

How Developing Countries Can Produce Emergency Food And Gain Self-Sufficiency

by Mohd Peter Davis and N. Yogendran

Malaysia's revolutionary Deep Tropical agricultural system is a model for feeding the world—fast—and bringing the developing nations out of feudal poverty.



(a)

Google Maps

Although Malaysia has developed fairly well since independence from the British in 1957, it still only produces one-half of its food.¹ What the rather complacent and well-fed Malaysian population unfortunately does not know is that the country, caught up in the midst of an orchestrated collapse in world food production and the global



(c)

Earth Observatory/NASA



(b)

Google Earth

Crop circles, in (a) Libya, (b) Jordan, and (c) Kansas, using center pivot irrigation systems. Today these crop circles use underground water for irrigation. But with cheap and abundant electricity and desalinated water produced by fourth-generation modular nuclear reactors, irrigated crop circles can spread throughout the vast tropical zone, solving the world food crisis and improving the nutrition of a much larger world population.



Courtesy of Mohd Peter Davis

Fast-growing grass is key to the Deep Tropical agriculture system. Here, co-author N. Yogendran (who is 6-feet tall) stands in 3-foot grass, which took only 38 days to grow on his Malaysian grass farm. Grass cut at this age is perfect for feeding ruminants. The grass can be cut 10 times per year for three years before re-plowing and re-seeding.

nations as nuclear-powered desalinated water comes on stream.

Malaysia is now making great advances with its Deep Tropical agricultural system that “double leapfrogs” both the backyard farming in developing countries and the grazing systems in more advanced temperate countries.² A Deep Tropical intensive dairy farm in Malaysia, based on grass plantation and climate-controlled-housed cows, which started from scratch in September 2007, is today selling commercial quantities of top quality milk and by December 2009 will be well on target to produce 15,000 liters of milk per day, from a 150-hectare grass plantation employing just 25 staff. (See box for milestones in the Deep Tropical system.)

The time to clear the land, establish a plantation, build a mod-

meltdown of the economy, is now in a precarious situation and faces a repeat of the starvation which occurred in the wartime naval blockade during the Japanese occupation of Malaya. The danger is that the British Empire is now poised to re-colonize and bring to heel its former colony, which has become an inspiring role model for downtrodden developing nations.

The need for food self-sufficiency and the threat to national survival has driven us to find a fast solution for producing emergency food for Malaysia. We believe that our Deep Tropical agricultural system, which has blossomed only in the last year or so, after 20 years of rather lonely research and entrepreneurship, can also be adopted immediately by those developing tropical countries that have sufficient rainfall or underground water, and later by the rest of the tropical



Ministry of Tourism, Malaysia

Bukit Malawati, a former British fort in Malaysia. The cannon stands as a reminder of British colonialism, which remains today in the form of Malaysia’s vast plantations. These plantation lands will be perfect for establishing Deep Tropical animal husbandry, sustained by fast-growing grass farms.

ern dairy, and achieve full-scale milk production from 1,200 cows is therefore expected to be only 27 months. The anticipated return on investment is 3-4 years, better than many modern factories, and government circles and investors are getting interested.

Malaysia’s first large-scale Deep Tropical dairy farm is well on target to produce 5.7 million liters milk per year from 150 hectares grass plantation, or 38,000 liters per hectare per year. A team of 5 management staff and 20 workers will run the farm. The productivity per person is expected to be 625 liters of milk per day, a tremendous leap in productivity compared to backyard farming. For instance, South African researchers have reported, “In many situations the household has to milk several cows to get only a few liters of milk.”

We are now able to report the milestones and current and targeted performance of this Deep Tropical dairy farm in Malaysia, and the Vernadsky-inspired Biosphere thinking behind it, as an exemplary model for other developing countries to consider.



Courtesy of Mohd Peter Davis

Goats from an experimental herd on one of the Malaysian grass farms feed on the farm’s fast-growing grass.

Comparison with New Zealand Grazing System

While Malaysia is on target by the end of 2009 to produce 38,000 liters of milk per year per hectare of grass plantation (supplemented with concentrate feeding), New Zealand produces on average 8,880 liters milk per year per hectare of grazing land (albeit with minimal concentrate feeding). This leap in milk production for Malaysia demonstrates a world agricultural break-