National Food Self-Sufficiency Planning: The Case of Malaysia

Providing for a national food supply, under today's conditions of rapidly worsening financial chaos, and economic breakdown, is a matter of foremost importance. The "free trade" institutions (IMF/GATT/WTO), now collapsing, forbade both national food reserves and the goal of national food self-sufficiency itself, decreeing that nations should depend on "access to world markets." In opposition, agriculture specialists have worked on technologies to build up national food output capacity.

Mohd Peter Davis, Lecturer in the faculty of Veterinary Medicine, Universiti Putra Malaysia, Selangor, Malaysia, is calling for a concerted drive for food self-sufficiency in Malaysia and other nations. Davis, who was born in Britain, is an agriculture specialist with wide experience: He trained in Britain in biochemistry, worked in animal husbandry in Australia, and has been active for many years in Malaysian agriculture. This year, Davis co-authored a policy paper, "Food Production for Malaysia During a Collapsing World Economy" (with Makhdzir Mardan), presented in March in Kuala Lumpur, to a Conference on "Bio-Industry: The Future of Malaysia" (see box). Mr. Davis is working on a book with the same focus.

Malaysia held off the 1997-98 "Asia Crisis" with capital and currency controls. Now Mohd Peter Davis, agronomist and lecturer at Universiti Putra Malaysia, has presented a Malaysia Bio-Industry conference with a food national self-sufficiency plan, against the global economic collapse. In the background is LaRouche's Triple Curve "Typical Collapse Function."

On June 22, EIR*'s Michael Billington and Marcia Merry Baker discussed with Davis, his experience as a scientist on three continents, his agricultural planning, and his proposals for Malaysia. Excerpts from that interview, and Davis' recent paper, follow.*

EIR: You have been stressing that the onset of global depression is an urgent reason for acting on expanding national agriculture output toward food self-sufficiency. In fact you say that for Malaysia—a nation of 22 million people—this task can be usefully viewed in the context of the model of the World War II Japanese occupation, when Malaysia had no outside access. Why do you see it that way, and what are your proposals?

Davis: Self-sufficiency in food has been the long-term objective of the Malaysian government. Every five years they come up with a Malaysia plan. We are now on the eighth Malaysia plan, and every single one comes up with the idea of self-sufficiency. But when you start looking at it, in fact, we are becoming less and less self-sufficient, despite all of the aims and the requirements in the plans.

This struck home in 1997, in the last recession, the crash of the Asian economies. Food imports started to increase dramatically, due to the devaluation of the currency in 1997. Suddenly, the Malaysian currency—even though we had pegged it to the U.S. dollar, it became about 3.8 ringgit to the dollar from having been at 2.5 to the dollar previously. So all of the imports suddenly became much more expensive, and it literally began to hurt. The economic downturn affected exports and all of that.

We are at the stage now where the import bill for food is over $12 billion per year. To put this in context, exports from the oil palm industry—Malaysia's golden crop, this has really put Malaysia on the map of using palm oil—that industry only produces $17 billion per year in exports. So our full food import bill now is almost wiping out all those tremendous gains that we have made. Forget those exports, we've got to do so much work. We have to transform the country, but now we're squandering it all on this food import bill.

So, we are now paying the price, really, of the neglect of a policy that has been stated, but has never really been seriously enacted. We've gotten further and further behind.

TABLE 1
Malaysia's Food Self-Sufficiency, Without Imports or Exports

Carbohydrates	
Rice	70%
Cereals	5%
Animal Proteins	
Milk	1%
Eggs	5%
Meat	4%
Fish	100%
Fruits and Vegetables	
Fruits	90%
Vegetables	45%
Other	
Oils	100%
Sugar	5%
Tea, Coffee	100%

Source: "Food Production for Malaysia During a Collapsing World Economy," by Mohd Peter Davis and Makhdzir Madan, Universiti Putra Malaysia, March 2002.

EIR: You have provided charts, with rough estimates by food category, of how import dependent Malaysia is for food and livestock feedstuffs (see **Figure 1**). What has been your experience in this? What are your recommendations?

Davis: In the field that I was involved in, that is, before I got into my current housing studies, when I first came to Malaysia, I helped set up a prototype sheep industry in the country. Traditional agriculture is extremely difficult to do in Malaysia for producing animals, because we haven't got grazing land. Usually with sheep, goats and cattle, you need grazing land. But we are a rainforest country, and any attempt to cut down the rainforests and introduce grazing land is soon doomed to failure, because after a few years, the pressure from the rainforest reasserts itself and it all gets overgrown by secondary jungle.

And so it's hard to get self-sufficient in ruminant animals. It is an extremely difficult task. None of the traditional methods could work, so, when I came to Malaysia, I tried a different approach. I came, really, with some American technology. I was working on a higher degree in biotechnology, and high-pressure steam treatment of woody materials to release the cellulose.

Now, I selected this topic, actually, because I realized that, in Malaysia, there was no natural feed for animals to eat. Without food, without feed, you can't grow animals, and about 80% of the cost of animal production is in the cost of the feed. So, we had to find a replacement feed—traditional grasses and all of that wouldn't work—so I came with these technologies that I had worked on in Australia to break down woody materials, using very high-pressure steam.

The process was developed in North America, using continuous high-pressure steam process. You put the water in and keep the vessel pressurized at very high steam, and out comes a woody material, in which the lignocellulose bonds are broken, really liberating the cellulose. Normally, cellulose is locked up and it has a concrete-type structure, but this broke that down. I did some of the work on that in prototype machines, and lab-scale models.

It needed about a million dollars. We could have bought the machine quite cheaply. I was in touch with the Americans and Canadians on this, but at that stage of science in Malaysia, it was a joke to spend a million dollars. In retrospect, if we had done it—the technology outfit has since gone broke, I think, but the general idea of it is, that it's a bit like splitting the atom. You have all that energy within the atom, and you have to find a way of releasing it. This technology opened up the same with woody materials. Normally, those materials go back to, not organic nature, but the inorganic cycle of matter; but this way was capturing it for the organic part, instead of keeping it in the inorganic cycle.

Anyway, that wasn't done, so we starting looking around for local feed, and, by great good fortune, a byproduct from the oil palm industry, called palm-kernel cake—it's what is left over when you squeeze out the oil, the natural meal—this was, before I came to Malaysia, found to be almost a perfect feed for cattle. So I picked up on that and, being a lot more interested in sheep, because I had been working for ten years or more in sheep research and production, I took up the palm-kernel cake idea, and we found that this feed could be ideal for growing sheep without any grass. We could grow sheep intensively in sheds, and we could give them this feed, with a few minor modifications for mineral content and all that—you know, a few nutritional problems to fine-tune.

We could breed sheep in these sheds and get them to the market in four months. So there was a tremendous increase in productivity, and we were, at this point, looking into different breeds of sheep, cross-breeding them. There were active programs going on in other research institutes, and so we had this very progressive solution. We got really to the prototype stage of producing sheep. I was doing it with sheep, really, as a model study for cattle, but sheep are a lot cheaper, being small, they are a lot easier to work with. But if you can get it to work with sheep, then you can just transfer it to cattle.

So we had done this pioneering research. It was very practical, live, and very sensible. It was the 1960s-style technology that we were doing. The stuff I had been taught, really, as a student. So we applied all that. Put it all together, and at that stage we were ready to go for big prototype testing. We applied for money to have sheds and to overcome all the other problems, such as heat stress, disease. We got our disease problem down to zero percent!

When we first started, we were losing 10% of the sheep per month. Malaysia had wanted a sheep industry, so they imported 3,000 sheep. It was a politician and a businessman that came up with this idea. There was never a scientist in-

volved. [Their idea was], if you've got 3,000 sheep in the country, then natural selection would leave a few, and we'd breed from them with "super-sheep." But, of course, that was wrong, and they all died. It was a stupid experiment, and any scientist would not even look at it. That's not the way to do it.

I came to Malaysia at that time, starting as a lecturer in animal science. I had inherited these sheep, donated to our university. The remainder had been farmed out to all these farm institutes and universities. They soon started to die at the rate of about 10% per month. People were trying to do experiments with them. You can't do experiments with dying animals.

Then we had to do real rush emergency things. So I drew on my Australian experience then. Australia is a land of sheep, having built a whole economy on sheep. I'd worked with a research institute there of very practical scientists. I was able, within weeks, to say what was necessary. I was given all these animals and left alone to do it. It was a very tough job.

We had to get them into housing. It takes some of the toughest sheep in the world to withstand the Australian outback, but when they came to Malaysia, they just absolutely died right away from all the tropical diseases that were never encountered before—the fact that we have a wet and humid climate. Sheep like hot and dry. There was perpetual disease, compounded by the problem of poor nutrition from available grasses. They were suffering heat stress. All of these combined problems, was a real emergency, but we were able to save these animals. Over the next eight years, we had solved all of the problems. We succeeded in transforming that disastrous situation into one where we could get a highly productive lamb market.

EIR: What period was this?
Davis: This was about six years ago, just before the ["Asian" financial] crisis. It was at the height of the boom, really. Malaysia by that time was booming. We had an early recession in the late 1980s. By then it was climbing out of that, and it was boom-time in Malaysia—fantastic building—the whole country was a building site. I had never seen so much development. Every time you'd wake up, there was another building and housing estate, and all that.

EIR: That was already a year into the World Trade Organization—started in January 1995—and there was tremendous pressure building internationally to distort domestic farm programs in line with so-called "free trade" in agriculture.
Davis: That's interesting to know, because the policy that was coming up here [in Malaysia] was an unwritten policy. It centered around the concept that agriculture was a sunset industry.

EIR: People aren't going to eat in the computer age.
Davis: That's what happened. Things were very rough. All of our funding was cut. I had to change my focus. That's why I'm now in housing. . . . Malaysia said, "We are an advanced country now, we'll let the poor countries feed us. We'll pay for it with our microchips." And, of course, Singapore was producing enough microchips to drown you.

Then we started all the debate about "food security" because as scientists, we were appalled by this. Myself, I was putting forward these programs. My colleagues were putting forward similar programs for our cattle industry. We were at the point of really breaking through and getting prototype industries set up. If we had been allowed to do it, we would be halfway to there by now.

With animals, given the general reproduction time, it takes about a 20-year program, really. . . . Even with the most advanced techniques, but you still can't speed up the pregnancy time.

EIR: So, this is dead now, the program?
Davis: Dead, killed. Everything.

Just one thing more about the livestock, which I didn't mention: My wife and I—my wife is an agricultural researcher—we wrote a paper about seven years ago, where we looked at this palm-kernel cake, the byproduct from the old palm industry, which is good for feeding the sheep. We did the analysis of it, and we found that there would be enough of this palm-kernel cake *to create a completely self-sufficient animal feed industry, for cattle, sheep and goats, i.e., that Malaysia could be completely self-sufficient.*

All that feed was going to Europe because of high prices, so that completely undermined the industry, where people were beginning to set up the preliminary steps to an industry, backyard farming and all of that, but it would have gotten better. All of that was killed by economics. The companies said, "Why should we bother with animals, when we can get good money just with quick return?". . . But in this paper, we put forward the proposal that if you used this feed here in the country, we could get ten times its value, compared with selling just the raw materials, by putting it through animals, then getting the fleeces, and all the other downstream industries and products that would be spun off.

This didn't cut any ice at all, either. We warned in that paper, that one day the Europeans would stop buying the palm-kernel cake because the market was purely artificial. This feed is now becoming available at about half the price of what it was before, and it is beginning to look attractive.

With the collapse in the world economy, we'll have our chance to pursue that.

EIR: What about the parallel story, for expanding output of carbohydrates—rice, and others?
Davis: The only carbohydrate we produce is rice. Rice is perhaps the only one that we are efficient at. We are 70% self-sufficient in rice, and this is done the proper way. It used to be done by Kampong farming techniques—you know, village farming techniques—but now that has been taken over in

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designated areas, and is being carried out with proper scientific foundations and with oversight from the authorities. And that can be expanded—even in a depression, I think—that can be very quickly expanded to full self-sufficiency in rice.

But the cereal groups—the flour, the maize that we need for bread and other forms—all of that is imported. In Malaysia, we are not able to produce corn. You can raise it in the wet-dry tropics, but you can't do it in the humid tropics. You need a long, hot Summer for the kernels to ripen, and everybody says—and I referred to the expert on this, in my paper on food self-sufficiency—that no matter what you do, you can't produce maize here. But, of course, she has come up with an alternative, which is sweet potatoes.

I've taken it one stage further by saying, "Right, this is the crop that we must go for, and mass produce it."

But, in all of these things, you have to get past not only the early science stage. And last week, there was a big development: The government has passed a bill saying that the research organization, called MARDI (Malaysian Agricultural Research and Development Institute), will allow the scientists now to take it all the way to commercialization, with farmer-entrepreneurs.

In the past, the research organizations do the research, and then they leave it for industries to pick up. But, they don't pick up.

EIR: So, this will all be government-sponsored?

Davis: The government will sponsor it now all the way through. This is what is needed. . . . We don't have the class of entrepreneurs that we need. It's just beginning actually, of people picking up an idea and following it through, from the research organizations. It means that the government has to do much more. The recognition of this, really, by this new act of Parliament last week, is recognition that the government has to take the lead. It can't just rely on industry to pick it up. . . .

It's the American way, you know. The original researcher makes a scientific breakthrough discovery, and then he follows that through, right through production, setting up companies; because he's the one that drives it. Those are the people who drive it. The ones that just pick up the invention, are just in it for quick profit. And, of course, there's a long lag between the initial discovery and actually making any money.

EIR: During the recent decades of so-called "free trade," what would happen is that the major cartels, whether it's Monsanto, Cargill, or the others, would move to control the food and agricultural innovations—what gets developed or not. These cartels have even altered patent law in the United States, to make demands for sweeping patent rights to such things as bio-engineered crop traits and methods. So your new Parliamentary act in Malaysia is strategically very significant for being in opposition to that kind of mega-multinational control.

Davis: It's come out of the blue, actually. I've only just heard about it, but I said to myself, "Ah, at last, this is a very good move, because lots of our inventions might be taken up." It opens up a lot of possibilities.

EIR: It goes to the very core of the general collapse of the world economy. . . . And, of course, linked to that is the whole question of developing infrastructure—all of these things have been largely dropped globally, but especially in the United States. In this light, it is valuable to have your first-hand review of food projects, and what really did and didn't happen to them; because usually, we hear only the false propaganda—for many, many years, from such agencies as World-Watch, and its director, Lester Brown, which say, "Well, we've exceeded the possibility of new technology in food and agriculture. We are overpopulated."

The very idea of national food self-sufficiency, as an idea, was literally disallowed, that is, prohibited in the tenets of the 1995 World Trade Organization. It had been debated in 1986, at the founding meeting of the "Uruguay Round" of the old General Agreements on Tariffs and Trade, that is the old GATT under the United Nations. They met in Punta del Este, Uruguay, where they made agriculture their leading concern for what they called "reform." They said, it is wrong for any nation to try for self-sufficiency, in fact, you should not even have national food reserves or contingency stocks.

As you worked in Britain, then Australia, and then you went to Malaysia, did you personally see this shift? Would you comment on that?

Davis: We all got contaminated by this, through the Club of Rome, you know, the "limits to growth," and panic that we are overpopulated, and all these limit projections, including claims that we were running out of food, with risks of mass starvation.

New Agriculture Policy For Malaysia

Here is the summary of the March 2002 paper, "Food Production for Malaysia During a Collapsing World Economy," by Mohd Peter Davis and Makhdir Mada, of Universiti Putra Malaysia, presented at a Conference on Bio-Industry: The Future of Malaysia, March 25-26, in Kuala Lumpur.

The agricultural issues raised in this paper come from the rather late realization by the authors that the world economy, which has resorted to printing paper money for the last 30 years, is now entering the final and dangerous stage of disintegration and collapse. The Argentine economy has collapsed under a heap of debt. Japan, the world's second largest economy, may well be next, threatening to collapse the American economy and with it, the entire world economy. The worst-case scenario for Malaysia is that commercial imports and exports based on currency, will cease, similar to the Japanese occupation of Malaya. Under these conditions, Malaysia can only produce half its food. The authors in the present paper have suggested possible strategies for minimizing food shortages. We have no monopoly of wisdom on these issues and wish only to open a serious and mutually beneficial debate with all sectors of society.

Our suggestions include the *simultaneous* adoption of the following new policies:

Proposal 1: Defend Malaysia's chicken and pig industries by guaranteeing supply of 1 billion ringgits imports of animal feeds. **Action:** Barter trading with ASEAN neighbors, China, India, Australia and New Zealand by exchanging palm oil, petroleum, natural gas, etc.

Proposal 2: Secure Malaysia's supply of frozen beef by feeding cattle in Australia with Malaysian palm-kernel cake. **Action:** Oil Palm Companies to consider venturing into Australian cattle feedlots and shipping back the beef to Malaysia.

Proposal 3: Expand rice production from the current 70% self-sufficiency level to 100%. **Action:** Improve irrigation and mechanization and expand the eight existing granary areas.

Proposal 4: Establish sweet potato as a second source of carbohydrate for humans and as a replacement of maize grain for the chicken and pig industries. **Action:** MARDI to serve as main consultants for large-scale sweet potato industry established on waste sandy soil in Kelantan and Terengganu.

Proposal 5: Free school meal packets, providing half the daily nutrient requirements, for school children and the needy. **Action:** Dieticians, food scientists and food manufacturers to devise and produce palatable biscuits from sweet potato, ground nuts and other high-protein sources, and palm oil and vitamin fortification. Distributed directly and freely to schools and communities using Government channels and finance.

Proposal 6: Development of new agricultural systems for urban agriculture, small-holder farming and commercial farming. **Action:** Government and Industry to provide ample fast-track research funding for novel food producing systems, especially new food sources such as jungle fowl.

We didn't realize until years later that it was a conscious policy. At the time, we got caught up in it, but even then, it wasn't taken all that very seriously. In a country like Australia, where you've got a tiny population, it's always been a battle, literally, to survive, for the population, so they've always had this policy of "populate or perish." The thinking was that unless we populate this continent, we are doomed.

And, then this stuff comes along from the Club of Rome about how we are overpopulated—well, this didn't cut much ice with Australians. I, obviously, got involved in things like social responsibility in science and all that; and I read a lot of this, saying, either, "depopulate or perish," or, in the next breath, "depopulate or else." We saw this really as a kind of mailed fist, really that somebody is behind this, but we didn't really know who, so it didn't cut much ice.

EIR: In your experience, did needed science projects, in particular, those focussed on the needs of the developing sector, prove to be virtually impossible to get funded? Even when there was money available for scientific development?

Davis: This first happened when I was in England, where I worked for nine years with this company, Pfizer, an American company—a very, very progressive company, reflecting the American intellectual tradition. They developed teramycin, which was used globally, as bacteria became drug-resistant to penicillin. This was a big breakthrough.

But there was a big change in the early 1960s. I left there in 1968, but a few years before that we were developing a lot of programs in biochemical research, and brought in a lot of young, fresh graduates, and they were setting up these programs on tropical diseases, to develop drugs against tropical diseases.

They were really dedicated scientists. They had just got to the stage of setting up all these screening tests for drugs to

treat diseases, such as sleeping sickness, when there was a change in the board management of the Pfizer-U.S., which controlled the worldwide operation. The next day, they said, "All of this research has been cancelled." Just overnight, one change in the top management. The reason was, they said, that even if we came up with a miracle cure for sleeping sickness or other tropical diseases, the poor countries could not pay for it, so what is the point in doing it?

EIR: What they called that in GATT-speak, was to say, "There will be *no effective demand*," meaning people can't pay for it. It's like AIDS today. That captures the character of the 1960s, and the paradigm shift, doesn't it?

Davis: This was about 1965. So this, of course, sort of shattered my belief, because all the scientists I worked with saw this as a very progressive period, post-war period. We were entranced to seek to change the world. We saw all the fantastic benefits of antibiotics, and there was popular support for these efforts; and then, suddenly, there was a change of thinking, and they revealed their true colors, that they were just in it for the money.

From then on, I grew up. I realized the scientists that were making the breakthroughs changed the world. And the companies themselves were doing it to get rich. That's when I went out to travel the world, traveling overland from England to Australia. What I saw—and especially in the Third World—the problems, health problems I saw, I know could all have been solved by this science. So it was a big shock. What was stopping all this science from being applied? What was stopping sensible agricultural projects?

Then it dawned on me: These people don't want this to happen. You realize this is the whole class conception of society—them versus us.

EIR: It's not so much class distinction, as it is that in 1974, Henry Kissinger chaired a committee which issued the National Security Study Memorandum 200, which laid out, as America's national security policy, to contain and restrict population growth as essential to secure U.S. free access to the raw materials of the developing countries.

Davis: And in 1974, we were disgusted in Australia with the idea of the intent to use food as a weapon, and then it was enacted in 1975!

EIR: In 1974, Henry Kissinger went to the World Food Summit, representing the United States—not Earl Butz, the Secretary of Agriculture, from Purdue University. Butz was pushed aside, and Kissinger went to the World Food meeting in Rome, and made a speech, with crocodile tears, about the world. He said, *we*—meaning the people behind him from the City of London and Wall Street, "we care about who eats, just leave it to us," with his secret NSSM-200 memorandum, naming 13 countries that were to be suppressed.

So, your personal experience spans the shift.

Davis: They want to see mass starvation, do they?

EIR: You mentioned that back in 1971, when you saw Nixon take the dollar off the gold-reserve standard, you said at the time that this was going to be the beginning of the end, which is something that LaRouche is famous for having predicted. How did you happen to have that perception, and how did it go across with your associates?

Davis: It didn't go across at all well, but there was no LaRouche movement around then, in Australia; I wish there had been. We got it through the student radicals, socialist movement. I think the analysis came from England, I think, from the Socialist movement there, on the collapsing world economy, and by that time I was involved in all these environment groups, social responsibility and science. I think that analysis came through, and papers started to be published, and they were full of it. And there was anti-Americanism. Even until recently, I couldn't see anything good coming out of America, but we didn't know the solution.

There was some idea that somehow the working class would wake up one morning and take over, but that's not how it works. Looking back, all that it did was to destroy all the scientific initiative. We missed out on that golden opportunity. We lost them all.

EIR: The collaboration among all those who have experience and training, whether it's in agronomy, dairy science or livestock, animal husbandry, and so on, is needed now, as part of a mobilization towards a new, just national-interest system—what Lyndon LaRouche is calling, a "New Bretton Woods."

Davis: I'm quite optimistic here, even though there's total ignorance, at least seemingly, among top political circles as well. But the country [Malaysia] has the capability to close ranks and it can move fast, as it did in the last crisis, the Asian economic crisis, when Prime Minister Mahathir suddenly changed policy against the IMF pressure, and suddenly pulled a master stroke, which saved us. The man is capable of great and sudden changes for the better. He is a great commander, a man of action in battle. I think that our function is not to cause antagonism, but to say, these are the policies that are in the national interest, and I think they can be adopted and people can get behind them.

There are a great number of frustrated professionals. You know, people that want to go ahead, make progress, and getting unemployed. They are going to come naturally to the LaRouche movement, but when they come, we've got to be able to get them thinking.

It's really the Roosevelt "Re-Build" project. I realize I'm not thinking big enough. For example, we should think about a "Tennessee Valley Authority" type project for the poorer, East Coast states in Malaysia: eliminate rural poverty, address the poor soil problem. We have to give these young professionals the hope that this can be done.