



BRAMBLE

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FALL 2003

THE NEWSLETTER OF
The North American Bramble Growers Association, Inc.

North American Bramble Growers Research Foundation

After more than three years planning, phoning, writing and bartering the Research Foundation on July 17, 2003 became an official private foundation, an exempt public charity under section 501 (c) (3) of the IRS code. Many thanks to Dr. Ed Burns, North American Strawberry Research Foundation, Hugh McMullen, attorney, and Ron Dorman, CPA for all there advice and guidance. Private Foundation means that NABGRF can receive and disperse moneys tax-free.

Since 1997 North American Bramble Growers Research Foundation, (NABGRF) has granted more than \$35,000 to research. In 2003 Dr. Gina Fernandez, Chairperson, and her committee had 4 grants for a total of \$9900. The grants were to Dr. Jim Ballington, N.C. State Univ. for \$2000; Drs. Rose Gergerich and John Clark, University of Arkansas \$1500; Dr. Brian Smith University of Wisconsin, River Falls, \$2000; Dr. Courtney Weber, NYSAES, \$2800 and Dr Michelle Warmund University of Missouri, \$1600.

Money for research comes from dues, one-fourth or \$25 from each member at renewal, all the profit from the tasting of the Berry Fields held during the annual meeting and

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from donations from members and companies that are interested in Bramble Research. In 2003 NABGRF received \$5759.00 from memberships, donations and Tasting of the Berry Fields. So you can see if we are going to fund the research requests NABGRF is going to need more funds.

Membership

Page 11 of this bramble is the 2004 membership form. If you will use this form it will save your association the expense of sending you another form. You can also download the membership form from our web site www.NABGA.com.

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2004 Conference

The 2004 NABGA Conference will be held on February 22, 2004, preceding the NASGA Conference in Tampa, FL at the Hilton Tampa Westshore Hotel, 2225 North Lois Avenue, Tampa, FL 33607-2355, Phone: 1-813-877-6688, Fax: 1-813-879-3264, web site www.hiltontampawestshore.com. In making reservations please reference North American Strawberry Growers to ensure receipt of the group rates. NABGA will be included in the NASGA block of reserved rooms. The group hotel room rates are \$119 per night + 12% tax. The deadline to reserve a room in the NASGA group block is January 31. We cannot guarantee room availability after that date and you may end up paying the hotel's standard room rates. The hotel will assess an early departure fee of \$75 to any guest who checks out prior to his/her scheduled departure date. The Hilton Tampa Westshore offers complimentary shuttle service to and from Tampa Airport. Major rental car services are also available. For those arriving by car, the Hilton Tampa Westshore has free parking.

Members will receive a letter and registration form for the Conference.

Upcoming Events

November 8-11, 2003 The 2003 Southeast Strawberry Expo will be held at the Sheraton Imperial Hotel in Research Triangle Park, North Carolina. The Expo is the leading forum in the Southeast for information on plasticulture strawberry production methods and discussion of strawberry marketing practices and other concerns of strawberry growers. The conference attracts hundreds of participants — growers, extension workers, researchers, and suppliers—from many states

For a complete schedule and registration brochure or information on exhibiting at the Expo trade show, contact the NC Strawberry Association, 1138 Rock Rest Rd., Pittsboro, NC 27312, phone 919-542-3687, fax 919-542-4037, e-mail: ncstrawberry@mindspring.com. Information will also be posted on the association's website, www.ncstrawberry.com

Feb. 22—25, 2004 North American Berry Conference at the Hilton Westshore in Tampa, FL. Contact: Pat Heuser, Phone 814 238 3364, Fax 814 238 7051, E-mail info@NASGA.org. Or Richard Fagan , Phone 301 724 4085, Fax 301 724 3020, E-mail NABGA@charter.net

Change of E-mail Address

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The Best Way To Prune Raspberries Depends On Their Color And The Time Of Year.

By Marvin Pritts

Department of Horticulture
Cornell University

Productivity in summer fruiting red floricanes raspberries is most closely related to the number of canes. Unlike the situation with primocane-fruiting raspberries, however, fruit size decreases as cane numbers increase. Growers must maintain a high number of canes, but not high enough to greatly reduce fruit quality. In general, three to five large canes per linear foot of row is the optimal range with a plant row width of 12 to 18 inches.

On summer-fruiting raspberries, buds at the top of a cane often winter kill because they are less mature and less hardy than buds lower on the cane. Spring pruning should be delayed until winter injury on canes can be identified, usually by mid March. Canes should be topped as high as the trellis and harvest operations will permit, but below the point of winter injury. Severe topping will increase fruit size but will greatly reduce yield. To prevent a loss in yield, no more than the top one fourth of a cane should be removed.

After pruning, canes are tied loosely to the trellis wire to prevent wind damage of laterals after bud break. Canes should be spaced evenly along the trellis wire, or equally divided and spread between sides of a V-trellis.

Tipping (pinching off the tips) of red raspberry primocanes during the growing season to promote lateral growth is not recommended in the Northeast. This procedure slows cane development, does not stimulate much branching, and makes the plant susceptible to winter injury.

Black Raspberries

In contrast to red raspberries, black raspberries respond well to primocane tipping. Many more fruiting buds are produced on black raspberry lateral branches than on the main cane, so primocanes are pinched back at a height of 28 inches to stimulate lateral branching from the main cane. At least 4 inches of tip should be removed during pinching. Several passes through the field may be required since canes grow at different rates. Ideally, primocanes should be tipped just above a bud so very little dead wood is left between the pruning wound and the bud. Dead wood can be a site for cane blight infection, especially if wet weather follows tipping.

At the end of the first year, black raspberry primocanes are branched with long laterals. These lateral branches should be supported by trellis wires before October since wet snow tends to break them off the main cane. Also, canes are more flexible in early autumn than in late autumn and are less prone to breaking from the crown during trellising. A large portion of the lateral branches may be killed during the winter since black raspber-

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ries generally are not as hardy as red raspberries. Black raspberries could be pinched higher, but shorter laterals would result and the winter damage would be greater. If the whole lateral is permitted to fruit, smaller berry size will result. Laterals are shortened (headed back) in early spring to remove winter damaged wood and to maintain berry size. Some growers shorten laterals to less than 10 inches. The choice of lateral length depends on cultivar vigor and the relationship between crop size and fruit size. The relationships among productivity, fruit size, and lateral length are not well known. Whatever general pruning method is chosen, leaving four to six canes per crown should give most growers acceptable yields of large fruit. Black raspberries will respond well to partial primocane suppression. Full suppression is not recommended because black raspberries produce few primocanes.

Purple Raspberries

Purple raspberries perform best if pruned similarly to red raspberries. Purple raspberry primocanes may be tipped, like black raspberries, but wounds are often an entry site for cane diseases which kill part of the cane. If a grower chooses not to tip purple raspberries, the canes will grow very tall, and the trellis should be able to support such vigorous growth. Primocane suppression can be used to control this vigor with good results. Some natural branching will occur near the base of primocanes when growing conditions are favorable. These canes may be removed or allowed to fruit.

If primocanes are tipped to keep the plant short and compact, it should be done when primocanes reach a height of 32 inches. At least 4 inches of tip must be removed. Many lateral buds will break near the top of the cane, and fewer near the base. Lateral branches should be shortened below any winter damage in early spring.

Tipped plantings without cane diseases will generally produce higher yields, but berries on the long laterals are more difficult to harvest. Also,

long lateral branch or cane length generally results in smaller fruit size. Larger fruit can be obtained by shortening canes or lateral branches in early spring, but at the expense of yield.

Pruning methods that leave three to four fruiting canes per linear foot of row produce acceptable yield and quality of fruit. Purple raspberries respond favorably to primocane suppression but do not respond well to mowing.

For More Information

You can find more information from Marvin Pritts on berries by going to www.fruit.cornell.edu, and clicking on berries. You can also view a course document by Pritts by going to courseinfo.cit.cornell.edu/courses/hort42/ and typing in "guest" as the user ID and password. This page also has details on primocane suppression and alternative pruning systems.

Printed from the AMERICAN FRUIT GROWER – May 2003

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The Healthy Attributes of Red Raspberries

David Ropa, Consultant to the Washington Red Raspberry Commission

The red raspberry (*Rubus idaeus*) is indigenous to Asia Minor and North America. Today, the leading producing regions for red raspberries in the US. are Washington, Oregon and California. However, Washington accounts for nearly 60% of the U.S. production of red raspberries, at nearly 70,000,000 pounds per year.

The world market for red raspberries has grown tremendously in recent years, primarily because of the numerous healthful compounds that are present in red raspberries. The following is a brief overview of the compounds found in red raspberries and the nutraceutical functions to which they contribute.

Ellagic Acid

Ellagic acid is a phenolic compound that has become known as a potent anti-carcinogenic/anti-mutagenic compound. It also has anti-bacterial and antiviral properties. Ellagic acid itself is not thought to be naturally present in plants. It is the ellagitannins that are present in red raspberries which are converted naturally to ellagic acid. The concentration of ellagic acid is highest in the Meeker variety of red raspberries, at 8.40 ug/g of dry weight.

Ellagic acid acts as a scavenger to "bind" cancer-causing chemicals, making them inactive. It inhibits the ability of other chemicals to cause mutations in bacteria. In addition, ellagic acid from red raspberries prevents binding of carcinogens to DNA, and reduces the incidence of cancer in cultured human cells exposed to carcinogens.

Antioxidants

Anthocyanins, which act as pigment to give berries their deep color, are a major component of the phenolic/flavonoid class. Recent

research shows that anthocyanins act as antioxidants, providing many potential healthy benefits. Researchers are currently linking anthocyanin activity to improving vision, controlling diabetes, improving circulation, preventing cancer, and retarding the effects of aging, particularly loss of memory and motor skills. The anthocyanins in red raspberries, present at a level of 20-65 mg/100g, help reduce the risk of heart disease.

Recently published research investigated the activity of the anthocyanins found in red raspberries. Researchers analyzed the ability of the fruit to inhibit cyclooxygenase and act as antioxidants to destroy free radicals. Researchers discovered that the antioxidant activity of anthocyanins from red raspberries was superior to vitamin E at a test concentration of 125 ug/ml. The COX inhibitory activities of anthocyanins from red raspberries were comparable to those of ibuprofen and naproxen at 10 uM concentrations.

Salicylic Acid

Salicylic acid is found in red raspberries and is suspected of having the same protective effect against heart disease as aspirin. Aspirin is a closely related compound known to pharmacists as salicylic acid acetate. The therapeutic successes of small daily doses of aspirin to inhibit atherosclerosis suggest the possibility that salicylic acid consumed in foods may provide a similar benefit. A 100-gram serving (about 3/4 cup) of red raspberries contains around 5 milligrams of salicylic acid.

Quercetin is a flavonol that works as an anti-carcinogen and an antioxidant. Quercetin has also been shown to reduce the release of histamine and may be effective against allergies. The quercetin content of red raspberries is 12mg/100g of juice.

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An Ace Crop for Cold Area Growers

Charlie O'Dell

In colder, restrictive regions for Florida and California cultivars of strawberries, lower yields are common; resulting from more extreme cold snaps and late spring killing freezes, compared to warmer parts of Virginia and the Mid-Atlantic region. After 30 years of growing strawberries for our loyal U-Pick customers, the past 13 by customer-friendly plasticulture on raised beds, it's mighty hard to think about giving it up. Plasticulture strawberries are risky and often not profitable here with current weather extremes, especially over the past couple of years.

As I write this in March, my strawberry work for the spring is just beginning here, with bloom season fast approaching by the next couple of weeks. On the other hand, I'm all finished until about harvest time with our primocane raspberry work.

Temporary harvest trellises have been removed, all canes have been mowed to the top of the ground, delayed dormant lime-sulfur spray has been applied, fertilizer has been top dressed on the mowed beds, herbicides have been applied, and harvest aid trellis T-bar posts have been reinstalled into their PVC pipe holders. Remembering that they don't even begin to bloom until mid-June brings a smile to my face as I kid myself thinking, "If it weren't for strawberries, I could go fishing this spring!"

Lots Of Potential

Last summer was our fourth harvest year for primocane raspberries, and they provided an ace crop against the financial risk of loss from a poor strawberry crop. They allowed us to continue producing a hardier, frost and freeze-proof fruit crop, perhaps the only such

fruit crop for growers in this region. This past growing season, it was our only small fruit crop to provide U-Pick income. Buds and blooms of our primocane raspberries do not appear here until mid-June, then continue blooming right on without interruption until fall frost. Again, last summer our U-Pick raspberry customers harvested nearly 5000 pints on our 1-acre of primocane raspberries. A severe, prolonged drought was made bearable by drip irrigation used several times each week. Don't plant without it! Customers picked each week from July 16 through Oct. 5, almost 12 weeks of continuous harvests and income!

New Varieties

Some newer varieties, especially Jaclyn, then Autumn Bliss, Polana, and Caroline, in order of ripening, are much earlier ripening than Heritage, allowing first harvests to begin

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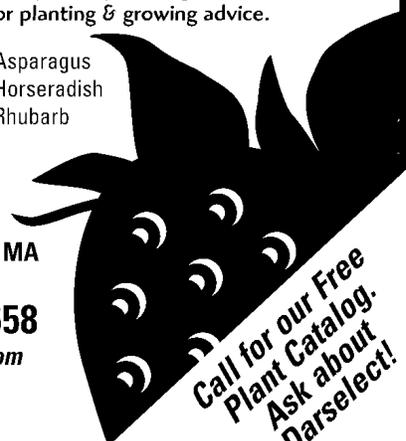
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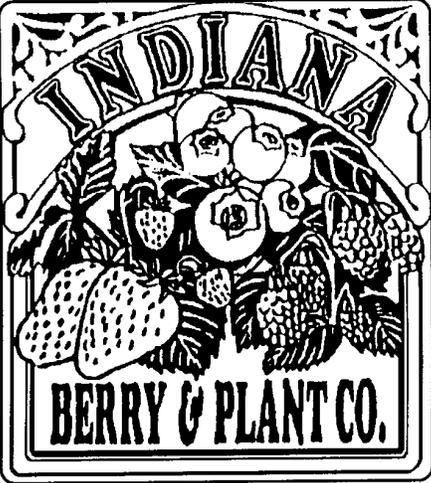
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Catechins

Catechins are flavonols that support the antioxidant defense system. Catechins found in red raspberries may contribute to cancer prevention. The catechins content found in red raspberries is 0.83 milligrams per 100 grams.

(Source: Ohio Berry Symposium Proceedings, Nov. 12-13, 2002).

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(Continued from page 6)

in mid-July in this region. We experience continuous harvests at least three times per week until fall frost. Other newer varieties begin by mid-August, including Josaphine and the Golden Anne. They also continue ripening and harvest until fall frost.

Other customer-loving fruit attributes of newer varieties include much larger berry size along with very fine flavor and appearance, features that are welcomed by growers, consumers, restaurant chefs, and local produce buyers. We always start with tissue cultured plug plants and plant them on raised beds after the danger of frost ends, usually in early June. Growers in warmer areas and with longer fall growing seasons may find these later maturing newer varieties to be better suited to their location. Ripening will commence after most of the intense heat of summer is past and will continue on through October or even later in some areas. These varieties are also stimulating research and grower trials into use of high tunnels to extend the harvest season, notably by research at Penn State University and the University of Maryland.

While warmer areas of our region have more ideal conditions for growing plasticulture strawberries, colder areas seem most ideally suited to production of these newer varieties of primocane raspberries. In warmer areas, on-farm variety testing on a small scale should be done before committing to commercial plantings. Start small and grow with market demand for this "new" fruit crop. You too can sleep better with an "ace" crop!

Charlie O'Dell is a horticultural consultant and Extension Horticulturist Emeritus, commercial strawberry, blueberry, and vegetable production, Crows Nest Farm, 1859 Brookside Road, Blacksburg, VA 24060-0607; olecr@gro-k.com.

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2004

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Northland Berry News (optional) NABGA members rate before March 1

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Personal volunteering information: Contact Exec. Sec. to explore the following area (s):

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3. Work on committees ____ Name of committee(s) _____
4. Wish list: If you could make only one change or innovation for the improvement of any aspect of NABGA, what would this be? Use reverse side for more space.

We are always looking for articles of bramble interest to print in the *Bramble*. If you have such articles, please send them to the *Bramble*. If they have been printed in other publications, we will need to know the author and the publication where printed so we can get permission to print.

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The Newsletter of the North American Bramble Growers

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