



Our Food Our Future: Revitalizing the Ecosystem in Malaysia*

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Malaysia as a country has the right to define and control its food sovereignty but the country is open and vulnerable to the challenges of the environment, urbanization, changing demographics, and rising amounts of food waste. Thus, Malaysia desperately needs a food revolution movement where farmers need to be smarter about crop production. It is realized that agriculture has enormous impacts on the world's most critical resources, i.e. land and water. Accordingly, farmers will have to produce while also ensuring the provision of various vital ecosystem services. For a greener and more sustainable future, agriculture needs to co-exist with nature. First, the soil on which the food crops are grown must be managed properly. Through continuous use of chemical fertilizers and pesticides, the microbial ecosystem, which is very much needed for healthy growth of the crops, is jeopardized. This ecosystem has to be revitalized and this can be achieved through soil microbial restoration. Careful selection of effective consortium of beneficial microorganisms using biotechnological approaches is very crucial in revitalizing the soil and promoting plant growth. With better plant growth, plant immunity is also stimulated and tolerance to pests and diseases is enhanced. Second, pollinating insects such as bees should be nurtured, and natural resources such as birds must be utilized to feed on insect pests rather than using large amounts of pesticides. Consecutively, farmers need to be urgently educated on their co-existence and the need to synergistically work with the environment rather than against it. If they do not start now, our vital resources will be continuously degraded and the ability to produce enough food for the future will be exhausted.

Are we aiming at the correct goals when producing food to satisfy our taste buds? For the first time in history we have as many overweight people as undernourished people. The modern food environment is a remarkable source of pleasure, far richer than is needed by our body which very often led us on as disastrous journey to human health. This is tied in with our agriculture policy that mainly focuses on production and trade and is curiously dissociated from the vital issues of good nutrition. We need to actively shift our focus to the production of more nutritious or healthy foods. Most of us know that diet plays a key role in determining health but with the knowledge gained from frontier sciences, we now acknowledge that the type of food we eat can actually affect expression of genes related to health, either causing a wide range of diet related to health. Choosing the correct meals but on fruits, vegetables, legumes and whole grains which are high in bioactive components, is the best way to stay healthy as validated by voluminous amounts of scientific data. At the research front, the focus should be towards defining the goals in terms of nutritional value rather than simply having "more production".

Do we need a profound re-assessment of our current utilization of food resources and food system so that they can better serve our future needs? We may need to explore other options of food security issues and this may lead us to a very different path. One example of a good alternative food crop is algae. Although located at the bottom of the food chain, algae is capable of providing a rich nutritious food source for mankind. It grows very rapidly in the ocean and does not require land and fresh water which is becoming increasingly scarce worldwide. Food industrialists predict that algae farming could become the world's biggest cropping industry of the future not only due to its richness in nutritional composition but also because of its high productivity where certain microalgae are 20 times more productive than conventional crops.

In conclusion, it is timely to stress that "business as usual in food production" is no longer a viable option. We need a broader vision and bolder ideas to help nourish our people in a manner that is environmentally sustainable. Rather than simply "more" production, we must also consider what would be "better" production with healthier food systems. The choices we make today on the type of food produced will make an incredible amount of difference for the future of our children and the planet we live in.

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