

Diseases of *Heliconia*

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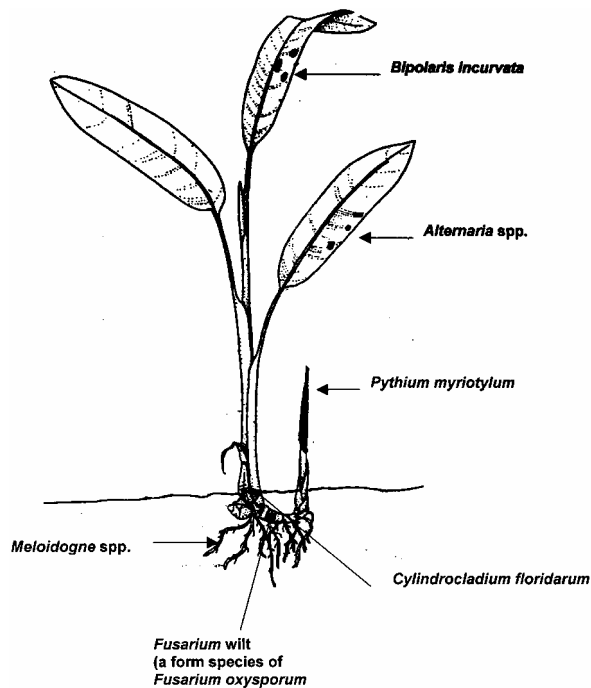
INTRODUCTION

The cut flower industry of the Darwin area consists mainly of orchid, heliconia, and ginger growers. This is a fast growing industry, with great potential for the future.

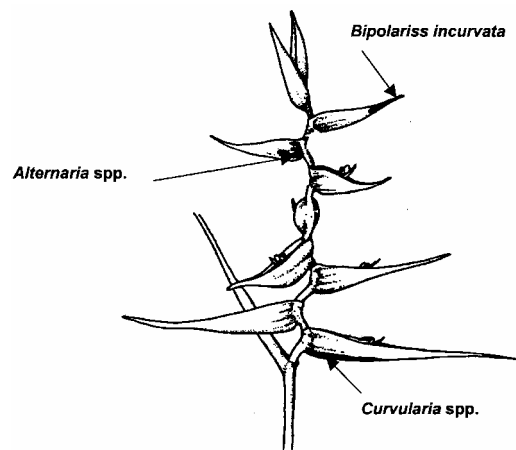
Both heliconias and gingers are propagated from rhizome pieces. When purchasing new lines of heliconias, a thorough examination of the rhizome pieces is necessary to avoid introducing contaminated stock onto your property. A rhizome in good condition should be firm with no soft areas present.

The trimming back of roots from the rhizome will reduce the incidence of *Meloidogyne* spp. (Root Knot Nematode). The removal of all soil and dried material attached to the rhizome will reduce the incidence of soil borne pathogens.

Heliconia Plant Disorders



Flower Bract Disorders



This Agnote is intended to help the new grower to become aware of common disease problems of Heliconias.

| DISORDERS | DISEASE | TREATMENT |
|---|--|--|
| Aerial Disorders | | |
| Leaf spots | <i>Bipolaris</i> spp. and <i>Altemaria</i> spp. | Bravo® and/or Tilt® |
| Shoot Rots | | |
| Emerging shoots | <i>Pythium myriotylum</i> | Previcur® and/or Fongarid® Avoid water-logging |
| Basal Rots | | |
| Pseudostem at ground level | <i>Cylindrodadium floridanum</i> | No chemical control currently available. Usually attacks weakened plants, so avoid water-logging, which can cause other root rots. |
| Soilborne Plant Disorders | | |
| Wilt syndrome | A form species of <i>Fusarium oxysporum</i> | No chemical control available. Clean knives when harvesting flowers. Clean planting material. Never re-plant on diseased ground. |
| Rhizome rot | <i>Cylindrodadium floridanum</i> | No chemical control currently available. Avoid water-logging. |
| Root Knot nematode | <i>Meloidogyne</i> spp. | Nematicides not recommended due to cost and toxicity. Organic mulches, e.g. green manures, forage hay incorporated into beds at planting. |
| Root Rots caused by poor soil drainage | | |
| Fine-feeder roots | <i>Phytophthora</i> spp. and <i>Pythium</i> spp. | Recommended fungicidal drench, e.g. Copper oxychloride, Fongarid®. Avoid planting in wet season. Incorporate gypsum in clay soils to aid in water dispersal. Do not plant rhizomes too deep in beds. |

Factors affecting Flower**Quality**

| | | |
|------------|---|---|
| Physical | Abrasion due to wind causes brown superficial lesions on peduncles and bracts | Incorporate wind breaks, e.g. native timber, palms and/or barna grass. |
| Chemical | Spray-damage due to herbicide drift can cause discolouration of bracts. Poor spraying practices can cause scorch marks and reduce bloom quality. | Do not spray on windy days; choose calm weather conditions. Spray in early morning or late evening, i.e. cooler parts of day. Use correct formulation, concentrations recommended on the label. |
| Biological | Flowers attacked by ants and rodents are not salable. <i>Curvularia</i> spp. and <i>Alternaria</i> spp. can cause severe spotting on bracts. <i>Bipolaris incurvata</i> can cause flower bract spots. | Aim to reduce pest populations through appropriate trash management. Regular spray program of Bravo®. Improve aeration during wet season to avoid water build-up on leaves. Regular spray program of Mancozeb®, Rovral® and Tilt®. Improve aeration during wet season to avoid water build-up on leaves. |

Use of a registered ® chemical does not imply endorsement of the product by DPIFM as other commercial formulations may also be appropriate.

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View of *Fusarium* wilt infected *Heliconia psittacorum* plants caused by a form species of *Fusarium oxysporum*



Leaf Spot on *psittacorum* flower caused by *Curvularia incurvata*



Internal vascular discolouration of lower pseudo stem of *Heliconia psittacorum* spp. caused by a form species of *Fusarium oxysporum*



Base and rhizome rot caused by *Cylindrodadium floridanum*