

Session Eight
‘Profit Together’ –
addressing grower technology,
technology transfer and
production communication needs
and expectations

New Zealand and Australia Avocado
Grower's Conference'05
20-22 September 2005
Tauranga, New Zealand



The key purpose of grower education is to:



Technical transfer and grower education *- Is there a way forward?*

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The key purpose of grower education is to:

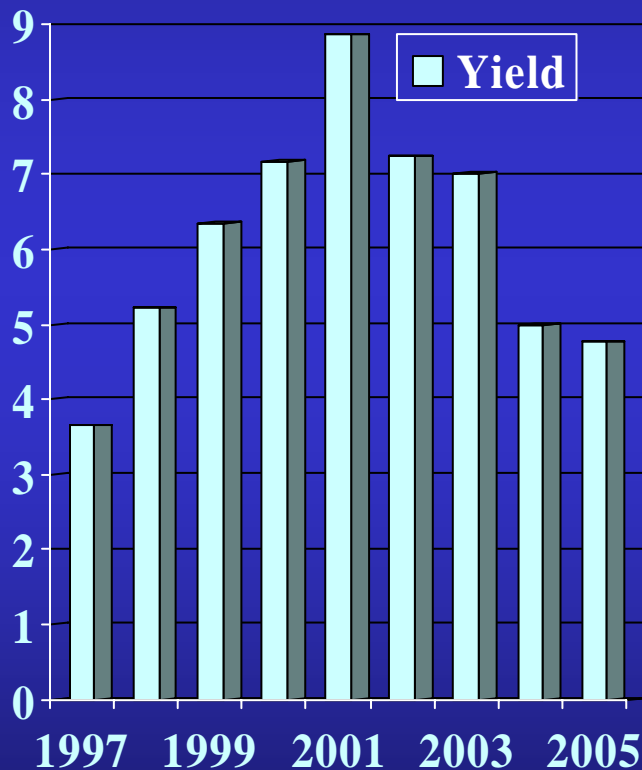
- Improve grower profitability through understanding and implementation of new technology (innovation) on farm



Key on-farm profitability measures

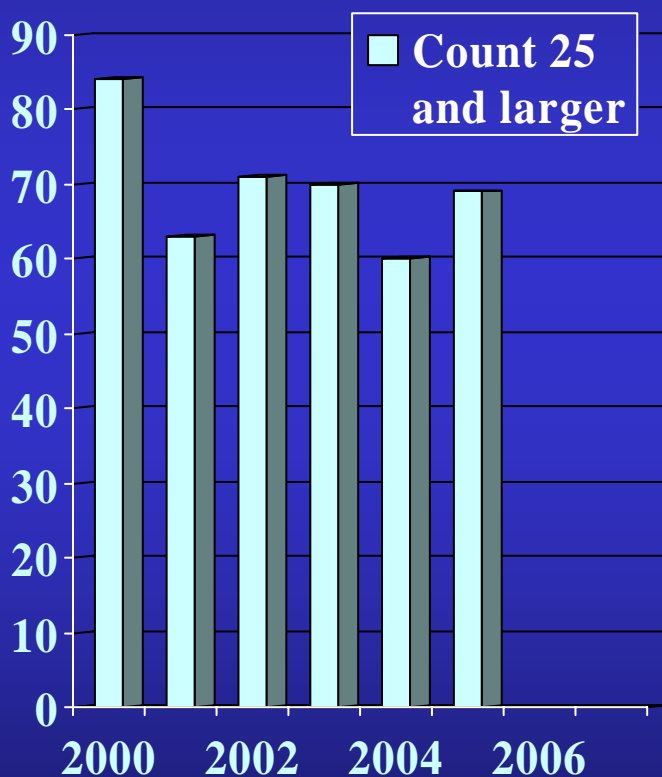
- Yield (tons per ha)
- Fruit size distribution (fruit count 25 and larger)
- Pack out percentages (class 1)
- Market access restrictions (all market access)

Yield (tons per ha)



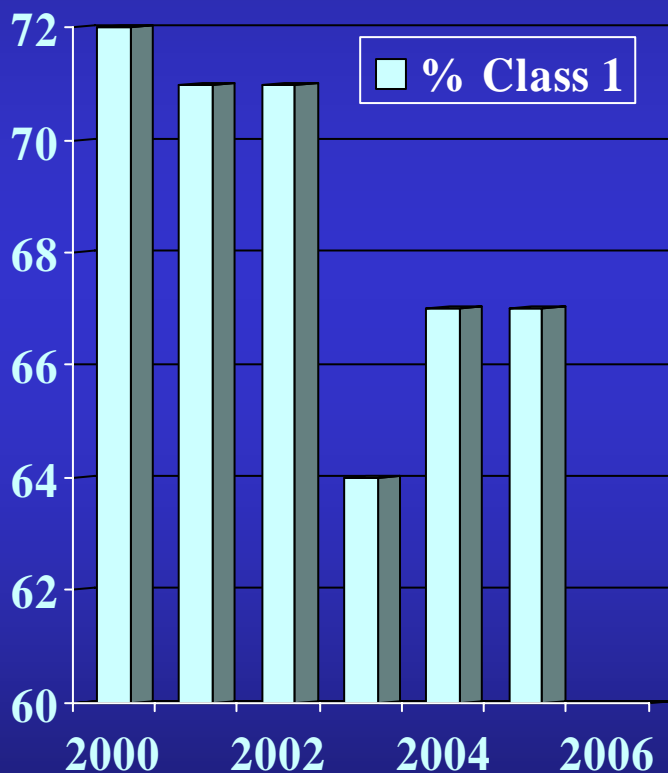
- Yield has been very variable on an annual basis
- No clear alternate bearing pattern for industry
- Yields have not increased
- The industry goal of 15 tons/ha is optimistic

Fruit size distribution



- Fruit size has been variable on an annual basis but within a narrow band
- There is a slow trend towards smaller fruit
- % large fruit has **not** increased
- The industry goal of 75% of the crop count 25 and larger is achievable!

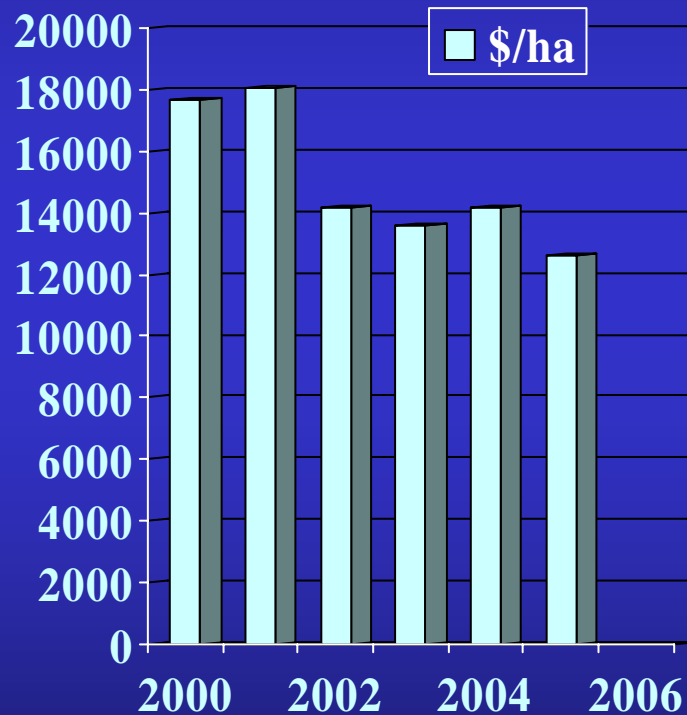
Class 1 Pack out percentage



- The percentage Class 1 (export and domestic) is declining
- % Class 1 fruit has **not** increased
- The industry goal of 95 % class 1 and 2 is challenging



Average property orchard gate return (\$/ha)



- Average farm gate return has been declining on an annual basis
- The industry goal of increasing orchard gate return by 5% annually is optimistic



- All the measures of profitability indicate technology transfer and on-farm innovation have not been successful



Why is it so hard
to make progress ?



Situation assessment

- Many new growers – is there a lack of experience?
- Age demographic – many new growers are older and there are very few young entrants into the ranks of avocado growers – few have orchard experience
- Land values encourage “capital farming”
- High orchard turn over
- More than 50% of orchards produce less than 1,000 trays (5.5 tons)
- Average **producing** orchard size is 2.1 ha



Lets consider some academic views of “farmer learning” and determine if there are any leads to consider

(Mostly drawn from Guerin and Guerin 1994 – Constraints to the adoption of innovations in Agricultural research and environmental management – a review)



Constraints to adoption of new technology in agriculture

- Farmers adopt technology and are innovative for:
 - Immediate survival
 - Anticipated long term benefit
- More experienced farmers are more likely to be innovative and adopt new technology
- Optimum age for innovation adoption is between 40 and 50
- Farmers with larger land holding tend to be more innovative



Constraints to adoption of new technology in agriculture

- Farmers growing crops under marginal conditions tend to be stubborn and not adopt new technologies
- Farmers who are more educated tend to be more innovative
- Farmers with good access to credit are more innovative
- Farmers with debt are more innovative
- Farmers who perceive a lack of control of their operation are less innovative



Constraints to adoption of new technology in agriculture

- Farmers who are motivated on the farm are more likely to be innovative
- Farmers who can understand the perceived benefits are more likely to innovate
- Farmers are basically self directed learners and require a base level of knowledge before they can innovate.
- Farmers will not adopt technologies where the cost exceeds the benefit or where the benefit is not clear!



What can we learn and how should we go forward

- Should grower organisations be involved in grower technology transfer education?
- Need to consider the demographic of the grower base and focus accordingly
- Small group learning is the best method of achieving grower adoption
- All technology transfer innovation should be viewed through a “whole of farm” approach
- Focus on the most innovative growers!



Thank you for listening!

