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***AN ANALYSIS OF THE NEW ZEALAND
SUPPLY OF CALLA TO THE
UMEDA WHOLESALE AUCTION MARKET***

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of the requirements for the degree of
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ABSTRACT

This paper is an exploratory analysis and discussion of the supply of New Zealand Calla to the Umeda wholesale auction market in Osaka, Japan. The hypothesis, that total revenue has not been maximised at the Umeda market, was tested and found to be true. The test was conducted by optimising the supply schedule, constrained by the total volume of imported Calla (white and coloured) sold at Umeda each season.

To conduct this test, data collection at the Umeda wholesale auction market was necessary. The results are based on observations of two and a half seasons (January 1992 to June 1994) for each Calla product (i.e. Japanese white Calla, Japanese coloured Calla, imported white Calla and imported coloured Calla). As New Zealand supplies 90-95 per cent of Calla imports each year, it was assumed that all imported Calla sold at Umeda were grown in New Zealand.¹ In conjunction with data collection, many representatives of the Japanese cut-flower market were interviewed in order to provide descriptive information as well as the requirements and expectations of the Japanese market (not just the Umeda wholesale auction market).

The results show that, in terms of maximising total revenue, imported Calla tend to be poorly allocated over the season. The exception to this was imported white Calla in the 1993/4 season, where maximum total revenue was only NZ\$4,600 more than the actual. In the previous season, imported white Calla attained a total revenue of NZ\$17,700 less than the maximum. The imported coloured Calla results show that maximum total revenue was NZ\$20,000 more than the actual in 1992/3 and NZ\$17,800 more in 1993/4.

As this paper is of an exploratory nature, total revenue maximisation was not the only focus. Constant Market Shares Analysis was also applied to the data, in an attempt to explain changes in the share of imported Calla at Umeda. The results of Constant Market Shares Analysis were inconclusive with respect to explaining the observed changes. This tested the limits of this deterministic form of analysis. Specifically where the appropriateness of Constant Market Shares Analysis on small data sets and products where the underlying product composition (cultivar and grade mix) changes from season to season. In both respects Constant Market Shares Analysis was found to be very limited as a simple means of explaining changes in supply.

¹ The statement that 90-95 per cent of imported Calla are from New Zealand holds for 1989-1994.

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