

Blackberry Cultivars for North Florida

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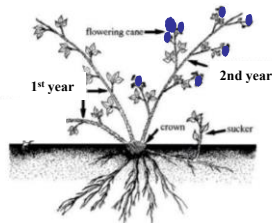


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Blackberry Fruiting Type

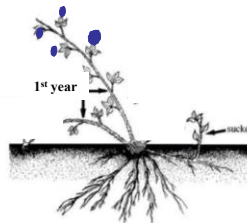
Floricanne

- Produce Fruit on 2nd year growth
 - Flower in Spring
 - Fruit in Early Summer
- These are the primary varieties grown where hot summer heat is an issue



Primocane

- Produce Fruit on 1st year growth
 - Flower in Mid-summer
 - Fruit in Early Fall
 - *Can also be managed with selective pruning to fruit both in the fall and spring*
- Heat issues over 85-90° F



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Blackberry Winter Dormancy



Cane Dormancy

Flower Bud Initiation

- depends on day length, cultivar, temperature

Chilling Hours

- **Hours of temperatures between 32 and 45°F (Starts at first frost)**
- Certain models estimate that chilling hours are lost when temperatures rise above 60°F

Cold Damage

- AKA: Winter Injury
- **Occurs at 0°F**
- Winter temperature fluctuations can result in damage at higher temperatures

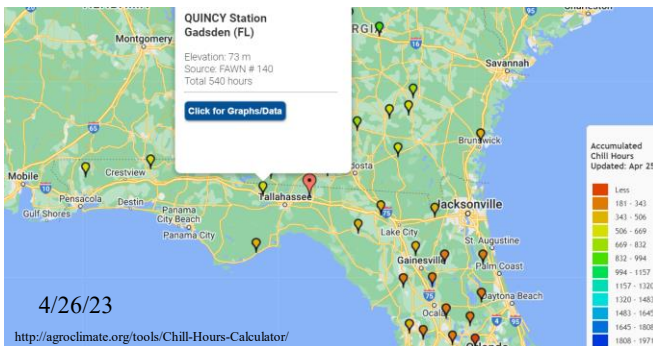
Symptoms

- Delayed or sporadic bud break - > spread out season
- Bud death
- Reduced yield
- Cane die back
- Failure of laterals to develop



Photo: Graça Ferraz

Blackberry Chilling Hours



Estimate of Number of Chill Hours Required

- Chester, Triple Crown 800 hours or more
- Navaho, Apache 800-900 hours
- Ouachita 400-500 hours
- Osage 350-450 hours
- Prime-Ark® 45 300 hours
- Natchez 300 hours



Breeding Blackberries in Arkansas: January 1964 – Present



Dr. James N. Moore
1967



Dr. John Clark
(Retired Jan 2023)



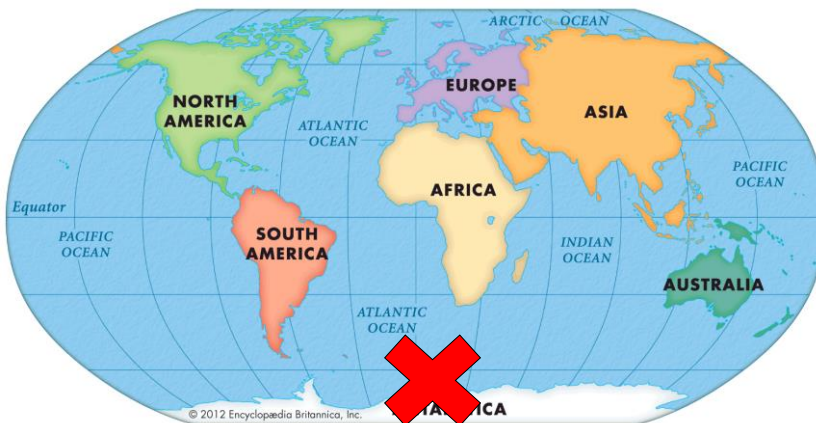
Current Breeding Program Lead
Dr. Margaret Worthington
Started in 2016



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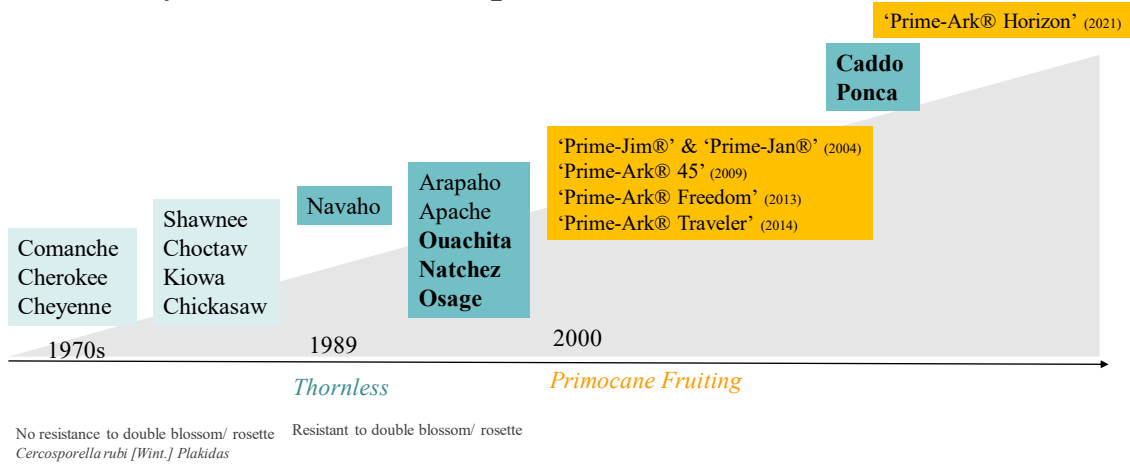
Arkansas Blackberries Globally

- Native crop to USA, more adapted than many other fruit crops
- Varieties developed in Arkansas are *grown worldwide*
 - Thorn-less, Primocane fruiting, Flavor, and Size



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Blackberry Varieties Developed in Arkansas



Acta Hort. 1133. ISHS 2016. DOI 10.17660/ActaHortic.2016.1133.2
 Proc. XI Int. Rubus and Ribes Symp.
 Eds.: G.E. Fernandez and K.E. Hummer



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Blackberry Double Blossom (Rosette)

Caused by the fungus, *Cercospora rubi*

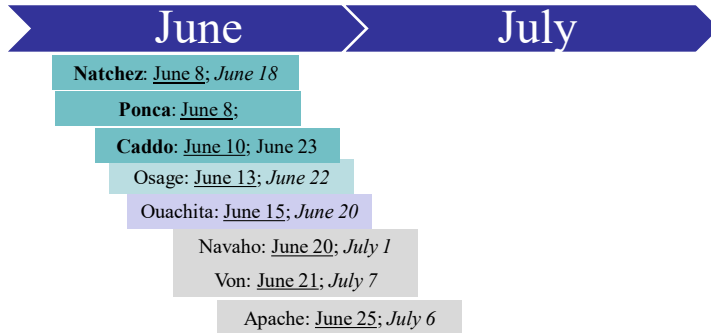
Photos: Bryce Baldrige
 Lawrence County



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Blackberry Cultivar Harvest Window

Average Day of First Harvest and *Peak Fruiting* in Clarksville, AR



(Source: Hort Sci. 2013. 48: 909-912. Hort Sci. 2005 40: 259-260).
<https://journals.ashs.org/hortsci/view/journals/hortsci/54/9/article-p1632.xml>

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Top UA: Thornless Blackberry Varieties

Natchez

- BIG Berries and lots of them; Earliest!
- 300 hours chilling



Ponca

- FLAVOR
- 300-400 hours chilling estimated



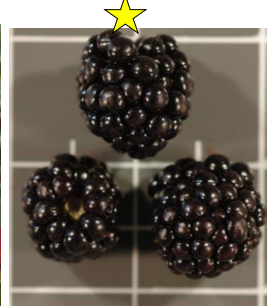
Caddo

- Good flavor and yield
- 300-400 hours chilling estimated



Osage

- Good flavor
- Easily packs in a clamshell
- 350-450 Chill hours



Ouachita

- Consistent producer
- 400-500 Chill hours



Thanks to Dr. John Clark for some of the content shared in following slides

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Natchez

- BIG and EARLY
- Quite low chill (300 hours)
- Very high yield potential
 - VERY PRONE to overcrop
- Can be tart early, can be the BEST also; 9.5% soluble solids, higher and lower; environment impacts also....
- Large, fills the clamshell “mighty quick”; Berry size large, 8-10 g or more; remain large season-long
- Postharvest handling a little trickier, more reversion and softer than others; pick and handle early in the day to avoid heat impacts



Sweet-Ark™ 'Ponca'

- A-2538T
- Sweetness and flavor a key attribute
 - Soluble solids can exceed 13%
 - Reduced acidity, always below 1%
 - **The one JR Clark MAKES SURE TO PICK AND TOTE HOME!**
 - Comparable to Ouachita and Osage for reversion; better than Natchez
- **Internode length often shorter, primocanes usually emerge above canopy later than other Arkansas thornless**
- Begins harvest with Natchez, 2- 4 days before Caddo and Osage and a week before Ouachita
- Average 6.8 g; a little larger than Osage, about with Ouachita, smaller than Caddo and Natchez
- Comparable yield to Osage and Ouachita 20,000 lb/acre
- First bloom date with Caddo and a little later than Osage and Ouachita and 8 days later than Natchez
- Great plant health; floricanes and primocane leaves; deep green color
- Can **produce secondary bud crop**, ripens 14-20 days after primary crop starts harvest



Caddo

- A2428T
- Good flavor (osage relative, but larger fruit)
 - Great aromatics
 - 10% SS or more
 - 1% acidity
 - folks really like!
- Excellent storage potential
 - Flavor consistently good after storage 7 days
 - Stored adequately for 14 days in 6 of 7 years
- Productive
 - Comparable yield to Osage and Ouachita (19,000 lb/acre), below Natchez (22,000 lb/acre)
- Fewer primocanes, but still a full crop
- Thornless, erect canes, floricanes fruiting
- Begins harvest between Natchez (2 d after) and Osage (2 d before) season; avg. 8 June but can run much later with Ouachita or after



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Osage

- Pink flowers
- Good flavor
 - lower acid flavor with notable flavor components coupled with high soluble solids
- Good vigor and cane production
- Smaller fruit size, but good number of fruit
- Yields have been consistent and good, comparable to higher than Ouachita
- Ripens (In Ark.) between Natchez and Ouachita, ave. June 10 beginning harvest – a **COMPLEMENT TO OUACHITA**
- 5 – 6 g, slightly smaller than Ouachita
- Great postharvest handling potential in Arkansas trials; some growers comment that more soft than Ouachita and some not
- Reduced N has benefited PH handling



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Ouachita – The Arkansas Standard

- The most widely planted and adapted
- Consistent production
 - *J Clark: I still say : If you plant one Arkansas variety, plant this one (tho with new one's still best?)*
- Berry size 6-7 g (Smaller in FL?)
- Excellent shipping capability
- Reduced acidity
- Mid chill – 400-500 h

In florida- watch cane production and



Primocane

Prime-Ark® Horizon

- **Thorny (reduced thorns on main canes)**
- A complement to Prime-Ark® 45
- Huge floricanes crop potential
- Longer primocane-fruiting crop potential
- Impressive berries!



Primocane

Prime-Ark® 45

- The largest Arkansas seller
- Most planted in California
- **Thorny**
- Value of floricanes fruit can be high due to very early and high quality – is being used some in the South for this
- Very tall plants under tunnels!
- *Make sure PF blackberries work where you are...*



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Primocane

★ Prime-Ark® Freedom



- Thornless
- EARLY
 - FC crop ripens 7-10 days before Natchez – really early
- 9-11% SS
- Primocane berries up to 16 g in (cool places)
- Intended for home garden or local-market use, due to limited long-term storage potential
- Is low chill, *and showing promise in Florida!*
- Has value for very early cropping (in May) in the deep South for local markets

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Primocane

Prime-Ark® Traveler



- **Thornless**
- Medium size – 7 g
- 9-11% SS, reduced acidity
- Shipping potential for distant markets
- Target use is shipping, local markets and home gardens
- In Florida, issues with plant vigor



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Stay in Touch!

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