

Physiological Effect of  
**Summer Pruning** in  
Apple Trees

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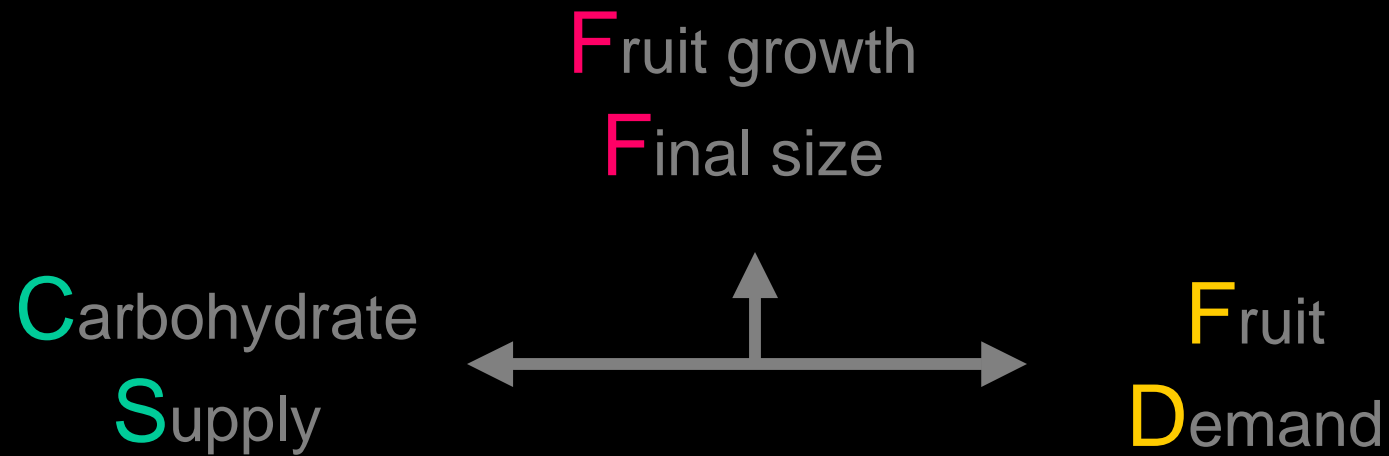
**NYSAES**  
**Cornell University**

# Summer Pruning

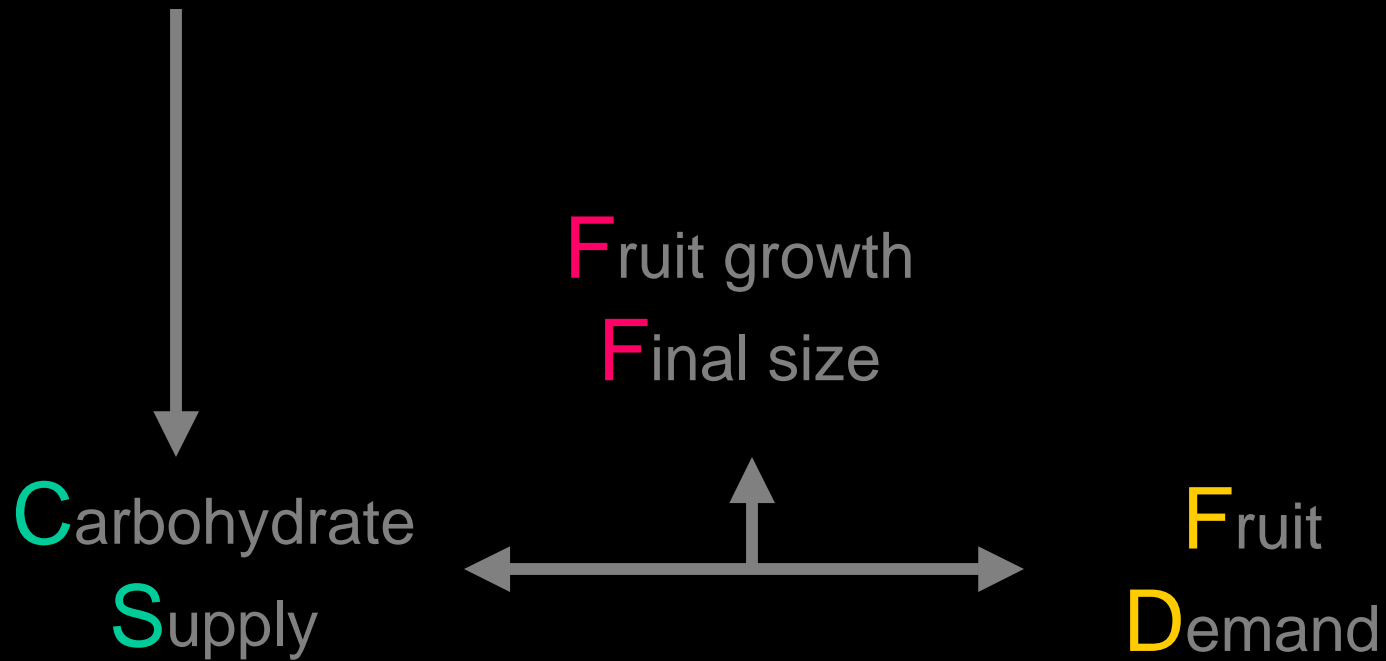
C Control tree size  
I Improve fruit color

S Smaller fruit size  
L Lower final yield  
I Inferior fruit quality

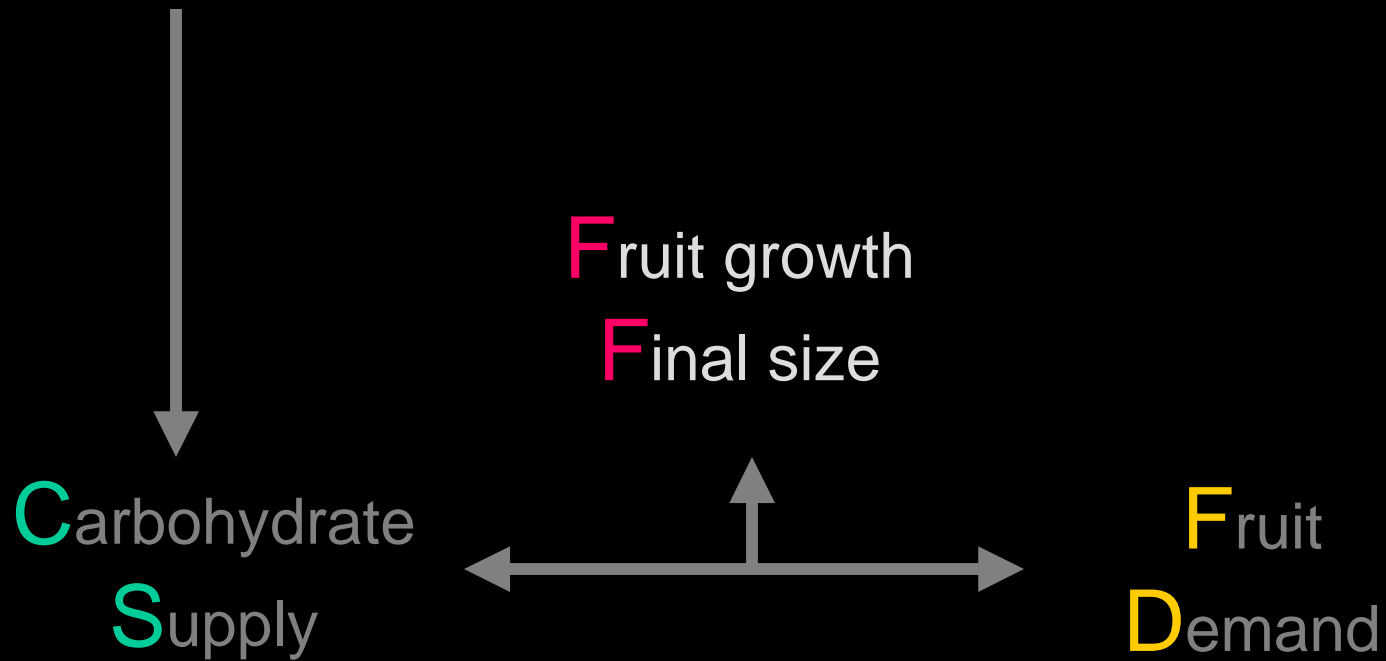
# Summer Pruning



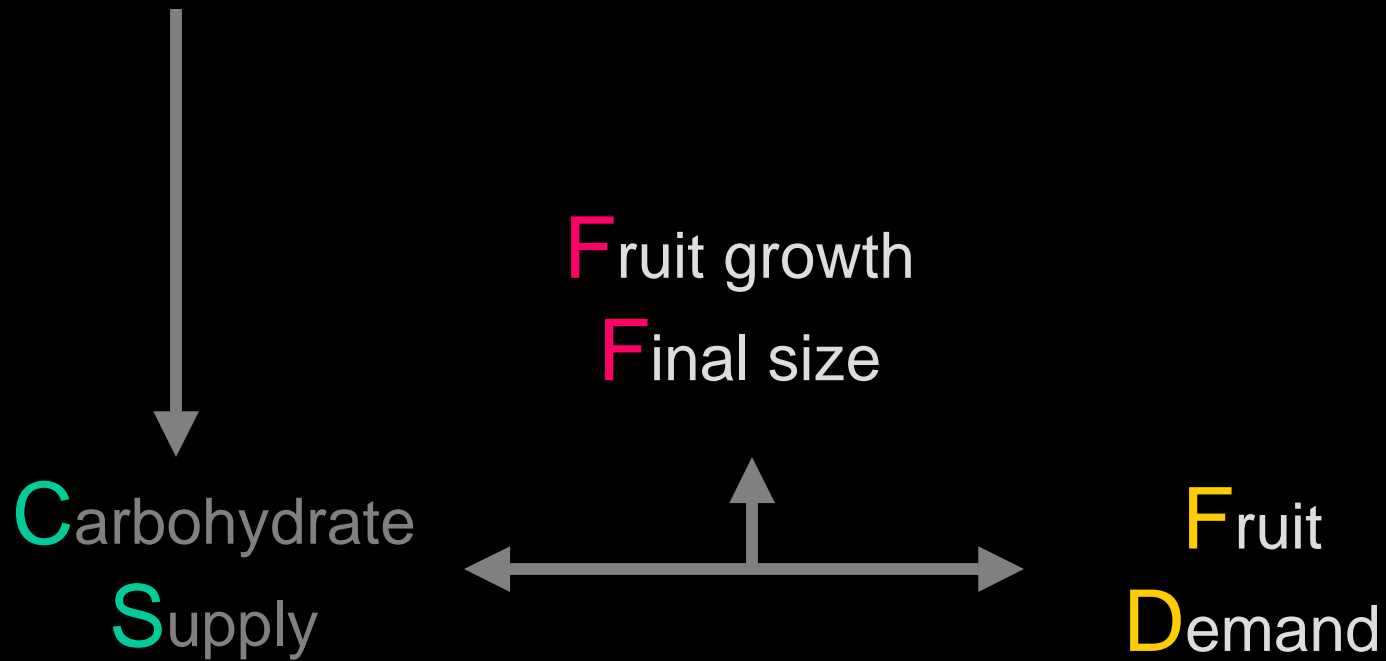
# Summer Pruning



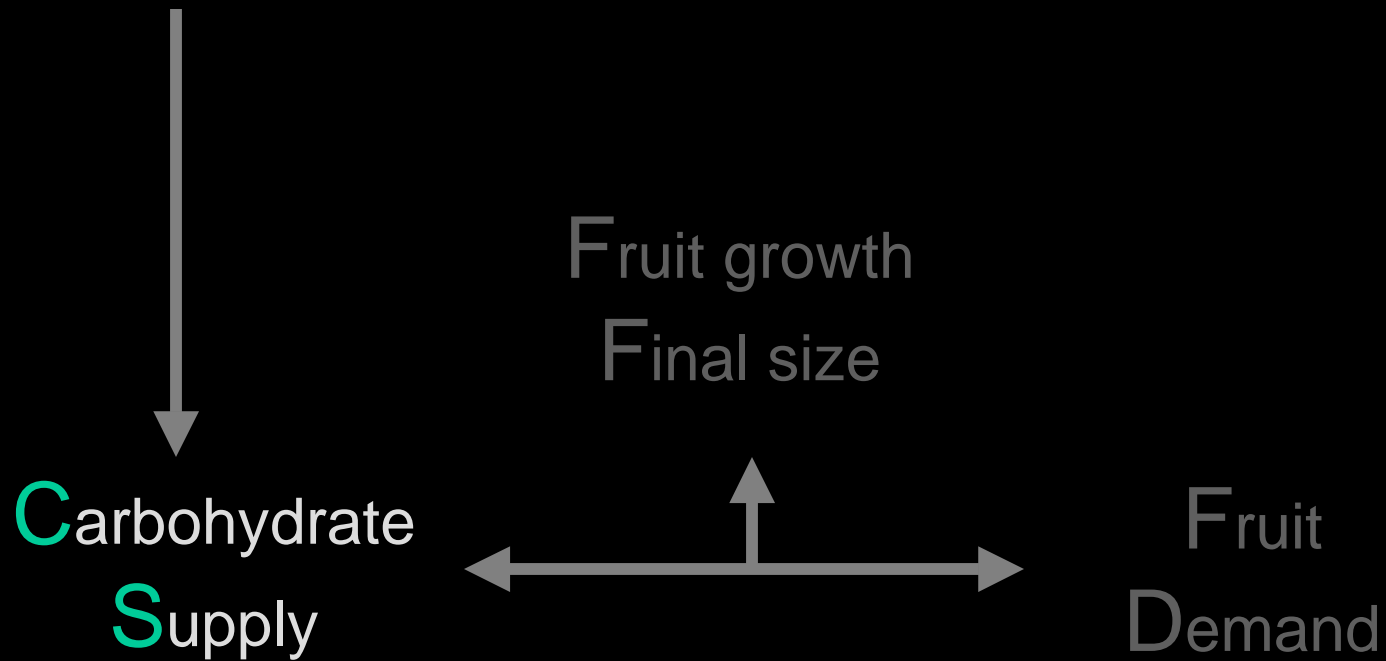
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**E**mpire/M.9

**S**lender spindle

**2**2-year-old

**5'** x 11'



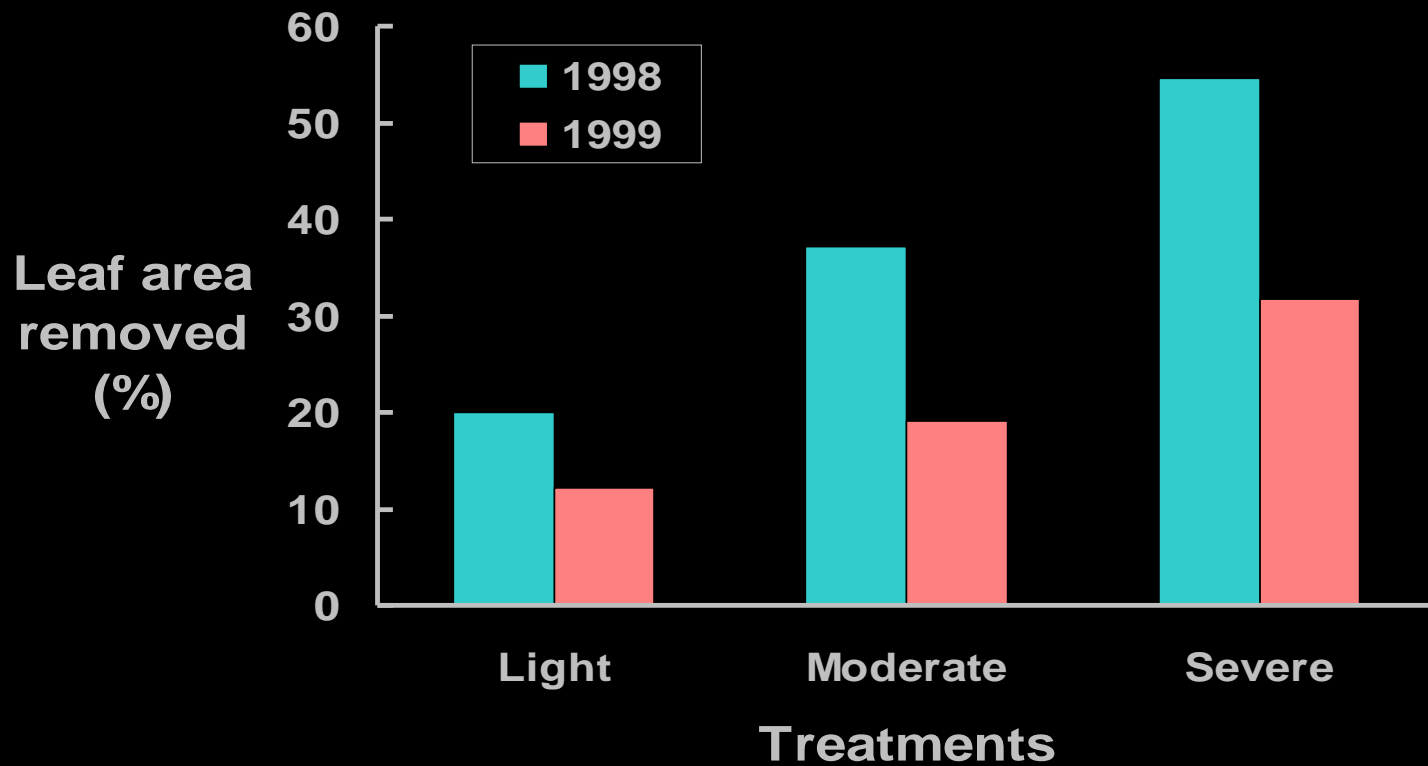


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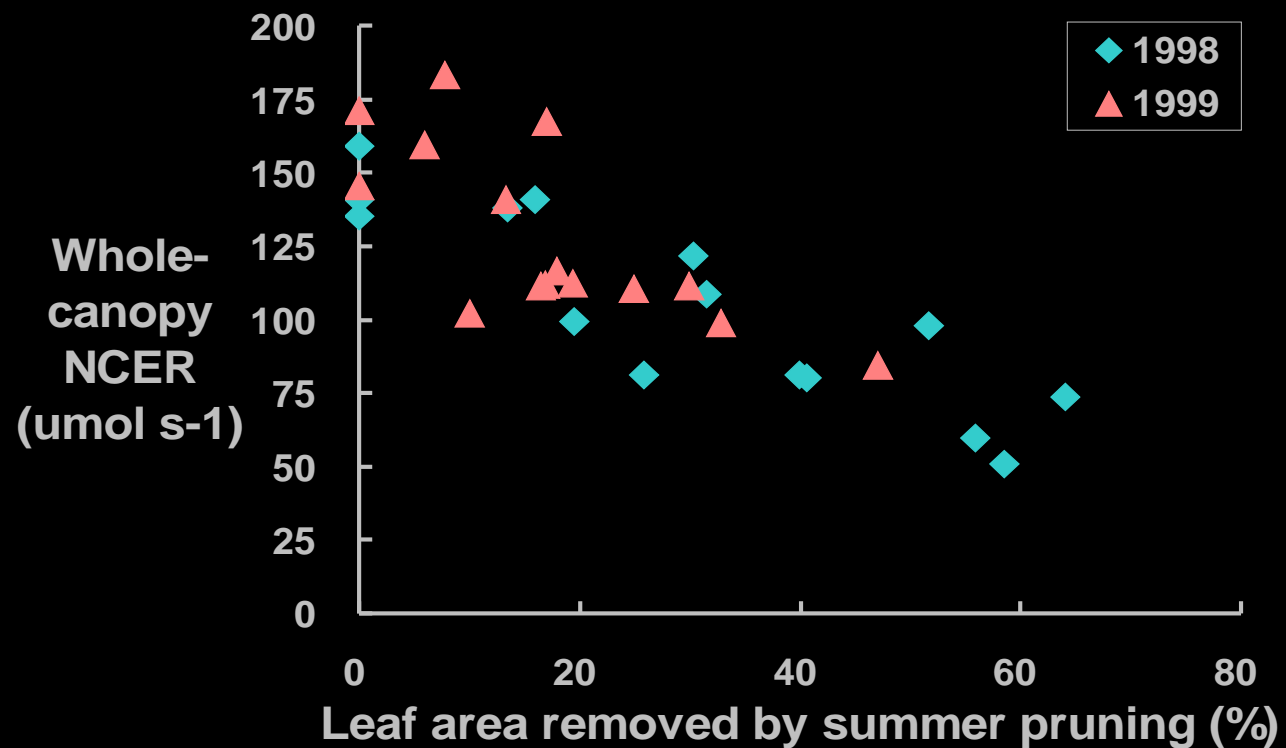


Canopy balloon  
gas exchange  
system

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**R**eductions in whole-canopy net CO<sub>2</sub> exchange were approximately proportional to pruning severity and % leaf area removed

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Growth rate

Final fruit weight

Fruit quality



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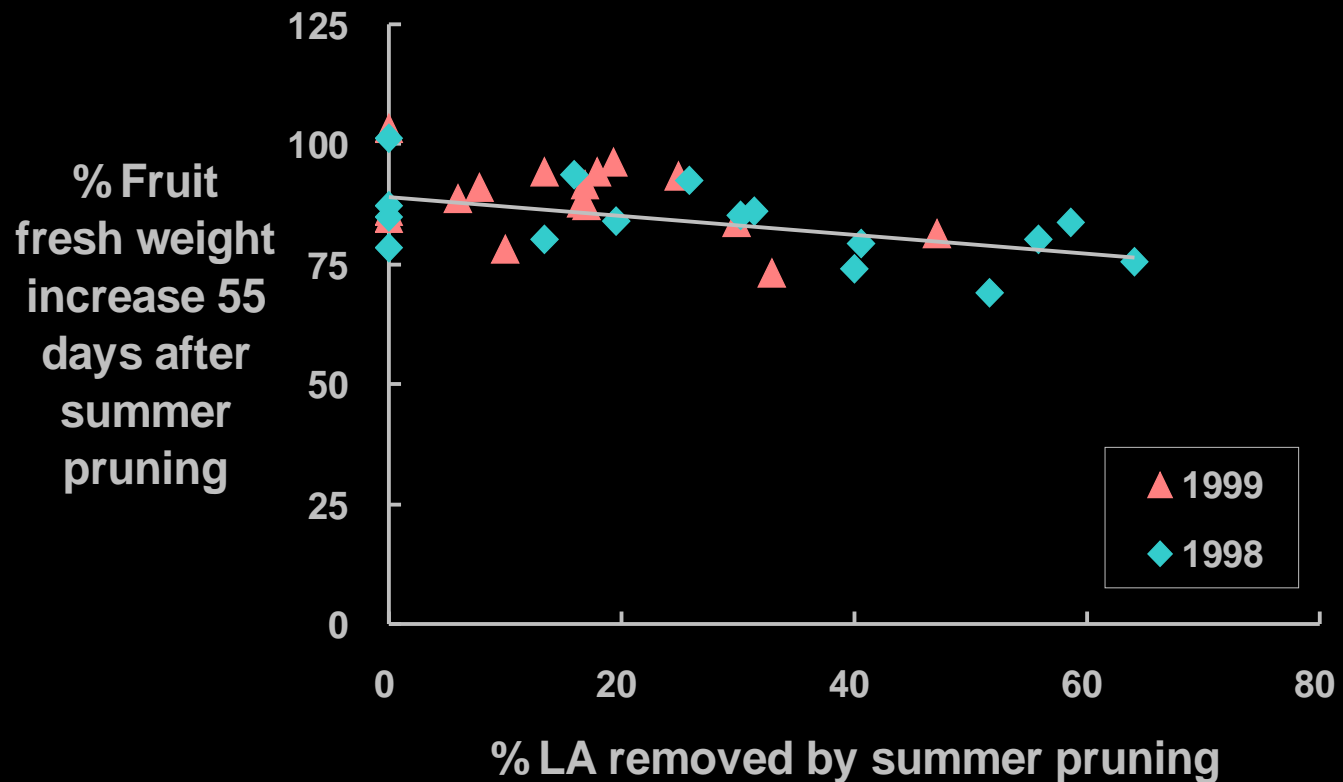


Growth rate

Final fruit weight

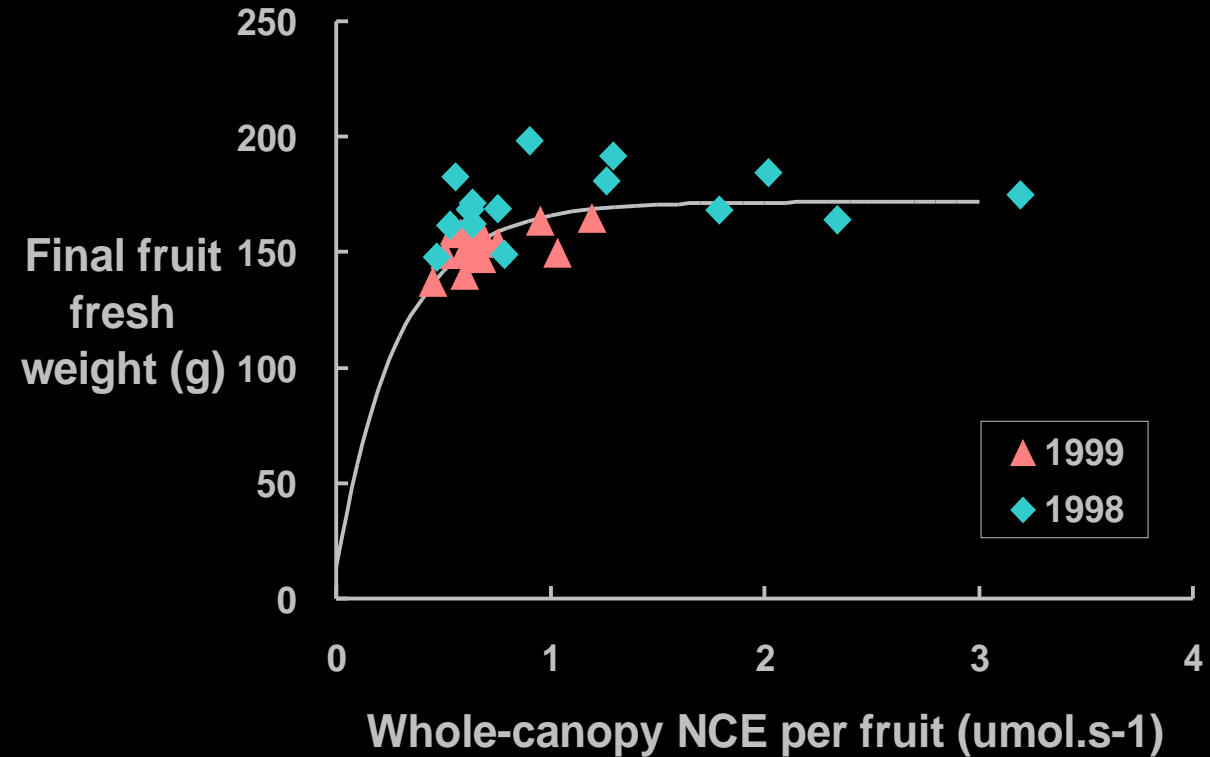
Fruit quality

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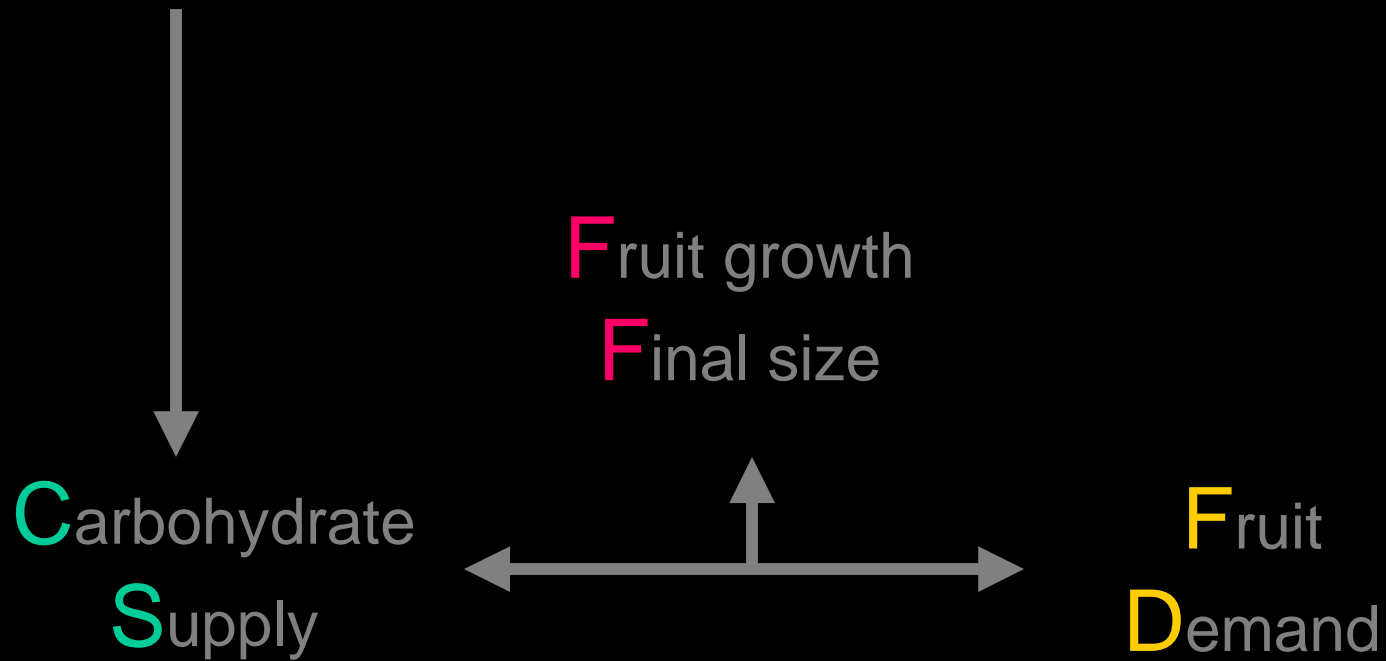




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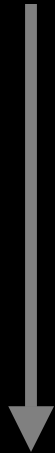
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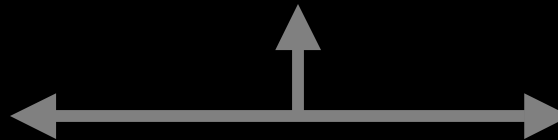


**C**anopy  
**W**ater usage



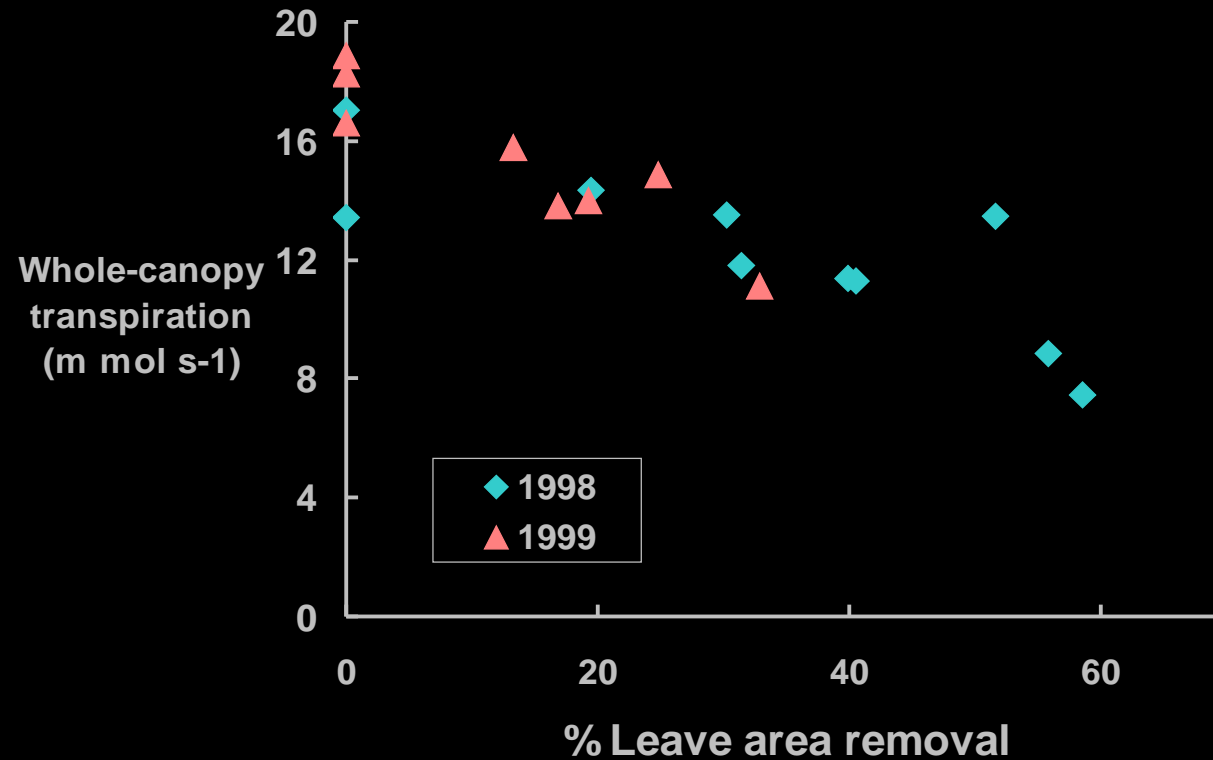
**C**arbohydrate  
**S**upply

**F**ruit growth  
**F**inal size

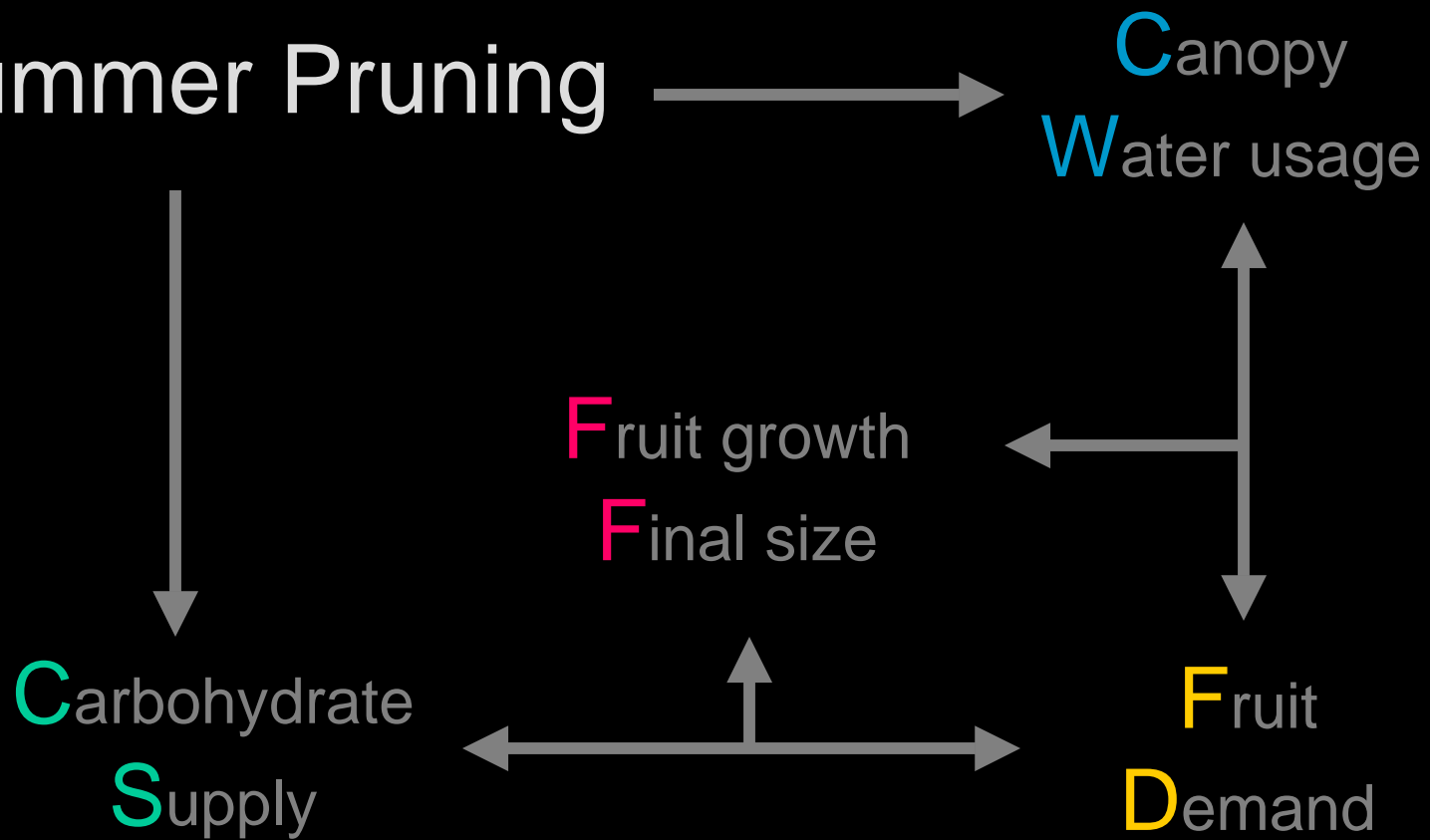


**F**ruit  
**D**emand

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