Extending Blackberry Production into New Market Windows

Mark Gaskell, Farm Advisor
U.C. Cooperative Extension - Santa Maria
Overview

- review of traditional blackberry production
- recent trends
- blackberry market situation
- seasonal shipping points
- trends in variety improvement

- current options for season extension
Traditional blackberry production …

• inconsistent flavor, quality
• best taste > processing
• floricane fruiting types
• narrow, defined harvest period

• narrow, inconsistent, and limited availability
Recent blackberry news?

- Annual sales > 3X increase in last five years
- Above 60 million pounds
- Health benefits of dark fruit with antioxidants
- New varieties grown more widely
- Off-season imports have surged
Past limitations?

- high chill requirement in temperate areas
- localized plantings
- more as processed fruit
- fresh market commercial expansion -1980s and 90s Guatemala, Costa Rica, Chile varieties still not great
- prior emphasis on raspberry
Traditional production

- Marion, Chester, etc in PNW >> processing
- Ollalie, Boysen in California; Chester in Watsonville
- localized summer production in East
- Brazos, Rosborough, Womack, >> Texas, OK, Ark
- 1980s >>> new erect types from Arkansas
  Brazos and Roseborough >>> Guatemala
  little or no chill!
Current / future push with blackberry

- New varieties
  - better flavor
  - firmer – better shipping
  - low chill
  - primocane fruiting
- Mexico now dominates off-season world wide
  - Tupy has largely replaced Brazos
  - some defoliation, etc.
- Tunneled production – Spain, Chile, California,
Floricane VS Primocane fruiting
Primocane characteristics?

- flexibility for controlling harvest season
- low maintenance
- overwintering - mowed back, little pruning labor
- drawback?
  current varieties very thorny
Current and future? - newer varieties …

- U. of Arkansas program - erect and thorn-less USDA – Triple Crown thorn-free are usually later, lower cold tolerance

- expansion into low chill areas is current focus

- improved flavor, yield, low chill, easier management, expanded season

- Primocane fruiting (very new)
Future focus - newer varieties … (continued)

- proprietary varieties – Driscoll, U. of Md Vitalberry (Chile), New Zealand,
- EMBRAPA at Pelotas, Brazil
- = low chill focus with fruit quality
- more low chill varieties coming with improved fruit quality, more production flexibility
## Newer varieties in California

**Erect, lower chill**
- Arapaho
- Navajo
- Apache (–T)
- Ouchita (-T)
- Chickasaw
- Choctaw
- Kiowa
- **Triple Crown** (–T)
- **Tupy** (replaces Brazos)
  - -- little, no chill

**Primocane fruiting**
- Natchez (?)
- **Prime Jim**
- **Prime Jan**
- others coming?
- **Driscoll Proprietary**
  - (floricane to date)
- **Carmel**
- **Eureka**
- **Cowles**
# Blackberry Production Windows

<table>
<thead>
<tr>
<th></th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Agt</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rosborough</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>XXX</td>
<td>XXX</td>
<td>XX</td>
<td>XXX</td>
<td>XXX</td>
<td>XXX</td>
<td>XXX</td>
<td>XXX</td>
</tr>
<tr>
<td>Arapaho</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>XXX</td>
<td></td>
<td></td>
<td>XXX</td>
<td>XXX</td>
<td>XXX</td>
<td>???</td>
</tr>
<tr>
<td>Shawnee</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>XXX</td>
<td>XXX</td>
<td>XXX</td>
<td>???</td>
</tr>
<tr>
<td>Navajo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ollalie</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boysen</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black Satin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chester</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Choctaw</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ouchita</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trip Crown</td>
<td>???</td>
<td>???</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apache</td>
<td>???</td>
<td>???</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prime Jim?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prime Jan?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tupy?</td>
<td>???</td>
<td>???</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- XXX: Early June
- XX: Late May/Mid June
- X: Late May/Early June
- ??: Unknown
Winter off season – Mexico, Guatemala, Chile, other

- Mexico now mostly Tupy
  - plus some Choctaw
  - Sleeping Beauty is Driscoll proprietary --January > April

- Chile is Arkansas varieties and Chester

- EMBRAPA – Tupy, Ebano, Gurani, Caigangue, Xavante, Brazil breeding low chill

- little or no off-season California production yet
Off-season Mexico management …

- Season typically October to May (some local May / June)
- Dominate winter season world-wide
  North America, Europe, Asia
- Tupy, Choctaw, and Chickasaw – erect types
  (Driscoll also uses Sleeping Beauty – January > April)
- prune back all canes in Nov - December
- defoliation sprays in June >>> water stress
Off-season Mexico management …

• “cane conditioning” sprays, growth regulators 2-3 weeks after defoliation for shoot induction, - many feel complex spray program not necessary - Dormex?

• harvest begins 9 -120 days post defoliation

• some growers prune producing wood and repeat 2-3 times for long harvest season

• may combine with tunnels; new primocanes? - lessons for CA?

• Tupy is heart of public Mexican program until newer varieties
Other extended season?

- Portugal pruning floricane types like Loch Ness and Triple Crown for EU >>> later, smaller harvest

- Oregon tipping and pruning primocane types in tunnels also to extend season into fall >>>> Oct / November - yield INCREASE with primocane types

- both of these techniques should work here

- little or no off-season California production yet
California Off season?

- **experimental attempts at early pruning of Triple Crown, Ouchita** > move harvest back but reduce yield?
  - more work needed in this area?

- **late season in mild areas >>> Sept – Nov / Dec**
  - mow down, pruning for late annual crop

- **year around with Tupy or primocanes in tunnels?**

- **heat units for ripening and fruit quality?**
Summary

- New opportunities for extended season blackberry production
- Attractive prices and growing consumer demand
- New varieties coming and new options
- Mexico dominates global winter production
- Best current off-season options for CA include pruning, primocane varieties, proprietary or Tupy in tunnels
Extending Blackberry Production into New Market Windows

Mark Gaskell, Farm Advisor
U.C. Cooperative Extension - Santa Maria