

# The Cymbidium Orchid Club of South Australia – June 2007 Survey on Bulb Rot

This survey is to gather information which might assist in finding the cause and possible cure for our Cymbidium Orchids

### Collection Details

**How many Cymbidiums in your collection (please circle)**

1-9	10-49	50-99	100-199	200-499	500-1000	Over 1000
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**Number of plants with rot since 1/9/06 (please circle)**

1-9	10-49	50-99	100-199	200-499	500-1000	Over 1000
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**Growing Medium (please tick)**

Pine Bark	Small	Medium	Large
Coco Fibre	Small	Medium	Large
Other Please List:			

**Source of potting medium (where purchased)** \_\_\_\_\_

**Fertilizing Method (please tick)**

Type		Name	NPK (if known)	How Often
Liquid	√			
Organic				
Slow Release				
Other				

**Watering Details (please circle)**

Mains water	Rain water	Combination
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**Duration**

Season	Duration	Start AM	Start PM
Spring			
Summer			
Autumn			
Winter			

**Prevention Methods**

Do you spray to prevent rot?  Y  N Name chemical \_\_\_\_\_

How often do you spray? \_\_\_\_\_

Do you use calcium nitrate regularly?  Y  N How often? \_\_\_\_\_

Any suggestions to minimise bulb rot? (please use added sheet if necessary)

Name (optional) \_\_\_\_\_ Area \_\_\_\_\_

# Horticultural diagnostic service

## Interim REPORT

6 June 2007

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**SPECIMEN No.:** 109/07

Date received: 18/05/2006  
Crop affected: orchid (Cymbidium)  
Relevant details: blackening on leaves and tubers  
Test undertaken: fungal ID on plant and soil

### Diagnosis:

Blackening was observed on the leaves both in discrete lesions and extending down into the tubers. Some of the corms were mushy and odorous, with leaves blackened at the base that were easily removed. A few roots of the softened corms were also soft and discoloured.

Anthraxnose (*Colletotrichum gloeosporioides*) was found in association with the blacked leaf tissue found in discrete lesions. This is a common fungus with a wide host range. Spots can start as light brown sunken lesions on leaves or tubers. These spots can turn black or dry out the leaves, and concentric rings of orange slimy spore pustules may be seen in high humidity. These spores will be splashed or blown onto nearby plants and the disease can spread rapidly. When the disease is severe the leaves and tubers can be killed.

*Phytophthora* was found in association with the rotten roots and blackened stems. This is a soil borne organisms, and several species have been found in association with rots in orchids. This is being identified to species, which will take about another 2 weeks, and a final report will be submitted at this stage.

Bacteria were abundant in the softened corms and in the base of the leaves attached to the affected corms. This was most likely secondary, and initial tests indicate in is a fluorescent pseudomonad, which are often secondary. Testing to determine the identity is continuing.

### Advice:

Anthraxnose likes warm humid conditions. Aerate plants as much as possible and avoid overhead watering. Remove infected leaf tissue and destroy. It would be advisable to remove any infected plants away from the rest as soon as possible. Protectant application of fungicides (eg chlorothalonil, copper or mancozeb) may help prevent new infections, but will not kill the existing infection.

*Phytophthora* likes water and wet conditions. It is spread in water and infected soil. Hygiene is important to reduce spread. Ensure water drains freely and is not pooling under the pots, and minimise water splash between pots. Remove all infected plants and keep separate from uninfected. Reduce watering to prevent over watering – more frequent light watering is often better as wet/dry cycles encourage the disease. There are fungicides which will reduce the disease but they may not completely eradicate it. (eg Fongarid, Banrot, Phos acid, Ridomil, Aliette)

The only chemical that will prevent bacterial infection is copper. Bacteria need an entry point to infect, and usually rely on wounding or other diseases. Keep the plants as healthy as possible.



(Barbara Hall)

**PLANT DIAGNOSTICIAN  
HORTICULTURE PATHOLOGY**

### Disclaimer:

SARDI will not be responsible for any losses of whatever kind incurred by you, the client, as a result of incorrectly collected samples; inadequate or incorrect samples; inadequate or incorrect information provided by you; inadequately sealed sample bags or damage to the sample bag in the course of delivery to SARDI.

The results are provided on the basis of such standard testing procedures and scientific information as are currently available to SARDI.

Neither SARDI nor its officers accept any liability resulting from the interpretation or use of the information contained herein. Use of the information is at the risk of the user to the extent permissible by law.

Where information on chemicals is provided, the product should ALWAYS be used according to the directions on the label.

SARDI



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