



Miltonia and Miltoniopsis

Introduction

Miltoniopsis orchids are native to the Andean and Central American regions e.g. Peru. They are very colourful orchids with flowers resembling large pansies. *Miltonia* and *Miltoniopsis* can be distinguished where *Miltonia* have 2 leaf Pseudobulbs and *Miltoniopsis* has only one leaf per pseudobulb; their cultivation can be treated the same however. They are not the easiest of orchids to grow and are therefore left for more enthusiastic growers. It may be that their culture is poorly understood by some growers.

Pot type:

Miltonia like to be repotted every year as this will help ensure healthy plants. Generally plastic pots are fine as long as good drainage holes are present. Classic Orchiata is the best media for these. Do not over pot; 10cm pots will usually be large enough in size for mature plants; 5-7cm pots will be a good size for divisions. Plants from flask may be potted into cell trays or 3cm pots. Repotting is best done in autumn after flowering with new growth.



Grades to use/ Re-Potting

As the roots do not like to dry out, they must still drain so that there is no pooling of water and have good air movement. Therefore Orchiata grades such as Classic can be used for all plant sizes. Remove old medium when repotting to ensure roots are being in contact with fresh medium. Remove damaged or dead roots at repotting. Trimming roots is better than potting up broken roots.

Humidity and Air:

Miltoniopsis require good humidity (50-80% but generally 70-80%) with regular misting. In all cases the air movement is also important especially to prevent disease in winter.

Temperature:

These orchids are equatorial and therefore see only minor seasonal fluctuations. Day temperatures should be 27-29°C with nights at 16-18°C (an 11 degree diurnal difference). Lower temperatures can also be tolerated however better blooms occur if night temperatures do not fall below 16°C. *Miltoniopsis* are usually mistaken as being 'cool growing plants', but in fact most of the best specimens ever grown were grown together with *Phalaenopsis* in warm conditions. As it turns out, cooler temperature slows down the metabolism of the plants and helps to compensate for improper growing conditions.

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Light:

Miltonia do not like bright light as these plants are used to shaded rain forests. The same light required for *Paphiopedalums* will be adequate for *Miltonia*. They do not like direct sunlight therefore good shade is required. 1000 – 2000 foot candles is ample for these orchids; higher humidity will allow for the higher light level. Light is also required for flower initiation; high light will initiate flowering however moving blooms to lower light levels once buds have formed will keep better quality flowers.

Fertiliser:

Fertiliser should be a ½ strength high nitrogen fertiliser (30-10-10) applied at every watering when plants are actively growing. Extra iron is needed by *Miltoniopsis* therefore add 2 ppm of IronEDTA as a welcome addition every 2-3 months. Once every 6 weeks high phosphorus fertiliser should be applied to improve flowering. These plants do not like high salt levels so it is important to check media regularly; using Orchiata is a good option however regular checks are still recommended. High salt levels can result in root and leaf tip burn. If EC becomes high (>0.8mS/cm) then flushing may be required. It is essential too that the plants are kept at pH around 6 and will require additional lime. Most growers keep these plants at a too low pH, resulting in many metabolic disorders, the most spectacular being a glassi defoliation.

Irrigation:

Miltonia species need to be kept evenly moist. Their natural environment is continuously damp therefore the plants do not like to dry out. During summer irrigation the plants require watering every 1-3 days, whereas in cooler months this may be every 7-10 days. Keep plants slightly drier after repotting to prevent disease on the roots.



Troubleshooting

Leaves should be light green with a light pinkish tinge when healthy. If light levels get too high then leaves will become more reddish in colour. If leaves are too pale or yellow then light is too low. Tip burn may indicate either lack of water or high salt levels; in either case give a good flush with water and drain well.

Sudden rot can be due to a real rot, or in fact to a strong nutrient disorder such as improper pH, iron deficiency (tissue damaged during a temporary deficiency will not improve when the deficiency is corrected, hence these tissues will be permanently susceptible to pathogens and collapse), or some new species of bacteria recently described. However if the plants are kept warm, the potting mix is kept around pH6 and iron is supplemented regularly, there should not be any problems growing great orchids.

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