**Management Practices to Prevent and Control Plant Diseases**

1. Q: What is a pathogen?

A: Pathogens are disease-causing *organisms*

1. Q: Where do pathogens come from?

A: Pathogens may come from many sources. Such as: contaminated soil, uncertified seed, one bad seed in a certified seed stock, vegetative propagation material, bacteria and viruses in soil or other medias, infected plants, seedlings, cuttings, crop residues, previous crops in the same media, infected leaves, fruits, unused seedbeds, tools that have not been disinfected after pruning or harvesting, human hands, hair, shoes, sneezing, coughing, touching after smoking tobacco (Mosaic virus), insects, birds, animals, many, many more places…

1. Q: How can pathogens be prevented without use of pesticides?

A: Sanitation of tools and hands; using controlled environment agriculture procedures and ensuring that your plants have proper nutrition so that they are not susceptible to disease causing pathogens.

1. Q: Why is plant nutrition important?

A: A properly nourished plant is able to withstand or tolerate the attack of pathogens much better than a plant that has either nutrient deficiencies or excesses. A nutrient deficient plant will be stressed and therefore more prone to disease or attack. Excessive fertilizer applications can also cause plants to be more susceptible to disease.

1. Q: When you find a diseased plant, what should you do?

A: Take the dead and diseased plants out of the aquaponic system and destroy them by burying, burning or composting. If disease is widespread in an AquaPono Microsystem, such as mold, then all plants should be harvested and destroyed and the growbed cleaned following the proper Standard Operating Principle.