



The National Bramble Conference

The National Bramble Conference is **January 15-17, 2006**. It will be part of the Ohio Fruit and Vegetable Congress, which also includes programs for the Ohio Fruit Growers Society, the Ohio Vegetable and Potato Growers Association, and the Direct Agricultural Marketing Association of Ohio, and Mid-American Ag and Hort Services. At any one time, there are as many as eight tracks of concurrent sessions, as well as a large trade show! Bramble Conference attendees sign up for the conference as a whole and may attend any of these other sessions, except a few workshops that must be pre-registered. On Monday, January 15, we are offering one special workshop of our own – Bramble ABCs – which is by preregistration only. On page 5 is a detailed schedule of our sessions, followed by an overview of the whole Ohio Fruit and Vegetable Congress schedule, and a registration form (page 7). We hope to see you there, and encourage you to tell other bramble growers about the conference. Especially for growers in the Midwest, this is a great opportunity

– NABGA moves its conference around, and we won't likely be back for a while.

Registration

All registration is through the Ohio Fruit/Vegetable Associations. Your registration will allow you to attend other sessions at the conference, not just the Bramble sessions. Note that the registration, except for special workshops, is a *family* registration and includes all members of your family. Workshop registrations are separate and are per-person. There is a preregistration discount for members of NABGA (or of the other participating organizations), so be sure to renew by January 4.

Hotel Information

The conference takes place at the Greater Columbus Convention Center in downtown Columbus.

The Hampton Inn and Suites is the Headquarters Hotel for the 2007 Growers Congress. The Hampton is located directly across the street from the conference at 501 North High Street, Columbus, Ohio 43215. A block of rooms has been reserved for participants and registrants at the special room rate of \$99/night + 16.75 % tax for a Standard King or

Double bed for ONE person. Call (614) 559-2000 or visit their website at www.hamptoninn.com

Two other hotels will be offering special rates for Congress participants and registrants:

The Drury Inn and Suites will be offering special conference rates. Call (614) 221-7008 or visit their website at www.druryhotels.com

The Crowne Plaza will also offer special rates for the Congress. Call (614) 461-4100 or visit their website at www.crowneplaza.com

For more information on the overall conference, visit www.ohiofruit.org.

CALL FOR POSTERS

The North American Bramble Growers Association (NABGA) invites all researchers to submit a poster for the National Bramble Conference. Posters covering basic and applied research on all aspects of raspberry and blackberry culture, physiology, breeding, genetics, molecular biology, fruit quality, nutrition, health benefits, pathology, and entomology are welcome. Please share this Call for Posters with your colleagues as well.

Poster title and an abstract should be sent to nabga@mindspring.com, by December 20, 2006. Posters will be displayed continuously during the conference. Please indicate when you send your abstract whether you plan to be there for the meeting and can participate in a poster session (on Tuesday, January 16, 5:00-6:00 pm). If you will not be at the meeting, you will need to work with NABGA to arrange for delivery and return of your poster.

Abstracts of posters will be published in NABGA's Conference Proceedings. More extensive papers, if submitted, will be included at the discretion of the editor.

For more information and recommendations on poster layout, contact NABGA at 919-542-3687 or nabga@mindspring.com.

Please support bramble research with a year-end donation to the North American Bramble Growers Research Foundation.

If you are a grower, you can probably think of many research needs you have: Control of a difficult weed? Better varieties for your climate? Hard-to-manage disease problems? Since brambles are a minor crop in many states, they often receive little research attention. A gift to the NABG Research Foundation supports research that can benefit many growers. Our funds, even when our grants are small, often leverage additional funding from other sources. And NABGA is committed to sharing results from projects funded through the NABG-RF with all members, through the newsletter and annual conference.

Our funding for 2007 grants is based on funds received before the end of 2006. Your gift to NABG-RF is tax-deductible. If you are renewing your membership, just add your donation to your membership dues. If you've already renewed (or just recently joined), send a check made out to NABG-RF to NABGA, 1138 Rock Rest Rd, Pittsboro, NC 27312. Many thanks!

Briefly Speaking...

All of us in the bramble industry fear that the day will come when a news item will link raspberries or blackberries to an outbreak of food borne illness. The thought that the product we promote for its health benefits could be the cause of sickness or death is sobering. Are we ready if the next incident is about raspberries or blackberries? I say "we" because all of us in the industry would be affected as has been evidenced by previous events. Common sense tells us that we could never be fully prepared with enough damage control strategy to prevent major problems.

A proactive approach seems to me the best way for our industry to meet this challenge. "An ounce of prevention is worth a pound of cure." It is essential that all of us make a personal commitment to producing a safe product.

Support for on-farm food safety planning is available. Most commercial growers are required by their markets to be certified by third party inspections. For those not connected to retailers or wholesalers, food safety plans are currently voluntary. But like a chain that is only as strong as its weakest link, we are all connected through the supply of our product to the consuming public. Contact your local Cooperative Extension Office now to get started with food safety planning for next season.

Your NABGA board of directors is working on this issue and plans to have commodity specific material available soon. The next issue of "The Bramble" will contain more information on this. Also, bramble sessions at BOTH the Southeast Regional Fruit and Vegetable Conference in Savannah, Georgia, January 4-7, and the NABGA Annual Conference in Columbus, Ohio, January 15-17, will include food safety information specific for brambles.

Let's keep brambles out of the news on this one!

It has been a pleasure for me to serve as your President during the past two years. While all of our goals and objectives have not been reached, some have; and I feel we are making progress in many ways. Much of the credit for our accomplishments should be given to our dedicated and competent Executive Secretary. She is the driving force behind NABGA.

"Thank you, Debby!"

Ervin Lineberger
NABGA President

I believe that Ervin deserves a lot of the credit for having a real vision for what NABGA can do and be and for thinking creatively and strategically about the needs of the bramble industry as a whole. So, "Thanks, Ervin!"

Debby Wechsler

EVENTS

December 11-13 —New England Vegetable and Berry Conference. For more information: www.nevbc.org.

January 4-7, 2007 — Southeast Regional Fruit & Vegetable Conference, Savannah, GA. Includes bramble sessions and Blackberry ABCs workshop. This is where our annual meeting was last year; NABGA is helping plan these sessions. For more information, contact NABGA, visit www.gfvga.org, or call 877-994-3842.

January 16-17, 2007— NABGA's National Bramble Conference, at the Ohio Fruit and Vegetable Congress in Columbus, OH. See page 1.

February 9-12, 2007 — North American Strawberry Research Symposium and North American Strawberry Growers Association Annual Conference, Ventura, CA. Contact 613-258-4587, info@nasga.org, or visit www.nasga.org.

Savannah Conference Offers Bramble Sessions

Most of our members in the Southeast, and anyone who attended last year should have already received information about the Southeast Regional Fruit and Vegetable Conference. NABGA is helping with this event and it is essentially a NABGA regional meeting. If you need more information or a preconference booklet, visit www.gfvga.org, or call 877-994-3842. You can also contact NABGA.

Thursday, January 4-1-4 pm

- **Blackberry ABCs workshop**— the basics for new and novice growers. Presenters will include Dave Lockwood, University of Tennessee; Phil Brannen, University of Georgia; Arlie Powell, Auburn U; Mike Bruorton, SunnyRidge Farm.

In the evening there will be a **Bramble Grower's Dinner** (Dutch Treat).

Friday, January 5, 8-11 am

- **Production Updates-**

- Double Blossom (Barbara Smith, USDA-ARS)

- Raspberry Crown Borer (Dan Horton Uof GA)

- Disease Control (Barbara Smith, USDA-ARS)

- **Building a Dynamic and High Quality Bramble Industry in the Southeast.** Debbie Hamrick, NC Farm Bureau; Henry Bierlink, Washington Red Raspberry Commission; Keith Mixon, SunnyRidge Farm, and Ervin Lineberger, NABGA president.

- **Bramble Food Safety** session (not shown in printed program).

- **Q & A with all speakers**

Other tracks at the conference include peaches, strawberries, muscadines, blueberries, vegetables, watermelons, roadside markets, organic production, and more. There is an extensive trade show as well.



Winter Bramble Chores

This list was developed by Dr. Gina Fernandez, Small

Fruit Specialist at NC State University and reviewed by Dr. Marvin Pritts at Cornell. Chores and timing may be somewhat different in your area or for your cropping system. We plan to publish appropriate seasonal chores in each issue of the Bramble.

Plant growth and development

- Plant is "dormant" and accumulating chilling hours.
- Some differentiation may be occurring in the flower buds.

Pruning and trellising

- Pruning should occur in late winter or early spring. Ice storms can do tremendous damage to plants and trellis systems. If you produce blackberries in areas where ice storms are common, pruning can take place early winter to help avoid severe damage. Wait until early spring to prune floricanes raspberries so winter injured wood can be removed.
- Make trellis repairs after plants have defoliated but before pruning and training.

Erect blackberry types

- prune out the spent floricanes
- Tie canes to wires in a fan shape
- cut lateral branches back to 8-12"
- thin canes to 6-8 canes/ hill (4 ft spacing)

Trailing blackberry types

- prune out spent floricanes
- tie or weave canes to wire so that they do not overlap
- prune side laterals to 12-18"
- thin canes to 6-8 hill (6-8ft spacing)

Primocane fruiting raspberries

- Prune (mow) primocane fruiting types to the ground

Floricanes-fruiting raspberries

- prune out the spent floricanes
- tie canes to wires so they are spread out
- cut any lateral branches back to 6"

- thin canes to 6-8 / hill (3 ft spacing) or 3-4 canes per linear ft. of row

Weed control

- Many summer weed problems can best be managed in the fall and winter using preemergent herbicides. Determine what weeds have been or could be a problem in your area. Check with local extension agent for cultural or chemical means to control these weeds.
- Establishing new blackberry or black raspberry plants into rows of black plastic or landscape cloth can reduce weed problems significantly. For red raspberries, straw mulch works best since new canes will emerge within the row, and must be able to push through the mulch.

Insect and disease scouting

- Scout fields for insect and disease damage and remove those canes.
- If possible, remove any wild brambles by the roots that are within 600 ft of your planting during the winter, or treat them with Roundup in autumn.
- Apply liquid lime sulfur to dormant canes, just prior to bud break, for disease control.

Planting

- Growers in warmer areas can plant in December. In northern areas, set dormant plants in spring when the soil thaws.
- Take soil tests to determine fertility needs one year before planting. Amend the soil in the fall prior to spring planting.
- Prepare list of cultivars for next year's new plantings. A commercial small fruit nursery list can be found at www.smallfruit.org or www.hort.cornell.edu/nursery.

Water management

- Make repairs to irrigation system (check pumps, lines, etc).
- Plants generally do not need supplemental water in winter.

Marketing and miscellaneous

- Order containers for next season.
- Make contacts for selling fruit next season.
- Attend grower meetings.

Request for Proposals

The North American Bramble Growers Research Foundation (NABGRF) is seeking proposals for bramble research for the year 2007. Since 1999, NABGRF has funded a total of 30 proposals, totaling \$58,360.

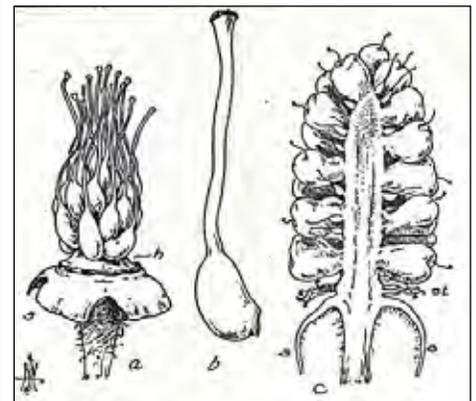
All bramble proposals will be considered; however, preference will be given to proposals related to:

- cultivar development and testing
- pest management strategies
- cultural management strategies to improve yield, quality and profitability
- identification of beneficial compounds in bramble fruit and their effects on human health

Funding for individual projects is expected to range from \$1,500 to \$3,000. In 2006, NABGRF funded two proposals, for a total of \$5,714 and two through a cooperative arrangement with the IR-4 program, which supplemented NABGA's contribution to provide full funding.

Guidelines and procedures for proposals are posted at www.raspberryblackberry.com. New this year, all proposals are to be submitted **electronically** through this website. For more information, contact Gina Fernandez, Research Committee chair, at gina_fernandez@ncsu.edu.

Proposals will be reviewed by NABGA's Research Committee at the Association's meeting in Columbus, Ohio in January 2007. Awards will be sent out shortly after the meeting. Deadline for proposals December 20, 2006. ❖



Q & A

From Cathy Heideinrich via the Forum:

I have been getting a lot of questions lately about weed control in brambles, especially in established plantings. Does any one have good reference articles on bramble weed control “do’s and don’ts” or “how-to’s” that you might share?

Also, does anyone have a list of currently labeled bramble herbicides and the weeds they are effective against?

(Reply via the Forum, or to mcm4@cornell.edu.)

Followup to the query in the last newsletter on trellising, from NCSU Bramble Specialist Gina Fernandez, passing on comments from Sara Spayd, Extension Viticulture Specialist at NCSU:

Here is another place for trellis supplies: www.orchardvalleysupply.com

I sometimes just use the tape that comes with the tapeners. The tapeners can be a real pain and I don’t think they always hold that well. Some people use the plastic lock fastners that are pretty heavy duty (see website above).

You have to make sure to loosen them or you get into some pretty hairy girdling problems. Old fashioned hemp string works pretty well too

Send queries or responses to NABGA or use the NABGA Forum (see box).



Berry are Tops in Nutrition Study

A study on “Nutritional Status, Dietary Intake and Body Composition” ranked foods for their total content of antioxidants (“redox-active compounds compounds”).

The food groups spices and herbs, nuts and seeds, berries, and fruit and

Join the Conversation! NABGA’s New E-Forum

Writes Tom Doyle, “I just wanted to congratulate Debby for getting a forum for all of us to talk and share information. I belong to two other trade forums and everyone who participates gets much more from the forum than they could possibly imagine.

It can become an immense source of information to help in our businesses but also a place to keep in contact with all the nice people you meet at the conferences. The main thing to remember is that the more you use this forum the more you get from it.”

Have *you* joined NABGA’s new email forum? This e-mail forum is different from the occasional email alerts and reminders we send out from the NABGA office to all members for whom we have emails. **You have to actively join.** It takes just a few minutes of your time. Only NABGA members can join.

Here’s how:

1. Go to the website <http://tech.groups.yahoo.com/group/NorthAmerican-BrambleGrowers/>

2. If you do not already have a Yahoo account, follow the steps to create one. You can use your own name or create an alias. You do NOT have to fill out any info except to create an email address and a password. If you have a different email address already that you check regularly, list it as your primary alternate address rather than the Yahoo address.

3. Then, to join the group, you will be asked to:

A. Verify contact information—your Yahoo name and email preference. Click on your other email address if you don’t want to bother with the Yahoo one.

B. Write a brief comment telling about yourself and why you want to join the group—we really just need your name/farm name/address, enough to tell who you are and determine whether you are a member.

C. Decide how you want messages delivered. You have the choice of getting each individual email that is sent, a daily digest of all messages that day, special notices only, or just checking the website for messages. I recommend choosing either the first or second option (I do the daily digest with my other group). You can change these preferences at any time.

D. Select a display preference. Unless your computer system is very old or your internet connection is horribly slow, choose the “enhanced” option.

Once this is done, I will get a message you’ve applied to join, and if you are a member, your membership will be approved and you’ll get a notice via email. Let me know if you have problems. While navigating the group website is a bit confusing, I assure you that reading and responding to the emails themselves is easy – and I think you that you will find it both interesting and useful.

—Debby Wechsler

vegetables all contained foods with very high antioxidant contents. Most food categories also contained products almost devoid of antioxidants. Of the 50 food products highest in antioxidant concentrations, 13 were spices, 8 were in the fruit and vegetables category, 5 were berries, 5 were chocolate-based, 5 were breakfast cereals, and 4 were nuts or seeds. On the basis of typical serving sizes, **blackberries**, walnuts, strawber-

ries, artichokes, cranberries, brewed coffee, **raspberries**, pecans, blueberries, ground cloves, grape juice, and unsweetened baking chocolate were at the top of the ranked list.

American Journal of Clinical Nutrition, Jul 2006; 84: 95 - 135.

The National Bramble Conference

January 15-17, 2007 in Columbus, Ohio

See hotel information on page 1. Info about the overall Ohio Fruit and Vegetable Congress, of which our conference is a part, is on page 6 and the registration form is on page 7 – you can clip or copy it or download it at www.ohiofruit.org. Note that your registration should be sent to OFVGC, PO Box 182383, Columbus, OH 43218 and not to NABGA. You can also fax your registration to 614-246-8692. There is a pre-registration discount for all registrations received by January 4.

Monday January 15		
1:30-4:30	Bramble ABCs Workshop	An intensive workshop for new and prospective raspberry and blackberry growers, and those in their first few years of production. Includes planning and design, site preparation, variety selection, trellising, disease and weed control, marketing and more. Led by Dick Funt, retired OSU Extension specialist and a commercial berry farmer himself, with experienced Ohio berry producer Tom Althausser and Tom Walters, NABGA Vice President and researcher at the NW Washington Research and Education Center. Limited registration; preregistration required.
Evening	NABGA Executive Council meeting	
Tuesday, January 16		
9-10	Raspberry Varieties on Review and Primocane-Fruiting Black Raspberry Breeding Progress	What raspberry varieties are best for you? What's new and interesting? Learn the latest from Courtney Weber, Cornell University bramble and strawberry breeder. And, a primocane fruiting black raspberry is on many wish lists—and may be available soon. Hear from breeder Peter Tallman, who has been working on them since 1991.
10-11	Get on Top of Bramble Disease/Weed Management	Learn how to prevent problems, identify them when they first show up, and keep diseases from becoming BIG problems. Mike Ellis, & Doug Doohan, OSU
11-12	GAPs for Bramble Growers	Whether you are small or large grower, whether PYO or wholesale, you need to be aware of appropriate food safety practices during production and harvest. Recent foodborne illness outbreaks highlight the need for good agricultural practices (GAPs). Betsy Bihn, coordinator for the National GAPs Program, will discuss how to document a farm food safety plan and implement GAPs for bramble crops.
1:30-3	Organic Bramble Possibilities	Are you growing raspberries or blackberries organically or interested in trying? Share your experiences and questions in an informal roundtable discussion.
3-4	Growers in the Spotlight	Two bramble growers tell about their farms: Dean Henry, The Berry Patch Farm, Nevada, IA, has been farming since 1968 and raises 25 acres of raspberries, blackberries, strawberries, blueberries, gooseberries, and currants for PYO, retail market, CSA and farmers market. Mike Pullins and his family started raising raspberries for a son's VoAg project 15 years ago; their Champaign Berry Farm in Mutual, OH, now raises more than 25 acres of raspberries, as well as blueberries and blackberries.
4-5	Irrigation for Brambles	How to irrigate raspberries and blackberries: how much, how often, and how to know if you have it right, Includes results of a grower survey on drip systems and how they've held up in the "real world". Tom Walters, NW Washington Research & Extension Center
Evening	Bramble Growers Dinner	Join other bramble growers for a Dutch Treat dinner and informal discussion at a nearby restaurant. This was a lot of fun last year! Location TBA
Wednesday, Jan. 17		
8:30-10	NABGA Annual Meeting & Bramble Research Reports	A brief annual meeting of the North American Bramble Growers Association (open to any interested persons) will be followed by talks on blackberry and raspberry work conducted by researchers across the country as well as a summary of research funded by NABG-RF in 2006. Presenters include Gina Fernandez, NCSU; Courtney Weber, Cornell; and Annemieke Schilder, U of Michigan.
10-11	Building Demand: Bramble Industry Promotion	How can we, as individual growers and as a group, make the bramble industry grow—at the farm level and at the state, regional, and national level? Henry Bierlink, Director of the Washington Red Raspberry Commission, will share his perspectives and some exciting new opportunities.
11-12	Health Benefits of Brambles	Ohio State University has been a leader in research on medicinal uses of bramble fruit. Gary Stoner, OSU Medical Center, will share results of their cutting edge research.

Monday, January 15 Program Summary									
No Trade Show Today	Room >	E150	E151	E160	E161	E162	E170	E171	E172
	9:00 AM	Mid American Ag & Hort Human Resources Conference (see page ?? for more detail)		Direct Marketing Workshops (see page ?? for more detail)				Workshops (see page ?? for more detail)	
	9:30 AM	Experienced Supervisors Hiring Workshop	What's New with Labor & Immigration Compliance	Advanced Retail Concepts - John Stanley	Hosting Team Building Events on Your Farm - Jim Cain	Season Extension Workshop	Ohio Irrigation Vegetable & Fruit Crops - Pesticide Recertification		
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Tuesday, January 16 Program Summary									
Room >	E150	E151	E160	E161	E162	E170	E171	E172	
	9:00 AM	Vegetables (see page ?? for more detail)	Direct Marketing (see page ?? for more detail)						
	9:30 AM	Sweet Corn Charlie and Advanced Israeli Technology	New Market Opportunities	Effective Marketing Strategies & Tools	Marketing Results for Farmers Market Managers	Peaches, Nectarines, Michigan Tree Fruit, Apple Scab, Pesticide Update	Strawberry Weed Control, Varieties, Small Fruit Pollination	Red & Black Raspberry Varieties, Bramble Diseases & Weeds, GAPs	NBC ¹ (page ??) E172
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Wednesday, January 17 Program Summary									
Room >	E150	E151	E160	E161	E162	E170	E171	E172	
	7:00 AM	Awards Breakfast/ Top Growers Vegetable Sessions (Page ??)							
	7:30 AM	Awards Breakfast							
	8:00 AM	Associations Joint Meeting							
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OHIO FRUIT & VEGETABLE CONGRESS OVERVIEWS
 Monday evening activities not shown due to lack of space. Visit www.ohiofruit.org or call 614-246-8292 for more info.

**2007 Ohio Fruit & Vegetable Growers Congress, Ohio Direct Agricultural Marketing Conference
Mid American Ag & Hort Human Resource Conference, National Bramble Conference**

January 15 - 17, 2007 at the Greater Columbus Convention Center, Information: Ph: 614-246-8292, Fx: 614-246-8692

Pre-Conference Registration Form: Pre-Registration Deadline: January 4, 2007

Registration Information (Registrant, spouse & children under 18 at the same address = one family registration. All active students admitted free)

Primary Registrant Name:		Today's Date: / /
Additional Registrants' Names:		
Business Name:		County:
City:	State:	Zip:
Email:	Phone:	Fax:

Conference Registration	Member Regular Registration Rate	Member Pre-Reg Discount (by 1/4/07)	OR	NonMember Regular Registration Rate	Number of Registrants	Amount Due
Sponsored by: OVPGA: Ohio Vegetable and Potato Growers Assoc, OFGS: Ohio Fruit Growers Society, DAMA: Direct Agricultural Marketing Assoc, MAAHS: Mid American Ag and Hort Services, NABGA: North American Bramble Growers Assoc						
Ohio Fruit & Vegetable Growers Congress (OVPGA, OFGS) <u>Monday, Tuesday, Wednesday</u> Fruit & Vegetable Workshops, Education Sessions & Trade Show: This is a Family Registration and also qualifies registrants for the MAAHS Conference and Tuesday, Wednesday Direct Marketing Conference and National Bramble Conference. (Does NOT include DAMA or NABGA Monday Workshops or Monday lunch)	\$95	\$85	OR	\$115		
Mid American Ag Hort Human Resource Conference (MAAHS) <u>Monday</u> Mid American Ag & Hort Human Resource Conference: MAAHS registration is a Family Registration and also qualifies registrants for the Growers Congress One Day or Full Registration. (Does NOT include DAMA or NABGA Monday Workshops or Monday lunch)	\$95	\$85	OR	\$115		
<u>Monday</u> , Noon - 1:30; MAAHS Annual Meeting and Lunch (per person)	\$22					
Direct Marketing Conference (DAMA) <u>Sunday</u> Direct Marketing Boot Camp & Reception (per person)	\$35	\$0	OR	\$65		
<u>Monday</u> Direct Marketing Workshops (John Stanley & Jim Cain): This is a per person registration and is valid for these sessions only	\$75	\$0	OR	\$115		
<u>Tuesday & Wednesday</u> Direct Marketing Conference, This is a Family Registration AND also qualifies registrants for the Fruit & Vegetable Congress & National Bramble conference	\$95	\$85	OR	\$115		
National Bramble Conference (NABGA) <u>Monday</u> Brambles ABCs Workshop: This is a per person workshop and qualifies registrants for this workshop only. Membership discounts apply to NABGA members only. Pre-Registration required	\$60	\$50	OR	\$80		
<u>Tuesday, Wednesday</u> National Bramble Conference: This is a Family Registration and qualifies registrants for all Fruit, Vegetable & Direct Market Education Sessions and Trade Show	\$95	\$85	OR	\$115		
Use this section for ADDITIONAL REGISTRANTS for: Growers Congress, MAAHS Conference and Tues/Wed DAMA and NABGA Conferences						
<u>Additional Registrant:</u> Business employee or children over 18, in the business and not a student. FULL REGISTRATION (Mon, Tue, Wed)	\$80	\$70	OR	\$120		
<u>Additional Registrant:</u> Business employee or children over 18, in the business and not a student. ONE DAY REGISTRATION for: Monday Tuesday Wednesday (circle one)	\$60	\$50	OR	\$80		
<u>Wednesday</u> Awards Breakfast (per person): Sponsored by OFGS, OVPGA, DAMA and NABGA	\$22					
<u>Tuesday or Wednesday:</u> Trade Show Only (per person) Attending: Tuesday Wednesday (circle one)	\$25					
Make check payable to "OFVGC" 280 N High, PO Box 182383, Columbus, OH 43218-2383	Total Amount Due >					
<i>Credit Card payment: Name on Card: _____ VISA MASTERCARD (circle one), Charge Amount: _____</i>						
Exp Date: / /			Account Number: _____ Authorization signature: _____			

Blackberry Variety Trials in New Mexico

By Ron Walser and Steve Guldan

Plants of the thornless semi-trailing blackberries Chester and Triple Crown and the thornless upright Arkansas varieties Apache, Navajo and Arapahoe were planted into the field at the New Mexico State University Sustainable Agriculture Science Center, Alcalde, New Mexico, in March, 2002. All rows were 10 feet wide with the semi-trailing varieties planted at a spacing of 6 feet down the row (726 plants/acre), while the upright varieties were spaced 2 feet down the row, and allowed to fill in 10-foot plots that were replicated 3 times. The semi-trailing plants were trained to a 2-wire trellis, with the top wire at 4 feet 8 inches and the lower wire at two feet 8 inches.

This planting is part of a certified organic orchard established at the Alcalde Science Center, thus organic cultural practices were followed. The only pest problems encountered during the five years were birds eating the berries. This problem was easily overcome by placing

bird nets over the plants before ripening. It has not been necessary to apply any other type of pest control. The very successful fertility program was the application of approximately 5 tons per acre of compost made from 25 percent horse manure and 75 percent green chop alfalfa applied down the row in the fall of 2002 and 2003. A cover crop of New Zealand White Clover was planted in the spring of 2002, and since the fall of 2003 has supplied all of the nutrients that the plants have required. A low profile micro-

sprinkler irrigation system was installed before planting in 2002 which applies approximately 50 gallons of water per acre per minute. The water is obtained from a canal (acequia) that draws water from the upper Rio Grande. The water quality is excellent.

Training (pruning) of both upright and semi-trailing types involved removing the tips of the new canes (primocanes) when they reached approximately five feet, then during the winter removing the dead floricanes and cutting back the

Blackberry Production in New Mexico

Current blackberry production in New Mexico is not extensive (estimated to be around 10 to 15 acres) but there is a considerable amount of interest, and several small plantings have recently been planted. Most of the new plantings (about 5 acres) are being grown organically and marketed locally. The lack of any serious pest problems makes organic production very feasible in this area. Most of the plantings are Chester and Triple Crown, but a couple of growers have planted some of the new primocane varieties Prime Jim and Prime Jan. It is too early to tell how these new varieties will do in this climate, but the idea of extending the marketing season is appealing. There is high demand for the locally grown berries, and supply does not come close to satisfying the demand, even at prices of \$4.00 to \$5.00 per 6 oz clam shell. One grower in southern New Mexico uses his second-grade berries to make blackberry wine, which also has a good market.

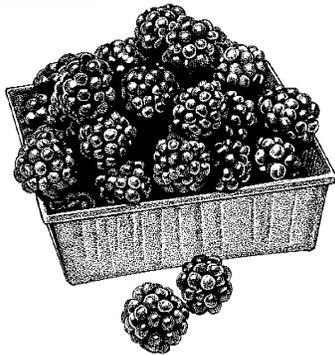
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laterals on the remaining canes to approximately 18 inches.

The upright blackberry cultivars did not have enough fruit in 2003 to warrant harvesting, thus the lack of data for Apache in 2003. In 2003 and 2004 it was observed that Arapahoe and Navajo had much less fruit than Apache, thus data was not taken from these two cultivars.

Minimum low temperatures that occurred during the past four winters and recorded near the orchard were: -1° F in 2002-2003, 2° in 2003-2004, 1° in 2004-2005, and -5° in 2005-2006. With the exception of Arapahoe, which showed some winter damage each year, the plants did not show much winter damage except in 2005-2006. In this last winter, winter damage (expressed as terminal die-back and blind (damaged) buds) was most severe on Arapahoe, slightly less on Navajo and Apache, less on Triple Crown, and very light on Chester. This damage was also somewhat reflective in the lower yields in 2006 for Apache.

Firmness (shipping qualities) of the berries showed that Navajo and Chester were firm and shipped very well, while Apache and Triple Crown were less firm, but still maintained sufficient quality while stored at slightly above freezing temperatures for several days and then transported to local stores or farmers markets etc.

Websites to Visit

www.justberryrecipes.com has hundreds of recipes using berries. Great ideas for holiday cooking!

<http://berryhealth.fst.oregonstate.edu/index.html> is a new website "Connecting Berry Health Benefit Researchers for the purpose of sharing information about their respective projects, findings and methodologies... In addition, it is the intention of this network to develop and deliver guidelines to consumers that promote good health relative to berry fruits." Nothing is up yet, but bookmark it and watch for it to grow.

The **BRAMBLE** is a quarterly publication of the North American Bramble Growers Association (NABGA) and is a benefit of membership in the association. For sample copy, reprint permission, membership information, and advertising rates, contact

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The Bramble © NABGA 2006

Year/Variety	First harvest	Peak	End	Lbs/plant	Lbs/acre	grams/berry
<u>2003</u>						
Triple Crown	7/28	--	8/25	3.1	2251	5.8
Chester	7/28	--	8/21	2.5	1815	4.9
Apache	No Data					
<u>2004</u>						
Triple Crown	7/20	--	8/17	14	10,164	7.7
Chester	7/30	--	8/20	3.8	2788	3.9
Apache	7/23	--	8/17	--	4673	6.8
<u>2005</u>						
Triple Crown	7/21	8/08	9/16	10.3	7513	5.9
Chester	8/01	8/29	9/16	13.3	9633	3.7
Apache	7/21	8/08	9/16	--	5282	5.2
<u>2006</u>						
Triple Crown	7/18	8/15	9/04	10.4	7550	6.2
Chester	7/25	8/22	9/04	16.8	12,197	4.0
Apache	7/21	8/18	9/01	--	3555	6.1

Samples from all of the varieties were frozen and observed for color quality in the frozen product. All of the varieties had sufficient color to meet A grade quality, but would need to be harvested fairly mature to reduce the red color of the frozen product.

Thus, in areas where winter temperatures are similar to or warmer than those recorded at Alcalde, any of the three cultivars (Chester, Triple Crown, Apache) can be productive and successfully grown. In colder areas the Chester variety could be productive but some damage

would most likely occur with temperatures much below 0° F. Consumer acceptance of these berries has been excellent.

I (Ron Walser) have recently transferred from the Alcalde Science Center to the New Mexico State University Science Center at Los Lunas (about 30 miles South of Albuquerque), where I intend to establish an extensive fruit and vegetable research planting. Blackberries will be part of this planting.

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Raspberry High Tunnel Open House Highlights

By Cathy Heidenreich, Cornell University

Despite driving rain and blustery high winds, approximately 40 people braved the wet and cold to attend the second annual Cornell Raspberry High Tunnel Open House. Those attending came from near and far; some traveled from as close by as main campus for the event, others traveled from as far away as Quebec City, Canada, to attend. Some were commercial growers looking for ways to extend their raspberry season, others were high tunnel owners/operators looking to share their own experiences or get discuss concerns with researchers. Also attending were Coornell Extension educators, homeowners, students, and some local newspaper reporters.

Tours of the tunnel were conducted by Dr. Marvin Pritts, the project leader, and Mary Jo Kelly and Jenny Conrad, who are assisting him with the project. Some interesting raspberry high tunnel facts:

- The plastic goes on the tunnel in early September. The process takes about 2 hours. The tunnel, which is 30 x 90 ft, contains 4 rows of raspberries, planted on 7 foot centers.
- Bumble bees quickly adapt to life as high tunnel dwellers, often waiting to enter or exit each day when the doors were opened or the tunnel sides raised for ventilation. No additional pollinators were needed.
- Raspberries are harvested from the tunnel for approximately a 10-week period between early September and mid- November.
- Rows are picked on alternate days; two people harvest 8 hours a day, 3-4 days a week.
- Approximately 500 pints of fresh market quality fruit are harvested per week; the raspberries are sold from the Cornell Orchard store at \$5.00 per pint.
- The shelf life of tunnel produced raspberries is more than triple that of conventionally produced raspberries.
- Row covers are used to cover raspberries inside the tunnel on evenings when temperatures are predicted to drop into the mid to upper 20s to protect plants from cold injury.

- The plastic is removed again in early December after the cropping season is over.

One of the suggestions coming from the meeting was the development of a raspberry high tunnel production guide similar to the greenhouse raspberry production guide already available on line at: http://www.hort.cornell.edu/extension/commercial/fruit/Berries/bra_mblehtml/ghrasp.html Watch



for the release of this new on-line publication in the months to come!

From *New York Berry News*

Benefits of Compound in Blackberries Studied

From the ARS News Service September 20, 2006

A patent-pending compound isolated from fresh blackberries may inhibit the expression of genes that are associated with cancer-promoting agents. The purified compound, cyanidin-3-glucoside (C3G), inhibited tumors from growing and spreading when used in animal test models.

Scientists with the Agricultural Research Service (ARS) and National Institute for Occupational Safety and Health (NIOSH) collaborated on the study. ARS is the U.S. Department of Agriculture's chief scientific research agency.

C3G may one day become a key natural ingredient in new products formulated for their anti-cancer properties. Cell biologist Min Ding, with NIOSH in Morgantown, W. Va., and plant physiologist Shiow Wang, with the ARS Fruit Laboratory in Beltsville, Md., conducted the research with colleagues at West Virginia University-Morgantown. The study appears in a recent issue of the *Journal of Biological Chemistry*.

C3G is among a series of plant chemicals that are a subclass of flavonoids-water-soluble plant pigments known for their antioxidative and antimicrobial

effects.

For the study, the researchers tested mice that had skin tumors. In one group, they found a significant reduction in the number and size of skin tumors among the mice that had been supplemented with C3G, when compared to those that had not been supplemented.

In another experimental model with immune-system-suppressed mice, the researchers studied lung cancer cells because of their relatively high tendency to spread to other organs. They found that the purified blackberry compound not only significantly reduced the amount of cancer cell growth in the mice, but also inhibited the spread of the cancer cells to other organs.

C3G exhibited anti-cancer activity in this animal model, according to the researchers. The preventive effect of the extract may be due to the compound's ability to control free radicals known as reactive oxygen species, which activate molecular signals involved in initiating, promoting and progressing cancer.

The findings indicate a promising direction for understanding the molecular mechanisms responsible for the beneficial effects of plant chemicals on human health.

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Our Experience with Phosphite Foliar Nutrients

By Charlie O'Dell

The following information was excerpted from an article in *Better Crops*/Vol.90, 2006, No. 4 written by C.J. Lovatt and R.L. Mikkelsen, titled "Phosphite Fertilizers: What Are They? Can You Use Them? What Can They Do?" Dr. Lovatt is Professor of Plant Physiology, Department of Botany and Plant Sciences, University of California-Riverside; Dr. Mikkelsen is PPI Western Region Director, Davis, California. In addition, I have reported our observations using phosphite foliar supplemental nutrient sprays on our U-Pick blueberries, blackberries, late summer primocane-bearing raspberries and seedless table grapes.

"Interest is growing in phosphite fertilization as part of a total production program by progressive growers. Phosphite is a salt of phosphorous acid containing one less oxygen atom than phosphate, making its chemistry and behavior quite different. Phosphite is more soluble than phosphate, making leaf and root uptake more efficient. In fact, high concentrations of phosphite can be toxic to plants. Soil microorganisms are able to assimilate phosphite and release phosphate, gaining energy and nutrients during this biological conversion. Phosphite can move from the leaves to the roots through the phloem in the phosphite form.

"Research by C.J. Lovett (see references at end of article) showed that foliar applications of phosphite can help replace phosphate in crops suffering from P deficiency. There is consistent evidence that phosphite is more readily absorbed into plant tissues than phosphate. He cites an example: some fruit crops in southern areas including citrus and avocado have leaves that are almost impervious to spray applications of phosphate for foliar absorption. In such cases, foliar phosphite sprays have proven to be expeditious for fast correction of this nutrient deficiency. In these crops, foliar application of phosphite has proven to work as a plant nutrient source for supplemental P to increase

floral intensity, then yield, fruit size, total soluble solids and anthocyanin. Application timing has been shown to be critical to obtain such plant responses. A single spray applied pre-bloom has produced the maximum results, but beneficial additive results have been seen from adding low-dose phosphite sprays during the growing season. Growers report additive effects are seen the following year with perennial crops, compared to plants that were untreated the previous year. Note: phosphite fertilizer research has not been completed for many crops since this technology is still fairly new. Growers are urged to trial phosphite programs on their crops at their location to judge possible benefits for their crops."

Like all growers, we are always interested in improving our yields, fruit quality and fruit size, plus improved shelf life for our U-Pick blueberry, blackberry, primocane raspberry and seedless table grape customers. Over the past few years we began using foliar phosphite in a proprietary formulation linked to calcium, especially timed for pre-bloom, early when plant demand for calcium peaks in the growing season. We used a low, non-toxic recommended rate of 1 to never more than 2 quarts per acre per foliar spray product in adequate water for good coverage with an air-blast sprayer. We realize that many factors influence crop performance each year, but it is our observation that we have seen excellent increases in our yields and fruit quality since we began this supplemental feeding program. A special example: in the summer of 2005, we took foliar tissue samples sent to a commercial lab for nutrient analyses. We were shocked to find we had a severe plant deficiency of both zinc and potassium in all our berry crops. We did not suspect this, we could not tell by looking at our plants. That fall in October we sprayed a commercial foliar carbohydrate-based 24 percent potassium, at 2 quarts per acre of product followed by 1 gallon per acre before leaves fell. Beginning at pre-bloom this past spring 2006, I began foliar sprays of a commercial product of zinc-phosphite alternated with calcium phosphite, 2 quarts of product per acre each spray every 2 weeks for a total of 4 sprays, 2 of

each phosphite. I added a foliar formulation of a carbohydrate-based 24 percent potassium at the rate of 2 quarts per acre to each spray. We had our best crops ever over this past summer, our plants really responded! Also, in late summer of this past '06 season we again took leaf tissue samples, sent to the same commercial lab for nutrients analysis on all crops. Our zinc and potash levels both were at satisfactory to high levels compared to the deficiencies of both in the previous year's tissue tests.

Needless to say, we highly recommend that all berry growers take regular leaf tissue samples for nutrients analyses to enable fast correction of plant and possible soil deficiencies. It is my observation that supplemental foliar nutrients applied early and during harvest of our fruit crops, based on such tissue analyses, do benefit our crops and have increased our income from them. Phosphite foliar programs have been developed for a wide range of tree fruit, vegetable, small fruit, floral and landscape nursery crops. Growers report that phosphite foliar/stem nutritional sprays applied to cuttings in rooting beds of grapes and other fruit and nursery crops help stimulate rooting and fast plant growth.

References:

Albrigo, L.G. 1999, Effects of foliar applications of urea or Nutriphite on flowering and yields of Valencia orange trees. *Proc. Fla. State Hort. Soc.* 112: 1-4.
Forster, H., J.E. Adaskaveg, D.H. Kim, and M.E. Stanghellini. 1998. Effect of phosphite on tomato and pepper plants and on susceptibility of pepper to *Phytophthora* root and crown rot in hydroponic culture. *Plant Disease.* 82: 1165-1170.

Lovatt, C.J. 1999. Timing citrus and avocado foliar nutrient applications to increase fruit set and size. *Amer. Soc. for Hort. Sci. Hort Tech.* 9: 607-612.

Additional information at:
www.ppi-ppic.org/phosphite/ref

Charlie O'Dell is VA Tech Extension Horticulturist Emeritus, and raises small fruits at Crows Nest Farm in Blacksburg, VA. He is also a dealer for Agro-K, which markets crop nutrients, including phosphite products.

RESEARCH REPORT

Evaluation of Herbicides for Yellow and Purple Nutsedge (*Cyperus esculentus* and *C. rotundus*) in Blackberry Fields

By Mark A. Czarnota, Dept. of Horticulture, University of Georgia, Griffin Campus, Griffin, GA

Objective / Justification: There approximately 800 acres of blackberries (*Rubus* spp.) grown in the state of Georgia, and planted acreage in the Southeast continues to rise. As with many of the other small fruit growers, the weeds from the sedge family (*Cyperaceae*) continue to plague growers. Many growers throughout Georgia (and the Southeast) have experienced heavy infestations of yellow and purple nutsedge (*Cyperus esculentus* and *C. rotundus*). At present, there are no herbicides labeled for postemergent nutsedge and annual sedge control dur-

ing this establishment period. There are, however, several postemergent herbicides that are known to be safe to plants in the blackberry family (*Rosaceae*) that control sedges (e.g. halosulfuron and sulfentrazone). Although none of these herbicides has been labeled for use in blackberries, many could possibly be registered for use on non-bearing and bearing blackberry plants.

Procedure / Methodologies: Two blackberry experiments were conducted. Experiment #1 was a preemergent study, and experiment #2 was a postemergent study. Treatments in both experiments were identical and included sulfentrazone (Spartan) at 6.0 and 12.0 ounces of product per acre (oz pr/A), and halosulfuron (Sandeia) at 0.5 and 1.0 oz pr/A (Table #1). Both experiments were conducted in Lakeland, GA at the farm of Mr. Ben Strickland. Experiment #1 was conducted on the Owatchata blackberry (*Rubus* x 'Owatchata') and was initiated on March 20, 2006. Experiment #2 was conducted on Apache blackberry (*Rubus* x 'Apache') and was initiated on May 24, 2006. Both experiments contained 4

replication and were designed as a randomized complete block. Herbicide were applied with a CO₂ backpack sprayer calibrated to deliver 20 gallons per acre. All treatments in experiment 2 contained the adjuvant Kinetic® at 0.25% volume to volume. Ratings for nutsedge (*Cyperus esculentus* and *C. rotundus*) control and blackberry injury were taken on the pre study at 4, 8, 10, and 17 weeks after treatment (WAT), and 2, 4, and 8 WAT on the post study. Blackberry injury and nutsedge control was taken on a (0-100 scale) and numbers are represented in table 2.

Results and Conclusion:

Experiment #1 (Table #3): Control of yellow and purple nutsedge was significantly better with both treatments of halosulfuron and sulfentrazone during all rating periods. By 17 WAT, control with all treatments was 80%. Injury to blackberries was significant, but didn't exceed 19% during the 4, 8, and 10 WAT ratings. No blackberry injury was noted at the 17WAT rating.

Experiment #2 (Table #4): Control of yellow and purple nutsedge was sig-

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Table #1. Treatment list for both pre- and postemergent experiments.

Treatment #	Treatment	Formulation	Formulation Rate
1	Spartan	4 L	6.0 oz/A
2	Spartan	4 L	12.0 oz/A
3	Sandea	75 DF	0.5 oz/A
4	Sandea	75 DF	1.0 oz/A
5	Control		

Table #2. Blackberry injury and nutsedge

Value	Plant Symptoms
0	No visual injury present
10-30	Minimal injury to desirable plant. Less than 10% of the plant leaf service area showing chlorosis and necrosis.
40-70	More noticeable plant injury or stunting. Greater than 50% of the leaf area showing symptoms of chlorosis and/or necrosis.
80-90	Plants severally injured. Most of the leaves and leaf surface showing signs of chlorosis and necrosis.
100	Plant appears dead. No signs of regrowth.

Table 3. Experiment #1 - Preemergent nutsedge (*Cyperus esculentus* and *C. rotundus*) control and safety to Owatchata blackberries (*Rubus* x 'Owatchata') with Sandea (halosulfuron) and Spartan (sulfentrazone) at 4, 10, and 17 Weeks After Treatment (WAT).^{1,2}

#	Treatment	Rate	4 WAT		10 WAT		17 WAT	
			Injury 0-100	Control 0-100	Injury 0-100	Control 0-100	Injury 0-100	Control 0-100
1	Sandea 75DF	0.5 oz pr/A	15 a	81 a	16 a	96 a	0 a	89 a
2	Sandea 75DF	1.0 oz pr/A	15 a	75 a	19 a	88 ab	0 a	81 a
3	Spartan 4L	6.0 oz pr/A	14 a	70 a	14 a	73 b	0 a	83 a
4	Spartan 4L	12.0 oz pr/A	11 a	70 a	16 a	84 ab	0 a	80 a
6	Check		0 b	0 b	0 b	0 c	0 a	0 b
LSD			6.1	26.1	5.2	20.2	0.0	17.2

Table 4. Experiment #2 - Postemergent nutsedge (*Cyperus esculentus* and *C. rotundus*) control and safety to Apache blackberries (*Rubus* x 'Apache'). with Sandea (halosulfuron) and Spartan (sulfentrazone) at 2, 4, and 8 Weeks After Treatment (WAT).^{1,2}

#	Treatment	Rate	2 WAT		4 WAT		8 WAT	
			Blackberry Injury 0-100	Nutsedge Control 0-100	Blackberry Injury 0-100	Nutsedge Control 0-100	Blackberry Injury 0-100	Nutsedge Control 0-100
1	Sandea 75DF	0.5 oz pr/A	6 a	88 a	0 a	88 a	0 a	95 a
2	Sandea 75DF	1.0 oz pr/A	8 a	95 a	0 a	95 a	0 a	95 a
3	Spartan 4L	6.0 oz pr/A	5 a	89 a	0 a	86 a	0 a	88 a
4	Spartan 4L	12.0 oz pr/A	5 a	96 a	0 a	91 a	0 a	89 a
6	Check		0 b	0 b	0 b	0 b	0 a	0 b
LSD			3.4	12.8	0.0	14.1	0.0	15.3

nificantly better with both treatments of halosulfuron and sulfentrazone during all rating periods. By 10 WAT, control with all treatments was 73%. Injury to blackberries was significant, but didn't exceed 19% during the 2, 4, and 8 WAT ratings.

Significance to the industry: Both Sandea (halosulfuron) and Spartan (sulfentrazone) herbicides provided less than 20% injury to the two blackberry cultivars tested, as well as providing fair to excellent control of yellow and purple nutsedge. Currently, these herbicides are being evaluated for possible label expansion into several small fruit crops – including blackberries.

Acknowledgements: Special thanks to IR-4, Gowan, the North American Bramble Growers Research Founda-

tion, and the Southern Region Small Fruit Consortium for providing funding. Thanks also to Mr. Ben Strickland for allowing us to conduct blackberry weed

control research on his property.

For more information, contact Mark Czarnota at mac@griffin.uga.edu or 770-228-7398.

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Nominations Sought

Executive Council seats for Regions 1, 3, 5, and 7 will come open for election at the NABGA annual meeting in January. To make a nomination – volunteers welcome – contact Ervin Lineberger, NABGA president, or the NABGA office.

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Region 6 (Represents AR, IA, IN, IL, KS, KY, MN, MO, ND, OK, SD, NE, TN & WI) **Dean Henry**, The Berry Patch Farm, 62785 280th St., Nevada, IA 50201, phone 515-382-5138, e-mail berry.patch@midiaowa.net.

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See inside for complete
information.

Region 8 (Represents AK, AZ, CA, CO, ID, HA, MT, NM, OR, UT, WA, WY, Mexico, Central & South America) **Henry Bierlink**, Washington Red Raspberry Commission, 1796 Front St., Lynden, WA 98264, phone 360-354-8767, e-mail henry@red-raspberry.org.

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Thank you to all who have already renewed! A renewal form is in your newsletter if you still need to renew. Contact the NABGA office if yours is missing.

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