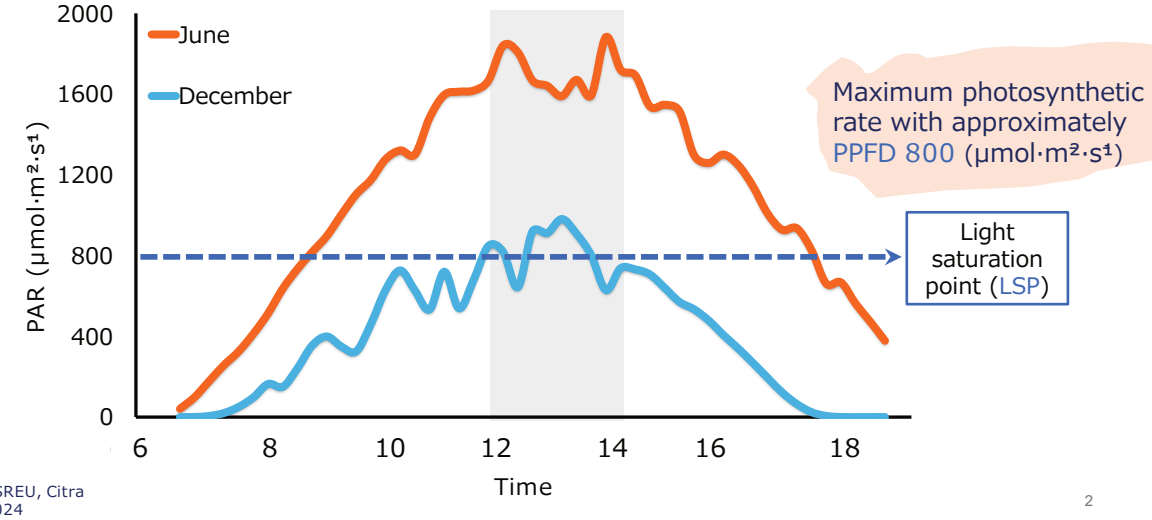


Blueberry Canopy Light Interception

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03-06-2025

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2

Blueberry leaves in the top and side of the plant receive maximum sunlight



Light interception changes because of canopy shape

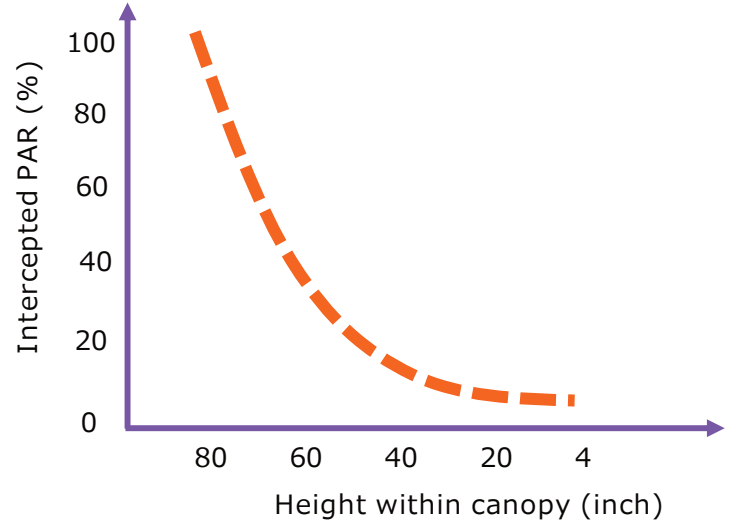


Top

Inside

Side

But not all leaves have the same exposure to light.



3

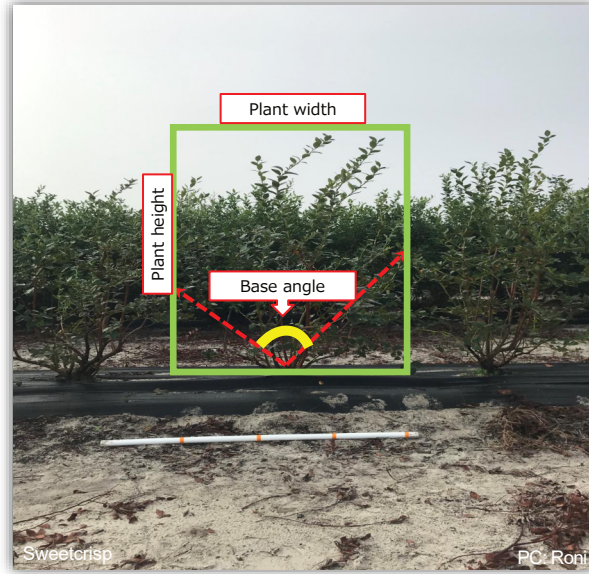
4

We investigated how plant shape affects canopy photosynthetic light interception

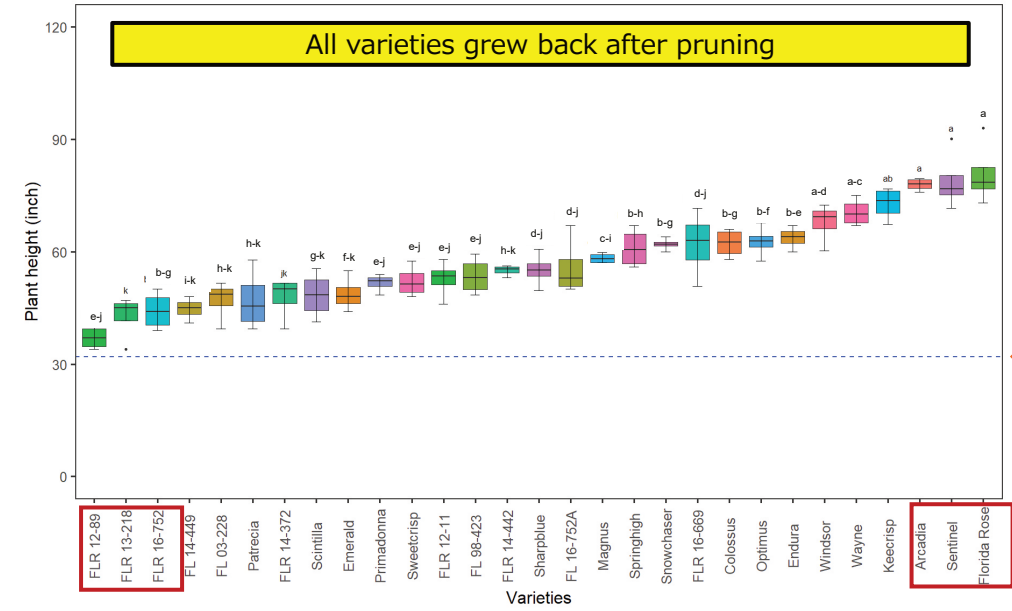


Plant materials

- 29 southern highbush blueberry (SHB) genotypes
- Plant age: 5 years old
- Hedging: weeks 18-20
- PSREU, Citra



We found great diversity in plant height



Taller plants receive less light in the bottom the canopy than shorter plants

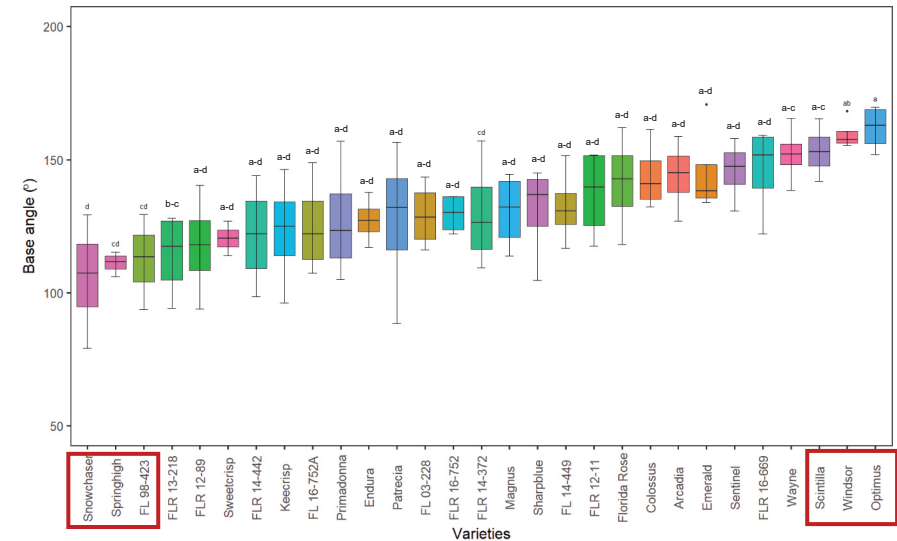


Arcadia



FLR 12-89

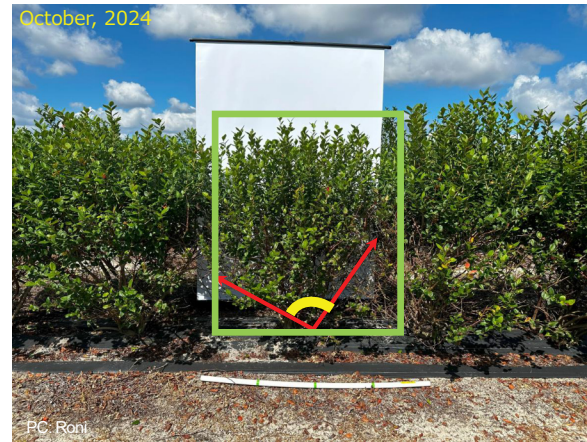
We found great diversity in plant base angle



We found expansive and columnar varieties



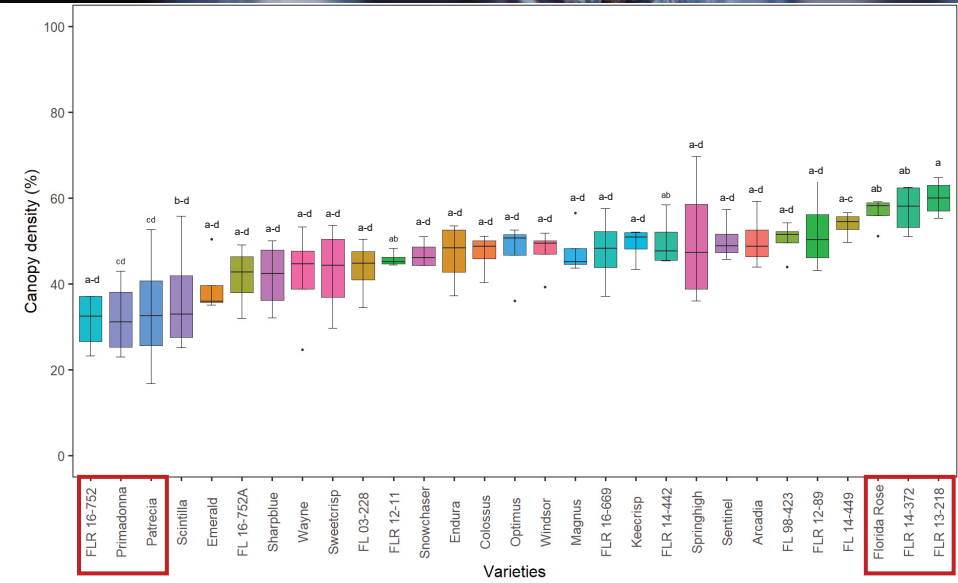
Windsor



Snowchaser

9

We found great diversity in canopy density



10

We found dense and sparse canopies



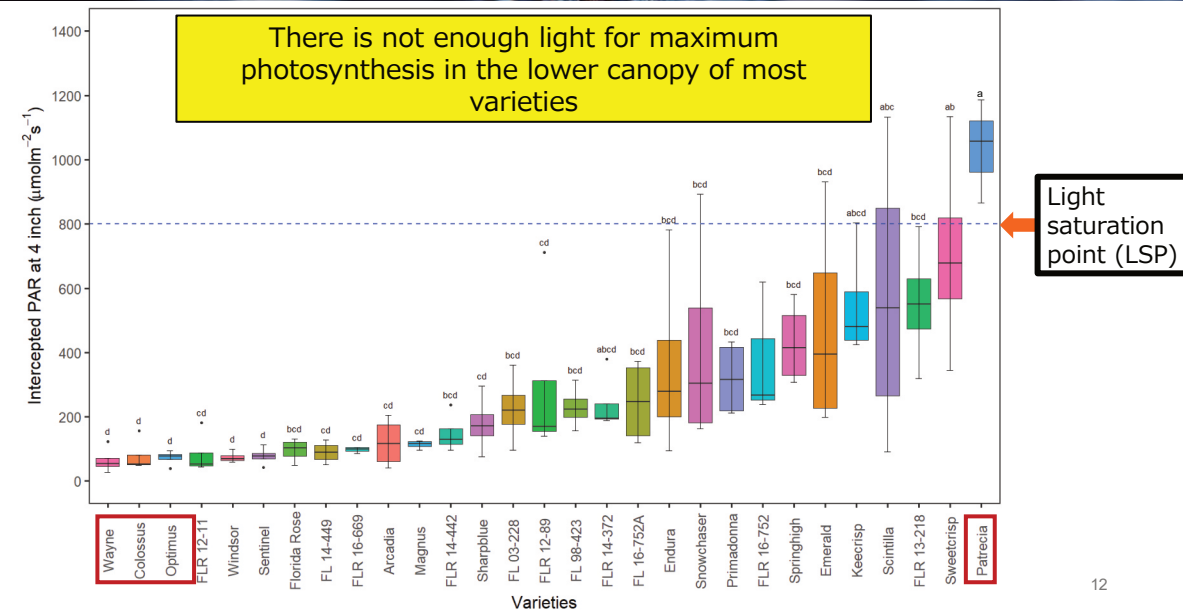
FLR 14-372



Primadonna

11

Canopy shape impacts intercepted PAR



12

Taller plants receive less light in the bottom the canopy than shorter plants



Light interception depends on canopy shape and cultivars



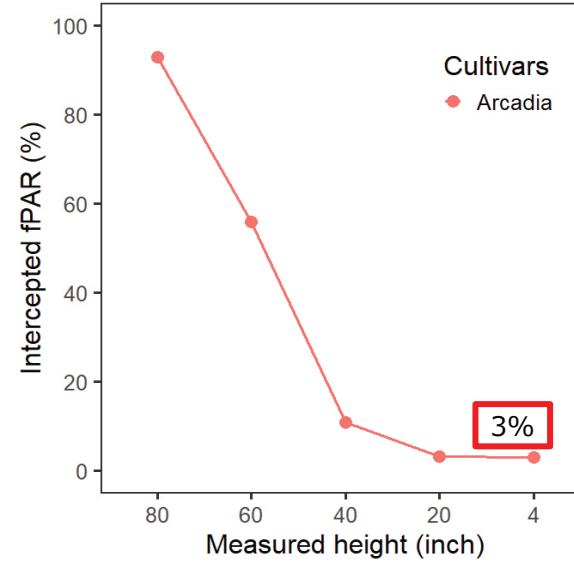
Arcadia



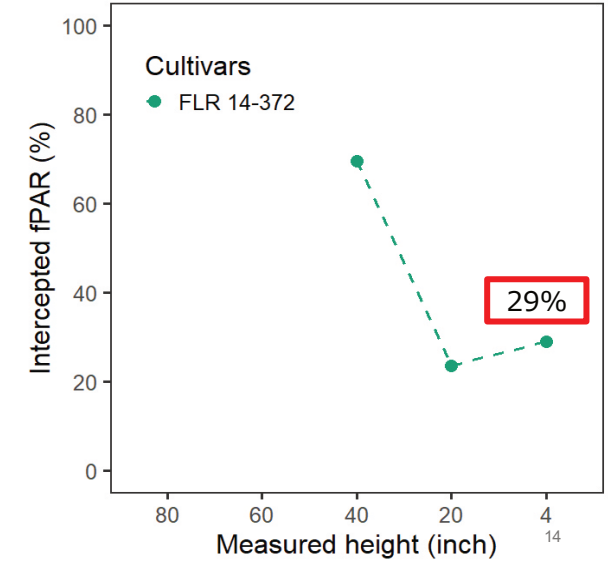
FLR 14-372

13

Tallest plant



Shortest plant



14

Wide plants receive less light in the bottom the canopy than narrow plants



Light interception depends on canopy shape and cultivars



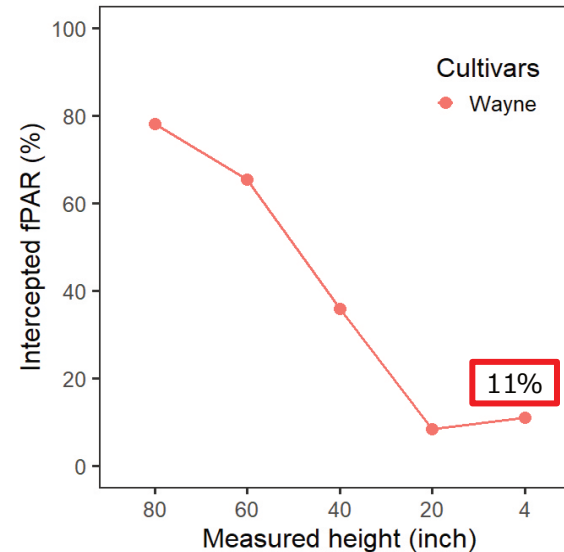
Wayne



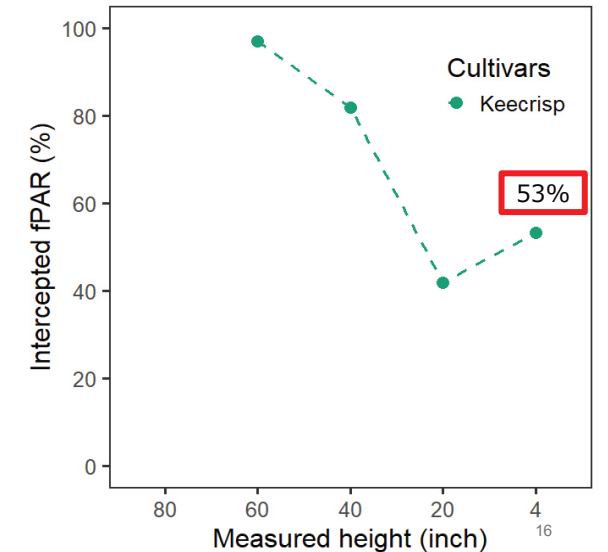
Sweetcrisp

15

Widest Plant



Narrowest Plant



16

Plants with dense canopies receive less light in the bottom of the canopy than plants with sparse canopies



Light interception depends on canopy shape and cultivars

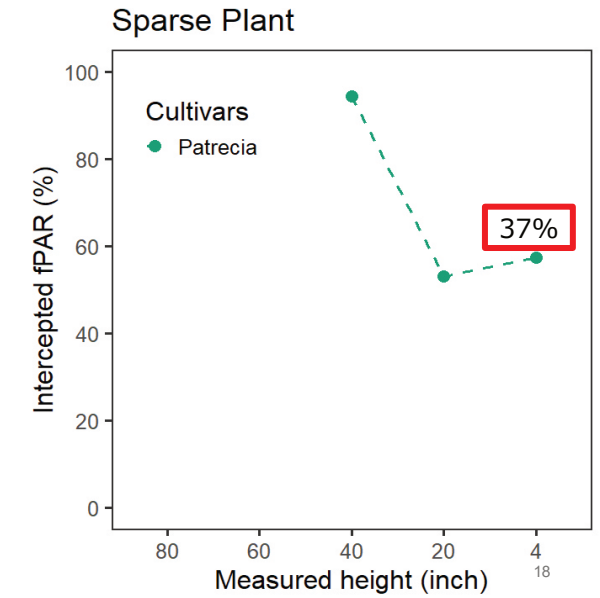
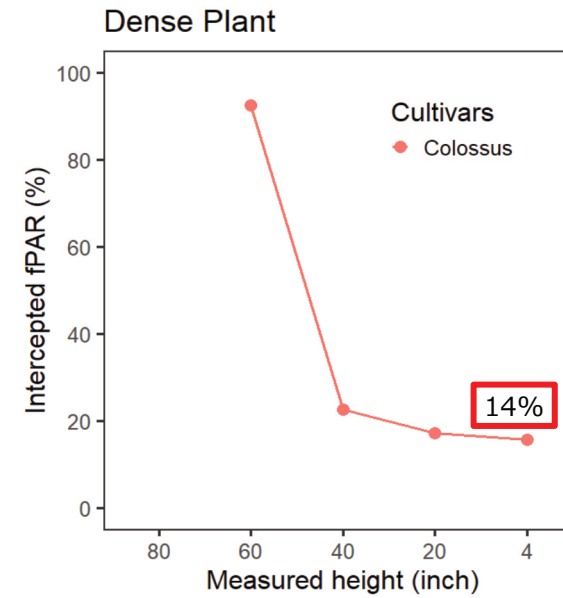


Colossus



Patrecia

17



18

Summary



- Light interception changes throughout the blueberry canopy.
- There are different canopy shapes in southern highbush blueberry.
- Canopy shape impacts photosynthetic light interception.



Acknowledgement

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(Elijah and Krishna)



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Thank you all!



We found wide range of canopy intercepted light



Blueberry Canopy Light Interception

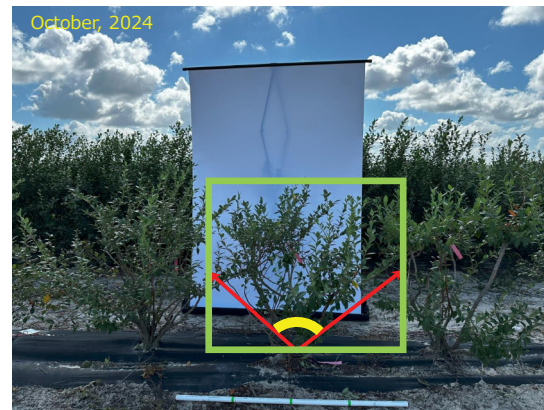
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Optimus



Patrecia