Recommendations for new and not-so-new blackberry and raspberry growers

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Exciting Days Ahead
For Brambles

New varieties may boost fruit size and sales.

By Jean Aylsworth
Senior Staff Writer

IMAGINE, a blackberry so large that just one would fit in a film canister. Or a black raspberry with the flavor of a grape. Or pharmaceutical companies buying large quantities of blackberries or blackberries to use in drug products. These are just some of the possibilities as bramble growers look toward the millennium and beyond.

"We've barely scratched the surface," says Harry Swartz, associate professor of horticulture at the University of Maryland. "The germplasm is there to do all sorts of exciting things. We won't run out of new ideas or new varieties any time soon."

The problem with developing new varieties is that it can take as long as 20 years from initial selection to commercial production. The good news is that some interesting new developments are already in the pipeline.

Swartz is working with a blackberry/raspberry hybrid with the best characteristics of each. Thornless, large-sized blackberries such as 'Chesapeake,' 'Kiowa,' and 'Big Beauty' are already available to growers. Ongoing research may yield raspberry varieties that will grow well in warmer climates.

A Whole New Way To Grow

We want to hear from you. As we begin a new millennium, we will be examining this industry's future. That's where you come in. All you have to do is answer the following question:

"In the last century, we've come from hand spraying to tunnel spraying, from hand picking to machine harvesting, and from praying for good weather to predicting disease by computer. What new technology will most change your production practices in the future and how? What technology or production practice isn't out there yet that you'd like to see? Please check those that apply."

☐ genetic engineering
☐ super-dwarfing rootstocks
☐ biocontrols/alternative ag
☐ GPS / GIS / precision ag
☐ mechanical harvesting for fresh-market
☐ super-high density plantings
☐ private consultants vs. extension
☐ custom-designed equipment
☐ other (please explain)

Name: ____________________________
Address: __________________________
City: ____________________________ State: ____________ Zip: ____________

Your answer may be published in the November 2000 issue of Fruit Grower. May we publish your name with your answer? ☐ yes ☐ no

Please return your answer to:
Fruit Grower, Millennium Question, 37733 Euclid Ave., Willoughby, OH 44094; fax: 440-942-0662, e-mail: afg_edit@meisterlink.com
Blackberry and raspberry... exciting days are here

- Available year round
- Interest in locally produced food
- Health benefits rival blueberry
- Consumption increasing
- Varietal improvement
- New types
- New production systems
Exciting days for SE blackberry (and raspberry) industry
Are they for you?

- Southern U.S. constraints
  - Hardiness not usually a problem
  - Chilling
    - Blackberry
      - Low chilling not a concern for NC blackberry
      - Low chilling is concern for south GA and other areas
    - Raspberry
      - Need high chilling in NC, low in other areas
  - Heat
    - Blackberries “thrive”
    - Raspberries “dive”
  - Pests
    - Double blossom and virus problems
Climatic requirements

- Raspberries
  - Cool summers, sustained cold winter temperatures
- Blackberries
  - High temperatures, tolerates fluctuating winter temperatures
Types of caneberries

- Growth habit
- Fruiting habit
- Presence or absence of thorns
- Fruit color
Growth Habit

- Erect
- Semi-erect
- Trailing
Fruiting Habit

- Floricane fruiting
  - fruit is produced on laterals of 2\textsuperscript{nd} year canes

- Primocane fruiting
  - Fruit is produced at tips of 1\textsuperscript{st} year canes
Thorns

- Thorny
- Thornless
Fruit color

- Red
- Yellow
- Purple
- Black

Fig. 1.1 Relationships between various types of raspberries and blackberries.

Source: Raspberry and Blackberry Production Guide, NRAES
Site Selection

- Prepare 1 year in advance
- Full sun, good air movement, adequate soil moisture
Soils

- Deep well drained loamy soil
- 2-3%OM
- pH 6.0-6.5
- Sandy w/irrigation
- Heavy soils w/drainage and raised beds
Site Preparation

- Soil tests
- Eliminate noxious weeds
- Remove barriers for good air drainage
- Address areas in field having poor drainage
- Remove wild brambles withing 600’
Floor Management

- Raised beds on plastic with sod or cover crops in between rows
- Clean cultivation in aisles
- Permanent sod between rows and clean strips in row
Blackberry info

- Produce fruit in 2 years
- Average yield
  - Erect 12-15 lbs/plant
  - Trailing 20 lbs/plant
- Number of plants
  - 4 people: 6 erect, 2 trailing
  - 1200/acre (12 ft btwn 3 w/in)
- Life expectancy
  - 5-20
Blackberry varieties

- **Erect**
  - Navaho, Arapaho, Kiowa (not high mts), Shawnee, Chickasaw, Apache (NR), Ouachita (trial), Natchez (Trial)

- **Trailing (Semi-trailing/Semi-erect)**
  - Black Satin, Hull, Chester, Triple Crown (?), Chesapeake?

- **Primocane fruiting? DON’T PLANT**
Raspberry info

- Produce fruit in 2 years
- Yields 2-4 lbs/plant
- Number of plants
  - 4 people: 6
  - Acre: 1200
- Life expectancy 5-10 years (if you are lucky to be in high elevation)
Raspberry info

- Not heat tolerant
- Virus susceptible
- High demand
- PF types easier to manage?
Raspberry varieties

- Primocane fruiting (Mts only, piedmont trial)
  - Heritage
  - Caroline
  - Autumn Britten
  - Nantahala

- Floricane fruiting (CP, Peidmont)
  - Dormanred
  - Southland (home only)
  - Mandarin (availability?)
  - Others soon!
Nantahala

- Late PF
- Larger than Heritage and Caroline
- Yields lower than Caroline
- Rated as good or better than others in sensory panel evaluations
V trellis
T trellis
V/T trellis

- Soil line
  - 30-36" (0.75 - 0.9 m)
  - 18-22" (45 - 56 cm)
  - 2-3" (5 - 7.5 cm)
  - 42-48" (1.05 - 1.2 m)
  - 22-24" (0.55 - 0.6 m)
  - 102-109" (2.59 - 2.75 m)

Dimensions:
- Height: 102-109" (2.59 - 2.75 m)
- Spacing: 22-24" (0.55 - 0.6 m)
- Stake: 30-36" (0.75 - 0.9 m)
Shift trellis

- Orientation of canopy changes after bloom
- Fruiting side of canopy faces afternoon sun
New stuff--Season Extension and Breeding

- Raspberry
  - Breeding
    - Heat tolerant floricane fruiting (FF) raspberries (May-June-July)
    - Primocane fruiting (PF) cultivars (Aug-Oct)
  - Cultural
    - Row covers, tunnel and pruning combinations spread harvest season earlier and later

- Blackberry
  - Breeding
    - New and not so new floricane fruiting thornless blackberries. High quality, early and late season (Arkansas cultivars)
    - New primocane fruiting cultivars (Prime-Jim and Prime-Jan and others)
  - Cultural
    - Row covers, tunnels and pruning for fall harvest
High Tunnels
Salisbury, Mills River and Laurel Springs
Floricane fruiting blackberry harvest dates by location and trial

(OX = Oxford, SL = Salisbury)
Primocane Fruiting Blackberries: Laurel Springs
Salisbury floricane fruiting raspberry average berry size outside and in the tunnel

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<tr>
<th>Average berry weight (g)</th>
<th>Outside</th>
<th>Tunnel</th>
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<tr>
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<td>Lauren</td>
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<td>Mandarin</td>
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<td>Moutere</td>
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<td>3.0</td>
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<tr>
<td>NC 344</td>
<td>2.5</td>
<td>2.6</td>
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Average berry weight (g)
Primocane fruiting raspberry harvest outside and under tunnels
(T=tunnel, 5%-95% yield)
Primocane fruiting raspberry yield/plant (g)

Average berry size (g)
2008 Harvest Season
Which berries do we like best?

Name: Mrs. Jones' 1st Grade Class  Date: Sep. 21, 2007

<table>
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<tr>
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<th>Heritage Raspberry</th>
<th>HC 535 Black Raspberry</th>
<th>Anne Raspberry</th>
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www.hellomrsjones.com
Resources

- SRSFC website [www.smallfruits.org](http://www.smallfruits.org)
  - 2008 Southeast Regional Guides (IPM and Production Guides)
  - Newsletters (home/smallfruitnews)
  - Budgets, NEW Blackberry, PF raspberry soon (crops/brambles/production)

- Berry Diagnostic Tool- Google
  - [http://www.ncsu.edu/project/berries/diagnostic_tool/blackberry_diagnostic_tool.html](http://www.ncsu.edu/project/berries/diagnostic_tool/blackberry_diagnostic_tool.html)

- Raspberry and Blackberry Production Guide (NRAES)
- County agents, State Extension Specialists
Thanks!