



# **Performance of Rabbiteye, Southern Highbush and Northern Highbush Blueberry Cultivars in Southern Maryland**

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## Trial Objectives:

- Performance of cultivars in terms of yield, berry quality and size
- Cold hardiness and spring frost injury potential of Southern Highbush and Rabbiteye Cultivars
- Tolerance of southern cultivars to low organic matter sandy soils typical of Southern Maryland coastal plain region
- Season extension later into the summer

04/14/2005

# Varieties on Trial

- Legacy – A northern variety that has southern parentage. Developed at Beltsville in collaboration with New Jersey, well adapted to a variety of sites.
- Jubilee – A Mississippi release with good adaptation. Southern Highbush.
- Oneal – Standard Southern Highbush variety for much of the South - A little better soil adaptation.
- Duke – Gaining fast in popularity. Straight Northern Highbush - a popular variety because it blooms and ripens early.
- Bluecrop – A standard in Northern Highbush varieties. Widely grown. Good for comparison.
- Premiere- Rabbiteye variety released by North Carolina in 1978. May tolerate higher pH.
- Brightwell: Rabbiteye variety released by Georgia in 1983. Approximate date of ripening in Southern MD is early-mid July to early-August. The harvest period is about 35 days. The berries are medium-large in size, have small, dry stem scars, and have good flavor and color. Plants are vigorous and upright and can be mechanically harvested for the fresh market with good weather conditions.
- Ozark Blue – A late Southern Highbush from Arkansas - New release with good potential and good site adaptability.
- Santa Fe-Southern Highbush with good vigor and large berries. May tolerate higher pH
- Reveille: A good early berry with an upright canopy, very vigorous, which is important for our soils--recommended by all major universities. Good winter hardiness and ability to harvest with machine or by hand.

# Selecting Varieties

Variety	May	June	July	August	September
Oneal		■			
Sharpblue		■			
Jubilee		■			
Ozarkblue		■			
Duke		■			
Bluecrop		■			
Darrow			■		
Jersey			■		
Elliott			■		
Aurora			■		
Premiere			■		
Brightwell				■	
Tiftblue				■	
Powder Blue				■	
Ochlockonee				■	
Onslow				■	
Maru				■	



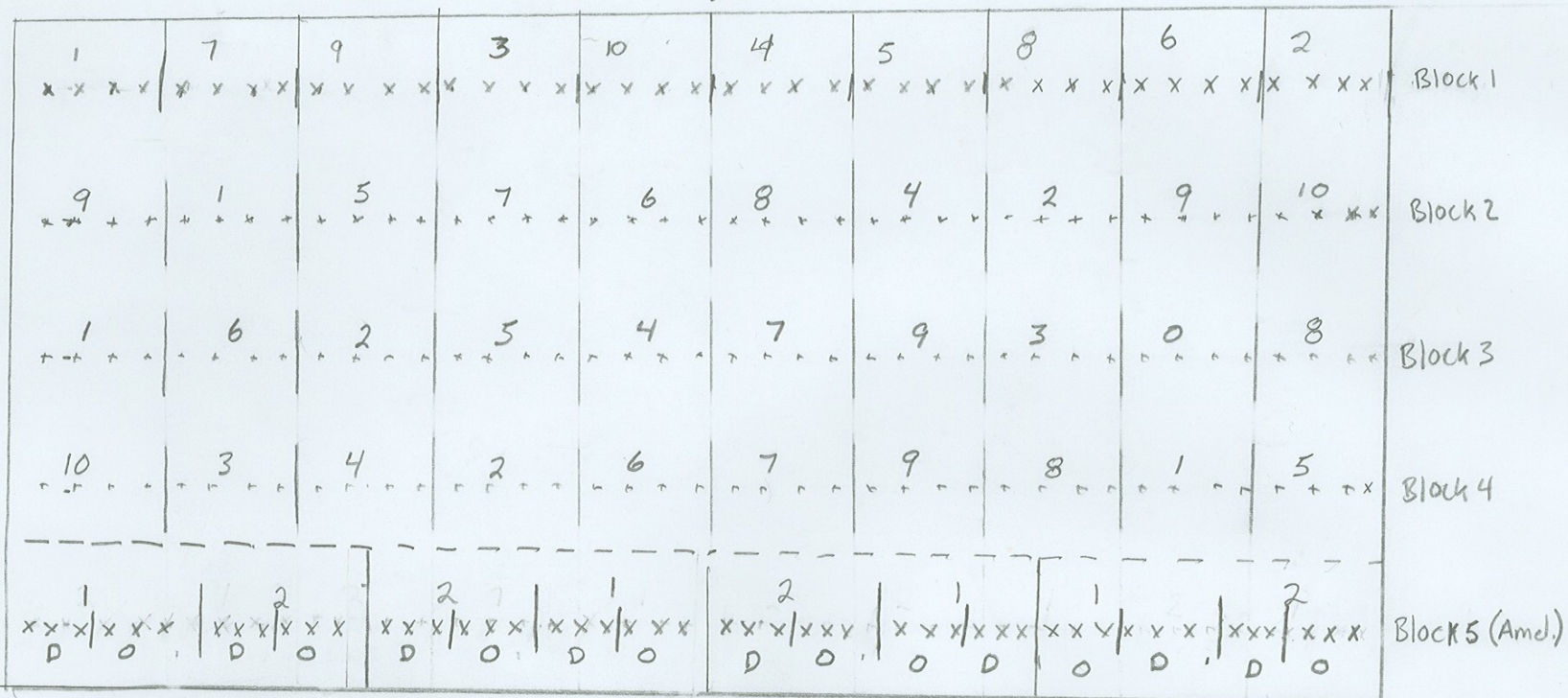
Average Harvest Dates for Lower Southern Maryland

PLANTED: SPRING 2005

CMREC BLUEBERRY TRIAL PLOT

200'

60'



- PLANT SPACING 5' x 12' on Blocks 1-4, 4' x 12' on Block 5

- EACH ROW IS SEPERATE BLOCK

- 5<sup>th</sup> ROW IS AMELIORATED STUDY USING TWO VARIETIES

- EACH ROW WILL CONSIST OF 40 plants representing 10 varieties (EXCEPT 5<sup>th</sup> ROW)

- RANDOMIZED Block Design - RANDOMIZED USING RANDOM TABLE OF NUMBERS

- 1 = LEGACY      D = DUKE
- 2 = JUBILEE    O = ONEAL
- 3 = ONEAL
- 4 = DUKE
- 5 = SANTA FE
- 6 = BLUE CROP
- 7 = Reveille
- 8 = PREMEIRE
- 9 = BRIGHT WELL
- 10 = OZARK BLUE

- 1 = Amended    2 = Non-Amended
- D = ONEAL      O = DUKE

Spacing: 5' x 12'



04/14/2005

Peat moss is added to the planting hole at a rate of 50/50 rate of soil/P moss.



04/14/2005



04/14/2005





04/15/2005



2005

2006



2007



4 year old Rabbiteye in variety trial at Upper Marlboro, CMREC

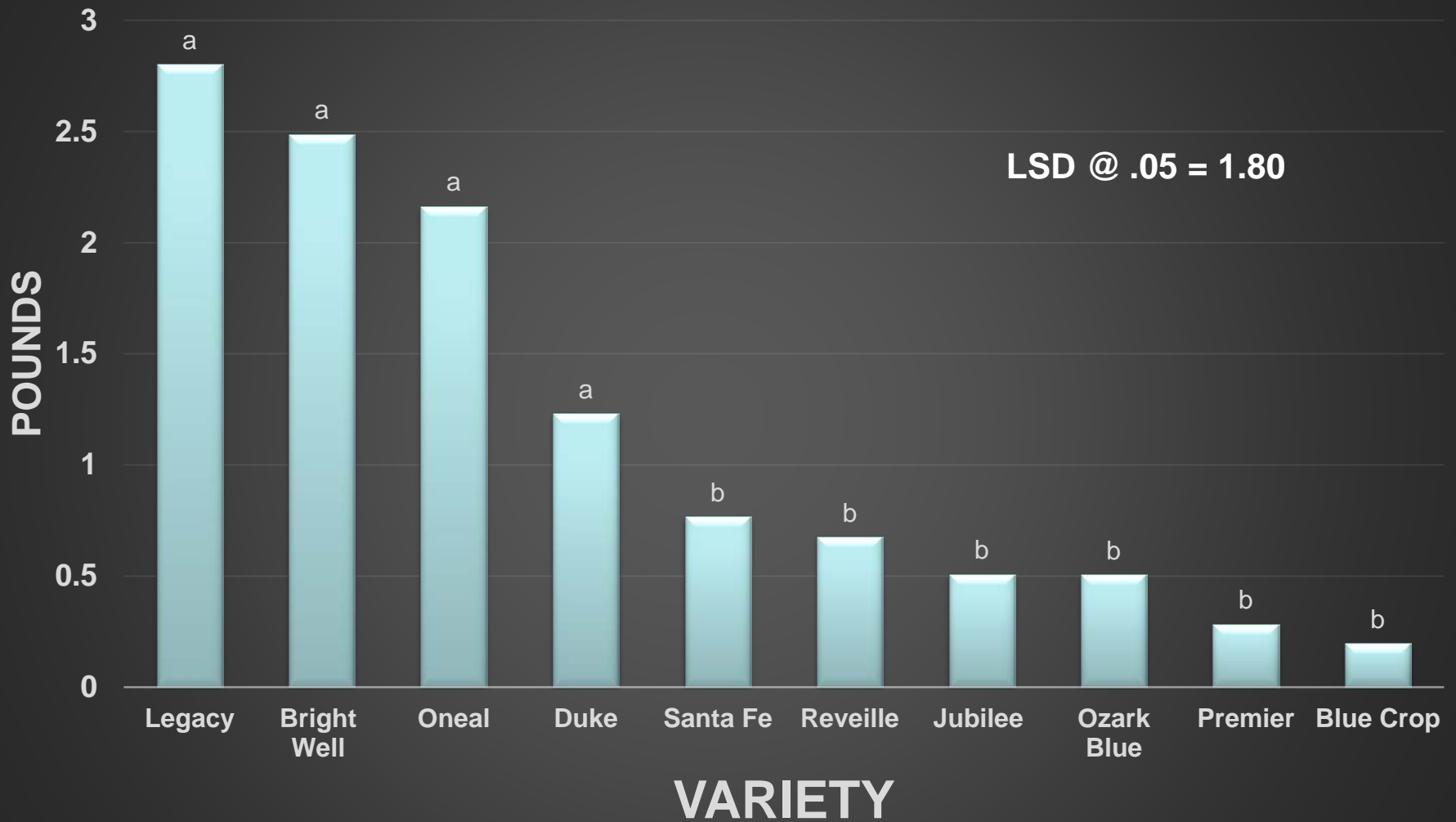
June 2008



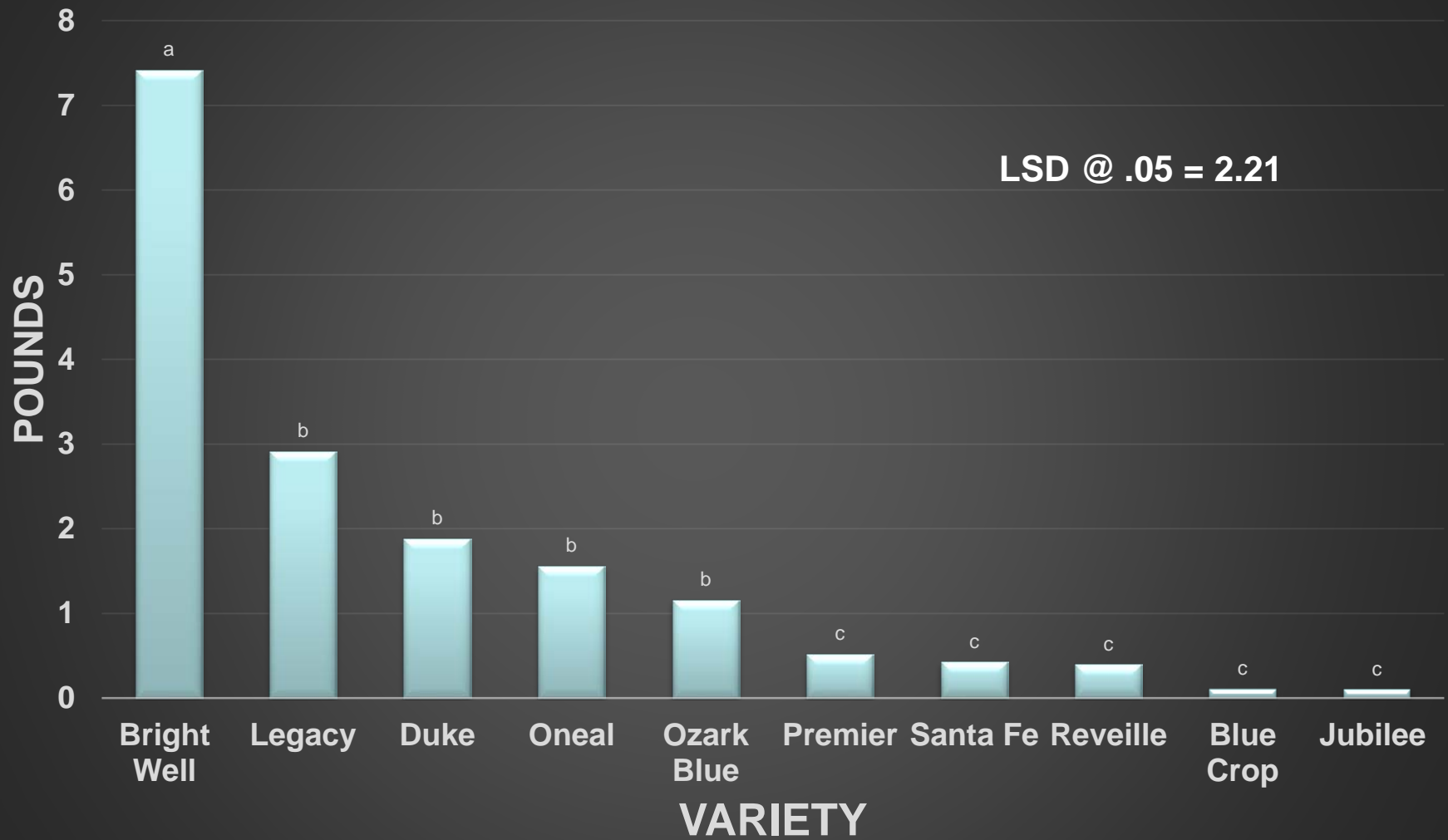
June 2008



# 2013 Yield Pounds/Plant

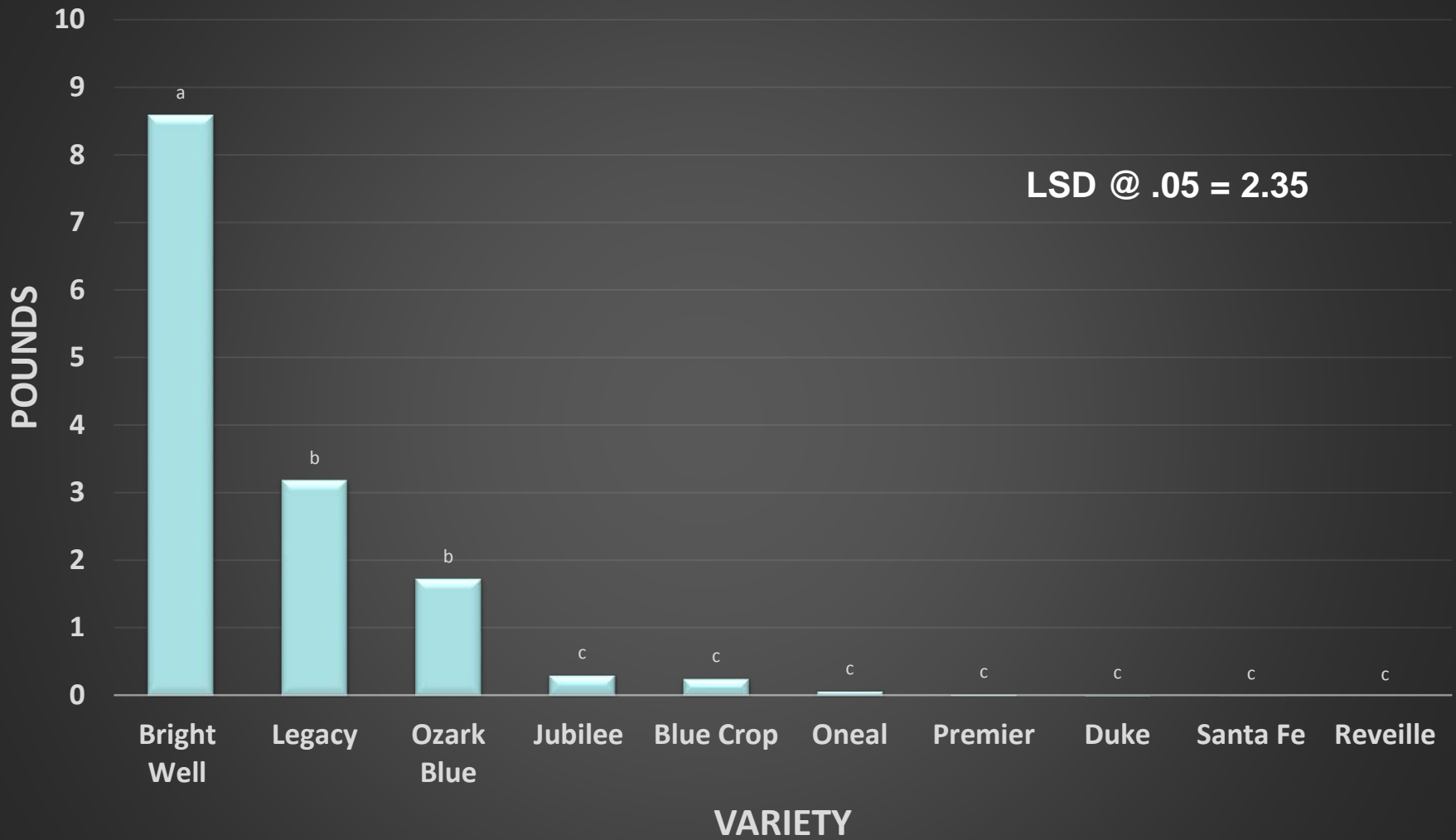


# 2012 Yield Pounds/Plant

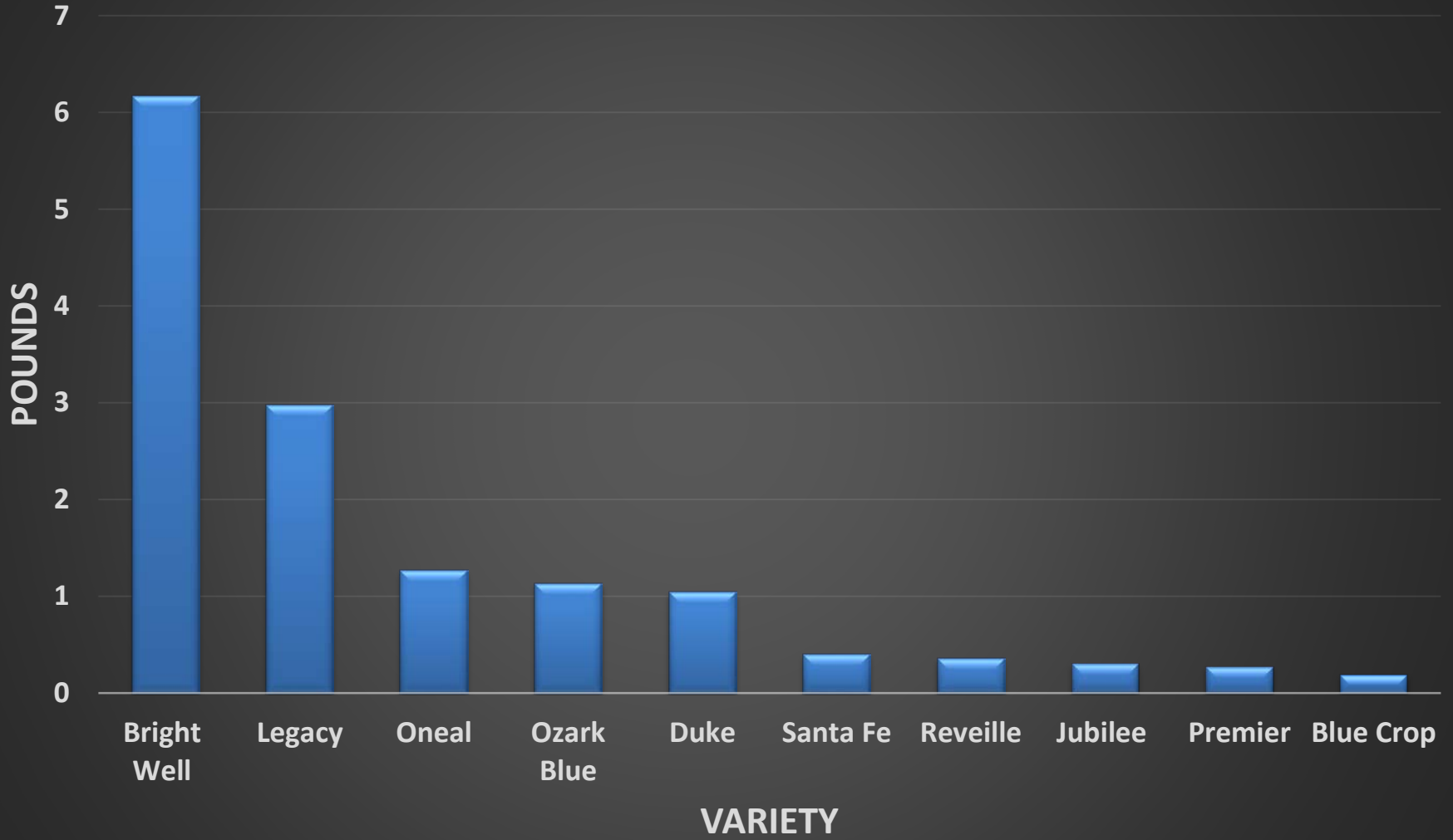




# 2011 Yield Pounds/Plant



# 3 Year Mean Yield Pounds/Plant



# Brightwell

- Rabbiteye variety released by Georgia in 1983.
- Approximate date of ripening in Southern MD is early-mid July to early-August.
- The harvest period is about 35 days.
- The berries are medium-large in size, have small, dry stem scars, and have good flavor and color.
- Plants are vigorous and upright and can be mechanically harvested for the fresh market with good weather conditions.



# Legacy

- A southern highbush with northern with southern parentage.
- Parentage: 'Elizabeth' x US75 (*Vaccinium darrowi*, 'Florida 4B', x 'Bluecrop')
- Developed at Beltsville in collaboration with NJAES, Rutgers University
- Well adapted to a variety of soils and sites.
- A leading cultivar in North Carolina due to high yields and excellent fruit quality



# Oneal

- Standard Southern Highbush variety for much of the South
- Good soil adaptation
- Early fruit maturity
- No losses from early frost, as of yet
- Not as productive or vigorous as Brightwell or Legacy



# Ozark Blue

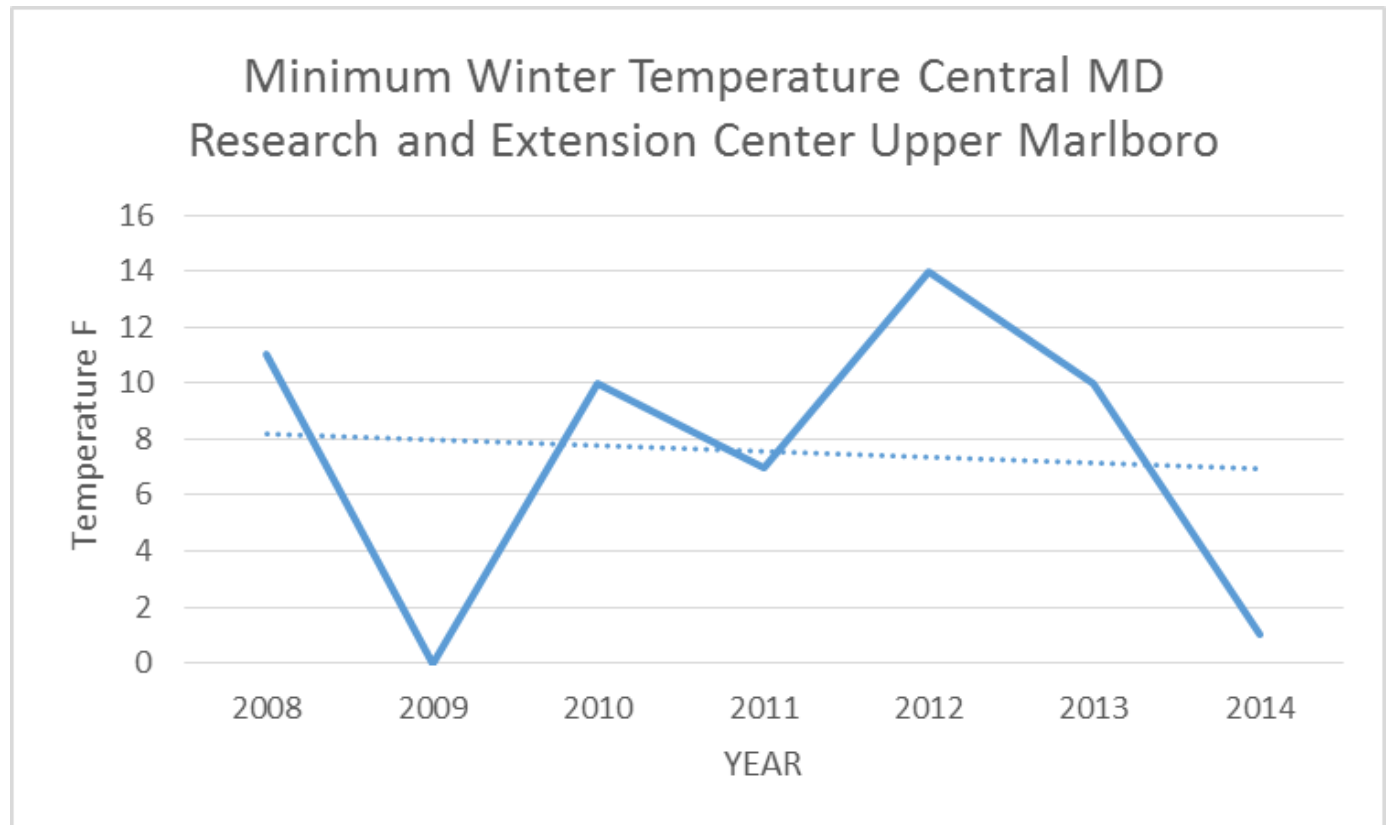
- A late Southern Highbush from Arkansas
- Good site adaptability.
- Large fruit, good fruit quality



# Winter hardiness and early frost damage

- Bud break and flowering did not occur substantially earlier on Rabbiteye and So. Highbush
- No noted fruit set or spring frost injury at this site

- Winter injury was not noted on any varieties, with minimum winter temps reaching 0 F







# Trial Summary

Rabbiteye and some Southern Highbush have exhibited much greater growth and yield than Northern Highbush. We have not observed any heavy frost damage due to the low chilling hour requirements of southern varieties. Over the life of the trial, Brightwell, Legacy and Ozark Blue consistently emerged as the most vigorous and best yielding varieties from this trial to date. As was the case in 2012 and 2013, Duke and Oneal also performed well relative to others. Brightwell in particular has out yielded all other varieties. Bush size is also much larger than other varieties.

# Bird Fiasco









The Southern Maryland Fruit Team wishes to acknowledge the efforts of the farm technicians, as well as Ag. Technician Supervisor Alfred Hawkins. Without their assistance this project would not be possible.

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# "Any Questions?"

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