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PART 1 FRAG TANKS

This time **Jason Thresher** takes a break from the usual step-by-step fragging guides and looks at fragging systems.

This month I'm taking a break from coral propagation to discuss fragging systems. Once you have been bitten by the fragging bug you will almost certainly want to set up a frag tank. However, a project like this should not be rushed. Take your time and make sure you plan the build in its entirety. There are several things to consider, and with a little thought and preparation you will save time and money in the long run.

Budget: The cost of the project is the main consideration for most people. My first bit of advice would be to sit down with a sheet of paper and write down all the equipment you need. Once you have your list, price up the equipment so you have an idea of the cost. While the budget is important, I would recommend that you purchase the best equipment you can afford. Experience has

taught me that inexpensive substandard equipment invariably fails first, and ends up costing more to replace in the long run. It is also important to remember to factor in running costs. As a general rule, the larger the tank, the more it costs to run.

Frag Tank Location: The location of the tank is also important. There are basically two types of frag tanks:

The pretty frag tank – this is a feature in the house and a hybrid of a display tank and a workhorse frag tank. It is aesthetically more pleasing than the workhorse, usually having a nice cabinet to sit on, gravel, and possibly a fish or two.

The workhorse frag tank – this tank is usually tucked away and the aesthetics aren't as much of a consideration. If you have the space available, this would be the best system to choose because it costs less and



This is how the pros at The Living Reef do it! Here is one of the fantastic frag trays in their custom propagation system.

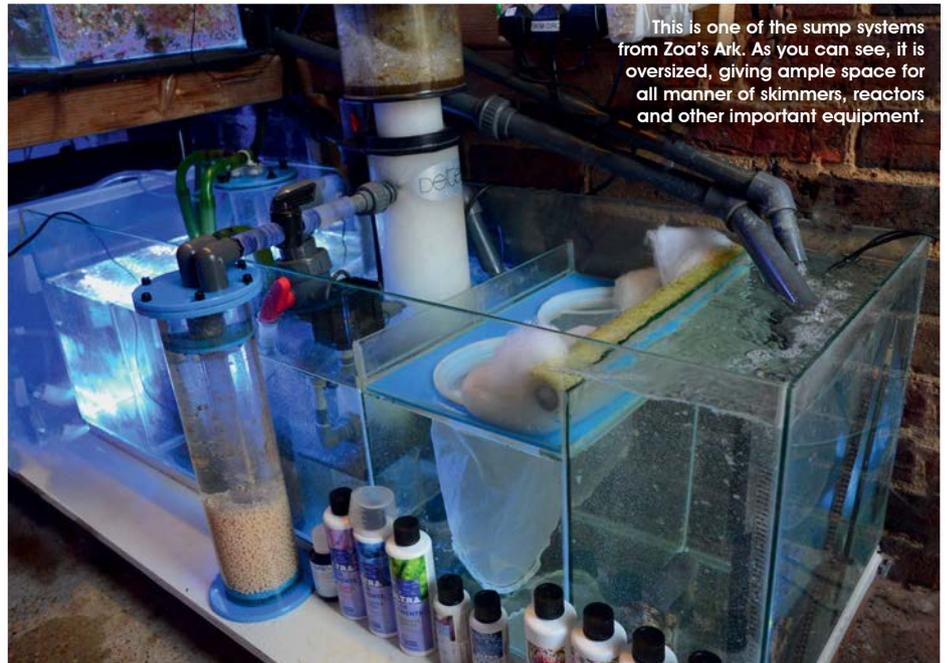
can be set up for minimal maintenance.

If you have the space, I would definitely recommend a sump, regardless of the system you choose. Sumps allow much more flexibility when it comes to adding equipment, and helps keep the tank healthy and the corals flourishing.

Tank Size: You don't want your frag tank to be too small. Keeping the parameters stable in a small frag tank (especially if you have SPS frags) is, at best, difficult. For me,



Here you can see the large plastic vats that have been used for the propagation system. The fact that they are easy to drill, light, and very strong make them an ideal choice.



This is one of the sump systems from Zoa's Ark. As you can see, it is oversized, giving ample space for all manner of skimmers, reactors and other important equipment.

the perfect frag tank is 60cm x 60cm x 30cm. It is large enough to house a very good selection of frags, but small enough to keep down running costs. If, however, you have the space and budget, go bigger!

Hard Corals or Soft Corals: While it is possible to keep hard and soft corals together in a frag tank, it is better to choose one and stick to it. Hard corals prefer pristine water conditions, and would either need regular water changes or dosing to keep the trace element levels up and water quality high. Softies, however, thrive better in nutrient-rich dirtier water. If you are starting out with your first frag tank, I would recommend you start with softies. They are easier to keep successfully and are much more forgiving should you make the occasional mistake, or miss a water change or two!

OK, so you've decided on the budget, tank location and size – so let's get started in building the perfect frag tank.

The workhorse frag tank is most often what people have, so I will cover this regarding the build. The same principle applies to the 'pretty frag tank' – except you would add the proverbial bells and whistles!

LET'S GET STARTED!

There are a few ways to keep costs down without cutting back on important equipment that would be critical in the successful running of the tank, and one is to build your own tank and stand. If you have decent DIY skills, you can literally save hundreds of pounds building your own setup. If this prospect is a little daunting, there are many excellent deals to be found if you shop around. When comparing prices, make sure you compare like for like; thicker glass is more expensive but is always worth the additional investment. Large food-grade containers are an excellent alternative to glass tanks. They are strong, inexpensive, and very easy to cut and drill. The downside is that you would only see the frags from above because the container sides are not clear.

LIGHTING

The three lighting choices are:

Metal Halides – Expensive to run and most bulbs need replacing at least once a year. They do, however, provide unparalleled growth, especially for hard corals.

T5 Tubes – Less expensive to run than the halides, but also need the tubes replaced regularly. This is a good all-round lighting choice, and with the various colours on the market, you can customise the lighting to suit your needs. If you choose the T5 option, try to purchase a unit with six tubes because this gives great flexibility for lighting customisation.

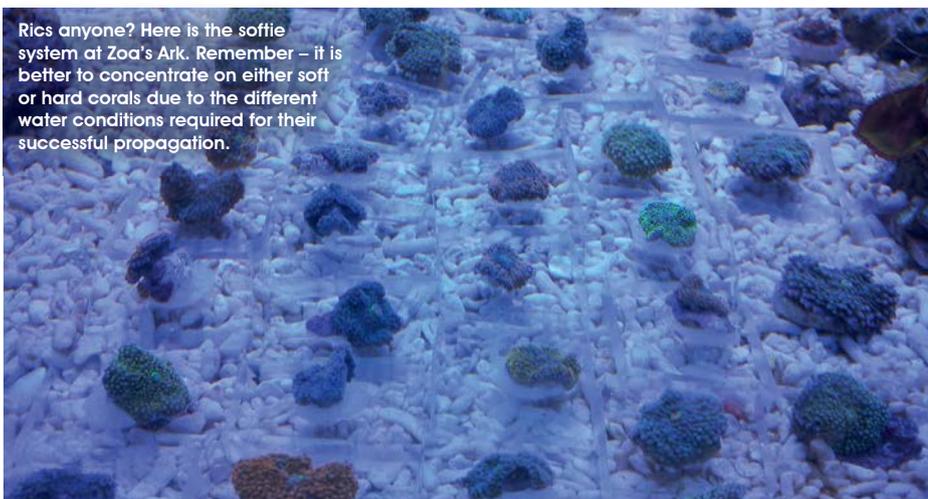
LEDs – Still a relatively new technology, and expensive, but improving all the time. The running costs are the lowest of all the options, and with most units having a 50,000 hour rating, the system will run for many years before needing replacing. Opinions vary on how effective LED lighting is for coral propagation.

TANK SUBSTRATE

Bare Bottom – Having the tank without any substrate is hugely advantageous. Firstly, there are less places for pests to hide, allowing you to easily find and ID anything that should not be in the tank. Secondly, you will be able to vastly increase the water flow without the worry of substrate clouding the water. Increased flow also keeps any detritus suspended, allowing it to be caught up in the filter system. Should any detritus be left in the tank, cleaning would literally be as easy as switching off the pumps, allowing it to settle and siphoning it out. Bare bottom tanks allow for the easiest possible tank maintenance.

Substrate – The only real advantage of substrate in a frag tank is for aesthetics. If the tank is on display, a thin layer of coarse substrate still allows relatively easy cleaning, while providing a more natural look in the tank.

Well folks, that all for now. Be sure to join me for part two of this Frag Tank article in the next issue. **JT**



Ries anyone? Here is the softie system at Zoa's Ark. Remember – it is better to concentrate on either soft or hard corals due to the different water conditions required for their successful propagation.