

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

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MILLENNIUM



Large-sized blackberries such as Chesapeake (above) may bring brambles to a whole new level.

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 raspberries to use in drug production.

These are just some of the possibilities as bramble growers look to 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 Shawnee, Chesapeake, Kiowa, and Big Beauty are already available to growers. Ongoing research may yield raspberry varieties that will grow well in warmer

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 past 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.

- | | |
|---|---|
| <input type="checkbox"/> genetic engineering | <input type="checkbox"/> super-dwarfing rootstocks |
| <input type="checkbox"/> biocontrols/alternative ag | <input type="checkbox"/> GPS/GIS/precision ag |
| <input type="checkbox"/> mechanical harvesting for fresh-market | <input type="checkbox"/> super-high density plantings |
| <input type="checkbox"/> private consultants vs. extension | <input type="checkbox"/> custom-designed equipment |
| <input type="checkbox"/> 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@meisternet.com

Blackberry and raspbbery...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



Erect



Semi-erect



Trailing

Fruiting Habit

- Floricane fruiting
 - fruit is produced on laterals of 2nd year canes
- Primocane fruiting
 - Fruit is produced at tips of 1st year canes

Thorns

- Thorny
- Thornless



Fruit color

- Red
- Yellow
- Purple
- Black

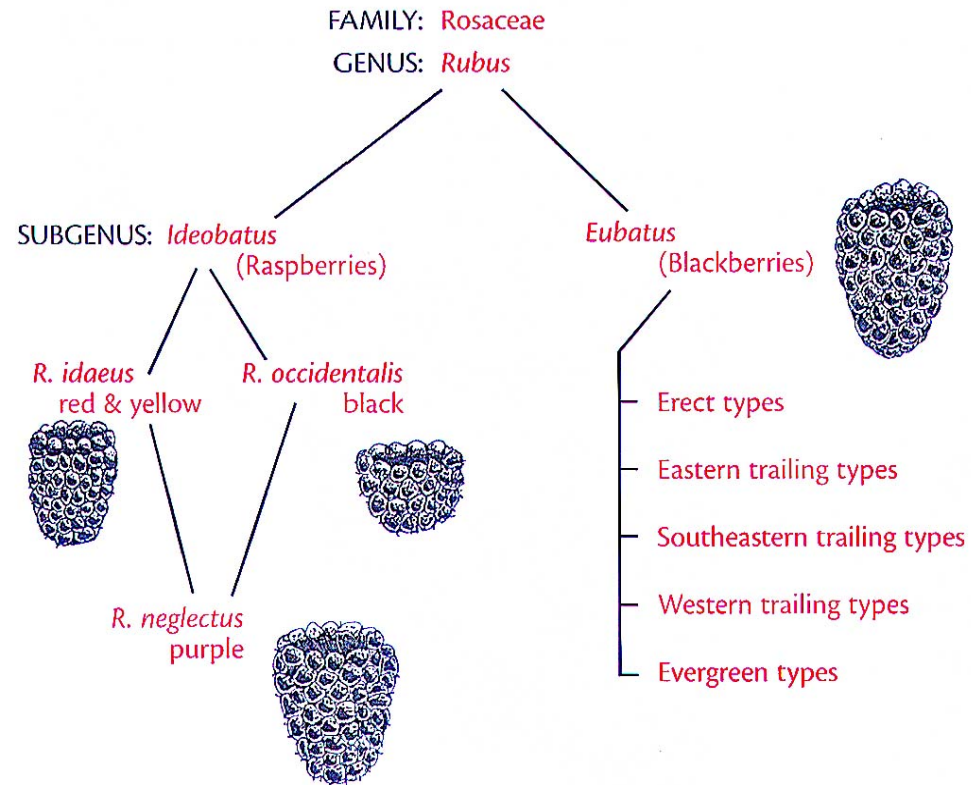


Fig. 1.1 Relationships between various types of raspberries and blackberries.

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

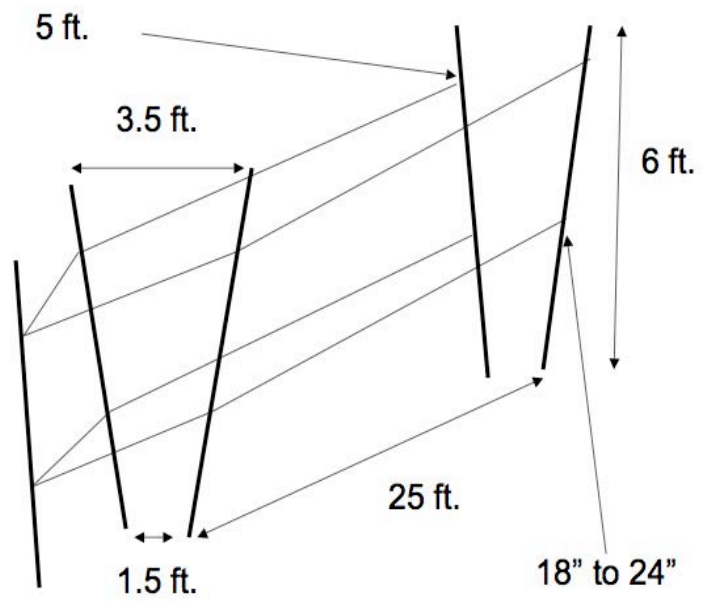
- Primocane fruiting (Mts only, piedmont trial)
 - Heritage
 - Caroline
 - Autumn Britten
 - Nantahala
- Floricane fruiting (CP, Peidmont)
 - Dormanred
 - Southland (home only)
 - Mandarin (availability?)
 - Others soon!

Nantahala

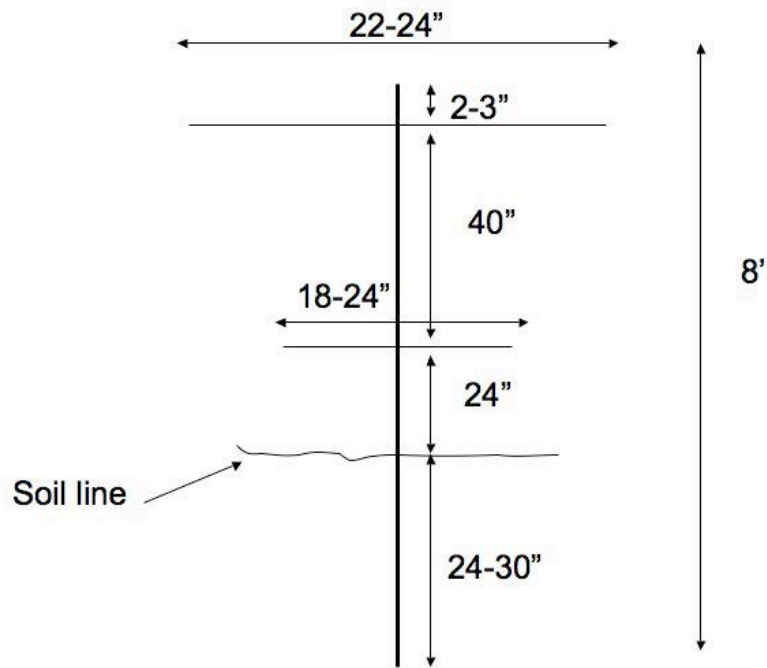


- Late PF
- Larger than Heritage and Caroline
- Yields lower than Caroline
- Rated as good or better than others in sensory panel evaluations

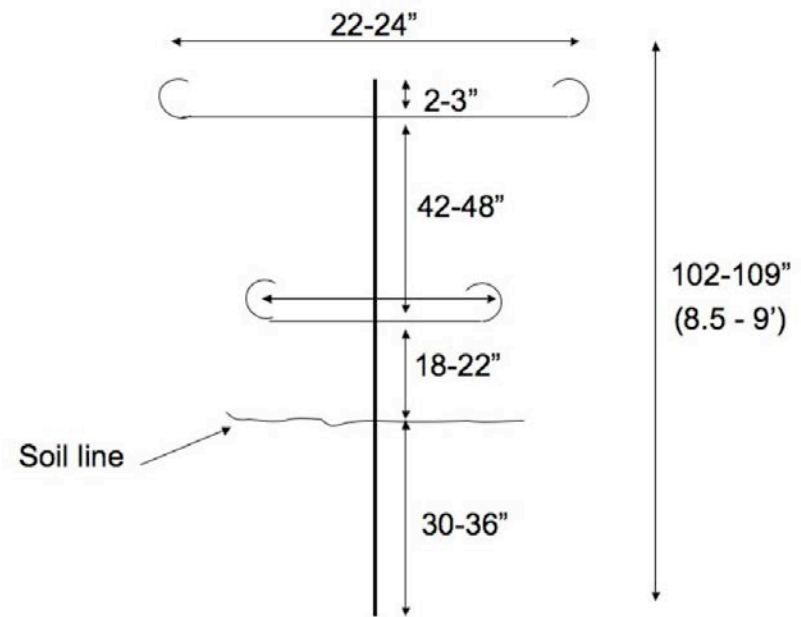
V trellis



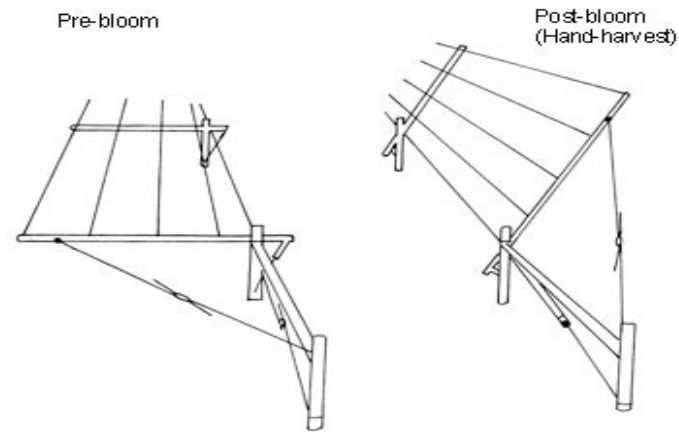
T trellis



V/T trellis



Shift trellis



■ 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

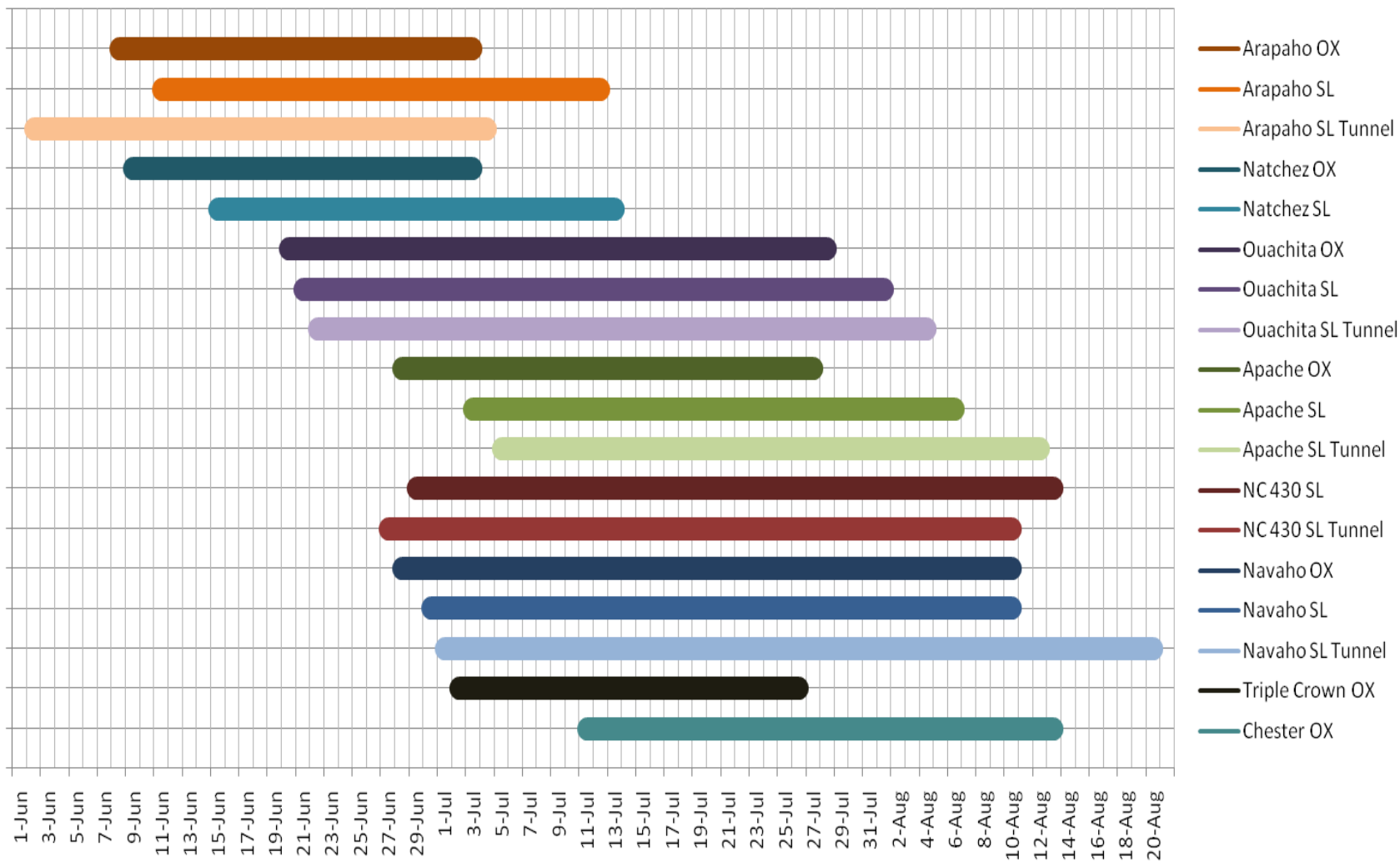
High Tunnels

Salisbury, Mills River and Laurel Springs

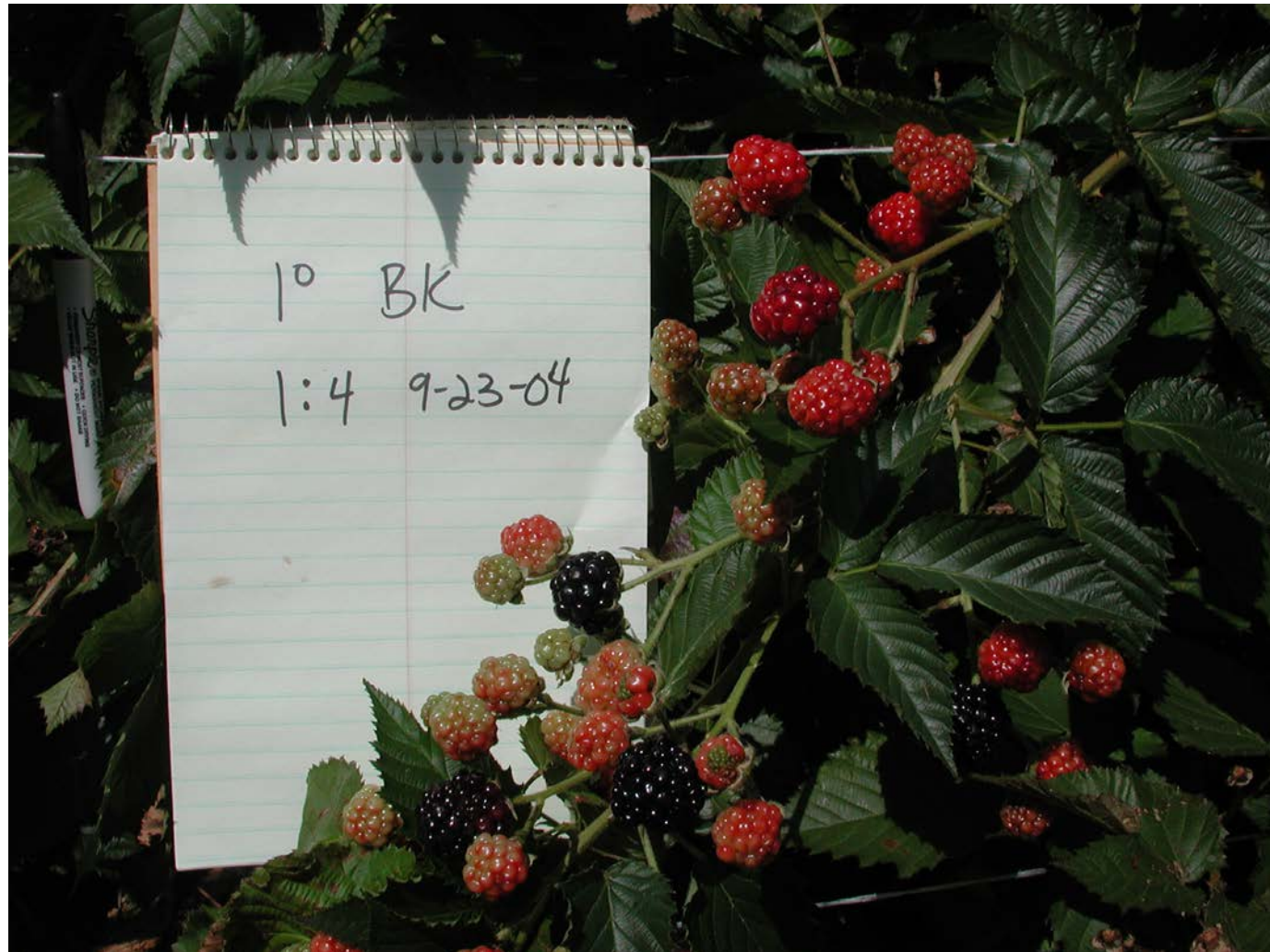


Floricanne fruiting blackberry harvest dates by location and trial

(OX = Oxford, SL = Salisbury)

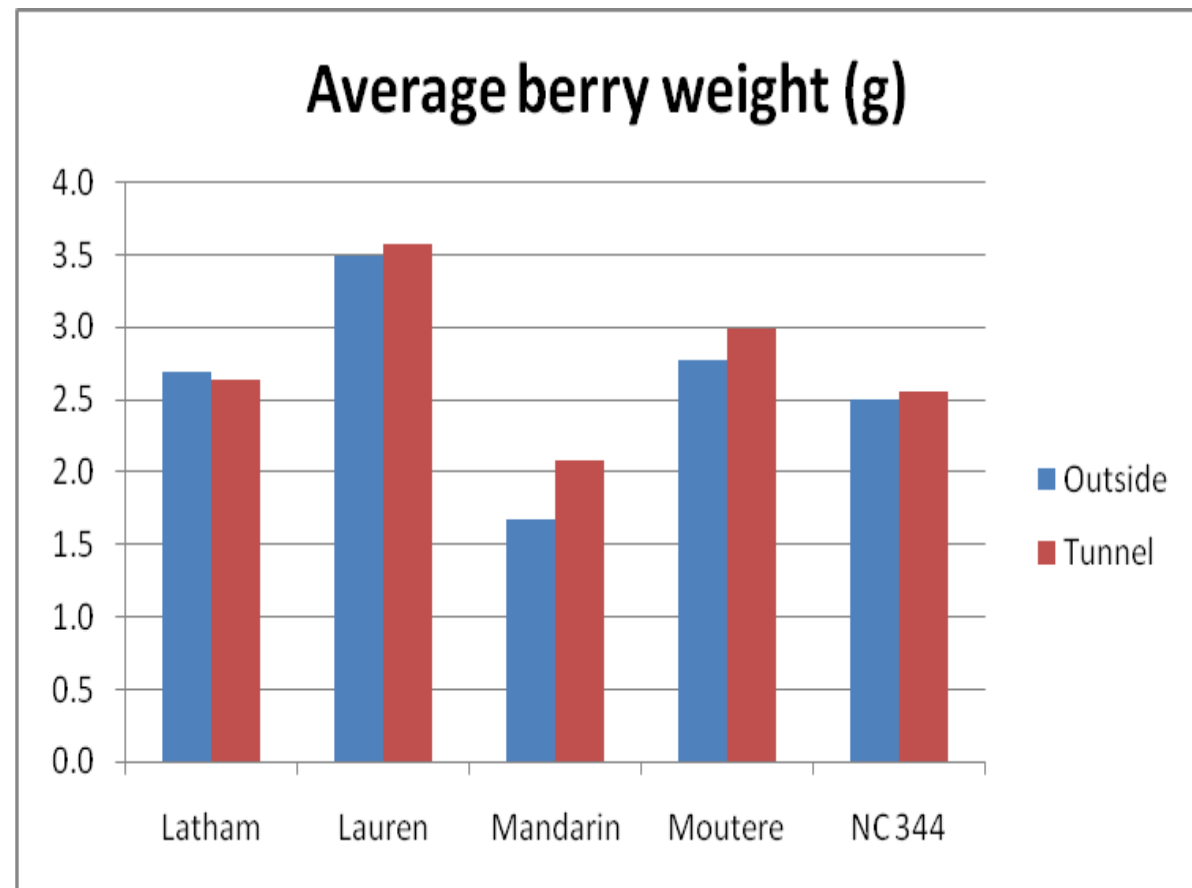


Primocane Fruiting Blackberries: Laurel Springs



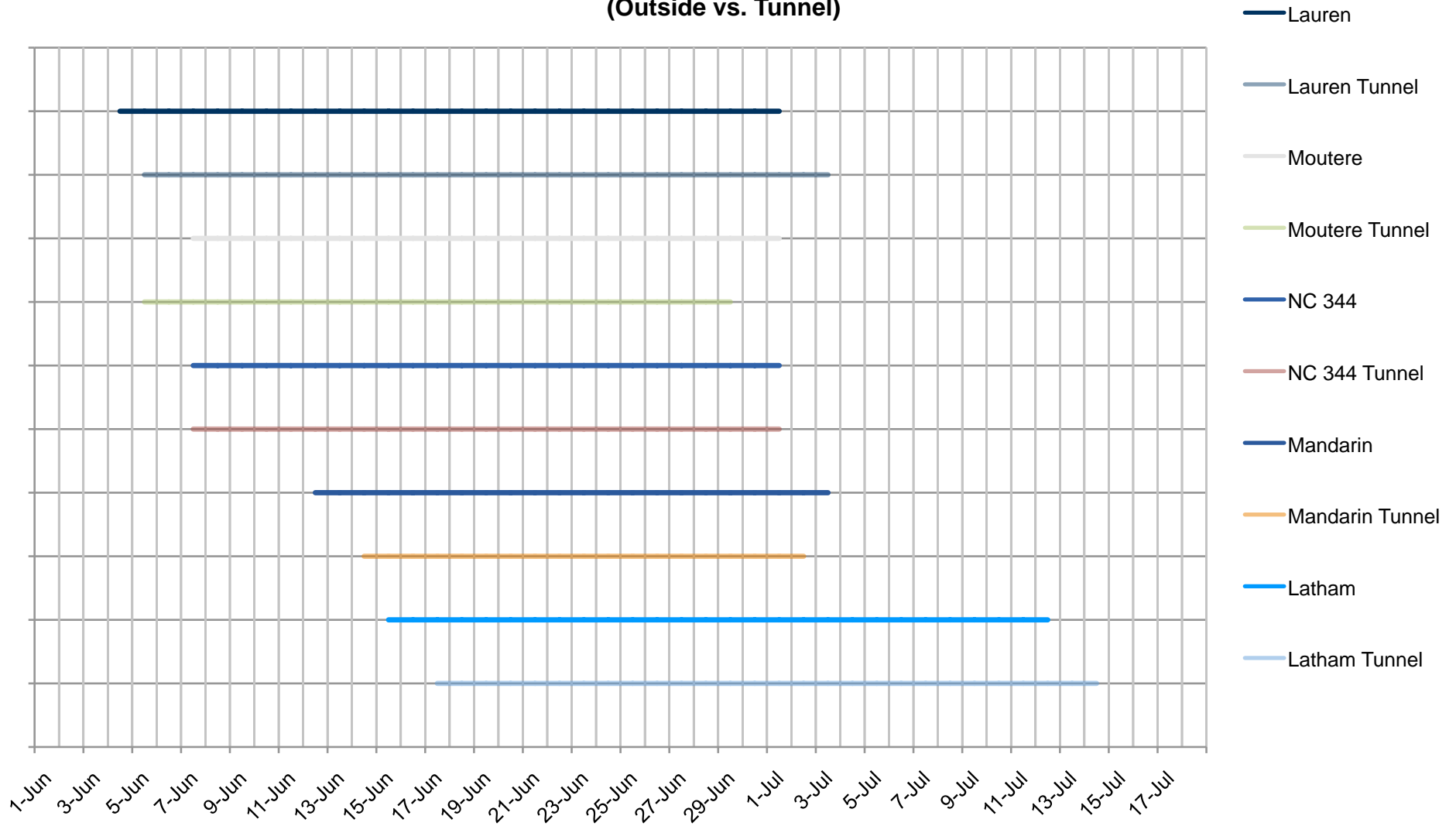
Salisbury florricane fruiting raspberry average berry size outside and in the tunnel

Average berry weight (g)		
	Outside	Tunnel
Latham	2.7	2.6
Lauren	3.5	3.6
Mandarin	1.7	2.1
Moutere	2.8	3.0
NC 344	2.5	2.6



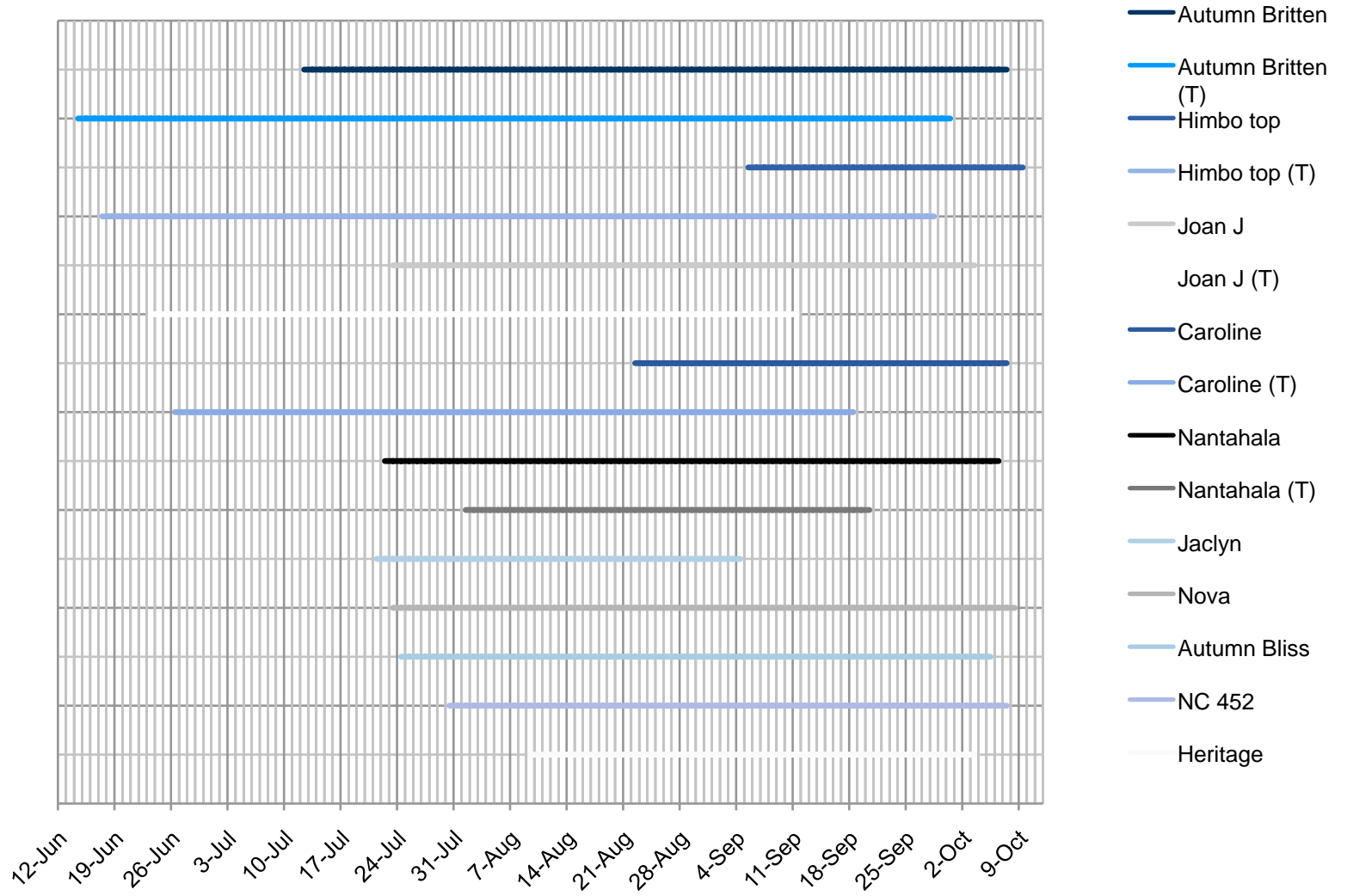
Floricanne Fruiting Raspberry 2008 Harvest Dates

(Outside vs. Tunnel)

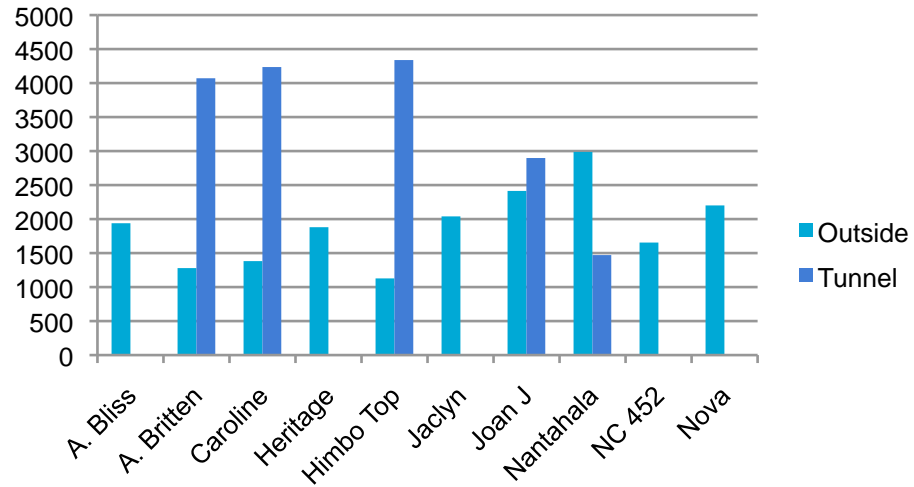


Primocane fruiting raspberry harvest outside and under tunnels

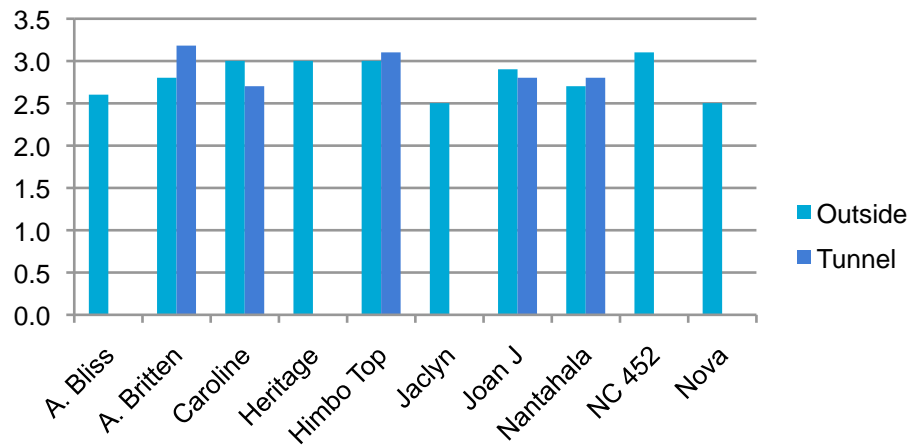
(T=tunnel, 5%-95% yield)



Primocane fruiting raspberry yield/plant (g)

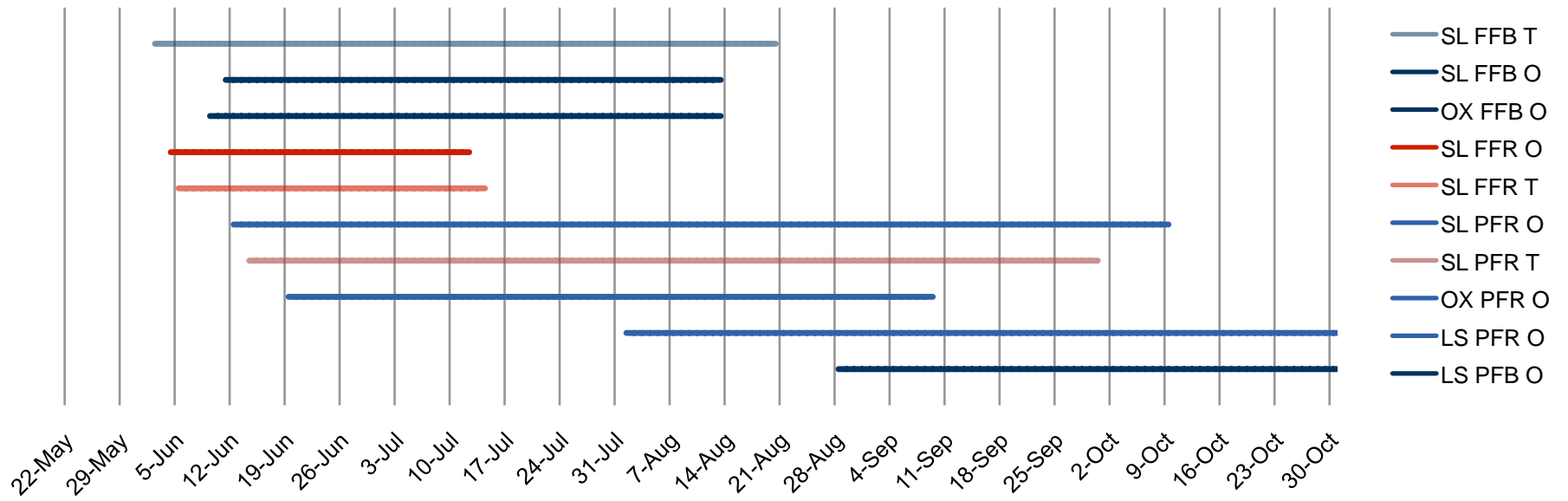


Average berry size (g)






2008 Harvest Season

(SL=Salisbury, OX=Oxford, LS=Laurel Springs, T=Tunnel, O=Outside)



Which berries do we like best?

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

16			
15			
14			
13			
12			
11			
10			
9			
8		X	
7	X	X	
6	X	X	X
5	X	X	X
4	X	X	X
3	X	X	X
2	X	X	X
1	X	X	X
			

Heritage
RaspberrY

HC 535 black
RaspberrY

anne
RaspberrY

Resources

- SRSFC website 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
- Raspberry and Blackberry Production Guide (NRAES)
- County agents, State Extension Specialists

Thanks!

