

Checklist for Growing Problems

To answer a question, such as "My Paphs or Phrags are not growing well", or "They are not flowering for me", it would be useful to have the following information. It will not always be possible to provide all of this information, but as much as possible is helpful, especially in eliminating certain possibilities, and sometimes knowing what you cannot provide may also give clues as to what is going on. It is also very possible that while thinking about how to answer these questions you will end up solving your growing problem. After you've answered as many of these questions as possible, we'd suggest looking at the articles "Buying and Growing Your First Paph", which contains information detailed well beyond just the beginner's level, and "PAPHIOPEDILUM: Frequently Asked Questions (FAQ)" where you may very well find your answers. For more detailed information these articles cross reference to some of our other growing information articles.

Plants

Specifically, what plants do your questions refer to? Paphs and Phrags are not homogeneous groups of plants with regard to care, and it is necessary to know what plants are under discussion. At what stage are they----seedlings, adults of single or multiple growths, recent divisions, or recent acquisitions, and when did they last flower? Is your problem related to just a few of your plants, or does it seem to cross all boundaries?

Light

If greenhouse growing, what is your geographic location and total shading factor (glazing plus shade cloth). In what micro-climate are the plants, i.e. if you are in a cool climate are they close to the wall in the back, far away from the heaters and are they generally therefore growing somewhat colder than other plants in your collection? Are your plants positioned right next to the glazing on the east or south side, and therefore subject to greater amounts of stress with regards to heat and light? Are you growing the plants under the bench, or if on the bench, are there hanging plants above them that drip upon them for a time after you've watered?

Are you plants directly under a fan? Is there sufficient space between your plants on the benches, or are they crowded? If you cannot see the mix on the top of each individual pot, then they are crowded.

If under lights, what type, wattage and distance from them, both horizontally and vertically? How long are the lights on? Do you seasonally vary the time the lights are on? Are your timers working correctly?

Temperatures and humidity

What are your typical daytime and nighttime temperatures? Have the plants been moved recently to a new location so that they are experiencing new and different temps? Are temperatures constant throughout the year or do they vary by season? If varying, give the typical seasonal temperatures. Do you know what your average relative humidity is, and is it strongly variable?

Water

How do you determine when to water your plants? Do you water on a fixed schedule? Do you water with several volumes per pot (i.e. until there is a large amount of run through), or less? When you water, can you see the surface of each pot to ensure that every pot receives water? Does the water run through freely through the pot, run very slowly through the pot or pool up on the surface when you water? What is your water quality in terms of hardness and pH? Do you have an analysis, particularly with regard to calcium, magnesium and sodium? What is the approximate temperature of your water when you apply it to your plants, particularly is it much cooler than the air temperature, or of the plant's leaf surface? What time of day do you water, can you water only in the mornings, do you water later in the afternoon, or approaching evening? If watering in the greenhouse in the evening through unavoidable circumstances, do you raise the temperature of the greenhouse overnight? If you are growing under lights, do you water just before the lights go on, or after they go off?

Fertilizer

What do you use for fertilizer? At what strength do you fertilize, and at what frequency? Do you use different fertilizers at different times of the year? What is the pH of your fertilizer/water irrigation mix? Do you have

an accurate measuring system for fertilizer? Do you use any supplements and at what frequency and rate? Does your fertilizer contain calcium and magnesium?

Pots and Potting Mix

What is your potting mixture composed of? How long have your plants been in this mix, and does the mix appear fresh or has it broken down so that it resembles soil? Do various plants have different mixes, or is your collection in a homogenous potting mix? How do you prepare the mix, and do you have a constant 'recipe' that you use? What is your pot size with regard to the root system of your plant? What are your pots made of and what is their shape and depth? Describe the drainage system of your pots. Do you use any sort of crocking? On what type of surface do the pots rest, are they on a solid based tray, on mesh, or on pebbles?

Roots

How often do you repot? Have you unpotted your plant recently and examined the roots? If so, describe the condition of the roots, especially with regard to quantity and color, substance (hollow, squishy, firm). Also, are there white growing tips in evidence? Are the roots going tightly around and around the inside of the pot, very nearly filling the pot with little visible evidence of remaining potting mix? Are there only roots on the outside walls of the pot, or are there roots in good condition throughout the pot? Are there emerging new white roots at the base of the plant? Are the roots only on the top of the mix in the pot, and refusing to go down into the mix?

Top Growth

Describe the top growth--the leaves-- of your plant. How many growths, has it flowered previously, and when was the last time it flowered? Do your plants seem to be extending their rhizome above the surface of the pot, and thus attempting to put out roots above the mix? What is the color of the leaves, is it uniform throughout or are there varying streaks or spots (not referring to the natural mottling some Paph leaves have)? Are the lower leaves pale in color, or almost yellow, or are they brown and very dry? What do the leaf tips look like, are they the

same color of the rest of the plant, or are they dark in color and crispy, or damp? Are the leaves turgid or floppy? Are you growing new leaves at a rate equal to or faster than the loss of older ones? Are there dark, wet areas at the bases of the leaves? Are there areas of dark, crispy spots or blotches anywhere on the leaves? Are there new starts on the plant, and are they growing well or are they turning dark brownish-orange in color and appear wet? If your plants are mottled leaf types, is the mottling barely discernible, or are the leaves very darkly mottled? Are the new growths of the plant maturing smaller in size than the previous mature growths?

Air Movement

How much air movement do you provide for your plants? Are fans blowing directly on the plants or moving the air over them? Describe the feel and smell of the air in your growing area.

Pesticide Applications

Have you made any applications of pesticides, fungicides, horticultural oils etc. to your plants in the last few months?

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