which is needed to stimulate germination of apothecia on mummy berries. If your operation had a serious mummy berry problem in 2009 and you have mulched beds, you will need to remove the existing mulch (despite labor intensity), and re-mulch beds. Once mummy berry becomes established in existing mulch, it is actually a favorable organic matter rich environment for the pathogen. Similar to established mummy berry in mulch beds, moss can be an extremely favorable ecosystem for mummy berries, providing moisture and organic matter. Moreover, moss protects mummy berries from exposure to detrimental environmental conditions and management practices. Although moss can be a nice feature in pick your own blueberry operations it can be a serious problem if mummy berry becomes established. In these instances, the moss should be removed manually by removing the sod on which it is established. There are chemical means of the killing moss, but these means must be repeated on a yearly basis, and often provide limited success.

Once the best efforts are made to reduce inoculum, a regular program of fungicides aimed at protecting emerging leaf and flower tissue needs to be implemented. The chemical management program should be started when the first variety is showing ¼" of green tissue on leaf buds, and end when the latest flowering variety is at 50% petal fall. Fungicide applications should be made prior to rain events and re-applied on 10-14 day intervals unless the planting receives more

than 2" prior to the end of the interval. There are several excellent mummy berry fungicides, but one of the best fungicide programs consists of applying Indar 2F (6 fl oz/A) alternating with Pristine (20 oz/A) or Switch 62.5 WG (14 oz/A). These materials will not only help control mummy berry, but also control the majority of other fungal diseases of blueberry such as anthracnose and *Botrytis*.

If you had mummy berry in 2009, you should consider practicing all of the recommended cultural and chemical management practices. If you do not implement the inoculum reduction practices, you can easily overwhelm the ability of your fungicides to control the disease. Even if you do both cultural and chemical management, do not be surprised if the problem is not immediately solved in 2010. Although mummy berry disease appears to become established "out of the blue", it actually becomes slowly established over time. Mummy berry can take several years of proactive management to eliminate. If you did not have mummy berry in 2009, it is not necessary to implement the cultural and chemical management practices. However, it will be important to begin scouting for mummy berry strikes around bloom to ensure that mummy berry doesn't "get the jump on you" in later seasons.

BLUEBERRY POLLINATION - REVISITED

Information from a Cornell Berry Webinar given by Sonia Schloemann, compiled by Molly Shaw, Molly Shaw, South Central Fruit and Vegetable Program, Tioga County Cooperative Extension, 56 Main Street, Owego, NY

There are roughly 1.8 million blueberry flowers in an acre of highbush blueberries, every one of which needs good pollination to make a nice berry. How does this get accomplished?

Blueberry blossoms are high maintenance flowers—no simple wind pollination here. Every flower needs personal visits from a pollinating insect to make it happy. Blueberries have "perfect" flowers, which (botanically speaking) means that the flowers have both actively functioning male and female parts. The glitch is that pollen from a single blueberry flower is usually unable to pollinate its own ovary—think of it as a blueberry's way of preventing inbreeding. Many varieties can still make a small second-rate berry that ripens late with less flavor from unpollinated flowers (called parthenocarpic fruit). But the largest, best quality berries form when pollen from a different blueberry variety is used to fully pollinate a flower. Full pollination entails every one of the roughly 65 ovules in the flower getting its own pollen grain. With about 2,000 blooms per bush and close to 900 bushes per acre, that requires 117 million pollen grains to be moved to fully pollinate every acre. Puts a new emphasis on busy bees, huh?

Because of the structure of the flower, the pollen that sits up deep inside the top of the tubular corolla doesn't make contact with the stigma (pollen receiver) unless an insect bumbles around the flower, scraping its pollen-dusted tummy on the stigma that sticks out the end. The flower makes nectar deep inside the top of the corolla, enticing the bees to push past the stigma and reach their tongues way up into the top of the flower. Honeybees have traditionally been used to pollinate large blueberry fields because we've long known how to raise them and move them from place to place, but really these bees of European decent have rather short tongues and struggle to reach the blueberry flowers' nectar (remember, blueberries are one of the few fruits native to north America). They'd rather visit the dandelions carpeting the row middles. If using honeybees to pollinate blueberries, you must wait for the blueberries to reach 25% bloom before moving the bees in, so they're less likely to get distracted by better nectar sources before they find the blueberry flowers you want them to work.

But wait, most of us have small blueberry plantings, we don't hire honeybees, and we still get blueberries every year. Who's doing the work?

One study surveyed insects which were found pollinating blueberry flowers on 15 blueberry farms and identified a whopping 112 native species that contribute to pollination. They included many species of bumble bees, Osmia bees (orchard mason bees, hornfaced bees, others), leafcutter bees, and the affectionately-named "shaggy fuzzyfoot bee." These pollinators can be amazingly efficient when compared to honeybees. A Japanese study comparing hornfaced bees to honeybees for pollinating apples found that 60-120 *thousand* honeybees are needed to do the job, while 300-800 hornfaced bees can accomplish the same task. Native pollinators are adapted to work in cooler weather (an endearing trait for blueberry plantings in NY!), and they evolved with blueberry flowers so they "know" how to handle them. Bumblebees actually perch on the bottom of the tubular blueberry blossom and shake loose the pollen by vibration, effectively dusting their stomachs with pollen in the process.

Carpenter bees, although commonly found in blueberry plantings, aren't helping to pollinate fruit. These guys are lazy; instead of reaching into the flower to reach the nectar from the bottom, they cut a hole into the top and sip the nectar without getting close to the stigma which needs to receive the pollen. You can commonly see these slits on the top sides of blueberry corollas. Carpenter bees have black shiny behinds, unlike the fuzzy back sides of the many species of bumble bees.

Now then, all this pollinator talk is well and good, but how do you know if you're getting enough pollination done to set a good berry crop?

One method is to asses the "buzz" level in the field. During sunny warm periods of the day during bloom (> 60F), there should be an audible "buzz" in the field. Another rule of thumb is that 4-8 bees should be foraging on each blueberry plant at any one time during the warmest part of the day during bloom. You could also watch and see if at least 20 pollinators (any species) are entering blueberry flowers in a 10 minute period.

Interestingly, some varieties of blueberries are more attractive to bees than others. Bluetta, Blueray and Bluecrop are listed as "moderately attractive," while bees find Elliot, Berkeley, Jersey, Coville and Earliblue unattractive.

Blueberry flowers are open and receptive to pollen for 5-8 days, and are most likely to set fruit if pollinated within the first 2-3 days after opening. Once pollinated, the white corolla separates from the ovary. If good pollination is happening, a carpet of white petals should be on the ground under the bush. You can gently shake a couple branches to see if the corollas will fall off. If the corollas stay white for about 24 hours after they drop, it means the flowers were fully pollinated. If the corollas on the plant or on the ground are brown, it usually means there was frost damage. Once the green fruit begin to swell, you can look for any tan berries that stay tiny have aborted—they didn't get pollinated.

Some of the native bees are actually available to buy commercially—honeybees, hornfaced bees, and leafcutter bees are some. You can also increase your own pollinators by providing them with nests (often as simple as holes drilled in a block of wood, or boxes filled with straws—instructions are easy to find on-line, you can start with ATTRA http://attra.ncat.org/attra-pub/nativebee.html). Make sure there is access to clean water nearby (without pesticide residues). Don't spray insecticides during bloom. If traps for cranberry fruitworm followed by egg-scouting show that an insecticide is needed, choose one less toxic to bees and spray it in the evening.

PROPOSED FEDERAL FOOD SAFETY LEGISLATION – NOW IS THE TIME FOR YOUR VOICE TO BE HEARD!

Craig Kahlke, Area Extension Educator - Fruit Quality Management, Lake Ontario Fruit Program, Cornell Cooperative Extension, Lockport, NY & Erin Bongard, Deputy Director, Produce Safety Project, Georgetown University, Washington, DC 20057

On February 19th, a Produce Safety Stakeholders' Discussion Series meeting was held at the Wegman's Conference Center in Rochester. The meeting was organized and held by Jim O'Hara and Erin Bongard of The Produce Safety Project (PSP), a non-profit organization running similar meetings across the country. The PSP, along with the National GAPs program and others are charged with the difficult task of compiling suggestions for the proposed rule. More than 120 growers, university extension agents, Food and Drug Administration and U.S. Department of Agriculture officials, and New York State officials participated throughout the day. Participant involvement, especially from growers in the break-out sessions, was key to the success of the event. In the evaluation sheets, participants responded very positively, and also gave good feedback on how to improve upcoming meetings.

Even if you missed the meeting, it is important for you to stay involved and contribute in the FDA rule-making process. To assist you in that, the PSP have developed the following document that provides information on how to contribute additional comments to the FDA.

To stay up to date on developments, please visit the Produce Safety Project Website, www.producesafetyproject.org. In addition, copies of the papers presented at the meeting, as well as shorter summaries, are available on the website. Finally, they have also posted video recordings of the plenary sessions on the site.

How To Tell The Food And Drug Administration The Best Way To Develop Safety Standards For The Growing, Harvesting And Packing Of Fresh Fruits And Vegetables

The Food and Drug Administration (FDA) will propose later this year new safety standards for the growing, harvesting, and packing of fresh fruits and vegetables. When a federal agency proposes a new regulation it seeks comments from the

public about the best way to write the rule and implement it. For the fresh produce rule, the FDA has already opened the "docket" where these comments can be sent.

You can submit your comments either online or by mail. Mailed comments should be sent to:

The Division of Dockets
Management (HFA–305),
Food and Drug Administration,
5630 Fishers Lane, room.1061,
Rockville, MD 20852.

Electronic comments can be submitted here:
http://www.regulations.gov/search/Regs/home.html#documentDetail?R=0900006480aab8f1

Guidance for filling out the electronic form:

1. You will need to click on the "Submit Comment" button (which is written in blue on the top right side of the Web page).
2. When the new page opens, provide your contact information (name and address) in the boxes on the left.
3. There is a box on the right where you can write your comments about questions such as those listed below (There is a limit of 2000 characters).
4. You can also submit comments by writing them in a separate document you can then attach to this form.
5. To attach a document you have written, click on the orange "Browse" button.
6. Be sure to include the docket number at the top of the pages you submit (The docket number is FDA-2010-N-0085).

Below is an abbreviated list of produce safety rule questions on which FDA is seeking comments. (A complete list can be found by viewing the Federal Register Notice online.

- What role should FDA's GAP guidelines play? (Good agricultural practice guidelines entitled "Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables")
- How should risk factors be identified and prioritized? What environmental assessments of hazards and possible pathways of contamination need to be completed?
- How should food safety practices for fresh fruits and vegetables and sustainable and/or organic production methods be coordinated?
- How should food safety practices for fresh fruits and vegetables and environmental and/or conservation goals or practices be coordinated?
- How should food safety practices for fresh fruits and vegetables and Federal, State, local and tribal government statutes and regulations be coordinated?
- What role should microbial testing play in produce safety?
- What records and documentation would be useful to both industry and regulators in ensuring the safety of fresh produce?
- What strategies should be used to enhance compliance?
- What are possible approaches to tailoring preventive controls to the scale of an operation so that the controls achieve an appropriate level of food safety protection and are feasible for a wide range of large and small operations?
- Any other issues or concerns you may have?

For further information on the docket contact: Michelle A. Smith, Center for Food Safety and Applied Nutrition Food and Drug Administration 5100 Paint Branch Parkway College Park, MD 20740-3835 (301) 436-2024.

DEMAND FOR PRIMARY FRUIT PROCESSING GROWING IN NEW YORK

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The demand for locally grown and processed food has been growing as the public becomes aware of the energy costs involved in shipping food, and interest increases in food security and supporting local economies. Green markets and CSAs have been growing in popularity as well as growing at least a portion of ones own food in the home garden. Workshops regarding production of value-added products are abundant, and folks are beginning to develop a good quantity of new products. As product lines are established and expanded, the demand for fresh and partially processed produce is increasing. In this article, I would like to explain what is involved in the primary processing of produce, and in what form entrepreneurs can use the products to make retail consumable value-added products.

Most producers of value-added food products are accustomed to receiving a cleaned fresh, frozen, or otherwise partially processed product. These are the raw materials that can be used to make their final retail products. Having these input products saves time and processing space for the producer. It can be more efficient for the value-added industry as a whole to have these partially processed ingredients because the producers don't each have to invest in and duplicate the machinery necessary to do initial cleaning and partial processing. Many times the same partially processed product can be used by a number of different processors to make different products. We can define this initial stage of cleaning and partial processing as primary processing. This converts raw product from the field into primary processed product.

So let's look in more detail at the different processes that can be involved in primary processing, and what is needed to accomplish the process. The first and easiest form of primary processing would be to produce a cleaned, refrigerated or frozen product packaged in plastic bags and boxes. Soil and foreign objects are removed, spoiled product is cut away, and stems and peels can be removed. The product is then rapidly cooled to and stored at the optimum temperature recommended for the product, or frozen. If frozen, it can be individually quick frozen (IQF), meaning that each piece of produce is separate, making it easier to dispense, or the product is frozen in a solid block. IQF is often easier to handle because it can be measured in batches or used in recipes that require separate pieces of produce. Package size for both solid and IQF forms is usually about 30 pounds.

Produce can also be freeze-dried to remove all water, and become shelf-stable for years. This is accomplished by taking IQF produce and putting it into a freeze-dry machine that maintains the produce frozen and under vacuum until it is dried. The process is expensive. With water removed, the produce retains only about 1/10 of its original weight which makes it easy to transport and work with.

Finally, other forms of primary processed product include puree, juice, and concentrate. These products are normally stored and sold in five to 55 gallon buckets which are convenient for the secondary processor. Puree is made by grinding fresh or frozen produce in a food mill. Juice is normally extracted by pressing, and sometimes an enzyme and heat pre-treatment is necessary to increase yield and efficiency. Concentrates are made when a percentage of water is removed from the juice.

Demand for all these primary processed products is increasing here in the Hudson Valley. This is an opportunity that is wide open. With a few primary processing facilities, mechanized plantings of fruits and vegetables could be developed and expanded, and the local market could benefit by replacing imports from the west coast and out of the country with local product.

Questions or Comments about the New York Berry News?

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Check out the NYSAES Tree Fruit and Berry Pathology web site at: **www.nysaes.cornell.edu/pp/extension/tfabp**
