TOWARDS ENDING HUNGER AND SUSTAINABLE AGRICULTURE

Problem: The current world population is around 7 billion. And it's estimated that by 2050, we'll be between 9 and 10 billion people. The food and agricultural organizations of the world have suggested that we need a 70 percent increase in current agricultural practice to meet that demand. Given that plants are at the base of the food chain, most of that's going to have to come from plants. We're going to have to think of some very smart ways of producing food. Horticulture is now one of the fastest growing industries with striking professional opportunities. The production of fertilizers is becoming increasingly expensive due to high prices of fossil fuels, and this may have long term implications for nutrient use in agriculture in the future, particularly in developing countries. The food we eat makes up more than 2/3 of our total water footprint, mostly because of all the "virtual water" needed to produce that food. Agriculture consumes a massive 71 percent of global freshwater use.

The discourse around food and agriculture that has dominated the past 60 years needs to be fundamentally re-thought over the next few years. New strategies are needed that respond to the daunting challenges posed by climate change mitigation and adaptation, water scarcity, the decline of petroleum-based energy, biodiversity loss, and persistent food insecurity in growing populations. By 2050, annual fish consumption is likely to rise to some 150-160 million tonnes, or between 19-20 kg per person. This amount is significantly lower than the potential demand, as environmental factors are expected to limit supply. Marketing studies show that the target markets want "fresh" fish.

Solution: With the world's fresh water resources limited, aquaponics would appear to have considerable potential for developing countries. We need sustainable aquaponic to untangle the theme. Aquaponics uses waste products derived from animals and plants which are fed to the fish, and thus converted into valuable animal protein and fresh vegetables. Aquaponics is the land based production of fish in tanks combined with the recirculation of the water from the fish tanks through hydroponic systems to produce high value horticultural crops. The waste products from the fish are converted by a bio-filter into soluble nutrients which are absorbed by the plants, and allow "clean" water to be returned back to the fish. Thus it produces valuable fish protein with a minimal pollution of fresh water resources, while at the same time producing horticultural (usually vegetable) crops. Aquaponics' include tanks and plant bed systems that will be inside a very large greenhouse. The building will not need to be heated; only the water in the fish tanks will be heated. The roof of the greenhouse is made out of normal greenhouse material that magnifies the sunlight; covers are used during the summer months as needed to control the heat. It is really a very simple sustaining system, and we think it is the simplicity of "the fish provide the food for the plants, the plants clean/filter the water, and it is returned to the fish tanks". An aquaponics system grows both fish and plants that can be harvested sustainably. The business will within the City limits where live "fresh fish" will be available. This system uses only 10% of the water needed for the same amount of crop produced on land. Because you can't use pesticides or chemical fertilizers that would harm the fish, it's a natural organic production system. You can grow just about any kind of plant, any leafy greens such as lettuce, kale, Swiss chard and arugula are the easiest to cultivate. You can also grow herbs such as basil, mint and chives. Other crops include cucumbers, shallots, snow peas, eggplant, tomatoes, cabbage, cauliflower, peppers, beans, squash, red onions and even potatoes. Aquaponics use inexpensive heat supplies such as solar greenhouses or hot compost to keep the water temperatures just right for the fish and plants. We conclude that 'Aquaponic' is sustainable practice to meet the demand for food since it eliminates massive agricultural water uptake, synthetic food and agricultural waste and

provide fresh protein rich fisheries. The business plan produce the highest quality fresh fish and vegetables at competitive prices to local and surrounding communities, provide a new purchase experience for buyers. "Pick the live fish" We aim to enhance customer satisfaction through the effective application of the system, including processes for improvement of the system and the assurance of conformity to customer and applicable statutory and regulatory requirements. Industry analysis, product analysis and buying patterns, financial plan and marketing sales & strategy are key components of the plan.