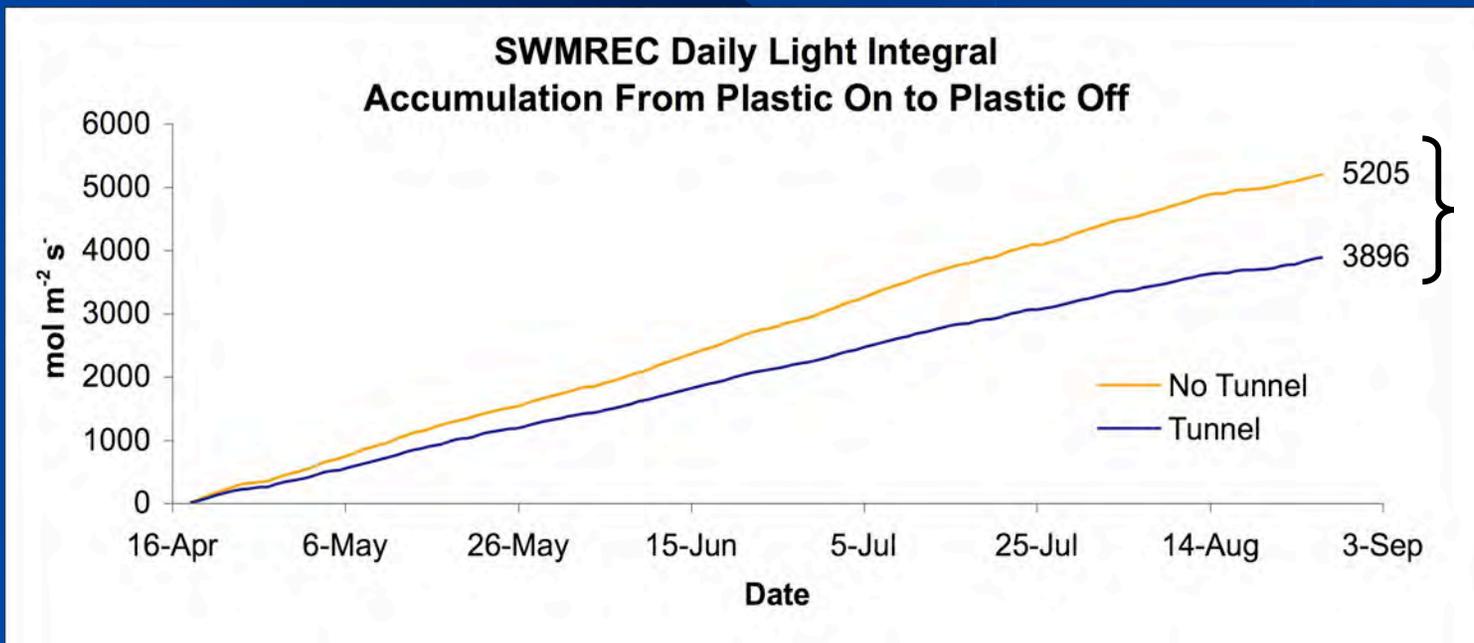
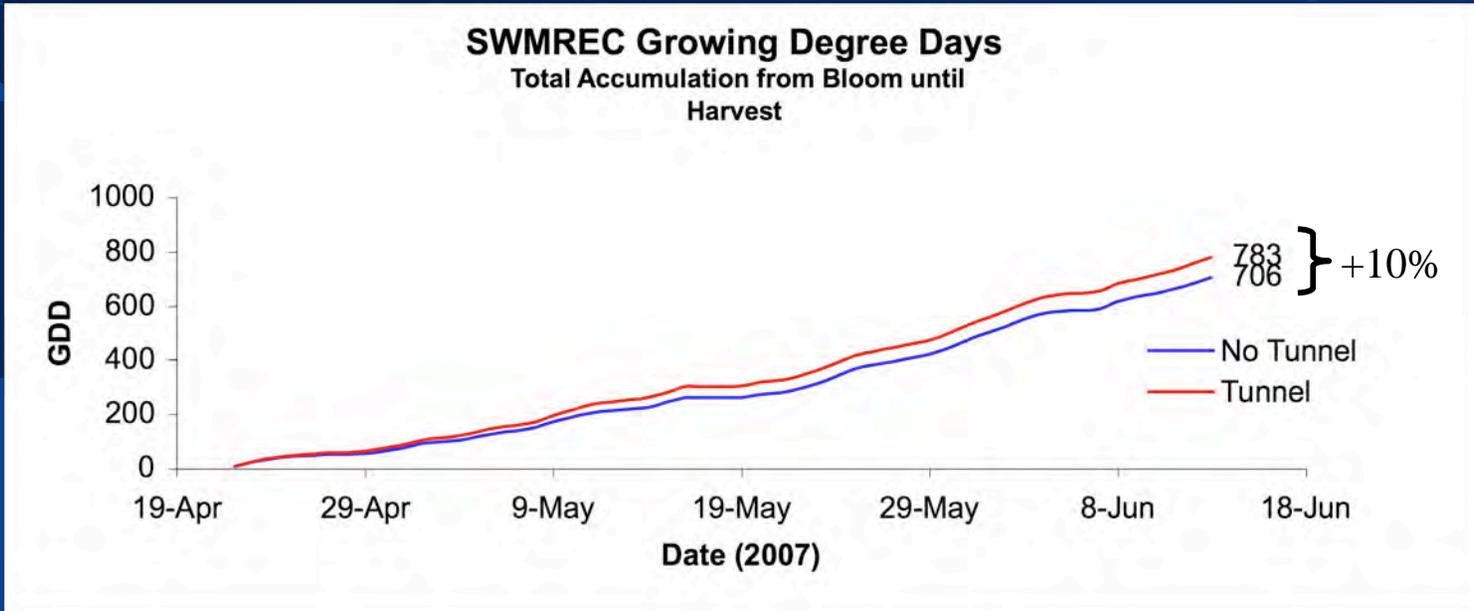


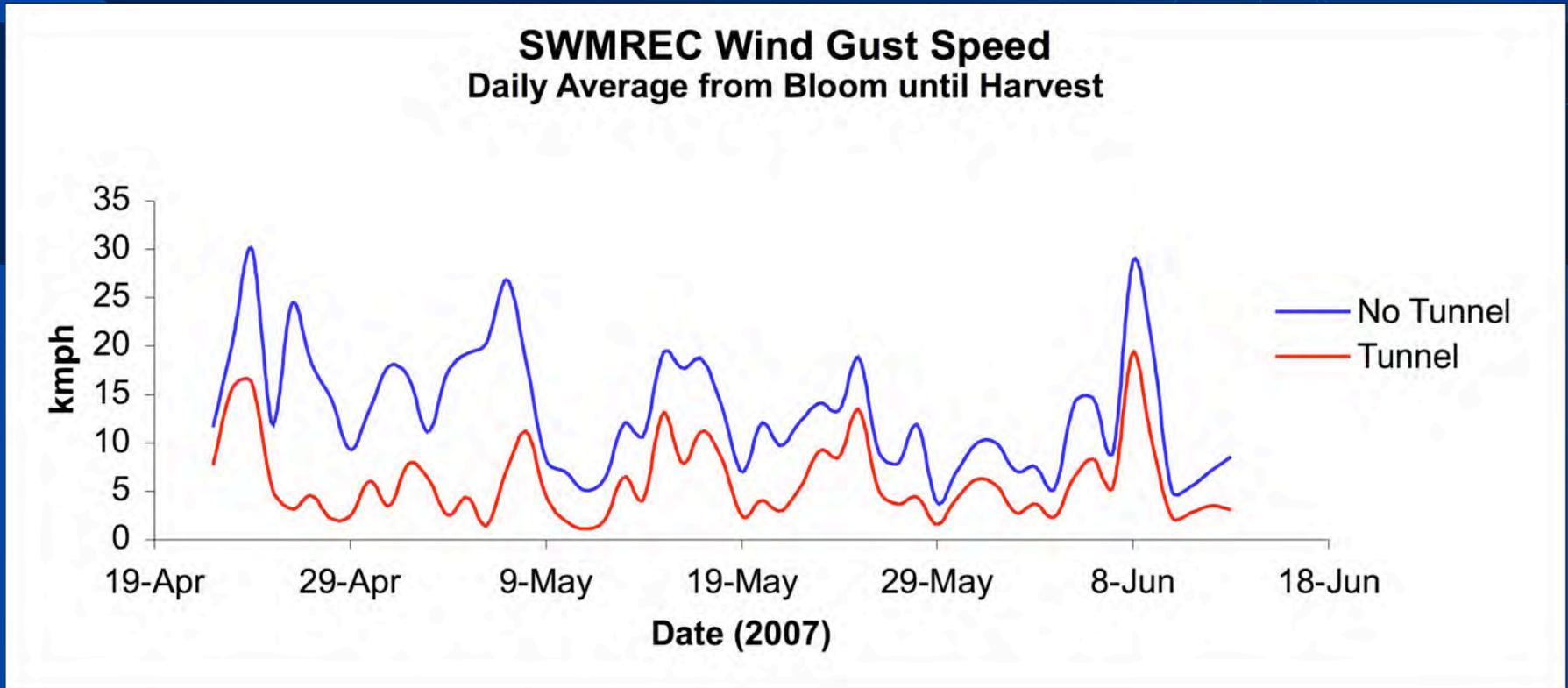
SWMREC: Optimization of Tree Canopy Architectures & Growth



Increased GDD, Reduced PAR



Tunnels Reduce Wind Through the Orchard



The tunnels generally reduced wind gusts during fruiting by 5 to 10 mph

Spring Temperature Management

2006-07: open ends & sides, slight protection from mild frosts

2008: closed ends & sides, daily heat effects, nightly heat loss

2009: closed ends & sides, supplemental heat retention?

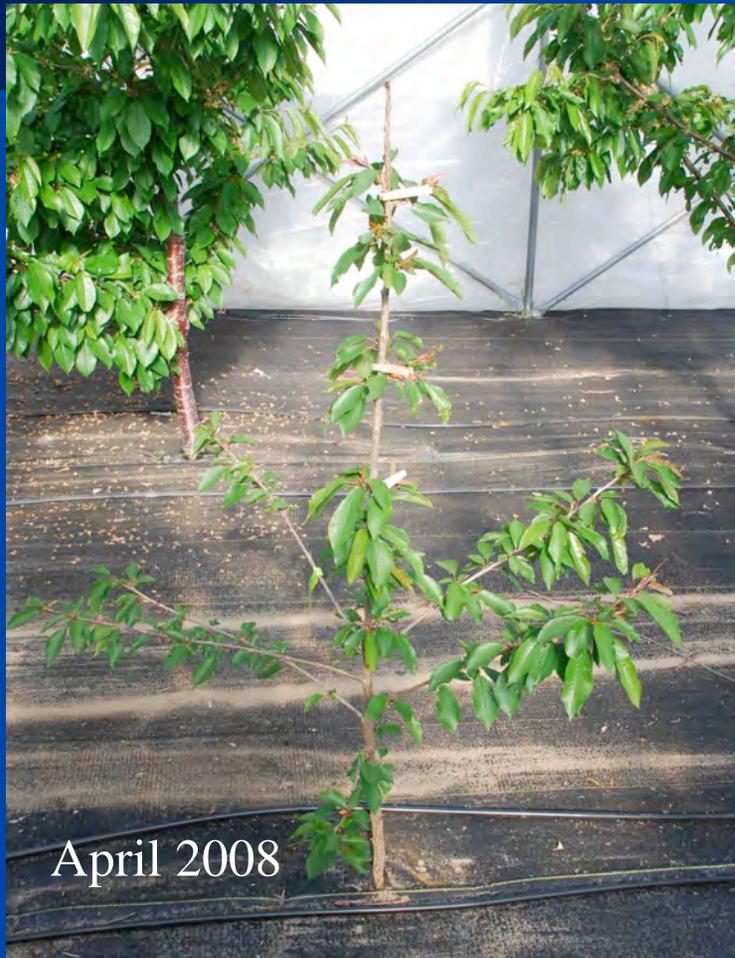


**MSU Tree Fruit
Research**



High Density Sweet Cherry Tree Training

Early tree establishment;
balanced, more horizontal growth



Impact of Season-Long Covers on Growth

Trees are up to 24% taller; leaf s

Trunk girth was 18% sm
then increased by ~35%

Lateral shoot lengt
greater under tunne



Projected Year 4
Fruiting Area

Effect of Reflective Orchard Floor Fabric (Installed in 2007) on Tree Growth



Cultivar / Rootstock	Increase in TCSA (cm ²)			
	Tunnel		No Tunnel	
	Extenday	No Extenday	Extenday	No Extenday
Early Robin / Gi12	33.3	20.0	16.8	11.5
NY 119 / Gi 5	17.2	13.4	18.4	13.4
Rainier / Gi 5	19.7	19.7	15.0	12.2
Skeena / Gi 5	25.2	18.2	18.0	18.1
Ave	23.9	17.8	17.1	13.8

+34%

High Tunnels: Effects on Cropping and Fruit Quality



MSU Tree Fruit
Research

