

Update on Strawberry Diseases in California

Steven Koike

University of California

Cooperative Extension



Charcoal rot

Macrophomina



Macrophomina



Mont.



SCruz





Fusarium wilt

**Fusarium oxysporum
f. sp. fragariae**



Diagnosis



?

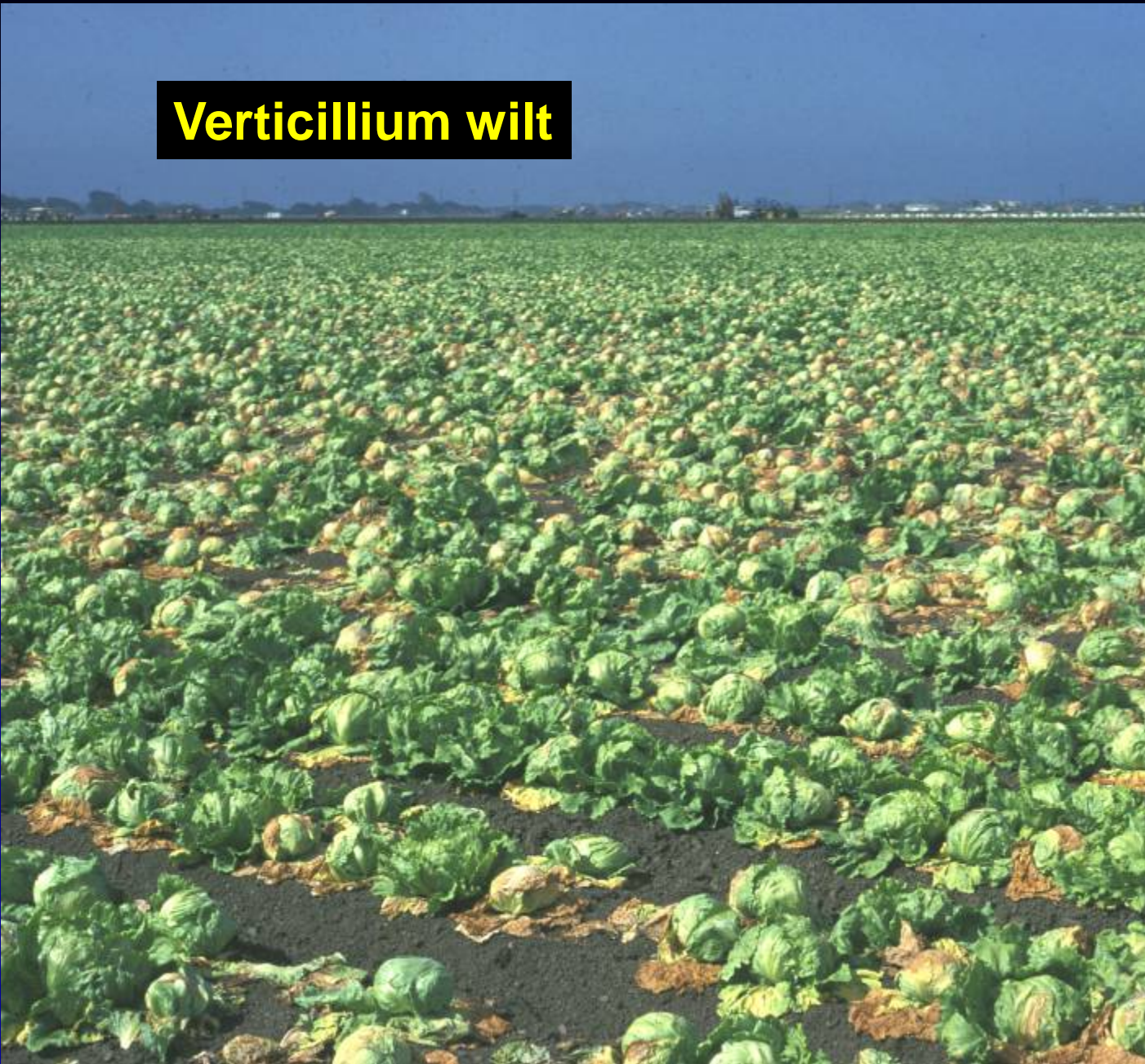


?



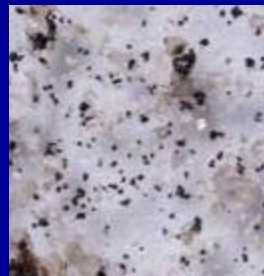
**Verticillium
outbreaks:
2011: yes?
2012: no**

Verticillium wilt



Management: soilborne diseases

- **Site selection:** avoid infested fields.
- **Crop rotation:** plant non-hosts.
- **Pre-plant fumigation:** still useful.
- **Sanitation:** don't move infested mud, contaminated equipment.
- **“Resistance”:** use tolerant (?) cultivars.
- **Production:** reduce plant stress.



Inoculations: *Macrophomina* isolate 3



Albion

Ventana

Seascape

Cultivar comparisons

| <u>Cultivar</u> | <u>Macroph.</u> | <u>Fusarium</u> |
|-----------------|-----------------|-----------------|
| Chandler | resistant | susceptible |
| Seascape | resistant | susceptible |
| Monterey | susceptible | resistant |
| San Andreas | susceptible | resistant |
| Ventana | susceptible | resistant |

* Resistant ≠ Immune

Leaf blotch



Angular leaf spot





Bolda/Koike



Powdery mildew

Botrytis



Bolda/Koike

Rhizopus



Mucor











NO PARKING
IN FRONT OF
BUS STOP

NO PARKING
IN FRONT OF
BUS STOP

