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# Holiday Cactus Production Guide

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CFREC-A Foliage Plant Research Note RH-91-20

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## HOLIDAY CACTUS

**There is much confusion about the nomenclature of Holiday cacti, a popular seasonal plant native to Brazil. Many commercial growers now call the Thanksgiving, Christmas and Easter cacti, Holiday cacti. The scientific as well as common names have also changed throughout the years. Currently, the Christmas cactus is identified as *Schlumbergera bridgesii* (Lem.) Lofgr., the Thanksgiving cactus, *Schlumbergera truncata* (Haw.) Moran, and the Easter cactus, *Rhipsalidopsis gaertneri* (Regel) Moran.**

**Christmas cacti have cladophylls, or joints, with 2 to 3 rounded teeth on margins, an ovary that is 4 to 5 angled, and purple anthers. Margins of the cladophylls of Thanksgiving cacti are 2 to 4 serrated, the ovary is cylindrical and anthers yellow. Grown under normal daylength, Thanksgiving cacti normally bloom near Thanksgiving, approximately a month before Christmas cacti. However, by manipulating daylength, growers can bring both species into bloom for the Christmas season. Easter cacti have cladophylls with crenate margins and bristles at the apex. Flowers have angled ovaries and spreading stigma lobes. They bloom primarily in the spring and sporadically throughout the year.**

**Holiday cacti are available in a range of flower colors including white, yellow, orange, pink, red, lavender and a few bicolors. Other characteristics which differ among cultivars are density of branching, stem texture shape of cladophylls, shape of flowers and time of bloom. Although flower color is the primary criterion which consumers evaluate when purchasing Holiday cacti, producers must evaluate performance, particularly the ability of specific cultivars to bloom in time for holiday sales.**

**Although Holiday cactus can be propagated from seed, propagation by cuttings of 2 to 3 cladophylls produce salable faster. Cuttings are usually stuck in the final container as either 3 or 4 cuttings/4 inch pot or 5 or 6 cuttings/6 inch hanging basket. Cuttings should be misted or lightly watered several times daily. Fertilization should begin with root development, about 3 weeks after sticking. Cuttings are usually taken in late spring, after stock plants have**

**produced new growth. Procuring cuttings in this manner prunes stock plants and supplies material which can be potted in larger containers for holiday sales.**

**Holiday cacti grow best in light shade of 65 to 80% (approximately 1500 to 3000 foot-candles) with the**

**higher shade level preferred. Excellent growth can be obtained with 3-1-2 (N-P2O5- K2O) ratio liquid or slow-release fertilizer when applied at a rate of 1200 to 1400 lbs N/A/year (equivalent to 28 to 33 lbs N/1000 ft<sup>2</sup>/year). Micronutrients should be added. Irrigation is sometimes reduced and fertilization stopped in early September to promote flowering. Potting media utilized must have excellent aeration as Holiday cacti do not grow well in heavy, wet mixes. A pH of soil 5.5 and mhos/cm of 1,000 appears optimum. Good growth occurs when soil temperatures are 70 to 80°F, with similar air temperatures. Limited growth will occur at 60°F soil temperature, but lower temperatures result in poor or no growth. Lower temperatures of 50°F minimum promote flowering.**

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## **PHYSIOLOGICAL PROBLEMS**

Reference Pest Control Guides [Here](#)

### 1) Chlorosis

Symptoms -

Upper cladophylls (leaves) are chlorotic, roughly in the center of the plant.

Control -

Although micronutrient deficiency has been suggested as the cause, treatment with various micronutrients has not been beneficial. Suspected cause are low soil temperatures encountered in the late fall and early winter.

### 2) Discoloration

Symptoms -

Portions of cladophylls are blue to gray-green, and sometimes shriveled.

Control -

Symptoms are sometimes induced by root rot pathogens, but frequently result from soil with poor aeration or overwatering. Reduce the frequency of irrigation and improve soil aeration.

### 3) Flower-bud drop

Symptoms -

Newly formed flower buds abscise.

Control -

Continued warm temperature above 90°F will cause some abscission of flower buds. Maintain temperature below 90°F.

### 4) Non-flowering plants

Symptoms -

Flower buds are not produced in the fall-winter seasons.

Control -

Maintain complete darkness during the night. Night lights or car lights can interrupt the dark period required to set flower buds. A second cause of non-flowering plants could be low light during the day. Maintain 1500 ft-candles, or more during the day for maximum flower production.

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## **BACTERIAL PROBLEM**

Reference Pest Control Guides [Here](#)

### 1) Soft rot - (*Erwinia* spp.)

#### Symptoms -

A blackened, wet, slimy lesion generally starts at the soil line at the base of the plant and progresses into the top of the cladophyll and into other segments of the plants. Plants wilt, collapse and often die.

#### Control -

Remove and destroy infected plants as soon as they are found. Keep watering to a minimum and avoid splashing since this can spread the bacterium to other plants. Irrigate early in the day to allow rapid drying of the foliage which reduces the ability of the bacterium to infect. Be sure to obtain an accurate diagnosis of the problem since several of the diseases caused by fungi appear similar.

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## FUNGAL PROBLEMS

Reference Pest Control Guides [Here](#)

### 1) Drechslera cladophyll rot (also called Helminthosporium cladophyll rot (*Drechslera cactivora*))

#### Symptoms -

Blackened, sunken lesions from 1 mm to 1 cm wide form on the cladophylls of infected plants. The lesions are generally circular and can occur above or below ground. Cladophyll abscission is common on plants even when infection appears light. The black spores of the fungus form in the lesions, giving them a fuzzy appearance. *Rhipsalidopsis* is very susceptible to Drechslera leaf spot and *Schlumbergera* is moderately susceptible.

#### Control -

Use the same cultural controls as listed for soft rot.

### 2) Fusarium cladophyll rot - (*Fusarium oxysporum*)

#### Symptoms -

Dieback, root and cladophyll may occur as a result of the Fusarium infection. Species of both *Schlumbergera* and *Rhipsalidopsis* are susceptible to *F. oxysporum*. An infection appears at the cladophyll border. Lesions are generally tan and may be dry at times and appear sunken. The orange-colored spores of the pathogen form in the lesions, and they spread easily by water or air since the spores are light weight. One of the easiest ways to distinguish between Fusarium and Drechslera cladophyll rots is to observe the color of the spores since those of *Fusarium* are tan while those of *Drechslera* are black. The possibility of both diseases occurring concurrently should be kept in mind when choosing control procedures.

#### Control -

Use the same cultural controls as listed for soft rot.

### 3) Pythium and Phytophthora root and stem rot - (*Pythium* and *Phytophthora* spp.)

#### Symptoms -

Foliage of plants infected with *Pythium* or *Phytophthora* spp. turns a dull gray-green and may wilt. Stems become rotted at the soil line and upper portions of the plant collapse. Cladophyll abscission may occur. Roots are darkened and mushy and generally sparse.

#### Control -

Use pathogen-free pots and potting media and grow plants on raised benches. Overwatering plants may predispose them to attack by root-rotting fungi.

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## NEMATODE PROBLEM

Reference Pest Control Guides [Here](#)

### 1) Cactus cyst - (*Cactodera cacti*)

#### Symptoms -

Heavily infected plants become stunted, foliage turns red brown and wilting is common. Examination of the roots reveals the tiny round cysts which may be white when immature and turn golden to medium brown when mature. The cyst is the female nematode and is usually attached to the roots.

#### Control -

Many nematicides are effective in controlling this nematode problem. Always raise plants above the ground and use nematode-free potting medium, pots and plant materials.

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## INSECT AND RELATED PROBLEMS

Reference Pest Control Guides [Here](#)

The major arthropod pests of Holiday Cactus are soil inhabiting insects such as fungus gnats and root mealybugs. However, foliar mealybugs and scales sometimes attack this plant. In the control section for each pest a few of the many registered and effective pesticides will be listed. For a complete listing, please consult the references at the end of this report.

### 1) Fungus gnats

#### Symptoms -

Fungus gnats are small black flies (1/8 inch long) and are frequently observed running around the soil surface or on leaves and are often confused for Shore flies (see later section). The adults have long bead-like antennas and their legs hang down as they fly. These insects are very weak fliers and appear to "flit" around randomly. The larvae are small legless "worms" with black heads and clear bodies that inhabit the soil. The larvae spin webs on the soil surface which resemble spider webs. Damage is caused by larvae feeding on roots, root hairs, leaves in contact with the soil and lower stem tissues. Feeding damage may predispose plants to disease and they are often found in close association with diseased plants or cuttings. Adults do not cause any direct damage, but are responsible for many consumer complaints to growers. Adults emerge and fly around in retail shops, homes, or offices and are therefore a nuisance. For further information please consult Extension Entomology Report #74. (Management of fungus gnats in greenhouse ornamentals).

#### Control -

Reduce the amount of water applied to each pot where possible. Avoid algae growth where possible. Soil drenches or soil-surface sprays are effective at controlling the larvae. Nematodes that seek out insects in the soil are sold commercially and have been shown to control these pests without causing any negative effects to the host plants. Adults are very sensitive to most chemicals.

### 2) Mealybugs

#### Symptoms -

Mealybugs appear as white, cottony masses in leaf axils, on the lower surfaces of leaves and on the roots. Honeydew and sooty mold are often present and infested plants become stunted, and with severe infestations, plant parts begin to die.

#### Control -

Systemic materials are preferred. Control of root mealybugs is accomplished with soil drenches with an insecticide. When pesticides are applied to the soil, care must be taken to assure that the pots have good drainage and that no saucers are attached, or phytotoxicity may result.

### 3) Scales

#### Symptoms -

Infested plants become weakened or stunted and, in severe cases, die. Scales can be found feeding on the cladophylls. They are usually distinct from the plant material on which they are feeding. Their shape (round to oval), size (pinpoint to 2 mm long), and color (light to dark brown) are quite variable and many scales are hard to distinguish from the plant material on which they are feeding.

#### Control -

See Mealybugs

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Pesticides should be applied according to label directions.

Regardless of the pesticide or mixture of pesticides used, it is strongly recommended that the effects be evaluated on a few plants, under your particular conditions before treating all plants.

Mention of a commercial or proprietary product in this paper does not constitute a recommendation by the authors, nor does it imply registration under FIFRA as amended.

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Reference Pest Control Guides [Here](#)

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