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SUPPLY AND DEMAND  
PROJECTIONS FOR NEW ZEALAND  
CITRUS 1973-77

By  
R.W. Cartwright



COMMODITY REPORT No: 3 - JUNE 1973



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NEW ZEALAND CITRUS 1973-77

by

R.W. Cartwright

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## Preface

One of the objectives of the Market Research Centre is to publish up-to-date marketing analyses and information concerning commodities of importance to the New Zealand economy. In keeping with this aim, the present publication - the third in the Centre's Commodity Report series - describes projections of supply and demand in the domestic citrus market over the period 1973-77.

As noted in the text, the study was severely constrained by a paucity of high-quality market data. Despite this, the projections show clearly that the citrus industry will face a severe depression in product prices and income unless immediate action is taken to stimulate consumer demand for citrus products.

This report provides warning of a potentially undesirable market situation, but it does not purport to provide solutions to the marketing problems that it exposes. Urgent attention should now be given to the development of new marketing systems that will encourage and sustain a massive increase in citrus consumption in New Zealand. The Market Research Centre has in progress an investigation of consumer needs and attitudes, and the results of this work will be available shortly. However, the scope of this research falls far short of the requirements suggested by this report, and a comprehensive programme of market research should be planned immediately.

R.W. Cartwright  
DIRECTOR

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SUMMARY

The New Zealand citrus industry is currently expanding more rapidly than at any other time in its history. In this situation, projections of future market trends are essential to responsible market planners. This report describes a modest attempt to provide information concerning trends in supply and demand of New Zealand grapefruit, tangelos, mandarins, oranges, and standard lemons over the period 1973-77. The scope of the study was limited by inadequacies in basic data, a deficiency which should concern the citrus industry.

Note that the projections developed should not be regarded as forecasts or predictions. Projections are logical developments of existing historical data and specific assumptions concerning social and market behaviour. They are developed to provide information to market planners and, because market plans change as a result of the review of projections by planners, one should not generally expect projections to be actually attained. The assumptions made and the procedures used in this study are described in the main text.

Projection of Fruit Supply

Increases in supply are projected for all fruits, with particularly rapid growth rates occurring in New Zealand grapefruit and tangelos. Compared with 1972 production, grapefruit supply is projected to increase by more than 250% by 1977, with a four-fold increase in tangelos. On the same basis, expected increases of 150%, 180% and 224% are projected for mandarins, oranges, and standard lemons respectively.

Projections of Demand for Fruit

The projections express demand for all citrus products in terms of demand for each type of fruit. Increases in demand due to growth in population and national income, at constant 1972 prices, are projected to be comparatively modest. Using 1972 supply as a base, the expected projected increases in 1977 are:

|                          |             |
|--------------------------|-------------|
| New Zealand grapefruit : | 38,900 bu.  |
| Tangelos :               | 10,100 bu.  |
| Oranges :                | 132,500 bu. |
| Mandarins :              | 7,900 bu.   |
| Standard lemons :        | 18,200 bu.  |

Comparison of Projected Supply and Demand

Substantial excesses of supply over demand are projected in all years for all fruits except oranges, for which a relatively small excess demand is projected.

Expressed as percentages of total supplies in 1972, the excesses of supply over demand in 1977 are projected as:

(iii)

|                          |      |
|--------------------------|------|
| New Zealand grapefruit : | 139% |
| Tangelos :               | 288% |
| Mandarins :              | 42%  |
| Standard lemons:         | 108% |

Unless excess supplies can be equated by additional demand stimulated and induced by the citrus industry, prices at retail and prices received by growers are projected to fall drastically. For example, in the absence of any action to stimulate demand, average retail prices in 1975 are conservatively projected to fall by the following percentages of 1972 prices:

|                          |     |
|--------------------------|-----|
| New Zealand grapefruit : | 30% |
| Tangelos :               | 40% |
| Mandarins :              | 11% |
| Standard lemons :        | 41% |

Further substantial declines in prices are projected for grapefruit and tangelos in 1976 and 1977.

#### Implications of the Projections for the Citrus Industry

The projections imply early and drastic depressions in prices unless urgent steps are taken to stimulate consumer demand. In the absence of such action, growers of tangelos, grapefruit, and standard lemons are projected to be placed under a severe cost-price squeeze, and this would be attended by pressure on processors and distributors to reduce their margins. On the basis of the projections, success in processing and distribution will depend crucially on diversification into new products, penetration of existing and new products into present retail outlets that have not previously handled citrus, and the development of new forms of outlet. These developments will not take place easily or at low cost. Innovation in processing technology is especially costly. Considerable scope will exist for individual firms to secure competitive advantages through innovative developments in processing and marketing. Nevertheless, it is clear that the industry as a whole would benefit from a centrally planned and directed programme of promotion for citrus fruits and their products. The low overall level of citrus consumption in New Zealand, relative to consumption in several other developed economies, leads the writer to suspect that such a programme could well produce spectacular results.

The Market Research Centre is currently engaged on an examination of consumer attitudes to fresh citrus and citrus products, and it is envisaged that this study will provide further information to market planners in the industry.



Supply and Demand Projections for

New Zealand Citrus 1973-77

1. Introduction

The New Zealand citrus industry is currently expanding more rapidly than at any other time in its history. The expansion is now at a point where relatively large new plantings established over the past five years are beginning to reach bearing age. Consequently, substantial increases in supply of fruit can be expected over the next five years and beyond. Casual observers may well suppose that these increases in supply will depress fruit prices unless new marketing strategies designed to stimulate demand are introduced. In view of the hardship that this eventuality would impose on growers and processors - especially those who have established their operations in the expectation that prices for fruit and citrus products would be maintained - it is remarkable that comprehensive examinations of market trends have not been undertaken. Although projections of the supply of some fruit types have been developed, principally by Fletcher [3,4]<sup>1/</sup> who has focussed most attention on New Zealand grapefruit and tangelo production, there has apparently been no recent attempt to project demand for citrus. Consequently, it has not been possible to compare supply and demand trends with a view to identifying undesirable market situations that may occur in the future. In short, a lack of sufficient information has precluded any informed attempt to develop marketing strategies for the industry as a whole and for the growers, processors, and distributors in it.

This report describes a modest attempt to provide more information about the future trends in the supply and demand of New Zealand grapefruit, tangelos, mandarins, oranges, and standard lemons. The projections prepared in the study relate to the period 1973-77. The report has three main parts. The first, contained in Section 2 describes projections of annual supplies of each type of fruit. Section 3 then turns to the demand side of the market, and projects annual consumer demand for citrus. These two series of projections are reconciled in Section 4, which also makes tentative suggestions concerning appropriate marketing strategies for the future.

The scope of the study was severely limited by inadequacies in data relating to fundamental issues such as the productivity of citrus trees, and the consumption levels and prices of the various citrus products. This scarcity of high-quality data should be a source of considerable concern to the industry.

Before proceeding, it is necessary to emphasise that this report does not contain forecasts or predictions. The report does, however, present projections, and it is important to distinguish these from forecasts. Market projections are logical developments of known market data and specific assumptions concerning the future behaviour of society and of the firms and individuals who participate in the market.

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1. Numbers in parentheses refer to references listed at the end of the main text.