Growing Berries in Kansas

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Types of Fruit

- Strawberries
- Raspberries
- Blackberries
- Blueberries?
Small Fruit in the Landscape

- Hedges
Small Fruit in the Landscape

- Borders
Small Fruit in the Landscape

- Strawberry ground cover
Strawberries
Strawberry Basics

- Self-pollinating – only one variety needed

- Three Types
  - June-bearing
  - Everbearing
  - Day Neutral
Strawberry Timeline

DN set buds, flower, and fruit

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<tr>
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<th>EB flower</th>
<th>EB fruit</th>
<th>EB set buds</th>
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<tr>
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= June Bearing
= Ever-Bearing
= Day Neutral
June-bearing Strawberries

- Set fruit buds in the fall when days are short
- Fruit in the spring to early summer.
- Usually planted in matted rows
- Perennial plantings
Everbearing Strawberries

- Fruit in the fall and spring
- Buds are set during long days
- Fruit until frost
- Remaining buds fruit in spring
Day Neutral Strawberries

- Fruit all year until frost
- Buds set all year, regardless of day-length
- Buds may abort at temperatures above 90°F
- Often grown as annuals on raised beds
Site Selection

- Well-drained soil
- Prefer loamy or sandy soils
  - Raised beds on heavy soils
  - Frequent watering on sandy soils
- At least 2% organic matter
- pH of 5.8 to 6.5
Site Selection

- Full sun

- Avoid low areas where cold air settles

- Avoid weedy or grassy areas
  - Till area one year before planting
  - Plan ahead!
Growth Habit
Planting

- Mid-March to early April

- Planting can begin as early as the soil can be worked during this period.

- Typically 1 foot of row will produce at least a quart of berries.
Planting

- Virus-free planting stock
- Dormant strawberry plants
  - Kept in cold storage (40°F)
- Keep roots moist
Planting

- Set the plants so leaves and stems are above the soil surface
- Crowns should be even with the soil surface
- Prune off lower 1/3 of root system when planting.
Correct Planting Depth
Matted Row System

- Most common
- Plants are set 18-24 inches apart within a row and 48 inches between rows.
- Runners root and produce “daughter plants” forming a “matted row”
Matted Row System

Move runners (daughter plants) into row

Original (mother) plant

K-State Research and Extension
First Year Care

- Remove all flowers to allow runners to develop
First Year Care

- Runner spacing
  - Space plants 4 to 6 inches apart
  - Extra runners should be removed, if possible.
  - Keep bed width to 12 to 18 inches.
- Mulch beds for winter after the ground is frozen
Second Year and Beyond

❖ Protect Flowers

❖ If frost predicted, cover bed with blankets or use overhead irrigation until ice melts.
Second Year and Beyond

- Weed Control
  - Organic options
    - Hand weeding
    - Hoeing
Second Year and Beyond

- Renovate after fruiting.
  - Cut off leaves
  - Reduce width of row to 10"
  - Fertilize
  - Water
Renovation

First Step: Mow off leaves
Renovation

First Step: Mow off leaves
Renovation

Second Step: Gather and Discard Leaves
Renovation

Third Step: Fertilize with 1 pound 10-10-10 per 25 feet of row
Renovation

Fourth Step: Narrow row to 10 inches
After Renovation

Keep planting watered. Plants should have recovered in about 2 weeks.

Immediately After Renovation

2 Weeks Later
Winter Care for Strawberries

- Mulch every winter (1st year and beyond)
- Mulch prevents heaving & cold injury
- Apply after growth ends, before freezes
- Between Thanksgiving and Christmas
Winter Care for Strawberries

- Remove mulch after growth begins
- Leave some mulch
  - Keeps soil moist
  - Delays soil warming?
  - Keeps fruit clean
Fruiting Strawberry Care

- Adequate water results in better fruit quality

- Watering sandy soils vs clay soils
Tarnished Plant Bug
Harvest Time

- Fruit should be fully red
- Pick fruit early in the day when it is cool.
- Place strawberries in a cool, shady place while picking.
- Store at 32°F to 40°F to retain quality.
Low Space Options

- Best used with Everbearing types
- Hanging Baskets
- Towers
- Barrels
- Pyramid bed
Blackberries & Raspberries
Brambles

- Self-Fruitful: only one variety needed
- Includes raspberries and blackberries
- pH should be 5.8-6.5.
- Organic matter should be between 2% and 4%.
Planting

- **Red raspberries**
  - 2 feet apart in the row
  - Rows are 6-8 feet apart

- **Black and purple raspberries**
  - 3 feet apart in the row.
  - Rows are 8-10 feet apart.
Brambles

- Raspberries have a hollow core when picked
- Blackberries have a solid core when picked

Blackberry Fruit
Brambles

- First year canes are called primocanes. These do not fruit.
- Primocanes become floricanes the second year. Floricanes fruit and then die.
Brambles

- Perennial plant with biennial canes
- First year canes are called **primocanes**
  - Primocanes do not fruit (usually)
- Second year canes are called **floricanes**
  - Floricane = flowering and fruiting!
Raspberries

- Red, purple, and black types
  - Purple raspberries are a cross between red and black
- Some varieties fruit in summer, some in fall
  - Primocane fruiting vs. floricane fruiting
Raspberry Varieties

- Red Raspberries
  - Heritage (everbearing)
  - Latham
  - Taylor
  - Titan
- Purple Raspberries
  - Brandywine
  - Royalty
- Yellow Raspberries
  - Fall Gold
  - Goldie
  - Anne (everbearing)

- Black Raspberries
  - Black Hawk
  - Bristol
  - Jewel
Blackberries

- Trailing vs erect types
- Thorny vs thornless types
Blackberries

- Thorny Types
- Thornless Types
Blackberry Varieties

- Semi-Erect Blackberries
  - Black Satin
  - Chester
  - Hull

- Erect Blackberries
  - Shawnee
  - Arapaho
  - Apache
  - Navajo
  - Ouachita

- Trailing Blackberries
  - Lucretia
  - Boysen
  - Young
Pruning

- Summer Bearing Raspberries
  - Maintain rows width at 18-24” by mowing
  - Thin canes to 4-6” spacing
  - Head canes back to 5-5 ½ feet
Pruning

- **Fall Fruiting (Everbearing) Raspberries**
  - Maintain row width at 18-24” by mowing
  - **Fruits on** primocanes in the fall
  - In late winter prune all the way to the ground
Pruning

- Blackberries, black & purple raspberries
  - Tip primocanes when they are 30-36” long
  - Prune back floricanes in early spring
  - Remove fruiting canes after harvest or during winter
Additional Pruning Tips

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<tr>
<th></th>
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<th>Pruned</th>
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<tr>
<td>Black or purple raspberries</td>
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Blueberries
Blueberries

- Hard to grow here due to high soil pH
- Make a good choice for someone living in an area with soil pH of 5.2 to 6.2
- Must amend soil to pH of 4.5 to 5.5
- Can grow in large containers (1/2 of a 50 gallon drum) if pH cannot be lowered. Use a mix of peat moss and soil.
Blueberries

- Grow best in fertile, well drained soils high in organic matter.
- Full sun
- Self-sterile: best yields with 2+ varieties
- Do not fertilize when planting (can burn roots).
Blueberries

- Blueberries reach full crop yields in 3-5 years.

- Rabbits are the main pest of blueberries. The bushes should be screened to avoid damage.

- Birds can be a problem when fruit is ripe.
Blueberry Varieties

- Bluecrop
- Blueray
- Colville
- Jersey
- Herbert
Questions?

http://thedemogarden.org