

Virus Control

The control of virus disease is essential in orchid growing. To achieve this it is necessary that the grower becomes aware of the seriousness of the disease, is aware of its modes of spread and adopts handling techniques that limit the possibility of its transfer.



Virus infection in Orchids is virtually always due to one of two viruses: Cymbidium Mosaic Virus and/ or Odontoglossum Ring Spot Virus. These viruses affect all genera with the signs of infection being more obvious in some and at certain stages in the growing cycle. Almost invariably virus affected plants result from the purchase of an infected plant, the division of a virus affected plant or the careless use of cutting instruments where infected sap is introduced to a previously clean plant.

When purchasing a plant it is essential that you view it carefully having familiarised yourself with the diagnostic signs of virus infection. Deal with reputable traders and if you see a suspicious mark, ask their advice. Beware of backbulbs especially if these do not have substantial leads, as the signs will not be obvious. The older the plant the more likely it is to be virus affected because it has been handled before. To the new grower, the offer of a backbulb or division from an untrained orchid grower is a common source for the introduction of infection.

Constantly view your collection critically and occasionally invite a fellow grower to look over your plants. They may see something that you miss. Be aware when signs are likely to be most obvious eg. with the new growth in cymbidiums and during flowering with Cattleyas. When a new plant is brought into the collection it may be prudent to quarantine it, although with virus disease this may involve a period of up to a year. If a virused plant is found it should be destroyed unless there is a very good reason for retaining it, as the disease is incurable. Only with a valuable breeding plant or valuable unique clone is an attempt to rid the infection by meristem culture justified. Do not give it to another grower whoever they are as this only perpetuates the problem.

Since spread is almost always by direct contact, and usually via cutting instruments, a safe technique for handling plants must be developed. The two most effective agents against viruses are alkaline solutions and heat. Mentholated spirits, hypochlorite, formalin may be used. However the best agent is trisodium orthophosphate marketed as Triclenium. This is readily obtainable from hardware stores, is inexpensive and relatively safe to use. Potassium hydroxide (caustic potash) and sodium hydroxide (caustic soda) are more effective but too dangerous and never forget that you are more valuable than your orchid. Triclenium is used as a 10% or saturated solution and the cutting instruments should be heated to blue heat.

A satisfactory approach to control any spread via cutting instruments involves

Use only long bladed knives not secateurs. Knives can be used to cut any part of the plant and can be readily flamed whereas secateurs cannot. Two carving knives will suffice so that one can be soaking while the other is being used.

After use-

Pass the knife through a container of detergent to remove vegetable matter and compost, which denatures the Triclenium, paying particular attention to the junction of handle and blade, as this is the difficult area to flame.

When clean transfer it to the Triclenium and shake the solution up into the handle, and leave for 20 minutes if possible.

Prior to use, flame the blade to blue heat. This has a direct sterilizing effect. Also in drying the blade, the Triclenium becomes more concentrated.

Other potential vehicles for the spread of virus include....

Your hands. Hot soapy water provides the most feasible approach and regular washing while repotting is desirable.

The potting area. Here, a regular wash down with Triclenium should be given, especially at the end of the day or when there is any suspicion that an infected plant may have been handled.



Pots and potting compost. If these are reused care should be taken. The potting compost would be difficult to sterilize, however pots and should be first washed in detergent and then soaked in Triclenium.

Insects whilst not proven to transfer infection should be eradicated at the first sign.

Virus infection can and must be controlled. Become aware of its diagnostic signs, keep a constant vigil and practice techniques that minimize its spread. You can control it in your collection and therefore orchid growers can be encouraged to adopt such an approach and we can take it a step towards its eventual eradication.

These notes have been used at our Cultural and New Grower's Meetings. They are from various sources and we thank the authors. All articles are supplied in good faith and the Bribie Island Orchid Society and its members will not be held responsible for any loss or damage.