

NEW CROPS TO CONSIDER FOR NEW ZEALAND AND AUSTRALIA TO ENTER THE WORLD MARKET

B. TJIA

*Department of Ornamental Horticulture
University of Florida
Gainesville, Florida 32611*

The world trade in floriculture products has expanded during the past 10 years. This trend is increasing at a rapid rate. Actual production from various countries, and their projected output for the next decade, have been adequately published in the *Floriculture World Trade Magazine* (2), a magazine that had its origin and start in the Netherlands in 1982. More and more people, especially in the technologically advanced nations such as Europe, USA, and Japan have more and more disposable income that they can spend on florist products. This increase has been noticed by the third world countries wanting to enter the world floriculture market.

There are other good reasons why these countries are seriously looking into flower production, especially the Caribbean basin countries. Growing flowers gives a better return per square meter or per hectare when compared to other agricultural products. Flower production is labor intensive, thereby providing more employment for the local work force. This is why third world countries currently are actively seeking to gain information, technical expertise, and marketing specialists to fulfill their goals of exporting flowers.

Colombia, for example, has taken the lead in developing a domestic flower industry into a world market. They have developed streamlined flower production and the marketing channels that go with it. In 1970, Colombia's export in flowers only ranked 11th in their national export commodity measured in dollar value; today, in 1987, it ranks 3rd. To give an idea of how voluminous the export trade to the United States is, at Miami International Airport, where 60 percent of all flowers imported to the United States are landed, more than US \$750,000 worth of flowers are handled every day of the year, the bulk of which originated in Colombia (1).

Now, what does this have to do with the topic of new crops to consider for New Zealand and Australia? The point is this: There should be no doubt in anybody's mind that there is a world market open for flowers, that the international industry is still in the expanding state, and that the market for the crops is still unlimited. Any country that is interested, provided it has the know-how, and can produce the quality that is acceptable, consistently and efficiently, has an equal opportunity in the world market for florist products.

I have seen in New Zealand the tremendous pressure to pro-

duce large quantities of better quality *Zantedeschia* tubers and flowers at cheaper prices. With the information on *Zantedeschia* that has been generated in the past five years, New Zealand is the leader in *Zantedeschia* production. However, the amount of flowering tubers that all the exporters of *Zantedeschia* produce in New Zealand cannot even supply the demand of Florida growers that want to force these tubers for the market if these growers go full steam in forcing *Zantedeschia* for the chain stores.

Thus, the market is there, now how about the crops? I personally feel that the crops that are exotic to you are difficult crops for New Zealand and Australia to produce, as well as to compete with others already in that market. As an example, attempting to grow alstromeria, nerines, carnations, mums, lilies, and the like in New Zealand or Australia for the world market would be a poor choice with limited potential, not because there is an adequate supply of these flowers, but mainly because the main flower-producing nations (Netherlands, Israel, Sweden, Africa, etc.) have cornered the market already. To be able to compete with those nations, producers in New Zealand and Australia would have to be more efficient, cost effective, and up-to-date, on the edge of the technical know-how, employ the latest mechanical equipment, and produce the best cultivars. To enter into this highly specialized business, when other countries can produce them so efficiently, is not an easy thing to do, not that it cannot be done. However, New Zealand and Australia would always be "trying to catch up" with the competition rather than being the leaders. Add to that the longer distance that these crops need to be shipped to the main markets, and this seems not a wise investment at all.

On the other hand, this should not be interpreted as a reason to eliminate the potential entry of New Zealand and Australia into the world market of flowers. What needs to be seriously looked into are methods to produce and export those flowers that New Zealand and Australia are familiar with, flowers that are relatively unknown and less exported in the world trade, but have proven to have long lasting qualities and, therefore can compete with other flowers with respect to postharvest life. This way, the margin of return can be somewhat adjusted to make it a profitable crop to grow and export, since other sources for these flowers are limited.

During the 1986 International Floriculture Marketing Seminar in Amsterdam November 2 through 4, Jeremy Pertswee, Chairman of Pathfast, LTD, Essex, England, stated that in order for prospective producers to produce marketable export flowers, they need to know the marketing chain and how much their product will cost the consumer. If the producer charges 100 units per box or bunches, by the time that product reaches the customers, the price would range from 624 to 800 units. Table 1 lists the increase of unit cost and where these increases go.

Table 1. Marketing index for flowers exported to the world trade market starting from the producer to the consumer.

	INDEX
Grower prices	100
Packing	120
Airport (departure)	125
Custom & forwarders	200
Duty	220
Clearance	225
Market commission	260
Distribution to florist (inland freight)	312
Florist mark-up	624-800

Crop yield: 50% average

Efficient growers: 60% to 70% (5% claims)

For tropical region producers: Later cost is higher

For European growers: Early cost is high; later cost is lower.

Let us see what are some of the flowering plants that have potential for New Zealand and Australia to export as cut flowers to the world market. Not much has been researched on some of these plants, but others have been studied for years by researchers in New Zealand as well as Australia. These researchers have accumulated a tremendous amount of data on prospective cut flower crops, and interested producers may obtain this information in order to help produce the crop and control its postharvest treatment. Below are listed some cut flowers that have potential, some of them are already being exported from New Zealand and Australia. The list is by no means complete but this should give prospective producers some ideas on what to look for in potential crops. These are crops that should be stressed, researched, and developed by the local scientists, crops that can be identified by the world market as being New Zealand and Australian specialties.

PROTEA

There is a variety of genera, more than sixty to be exact, that belong to the proteaceae family, of which around 1400 species have been identified. Familiar to many florists is one of the largest and most magnificent species of the protea family, *Protea cynaroides*, the king protea. Another species is *Protea magnifica*, the queen protea, and *Protea magnifica* 'Alba,' the variant of *Protea magnifica* which has pale greenish-white to rich, cream-colored bracts. *Protea neriifolia*, which is one of the more prolific bloomers of the protea family, and the slower growing specimen, *Protea grandiceps*, have beautiful bracts.

LEUCOSPERMUM

Leucospermums, or the pincushion flower as they are commonly called, are excellent cut flowers and have a vase life of up to a month without signs of desiccation or shriveling of the pincushion-like inflorescence. There are various shapes and colors in the *Leucospermum* species, ranging from pinkish yellow, orange, and salmon, to apricot colors.

LEUCODENDRON

Leucodendrons are dioecious plants, meaning that each plant is either male or female. One of the most colorful and widely used leucodendron is *Leucodendron salignum*, 'Safari Sunset,' developed in New Zealand. This was bred specifically for cut flower production purposes and is a female plant. It is very vigorous and fast growing, with an erect, bushy habit. Stem length, one of the outstanding features of 'Safari Sunset,' may exceed 60 cm. These flowers have excellent keeping quality, lasting up to sixty days in the vase without shriveling of flowers or bracts. 'Safari Sunset' is one of the most popular cultivars exported from New Zealand, and research needs to be initiated to discover if these cut flowers can be shipped in refrigeration by ship, rather than by air.

Other various species of the *Leucodendron* family that have potential for cut flowers as well as cut foliage are *Leucadendron xanthoconus*, which has small, lemon-yellow flowers borne on short stems and *Leucodendron argenteum*, the silver tree that grows 6 to 8 m high, has grey-green foliage overlaid with fine silvery hairs and has the potential to be used as cut foliage.

ANIGOZANTHOS

Commonly known as the kangaroo paw, *Anigozanthos* has generated interest in Europe and USA as potted flowers as well as cut specimens. There are at least 6 species of kangaroo paws, and most of them are very decorative and can be exported as cut flowers. Kangaroo paw is the most recent introduction to the florist trade, and presently the USDA and Florida are actively doing research on this crop to be used as a cut crop.

BORONIA

Boronia heterophylla, commonly known as simply boronia, has small, dark pink flowers borne on a straight stalk interlaced with attractive small, dark green leaves. They are widely used in New Zealand as landscape specimens and have a tremendous potential as an export crop. The fragrance of the flowers adds to the interest in this flower. Following harvest, the flowers remain on the stems and will not abscise or dry out and turn brown rapidly, as leptospermums do.

ERICA

Another interesting genus of flowering plants is *Erica*. The species come in many colors and shapes, the clustering, small flowers being borne on stiff stems. They are excellent cut flowers and are long lasting. They are used in New Zealand as landscape plants.

ORNITHOGALUM

A small bulbous crop, *Ornithogalum thyrsoides* flowers in early spring in New Zealand and has a tremendous export potential. The flowers are not bulky, and lend themselves very favorably for long distance air transport. There is only one color flower—white—but flowers lend themselves well to dyeing, so various color shades or colors can be obtained. *Ornithogalum* has long lasting flowers, and buds continue to open in the vase.

SANDERSONIA

Sandersonia aurantiaca has its origin in South Africa. The slender stems produce golden, urn-shaped flowers resembling Chinese lanterns. *Sandersonia* flowers have excellent keeping quality, and if placed in a preservative solution, flowers will continue to grow. Young flower buds develop and open normally.

ZANTEDESCHIA

Zantedeschia, or calla lily, has developed into a nice export flower for New Zealand, and Australia should follow suit. The new hybrids are showy, with long, stiff stems, large flowers, and excellent keeping quality. Colors are creamy white, light pink, yellow, golden yellow, maroon and dark red. Most cultivars have long-lasting flowers.

BANKSIA

These are slow-growing, large trees and are excellent specimens to grow as a commercial cut flower in New Zealand and Australia. The flowers are long lasting and can be used in dried arrangements. A lesser-known species is *Banksia coccinea*, a slow-growing plant with strong, leathery leaves and flowers that are borne on long stems; it is another cut flower that has potential. They are long lasting, and flowers become dry in flower arrangements without losing their color.

TELOPEA

This plant, the waratah, has one of the most colorful blooms. The plant grows into a large bush and the flowers are borne on long stems. This flowering plant should be promoted extensively in New

Zealand and Australia, since these flowers are magnificently beautiful with long-lasting qualities.

LATHYRUS

New Zealand has produced various cultivars of *Lathyrus odoratus* with long stems, and there is demand for *Lathyrus* both in Europe as well as in the United States. Florists are familiar with them, and the new color variation and combinations that have been developed in New Zealand should be promoted and used more as an export crop.

In conclusion, New Zealand and Australia can offer the world market these flowers that are common in these two countries, but are exotic and exquisite flowers to the world market. New Zealand and Australia should concentrate on becoming specialists and leaders in these crops, rather than trying to develop crops that are already grown and marketed by other countries.

LITERATURE CITED

1. Daum, P. 1986. Personal Communication. Rep. of Gloeckner Co. Miami, FL.
2. World Flower Trade Magazine. 1986. Misset International Co. Doetinchen, Netherlands.

PROPAGATION OF CHILEAN BELLFLOWER

WAYNE D. WILLIAMS

Whakatane District Council

Parks Department

Private Bag, Whakatane

Chilean bellflower (*Lapageria rosea* Ruiz & Par.) a not so distant relative of Australasian flora, both geographically and botanically has been a fascination for me, often bordering on an obsession. This, in conjunction with some other work which grew out of it, was prompted by a note from L. H. Bailey, "propagated by layering, cuttings, and seed."(2)

The work on *Lapageria rosea* (red and pink), and *L. rosea* var. *albaiflora* Hook., was undertaken between 1981 and 1984 in Dunedin, New Zealand.

SEED

The red flower seems to self pollinate and set seed unassisted during warm conditions, although the amount of fruit set and size (which I take to be indicative of effective pollination), was greatly