

Cool growing *Laelia* orchids for the Riverina region of NSW

Laelias (Lay-lee-a) are relatives of the Cattleya group. There are about 75 different species in the genus *Laelia*. They originate in Mexico, Central America and tropical South America.

The Laelias from Mexico are mostly (except for *L. rubescens*) from high altitudes (1000-3000m) and can be subject to very low temperatures which gives them a broad temperature tolerance from freezing to very warm. They have a long 7-8 month dry rest period during the cooler months.

The Brazilian Laelias are from Brazilian Plateau and the tropical southern coast with both environments having hot, humid summers with humidity near 80% for much of the year and a short 2-3 month dry period.

The *Laelia* group has been used to make many different intergeneric hybrids. Two Mexican species, *Laelia anceps* and *Laelia gouldiana* are considered to be the easiest to grow under cool to cold conditions in an unheated shade house. Other *Laelia* species, with a few exceptions discussed below, are better grown under glasshouse conditions.

Both *L. anceps* and *L. gouldiana* come from high altitudes (1500-2000m) where they experience hot wet summers and cool dry winters. Growing conditions should try to replicate these conditions. *L. anceps* is considered one of the easiest cool growing orchids to grow.

New growths appear in spring and flower spikes appear from the new growths in summer. Flowers open as the new growths mature in late autumn-winter.

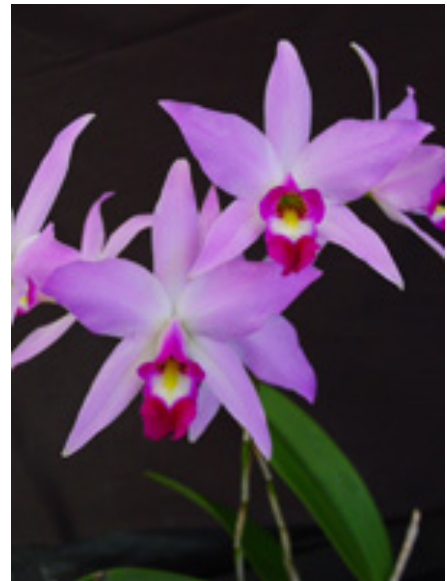
Temperature requirements.

L. anceps and *L. gouldiana* from Mexico come from an environment that experiences a typical temperature range of 12°C to 27°C but temperatures can fall to -7°C. Given their origin they can be grown in an unheated shade-house in the Riverina region of NSW, preferably under a polycarbonate roof to exclude winter rain. They can tolerate summer temperatures as high as 40°C for short periods provided they are well watered and humidity is maintained through misting.

They will tolerate winter minimum night temperatures down to 0°C for short periods provided they are protected from frost and kept relatively dry. In inland Victoria and the USA *L. anceps* has been reported to tolerate temperatures as low as -4°C. Although they will tolerate these temperature extremes, growth will be better under a more moderate temperature range of 6 to 28°C where this is possible.

The Brazilian Laelias come from environments that have a normal temperature range of 16°C to 24°C with winter temperatures of about 12°C and rarely experience temperatures below 8°C (7) and therefore are not likely to be as cold tolerant as the Mexican Laelias.

Mexican Laelias, such as *L. speciosa*, experience a typical temperature range of 2°C to 28°C in their native environments although extremes of -7 to 38°C are possible (8). Winter daytime temperatures of about 20°C and night temperatures of 3-5°C are typical during their dry resting period (8).



Light

They like good light similar to Cattleyas with about 30-50% shade in summer but no direct sun. They require high light intensity during their dormant period in winter. They like direct morning sun but avoid afternoon light and deep shade. Brazilian and Mexican Laelias come from environments that typically receive 3000-4000fc (7, 8).

Humidity and air movement

They need good air movement year round. They require moderate to high humidity in summer but low humidity in winter.

Water

In their native environment they receive daily rain in summer and so should receive regular watering during the warmer summer and autumn months, preferably daily in hot weather. Plants on slabs should be watered daily in warm weather. Brazilian Laelias experience a 2-3 month dry season (7).

The Mexican Laelias such as *L. speciosa*, experience a very long dry period (severe drought) lasting 7-8 months until late spring in their native habitat (8) and so they should only receive occasional light watering during winter when they are dormant and resting. They should not be watered during cold, overcast weather and need protection from winter rain. Over watering in winter can lead to plant decline and death of the plant. They may not flower if they don't have a long dry rest (8). Regular watering should only commence after flowering is completed (8) although plants can be misted or given a very light watering. A polycarbonate roof on the shade-house is necessary to keep the plants drier over winter in the Riverina.

Potting medium

Both *L. anceps* and *L. gouldiana* can be grown mounted, in hanging baskets or in pots. They are often grown on slabs as they grow 'drier' than other Laelias. When grown in pots they need a coarse bark free and fast draining potting medium. Roots may rot if they do not dry quickly after watering. Younger plants could have a finer bark with larger bark being used as plants become bigger. Mounted plants need to be watered daily in summer. As Laelias don't like being disturbed, when they outgrow the pot some growers simply place the plant and its pot into a slightly larger pot (over pot) allowing the roots to fill the space between the two pots. Repotting may be necessary however when the bark becomes decomposed.

The Brazilian Laelias are usually found growing on sandstone and are usually grown in pots. Some growers recommend placing pieces of sandstone in the potting mix if root growth is a problem with these species.

Always use the smallest pot possible as they dry faster and large pots increase the risk of root rot.

Fertilizers

Liquid fertilizers should be applied regularly during the growing season but not in winter.

Some growers recommend a low N but high phosphorus fertilizer in late summer and autumn.

Liquid seaweed fertilizer can also be applied.



Varieties for the Riverina region of NSW

For a detailed list of the best varieties for cool growing conditions experienced in the Riverina region of NSW refer to the excellent books, "Growing orchids in cool climate Australia" and the "Australian Gardening Flora's Orchids" listed in the references below.

Laelia anceps is regarded as one of the easiest to grow cool climate orchids. It has flower colours ranging from white through to pink, purple, yellow and orange. A full list of the large range *L. anceps* varieties can be found on the Santa Barbara Orchid Estate web site listed below (5).

The intergeneric *Laelia* hybrid *Laeliocattleya* Ballet Folklorico Eloquence HCC/AOS also has a reputation for being a good cold grower and is readily available.

Other *Laelia* species that have shown very good cold tolerance (-5°C) in Victoria, in addition to *L. anceps* and *L. gouldiana*, were listed by Ross Pascoe (6) and Brian Milligan (9) on the Orchid Society of Victoria web site listed below. These included *L. pumila*, *L. milleri*, *L. purpurata*, and *L. xanthine* (6), *Laelia gouldiana*, *L. autumnalis* and *L. albida* (9).

Intergeneric *Laelia* hybrids

Hybrid species containing *Laelia* in their parentage include;

- *Brassolaeliocattleya* (*Brassovola* x *Laelia* x *Cattleya*),
- *Potinara* (*Brassovola* x *Laelia* x *Cattleya* x *Sophranitis*),
- *Laeliocatonia* (*Laelia* x *Cattleya*, x *Broughtonia*),
- *Laeliocattleya* (*Laelia* x *Cattleya*)

Acknowledgements and further reading:

This fact sheet has drawn on information by local growers and the references listed below.

1. Growing Orchids in cool climate Australia (2nd Edn) by MJ Fraser, J Wright, W Ferris (2013).
2. Gardening Australia Flora's Orchids. ABC Books (2005).
3. Two Cool-Growing Laelias by Brian Milligan.
<http://www.oscov.asn.au/articles/laelia2.htm>
4. Orchids, A Practical Handbook. By B and W Rittershausen (2001).
5. Santa Barbara Orchid Estate web site.
http://www.sborchid.com/sboe_collection.php?collection_name=Laelia+anceps
6. Cold tolerant Orchids of the Cattleya Alliance by R. Pascoe.
<http://www.oscov.asn.au/articles/catcold.htm>
7. Charles and Margaret Baker. Brazilian Laelias.
<http://www.orchidculture.com/COD/FREE/FS139.html>
8. Charles and Margaret Baker. Mexican Laelias.
<http://www.orchidculture.com/COD/FREE/FS181.html>
9. Orchids for outdoors by Brian Milligan. Orchid Societies Council of Victoria.
<http://www.oscov.asn.au/articles4/outdoors.html>

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These notes are intended as a guide only and are composed from available information and local experience. The Wagga Wagga Orchid Society and its members are not responsible for any loss or damage.