The New York Berry News

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What's Inside

In the aftermath of the Presidents Day blizzard, near spring-like temperatures are expected in much of the state. This will certainly help to melt off some of the snow...but certainly not all of it particularly in those regions where lake-effect snows have dumped several feet of the white stuff on you. Yet, if you are fortunate enough to have access to your plantings, you may be able to get a jump on your pruning as this could be a perfect time for you to begin to prune your raspberries and blueberries. Late winter (beginning of March) and/or early spring is the best time for pruning vines and bushes. This is because the plants are in dormancy but the danger of damaging winter temperatures is past. Be sure that you can get easily to the base of your plants to make the appropriate cuts. There are two articles in this month's issue of the NYBN, one on raspberries and blackberries and the other on blueberries, to help guide you prepare for pruning. If you can't get to your plants this week, don't worry...wait until most of the snow cover has thawed or until you can get to the base of the plants and you should still have plenty of time to prune accordingly.

Current News & Events:

March 27, 2003: A one-day workshop sponsored by the University of Guelph on *Growing Raspberries in Greenhouses* will be held in Simcoe, Ontario, Canada from 8:30 am - 4:30 pm. Speakers include: Adam Dale, Marvin Pritts, Doug Balsillie, Glenn Fox and Tom Wood. Doug Balsillie and Tom Wood are among the largest greenhouse raspberry growers in North America. From more information: Department of Plant Agriculture, 1283 Blueline Road. Phone: 519-426-7127 ext. 333 or email adale@ uoguelph.ca. Or you may contact Max Welcome (mw45) for a brochure.

NY 2002 Berry Crop Increases

Some good news for NY berry growers...the value of strawberry production in New York was up 5 percent from 2001 to 6.3 million pounds, according to the New York Agricultural Statistics Service. The value of utilized production is estimated at $8.82 million, up 25 percent from the $7.08 million in 2001. New York ranks seventh in strawberry production. Nationally, the strawberry crop for 2002 was placed at 1.97 billion pounds, up 19 percent from 2001.

Production of blueberries for the Empire State was placed at 2.1 million pounds, up 24 percent from the 2001 level of 1.7 million pounds. The 2002 crop is valued at $2.55 million. This is an increase of 44 percent from the $1.77 million in 2001. The U.S. estimate for blueberries is 192 million pounds, down 1 percent from the 193 million pounds produced in 2001.

The combined value of New York's berry crops totaled $11.4 million. This accounts for 7 percent of the $168 million value of all New York's tree fruits and grapes. This compares with the $8.85 million in 2001 which was 5 percent of the total value.

Interestingly, the value of New York's 2002 tree fruit and grape production totaled $168 million, down 6 percent from the 2001 value according to the New York Agricultural Statistics Service. The value of utilized production was below the previous year for all fruits except tart cherries, blueberries, and strawberries.

Veneman Designates 25 Counties in NY as Primary Agriculture Disaster Areas: *Decision Allows Farmers and Ranchers to Receive USDA Assistance*

Agriculture Secretary Ann M. Veneman has designated 25 counties in New York as primary agricultural disaster areas due to excessive rain, freezing and other weather-related disasters."This designation will allow producers to receive assistance to help them recover from adverse weather conditions," said Veneman. "USDA continues to use all available programs to assist farmers and ranchers." The 25 counties that are designated as primary disaster areas due to damages and losses caused by a variety of extreme weather conditions are:

Allegany	Dutchess	Ontario	Schuyler	Ulster
Broome	Franklin	Orange	Seneca	Wayne
Cattaraugus	Jefferson	Ostego	Steuben	Westchester
Cayuga	Madison	Putnam	Tioga	Wyoming
Clinton	Niagara	Rensselaer	Tompkins	Yates

In addition to these primary counties, the following counties are also eligible for emergency loans (EM) because they are contiguous:

Albany	Cortland	Hamilton	Montgomery	Saratoga
Bronx	Delaware	Herkimer	Nassau	Schenectady
Chautauqua	Erie	Lewis	Oneida	Schoharie
Chemung	Essex	Livingston	Orleans	Sullivan
Chenango	Genesee	Lawrence	Oswego	Washington
Columbia	Greene	Monroe	Rockland	

These designations make all qualified farm operators eligible for low-interest emergency (EM) loans from the Farm Service Agency (FSA), provided eligibility requirements are met. Farmers in eligible counties have eight months from the date of the declaration to apply for the loans to help cover part of their actual losses. FSA will consider each loan application on its own merits, taking into account the extent of losses, security available and repayment ability.

FSA has a variety of programs available, in addition to the emergency loan program, to help eligible farmers recover from adversity. Over the last year, USDA has declared several other states, particularly in the western plains and mountain states, as agricultural disaster areas. USDA has also made other programs available to assist farmers and ranchers, including the Emergency Conservation Program, Federal Crop Insurance and the Noninsured Crop Disaster Assistance Program.

Interested farmers may contact their local FSA Service Centers for further information on eligibility requirements and application procedures for these and other programs. Additional information is also available online at: http://www.fsa.usda.gov/pas/disaster/assistance1.htm.

New Strawberry Cultivar for Trial in Ohio

Richard C. Funt, Dept. of Horticulture and Crop Science, Ohio State University, Columbus, OH

A new strawberry cultivar for trial by Ohio growers has been released by the USDA. 'Ovation' ('Lateglow' x 'Etna') is a red stele resistant, late season strawberry. It has large, firm berries and good flavor. In 2001-2002, 'Ovation' was tested by OSU faculty at two locations as B440. Plug plants were set 12 inches apart in August 2001 on raised beds with black plastic and micro-irrigation. Fruits were harvested, weighed, and compared to standard cultivars in a non-replicated trial.

'Ovation' is later and larger in berry size than 'Allstar' (Funt, 2002). On June 11, south of Columbus, OH, 74% of 'Allstar' had been harvested, but only 23% of 'Ovation' had been. Most of 'Ovation' was harvested by June 19th. ' Allstar'

averaged 12.7 grams, while 'Ovation' averaged 15.0 grams per berry for the entire season. 'Ovation' produced nearly 75% and 94% of 'Allstar' in locations tested.

'Ovation' is a tall, vigorous plant with a large amount of foliage. On rich, high organic matter fields, 'Ovation' needs to be planted at 18 inches. If managed with high rates of nitrogen and planted closer than 18 inches, fruits will be poorly colored and low in flavor. Sunlight is necessary for good color, berry shape, and flavor. Also, it appears that 'Ovation' could be planted at 12 inches on sandy soil having 0.5 to 1.5% organic matter in August in northern Ohio. This berry has good marketability for pick-your-own, farm markets, or roadside markets because of its size, firmness, and flavor when proper cultural practices are followed.

Further, when improper management occurs, leaves remain moist during early morning and leaf diseases could be an issue, even with good fungal sprays. This cultivar appears to be suitable for plasticulture systems, particularly if two harvest seasons can be obtained. Future testing by OSU personnel and growers in 2003 should provide additional information regarding the needs of this cultivar to match its major qualities.

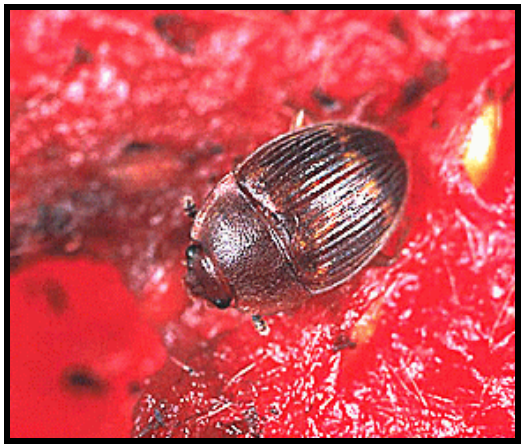
[*Editors Note:* 'Ovation' is currently under evaluation in New York in Dr. Courtney Weber's trials]

Source: Funt, R.C. 2002. Strawberry cultivar; performance and evaluation 2002. Ohio State University, Department of Horticulture and Crop Science.

Results of NY Anthracnose and Strawberry Sap Beetle Survey

Rebecca Loughner[1], Greg English-Loeb[1], and Bill Turechek[2]
[1] Dept. of Entomology and [2] Dept. of Plant Pathology, NYSAES, Cornell University, Geneva, NY

A sampling survey of strawberry acreage in New York was conducted in 2002 to determine the distribution of two pests of increasing concern to strawberry growers in New York: Strawberry sap beetle, *Stelidota geminata* (Say), and anthracnose, *Colletotrichum acutatum*. The 2002 sampling for both pests was conducted in a total of 37 strawberry fields at 14 farms, with farms distributed throughout four agricultural regions of New York. The average number of strawberry sap beetle (SSB) captured per whole wheat bread dough trap in fields ranged from 0.4 to 53.6. Trap catches of SSB were lower at farms sampled after berries began ripening, suggesting that the beetles are more attracted to ripe strawberries than the bread dough traps. No specific cultural practices or crops surrounding the strawberry fields were clearly linked to the number of SSB captured in the field. SSB was perceived to be a pest in some locations and not in others, despite its presence at all farms. Further work to understand when beetles are moving into fields in New York, what other crops are important food sources for the beetle, and how far the beetles can disperse will be needed to develop strategies for controlling SSB. Although, severe anthracnose epidemics were observed in some fields in western NY this year, the disease was found in only one of the 37 fields included in the survey this season. The reason for its conspicuous absence, in what appeared to be a season conducive for a widespread epidemic, is under investigation. Most likely, weather conditions in other regions of the state just prior to or during harvest were not as conducive for disease development as it was in western NY or, because many fields were sampled 1 to 2 weeks prior to harvest, fields were surveyed before significant disease development occurred. It has been hypothesized that SSB may help spread anthracnose throughout strawberry fields, although it was impossible to determine during this survey because the disease was only found in one field.


Strawberry Sap Beetle


Anthracnose lesions on mature and immature berries

BACKGROUND

The strawberry sap beetle (SSB) and strawberry anthracnose are both pests of strawberry in New York. SSB feeds on overripe strawberries, melons, and rotting fruit underneath other fruit crops including apples, cherries, and blueberries. Beetles likely move between crops during a season as various crops ripen. The beetles are known to overwinter in wooded areas, but the extent to which they overwinter in strawberry fields is unclear. While SSB is present in many fruit crops, it is only a pest in strawberry fields where the adults and larvae feed on berries. Adult feeding damage at first appears as tunnel drilled into the strawberry. Larvae then develop in the strawberry and are noticeable as consumer's process strawberries for making jam or jelly. Adults could potentially vector anthracnose, facilitating the dispersal of anthracnose within and perhaps between fields. A survey of strawberry acreage in New York was conducted to determine the distribution of SSB and anthracnose and if the presence of the SSB and anthracnose are correlated. Information was also collected on habitat surrounding strawberry fields as well as strawberry production practices.

OBJECTIVES

1) Survey strawberry fields to determine environmental, horticultural, and management factors influencing the distribution of strawberry anthracnose and (SSB) in New York.

2) Evaluate the potential for insects, particularly SSB, to serve as a vector of anthracnose.

PROCEDURES

Membership lists were obtained from the New York and North American Strawberry Growers Associations to create a database of strawberry growers in New York. Farms were then classified as being located in one of four agricultural regions of New York: Hudson Valley, Syracuse Plains, Lakeshore, and South/Southwest (Figure 1). Approximately 11% of farms from each of the four regions were randomly selected. Growers from selected farms were contacted and asked to participate in the 2001 SSB and anthracnose sampling. Either two or three distinct strawberry fields were identified at each farm, depending on farm layout and number of existing plantings. A total of 37 fields at 14 farms were surveyed. A distinct field was defined as a contiguous plot of strawberries separated by other fields, a road, a fallow field, a crop other than strawberries, or another type of strawberry production system. A minimum of 10 rows of strawberry plants were required but no limit was placed on the maximum size of fields. Fields planted in strawberries in 2001 were excluded as the plants were not fruiting at the time of the sampling. No attempt was made to separate fields based on cultivar, except for exclusion of day neutral strawberries that ripen later in the season. Cultural practices were recorded including strawberry cultivars grown within each field, age of plantings, crops and habitats surrounding each strawberry field, and method of berry harvest (u-pick and/or commercial).

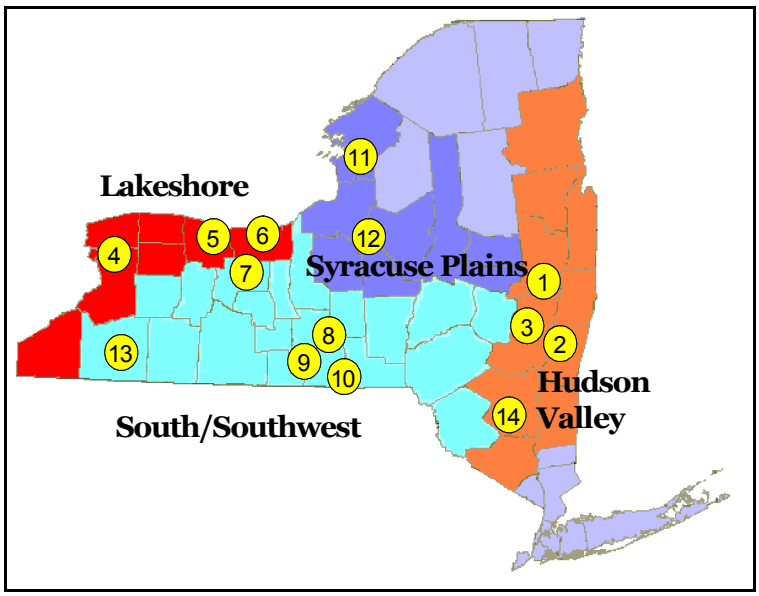


Figure 1. Agricultural region classifications of New York used to group strawberry farms. Points indicated approximate locations of farms included in the sampling.

Sampling was conducted with baited traps for SSB and visual evaluations in the field for anthracnose. "Nitidulid inventory technique traps" used were a modification of those used by Williams et al. 1994. A 0.95L polypropylene deli container was baited with approximately 30g of whole wheat bread dough wrapped in nylon fusible knit interfacing material (HTC-Handler Textile Corp., Secaucus, NJ) and secured with a rubber band. Bread dough was mixed following Williams et al. 1994, using 450g whole-wheat flour, 12.5g sugar, 7g package of dry active yeast, and approximately 300mL of distilled water. The opening of the container was screened (7 holes/cm) to exclude larger species of arthropods. A golf course cup cutter was used to create a hole in which the top of the trap was placed at soil level. A 30.5 x 30.5 cm piece of roofing shingle served as a rain shield and was placed over the trap and secured with either rocks or soil. Two transects of traps were placed approximately 11m apart running perpendicular to the rows of plants. A trap was placed in an edge row and in every other row thereafter, for a total of 5 traps per transect and 10 traps per field. One

additional trap without the mesh screening was placed at least 11m away from the other traps along the edge of the field to collect picnic beetles. Strawberry sap beetles and picnic beetles in the traps were counted after one week. Collection of traps from the 14 farms was spread over 20 days beginning on June 13, 2001 and ending on July 2, 2001.

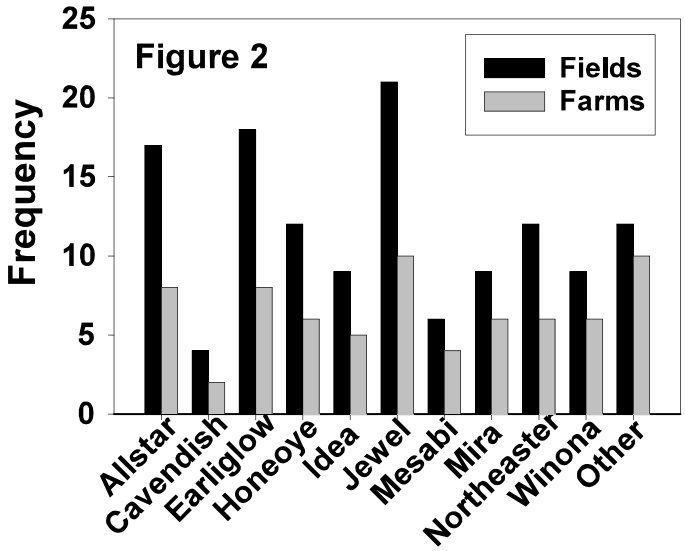
Sampling for anthracnose was conducted at the time SSB traps were collected. Six rows were randomly selected from the rows available in each field and 8 samples per row were evaluated, each approximately 3m apart. For each data point, three of the ripest berries within easy reach were examined in the field for symptoms of anthracnose and the number of affected berries was recorded.

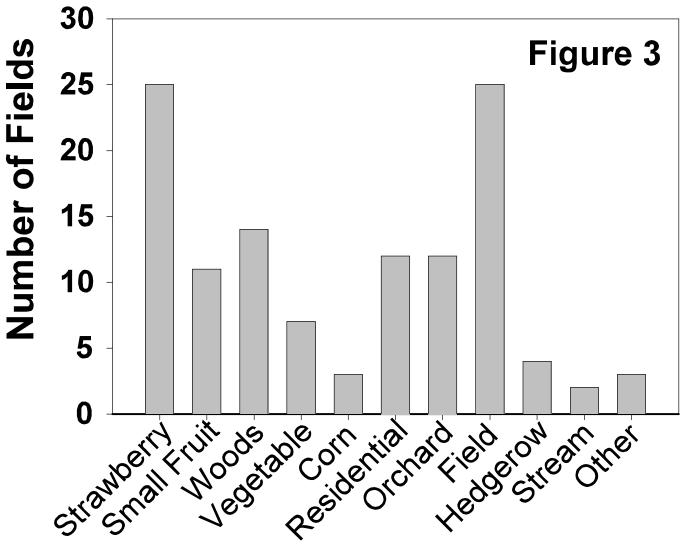
RESULTS AND DISCUSSION

Thirty-seven strawberry fields located at 14 farms were included in the survey. Production systems were primarily matted row (35 fields) although one field had raised beds and another had raised beds covered in black plastic. Overhead irrigation was available for use in 25 fields and trickle irrigation in 16 fields (some fields had both). Few growers had applied any irrigation due to the amount of rain in the weeks preceding the sampling. The age of fields ranged from 1 to 5 years of picking, with a mean age of 2.1±0.18 years (n=32 fields with known age). Harvest method was u-pick, commercial pickers, or a combination of both methods in 19, 4, and 14 fields, respectively.

Strawberry cultivars grown are summarized for farms and fields in Figure 2. Cultivars included in the "Other" category were grown in two or less of the fields surveyed and included Annapolis, Cabot, Delmarvel, Evangeline, Kent, Lateglow, Latestar, Mohawk, Primetime, Redchief, Seneca, Sparkle, as well as any unidentified cultivars. No attempt was made to determine acreage of each cultivar.

Crops and other significant features of the landscape immediately surrounding strawberry fields in the survey are detailed in Figure 3. Each type of habitat was counted only once for each field regardless of the proportion of the field surrounded by a particular habitat.

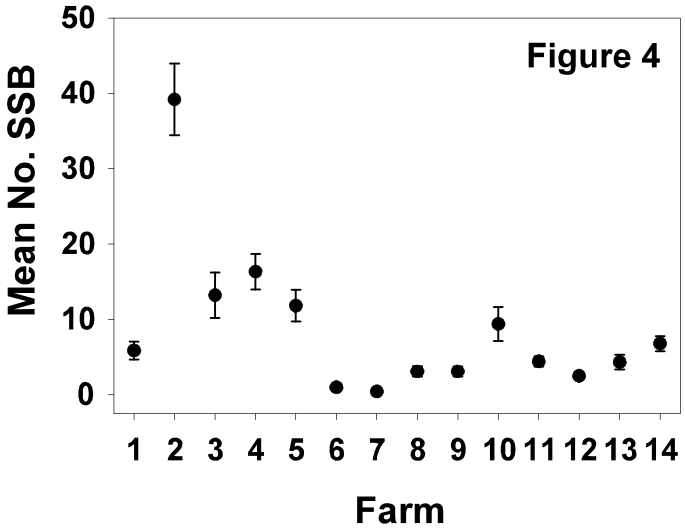


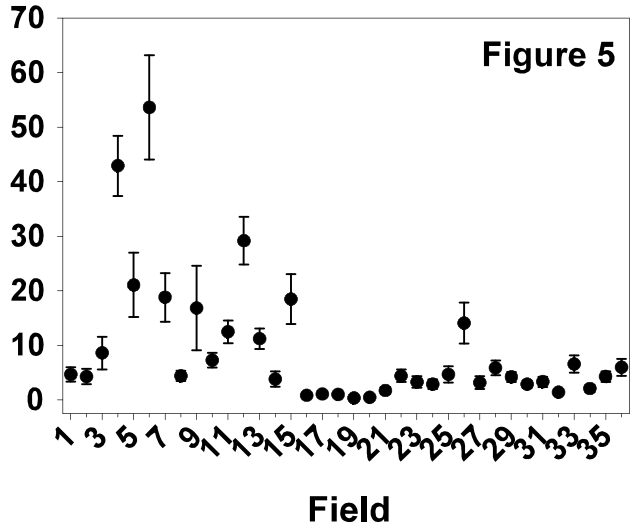


The number of strawberry sap beetles by farm and by field are shown in Figures 4 and 5, respectively. More sap beetles were captured in fields visited at the beginning of the sampling period. Berries were green or beginning to ripen in the first fields visited, while berries were ripe or overripe in fields visited later in the sampling period. Although some of the fields visited later in the sampling period had obvious strawberry sap beetle populations, relatively few SSB were captured in the traps. Anthracnose was found on berries in only one of 37 fields, with 20% of the berries examined being infected. The field with infected berries had raised beds covered in plastic.

Because sample collection occurred over a three week period, strawberry fields were in varying stages of ripeness when sampled. Variation in berry ripeness also was present within fields of mixed cultivars. In the presence of ripe and overripe berries, it is probable that SSB would be attracted to the ripe fruit instead of the bread dough bait. Future studies of SSB should incorporate some measure of damage to fruit in the evaluation method. Although time of sampling affected the quantity of SSB captured, strawberry sap beetles were found in all of the 37 fields sampled indicating that the beetle is distributed widely across New York. SSB was perceived to be a pest in some locations and not in others, despite its presence at all farms. Further work to understand when beetles are moving into fields in New York, what other crops are important food sources for the beetle, and how far the beetles can disperse will be needed to

develop strategies for controlling SSB.





Anthracnose was later found on at least one other farm after the sampling was concluded. Disease development is dependent on weather conditions and may have resulted in symptoms not being evident at the time farms were visited for sampling. Sampling of strawberry fields to correlate the presence of SSB and anthracnose in the field is unlikely to determine if SSB is a competent vector of anthracnose. A more controlled study will be necessary to establish the role of SSB in anthracnose dispersal.

The authors would like to acknowledge the efforts of Lisa Newell who worked on this project as part of the Hobart & William Smith Summer Internship Program in 2002. This project was funded in part through the New York IPM Program Competitive Grants Program at Cornell University.

Literature Cited

Williams, R.N., M.S. Ellis, and G. Keeney. 1994. A bait attractant study of the Nitidulidae (Coleoptera) at Shawnee state forest in southern Ohio. The Great Lakes Entomologist 27:229-234.

Organic / Conventional Strawberries Equally Tasty, Survey Finds

Joe Kovach (written by Candace Pollock [OSU Communications]), Ohio State University Extension IPM Coordinator, Wooster OH

Do organic foods really taste better than their conventionally grown counterparts? According to an Ohio State University Extension survey, when it comes to strawberries, consumers can't tell the difference. The survey, in its first year of evaluations, found that based on looks, taste, and smell, consumers could not tell the difference between organically grown and conventionally grown strawberries within the same variety. Research has shown, however, that consumers can make the distinction between varieties and when other conditions are factored in, such as the length of time a product sits at the market.

"When testing within a strawberry variety, we found no consumer detectable differences between organic and conventional," said Joe Kovach, an Ohio State Extension entomologist who participated in the research. "When people say organic tastes better, it's because of things like distance to market or a different variety."

Organic production, in its simplest terms, means that a crop is grown without the use of synthetic fertilizers or growth regulators and is managed through traditional practices such as composting, crop rotation, and tillage. Other studies have reported that organic foods taste better than conventionally grown products, mainly due to the cultivation practices and the lack of fertilizers, insecticides, and fungicides that are applied to the crop.

In the Ohio State study, researchers grew the strawberries using the matted row system and applied livestock manure to the organic strawberries and synthetic fertilizers to the conventional strawberries. Kovach said the survey results shed light on how a crop is grown, how it is harvested, stored and processed, and even what markets it is shipped to.

"The bottom line is people can't tell the difference in nutrient uptake whether it comes from a synthetic fertilizer or a

compost. But they can tell how long something's been sitting on a shelf," said Kovach. "When you go into a grocery store, you're going to pick up a fruit or vegetable that is home-grown, rather than something from California. Something closer to home is fresher and tastes better than a crop that was shipped halfway across the country and has been sitting in a store for days." He said the data is intended to aid Ohio growers in improving the production and marketing of organic crops.

The researchers used 'Seneca', 'Jewel' and 'Idea,' more commonly grown strawberry varieties in Ohio, for the survey. They harvested the same-sized berries in the same fields at the same time and asked a panel of 24 taste testers to identify which berries were organic and which ones were conventionally grown.

Kovach said the survey involved a triangle test, whereby participants were given three strawberries: two that were organic, one that was conventional or vice versa. "We didn't ask them to pick which one was organic and which one was conventional. We asked them to pick the one that was different, either in taste, smell or appearance. So it was a blind study," said Kovach. "If participants were able to tell the difference or took a guess, they would mark the one that was different. Analysis showed they really couldn't tell the difference between organic and conventional."

The researchers plan to conduct another survey this year and will incorporate other composts, like vermi-compost and yard waste into the study to determine if consumers can detect differences between them. They will also conduct chemical analyses among strawberry varieties to determine if chemical differences might enable some consumers to detect the difference between organic and conventional crops.

Pruning Black, Red and Purple Raspberries and Blackberries

Ray R. Rothenberger, Dept. of Horticulture, University of Missouri, Columbia, MO

Raspberries produce fruit on 2-year-old canes, which die after the crop has matured. The pruning of black and purple raspberries consists of: 1. Tipping the new canes when they reach a height of 18 to 20 inches, thus forming a branched cane that is capable of producing more fruit than an unbranched cane. Branched canes are also more able to support the crop off the ground thanunbranched canes. 2. As the buds break in the spring, the branches on the canes should be shortened to 8 to 12 inches (longer if the plant is supported by stakes or a wire trellis). 3. After the crop is harvested, the old fruiting canes should be removed at the soil line. (The removal of the old canes as soon as the crop is harvested is a good disease control practice since it removes an important source of infection.)

Pruning red raspberries

Red raspberries should be allowed to produce long, unbranched canes rather than branched canes like the black and purple varieties. The new canes are, therefore, unpruned during their first season's growth. At the start of the second season, they are topped to a height that will permit them to support themselves and keep the fruit off the ground. If the plants are supported by stakes or a wire trellis, they can bepruned to permit more fruiting wood. The old canes die after the crop is matured and they should be removed as early as possible in order to remove sources of disease.

Pruning upright blackberries

Standard American varieties of blackberries are usually able to support themselves without stakes or a trellis. Pruning is similar to that of black and purple raspberries except the canes grow taller. It consists therefore of: 1. Tipping the new canes at a height of 24 to 30 inches to form branched canes. 2. As growth starts, remove all dead and weak canes or branches and head the branches back to a length of 12 to 15 inches or to the degree that the canes can support the expected crop. 3. After the crop is harvested, remove the 2-year-old wood to stimulate the new canes and remove sources of diseases.

Pruning trailing blackberries (Dewberries, Boysenberries, etc.)

Trailing blackberries are not grown extensively in New York because of a lack of hardiness and their susceptibility to bramble diseases. Like other brambles, they bear fruit primarily on 2-year-old wood. The one-year wood is usually allowed to grow on the ground where it can be mulched for winter protection. As growth starts in the spring, these canes can be lifted up and tied to a trellis or stakes for fruiting. Weak canes should be removed as well as all dead wood and the stronger canes shortened to fit the trellis or stakes (usually 36 to 40 inches high). After the crop is harvested, the old fruiting wood is removed while the new wood is permitted to remain on the ground until the next spring (see Figure 1).

Additional suggestions

1. In tipping the new growth of black and purple raspberries and upright blackberries, each cane should have the growing tip pinched out as it reaches the desired height. If several inches of the cane are removed, the side branches are severely stunted.

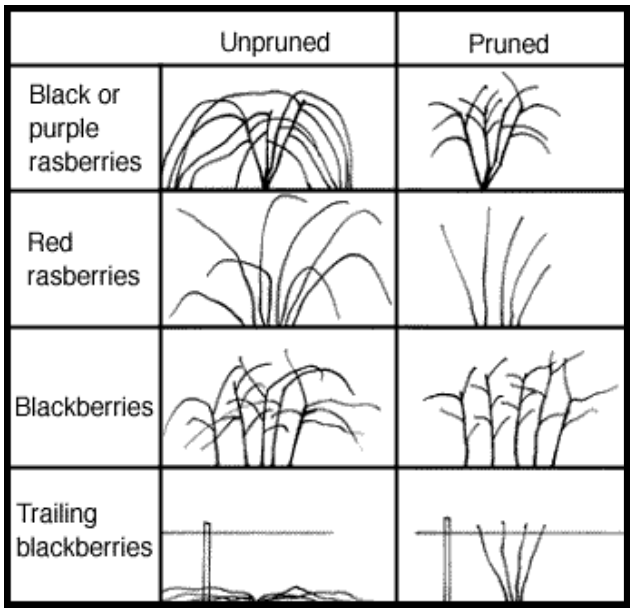


Figure 1. Pruned and unpruned raspberries and blackberries

2. Trailing blackberries and red raspberries should be supported by stakes or a wire trellis to produce maximum crops. The same is true of black and purple raspberries, especially for the first crop (2-year-old plants). These will support themselves fairly satisfactorily after the second year.

3. All brambles are subject to several serious plant diseases that are difficult to control. As a result, the plantings are usually short-lived and require frequent replacement.

4. Upright blackberries are frequently affected with a sterility condition in which the plant blossoms normally but produces no fruit. There is no control for this condition and such plantings should be removed.

5. A thorough spray program will assist in producing satisfactory crops of both raspberries and blackberries.

(Source: University of Missouri Ag. publication G6000, http://muextension.missouri.edu/xplor/agguides/hort/g06000.htm)

Principles of Pruning the Highbush Blueberry

Bill Cline and Gina Fernandez, NC State University

Effect on Plant Size and Crop Yield

Pruning a plant reduces its ultimate adult size and the crop yield in at least the following season. To compensate for this loss of bearing area and yield, other factors, largely economic, must be considered in planning a pruning program.

Effect on Fruit Size

By reducing the number of fruit buds (and hence clusters) on the bush, pruning results in an increase in the size of the individual berries. Up to a point, the more severe the pruning, the larger the remaining berries are. Pruning for increased size is a compromise between desired size and yield (numbers) of fruit.

Effect on Ripening Period

Moderate to heavy pruning tends to shift the ripening period forward so that most of the remaining fruit ripens together and early. Light pruning results in a longer season of ripening. It may be more profitable in southeastern NC to prune fairly heavily, even at the expense of some yield, to realize the earliest possible maturity.

Effect on Plant Growth and Vigor

Pruning results in longer and more vigorous (thicker) shoot growth in the next season. Heavy pruning causes thicker and more leafy shoots than light pruning. The thicker and later-developing shoots tend to produce fewer fruit buds than those which stop growing earlier in the season. Fruit of the blueberry is borne on wood produced in the previous season (one-year-old wood). By pruning, you are regulating the fruiting potential of next season's crop. Pruning should be severe enough to invigorate the plant so that sufficient new wood is produced during the following season. You are actually determining the fruiting potential of the crop of two seasons hence by the number and type of cuts you make this winter.

Spacing the Crop on the Bush

By wise selection of canes and lateral shoots on those canes which will bear the crop, the grower can prune to have his fruit well-distributed on the plant. Well-distributed clusters should have enough leaves around them to provide adequate foodstuffs, but not enough to overshade the fruit, or to reduce spray or dust coverage, or to make the clusters hard to reach during harvest.

Bush Life and Productive Life

Blueberry bushes tend to overbear, which shortens their lives. By pruning to regulate crop load, the grower can lengthen the life of his bushes and increase the number of commercial crops.

When to Prune

Blueberries should be pruned during the winter while the bushes are dormant. In winter, flower buds are easily visible on one-year-old wood and their numbers can be adjusted by pruning to regulate the crop load for the coming year.

Tools Needed

Most blueberries are hand pruned using long-handled pruning loppers capable of cutting branches 2 to 3 inches in diameter. Finer, more detailed pruning such as thinning of flower buds on individual fruiting twigs requires smaller, one-hand pruners. For larger plantings, pneumatic pruners are available, but these tools require an air compressor and are fairly expensive.

Training Young Plants (1 to 3 or 4 Years of Age)

If vigorous, well-rooted two-year-old plants are set, they do not need cutting back the first year in the field except to remove fruit buds shortly after planting. Pruning should be moderately heavy in the second year in the field to stimulate strong new growth on selected canes. Do not permit plants younger than three years of age to bear more than a cluster or two of fruit, or the onset of the commercially productive period will be delayed. A large bearing area should be established in the shortest possible time.

Pruning Bearing Plants (over 3 to 4 years of age)

1. Make large "shaping cuts" — Remove all low-spreading branches and the oldest canes if they are weak, particularly if in the center of the plant. "Head back" the upright "bull shoots" to the desired height to keep the bush from growing too tall. Essentially, you have then automatically selected the remaining, more upright canes to bear your crop next season and the following season.

2. On the remaining canes, systematically "thin out" the shorter, thinner shoots, leaving enough of the thick shoots to bear the crop and make new growth. Only experience can tell you how many shoots a particular variety of a particular age can carry and still perform well. It is probably better in most instances to prune too lightly than too heavily. Lighter pruning is usually practiced as the plant grows older because it can carry more "wood" successfully due to a larger root system.

3. Finally, some varieties such as ‘Murphy' and ‘Morrow' should have their fruiting shoots cut back to 3 to 4 fruit buds per shoot. This is done principally to insure adequate fruit size.

Renewal Pruning

When blueberries are about 8 to 10 years old, they are at their productive peak, but renewal growth has reached a minimum, and production will then decline markedly from year to year. Some provision must be made to revitalize the plant to prolong its productive period. Weak or badly diseased canes should be removed entirely. These canes can be identified by generally poor vigor and low fruit bud production. However, eastern NC many varieties do not sprout new canes readily from the crown. It may be necessary to either cut the cane back to a strong lateral which is properly located, or to cut the cane severely ("dehorn") back to within 2 to 3 ft of the ground. By the latter method, it is hoped that new lateral branches can be forced from below the cut. Either method may result in a 1- to 3-year crop reduction, but the plants should then bear several more good crops. However, when rejuvenation becomes necessary, it is well to start considering newer and better varieties to which your acreage may be systematically replanted in the near future. (Source: NC State Horticulture Information Leaflet HIL-201-B, 1998)

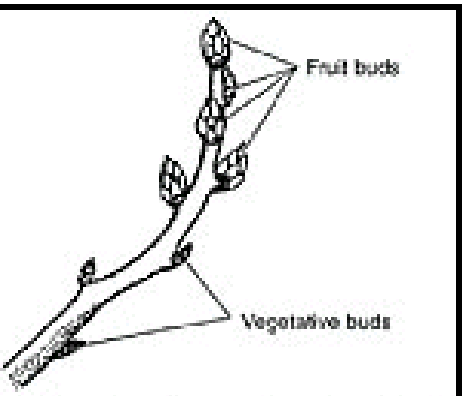


Figure 1. Types of buds on a blueberry shoot

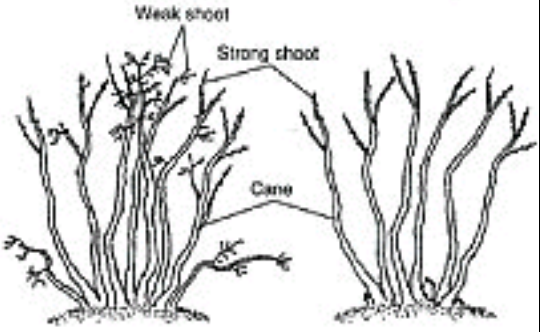


Figure 2. Dormant blueberry pruning

Questions or Comments about the New York Berry News?

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