Responses of Primocane Blackberries to Varying Mow-down and Tipping Regimes

Mark Gaskell, Farm Advisor
San Luis Obispo and Santa Barbara Counties
Primocane fruiting

- Fruit on first year canes
- Mow down to eliminate all of prior season's canes
- More flexible management?
- Acceptable fruit quality
Early trials with primocanes

- Prime Jim / Prime Jan
  - newer varieties now available
  - PrimeArk 45, Reuben (EU)
- Arkansas VS Oregon; also NC
- Little published work in CA
Factors affecting growth and development

- Temperature
- Mowing > primo VS floricanes
- Tipping
  - cane density
  - branch density
  - nodes, fruits per node
  - fruit size
- Timing is important
Temperature

- Faster growth
- Earlier harvest
- Faster development
  flower buds and tipping
- Tunnels accelerate harvest date
Earlier primocane trials (OR)

- Emergence to first bloom
  ~ 1290-1390 GDD

- Emergence to peak harvest
  ~ 2450 GDD

- Critical developmental stages related to bloom, fruit set
Mow-down time

- Earlier > earlier regrowth
  - match market price?
  - earlier fruit is larger

- Earlier harvest

- Earlier development
  - flower buds and tipping

- Plants may appear similar but different developmental stages
Tip pruning (tipping)

- Top 3" - 6" for soft
- Hard is on older canes
Tipping

- May affect harvest date - timing?
- Stimulates branching
  - increase number of branches
  - raises branch height
- Yield
  > increases branch number and yield
- "soft" VS "hard" pruning
Earlier studies with primocanes

- **Tip pruning is important**
- **Soft tipping at 3 ft increased yield 114 - 150% compared to un-tipped**

> more branches and fruiting nodes and higher % fruiting nodes
Earlier studies with primocanes

- **Soft tipping did not delay harvest**
  > this may depend on when

- **Soft tipping may advance 1 week if not too late**
  - _before buds have formed_
  - _increase yield without delay_

- **Tipping after flower buds form**
  > _delays_ harvest
"Hard" pruning

- Hard prune at 3 ft. potentially goes back to older wood and more mature buds.
- May advance harvest?
- If mow back already cut canes at 18" then delays fruiting 4 weeks
Earlier studies with primocanes

- Producing in unheated tunnel in OR extended season by 3 weeks
- Protection from sunburn during hot periods - CA
Earlier row-cover studies

- Row covers advanced harvest 14 days
  - cover from prior to shooting until 18" high (OR)

- in NC study no effect of row covers if removed after shorter period

- Use of row covers advanced bloom and increased yield 73% compared to untreated

- Row covers > no increase in cane number
Tipping affects fruiting and cane number

- Need to increase branch number for high yield
- More branches / cane, longer branches, more nodes, more fruiting nodes, and higher berry weight
- % fruiting nodes greater on branches then main canes
Pruning trials with PrimeArk-45
San Luis Obispo Co. 2012 season

- Open field production

- Three mow – down dates
  Jan 10, March 10, May 10

- Tipping heights
  - 18", 50" and 18/50
Results: Pruning trials with PrimeArk-45
San Luis Obispo Co. - 2012 season

- January pruning is earliest and highest yielding
- March mow-down appears similar to January but harvest advanced 3-4 weeks in January mowing
- March and May mow-down is too late - lose market and yield
- 18" tipping important
- 50" tipping > too late
Total marketable blackberry yield following different mow-down times

<table>
<thead>
<tr>
<th></th>
<th>January mow</th>
<th>March mow</th>
<th>May mow</th>
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<tbody>
<tr>
<td>kg per plot</td>
<td>11.74</td>
<td>4.92</td>
<td>3.12</td>
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<tr>
<td>lb per acre</td>
<td>12,930</td>
<td>5,420</td>
<td>3,436</td>
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- Total marketable -
Weekly marketable yield of Primeark 45 blackberries following different mow-down times

Marketable fruit yield (grams)
Fruit weight of Primeark 45 blackberries following different mow-down dates

less fruit on any date > so larger?
Weekly Fresh Blackberry Wholesale Prices (highs)
Los Angeles Terminal Market - 2011

Weekly Yield
Wholesale blackberry price highs ($/flat)
Weekly Fresh Blackberry Wholesale Prices (highs)
Los Angeles Terminal Market - 2011

Wholesale blackberry price highs ($/flat)

- Other variety
- Tipping of regrowth?
- Ouachita?
Vegetative management

- Cut at soil surface
- Crown can become woody trunk
  - below ground cutting?
  - need to replant after ~5 years?
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