



Plastic-based protection systems in organic fruits and vegetables

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Organic fruits and vegetables make up
40% of organic sales



Fabric row covers for frost protection and season extension

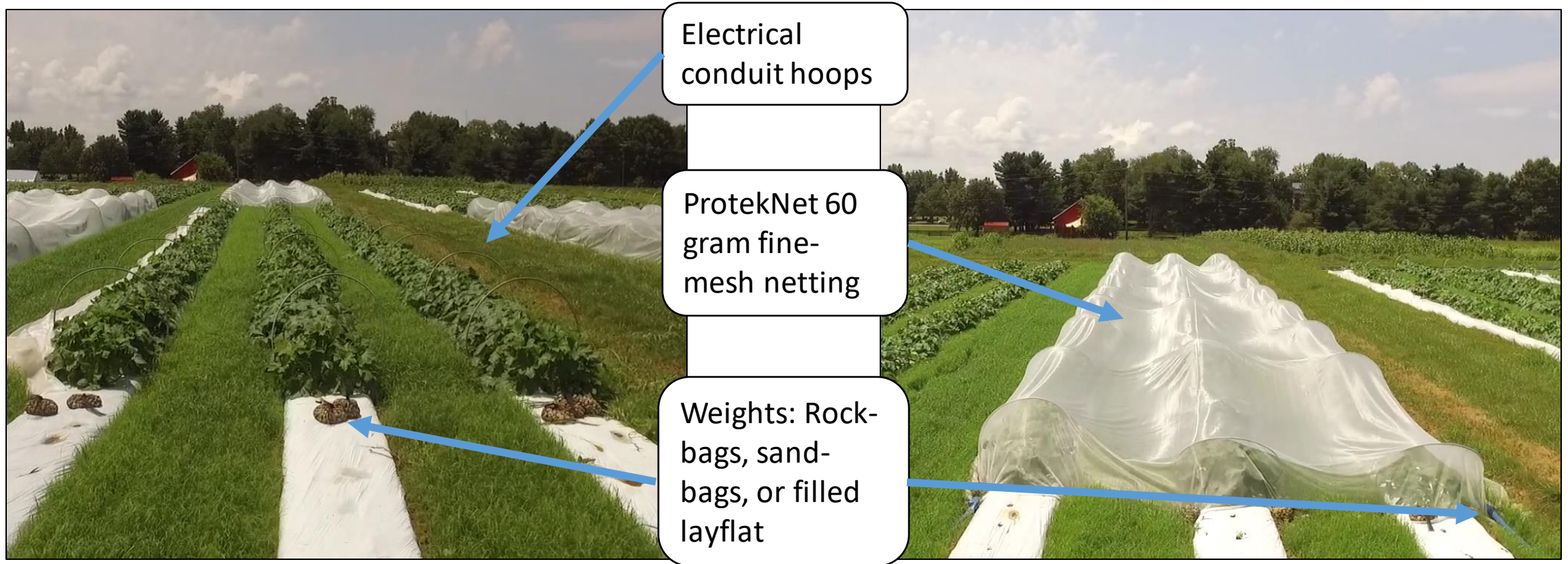


Row cover with short hoops



Floating row cover

Fine-mesh row covers for protection from insect pests



Netting also used to limit bird damage





High tunnels for season extension

Kaiser and Ernst. 2021. UK. CCD-SP-2

Survey of organic growers 2022

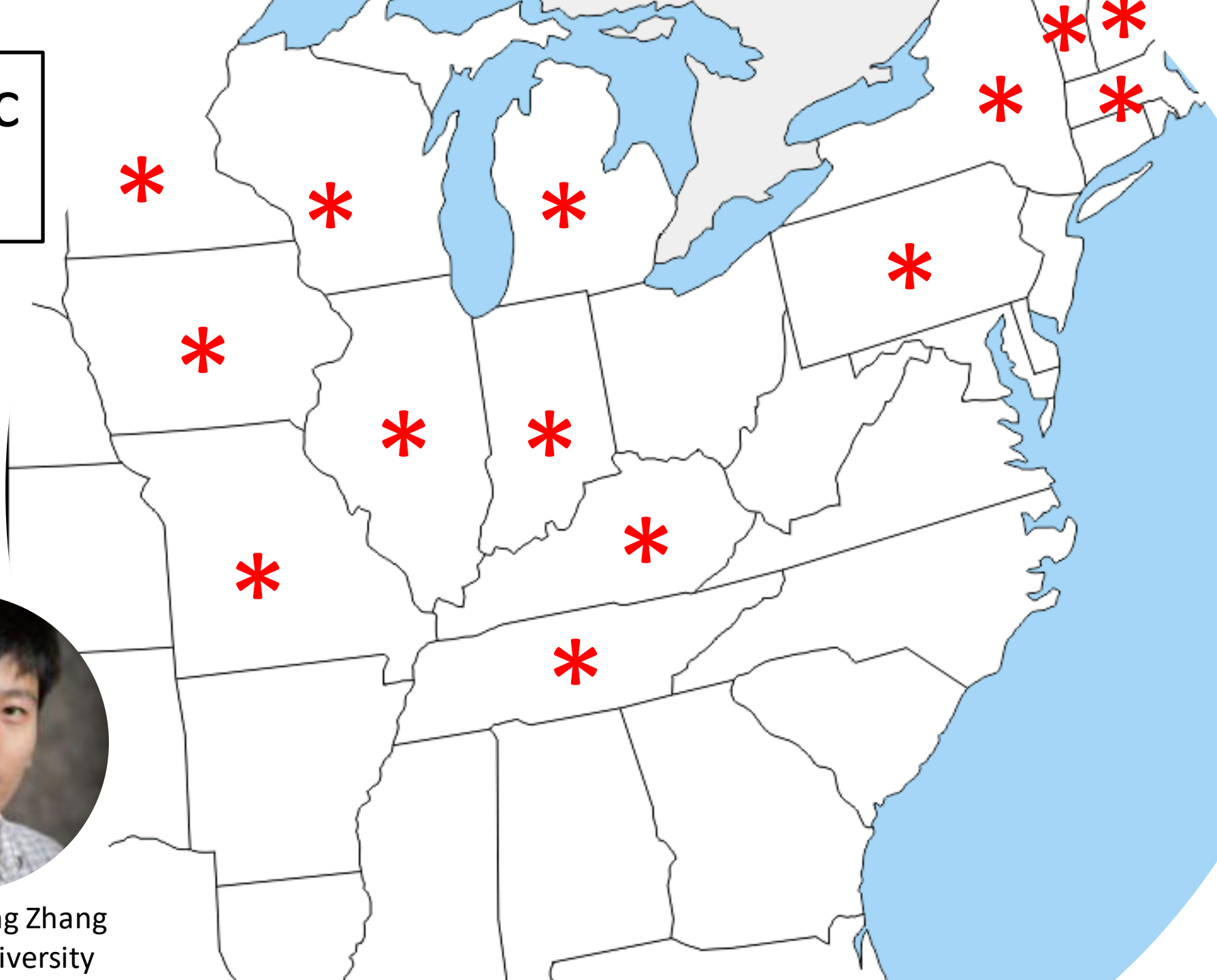
377 responses in
Midwest, Northeast,
and Southeast



Nieyan Cheng
Iowa State University



Dr. Wendong Zhang
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Polyethylene sheets
Season extension

- 70% of organic growers use high tunnels
- 88% of organic growers use row covers



High tunnels

Mesotunnel

Low-tunnel

Current Cucurbit

Row covers

Survey of organic growers 2022

Row covers

Growers agree or strongly agree that row covers:

- Reduce insecticide use - 67%
- Reduce vulnerability to weather – 78%
- Improve product quality -74%
- Improve overall yield -76%



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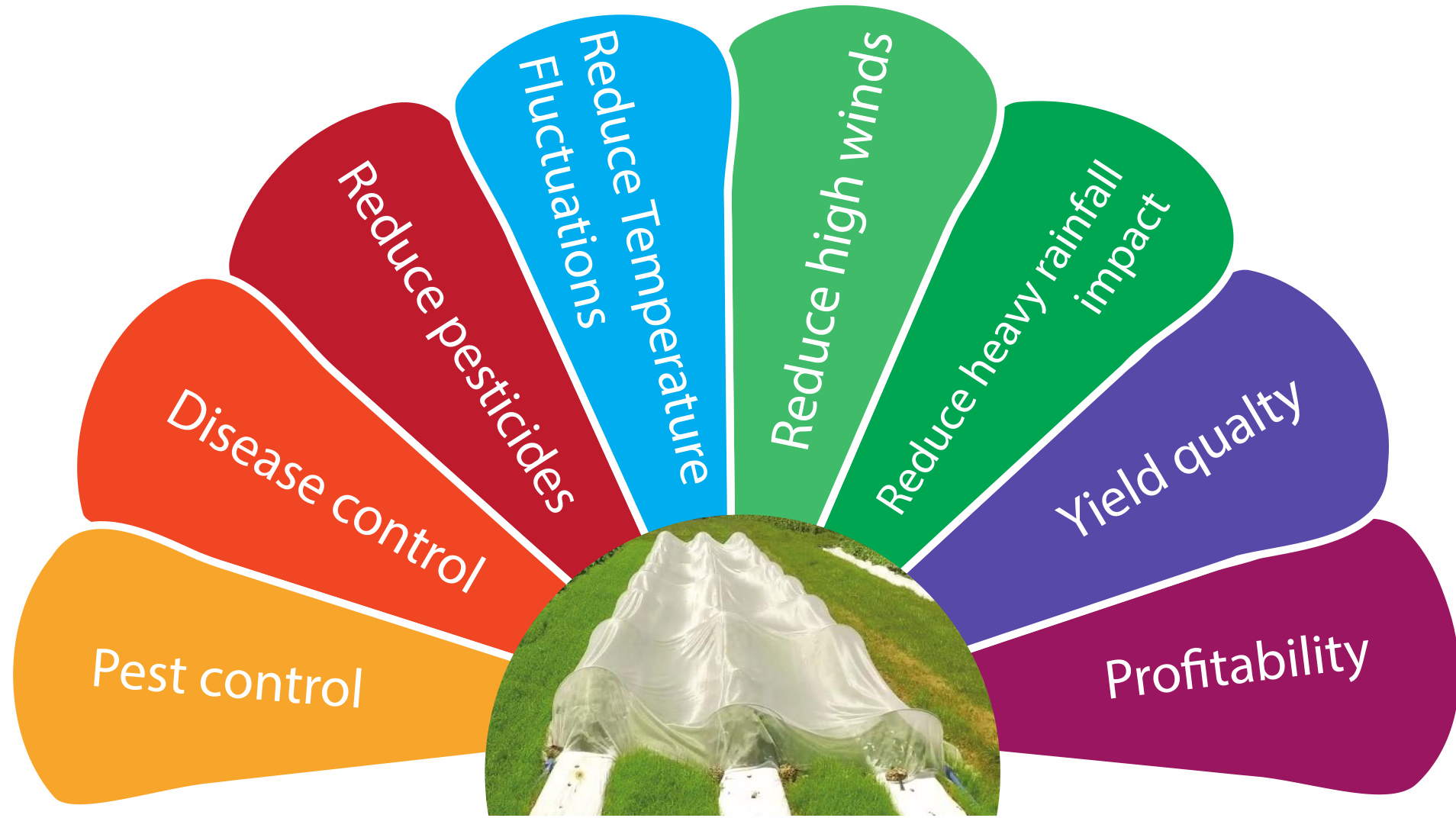
Row cover profitability in organic acorn squash

1-Acre	Organic pesticides	Row cover
Selling Price (\$)	\$ 1.77	\$ 1.77
Total Cost (\$)	\$ 4,361	\$ 5,111
Revenue (\$)	\$ 15,926	\$ 25,073
Profit (\$)	\$ 11,565	\$ 19,962

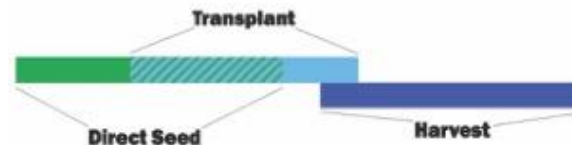
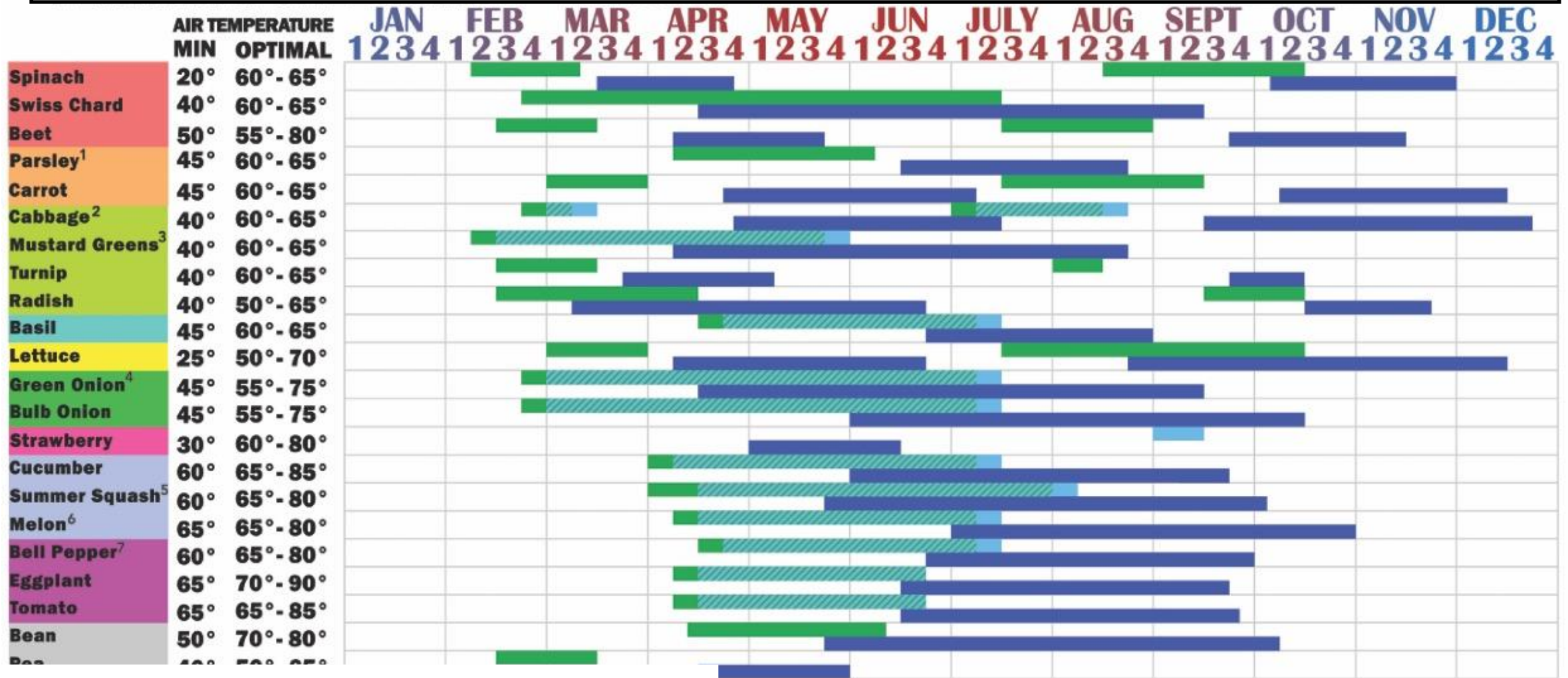
*Preliminary results, not all field prep costs included, some costs are annualized

Fiske, Gonthier,
Cheng, Zhang
unpublished
Also see Nelson
et al. 2023.
HortTechnology

Multiple benefits of protected systems address organic grower critical needs



High tunnels and row covers vital for local/organic markets



Questions!

The Current Cucurbit

IPM strategies for cucurbit organic growers for wilt disease and weeds management.

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