



# MSU Agriculture Innovation Day

## Focus on Fruit and Vegetable Technologies

### Taking a Narrow View: Precision Stone Fruit Orchards Simplified, Narrow Stone Fruit Canopy Training Improves Fruit Quality and Harvest Efficiency

Fruit ripen more uniformly, with optimal color and sweetness

Harvest labor costs are reduced, as fruit is easier to pick and fewer harvests are required to pick fruit at optimal ripeness

Narrow canopies facilitate potential robotic picking systems that are now under development



### Improves Labor Efficiency, Safety, and Mechanization Potential



“Stub pruning” (late dormant through bloom) simplifies fruit thinning and reduces thinning labor costs

Tasks such as blossom thinning and summer pruning/hedging can be partially mechanized

Narrow canopies facilitate mobile worker platforms that save labor and replace inefficient, potentially dangerous ladder work



College of Agriculture and Natural Resources  
MICHIGAN STATE UNIVERSITY

MSU is an affirmative-action, equal-opportunity employer.

## Impacts Pest and Disease Considerations

Narrow canopies provide better exposure of fruit to protective pest sprays

Exposure to wind-borne bacterial diseases may be increased, so wind breaks and varieties with greater genetic resistance to bacterial diseases should be considered

Enviroweather predictive climate/disease infection models can help growers optimize application timing of bactericides

