

## Market of Lily Bulbs in Argentina

P. Marinangeli<sup>1,a</sup>, L. Scoconi<sup>2</sup> and N. Curvetto<sup>1</sup>

<sup>1</sup> Agronomy Department, Universidad Nacional del Sur and Plant Biotechnology Laboratory, CERZOS, CCT-Bahía Blanca, CONICET, CC 738, 8000, Bahía Blanca, Argentina

<sup>2</sup> Department of Management Sciences, Universidad Nacional del Sur, 8000, Bahía Blanca, Argentina

**Keywords:** *Lilium*, imports, exports, cut flowers, pot plants

### Abstract

In Argentina more than 91% of lily bulbs are produced as cut flowers and the rest as pot plants and dry sales. Flower producers import their bulbs or purchase them from retailers, although in this case the prices are often higher. 91% of the bulbs are imported from Europe, mainly The Netherlands, and are usually transported by ship. 9% are obtained from Chile and transported by truck. Argentinean imports of lily bulbs increased significantly until 2001, followed by a drastic decrease due to the deep devaluation of the Argentinean currency in 2002. This resulted in increased costs of crop production and depressed the demand. However, imports rose again starting from 2005 up to 2009, reaching 6.3 million bulbs. This surpassed the value of bulbs imported in 2001. Although the quantity of imported bulbs increased, the number of importers decreased from 9 in 2001 to 4 in 2008, showing a concentration of the market. In 1999 Asiatic and Oriental hybrids were widely cultivated with a smaller proportion of *L. longiflorum* × Asiatic (LA) hybrids and *L. longiflorum* cultivars. At the present time, LA, Oriental × Trumpet (OT) and Oriental hybrids are the top choices, followed in a smaller proportion by the Asiatic, *L. longiflorum* × Oriental (LO) and *L. longiflorum* hybrids. The market of lily cut flowers and pot plants in Argentina is expanding, and bulb imports and local production are expected to increase. A comparison with the lily market in the neighboring countries is presented.

### INTRODUCTION

Following the changes that the floricultural sector is undergoing worldwide, globalization and increased competition have led to the development of new bulb and flower production centers (Benschop et al., 2010). The world bulb trade is slowly changing following domination by The Netherlands. Benschop et al. (2010) attributes this situation to four factors: (1) bulb production areas are being displaced by housing developments as the population of The Netherlands increases; (2) the need for fresh soils; (3) the need to decrease production costs, especially land and labor costs, for consolidation of bulb growers and exporters; and (4) the production of high-quality bulbs in other countries. Other external factors are: the globalization of the horticultural trade, the transfer of knowledge, and the economic progress of the developing countries. All of these factors contributed to the increasing production of bulbs and bulb flowers of high quality in various regions since the last decades of the 20<sup>th</sup> century.

By 2003, lily bulbs were produced in 10 countries with the largest production in The Netherlands with 4,280 ha (77%), followed by France (401 ha, 0.8%), Chile (205 ha, 0.4%), the USA (200 ha, 0.4%), Japan (189 ha, 0.3%) and New Zealand (110 ha, 0.2%) (Buschman, 2005). The value of the flower bulb industry is estimated to be over \$ 1 billion dollars, mainly tulips and lilies (Benschop et al., 2010). The Netherlands produces 2.21 billion lily bulbs, with 95% of them used as the starting material for the cultivation of cut flowers. Around 0.41 billion (19%) are grown in The Netherlands as cut flowers. The remainder is exported to countries within (1.0 billion) and outside

<sup>a</sup> pamarina@cerzos-conicet.gob.ar

(0.7 billion) the EU. In France, the production of lily bulbs is mainly in Dutch hands and the bulbs are used in The Netherlands for the planting period extending from May to the end of September. The lily bulbs cultivated in the Southern Hemisphere are scheduled for planting from October until the end of January and are exported to The Netherlands, Japan, the rest of the EU, Taiwan, China, USA and Canada (Buschman, 2005).

In Argentina, almost all the production of lily cut flowers is based on bulbs imported mainly from The Netherlands, which constitutes the main cost of the crop. Production of lily bulbs is possible in Argentina, although some legal and technical questions should be considered. We demonstrated that the production of good quality bulbs is possible in different sites of our country (Facchinetti et al., 2008, 2011). Knowledge of the current and potential demand for bulbs is a prerequisite for the planning of sustainable production and the prospects for continued growth. The aim of this work is to increase knowledge of the dynamics of the market of lily bulbs in Argentina and the production and trade profile of neighboring countries and potential buyers.

The statistics on the floriculture production are scarce in Argentina and no data are available about lily flower production. For this report the following sources were consulted: trade statistics from Argentine customs, Statistics Netherlands (CBS), Mercoflor (Flower Market), Flor-Ar (Importer, retailer and producer of flower bulbs), Brazil customs, ProChile and Chilean Council of Agriculture in Japan.

## **IMPORT, SUPPLY, CONSUMPTION AND PRODUCTION OF LILY BULBS IN ARGENTINA**

At the end of the last century and the beginning of the new century the imports of lily bulbs increased greatly until 2002 (Fig. 1). In 2002 a financial crisis led to a strong devaluation of our currency that increased production costs with lowered demand for cut flowers and lily bulbs. Many growers had to retire or change species and only the largest producers remained in lily production. During 2002, only three containers arrived from The Netherlands (Argentine Customs, 2010).

From 2003, imports began to rise again and this growth was exponential during the last three years, despite of the constant devaluation of the Peso with respect to the Euro. In 2003 the quantity of bulbs imported surpassed the number imported in 2001 (Fig. 1) (Argentine Customs, 2010). This was a clear indicator of a higher potential demand for cut flowers due to the improvement of the economic situation. Today, *Lilium* in our country is the main cut flower from bulbs. In addition, pot plant production has also increased (J. Romczyk, pers. commun.). The greater demand of bulbs was also satisfied by increasing importation from Europe, mainly The Netherlands, but also from Chile during the last two years. Chile contributed close to 9% of the imports during 2009 (Fig. 1). Unfortunately, the cost of the bulbs has increased due to the constant devaluation of our currency, making it account for about 80% of the direct production costs for small growers. Argentine imports of lily bulbs are a small portion of the world's trade (likely to be less than 0.5%) and the local growers must accept the international prices and import bulbs according to their needs.

Frozen bulbs arrive mainly by sea transportation (>90%) in 20 and 40 foot containers from Europe during all year, and from Chile by truck transportation, during the last trimester (Argentine Custom, 2010).

Before the financial crisis, there were nine importers and after 2002 this number decreased to three or four (Fig. 1). The bigger growers import bulbs for their own use and also provide bulbs to small growers who have to pay substantially higher prices. Small growers have neither the economical capacity to afford the importation of an entire container, nor the facilities for long term cold storage.

Recently, small quantities of bulbs had been offered to the market by local producers at lower cost. These bulbs are of medium quality and sometimes of old or unidentified hybrids. However, good quality bulbs of a new assortment can be produced in different regions of Argentina (Facchinetti et al., 2008, 2011).

More than 91% of the imported bulbs are forced for cut flowers, about 7.5% for pot plants, and less than 1% are dedicated to dry sales. In 1999 the most commonly grown hybrids were Asiatics, followed by Orientals and *L. longiflorum*. Currently the greatest demand is for the LA group ('Brindisi', 'Litouwen', 'Golden Tycoon', 'Advantage', 'Orange Tycoon', 'Original Love', 'Top Gun', 'Fangio', and 'Menorca'), OT ('Conca d'or', 'Donato', 'Lesotho', 'Yelloween' and 'Serano'), Orientals ('Acapulco', 'Expression', 'Bernini', 'Casablanca' and 'Montezuma'), Asiatics ('Nello', 'Brunello' and 'Castello'), LO ('Triumphator' and 'White Triumphator') and *L. longiflorum* ('White Heaven') (Flor-Ar, pers. commun.).

#### **SITUATION OF SOME NEIGHBORING AND POTENTIAL COMPETITOR AND BUYER COUNTRIES IN THE LILY BULB INTERNATIONAL TRADE**

Chile and New Zealand are the major lily bulbs producers in the South Hemisphere, doubling their production during the last five years and accounting in 2009 for 400 and 200 ha, respectively (Buschman, 2005; Grassotti and Gimelli, 2011).

Chile is a major exporter and importer of lily bulbs. In 2006 Chile exported 92.8 million lily bulbs to 12 countries valued at \$ 20.6 million dollars. Bulbs were exported mainly to The Netherlands, EUA, Mexico, China and Japan, providing fresh bulbs from August until December. In 2006, Chile imported 18.2 million lily bulbs valued at \$ 1.9 million dollars. This quantity comprises bulbs for cut flower production for the internal market and export, and propagation material for bulb production (ODEPA, 2008).

Chilean exports of lily cut flowers in 2006 accounted for half of the volume of total cut flowers (174 t) and represented 25% of their value (\$ 809,000). The destination of lily cut flowers is mainly the USA, The Netherland, Japan and UK (ODEPA, 2008).

Brazil is a major importer of lily bulbs for domestic consumption. In 2008 Brazil imported 1.1 million kg of bulbs from The Netherlands valued at \$ 4.7 million. During 2009, Chile was meeting all requirements imposed by the Brazilian government in order to be able to export bulbs to that country (ProChile Sao Paulo, 2009).

Uruguay is considered a small market in terms of commercialization of flower bulbs but is expanding with 290,000 bulbs (\$ 119,000) imported in 2009. However, Uruguay is a potential market for Argentina due to its proximity and the history of commerce with this country. Also, along with Brazil, it has 100% duty exemption. Since 2009, Chile has started the export of lily bulbs to Uruguay (Prochile Uruguay, 2010).

Japan is an example of a country that could buy lily bulbs from Argentina. In Japan, the number of imported bulbs and new cultivars has increased during the last years mainly due to the abolition of quarantine rules and the resulting outside competition (Niisato, 2009; Ohkawa, 2005). In 2001, Japan produced 34.8 million lily bulbs for domestic consumption and imported 173.7 million lily bulbs (Ohkawa, 2005). In 2005, Japanese production of lily bulbs dropped to 13.4 million and imports reached 168.5 million (Niisato, 2009). Despite the decreased production of bulbs in Japan, the production of cut flowers from bulbs increased in response to the consumer demand. This demand has been supplied by imported rather than domestic bulbs (Ohkawa, 2005; Niisato, 2009). The importation of lily bulbs comes mainly from The Netherlands, New Zealand and Chile, with 127.8, 15 and 9.4 million bulbs, respectively (Consejería Agrícola de Chile en Japón, 2009). The supply from the Southern Hemisphere starts in August and finishes in December.

#### **CONCLUDING REMARKS**

The market of lily cut flowers and pot plants in Argentina is at present expanding. Although it is small in terms of volume, lilies are the main flower bulb species and they are characterized for high quality and modern hybrid assortment.

According to the rate of growth of the imports in the last years, the demand for bulbs is expected to increase, supported by imports and, probably, by local production. However, local demand may be a limiting factor for the production of bulbs. External markets must be expanded despite the huge advantage of Chile, our close competitor.

## ACKNOWLEDGEMENTS

This work was supported by the Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Universidad Nacional del Sur, and Agencia Nacional de Promoción Científica y Tecnológica (ANPCyT-FONCyT). We thank Lic. Jorge Romczyk and Mercoflor Flower Market for useful information on flower and bulb market in Argentina.

## Literature Cited

- Argentine Customs. 2010. Trade statistics. AFIP, Sistema Informático MARIA. <http://www.afip.gov.ar/aduana/sim>.
- Benschop, M., Kamenetsky, R., Le Nard, M., Okubo, H. and De Hertogh, A. 2010. The global flower bulb industry: production, utilization, research. *Hort. Rev.* 36:1-115.
- Buschman, J.C.M. 2005. Globalization - flower - flower bulbs - bulb flowers. *Acta Hort.* 673:27-33.
- Consejería Agrícola de Chile en Japón. 2009. Importación de bulbos chilenos de flores en Japón. Newsletter de la Consejería Agrícola de Chile en Japón 11:1-3.
- Facchinetti, C., Bobadilla, S., Diacinti, A., Lexow, G., López, B., Medrano, N., Piovano, M., Turró, R., Möckel, G., Curvetto, N. and Marinangeli, P. 2008. Producción de bulbos de *Lilium* en siete localidades de la Argentina: segundo año de cultivo. 4° Congreso Argentino de Floricultura. Corrientes, Argentina.
- Facchinetti, C., Curvetto, N. and Marinangeli, P. 2011. Cut flower production of lily bulbs grown in different sites in Argentina - a comparative approach. *Acta Hort* 900:95-104.
- Grassotti, A. and Gimelli, F. 2011. Bulbs and cut flower production in the genus *Lilium*: current status and the future. *Acta Hort.* 900:31-36.
- Niisato, Y. 2009. Tulip bulb industry in Japan since 1988. *Acta Hort.* 831:285-292.
- ODEPA. 2008. Situación del mercado de flores de corte en Chile en 2007. *Mercados Agropecuarios* 186:1-8.
- Ohkawa, K. 2005. Production of flower bulbs and bulbous cut flowers in Japan - past, present, and future. *Acta Hort.* 673:35-42.
- ProChile Sao Paulo. 2009. Estudio de mercado bulbos de *Lilium* en Brasil. Estudios de mercado 2009: bulbos y flores. 7p.
- ProChile Uruguay. 2010. Estudio de mercado plantas y bulbos - Uruguay. 13p.

## Figures

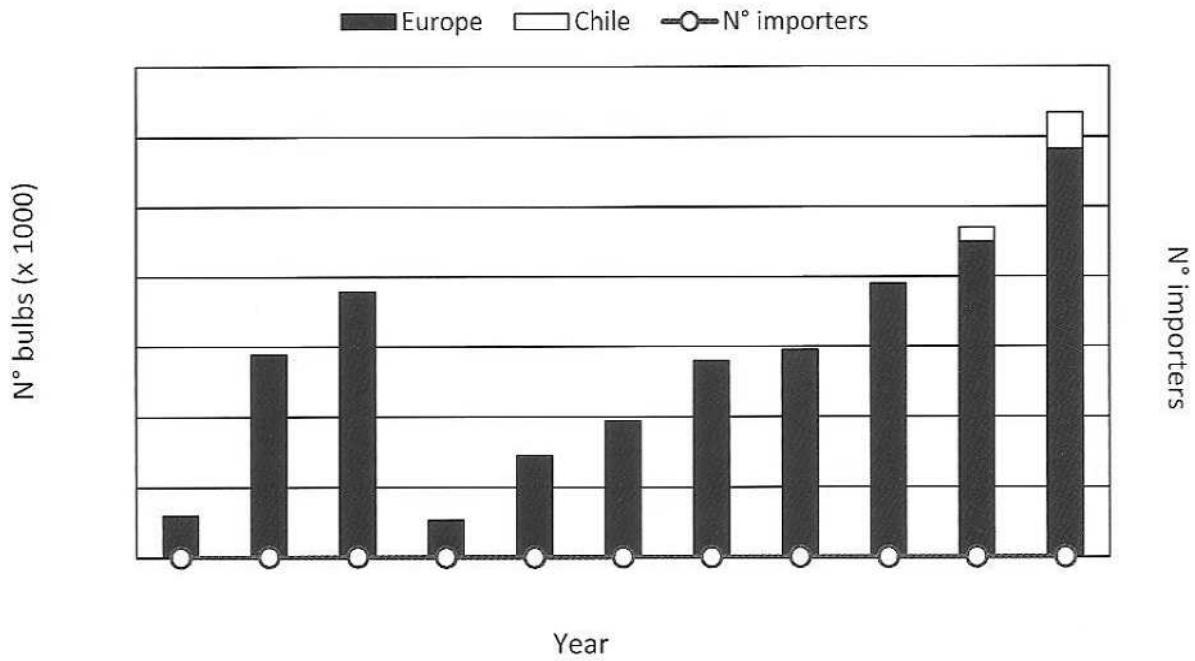


Fig. 1. Lily bulbs imported to Argentina in the period 1999-2009 from Europe and Chile and number of importing companies.