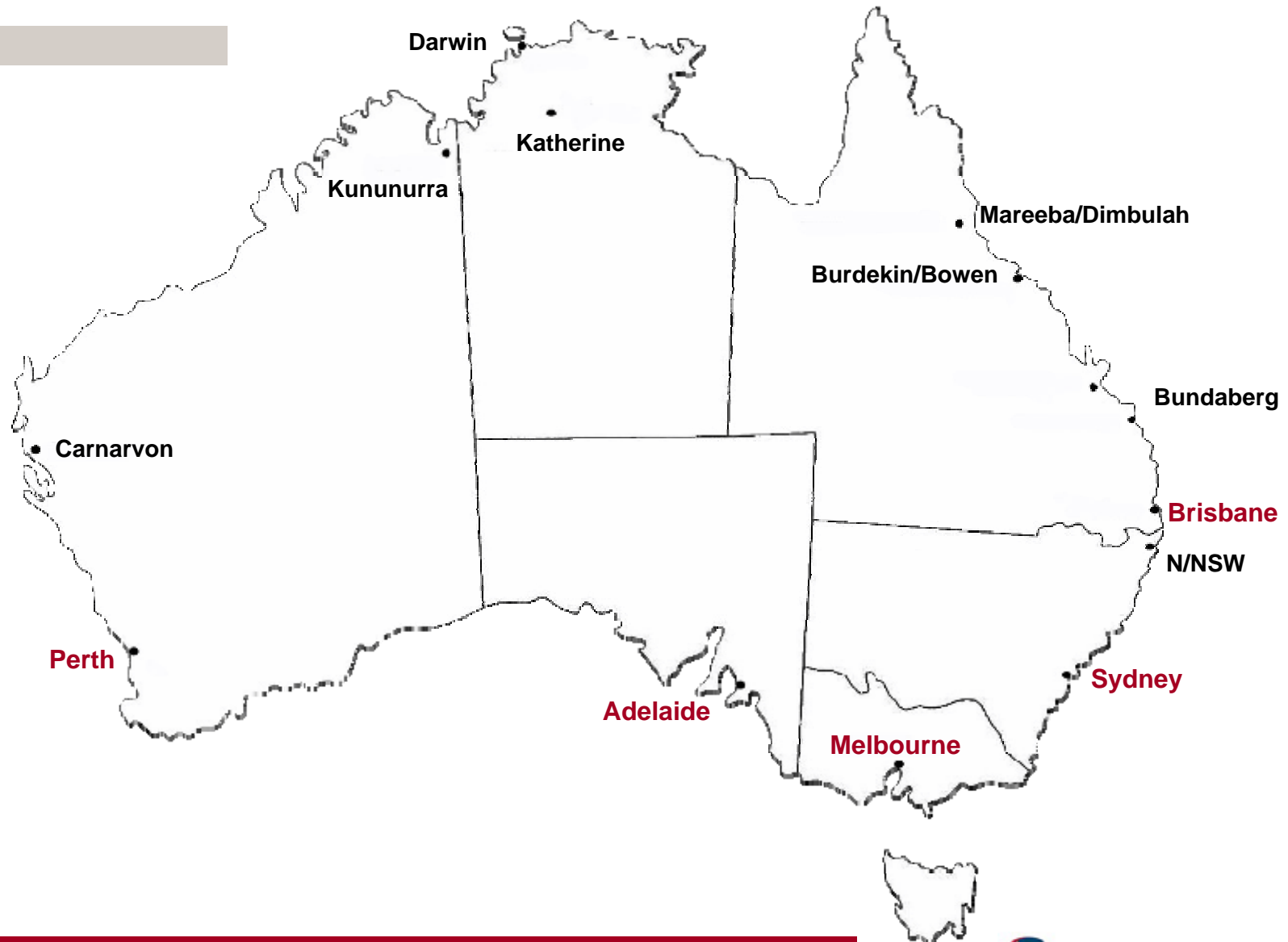


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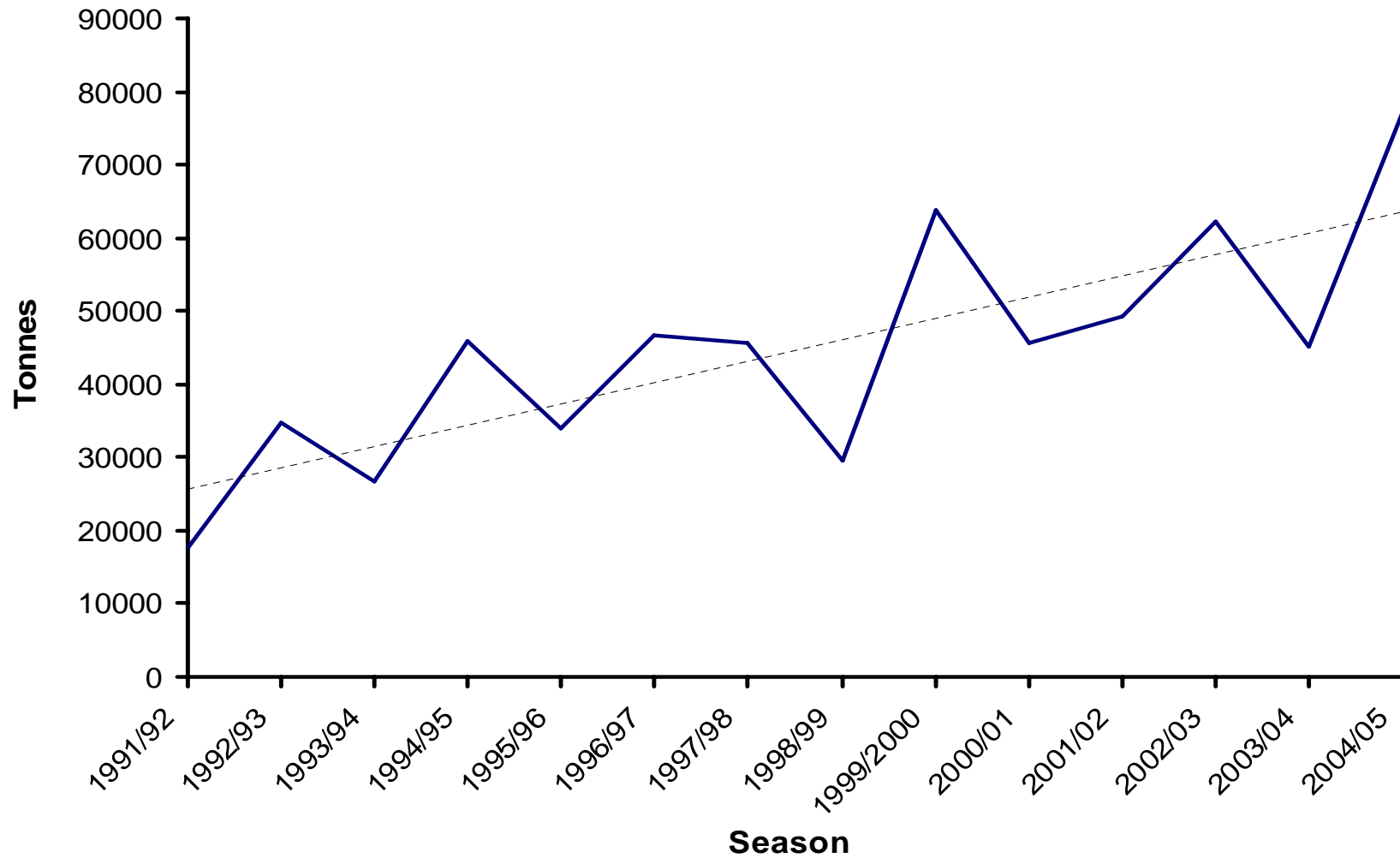
# Planning RD&E programs for the Australian Mango Industry

**Mr. Rowland Holmes**  
Mr. Bob Williams & Mr. Terry Campbell

# Australian mango production



# Australian mango production



# Orchard productivity

District	Ha	Tons 04/05	Tons/ha
<b>Mareeba</b>	<b>3720</b>	<b>26,250</b>	<b>7.1</b>
<b>Burdekin</b>	<b>2670</b>	<b>24,500</b>	<b>9.2</b>
<b>Bundaberg</b>	<b>1350</b>	<b>4060</b>	<b>3.0</b>
<b>NT</b>	<b>8000</b>	<b>18,900</b>	<b>2.4</b>
<b>WA</b>	<b>1890</b>	<b>3094</b>	<b>1.7</b>

# Scoping of a National Better Mangoes Project

**MGO4005**

# Methodology

- **Convergent interviewing of mango managers**
- **Identify likely changes to current systems**
- **Applicability of the Better mangoes process**
- **Expert panel review**
- **Facilitate panel of R&D providers to develop projects**



# Convergent interviewing

- **Use focus group in Burdekin to check and develop questions.**
- **One on one discussions with representative samples in other regions.**
- **Use wise interviewers to ask questions and interpret the results**
- **Look for areas of agreement and disagreement**

# Results

- **Is there Uniformity in the way mangoes are handled?**

**NO**

- **Techniques vary widely with differences between regions, Better Mangoes impact, transport times and fruit ripeness**

# Depends on

- **Export v's Domestic**
- **Involvement with Better Mangoes**
- **Relationship with wholesaler**
- **Level of control**
- **Distance to market**
- **Time in season**
- **Risk of delay**
- **Coolroom capacity**

# Areas for Improvement

- **Wholesaler expertise in ripening fruit**
- **Ripening facilities**
- **Feedback and trust from market**
- **Control of Maturity**
- **Use rail containers**
- **Benchmark fruit performance**
- **Uniform product specs**

# Suggestions

- **Continued Access to information products and services growers and wholesalers Best practice manual.**
- **Greater communications within supply chain**
- **Benchmark fruit performance using SLI**
- **Options for areas with longer transport times eg using staging posts or in container ripening using BM approach.**
- **Recommendations for other varieties.**

# Expert Panel Evaluation

<b>Opportunities</b>	<b>Estimated Cost</b>	<b>Likely Impact</b>	<b>Project influence</b>
<b>Better Mangoes in the Top End</b>	<b>Medium</b>	<b>4</b>	<b>4</b>
<b>Reprinting the Better mangoes guides</b>	<b>Low</b>	<b>3</b>	<b>5</b>
<b>Communication of weekly statistics of fruit</b>	<b>Medium</b>	<b>4</b>	<b>3</b>
<b>Fine tuning of systems for the Queensland industry</b>	<b>Medium</b>	<b>4</b>	<b>3</b>
<b>Development of new systems logistics</b>	<b>V. High</b>	<b>4</b>	<b>4</b>

# Mango R&D review

- **Conduct an analysis of mango production**
- **Establish baseline data of current production practices and skill levels**
- **Identify issues of mango production with the greatest potential for improvement**
- **Develop research and investment plan for the potential issues**

# Data collection

- **Benchmarking survey**
  - Covering aspects of pre & postharvest management
- **Extraction workshops in 6 regions**
  - Orchard Management
  - Harvesting Practices
  - Packaging Shed Practices
- **Research reviews**
  - What research had been done
  - Where were the gaps

# Analysis of production practises

- **Production practises**
  - Orchard Management
  - Harvesting Practices
  - Packaging Shed Practices
  
- **Focus on productivity impacts**
  - Costs
  - Yield
  - Fruit Quality

# Critical Targets

- **Increased Productivity**
  - Increased kg/ha
- **Intended Markets**
  - Processing
  - Extended Shelf Life
    - 30 to 45 days (from packaging- sea freight export)
    - 15 days (from packaging- desired normal practice)
  - Market Access constraints
- **Cost/unit**

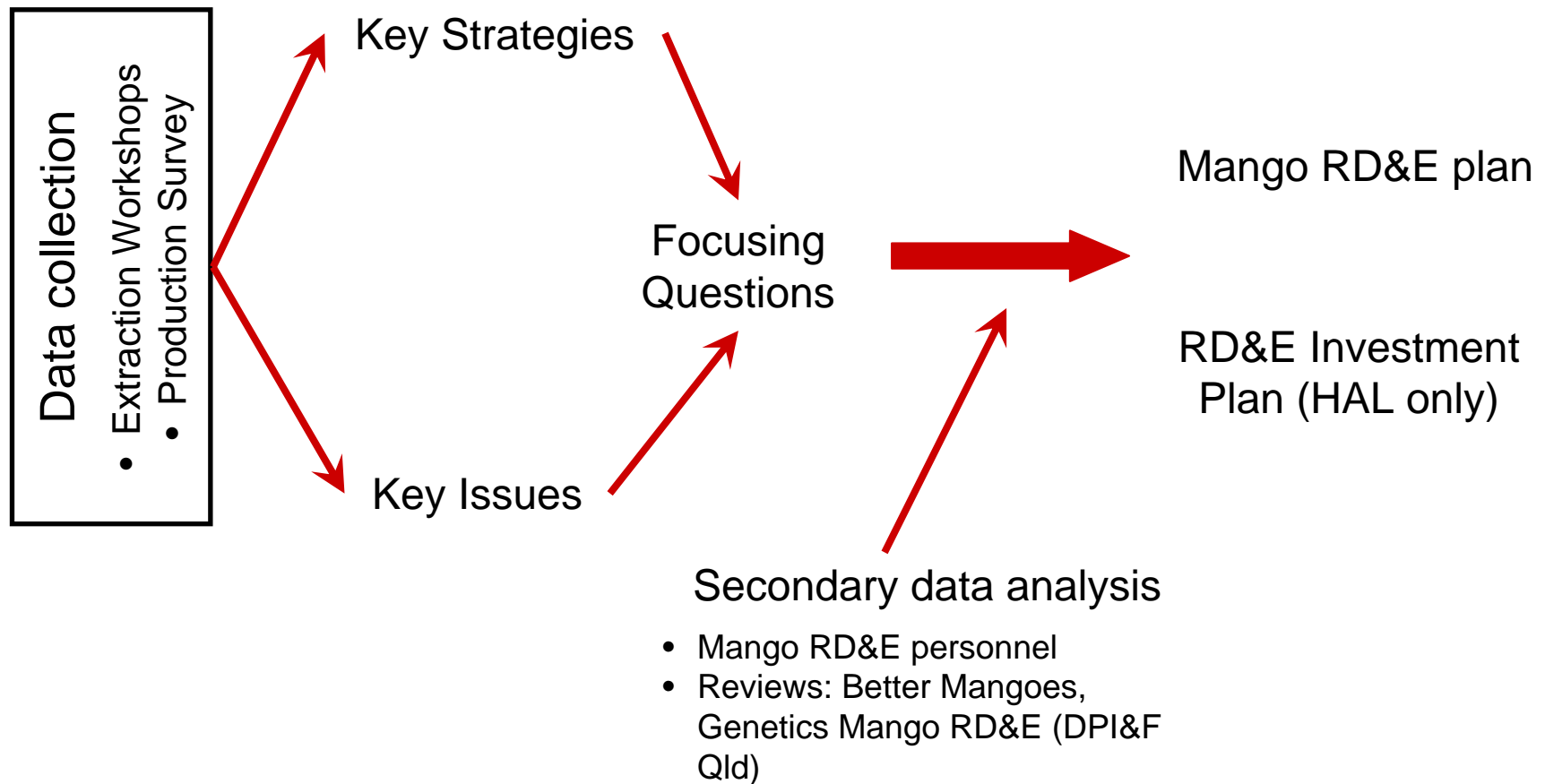
# Orchard Management - Nutrition

- **What are the optimum nutritional requirements for mango (by region and variety), to achieve maximum yield, fruit quality and fruit shelf life?**
  - Timing, Amounts, Application methods
  - Pollen viability, Fruit quality, Lenticel spotting, Disease levels

# Impact analysis

- **Analysed the key orchard management areas**
  - Percentage cost of production
  - Impact on fruit quality
  - Impact on yield
  - Potential improvement from RD&E
  - Need to improve knowledge, adoption, information

# Our process



# Outcomes, recommendations

- **Technology Transfer**
- **Unlocking Research**
- **Disease management**
- **Insect management**
- **Fruit maturity index**
- **Crop Forecasting**
- **Analysis of Harvesting systems**
- **Review of the packing sheds**

# Challenge

**How do we develop an industry driven research, development and extension program in Pakistan?**