

# Growing Blueberries in Kentucky

- The growing site
- Proper planting and fertilizing
- Raised beds
- Avoiding planting problems

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## Like pets, plants need:

- A good place to live
- Regular watering
- Proper nutrition
- Proper grooming
- Protection from pests
- *Care given when needed*

to do well!

# Site Selection Considerations

- Elevation & Slope
  - Soil Drainage
  - Soil pH
- 
- Soil Depth
  - Soil Type
  - Soil Fertility



# Six years old







- Planted in 1955

# Elevation

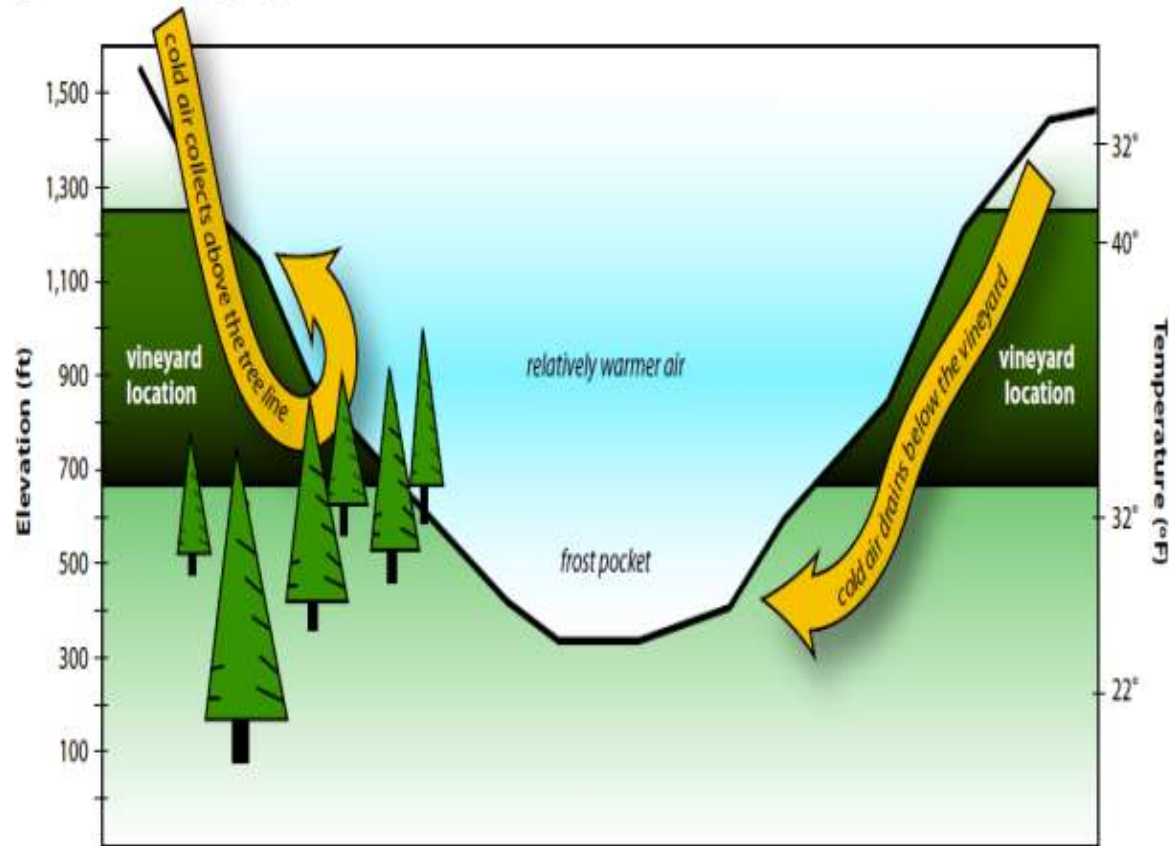


# Elevation

Higher elevation essential

- Less disease
- Less freeze injury
- Less frost injury

Figure 2. Effects of site topography on mesoclimate.



Frost Pocket



# Slope

- 2-10% slope
  - Tractor friendly
- east or north facing slopes ideal
  - North - Delays
  - bud break
  - East dries out sooner in morning







- Well drained soils
  - usually a brown to red color
  - sandy soil drains
- Poorly drained soils
  - have a lot of clay
  - are yellow or gray or have a gray layer or gray mottling

# Soil nutrient levels

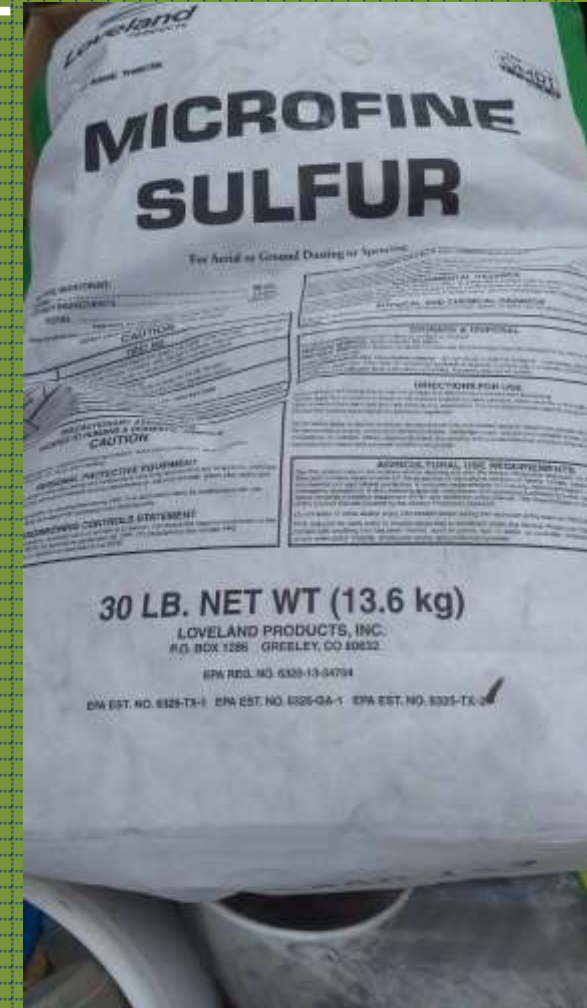
- pH 4.5 – 5.3
- organic matter 5%
  - P = 35 - 70
  - K = 200 - 300
  - Mg = 60 – 120
  - Ca < 2800

Test soil a year before planting or more  
Adjust nutrient levels before planting

# To reduce soil pH by 1.0 unit

e.g., 6.2 >> 5.2

Soil Texture	Elemental Sulfur (flake, powder)
Light Sandy	0.8 lbs/100 sq ft
Medium Sandy Loam	1.5 lbs/100 sq ft
Heavy Clay Loam	2.25 lbs/100 sq ft



Some prilled Sulfurs contain gypsum, which buffers pH



# Organic matter: Pine bark fines





# Pine bark fines

50 cents / ft



# Planting Blueberries

- Raised beds!!
- Late fall or spring OK
- 50/50 mix of soil + peat near plant
- Mulch
  - Wood chips
  - Landscape Fabric
- Irrigation!!



# Raised Beds !!

















# Raised bed-wood chip mulch



- Planted April 2020, 6 months' growth



# Mulch before weed mat





# Raised bed, landscape fabric (weed mat)

- Bed shaper
- 2 ft wide X 8 in. high
- Single piece of woven fabric
- mulch around plant
- Herbicides







# 2-piece fabric mulch (zipper system)

- 8 inch staples
- 2 person job
- overlap sheets





# Weed mat

- Reduces weeding
- Improves plant establishment
- Conserves organic matter (mulch) under it
- Seems to reduce SWD population
- May improve net returns \$\$

# Weed mat

- Does not necessarily improve yield
- Does not improve or harm fruit quality
- Does not change harvest start date



# Weed Mat increases yields

## Yield & Quality – Mulch



- On average, yield 8% to 20% greater with weed mat than other mulches in 5 of 9 years
- In 'Duke': no effect of mulch on cumulative yield
- In 'Liberty': 11% greater yield for weed mat than other mulches

Strik et al., 2017



# Weed mat

- Increases need to water
- Attractive to voles
- More initial costs



# Trickle Irrigation Essential



- Fruit plants need 1 inch of water per week
- 1 inch X 1 acre X 1 week = 9,000 gallons

# Wet peat for planting hole



Hot water, until soaked



# Common Problems

# Nitrogen Deficiency





# Nitrogen Deficiency



# Oz. of fertilizer per plant

Fertilizer	1st Year
Urea 46-0-0	1.4
Ammonium Sulfate 21-0-0	3.0
Ammonium Phosphate (MAP) 11-5-20	5.5
Actual N Per plant	0.6 Oz.

Apply half of above amounts at Bloom, half 6 weeks later



# Lbs/acre of N per year

Planting year	Year 2-4	Year 6	Year 8
15 - 30	15 - 30	45	65-70

Iron (Fe)  
Deficient  
Shoot tips





# For soils with pH > 5.4

Osmocote Plus 15-9-12 OR

Scott's Top Dress 17-3-6

2 oz. /plant monthly, March through August

- These products will not reduce pH
- They provide Iron, other elements

# Roots could not spread



- break up root ball
- 12 in. X 12 in. hole
- soil / peat / organic matter ix
- back-fill to raise plant



- spread pot-bound roots
- peat in planting hole
- wide planting hole



# Mulch too Deep

- 1-2 inches deep at trunk
- 5-6 inches further out





# Planted too deep



# Planted too deep, or sank

- firm up beds by flattening
- tamp down soil/peat in planting hole
- check on new plants 5-6 months after planting and lift plant or scrape dirt from top





# Hot fabric burns stems





# Bed settling & old mulch





# Too narrow at top of bed





# Voles



















Prozap (zinc phosphide) bait pellets  
are the only product labeled for blueberry



# Simple Electric Deer Fence



# Blueberry Varieties for Kentucky

(In order of ripening)

- Reka or Duke
- Patriot
- Bluejay
- Ozarkblue (S. H.)
- Sierra
- Bluecrop
- Draper
- Bluegold
- Chandler
- Nelson
- Brigitta
- Darrow
- Elliott
- Aurora



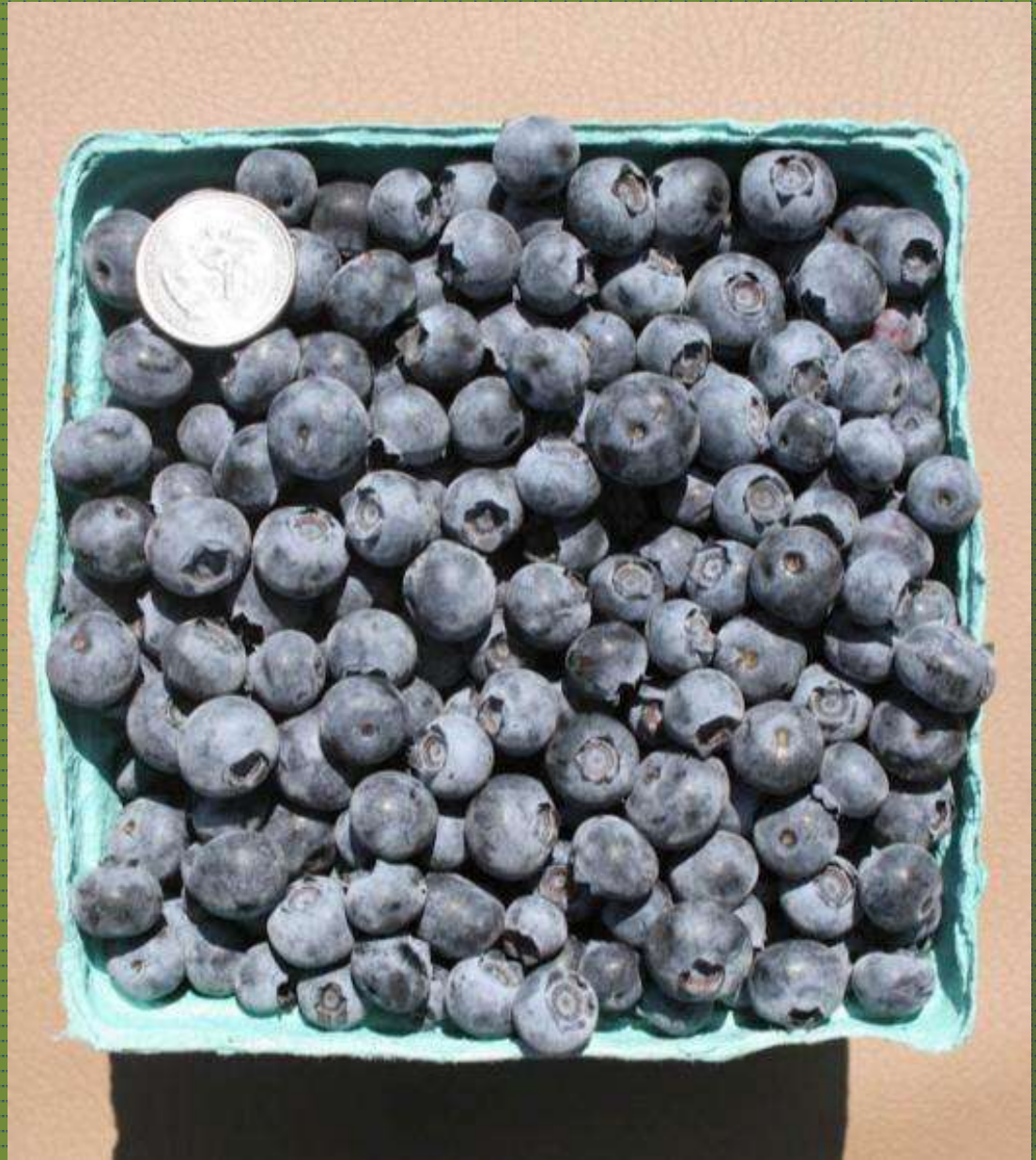


Bluecrop - most  
widely planted in  
US



# Spartan

- Early maturing
- Nice flavor
- Not as productive
- May have phytophthora problems





# Southern Highbush - Star



Large & attractive

## Midwest Blueberry Production Guide



- Midwest Blueberry Production Guide (ID 210)
- [www2.ca.uky.edu/agcomm/pubs/ID/ID210/ID210.pdf](http://www2.ca.uky.edu/agcomm/pubs/ID/ID210/ID210.pdf)



# More Information

<http://www.uky.edu/hort/>

(commercial or home hort info)

[ppfs-fr-s-29.pdf \(uky.edu\)](#)

(blueberry production calendar)

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- Midwest Blueberry Production Guide (ID 210)
- [www2.ca.uky.edu/agcomm/pubs/ID/ID210/ID210.pdf](http://www2.ca.uky.edu/agcomm/pubs/ID/ID210/ID210.pdf)