

# GROWING BLACKBERRIES

IN NORTH CAROLINA



# Raspberries, blackberries and dewberries

- All brambles and belong to genus *Rubus*, 2 different subgenera
- Ripe blackberry has solid core (receptacle)
- Ripe raspberry separates from core (hollow)
- Dewberries more trailing than blackberries

# Climatic requirements

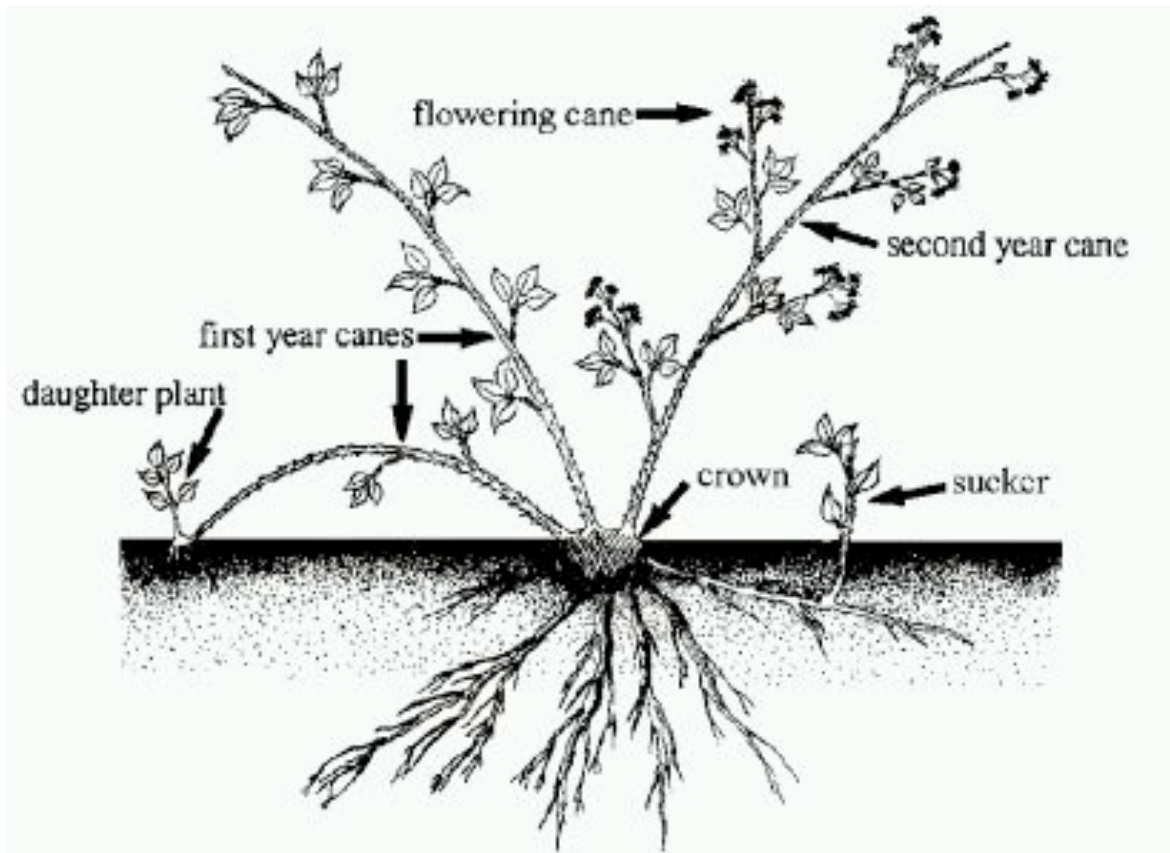
- Raspberries
  - Cool summers, sustained cold winter temperatures
- Blackberries
  - High temperatures, tolerates fluctuating winter temperatures

# Blackberries



- Demand is increasing
- New cultivars
- Thornless!
- NC Production 400 + acres
- Regional adaptation

# Growth Habit



# Why Prune?

- Long term yield increases
- Quality of fruit improves
- Change growth rate
- Fruit quantity and quality
- Decrease disease and insect problems

# Pruning 5 types

- No mowing or suppression of primocane
- Alternate year mowing
- Mowing with primocane suppression
- Primocane suppression without mowing
- Partial primocane suppression

# Our way

## No mowing or suppression

- Primocanes grow in year 1
- Floricanes cut to ground after fruiting



# Our way

- Summer
  - Primocane are tipped about inches above wire to promote branching
  - Floricanes removed after fruit produced
- Winter
  - Thin next season primocanes
  - Tip laterals
  - Remove unwanted growth

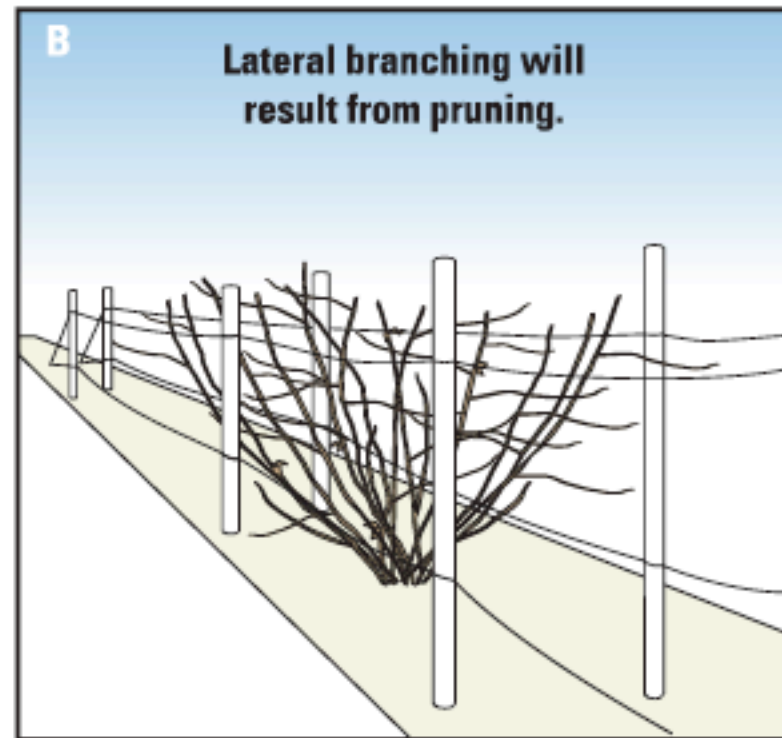
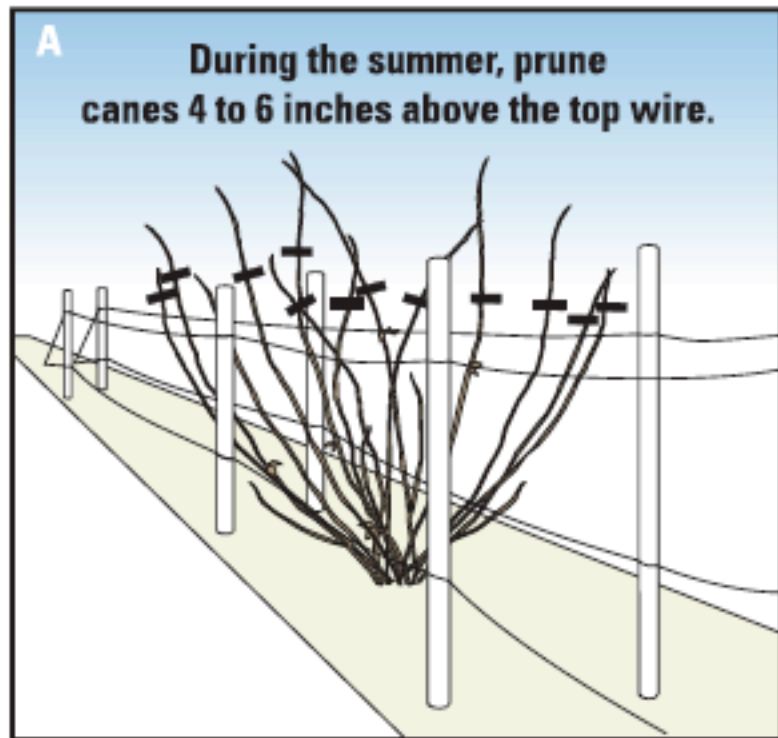
# What to prune

- Start with the easy decisions
  - Below lowest wire/18"
  - Too big or too small
  - Not in the plot
  - Damaged and diseased canes

# Pruning times

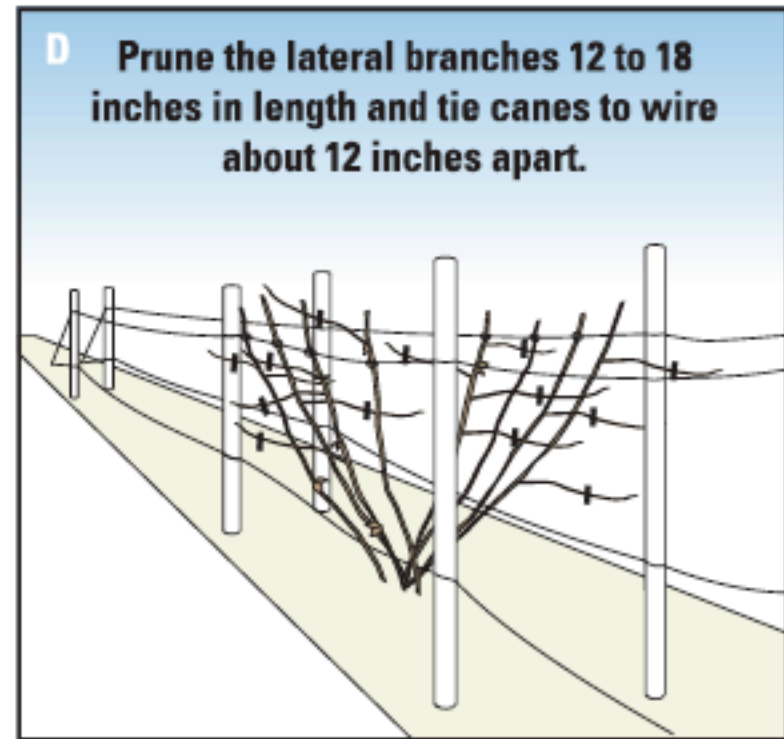
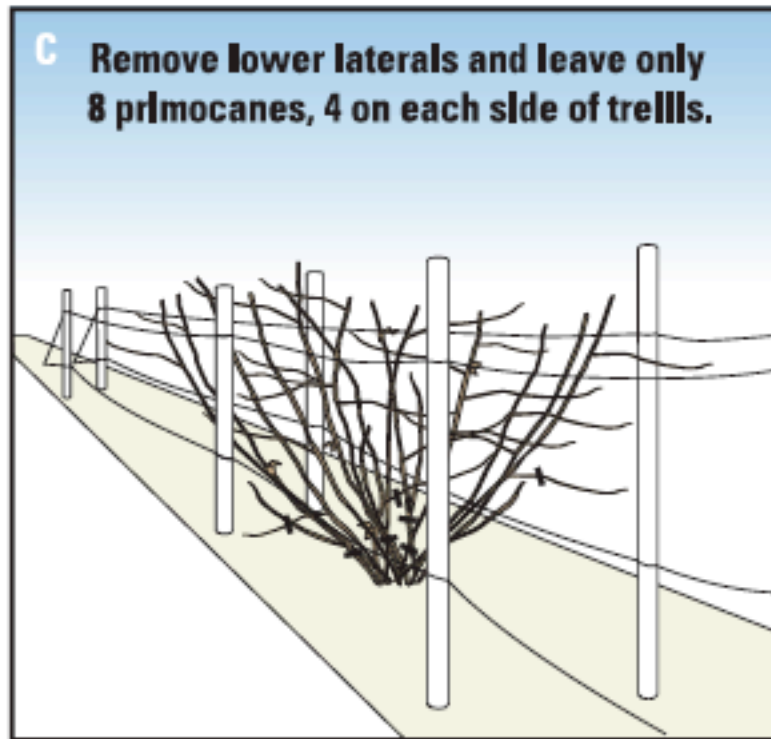
- Remove spent (old) floricanes each year
- Thin canes in winter
- Summer tipping
- Various trellis configurations also dictate what and when to prune

# Pruning Summer



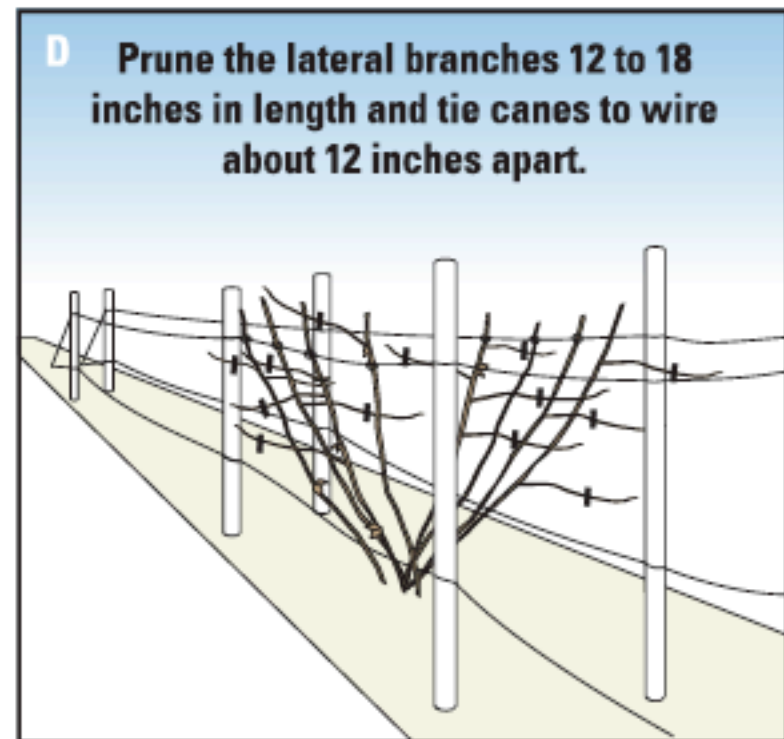
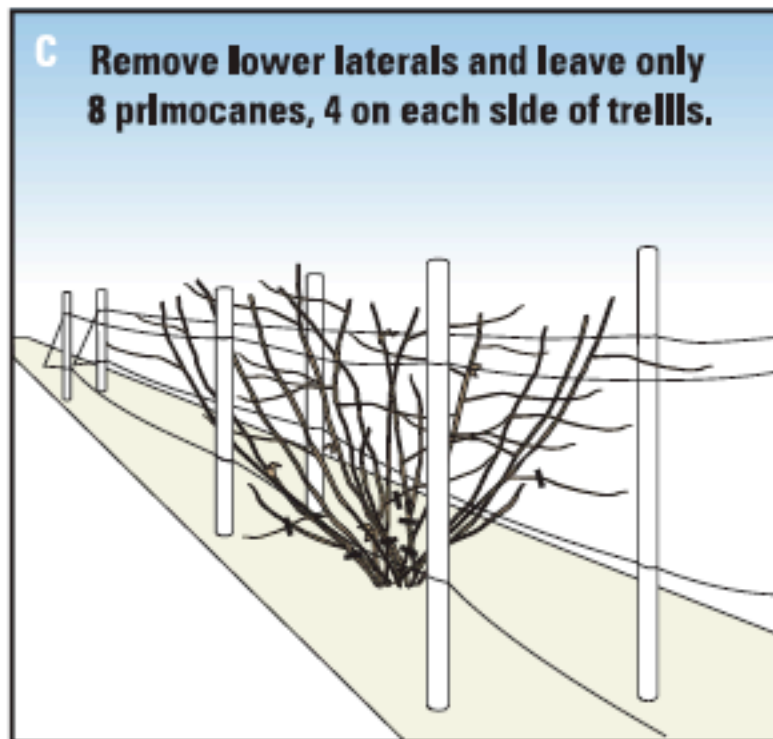
**Figures A and B are defoliated to show a better view of pruning.**

# Pruning Winter



Figures C and D depict canes in winter when leaves have fallen.

# Pruning Winter

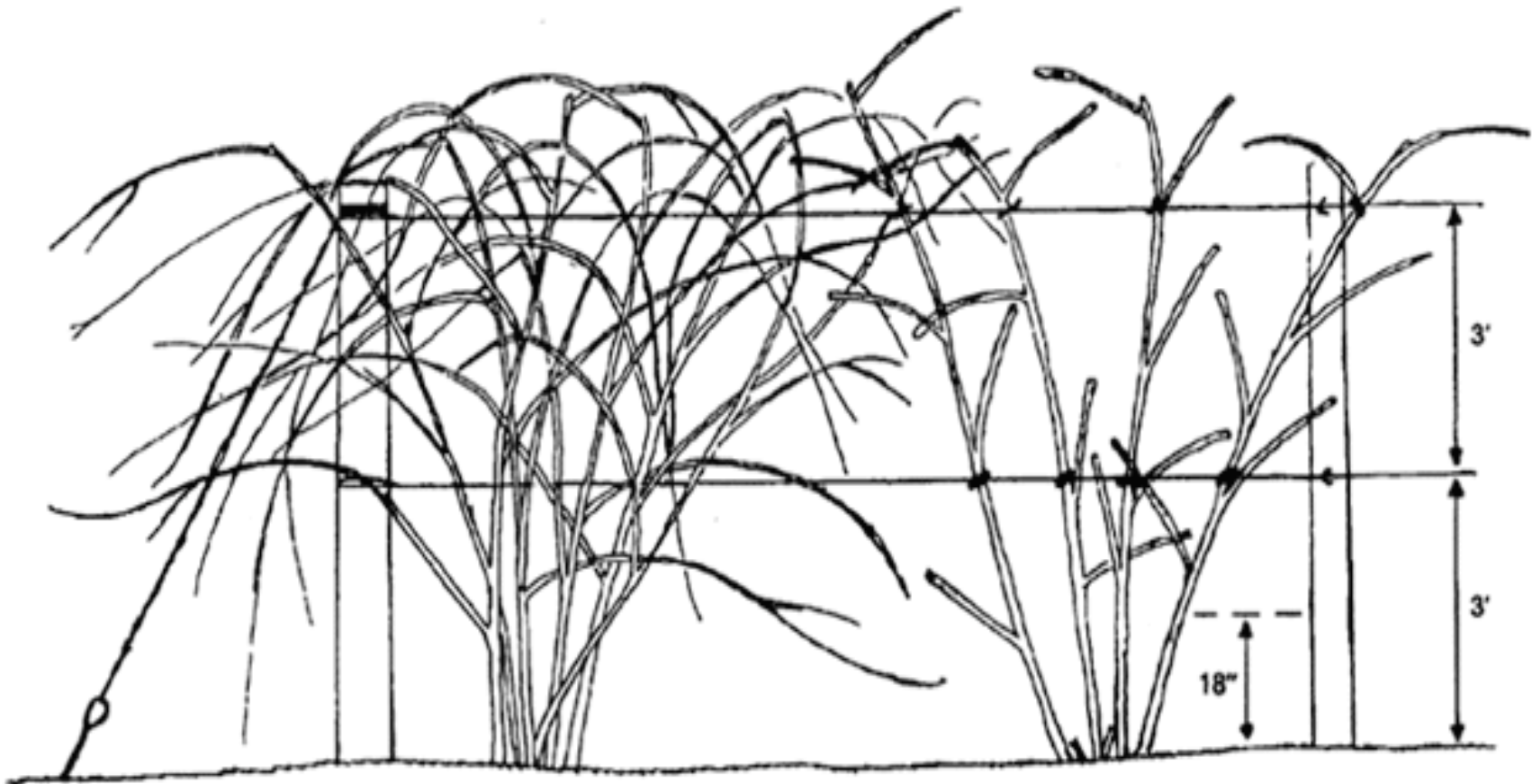


**Figures C and D depict canes in winter when leaves have fallen.**

# Pruning, training and trellising

# Before

## After



# Common trellis systems

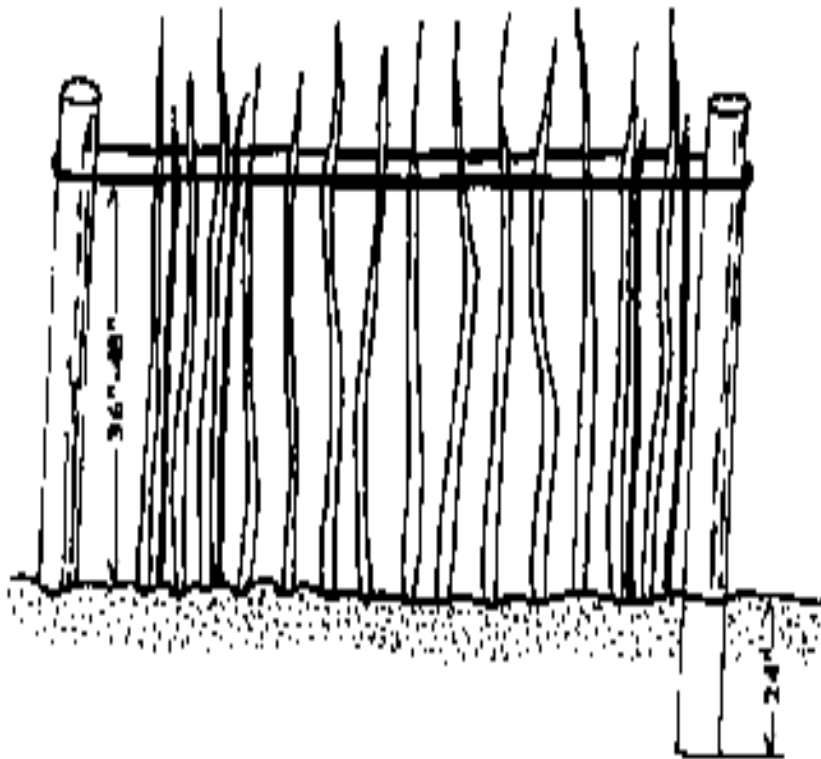
- I
  - Canopy in one plane
  - 1-2 wires
    - No crossarms
- V or T
  - Canopy in 2 or more planes
  - 2-4 (or more) wires
    - Single or double crossarms



# Many modifications

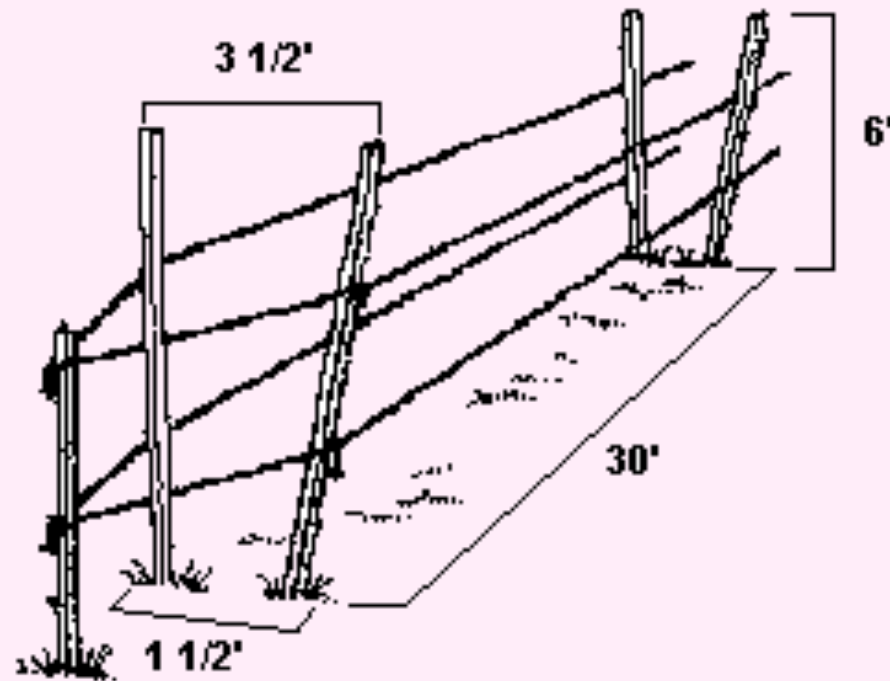
- Placement of canes
  - Bunching
  - Fanning
  - Weaving
  - Alternate sides
- Moving canes
  - Gjerde
  - Shift

Open up the canopy and let the sun  
shine through



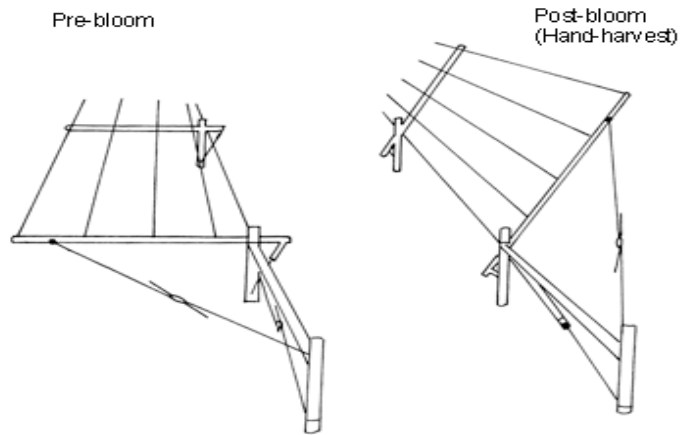
# V trellis

**Figure 2. A V-trellis system for raspberry plants.**



- Training system
  - Floricanes trained to wires
  - Primocanes in middle
- Alternate year
  - floricanes on one side
  - primocanes on other

# Shift Trellis



- Canopy horizontal pre-bloom
- Orientation of canopy changes after bloom
- Fruiting side of canopy **faces** afternoon sun



# Blackberry varieties

- Piedmont and Coastal Plain
  - **Arapaho**, Apache, Chester, Chickasaw, Hull, Kiowa, **Navaho**, **Ouachita**, Natchez, Triple Crown
  - APF-45 NO!



The image displays six clear plastic containers, each filled with a different variety of blackberries. The containers are arranged in a 2x3 grid. Each container is filled with dark, ripe blackberries, some showing the characteristic white or light-colored centers of the drupelets. The berries are set against a background of green leaves and stems. Each container has a white label with a black border and a bold, black serif font label.

**Navaho**

**Ouachita**

**NC 430**

**Apache**

**Natchez**

**Arapaho**



# NC 430



- Yield 10,704 g/plant  
– (23,000lb/acre)
- Season late
- Post Harvest – good
- Flavor- nice
- Virus tolerance  
unknown

NC 430





# Apache

- Arkansas, 1999
- Thornless, erect
- Large, 7-10 g; (ave. 8 g)
- Ripe 20 June- 20 July
- Yield med.-high, 7-10,000 lb/a; best of Ark. thornless
- Flavor between Navaho and Arapaho – Good! 11% SS
- PH potential –similar to Arapaho
- DB/R – resistant -similar resistance as other Ark. thornless
- Chilling not confirmed; 500-800 hours?
- White drupe limitation

# White Drupes



# Arapaho

- Arkansas, 1993
- Thornless, erect
- Medium, 5-7 g (ave. 5 g)
- Ripe 4 June – 20 June (earliest thornless)
- Yield med.-low, 4-6,000 lb/a
- Yield – Moderate yields, usually lower than Apache and Navaho
- Flavor very good, 10% SS
- PH potential very good, just behind Navaho
- DB/R- resistant
- Tip dieback has limited use in cooler areas; hardness concerns in colder areas



# Arapaho



# Natchez

- Thornless, erect to semi erect
- 2007 release
- Large 8-9 g
- Flavor, comparable to Arapaho, 9.5% ss
- Yield high
- Arapaho season (early)
- PH good, but uneven ripening
- Some hardness problems



# Natchez



# Navaho

- Arkansas, 1989
- Thornless, erect
- Medium, 5 g ave.
- Ripe 15 June – 20 July
- Yield med.-high, 8-10,000 lb/a
- Flavor exceptional;very sweet fruit, 11-12% SS
- PH potential great – the best of all blackberries
- DB/R- resistant
- Chilling 800-900 hours; not for low chill areas
- Orange rust susceptible
- If you plant only one, this is it!

# Navaho





# Ouachita

- Thornless, erect
- Berry size 6-7 g
- Ripens between Arapaho and Navaho; average 12 June
- Yields usually among highest of any Ark. thornless
- Flavor near that of Navaho; 10% SS
- PH potential very good, much like Navaho
- DB/R –similar resistance as other Ark. thornless

# Ouachita



# Tupy



# **Prime-Ark<sup>®</sup>** *Primocane-Fruiting* **Blackberries**

## **Prime-Jan<sup>®</sup> Primocane-Fruiting Blackberry**



 **Prime-Jan<sup>®</sup>**  
**Blackberry**  
(cultivar APF-8)

All photos are property of the University of Arkansas, Fayetteville, AR.

## **Prime-Jim<sup>®</sup> Primocane-Fruiting Blackberry**

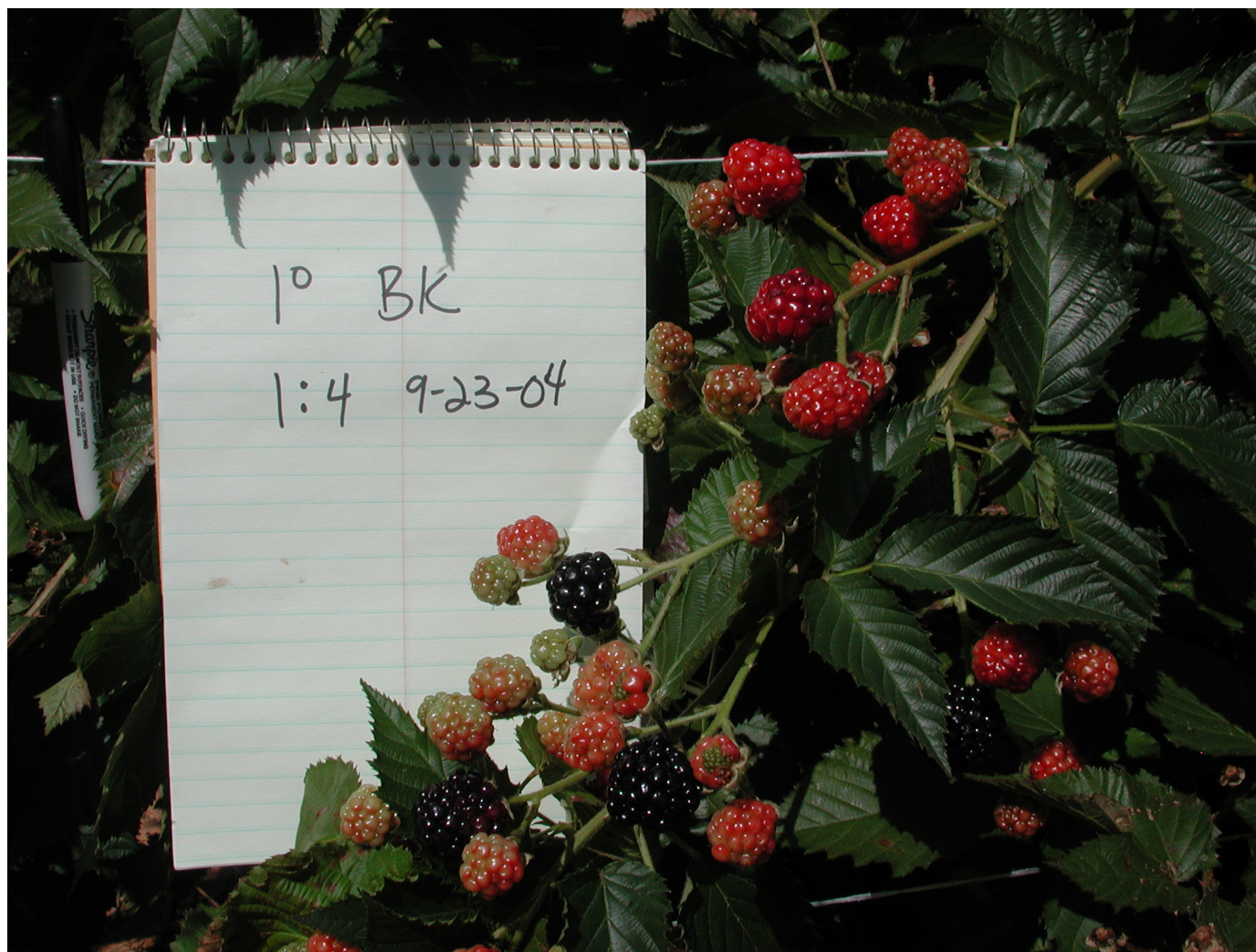


 **Prime-Jim<sup>®</sup>**  
**Blackberry**  
(cultivar APF-12)

All photos are property of the University of Arkansas, Fayetteville, AR.



# Primocane Fruiting Blackberries



# Comparison of Arkansas vs Oregon Primocane Fruit

- Oregon



- Arkansas



# Prime-Jim and Prime-Jan, Prime-ARK -45? Recommendations

- Intended for home garden use
- PH not adequate for shipping
- Only value commercially would be as a limited trial
- Not consistent flower production in heat

# But the cool thing is...

- Pruning is easy....mow to the ground each year



# Caneberry Resources

- NC Market Ready Blackberry/Raspberry Portal
  - <http://www.ncsu.edu/enterprises/blackberries-raspberries>
- SRSFC website [www.smallfruits.org](http://www.smallfruits.org)
  - 2008 Southeast Regional Guides (IPM and Production Guides)
  - Newsletters (home/smallfruitnews)
- 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!

