

AUSTRALIAN SYSTEMS APPROACH TO DISEASE MANAGEMENT

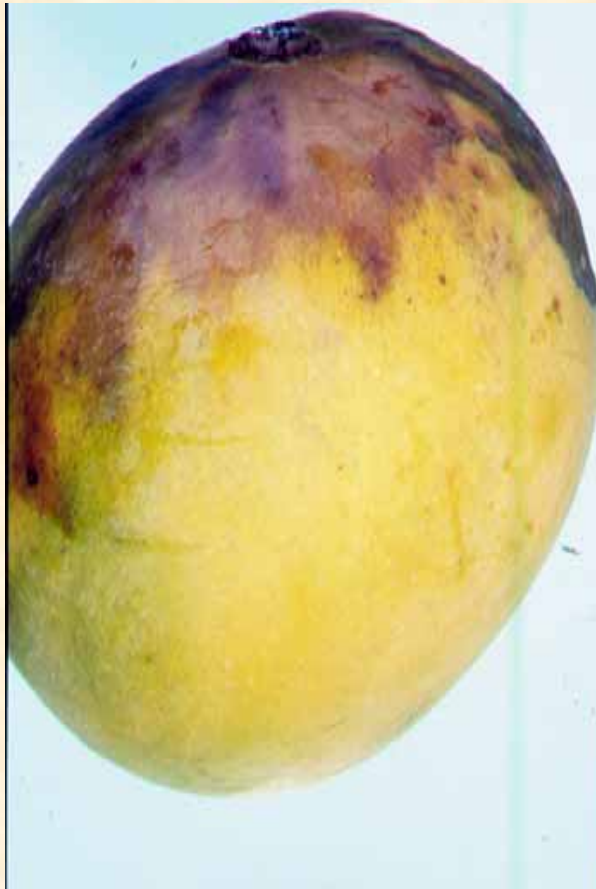
*Dr Chrys Akem and Mr Tony Cooke
Plant Pathologists, DPI&F*



The Major Problems - Anthracnose



Another Major - Stem End Rots

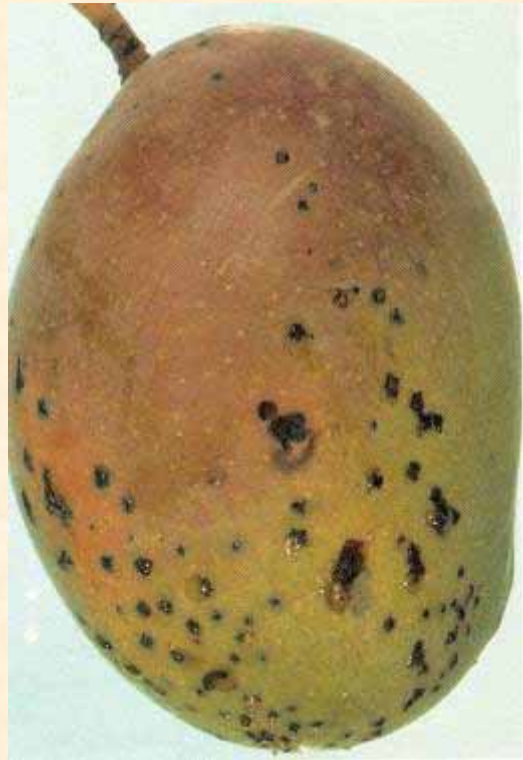


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The Minor Problems



Bacterial Black spot



Powdery mildew



Mango scab

More minor problems

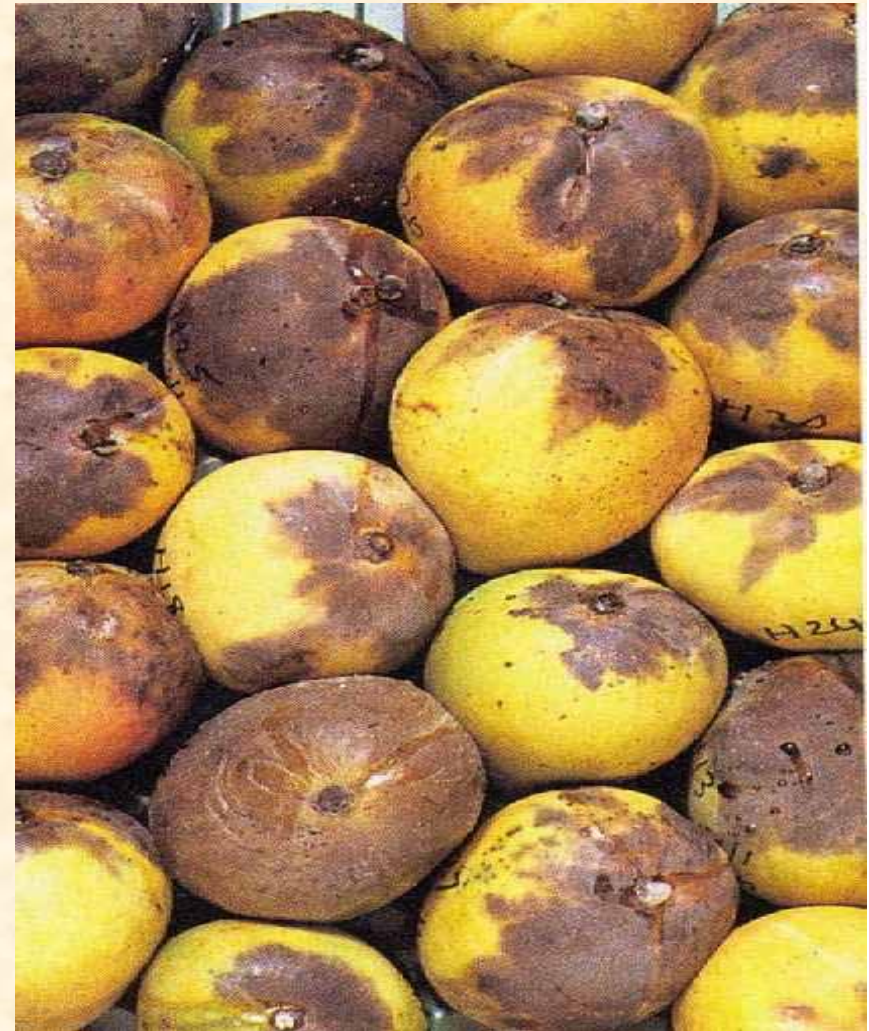


Tree Dieback



More fruit problems

Taking on the Two Major ones



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Expected Seasonal Operations

In the Field

- Pruning
- Fertilization
- Irrigation
- Spraying

In the Shed

- Washing
- De-sapping
- Dipping/Spray
- Sorting/Pack



Field Fungicide Sprays



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Postharvest Treatments



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The challenges persist



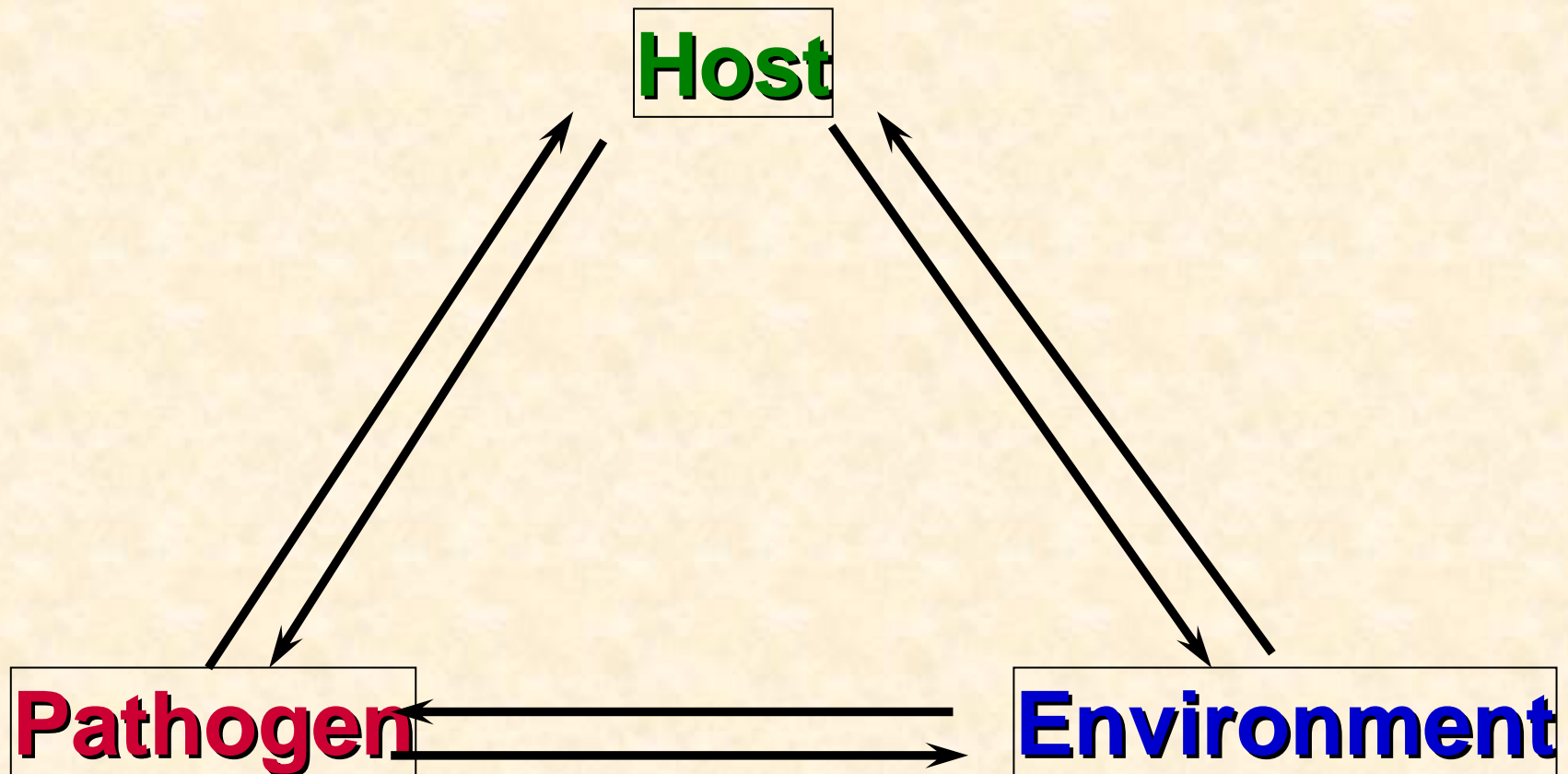
Delivery Market Dispatch + 4 days at 20°C - 8/12/00

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A New Approach Needed



Resistance Screening

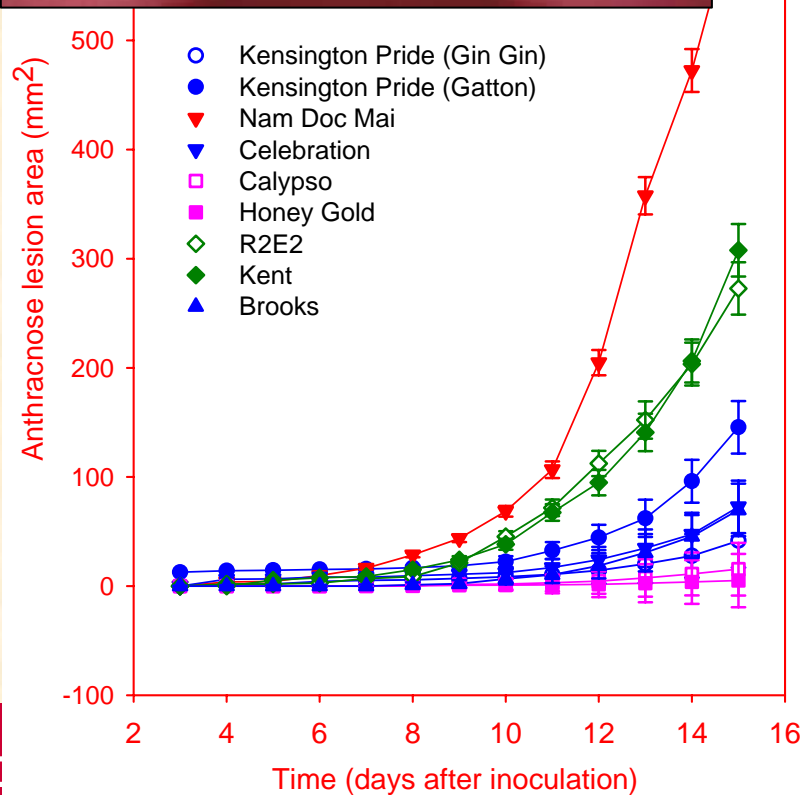


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Reaction of Australian mango varieties to postharvest anthracnose



Highly susceptible

- Nam Doc Mai

Susceptible

- R2E2
- Kent

Moderate

- Kensington Pride
- Celebration
- Brooks

Highly resistant

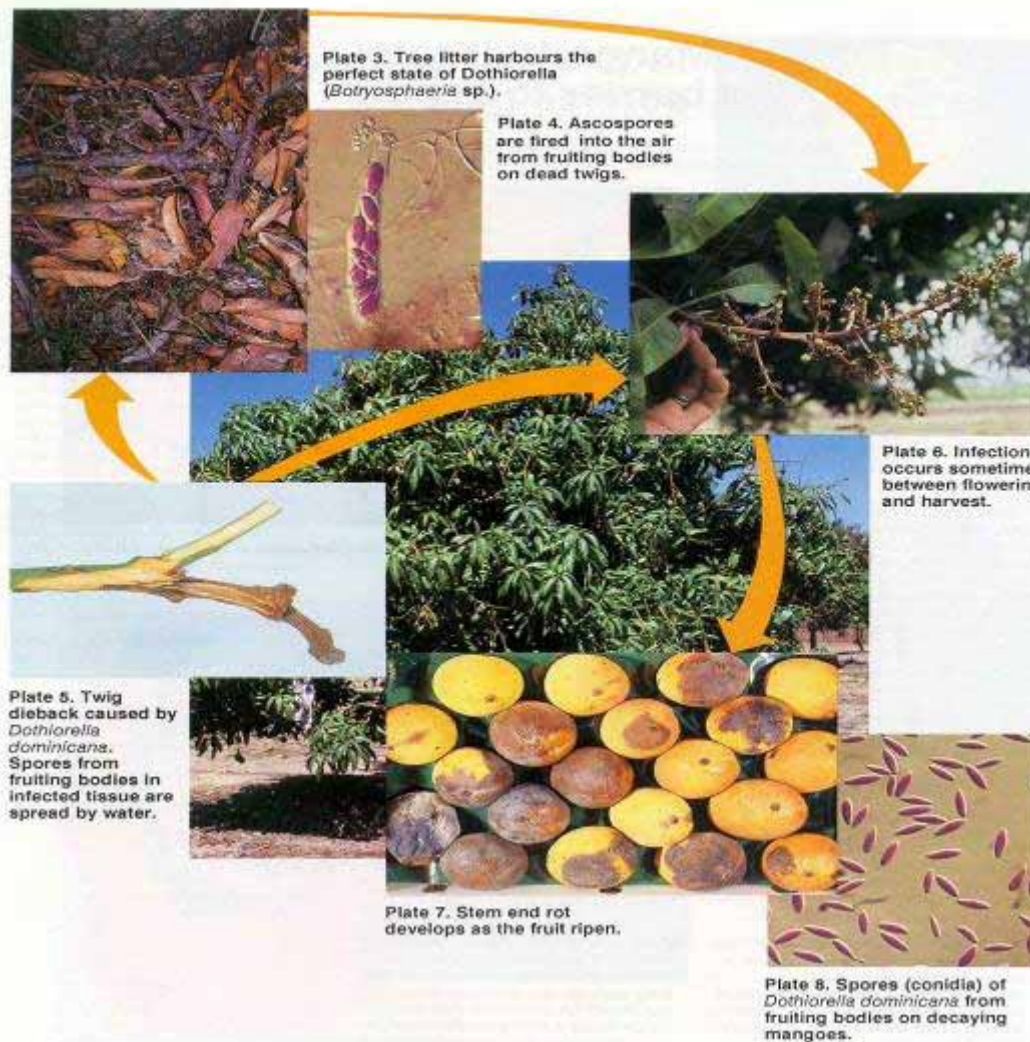
- Calypso
- Honey Gold



SER of Mangoes

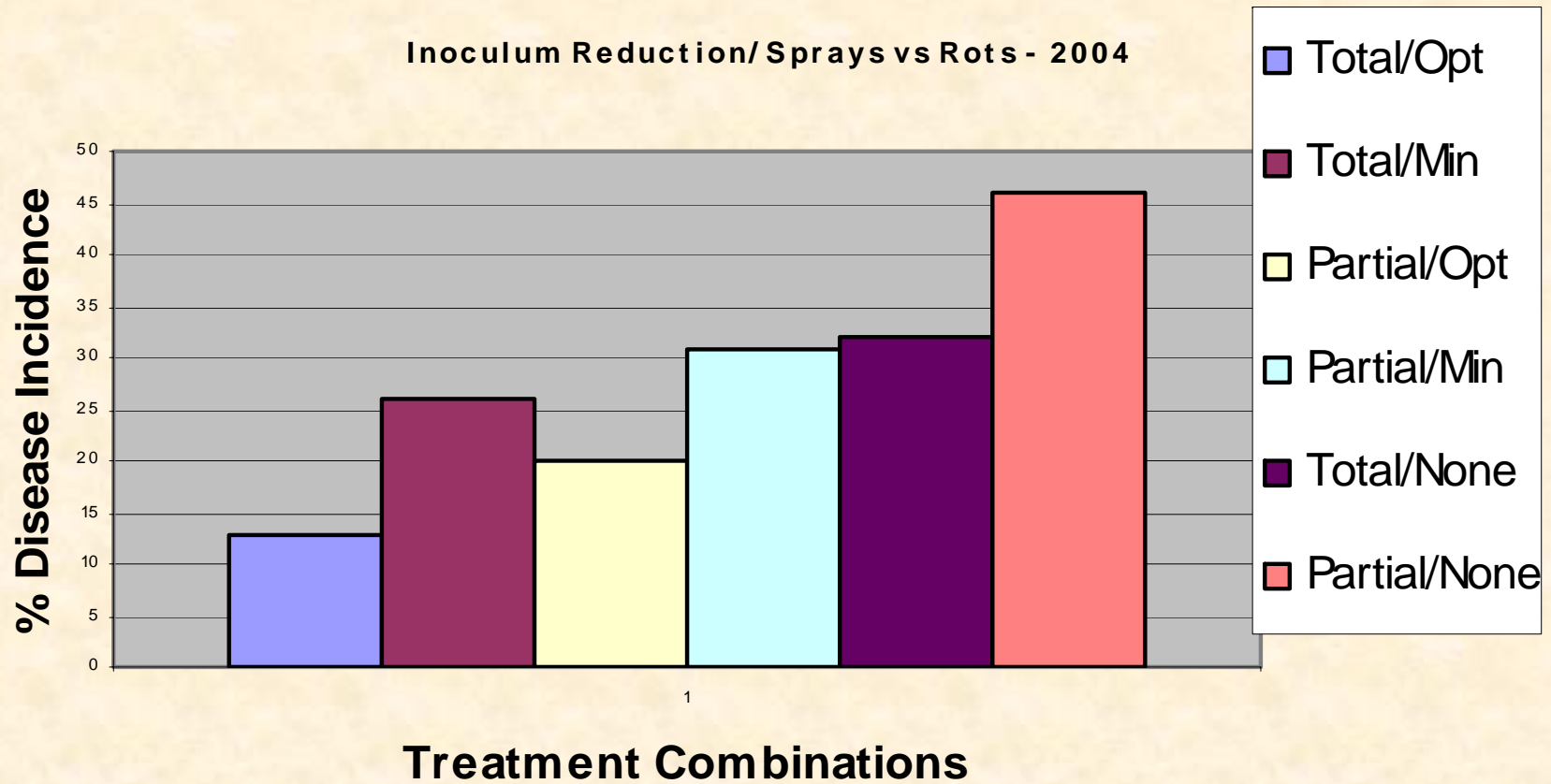


Mango stem end rot life cycle

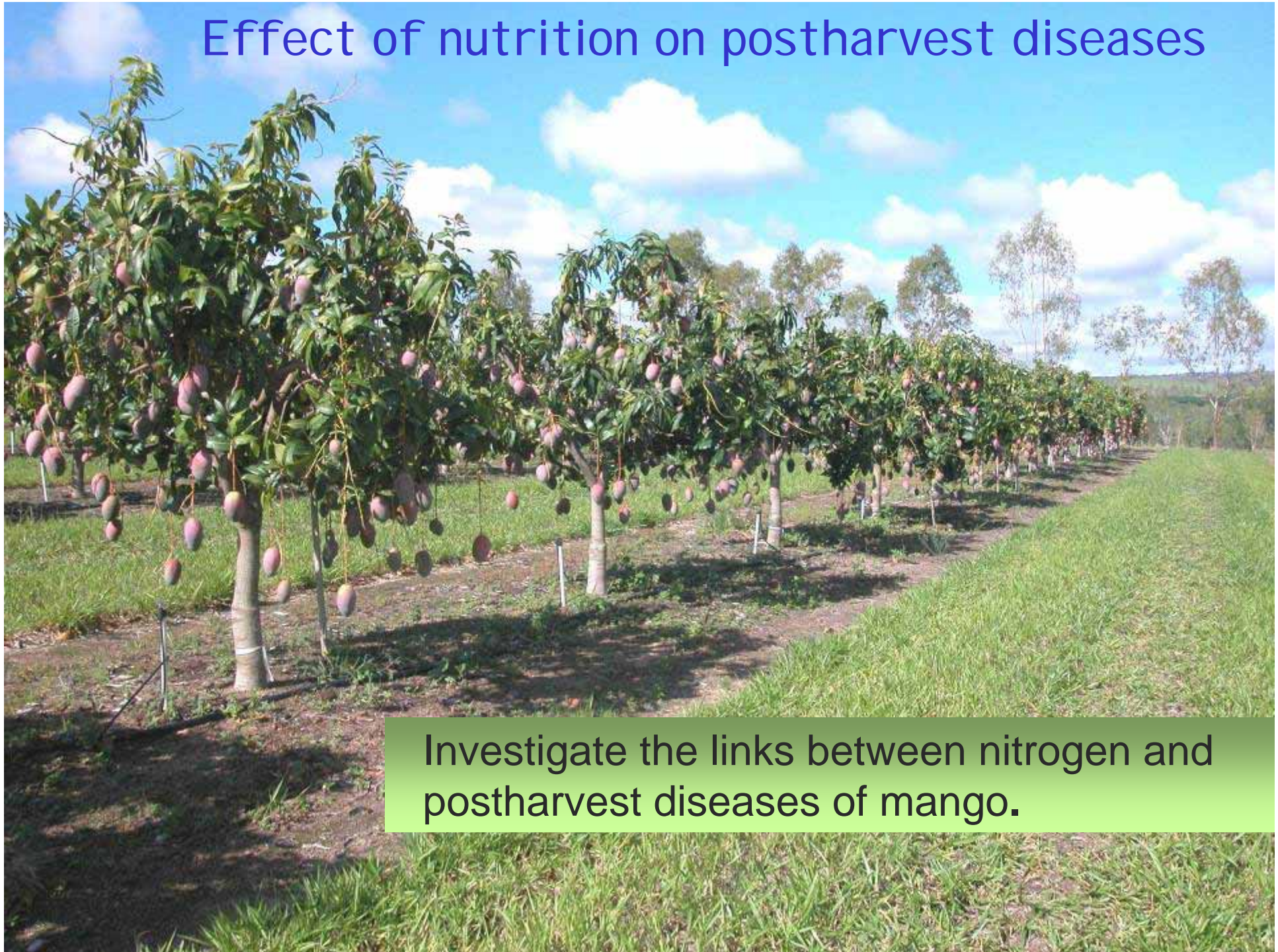




Inoculum Reduction/Sprays vs Rots



Effect of nutrition on postharvest diseases



Investigate the links between nitrogen and postharvest diseases of mango.

Anthracnose Severity



- Applied nitrogen rates above 292 g N tree⁻¹ significantly increased anthracnose incidence and severity

Alternatives to fungicides

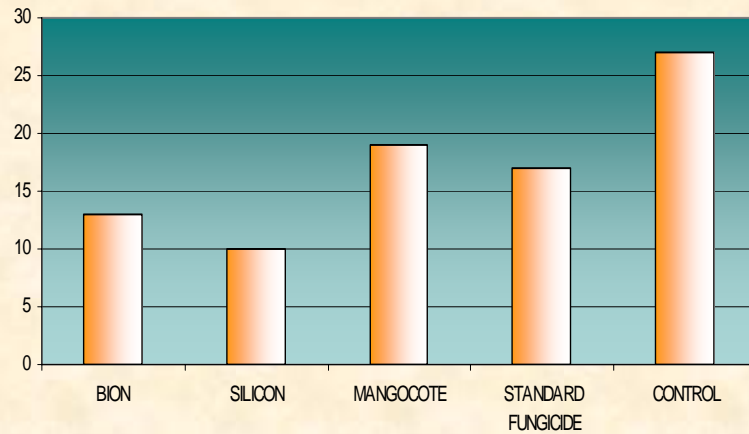
Activators – Under evaluation

- Silicon (Kasil)
- Kaolin products (Mangocote)
- Bion

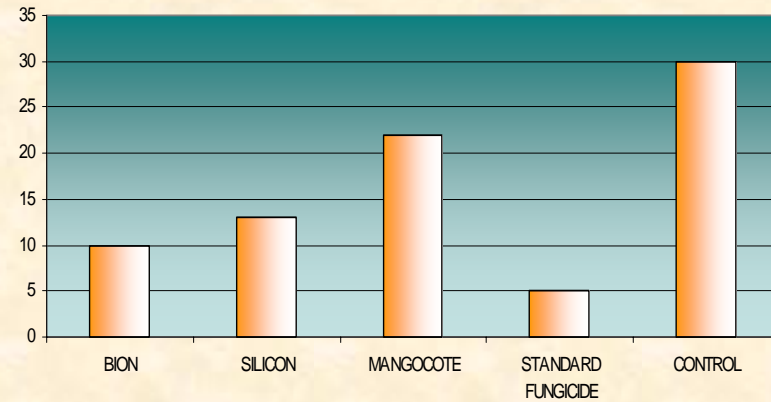


Effect of Activators on Rots

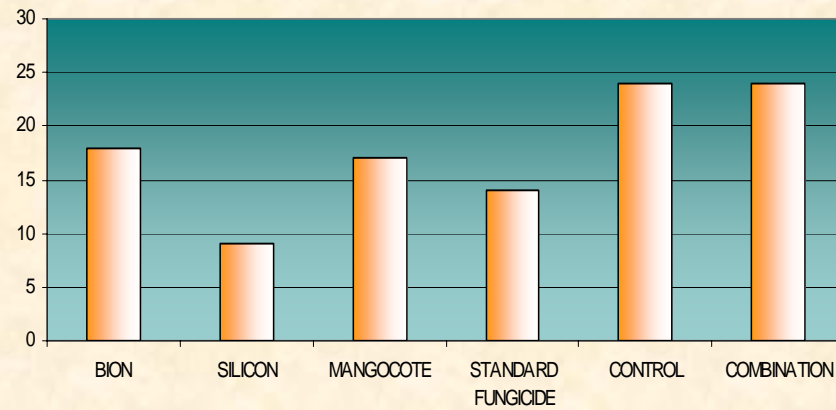
Percent Fruit Rots in R2E2 Mangoes - 2005



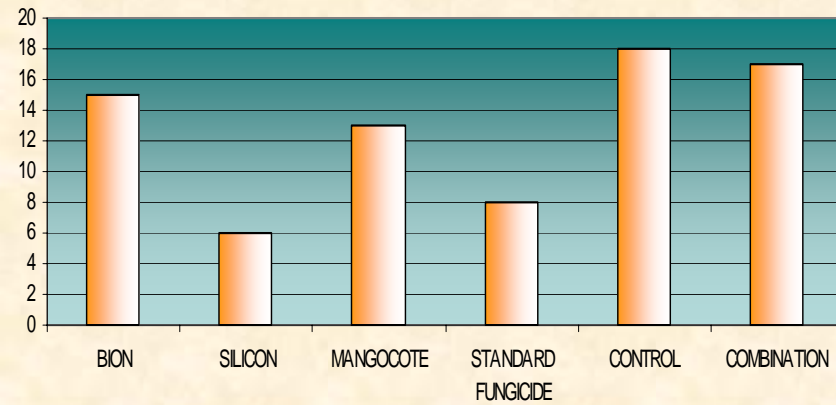
Percent SER in R2E2 Mango Fruits - 2005



Percent KP fruit with rots



Percent KP fruit with SER, KP



In Summary

- **A Holistic Systems Approach**
 - **Field Activities**
Integrated Crop Management
 - **Post harvest - Shed to Market Activities**
Supply Chain Solutions





Thank you

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