

# Blueberry Production in Mississippi

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## Native Blueberry Plants

- Several species native to the Southeast
- Understory in pine forest
- Adapted to the region



## Commercial Blueberries



- Easy to grow
- Derived from species native to SE US
- Very few pest
- Many good varieties

## Soil Test



Know your soil pH, fertility level, and characteristics

## Establishment

- Test soil and pH
- Determine row orientation
- Mark off rows
- Disk or till soil in row
- Place 3 to 4 inches of pine bark over entire row
- Incorporate pine bark
- Form bed and install irrigation



## Soil should be amended



Peat Moss



Pine Bark

## Establish the planting



- Trim tops to encourage growth
- 5ft. between plants  
12ft. between rows
- Raise rows if site is wet

## Blueberry Establishment



- Start with healthy plant
- Proper variety
- Gallon size is good
- Spread roots if root-bound

## Mulching and Weed Control



## Varieties

- Almost all plantings in Miss. are rabbiteye
- Most widely planted varieties
  - Climax
  - Premier
  - Brightwell
  - Tifblue
  - Powderblue

## Blueberry Varieties

### Rabbiteye

- Early- Climax, Premier, Austin, Alapaha
- Mid to Late - Brightwell, Tifblue, Powderblue, Ochlockonee
- Late- Centurion

## Blueberry Varieties

### Southern Highbush

- Misty, Biloxi, Sharpblue
- Jubilee, Magnolia, Pearl River
- Star, Legacy, Bluecrisp
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- Ozark Blue, Summit

## First Season's Growth



## Flowering



Blooms late Feb.-Mar.



Insect pollinated

Need two varieties for good  
pollination

## Frost Protection

- Wind Machines are the most common form of frost protection
- They do an excellent job when conditions are right



## Mature Planting





## Fertilization

### Mature Plants

- Nitrogen – Ammonium Sulfate or Urea
- High rates will cause brown leaf margins or yellow chlorosis of leaves
- Recommendation – 30 lbs/acre of Nitrogen;  
Am. sulfate – 142 lbs/acre (3.9 oz./plant);  
Urea – 66 lbs (2 oz./plant); 18-10-10 – 166  
lbs/acre (4.5 oz./plant); 14-8-8 – 300 lbs/acre  
(5.7 oz./plant)
- Apply in Spring and after harvest

## Irrigation

- Need 1 inch of rain per week
- Drip system most commonly used
- Water source – pond or well
  - license required for streams
- 12 gallons per plant per week
- Better to apply three times per week than daily

## Pruning

- Annual shearing encourages new growth
- Remove old or declining wood when detected (often done when dormant)
- Rejuvenation pruning renews the plant but reduces (eliminates) yield one season

## Pruning

- Older plants have reduced fruiting wood
- Eventually need to be rejuvenated



## Rejuvenation Pruning



June 10



September 8

## Primary Insect and Disease Problems

- Insect -  
Blueberry Gall  
Midge, SWD,  
CFW



- Disease -  
Mummy Berry



## Mature Fruit



Fruit matures May through July

## Production

- Yields have increased over time due to:
  - Closer attention to detail
  - Better management practices
  - Better harvesting methods
  - Better labor
  - Better post harvest handling practices
  - More sophisticated grading equipment
  - Better establishment procedures for new acreage

## Harvesting and Handling

- Harvest by hand or mechanically
- Harvest when fruit turns blue and go over field every 3-5 days
- If harvest is delayed and fruit becomes overripe, get current and resume schedule
- Pull field heat out of fruit as soon as harvested
- Grade, pack and refrigerate the fruit as soon as possible

## Harvesting

- Less than half the fruit is picked by hand
- Machine harvest is more common
- Trend toward more mechanical harvest



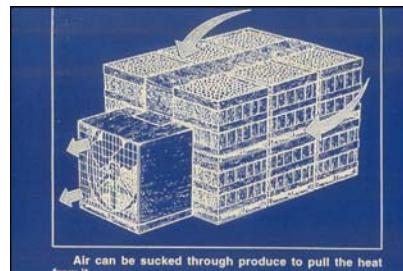
## Mechanical Harvester

- There are several types
- Newer models are gentler on fruit
- Industry trend is to mechanically harvest fresh fruit
- New grading equipment allows fresh packing



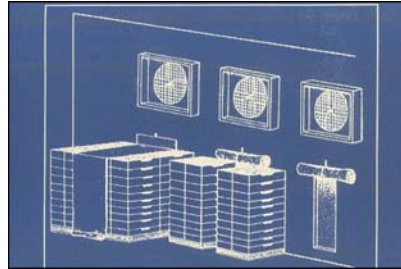
## Removing Field Heat

- Field heat must be removed after harvest
- Deterioration starts as soon as harvested
- Timely cooling extends shelf-life
- Cool air should be pulled through fruit



## Removing Field Heat

- A large fan pulls air through compartment
- Multiple units can be cooled using this setup



## Grading

- After cooling, fruit is graded.
- May be graded:
  - on the farm
  - at a grading station
- Packed in 12 pint flats
- Palletized and placed in cooler for shipment
- Frozen fruit is packed on a separate line and handled separately



## Fresh or Frozen

- Generally packaged for fresh or frozen market
- 10 lb flats – fresh
- 30 lb box – frozen



## Packaging



5 lb. & 10 lb. Bulk Pack



12 Pint Flat – 10 lbs.



## Marketing

- In Mississippi there are organized marketing groups
- Growers bring their fruit to a location where it is palletized, cooled, and prepared for shipment
- Sold through brokers who arrange sales and trucking

## Marketing

- There are basically two Markets – Fresh and Frozen
- Fresh – sold to stores and payment received within 2 weeks
- Frozen – Washed and frozen and sold during off season. Payment within 18 months

## Marketing

- Increasing interest in direct marketing
  - P-Y-O
  - Farmers Markets
  - Roadside Markets
  - Festivals
  - Home and Business Delivery
  - 5 lb boxes are popular for direct market

## Other Potential Markets

- Juice
  - utilizes fruit culled from frozen line
- Dried
  - growing market – 4 lbs fresh = 1lb dry, many advantages
- Canned
  - has potential, slow growth mkt.
- Value Added Products
  - strong growth mkt.

## Estimated Blueberry Acreage in 2012

- 2000-2500 acres in commercial production
  - ~170 growers
- Most South of I-20
- Most of that in the SE quarter of the state

## 2012 Estimated Wholesale Harvest

- Total harvest ~ 11,000,000 lbs
  - Fresh 4,250,000 lbs (\$2.50/lb)
  - Frozen 6,900,000 lbs (\$1.30/lb)

Total value ~\$16,000,000