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Going natural

On a small plot of land in Negri Sembilan, a spanking new project hopes to increase food production by allowing nature to regenerate and thrive.

By ABIRAMI DURAI
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YOU might not imagine the sleepy town of Kuala Pilah in Negri Sembilan to be the epicentre of a farming revolution, but this is exactly the place that has been earmarked for change.

On a small 3.5 acre plot of land in the area, a secondary forest has been cleared and herb and vegetable seedlings are being transplanted onto the spot. The farming methods used are relatively unorthodox in Malaysia, where commercial farming has long supplanted any traditional farming forms.

But it is here that sustainable agriculture advocate Dr Ho Ting Seng has chosen to start an experimental field station designed to showcase the intrinsic values and

benefits of natural farming.

What is natural farming?

Natural farming is an ecological farming approach first introduced by Japanese farmer Masanobu Fukuoka in his 1975 book *The One-Straw Revolution*. The farming method espouses the values of the biodiversity in different farmed land and works alongside it, encouraging the intricate web of living organisms and micro-organisms that thrive in the soil – from plants to animal life. It also promotes the cultivation of native crops grown using completely chemical-free techniques.

In Ho's case, his main focus is on diagnosing, assessing and in many cases, rejuvenating the health of the soil – as he believes that the basics of natural farming start

with good soil.

"Soil is a living organism, it starts from there. There are millions, if not billions of living things thriving in the soil, and they are actually having life cycles and decomposing and reconstituting and helping each other.

"So what we are doing is tapping into the power of biologics – the living things in the soil. We do this by trying to find what kind of genes and organisms are present in the soil. If there is not enough of something, we add it, if there is too much, we take it out, so we have to understand the soil culture and see what can live together. It is the management of the ecosystem in which the plant thrives – that is the technology," explains Ho.

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Photo: DR HO TING SENG

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An interesting component of the project is the exchange of information between the various institutions and interested farmers. Seen here is a representative from the Department of Agriculture talking to interested farmers about soil quality.



This secondary forest land earmarked in Kuala Pilah by Ho has not suffered chemical agricultural inputs of weed killers, fertilisers and insecticides, which makes it ideal for natural farming. — Photos: HO TING SENG

The road to natural farming

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So how does natural farming differ from organic farming, another farming method that seemingly shares the same basic tenets?

In essence, organic farming uses natural fertilisers and composts, which are added to the earth. What this means is the soil is nourished with external ingredients, even if they are natural.

In the natural farming method, nothing unnatural is added to the soil. Instead, it is analysed and left to regenerate itself anew, a process which is time consuming but allows microbes to gradually add

nutrition to the soil over a period of time. Also, the role of a farmer in natural farming is supplementary, because with this farming practice, nature plays the most dominant role.

In countries like India, this low cost natural farming method, also sometimes referred to as "do-nothing farming" is extremely popular and has been around for aeons.

In Malaysia, commercial farming is still the most widespread form of farming although organic farming has also taken off in leaps and bounds. Natural farming, on the other hand, hasn't seen quite that level of popularity. This is some-



The experimental field station project involves a collaboration with numerous government entities, NGOs and universities. Pictured here is a team from Universiti Putra Malaysia.

thing Ho passionately hopes to change in the next few years.

The experimental field station

Born in Perak, Ho is an economist and corporate maven who is now the chairman of the Sustainable Agrotech Association (Sata) Foundation and executive vice president of The Asian PGPR (Plant Growth-Promoting Rhizobacteria) Society for Sustainable Agriculture.

He was inspired to initiate the natural farming project in Kuala Pilah after growing increasingly concerned about the safety of commercially farmed food and spending over a decade learning about natural farming from experts around the world.

"I want to put all the results

that I have seen over the years in one place, which is the Kuala Pilah land. Now I have only one wish and that is to change the way food is being grown," he says.

Ho also realised that Malaysia is extremely reliant on food imports, something that Covid-19 has disrupted. This derailment in food supply chains highlights the need for more national self-sufficiency - the country is only 70% self-sufficient in basic staples like rice. It is something Ho is aiming to ameliorate with natural farming methods.

"The evidence shows that commercial yield is declining - even palm oil and paddy - because it has reached a limit. The soil is destroyed, so now we have to engage in remediation of the soil. If we continue the commercial practices of putting more fertiliser, the yield will not increase and plants will have more diseases," he says.

Interestingly, Ho has used his own savings to fund the Kuala Pilah project, and is working alongside government bodies like the Malaysian

Agricultural Research & Development Institute (Mardi), Forest Research Institute Malaysia (FRIM) and the Department of Agriculture in Negri Sembilan; and universities and NGOs like Universiti Teknologi Malaysia, Universiti Putra Malaysia, PGPR Asia and the Malaysian Institute of Economic Research to do research, provide scientific input, cross-colaborate and exchange knowledge.

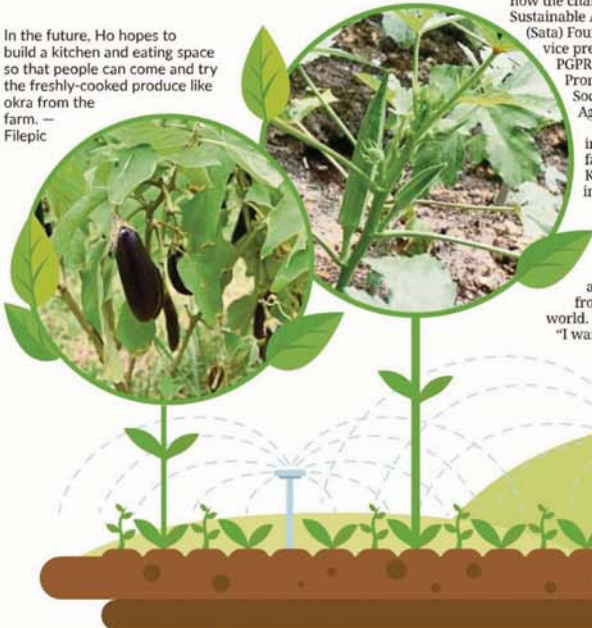
These sort of institutional link-ups are relatively rare for independent natural farming initiatives, but Ho is clearly on to something.

"This is not a project that is identified to make money, it is a project to aggregate knowledge base. That is why I am tapping into all the resources available with a similar mindset and saying, 'Let us give it a try'," he says.

Ho says although the land for the experimental field station is small, it is ideal for a natural farming pilot project on many levels.

"People are abandoning the land they have inherited in this area, because it is not economically viable - the size is too small, so they are leaving it and moving away to Seremban or Kuala Lumpur, and the community is declining and food production is more and more marginalised.

In the future, Ho hopes to build a kitchen and eating space so that people can come and try the freshly-cooked produce like okra from the farm. — Filepic



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In natural farming, native crops like ulam raja (pictured here) are grown.

"But when I surveyed this area, the secondary forest has already come back. So this motivated me for me for two reasons – there's a market need and this is also an area that can be easily turned around.

"It has been left for 15 or 20 years, so much of the problem with the infertility of the soil has been eradicated. Of course on the surface we can see a secondary forest but actually it is the right place to go through that process of reinstating nature back to the area. Now we have to clear some of the land and put in the infrastructure, but once we grow the crops, we can demonstrate that it can grow and then the villagers will hopefully come back," says Ho.

Ho plans to grow about 40 different kinds of vegetables and fruits on the land, predominantly local varieties like ulam raja, okra and brinjal. There are also blueprints in place to breed farm animals on the farm, including cows, goats and chickens.

As part of the project, Ho is also working with (and teaching) a network of small-holder farmers in the area who have embraced his ideas as they have no preconceived notions and are curious about natural farming. In many ways, they represent the ideal candidates for the project because they don't have fixed commercial farming mindsets, which is one of the things Ho says is most difficult to change.

"The farmers here are curious whereas most people are skeptical of this, so this is the reason for this experimental field station. So I will teach them and propagate the idea and let the farmers work together.

"Basically the farm in Kuala Pilah is just a cradle where knowledge can be shared and spread, so it can start with one community, but can migrate to other communities," he says excitedly.

In the works

Once crops at the farm have been successfully grown, Ho also plans to introduce a small purpose-built weekend kitchen-cum-eating space on the plot of land, so that interested members of the public can taste the produce and decide for themselves if natural



farming methods make a difference in the final outcome.

"We want to build a simple kitchen attached to the farm because people have to eat and taste before they can say, 'You can grow beautiful food'. Otherwise it might look good but not taste good. What is necessary is the model reaches the final consumer – let them eat, taste and judge," he says.

Aside from spreading the word about natural farming to small communities of farmers, Ho also hopes to be part of a larger network, responsible for identifying arable, disused land around the country that can be transformed into natural farming models.

"We are working with the Department of Agriculture and FRIM to identify abandoned land – there is a lot of abandoned land, so we will find this land and do soil analysis and collect samples. And if it is suitable, we will help to remediate the land," he says.

Ultimately, Ho believes that the future of farming lies in natural farming, with its emphasis on nature and sustainability and zero use of artificial supplements like fertilisers and pesticides, which consumers are both wary of and are already moving away from.

"In some areas, there is very weak soil fertility and so we lose the productivity of the soil, because the bio-organisms are overworked. We have to reintroduce life and that is hard, because you have to create an environment where new life can thrive.

"But if you decide with determination to make certain objectives, you need to have the resolve to persist. In the process, we are going to learn and discover so many things that nobody has done before.

"It is that vision that I want to make happen before I die – I am 72 now, but I have a fire in my belly – I need to do it, I really want to do it," he says.

Farmers interested in connecting with Ho can contact him at tingho.qbiotech@gmail.com.

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