

My Amorphophallus Culture

I really love Amorphophallus, and the information given here is how I grow my Amorphophallus plants, and it has been quite successfully for me. In particular, my fertilizer program is quite different from most growers. These notes are based of protocols I developed while working for a botanic garden. They are rather lengthy, but it's like a mini horticultural class, so please enjoy!

Thanks,
Craig Allen

CONTAINER: Size depends on the species and tubers size, just make sure it has very good drainage. I will often over pot if I know the plant (tuber) is healthy and stable to give the tuber plenty of space to expand. The tubers can expand and multiply very quickly. For newly acquired plants I pot small in soft sided (blow molded) nursery containers and repot again in a few months if the plant has grown very quickly. I like the soft sided pots because they cause less stress on a tuber if I don't get it into a pot that can accommodate the quick growth. Stressed tubers will often split into smaller tuber instead of one large specimen. Once a species like the *A. titanum* gets large it is difficult to find large enough pots. For a giant species you will need a pot that is at least twice the diameter of the tuber about half way down the pot. When actively growing a young tuber might need even more space. I tend to set many of my larger potted tubers into ceramic garden urns. The added weight of these pots help keep the plants upright in a breeze. The single leaf an amorphophallus makes each year is easily damaged. If it is, you have to live with it the rest of the growing season.

POTTING: I repot most amorphophallus in Spring just as their new growth begins to emerge. This way they start out with fresh soil, new fertilizer and are ready to go. This ensures that all of last year's roots have rotted away or are cleaned off. I hate to repot once a tuber has gotten established in its pot, unless it is about to split its container with its vigorous growth. The exceptions are the giant species like *titanum* and *gigas*. [They did not appear to have as defined a growing season when grown in tropical areas.] I later found this wasn't consistent, their season just seemed to be later, going dormant in early winter in South Florida. I found as mature plants they became more regular in their habits. I pot them up when they look too big for their pots. I like to keep repotting them often as seedlings, sometimes several times a year for their first few seasons. Then you can add more and more fertilizer.

LIGHT: Most species I have grown appreciate strong light. I have seen a few common species planted in the ground growing in almost full sunlight, but it is difficult to maintain a potted specimen that way. My personal plants grow under a pool screen with tall trees on the western side providing afternoon shade.

POTTING MEDIA: I now use a commercial planting mix. Berger BM7 or Faford 3B. It is a peat moss based soil with pine soil conditioner and perlite. Most important is that it drain well. I used to mix my own soil with 6 cu. ft. compressed peat, 3 cu. ft. perlite, 2 bags pine soil conditioner. I liked it better, but I haven't the time to mix my own anymore. On some rot prone species

(gigas, for example) I add more perlite, Turface (fired clay granules) and sometimes add drainage material in the bottom of the pot.

FERTILIZER: This is a very important, perhaps 'The Most Important Section' in this instruction, as many amorphophallus species are very heavy feeders.

I use a combination of fertilizers, mostly added to the soil in the pot. I add soil to the middle of the container and add generous quantities of fertilizer.

New organic fertilizers are beginning to show up in garden centers and box stores, JOBES 4-4-4 is a brand I have seen recently at Lowes (and it's really good stuff). There is now a 3-5-4 specially for bulbs. In a 3-gallon pot I might add up to 1 cup for vigorous species such as the Titan. I also add generous amounts (1/4 cup) of bone meal. (VERY IMPORTANT) In 2003 I placed the famous Mr. Stinky in a 42" planter, adding about 5 gallons of the Roots 2 Dry (another brand of organic fertilizer based on kelp meal and chicken manure). My rule of thumb was to add almost as large a volume of this organic fertilizer in the pot as the size of the tuber. I then add a shallow layer of soil without the fertilizer. Then I place the tuber and fill with more soil. I have the tuber in the upper part of the pot, several inches under the soil surface. Then I use generous quantities of Florikan - blend 12 month Foliage & Ornamental 15-4-9 + Mg. (a Nutricote time release mixture with trace elements) Top dress with a little more soil and water it in. I tend to plant high because the larger species will put out thick roots from the growing point that quickly spread through the soil and begin to shorten. It stabilizes a top heavy plant. The soil level will often drop quickly when top growth begins and the soil is compressed under the tuber. I add more soil to the surface as that happens. Then the tuber produces many smaller feeding roots that fill the container and make use of all that fertilizer. I try not to place much fertilizer over the top center of the tuber, though I have never had a problem even when it was accidentally done. Occasionally I have missed a pot on the first potting go round and the new growth has already fully developed, so I add fertilizer to a new layer of soil on top. It is better than nothing, but don't neglect the fertilizer.

The other thing I have going for me is the Florida weather. We get a lot of rain most summers and some of the nutrients are flushed out. If your growth method would not allow flushing out of the pots, you might have to consider lower feeding rates. Just don't neglect it.

DORMANT PERIODS: During their dormant period I let an Amorphophallus titanum rest in the moist soil. If you have to worry about winter chills I would keep the soil just barely moist, but titanum doesn't like to be kept dry. Different species have quite different requirements, so research each species. Some species vary in their need to rest in soil. A number like to be kept very dry. I'm lucky to have a basement where I store my pots during the winter. Just be sure to keep an eye on the pots starting in April. When new growth emerges they grow very quickly.

YOUNG TITAN TUBERS: When they are growing vigorously as a young tuber they can skip dormancy for a year or even more, adding a new leaf before the loss of the older one. Keep them very well fed, as this is the one time in their life that they can produce multiple offsets. In my case I'm wondering if this was caused by the stress on the tuber from bursting their pot from rapid growth. My final suggestion is to keep them warm.

In their native habitat they are never exposed to anything but sultry humid warmth, and they love it. Cooler weather is tolerated by most but that's where your taking chances.

There are some species that are adapted. Look for the term HARDY, in a species description.

PESTS: The main pest I have run into with amorphophallus are nematodes. They are microscopic worms found in soils. Commercial soils are completely free of them, but setting a pot on the ground, or even on a patio can infest the soil. Fortunately for me they seem to be controllable with Sesame Oil drench. I have found it available in most Garden Centers. If you run into this problem you will find your tubers spotted with hollow rotten spots when you remove them from the soil for repotting. In more advanced cases the tuber appears to be dissolving. The tuber will need to be well cleaned. I use the sharp fan spray on most hose gun nozzles. For advanced rot I once dusted with a fungicide powder. It has been so long since I had the problem that I don't remember what chemical powder I originally used. I'm actually now using cinnamon. I buy the large economy brand, like Badia, a good brand. I dust it heavily on any well cleaned tuber surface, and even where you break off rhizomes. It's safe, it's cheap, and fairly affective. I have seen sulfur also recommended. Cleaning the tuber of any rot and catching it soon, then treating it with cinnamon has been very affective for me. And... It smells good!

Conversations with other friends who raise amorphophallus indicates this can be a rather serious though not common problem. It is difficult to keep pots off the ground where your soil might be exposed to Nematodes. When the tubers and pots get large, even on the less giant species it difficult to avoid setting them on the ground.

Have great luck, and send me a message at: cm_allen@yahoo.com
... if you need information.