Malaysia's Agricultural Breakthrough, and Nuclear Desalination, Can Feed the World

by Mohd Peter Davis

World agriculture was developing rapidly, until the destruction in 1971 of Franklin Roosevelt's Bretton Woods Agreement, which had provided the economic stability for the post-war boom. In the previous 17 years, world milk production had increased by 49 percent, and world meat production by nearly 100 percent. The visionary "Atoms for Peace" program, promising cheap electricity and abundant desalinated water, was inspiring the world with the "green revolution" to end world hunger.

Reflecting this scientific and technological progress, Dr. K.L. Blaxter from the Rowett Research Institute in Aberdeen, Scotland, ended his review of world agriculture on a very optimistic note: "I share the view … that agriculture and animal production resources of the world are perfectly adequate to cope with foreseeable demands"

What this dedicated scientist did not foresee, was the intention by the British Empire to destroy world agriculture. In 1974, U.S. Secretary of State Henry Kissinger, who later admitted in a public speech at Chatham House in England that he was a longtime British agent of influence, wrote a secret report (National Security Study Memorandum 200) to protect "our resources" in Africa and Third World countries and to use food as a weapon to control population growth.

In NSSM 200, Kissinger envisaged "large-scale famine of a kind not experienced for several decades—a kind the world thought had been permanently banished."

As the now-declassified NSSM 200 makes clear, the food crisis and the food riots now being reported daily in the world media, and the impending mass starvation in developing countries, have been carefully engineered and have little to do with droughts, climate change, "global warming," or the two-centuries-old lie by Thomas Malthus of "too many people," which is peddled to this day by the green environmental movement.

Courtesy of Mohd Peter Davis

Fast-growing grass and genetically improved breeds of sheep, cattle, goats, and milk cows combine to provide a way to bring a high-quality diet to the world population. These goats are one of the Malaysian grass farm experimental herds.

Lyndon H. LaRouche, Jr., has warned for decades that the willful destruction of agriculture is part of the British Empire's "Great Game," a continuation of both World Wars and the Cold War against Russia, to establish "globalization," which is merely a euphemism for world empire. To break down any resistance to this plan, the British Empire's intention is to return to the war, famine, and disease of Europe's 14th Century, thereby reducing the world population from 6.5 billion to what it considers a "sustainable" 1 billion, or even less. Essentially, the British Empire's Great Game is a killing game, on a scale never before seen in history.

This insanity and genocide must be stopped. The adoption of LaRouche's call for a New Bretton Woods among the four major powers—America, Russia, China, and India—which other nations can join, will provide the new financial architecture for urgently doubling world agriculture along the lines originally envisaged by the "Atoms for Peace" program.

Malaysia has an important role to play in vastly increasing the quality of grass required to feed the animals that can provide protein for the world population, and in maximizing the conditions of life for those animals, as described below.

Food Security the Nuclear Way

The aim of providing world food security is just as simple and straightforward as the definition put forward by the United Nations Food and Agriculture Organization (FAO) in 1983: "Access for all people at all times to adequate food for a healthy and active life."

Developing the technology to end world poverty and feed the present world population of 6.5 billion can become the noble task which unites the entire world scientific community. If the British Empire and its genocidal intentions are defeated, the world population is likely to grow to a healthy 9 billion by 2050. With agricultural scientists and engineers back on the job, under a New Bretton Woods, the Atoms for Peace program can be enthusiastically revived to achieve world food security in a remarkably short time.

The first task is providing adequate water.

During the colonial period, new lands were opened up in Asia, the Americas, Africa, India, Australia, and New Zealand for world agricultural commodities (cotton, wool, rubber, tea) and food (cereals, rice, lamb, beef, milk). These agricultural industries have relied, not so much on renewable rainfall, but heavily on underground fossil water, left over from previous ice ages. This underground water is now almost depleted. A good example is Australia, essentially a desert continent, which was prevented from going nuclear in the 1960s and is now stranded without the capacity to produce cheap desalinated water to replace its fossil water.

Once a world leading agricultural exporter of wool, meat, and wheat, Australia cannot withstand the natural droughts, and its agriculture is now in a pitiful state. Farmers, whose grandfathers—and their grandfathers before them—had carved out highly productive farms from the inhospitable Australian outback, have lost hope, and many are committing suicide.

Courtesy of Mohd Peter Davis

Entrepreneur N. Yogendran (who is 6-feet tall) standing in 3-foot grass, which took only 38 days to grow on his Malaysian grass farm. Grass cut as this age is perfect for feeding ruminants. The grass can be cut 10 times per year for three years before re-ploughing and re-seeding.

The irony is that Australia, the thirsty continent, is surrounded by oceans of water and is sitting on the world's largest reserves of uranium. With a revival of its "lucky country" post-war optimism, a Nuclear Australia could, within a decade or so, become a gigantic food supplier for the world.

Africa can lead the way! Africa has suffered extreme technological apartheid, but now South Africa has outflanked its former colonial masters with its pioneer design for a Pebble Bed Modular Reactor (PBMR), now under way. The South Africans intend to mass produce this small, inherently safe nuclear reactor, as well as its nuclear fuel, and place the reactors exactly where needed to supply electricity and desalinated water throughout Africa. The PBMR is the hope of Africa and "could transform the famine-ravaged continent into the bread basket of the world," to use the words of LaRouche Youth Movement leader Portia Tarumbwa Strid ("British Destabilization of Zimbabwe," *EIR,* April 11, 2008).

This African scientific optimism is shared in India. During the April 2008 India-African Union Summit, the Director-General of the U.N. Industrial Development Organization, Kandeh Yumkella, said that a solid India-Africa collaboration in agriculture can feed the world, drawing on the huge success in the Indian green revolution of the 1970s and 1980s in grain production. "This is indeed possible," Yumkella said. "India has the capacity and technology, and Africa has the land and labour."

This collaboration would allow Africa to industrialize its agriculture, increase production, and prevent the 50 percent post-harvest losses that are now occurring.

Increasing Animal Production

The human body has a biological daily requirement of 1 gram of protein per kilogram of body weight. (One kilogram equals 2.2 pounds.) A 60-kg person therefore requires 60 grams of protein per day. It is very difficult to supply this amount of protein by eating vegetables and grains. It is best supplied by meat, milk, and eggs, and the transition to this higher quality diet, particularly during the 20th Century, has greatly improved the stature, health, and longevity of populations, at least in more developed countries. However, to achieve this worldwide, means that the population of domestic animals has to be a similar size to the human population.

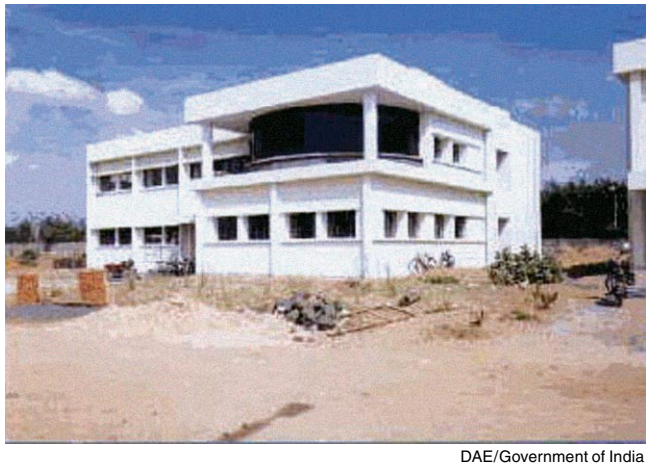
For example, one sheep will supply the protein requirement for a family of five for only two weeks. A good milking cow will provide 20 liters of milk per day, containing enough protein to feed only three families per day. (One liter is 1.057 quarts.) With the fossil water running out, the supply of grass in traditional and colonial animal-grazing systems is insufficient to support the billions of sheep, goats, cattle, buffalo, and milk cows required to feed the world population. These grass-eating ruminants are increasingly being fed human food, especially wheat and corn.

The non-ruminants, pigs and poultry, and the egg industry also rely predominantly on corn, but this is necessary because there really is no practical alterna-

tive feed for the highly efficient food industries that raise these animals. So our domestic animals are directly completing with human beings for corn and wheat.

Producing ethanol biofuel from corn has further removed up to 20 percent of the corn from American and Western European food supplies. This energetically useless and evil destruction of food must stop immediately.

The world desperately needs a new, large-scale source of grass as animal feed, to replace the wheat and corn inefficiently fed to ruminants. (Animals in barns require 14 kg corn, a human food, to produce 1 kg of beef or lamb.)



DAE/Government of India

Desalinated seawater can provide the needed irrigation for agriculture and human consumption. This Nuclear Desalination Demonstration Project at Kalpakkam, India, supplies fresh water for the nuclear power plant and the local population. The modular fourth-generation nuclear reactors, like South Africa's PBMR and General Atomics' GT-MHR are ideally suited for coupling with plants to desalt seawater.

Solution: Malaysian Grass Farms

In the nick of time—and against all the prevailing agricultural practices—a Malaysian livestock entrepreneur, N. Yogendran, has just established a giant farm, which provides at least three times more highly nutritious grass per hectare per year, compared to the best New Zealand pasture land. Prototype grass farms have proved that cut grass fed to sheep, goats, cattle, and milk cows in Malaysian climate-controlled houses dramatically overcomes the barriers to successful animal production in the humid tropics.

Despite determined attempts since British colonial days to establish modern animal production in Malaysia, the rainforest has always won. Land cleared from the rainforest and sown with improved pastures soon becomes overgrown with inedible jungle species. In addition, the parasite disease load on grazing domestic animals is unrelenting and uncontrollable.

Grass farms "leapfrog" over these problems by isolating domestic animals in climate-controlled houses and feeding them with young cut grass. The rainforest climate supports the highest rate of biomass production in the world. The humid equatorial climate can now be harnessed to produce enormous quantities of fresh grass per hectare for feeding animals, 365 days of the year.

Malaysian agriculturalists are just beginning to appreciate the worldwide potential of this beautifully simple innovation. There is no reason that grass farms for feeding housed ruminants can not be quickly established throughout the humid tropics. This new animal-production system can also spread to the dry tropics, as nuclear-powered desalinated water becomes available. The only other missing ingredients, plant minerals and nitrogen fertilizers, are easily supplied.

All this is bad news for Al Gore and Prince Philip's environmentalists, who hysterically claim that man-made carbon dioxide and global warming, and the presence of too many people, are destroying the planet. Ironically, the perpetually warm, humid tropical climate, with abundant year-round rainfall, plenty of sunlight, and naturally high concentrations of carbon dioxide from rotting vegetation, provides the perfect conditions for highly productive "sustainable" grass farms, without the use of pesticides, for potentially growing more than enough "organic" domestic animals to feed Southeast Asia.

Science, it seems, has out-greened the greenies!

All Flesh Is Grass

To appreciate the importance of grass farms, it is necessary to give a brief outline of ruminant nutrition. Grass is quite useless for human nutrition, because we cannot break down cellulose into its glucose units. However, young "Spring" pasture grass of selected and improved species is perfect for ruminant animals, which have been domesticated from wildlife species and artificially selected during 10,000 years of agriculture. Grass-eating domestic animals, complementing a much older fish diet, have served as a major source of protein for man.

Sheep, cattle, buffalo, goats, and cows have a special type of stomach, the rumen, which, when full of grass, can account for 20 percent of body weight. In this large organ, young grass (but not so easily old grass) is fermented by quadrillions of anaerobic bacteria of diverse species. The multiplying bacteria double about every 30-60 minutes, break down the cellulose, and live on some of the energy.

Most of the energy from cellulose, however, is excreted in the form of volatile fatty acids, which are absorbed into the blood stream and serve as the complete energy source for the animal. Protein for the ruminant animal is provided by the bacteria that get squirted into the small intestines for digestion into amino acids (in the same way as humans digest meat with enzymes). So the rumen is not so much a food-digesting organ as a food-producing organ. A cow is a walking fermenter, producing microbial food for itself from grass.

Ruminant animals can survive, but not gain weight on old grass, mature plants, or leaves, which become chemically protected (lignified), and resist microbial digestion. This rapid maturation of a juvenile plant to avoid getting eaten is the secret of how grass, plants, and trees can survive and recolonize barren lands after ice ages. Sheep and cattle on poor pastures can spend up to 18 hours per day searching for the young blades of grass, until rain and Spring temperatures again provide a plentiful supply of young grass.

For most of the year in temperate climates, ruminants are merely surviving, not growing. Yogendran's Malaysian grass farms overcome all the seasonal problems of grass and animals in temperate climates and allow for all-year-round weight gain, reproduction, and milk pro-

Courtesy of Mohd Peter Davis

Workers constructing a climate-controlled barn for cattle on one of N. Yogendran's giant grass farms. The grass grows 3 feet in just 30 days, providing a nutritious diet for the animals.

duction. In the humid tropics, the grass is cut every 30 to 40 days, when it is about 3 feet high and still highly digestible when fed to animals in barns. After this time, the grass becomes less and less digestible.

For the grass farm, particular species of grass are chosen that can be harvested about ten times per year for up to three years. The grass is then ploughed back to rejuvenate the soil. New sprouts of grass emerge in days from the old roots, and are supplemented with seeds to establish a packed carpet of grass. This prevents seeds from the large diversity of jungle plant species from germinating, much like a garden lawn keeps out weeds. With correct management to supply minerals and nitrogen fertilizer, the grass farms can be sustainable without exhausting the soil.

Water is not a limitation in this climate, for it is recycled almost daily in a rainforest by transpiration from trees and other plants, followed by rain, creating vast reserves of underground water. The soil is nearly always moist, and irrigation of grass farms is not usually necessary. To really gear up production of ruminant meat and milk, underutilized agricultural land and old rubber or oil palm plantations can be turned into grass farms, within six months, surrounded by well-separated villages, each for the intensive production of a different species of ruminant in animal housing.

A grass farm is, therefore, a modular animal production unit, which can be rapidly established throughout the humid tropical regions of Southeast Asia, West Africa, and the Amazon. As the developing world gears up with the small PBMR nuclear reactors that South Africa intends to mass produce, and the thorium reactors that India is now urgently developing, the new animal production system can spread throughout the dry tropics. making use of nuclear-powered desalination.

Climate-Controlled Animal Housing

Under British colonial rule, and up to the present, Malaysian researchers have put great effort into adapting the highly productive temperate breeds of domestic animals to the humid tropics, but these pure breeds do not perform in the harsher climate. Persistent attempts to mass produce cross-bred ruminants, more adapted to the humid tropics, using traditional grazing methods, have proved very disappointing; and Malaysia, with only 26 million people to feed, is only about 25 percent self-sufficient in ruminant meat, and less than 5 percent self-sufficient in milk.

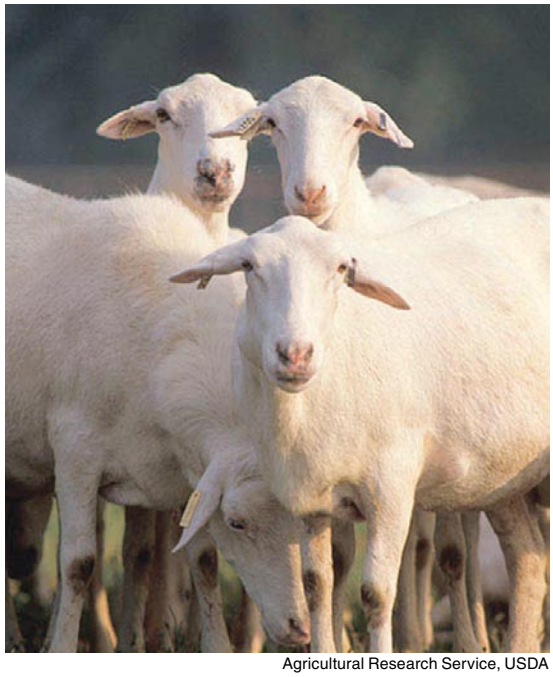
Entrepreneur Yogendran, after 25 years of self-funded experiments, has developed a stunningly simple solution. Instead of continuing the futile attempt to change animal biology, he changes the animals' environment! He air freights the most genetically improved breeds of sheep, cattle, and milk cows from around the world to Malaysia, and immediately trucks them to fully enclosed climate-controlled animal houses, located on his prototype grass farms. The economical, light-weight animal houses are maintained throughout the year at 25 to 29°C—77 to 84°F), ideal for maximum animal production. This perfect indoor climate is achieved not by electricity-guzzling air-conditioning, but by evaporative cooling using strong suction fans. At one end of the building, these fans draw in warm outside air (35°C maximum—95°F—in the humid tropics). The air cools down as it is forced through large pads dripping with water. The high ventilation rate also serves to keep the animal houses

fresh, dry, clean, and odor free at all times, improving the contentment and well-being of the animals.

Suitably vaccinated animals under these fully enclosed hygienic conditions are virtually disease free. The "animal rights" advocates, if they are sincere about animal welfare, should visit these new Malaysian animal houses! Enclosed, climate-controlled "bio-security" animal housing offers a practical way forward for replacing Asian and African backyard farming, where domestic animals and human beings now live side by side in poverty, the humans picking up and efficiently spreading any infectious diseases from the animals.

Mass Producing Intensive Animal Farms

The latest giant grass farm in Malaysia was established in a remarkably short time from old pasture land, which had become overgrown with secondary jungle. The failed animal-grazing project was ploughed in October 2007, and planted with an improved species of grass in November. The first batch of 285 pregnant cows arrived on one cargo plane from Australian high-tech breeding farms in April 2008. They adapted within days to their cool "Hilton Hotel" animal houses, loved the cut grass, and are all set to calve in June, with commercial milk production expected by August 2008.



Agricultural Research Service, USDA

The best sheep farms in New Zealand can carry up to 25 sheep per hectare throughout the year. One hectare of grass in Malaysia's new grass farms can support 82 sheep throughout the year. More food for more people.

A New Zealand automatic milking turntable for 50 cows has been built, and new climate houses are under construction for the next batch of cows from Australia. This good business model, from idle land to marketable milk and calves in one year, with a return on investment within 3.5 years, is now attracting large investors. If Malaysia's "plantation companies," no longer owned by the British, decide to mobilize their huge resources, milk and meat production in the humid tropics could move with lightning speed.

Given the political will, there can be no doubt regarding Malaysia's ability in this large-scale agricultural venture. Malaysia has vast colonial experience in rubber plantations which put it on the world map; and since the 1960s, Malaysia has planted 4.3 million hectares of oil palm and become the world's largest producer of palm oil. Malaysia has the resources to rapidly mass produce these intensive animal farms throughout its territory, and to assist its neighbors in climatically suitable parts of Indonesia, Thailand, and the Philippines to do the same.

With a crash science program modelled on what America used to do under Roosevelt during World War II, and Kennedy during the Apollo Project, Malaysia can lead the way in providing urgently needed supplies of milk, beef, lamb, and goat meat for Southeast Asia. As nuclear power comes on stream, and desalinated water becomes plentiful, the Malaysian animal production system can spread to other developing countries in the dry tropical regions.

As in the post-war period, agricultural scientists are able to find the solutions to end world hunger. The only obstacle standing in the way is the British Empire, which in its death agony is preparing frantically to kill up to 90 percent of the world's population in World War III and the intended famine and diseases which will follow such a war. This lust for genocide has been stated forthrightly by Prince Philip, president of the World Wildlife Fund: "In the event that I am reincarnated, I would like to return as a deadly virus, in order to contribute something to solve overpopulation"

The long overdue and final defeat of this totally evil British Empire will recapture the Atoms for Peace program for all humanity. World food security can then be easily achieved, as forecast by the great Russian biogeochemist V.I. Vernadsky, in his speech opening the Radium Institute in Petersburg in 1922: "Soon man will have atomic power at his hands. This is a power source which will give him a possibility to build his life just as he wishes."

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