Cultivation of Clivia

The basics

A promotional brochure from the Clivia Society 2014

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A SHORT GUIDE TO THE CULTIVATION OF CLIVIAS

Species: There are six species of Clivia which are indigenous to South Africa. One of the species has upright flowers, Clivia miniata and the other five species have pendulous flowers – Clivia nobilis, Civia gardenii, Clivia caulescens, Clivia robusta and Clivia mirabilis.

Cultivation: The following recommendations apply to all the Clivia species, however here we will concentrate on the spectacular miniata species.

Position

In the natural habitat Clivia plants grow in dappled shade, often on top of rocks, obtaining their nutrition from the leaf litter.

For the successful cultivation of Clivias we need to recreate the natural conditions for optimal growth. Fortunately the Clivia, in addition to being drought tolerant and relative hardy, except to severe frost, is very forgiving to a large variety of potting media and garden soil mixtures.

Planting in positions receiving the afternoon sun will result in scorched leaves. The early morning sun does not damage the Clivia leaves and is an acceptable position. Dense shade may result in the Clivias not flowering.

Planting Media

Clivia roots need a lot of air around them and they do not like to stand in water. The soil must be well drained. A Clay soil is not suitable for growing Clivia as the water will not drain away from the roots. A sandy soil is also not suitable as there will be too little moisture for the roots. A well composted coarse pine bark mix provides the ideal growing medium. Commercial Clivia mixes are available. Garden soil is vary variable in composition and adding good quality compost and coarse potting mixtures for good drainage is the most suitable way of preparing the garden soil for Clivias.

Nutrition

A slow release fertiliser such as 3-1-5 fed in Spring and Autumn is ideal for the Clivia plants.

Watering.

Water liberally in Spring when there is evidence of growth. Decrease the amount of water in winter as the growth rates are slower or have stopped. If the soil in which the Clivia is planted is well drained, watering will not result in a problem, such as root rot.

Seed propagation

Once your Clivias have flowered, you may wish to increase the numbers by pollination. This is an easy way of increasing numbers, but there is a three to four year wait for the plant to flower, usually after it has at least twelve leaves. Clivia miniata flower in September but may flower at any time and even surprise you in winter with a flower. Pollination is achieved by placing the yellow pollen of the anthers on the stigmatic lips of each flower. There are six anthers with pollen and one single stigma in the centre of each flower. Pollinate in the early morning for a few days while the stigma is still sticky and fresh looking.

A berry will develop if the pollination was successful. Leave the berry on the flower stalk/ peduncle/scape until the colour changes from green to orange or yellow. Harvesting the seed before the colour change occurs may be unsuccessful. Harvesting the seed from July onwards in the Southern Hemisphere ensures successful germination.

Germination of the Seed

The berry should be opened and the seeds exposed. A fine membrane surrounding the seed should also be removed. Wash the seed pulp in a mixture of a teaspoon of dishwasher liquid in a litre of water. This makes the removal of the slimy tissue surrounding the seeds much easier and acts as a “sterilising” agent.
After the seeds are clean, wash off the soapy solution and soak the seeds in a freshly mixed up solution (use the recommended strength) of antifungal mixture. Fungi are the main enemy of germinating seeds.

The seed may be germinated in a damp paper towel sealed in a zip lock bag or between paper towels in a sealed plastic container and should be kept in a warm place, or on top of the fridge. Keep the paper towel only moist and not too wet. The seed may also be pressed down in seedling soil to the depth of half the seed height, then keep the soil moist in a shaded protected area. A covering of oak leaves or newspaper or glad wrap may be used to keep curious animals out of the tray.

Once the radicle projects from the seed or when the root is 2cm long, place the seeds in communal seed trays and keep moist. When the plants have about eight leaves they may be planted in individual small pots. Don’t use too large a pot for the transplanted seedling.

While the seedling has the seed attached no feeding of the plant is necessary. Seedling fertiliser or foliar feed may be started once the seeds fall off the seedling. You may add some pelletized chicken manure to the bottom half of your seedling mix, so that nutrients are available once the roots reach that depth.

**Multiplying by division:** Clivia plants in pots need to be divided when there is no healthy potting soil left in the pot. Clivias in the garden need only be divided when the clumps grow into each other and the overall qualities of the blooms deteriorate.

Lift the whole Clivia plant out of the ground or out of the pot. Before dividing an offset make sure that there are roots attached to the offset. Use a sharp clean knife and divide the offset. The offset may often break off quite easily. Cover the open wounds with an antifungal solution e.g. Chlorothalonil (Bravo). Don’t overwater the newly planted offset.

**Pests and Diseases:**

**Pests:** The main pests of the Clivia plant are the Amaryllis caterpillar and the Leaf Miner. The snout beetle does cause a problem in some areas. The leaf miner causes leaf disfiguration. Control the leaf miner with Imidacloprid (Confidor/Kohinor/Bandit). The lily borer/amarililis caterpillar develops from eggs laid by moths on the underside of the leaves. The larvae of these lily borers burrow a channel down the leaves into the growth stem of the Clivia. The main fan may die, but usually offsets grow from the main rhizome of the plant. The best insecticide for the amaryllis caterpillar is Cypermethrin (Ripcord) or Dimethoate (Aphicide).

Mealy bug is another pest that occurs when plants are overcrowded and there is poor ventilation between plants. This pest is well controlled by imidacloprid (Confidor).

**Diseases:** The diseases affecting Clivia include viruses, bacteria and fungi. By far the biggest problem here is with fungal infections.

**Viral infection** of Clivia gives the leaves a mosaic pattern and the flowers may have split colours. As there is no cure for a virus infection, destroy the plant, and prevent further spread of the disease.

**Bacterial diseases** can cause stem rot. This gives a characteristic foul smell when present. Scrape out the rotten part of the plant. Pour dilute bleach over the area and wait for the area to dry. Keep the soil relatively dry until the bacterial rot has cleared up. Bacteria usually cause damage following on some previous physical injury to the plant.

Fungal infections cause brown marks on Clivia leaves. These are particularly common in warm and moist conditions. Remove the damaged and discoloured leaves. Spray with chlorothalonil. (Bravo) or a systemic fungicide. E.g prochloraz (Octave ).
From left to right and from the top downwards:

Clivia nobilis, Clivia miniata, Clivia mirabilis

Suspected viral infection of leaves, Clivia gardenii, Clivia flower arrangement with freesias

Clivia robustus, “Frats” Clivia, Clivia caulescens

Clivia miniata, Clivia mirabilis, Clivia miniata multitepal