Disa

Introduction

Native to South Africa, *Disa* orchids grow as a bog plant on the outskirts of cool swamps. They are naturally high altitude plants and prefer cooler temperatures. *Disa uniflora* are the more common types grown; flowers ranging in colour from bright red to cool yellows on firm stalks good for cut flowers. These plants are generally evergreen and are easily grown from tubers. It must be noted that in South Africa, it is a common practice to grow *Disa* without the tuber stage, new growth being induced shortly after the plant is blooming, and the tuber stage being avoided. It is a technic that allows for faster growth, but as well carries the risk of killing the plant. As a result many cultivars from South Africa have disappeared. In New Zealand or Europe bulbs would be allowed to form which makes an additional safety in case of culture problems. Today most of the older varieties are exceedingly rare or even extinct due to a lower number of breeders still working commercially today. The new varieties are still interesting but some colours and shapes no longer exist.

Pot type:

These plants do not grow too big as they are divided up once the tubers grow. Individual plants are potted into 7-10cm plastic pots with good drainage holes in the bottom. Re-potting should occur after flowering once the previous shoot has died. Discard any dead material. If the environment can be subject to higher temperatures, terracotta pots must be used as they will keep the roots cold. One nursery in Holland did grow commercial pot-plant D*isa* along with their *Phalaenopsis*, with temperatures exceeding 30 degrees for months, using terracotta pots and a drip system. The terracotta pots together with the constant drip system kept the roots cool, and in *Disa*, the leaves are tolerant of high temperature as long as the roots are kept cold.

Grades to use:

Disa are generally grown in Sphagnum moss. This is due to some varieties growing in live sphagnum moss in the wild and their requirement for high humidity. This said Precision Orchiata is the best media as dead sphagnum moss does not carry the same properties as live moss to grow these orchids. The media must be completely exempt from decomposition risks as most of the time it is the media decomposition, or anoxic waterlogging that will kill the plant. Sphagnum fines have been used successfully, however the best growers we visited used either gravel with a top layer of sphagnum renewed every few months, or Precision Orchiata.

Humidity and Air:
High humidity is ideal for *Disa* Orchids as they prefer constantly wet media. Good airflow is therefore important. Air movement is required at all times; during spring and summer plants may be kept outdoors to allow natural air movement. Indoors use a fan to improve air flow. Low humidity levels can easily kill the new growth.

Temperature:
Disa are generally cool growing with normal temperature ranges from 7 - 20°C with 4-5°C tolerated in winter with up to 27°C tolerated in summer with good air movement. In all cases keep roots cool by applying cool or running water. If roots remain in good condition then the plant will regrow if hit by frost or high temperatures. It is easier to correct any problems using Orchiata than in sphagnum or coir (coir became recently popular to grow disa, but has a too high pH in general).

Light:
These plants prefer 40-50% shade or bright light but not direct sunlight. During low temperatures higher light levels can be applied; this will help to intensify flower colour, in higher temperatures increase shade.

Fertiliser:
Use a low rate of fertiliser, about 0.25g/L of a 18-18-18 balanced fertiliser once a week. Ensure dissolved salt levels stay below 200ppm within the media (keep a low EC). Maintain pH around 5.5–6.0. If salts increase, flush with pure water. Some growers are very successful with very high EC, as commercial *Disas* have been grown in Holland with a 1.2EC in clay pots with rockwool and bark; however it requires definitely special skills.

Irrigation:
Disa prefer constantly wet media. Provide with fresh water throughout the year by watering pots every 1-3 days during summer, 4-6 days in spring and 7-10 days in winter. Plants can be placed in 2cm of water however this must be changed weekly to prevent disease and algal build-up. Do not allow the sphagnum moss to dry out.

General
Flower in spring through to early summer. They multiply quickly from tubers which allows for quick production. Watch for rots in tubers; remove and discard any diseased tissue but ensure no cross contamination. A drench with metalaxyl is recommended, and using tolclofos-methyl as a drench can ensure a disease-free culture. Some bacterial and fungal rots can attack the plants, but these usually occur only if the roots are decaying, or the pH of the media is too high.