Appendix E

Some basic questions asked about aquaponics

Home Built vs. Manufactured

The best way to work out if you want a home built system or a manufactured system is to ask yourself two questions:

1. Do you want to spend money on having a system ready to go and knowing it will just work?
2. Do you want to build and know how every aspect works and have the time to build it?

Personally, I would go for the kit system to start with; so that way you know it should work if you assemble it correctly, this way you will know exactly want is needed to create a system and how every aspect of it works. But if you don't have the time to build a system buying one off the self can still work for you and you can take it apart and see how it works. Aquaponics systems are basic and simple from small systems to large systems.

Hobby vs. Commercial Scale Production Systems

The main difference with Hobby systems and commercial system is the size and construction.

With a hobby system, you might set it up like a commercial system, have the system in a green house, but the real difference is in maintaining the system, for example if you have 10,000L tank of water at 20 degrees the temperature would have to be very high and over several days to change that volume of water to the point where it is too hot for the fish and plants. In a smaller system like 500L it can change within a few days.

In a larger system if a fish dies, the ammonia it produces will not affect the system too dramatically, but in a smaller system it can cause a domino effect and kill another fish and then it cascades exponentially killing all the fish within hours.

But in smaller system you have the advantage of seeing the issues straight away; in a larger system you might not see any problems until it's too late. In a 500L system you can see if there is a dead fish, in a 10,000L system you might not see dead fish and if there is an issue you could lose them all at once.

A smaller system can be run on a solar panel to run the pump, and you only need to check a lower number of pipes for blockages and issues. Commercial system needs more attention and work to maintain.

Fish Priority Designing vs. Plant Priority Designing

In designing a system, you can spend time and money making it perfect for both fish and plants. For the fish, you can make it as close to its natural environment, e.g. for silver perch the Murray river having shallow areas on the sides and deep in the middle, having areas of fast and slow moving water, having the waters levels rise and fall to match the seasons, and the temperature to match the seasons, etc ...