

Custard apples: sweet taste of success?

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Why haven't custard apples grown into a multi-million dollar industry to rival apples and oranges?

They have been grown in Australia for over 100 years. At present, approximately 128,000 trees are planted, producing about 2000 t of fruit a year. Even at this relatively low level of production (as a comparison, there are about 300,000 t of apples produced in Australia every year), the custard apple market is easily oversupplied. That is, prices decline over the season to unprofitable levels.

A comprehensive market survey throughout Brisbane, Sydney and Melbourne was carried out by Marketing Services Branch and Horticulture Branch of QDPI to examine the custard apple industry and suggest some strategies for its development.

The ingredients for success

Successful horticultural products have several attributes in common. They are:

- convenient to use
- readily available
- appealing
- reasonably priced and economical to produce.

How do custard apples measure up? They measure up rather poorly in all departments except, perhaps, some aspects of appeal.

Appeal

Taste tests using people from a broad cross-section of locations in Australia indicated that 90% of people liked the taste of custard apples. However, while it appears appealing in taste, it does not seem appealing to the eye. Blemish was rated by over 50% of retailers and 58% of wholesalers in Brisbane, Sydney and Melbourne as the most serious impediment to increasing sales of custard

apples. In Brisbane, 30% of consumers considered it the most serious problem.

Being realistic, custard apples blemish easily. Some major causes are:

- cold, windy sites
- limb rub
- rough handling
- incorrect storage
- pest and disease.

Some key strategies to avoid blemish are:

- avoid cold, windy sites
- use windbreaks
- don't hang fruit longer than necessary
- prune carefully
- pre-cool
- store correctly
- monitor regularly for insect activity
- mulch for disease control
- use grade standards consistently.

All these points are important.

In the long run, thicker-skinned cultivars with a greater tolerance to cool weather, better pruning methods and

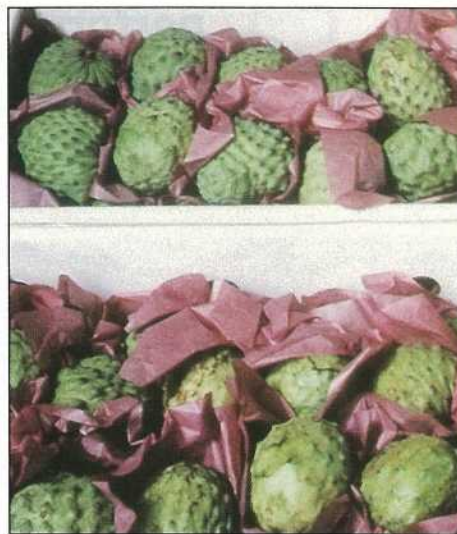


Plate 1. Well-presented African Pride custard apples.

more efficient harvesting, storage and handling systems are needed. Some research towards this has already been completed. All this work is basic product development. The custard apple has potential to be a very appealing product. Let's look at some of the other necessary attributes for success.

Convenience

Convenience of eating was not found to be a major problem although it is considered necessary to educate consumers on how best to store and prepare custard apples.

Availability

Production in Australia extends from March to September. This is a reasonably good spread. Newer hybrids and selections of cherimoya being tested may extend the season both earlier and later. The development of processed products is

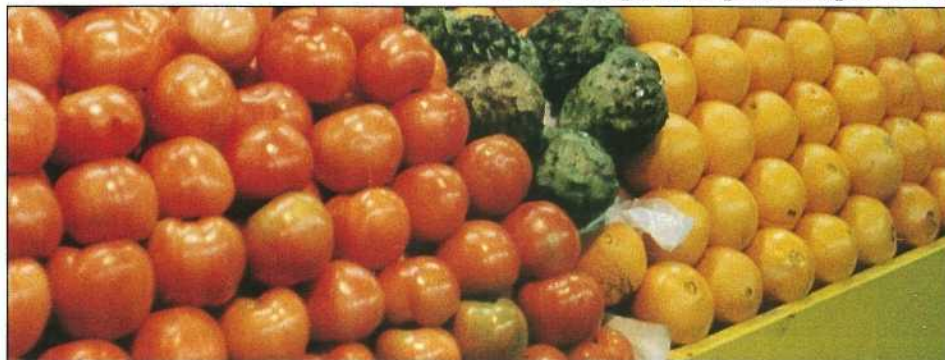


Plate 2. Poor quality custard apples, which present poorly when displayed next to other uniform, highly coloured fruit.

another way of artificially extending the season.

Price

On average 30% of consumers interviewed thought custard apples were too expensive. In Brisbane where people were more familiar with the fruit, 50% said they were too expensive. In Sydney, and more so in Melbourne, price was of less concern. This can be explained by using the product life cycle concept shown in figure 2.

Every product goes through a well defined life cycle. This life cycle consists of an introduction phase, a growth phase, a maturity phase and finally a phase of decline. In the introduction phase, there is little competition and high prices are received. In the growth phase, there is increased demand, sustained or slightly lower prices and more competition. At

some stage, the rate of sales growth slows down, and the product enters a stage of relative maturity. This stage is characterised by oversupply and price competition which often leads to lower prices.

The final stage is decline, where continued oversupply and price competition lead to a serious erosion of profits. The market study mentioned earlier suggests that the custard apple is in different stages of the product life cycle in different markets.

The following table demonstrates differing levels of market awareness and progression through the product life cycle.

In southern states, the fruit has more of an exotic image and hence price is of less concern. In fact, a high price helps promote the image. It must be emphasised that this is a small market. In Brisbane, custard apples are better known and considered more of a common consumption fruit. Price is therefore more important in Brisbane. Figure 1 shows the price and throughput trends for custard apples on the Brisbane wholesale market over the last seven years. Volume is increasing but price has levelled. Should volume continue to increase, without any new marketing initiatives, price can be expected to drop.

Market strategies

The domestic market

The market study identified the existence of a market segment which required high quality custard apples and was willing to pay a high price for them. With limited resources and limited quality product, it is probably best in the short-term for growers to form small groups and position their product as a speciality line for targeting the top end of the market. This requires top quality fruit. Strict quality standards would be necessary with a brand name so the product is easily identifiable for repeat purchasers.

These marketing groups should then target consumers who will pay for this special product. Examples are tourists, restaurants, consumers with a high disposable income and some segments of the south-east Asian population in Australia.

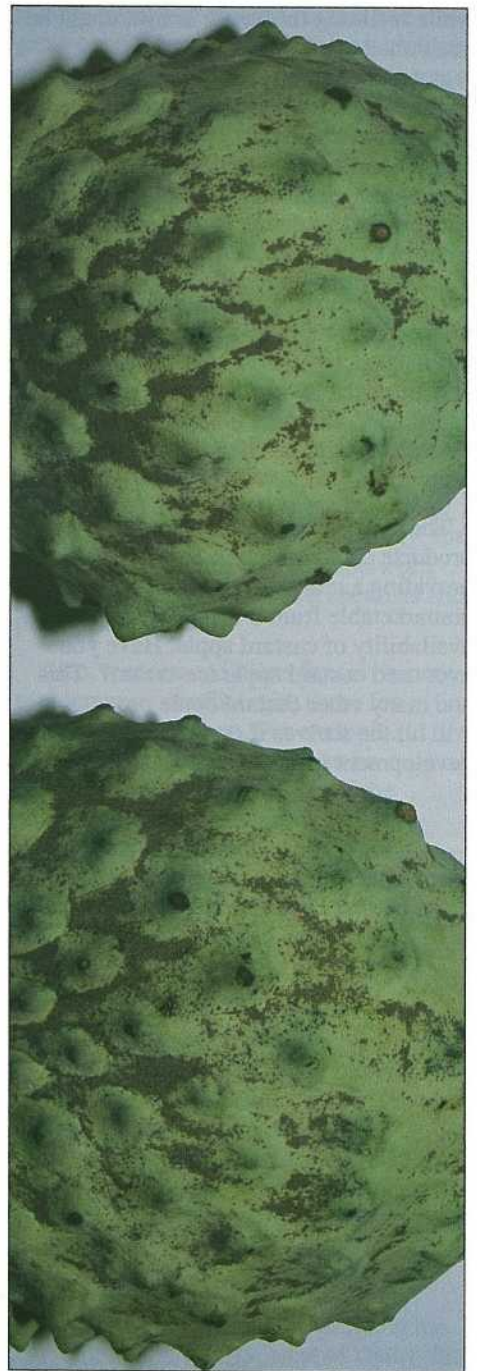


Plate 4. Russet from cold, dry winds.

Unfortunately, these market segments would initially absorb only small quantities of custard apples. In any case, only a small proportion of custard apples produced would be of sufficiently good quality, probably less than 100 t.

Markets need to be found for the remainder of production. Significant markets might exist for slightly blemished or misshapen fruit. This fruit,



Plate 3. Examples of mild and severe chilling injury.

while retaining the exotic image, could be positioned at a lower price. Market segments worth targeting initially would be the majority of south-east Asian communities in Australia and to a lesser extent older people in Brisbane. These market segments are already familiar with custard apples so less promotion is required.

To move into the 'average consumer' market segment would require more effort, especially in southern cities. It may be possible to educate these potential consumers that some blemish is 'okay'. Tastings should be an integral part of this promotion.

The market for processed custard apple products could be significant. As well as providing a return for previously unmarketable fruit, it also increases the availability of custard apple. Have you ever tried custard apple ice-cream? This and many other custard apple products will hit the shelves if current research and development in NSW is successful.

Export markets

The export of custard apples has been sporadic but significant. In most cases, only top quality fruit is required.

Table 2. Australian exports of custard apples for 1989

Country	Tonnes*
Singapore	17.12
Hong Kong	12.64
UAE	7.18
Kuwait	5.13
Philippines	0.68
Malaysia	0.43
Saudi Arabia	0.39
Bahrain	1.84
Miscellaneous	1.30
TOTAL	46.71 tonnes

* These are approximate tonnages compiled from figures supplied by the Victorian, New South Wales and Queensland Departments of Agriculture.

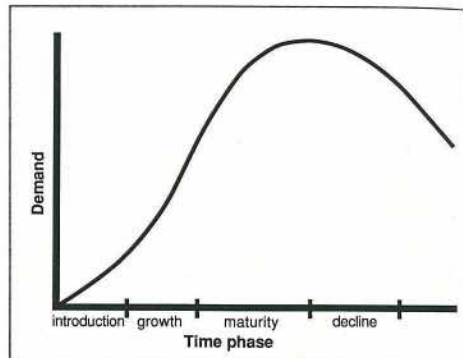


Figure 2. Product life cycle.

Experiences so far indicate the south-east Asian markets offer small scale potential, probably no more than 100 to 150 t.year. Nevertheless these markets can be worthwhile with more development.

The Japanese market, while currently inaccessible due to quarantine barriers, is considered a very high priced market. Development of disinfestation procedures is necessary to gain access.

Small consignments have been sent to Vancouver in past years. While returns were worthwhile, the long-term future of this market is in doubt. This is due to the closer trading ties being formed with the USA which introduce quarantine barriers for fruit from Australia.

A breakdown of the exports for 1989 is shown in table 2. A thorough study of potential markets, including the European market, is warranted.

The adoption of market strategies will go a long way towards organising the industry. In the long run, however, many of the cultural practices used to grow this crop need to be reviewed. The objective is to maximise the production of top quality fruit at low cost and little difficulty. This includes transport and storage technology becoming a top priority. Growing systems also need to be revised.

Instant successes don't just happen in the horticultural world. There are good reasons why crops fail to develop into large industries. Custard apples have a long way to go, but already the seeds for success are growing.

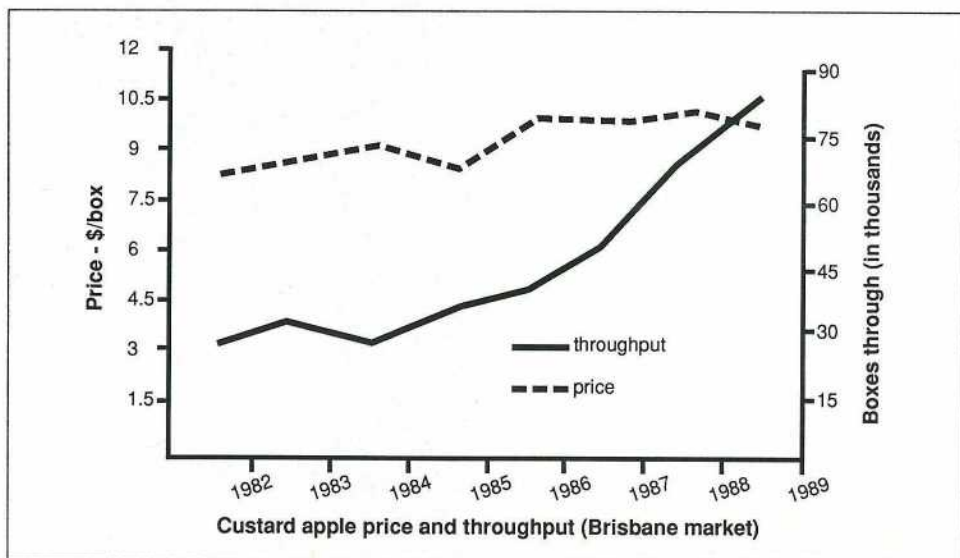


Figure 1. Custard apple price and throughput at the Brisbane wholesale market.

Table 1. Market awareness of custard apples

Knowledge of custard apples	Brisbane %	Sydney %	Melbourne %
Heard of custard apples	99	82	68
Tasted custard apples	93	47	43