

The Decline And Fall of GM Wheat

By Alex Jack

1. Full Moon Over the Potomac Monday Evening, July 22

Then Pharaoh said to Joseph, I saw in a dream seven ears of wheat, full and ripe, growing on one stalk. Growing up after them were seven other ears, shriveled, thin, and blighted by the east wind. The thin ears swallowed up the seven ripe ears. When I told all this to the magicians, no one could explain it to me."

Book of Genesis

At Bradley Airport in Hartford, Conn., where we board our flight to the nation's capital, I am hand searched by security guards when something in my trousers pocket sets off the metal detector. It turns out to be small packets of rice seed, a paddy variety from California and an upland strain of ancient temple rice from Japan. High mineral content, I quip to the astonished guard.

The Capitol dome, the Washington Monument, and other landmarks gleam in the moonlight as our small plane descends into Reagan National Airport. The air is hot and sultry on this midsummer night, and it reminds me of Saigon and other tropical capitals where I served as a war correspondent. On the plane coincidentally I read the account of a Cambodian woman who survived the Khmer Rouge death camps. Her niece was a recent student of mine at the Kushi Institute and asked me to read her aunt's heart-wrenching manuscript. I recall how the chemicals and defoliants of the war in Southeast Asia helped turn peaceful rice paddies into killing fields and meditate on how genetically engineered crops, global warming, and other environmental crises are eroding the veneer of modern civilization and may lead to a similar fate here. This summer's drought and floods, grasshopper plagues in the west, and unusually hot, humid weather are omens of nature rising up in fury over our continued exploitation of the earth.

At the airport Edward Esko and I meet Lynn Dohm, an Amberwaves supporter from the Virgin Islands who has offered to photograph our trip, and we retrieve our bags. Our luggage contains heavy binders with signed copies of the Amberwaves petition to save rice, wheat, and other essential

foods from the GM threat. The petition has now been signed by ten thousand people and voices the concerns of millions of others from sea to shining sea. We have a busy round of appointments lined up in the nation's capital over the next several days. After picking up a small rental car, we pass the illuminated marble dome of the Jefferson Memorial on the other side of the bridge into the city. Washington is largely deserted. Arriving at the Holiday Inn in College Park, Md., we check in about 1 a.m. and fall promptly to sleep.

2. A Prairie Fire

Tuesday Morning, July 23

Nature was constant, the spirit simple and centered . . . Heaven showered humanity with grace, and Earth sustained people with life. The four seasons did not lose their order, nor did the wind and rain fall with violence.?

Ancient Chinese text

I awake early and have a small bowl of spelt porridge that my wife, Gale, has packed. It is made from whole grain spelt an ancient form of wheat cooked with whole oats, barley, and rye. According to Lino Stanchich, a friend and colleague, spelt was the primary grain of the ancient Roman legions. It is wonderfully chewy, gives tremendous energy, and over the last couple of months I have been enjoying it daily for breakfast. Following our trip to the West Coast to meet with the head of the California Rice Commission in April (see Tide Turns Against GM Rice in Amberwaves #4), I had collapsed from exhaustion and been ailing for several weeks. Thanks to the spelt, daily walks, and other adjustments, I had slowly recovered.

Downstairs in the motel lobby, I meet Ed and Lynn and by 8:30 a.m. we are on a high-speed train to the District of Columbia. The Beltway is too crowded to drive into Washington and parking is prohibitively expensive. Our first appointment with the U.S. Wheat Associates is at 10:00 a.m. on I Street. We arrive a half hour early and walk a couple blocks to the White House for a few minutes of sightseeing. It looks much smaller than I remember it from the 1960s when I marched for peace in Vietnam and rallied in nearby Lafayette Park to the soulful melodies of folksinger Joan Baez. To protect from the terrorist threat, Pennsylvania Avenue is now closed to traffic in front of the White House. We stroll by clusters of security guards patrolling with walkie-talkies. Overhead, invisible technology

enforces an expanded no-fly zone over the mansion. Squirrels and birds frolic on the White House lawn, a reminder that the natural world functions without borders, passports, and satellites.

As the GM rice issue quieted down this spring, the wheat issue suddenly exploded. In our meeting in Sacramento, Tim Johnson, president and CEO of the California Rice Commission, reported that GM rice would be delayed 5 years, if ever because of growing opposition by farmers, consumers, and foreign countries, as well as our campaign to preserve natural and organic farming in the Sacramento Valley. The GM wheat issue, however, heated up when Monsanto, the principal biotechnology company, accelerated the timetable for its commercial introduction.

Over the last several years, wheat farmers and agricultural associations throughout the Wheat Belt, which extends across the northern plains of both the U.S. and Canada, protested Monsanto's plan to release new altered varieties without adequate safeguards or a viable market. They feared that non-GMO wheat the continent's main agricultural export would become contaminated and overseas markets would dry up. Two years ago, StarLink corn, an unapproved GM variety inadvertently entered the human food chain, contaminating much of the American corn crop. Wheat farmers, like rice farmers and other growers, are deathly afraid that the same thing will happen to their crops. Responsive to farmers concerns, lawmakers in North Dakota's lower house last year passed a bill calling for a moratorium on GM wheat. Monsanto then threatened to withdraw all financial support for agriculture throughout the state, including programs in universities and research stations, and the state senate weakened the bill into a study of the possible economic and agronomic effects of new transgenic varieties.

Over the winter, Monsanto put GM wheat on a fast track, sponsoring open field trails of Roundup Ready wheat, engineered to resist the herbicide Roundup, in Montana, the Dakotas, and Minnesota. The company signaled that it would introduce GM spring winter wheat as early as 2003 regardless of what farmers thought or its consequences to other crops. The company's arrogance sparked a prairie fire in the Dakotas, the epicenter of red spring wheat cultivation. Farmers organized to testify against GM wheat at a special hearing before the North Dakota legislature's Interim Agricultural Committee in Bismarck in early July.

As far as our customers are concerned, GM wheat is a contaminant, and they

don't want it, Linda Rauser, a farmer in the northwestern part of the state, told the committee. North Dakota is a leader in the U.S. wheat industry. It's the government's duty to protect producers from these contaminants.?

Robert Wisner, an agricultural economist at Iowa State University, reported that 80 percent of the hard red spring wheat exports go to the 22 countries that require mandatory labeling of GM foods and crops and that another 15 countries will likely adopt similar laws in the next several years. Wisner explained that contamination of conventional and organic wheat could occur at various points elevator dump pits, legs, conveyors, dryer systems, train cars and trucks. He predicted that GM wheat would result in the loss of half the export market and up to a one-third decline in crop prices.

Along with other health and environmental organizations, Amberwaves submitted testimony and scientific literature on the potential risks of genetic engineering to the legislative committee and networked with the Dakota Resource Council, which was leading the farmers campaign. Over the last year, Ed and I had met with beer company executives, including Sam Adams in Boston, which uses wheat in some of its specialty labels. Berkshire Mountain Bakery, Luna Pizza, and other regional food companies donated organic wheat products to our July 4th Amberfest Concert. But until now, wheat has not been the chief priority.

Now, just two weeks after the GM wheat issue reached the boiling point in the Great Plains, we arrive for our appointment with the U.S. Wheat Associates, the major trade association promoting sales of American wheat in over 100 countries. Representing farm associations across the country, U.S. Wheat has consistently warned that the world market is not ready for GM varieties and that it would be an economic disaster for the American farmer and economy. In a speech this spring at the Grains Week conference in Melbourne, Alan Tracy, U.S. Wheat president, told Australian scientists and global commodity brokers that millers and bakers would not deal with GM wheat and stores would not put bread, noodles, or other wheat products containing GMOs on their shelves. Tracy even invoked wheat's special status as the traditional Staff of Life in the Bible: Wheat is mentioned in the Lord's Prayer. Other commodities are not.

Dawn Forsythe & Edward Esko

We arrive at the association's headquarters and are greeted warmly by Dawn Forsythe, U.S. Wheat's director of public affairs. A warm, ebullient woman, Dawn ushers us into the conference room, offers us tea, and gives us samples of wheat from around the country. On behalf of Amberwaves, we thank her for her organization's courageous position on the GM wheat issue and present her with a copy of the Save Wheat Petition.⁷ Fortunately, when we started the campaign, we included wheat along with rice in the text: I oppose the introduction of genetically modified rice, wheat, and other essential foods pending comprehensive studies of their effects on human health and the environment. Through my food choices, I will strive to keep America and the planet beautiful, healthy, and peaceful. While the main focus of our activities until now has been rice, as soon as the GM wheat issue assumed center stage, we printed new petitions highlighting wheat America's premier grain in the title. We also bring copies of the Open Letter on Keeping Our Daily Bread and Rice GM Free that have been signed by several hundred medical doctors, health care practitioners, scientists, chefs, and other professionals.

In a review of the global market, Dawn explains that America's major trade partners Egypt, Japan, and the European Union have all indicated they will not buy GM wheat. In fact, they have warned they will turn to other suppliers if GM varieties even come to market in the U.S. because of likely contamination. Spring Wheat Bakers, one of the few agricultural cooperatives that supports the development of transgenic varieties, announced this summer that it would assume up to a half million dollars in liability for contamination of future shipments of non-GMO wheat. But, as Dawn notes, a transport ship typically carries \$4 million or more of wheat, and if it were contaminated (like some American ships turned back by Japan for containing StarLink corn), it could put the cooperative out of business.

To protect against the threat of commingling, farmers around the country have proposed IP (Identity Preservation) systems to segregate GM and non-GMO varieties. (In California, rice farmers successfully lobbied for a statewide IP system that will go into effect in 2003 and make the introduction of GM rice even more unlikely.) The U.S. Department of Agriculture officially weighed in this summer in support of a voluntary IP system but, as Dawn explains, it would probably not be able to meet

tolerance levels set by the European Union. The EU currently allows crops to contain up to 1% foreign genetic material, but even this tiny amount (which is difficult for silos and distributors to achieve) is expected to be halved to 0.5%.

In such an event, Dawn goes on, the EU is apt to turn to Russia and the Ukraine, which offer cheaper wheat and better transportation. In recent years, India and Pakistan have also become net wheat export nations and may cut into America's 25% share of the global market. According to press reports, China has also backed away from GM wheat. As the major supplier of soy sauce to Europe, Beijing recognized that it would lose its primary overseas market if GM wheat were introduced in China. (Wheat is a major ingredient of soy sauce or shoyu.) We've told Monsanto not to commercialize GM wheat prior to customer acceptance, Dawn says emphatically. When millers, buyers, and bakers tell us that they will accept it, then is the time to consider bringing it to the marketplace.

On a drawing board at the front of the room, we note a large circular pie diagram with the comment Bush Plan Smaller Pie. Dawn explains that the current Administration has severely cut back the amount of wheat in the foreign aid program. Over the last generation, record amounts of wheat have been donated by the U.S. State Department to Egypt, India, and other developing countries. The international subsidies have been a major boon to American wheat farmers who receive millions of dollars a year from the U.S. government for these aid shipments. However, the amount of wheat in the program has recently been slashed in favor of corn. The switch sparked a controversy this summer when Zimbabwe, Mozambique, Zambia, and other African nations refused to accept the maize donated by the U.S. because it contained GMOs. The spectacle of the world's poorest region standing up on principle against the world's mightiest superpower catapulted the GM issue into a world crisis. The refusal was all the more remarkable because Southern Africa is suffering a severe drought and millions of people face starvation. American officials scoffed at the resistance to GM corn, noting that that it was same food that the American people eat daily. Yet as African leaders explained, the import of tainted corn would inevitably corrupt the native seed supply, as it has in Mexico, the historic cradle of maize. Beggars can't be choosers, an unnamed State Department official was quoted in the Washington Post, as the U.S. threatened to withhold food aid altogether. Eventually, a compromise was worked out whereby the donated corn would be milled before it was shipped to prevent planting of whole kernels. Still,

the damage to America's moral prestige was enormous as satellite television beamed images around the planet of thin, hungry Africans refusing to dine off the crumbs of the wealthiest, most overweight nation's table. Wheat farmers took some solace in increased shipments of wheat to war-torn Afghanistan.

After a round of pictures in front of a large sheaf of wheat, Dawn thanks us for the Save Wheat Petition. She says that she will take it to a summit meeting of wheat producers, food manufacturers, brokers, and the biotech industry in Oklahoma City the following week. Monsanto will be there, she notes, to win support for Roundup Ready wheat, and she wants to present the Amberwaves petition as a voice of the American consumer. We thank Dawn, whom we affectionately nickname Demeter after the Greek goddess of grain, for her hospitality and wish her well in Oklahoma.

3. A Security Breach

Tuesday Afternoon, July 23

They laid foundations for their cities, so that they were munitioned. Captured wild beasts were domesticated and eaten; thus, there was grievous rupture of the Yin and Yang, and the succession of the four seasons failed. Thunderbolts wrought havoc, and hailstones fell with violence. Noxious miasma and untimely hoarfrosts fell unceasingly, resulting in atrophy and the failure of nature to bear abundantly." Chinese text on the destruction of the ancient world

From downtown Washington, we take the Metro back to College Park, retrieve our car, and head out on the Beltway to Rockville, a northern suburb in Maryland and site of the Food and Drug Administration. The mercury has climbed over 100 degrees, and we stop at a convenience store for spring water and a small bag of pretzels. In Rockville, we soon arrive at a tall, red-brick, multistory office building set back from the street. A security guard at the gate checks for explosives underneath the car with a large round mirror (similar to those I first saw in Vietnam during the war) and directs us to a parking space for visitors. Inside, we walk through a metal detector and our personal effects, including another copy of the rice and wheat petition, are passed through a large X-ray machine. Signing in at the security desk, we are detained another 20 minutes while a computer crosschecks the data on our drivers licenses, and temporary clip-on IDs are prepared.

While we wait for our credentials, various employees come into the building, and each is subjected to the metal detector and his or her briefcase or purse X-rayed. Soon a delivery boy arrives, carrying six large, thin boxes stacked atop each other and from his cap and uniform we identify them as Domino pizzas. He catches the guard's eye, mentions several names, and the guard dutifully makes a call, letting the recipients know that their takeout order has arrived. Presently, two middle-aged women arrive with cash in hand. As we practice our diagnosis (noting heavy, overweight conditions and red, cheesy complexions), the delivery boy hands the boxes directly to the women bypassing the X-ray machine. We are amazed at this major security violation since terrorists could easily have abducted the delivery boy in the parking lot, donned his uniform, and placed plastic explosives in the boxes or laced the pizzas with anthrax. But then we smile, realizing that Great Nature in the form of wheat the main ingredient in pizza, however processed and refined once again has slipped past human ingenuity undetected.

The actual visit to the FDA's Docket Management Branch on the 10th floor, escorted by yet another employee, is anticlimatic. We present the petition, a formal request for the agency to deny approval of GM LibertyLink rice and end production of GM pharmaceutical rice, and other supporting material. A clerk explains that we have not followed proper procedures. With more bureaucratic forms in hand, we thank her and leave, promising to redraft our submission.

From Rockville, we proceed north to Frederick where Ed's brother, Jeffrey, lives and where we will be staying for the next couple nights. Famished from our excursions and the heat, we enjoy a leisurely pasta dinner at an Italian restaurant and pick up some watermelon and other snacks at a local natural foods store (where we are pleased to find the Amberwaves petition posted). Jeffrey, a former school principal and musician, enthralls us with his collection of Renaissance instruments, rubbings of knights in armor from ancient British tombstones, and eclectic collection of videos. We consider going to Ft. Dietrick, the notorious center for U.S. biological weapons research that is located in Frederick, or drive to Gettysburg, an hour to the north, but we have had enough activity for the day. As night falls, I retire to my room and curl up with a new book on Abraham Lincoln and drift off thinking of the need today to emancipate the slaves to fast food and other high-tech addictions.

4. A Genetic Clean Up

Wednesday a.m., July 24

The destiny of nations depends upon what they eat.
Brillat-Savarin, *The Physiology of Taste*, 1825

Following a light breakfast of brown rice porridge topped with fresh raspberries, miso soup, steamed greens, fresh sourdough bread, and bancha twig tea, we are on I-270 heading south to DC by 7:30 a.m. The traffic is already heavy, but as a high occupancy vehicle we take advantage of the fast lane and breeze past the congestion. From the Beltway, we take the GW Parkway along the Potomac, sailing through McClean, Va., home of the CIA, to the turn off to Arlington. By the Pentagon, which Ed and I briefly visited several years ago, we slow down to see the damage from the September 11th terrorist attack when a hijacked plane slammed into its facade. In Crystal City, a vast complex of high rises and underground malls, we pull off Jefferson Davis Highway, park, and make our way to the EPA's auxiliary Virginia offices.

Our appointment this morning is with the Office of Pesticide Programs. Among the 378 pesticides, herbicides, and fungicides up for approval by the Environmental Protection Agency this year is glufosinate-ammonium to be used with GM rice. It has been placed on the docket for registration in the third quarter (July through September), and we are here to present evidence why it should not be released.

Security in the lobby once again is very tight, and we are issued special badges. Taking the elevator to the second floor, we are surprised to find that the corridors are completely sealed off and to enter we have to dial a special telephone number by the locked doorway and be escorted to our destination. We are met by Joanne Miller, a trim woman with short hair who is coordinating the registration process for glufosinate-ammonium, the herbicide to be used with the new GM rice. Two years ago, Aventis CropScience, the biotech division of a large multinational headquartered in Europe, contracted with farmers in Texas to undertake commercial production of the new herbicide-resistant rice (to be marketed under the Orwellian brand name LibertyLink). Aventis was so confident of government approval that it grew 5 million pounds of the rice before the EPA signed off on the use of glufosinate. But before the EPA could issue its ruling (a foregone conclusion since the herbicide had already been approved

for GM corn, soybeans, cotton, and rapeseed canola), the StarLink corn disaster broke and exposed Aventis, StarLink's manufacturer, to billions of dollars in lawsuits by farmers, food manufacturers, and consumers. The end result was that Aventis decided to get out of the biotech business altogether. It buried the GM rice in a Texas landfill and sold the CropScience division to Bayer, the large German pharmaceutical. Now Bayer hopes to try again and put glufosinate back on the EPA's calendar for use with its LibertyLink rice, a long-grain variety that would be grown primarily in the South.

In a small, corner office, we give Joanne a presentation binder with the rice petition and an independent scientific analysis of LibertyLink rice that we have commissioned from Joe Cummins, a geneticist in Canada. Citing numerous scientific and medical studies, Dr. Cummins came to the conclusion that glufosinate kills everything green and that it is linked with birth defects, miscarriage, kidney disorders, and other serious ills. Its effect on weedy species will be no less disastrous, and LibertyLink rice has already been banned in Brazil for environmental reasons.

We also describe to Joanne how rice fields constitute the largest natural wildlife sanctuary in the country, supporting over 200 species of birds, mammals, reptiles, amphibians, and insects. We point out that in California, a biotech company is currently farming GM rice spliced with human proteins to produce drugs. The EPA requires only a 20-foot barrier between this open field trial and surrounding commercial rice farms. The EPA should be preparing an environmental impact statement on how GM rice will affect nature and wildlife, we suggest.

Joanne listens attentively to our presentation and notes that we are the only group to officially object to the use of glufosinate-resistant rice or submit any scientific evidence documenting its adverse effects. After leading us through the labyrinthine process by which chemicals are tested and new crops are approved, she asks our opinion of Golden Rice, the GM rice under development in Switzerland that is modified to contain higher amounts of beta-carotene and protect Asian children against blindness. We give her our book, *Saving Organic Rice*, with essays by scientists showing that this particular rice supplies only 4% of the RDA for beta-carotene. A child would need to eat about 18 pounds a day to get any benefit. Golden Rice is also designed to be milled into 100% white rice, so that the bran, germ, and outer layers containing natural carotenoids are eliminated. Instead of an artificially manufactured high-tech rice, we explain, poor children around

the world should be provided with whole grain rice and fresh vegetables that are naturally high in beta-carotene and other essential nutrients.

Joanne acknowledges that genetic engineering has caught the EPA by surprise, there are grey areas, and the agency doesn't always know how to proceed. We admire her honesty and suggest that the EPA develop an entirely new category of contamination genetic pollution. It would include a broad definition and thresholds of risk; guidelines for assessing the genetic impact of new GM seeds, crops, and foods on the biodiversity of species in different ecosystems; and procedures for carrying out a genetic clean up.? Joanne thanks us for our suggestions and promises that she will show the petition and supporting materials to the expert panel that will make the final decision on the herbicide-resistant rice.

Benjamin Franklin

5. Yoda Goes to Congress

Wednesday Afternoon, July 24

Swing low, sweet chariot, coming for to carry me home.
Traditional African-American Spiritual

From Arlington, we cross the Theodore Roosevelt Memorial Bridge and proceed along Constitution Avenue to Capitol Hill. Parking is virtually impossible, and we end up in a lot by the USDA on 7th Street and walk a mile back to the House Office Building. The golden statue atop the imposing white dome of the Capitol Building intrigues us as we approach. A park ranger explains that it is the Statue of Freedom and says he thinks it is based on an Indian princess. Security in the HOB, to our surprise, is minimal, and we arrive in time to get some lunch. Several ethnic cuisines are represented in the congressional food court as in upscale malls across the country. We select fried rice and vegetable lo mein from an Asian vendor; wheat tortillas, refried beans, and guacamole from the Mexican counter; and spring water and decaf from the beverage stand. The rice appears to be a brown long-grain or basmati variety, but it's hard to tell with the soy sauce mixed in. Overall, we give the House cafeteria high marks for its range of choices. For example, tofu is on the menu, but it is not available today. It is clearly superior to that of most schools and hospitals, which have yet to implement the latest revision of the Food Guide Pyramid that now features whole grains

as the foundation of a healthy daily diet.

At 1 p.m. we step off the elevator and enter the seventh floor office of Congressman Dennis Kucinich. Ed and I saw Dennis earlier this spring at the Taste of Health expo in New York City, and we are happy to see each other again. The former mayor of Cleveland and a five-term representative from Ohio, Dennis is the primary sponsor of legislation in Congress requiring mandatory labeling of gene-altered food. This spring he expanded the scope of proposed legislation to include product liability for adverse health reactions to consumers and to farmers whose crops are contaminated by GMOs.

Greeting us warmly, Dennis apologizes for having to attend a committee meeting and asks us to accompany him to a conference room in the adjacent building. The session lasts longer than he anticipates, and he asks an aide to give us a personal tour of the Capitol Building. Inside the Rotunda, we admire the eight oil paintings on the walls by artist John Trumbell depicting the settling of America. Overhead, just below the windows of the dome, there is a 360 degree frieze recounting the country's greatest achievements from the arrival of Columbus (who first brought wheat to the New World) to landing a man on the moon. There is still room at the end of the bas-relief to record future accomplishments. At the very top of the Rotunda, nearly 275 feet up, is Brumidi's breathtaking fresco of The Apotheosis of George Washington in which the revolutionary hero and first president is flanked by celestial figures representing the 13 colonies. The design combines elements of Leonardo's Last Supper and Michaelangelo's Sistine Chapel. To one side of the Rotunda, our guide points out a sculpture of Susan B. Anthony and two other pioneers of the women's suffragette movement. One quarter of the marble block has a rough, unhewn quality, and he explains that it is believed to symbolize the future first female president of the United States.

The site of the Capitol building was selected in 1791 by city planner and architect Pierre Charles l'Enfant as the geographic center of the Republic's new capital. Jefferson suggested the circular domed rotunda, and a series of other architects and builders saw to its construction. The center spot directly beneath the dome is where the flag draped coffins of Lincoln, Kennedy, and other slain presidents have lain in state. Standing on the spot, I feel a sudden stillness as the background noise and conversations of hundreds of tourists and Capitol employees in the Rotunda mysteriously vanish. A rush of energy from the perfectly aligned dome overhead follows, ultimately dispersing

through the eight large entrance ways in the cardinal directions. Like a medieval cathedral, Chinese pagoda, or Islamic mosque, the building's powerful Feng Shui elevates one's consciousness into a higher dimension. Ed compares the eight murals to the trigrams of the I Ching, and the charge of heaven and earth's force spiraling along the vertical axis radiates out like an enormous mandala.

From the Rotunda we proceed to the Statutory Hall with its forest of sculptures and busts (two per state), including one of Ceres, the ancient grain goddess, and come to a stairwell with a gigantic mural of the Constitutional Convention. Ben Franklin is sitting languidly in a front chair while the other delegates assume postures of fierce debate. He's looks just like Yoda, Ed exalts, referring to the elderly sage in the Star Wars saga. But who was Luke Skywalker? Washington or Jefferson??

Following a long, winding corridor, we eventually ascend to the visitors' gallery of the House of Representatives. The session is in recess while members vote, not in the old fashioned way with raised hands, but with an ATM-like card that is inserted into a computer terminal at the end of the aisles. Among the hundreds of representatives caucusing in small groups on the floor, we notice Dennis. He makes his way to one of the aisles, gives his voting card to a little girl (evidently the daughter of a House member) and instructs her to insert it on the green eye side of the terminal (as opposed to the red nay side). We are pleased to see so many women on the floor, 60 in the House at last count and 11 in the Senate.

Compared to the House, the Senate chambers are much more cloistered. We sense intuitively that its ornate design and elaborate furnishings match its reputation as an exclusive club insulated from the vox populi. Back in the House Office Building, Dennis formally accepts the rice and wheat petition on behalf of Congress and says that he will enter it into the Congressional Record and post it on his web site (www.house.gov/kucinich) We also present him with rice seeds from East and West and the Amberwaves Commemoration honoring enslaved African rice farmers in South Carolina (see story on p. 11). Excited by this project, Dennis says he will bring it to the attention of John Lewis, the civil rights pioneer who is a representative from Georgia and a leader of the congressional black caucus. Dennis graciously accompanies us outside for photos, and we take our leave. We planned to drive to Mount Vernon, Washington's plantation home, and leave a copy of the Amberwaves Commemoration. But the afternoon is growing

late, and we are tired from our whirlwind visit to the Capitol. Instead, we head back to Frederick and dine at an Indian restaurant, enjoying biryani, samosas, nan, and other delicacies made with rice or wheat.

After dinner we find a Wal-Mart's to develop our film. The ghosts of Union and Confederate dead from the Civil War battle sites and cemeteries ringing the capital city are almost palpable in the evening's heavy atmosphere. Over the last several weeks, the Carolina connection has completely revolutionized our understanding of American history. Last autumn, shortly after 9/11, I went to France and Italy to trace Thomas Jefferson's 1787 journey in search of rice seeds. Risking his own life since taking seeds out of Italy was a capital offense Jefferson smuggled out rice and sent it to South Carolina to revive the rice industry following its collapse after the Revolutionary War. Since the late 1600s, rice had been the main crop in South Carolina, the wealthiest of the thirteen colonies, and many of the first Africans brought to America as slaves were rice farmers from West Africa's Rice Coast. These highly skilled cultivators and artisans brought millennia-old wisdom and technology to the New World, and rice farming became the foundation of America's prosperity.

Like Jefferson, the other leaders of the Revolution were farmers or dietary reformers. Washington organized a boycott of tobacco after Britain raised taxes and convinced Virginian farmers to grow wheat instead. John Adams grew wheat, maize, and vegetables at Peacefields, his farm in Braintree, Massachusetts. Benjamin Franklin, who grew up on rice as a young vegetarian, arrived in Philadelphia carrying two loaves of bread and for many years published Poor Richard's Almanac extolling the virtues of moderate eating.

By the early 1800s, the invention of the cotton gin made cheap cotton available, and cotton supplanted rice as the mainstay of the Southern economy. The growing split between North and South on the slavery issue mirrored underlying patterns of dietary consumption. Wheat constituted the main staple in the North and contributes to increased physical activity, artistic insight, and an idealistic, visionary mind. Unlike most other grains, wheat is soft and delicate and threshes out of its husk by hand without the need for applying any pressure or force. Rice, the staple of the South, produces stability, unity, and perseverance. Its sturdy husk is among the hardest to remove, requiring intensive human labor or mechanical power.

The two main grains of humanity are complementary. However, the way that each crop was traditionally processed undermined these positive qualities. In baked form (such as the famous brown bread of the Puritans), wheat creates a strong analytic mentality and rigid, uncompromising view of life. Milled into flour, its life force is also diminished. In polished form, rice loses its depth and universality, leading to reduced vitality and a fragmentary mind. In processing the rice, moreover, much of the sorrow and tragedy of the enslaved African farmers and cooks directly entered the food in husking, milling, and cooking. Afterward, it was absorbed by the white masters and their families, contributing to more guilt, violence, and unhappiness.

With the spread of the railroad and other industrial advances, both North and South consumed increasing amounts of animal food. Balanced with sugar and alcohol, this led to an explosive situation. The Civil War began when South Carolina, center of the rice aristocracy, seceded from the Union and fired on Fort Sumter. From this larger biological perspective, Lincoln's emancipation of the enslaved African rice farmers and their descendents signifies a noble effort to right centuries of agricultural and dietary imbalance.

Regrettably, the Capitol, like the White House, Monticello, and many other magnificent landmarks, was built chiefly by slave labor. As Thoreau, Emerson, and other prophets have observed, the American dream—the vision of freedom and opportunity for all people—is rooted in the soil, in the hearth, and around the communal table. Let us hope that one day the unfinished Capitol frieze will celebrate complete racial equality and harmony. Our democracy, however imperfect, has survived as long as it has thanks in large part to the insight and understanding of its grain-growing architect founders.

6. The Statue of Freedom

Thursday, July 25 to Saturday, August 10

Contrary to the claims of a literal army of public relations flacks, indentured politicians, and scientists, the first wave of GM foods and crops has apparently suffered a fatal hemorrhage. Future historians will likely record Tuesday, July 30, 2002 as the beginning of the end, the day of irreversible decline for Monsanto and the Gene Giants. On that day, facing mounting global opposition from farmers, consumers, and even major US food trans-nationals such as General Mills, Monsanto was forced to announce that they

were backing off indefinitely from plans to commercialize herbicide-resistant Roundup wheat, the most important new billion-dollar crop in the biotech pipeline.?

Ronnie Cummins, Organic Consumer's Association

At Reagan Airport, I bid farewell to my companions and catch an early morning flight back to Hartford. Picking up my car at the airport, I get back home to Becket about 3:30 p.m., and go over the correspondence and messages that have come in over the last several days. At 6:00 p.m., Gale and I go to the Kushi Institute and attend the welcome dinner and orientation for Michio Kushi's new Level IV seminar. I give a report on the Washington trip and apologize that I must leave in the morning to teach at the Macrobiotic Summer Conference in Holland.

Later that evening on the Internet, I research the history of the Statue of Freedom atop the U.S. Capitol. Designed in the 1850s by Thomas Crawford, an American sculptor living in Rome, the identity of the female figure remains an enigma. Historians agree that she was based on Athena, Demeter, or Persephone the classical goddesses of wisdom, grain, and rebirth. But Jefferson Davis, U.S. Secretary of War at the time, objected that the original model bore a liberty cap, the symbol of freed slaves, and it was replaced with a native Indian crest featuring an eagle's head, feathers, and talons. Despite this setback the artistic equivalent of the Missouri Compromise the symbolic connection is clear. The goddess of liberty, grain, and peace is the spiritual guardian of the United States of America and its eternal dream of spacious skies, amber waves of grain, shining seas, and other pristine natural features.

In the morning, I set off for Boston with Gale, stop at my mother's in Brookline for a nourishing lunch of lentil soup, brown rice, corn, and fresh veggies, and get to Logan Airport for my flight to the Netherlands by mid-afternoon. In addition to lectures and counseling, I give several classes at the conference on the GMO situation and distribute rice seeds to people from a dozen countries, including France, Belgium, Poland, and Ukraine. There is a large group of Muslims, and I also give away seeds and petitions to new friends in Lebanon, Saudi Arabia, and Surinam. One of the highlights of the assembly is a spontaneous peace prayer and circle dance led by Arab and Israeli participants.

On August 8, I return to Boston and drive with Gale to the Kushi Institute

Summer Conference in suburban Wakefield. We've missed the first three days because of the scheduling conflict, but I am able to give a class on the GMO situation and talk informally with many participants. At dinner, Ben Stackler, a member of the Amberwaves action committee in California, gives me an article that came out while I was away. I am overjoyed to read in the New York Times that Monsanto abruptly delayed its plans to bring out GM wheat following the meeting with the U.S. Wheat Associates in Oklahoma City. Antonio Costato, CEO of Grandi Molini, the largest miller in Italy, told Monsanto that if GM wheat were commercialized, "The European milling industry will simply not buy one more kilo of any U.S. wheat at all. Ron Olson, the vice president of General Mills told Monsanto that consumers don't want Roundup Ready wheat in their Wheaties and Cheerios. He said bluntly that his corporation must protect brand integrity for their stockholders and promised that we will not do anything to erode consumer confidence."

I am both proud and humbled to realize that our tiny grassroots effort helped contribute to this great victory. From one grain, ten thousand grains. Monsanto's retreat is already being likened to the battle of Gettysburg by organic activists and the environmental community. After the meeting in Oklahoma, Monsanto announced that it was going back to the genetic drawing board to redesign wheat to make it look and taste better. As Ronnie Cummins, head of Organic Consumers Association, concluded, Frankenstein is dead. But the coffin lid still rattles. Stay tuned.

On the way back to Becket that weekend, we stop for dinner at Masao's Kitchen, a macrobiotic restaurant in Waltham. Masao Miyaji, the chef, is an old friend and supporter of Amberwaves. We catch up and enjoy a delicious dinner, including brown rice, fried udon (a whole wheat noodle dish), chickpeas, hiziki, seitan (a whole wheat product), whole wheat bread, and watermelon.

On the way home, I express my gratitude to rice, wheat, and the other strengthening whole grains that nourish us day to day. The campaign is far from over, but for the moment America is still free of GM rice and wheat. I offer a silent prayer of thanks to Demeter the ancient grain goddess and spirit guardian of the nation who fashioned an improbable coalition of farmers, food company executives, consumer activists, and macrobiotic friends to preserve amber waves for future generations.

Alex Jack, president of Amberwaves, lives in western Massachusetts. He is the co-author with Michio Kushi of *The Macrobiotic Path to Total Wellness: Preventing and Relieving 200 Chronic Diseases and Disorders Naturally* to be published by Ballantine next year.

© *Amberwaves, 2002*