EIR Feature

Bio-Foolery Is Causing 'Food Shocks'

by Marcia Merry Baker and Christine Craig

It shouldn't take a specialist to realize that the current fad of "biofuels" is a scientific fraud, roughly equivalent to Jonathan Swift's depiction of scientists trying to produce light from excrement. Sure, it's a scientific challenge—but it's absolutely insane. The reality is that humanity's demand for clean and plentiful energy can only be met by an advance into the nuclear realm of fission and fusion power. As we reveal below, the "biofuel" alternative is not only a rip-off, but also it will never solve the energy crisis, and will starve people in the meantime.

The impact of biofuels mania on the food chain, is now hitting as *food shocks* at points all along world supply lines. This results from interaction with pre-existing crises of low grain stocks, marginalized agriculture, monoculture cropping, speculation, and the many other features of globalization.

The most dramatic effects so far relate to corn (maize), the grain for which the United States has typically accounted for over 40% of the world's annual production, and 70% of annual exports. But in 2006, fully 20% of the entire U.S. corn harvest went into ethanol distilleries, creating an automatic squeeze on exports, current and near future, and domestic uses as well (**Figure 1**).

Mexico, forced by the North American Free Trade Agreement (NAFTA) to be a corn-importer, is in a corn-for-tortillas crisis. U.S. livestock producers are being hit by sky-high corn-for-feed prices, and family-scale operations are threatened with shutdown. Unless stopped, this food-for-fuels dynamic—based on a *scientific fraud* of net energy gains from bio-mass—will guarantee outright famine.

Who will starve? "In the long run, it means that we are fueling our cars with food that people might have eaten. There are important trade-offs," was the warning from the Director of Public Resources, Lisa Kuennen-Asfaw, for the Catholic Relief Services, who put out an alarm in mid-January, that the agency is being forced to drastically cut its international food aid for the coming year. One SUV's 25-gallon tank of ethanol consumes enough grain to feed one person for a year, is the calculation of the trade-off, by Lester Brown of the Earth Policy Institute. (See box, p.9.)

General Motors/Steve Fecht

California Gov. Arnold Schwarzenegger, major booster for biofuels, talks with General Motors VP for Environment and Energy, Beth Lowery, about the Chevrolet Tahoe, which can use 85% ethanol (known as E85-capable). November 26, 2006.

This crisis is not the result of a natural disaster or mistake. A deliberate, top-down drive has been conducted by select financial circles—under both "right and left" guises—to push so-called renewable, alternative fuels, with intent to benefit from the financial bubble, to undermine national food security, and take advantage of the chaos. "Energy security" is the slogan, and the figurehead is R. James Woolsey, former CIA director. The networks include Chevron, British Petroleum, Archer Daniels Midland, Cargill, Morgan Stanley, and a host of other major transnationals. Among the leading figures are George Shultz and Arnold Schwarzenegger, as well as Al Gore.

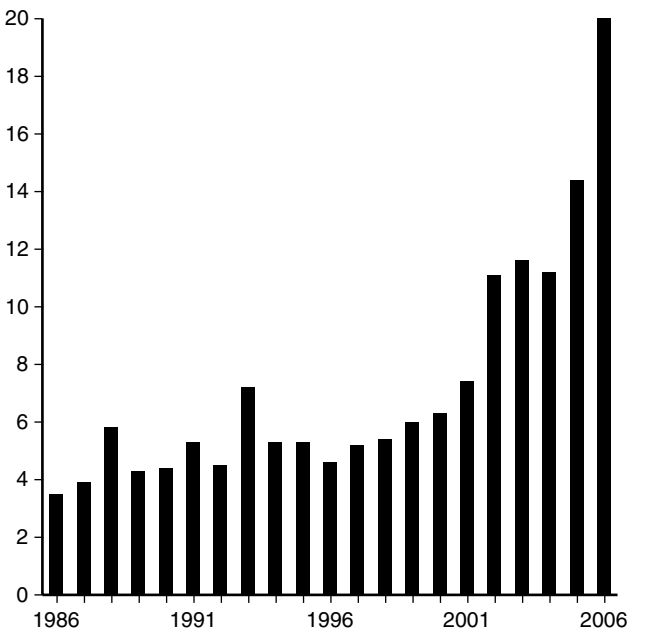
"Food shock"—*as a policy*—cannot be separated from the panicked manipulations of the Anglo-Dutch financial groupings that are steering a course for global banking and food control, through extreme deregulation and intervention.

Fools Rush In

The worst danger of all is the mad rush by leading government and institutional bodies, to get in on the action. "Biofuels will be the engine of the next farm bill," was the statement Jan. 10 by Sen. Tom Harkin (D-Iowa), chairman of the Senate Agriculture, Forestry and Nutrition Committee, in concluding his marathon hearing on "Rural America's Role in Enhancing National Energy Security." Food shortage dangers from fuel-vs.-food trade-offs barely received a mention during four hours of "expert" testimony. Instead, the glories of cellulosic ethanol were extolled—switchgrass, fescue, pine trees—as the great Green Hope of the future, to supercede using corn.

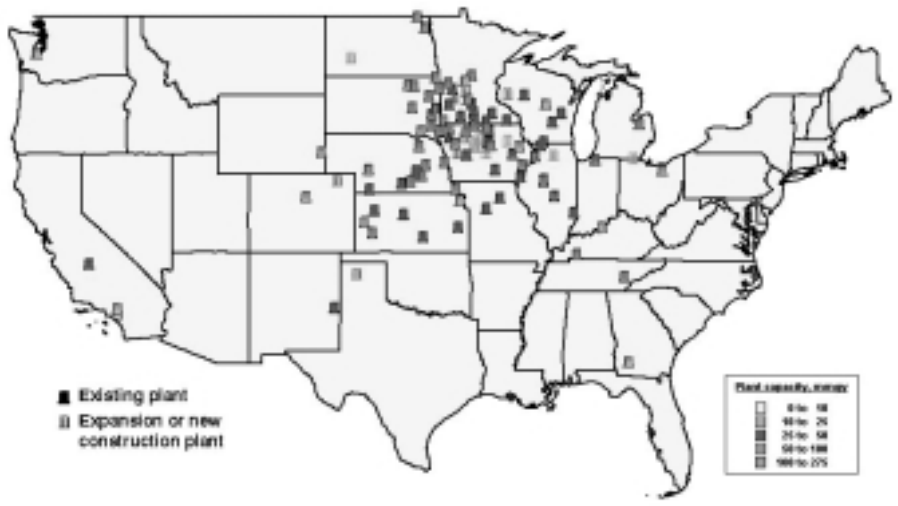
FIGURE 1

Share of U.S. Corn Harvest Used for Ethanol Is Soaring, 1986-2006; Now Over 20%



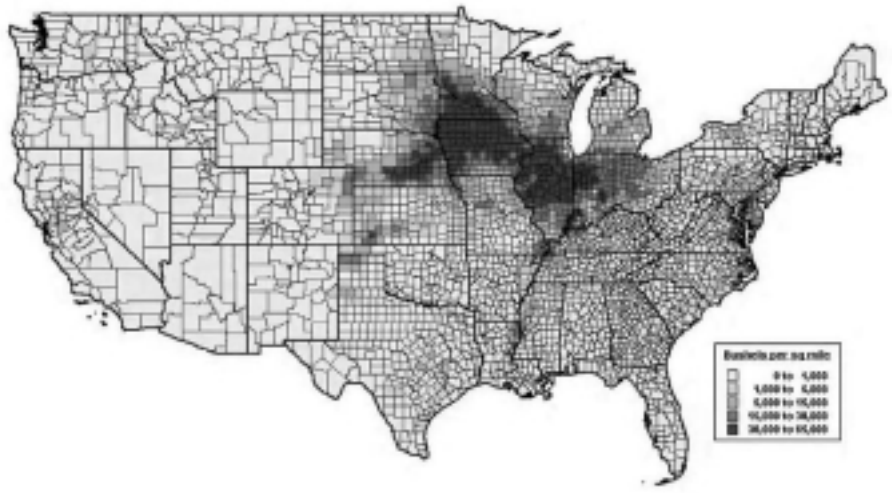
Source: U.S. Department of Agriculture.

FIGURE 2
U.S. Ethanol Biorefinery Locations



Source: Renewable Fuels Association, June 2006.

FIGURE 3
Geographic Distribution of Annual U.S. Corn Production
(10.6 Billion Bushels; Average Over 2000-04, in Bushels per Square Mile, by County)



Sources: USDA National Agriculture Statistics Service; Kansas State University.

In reality, the next five-year farm bill, due for passage this year, should be crafted as part of the solution, not as more of the problem. But Harkin's home state, the world's leading corn producer, has become the world's epicenter for ethanol and switchgrass madness.

On Feb. 1, the Senate Energy and Natural Resources Committee will join in the frenzy, with a "Biofuels Transportation Conference," sponsored by the two Committee leaders from New Mexico, Jeff Bingaman (D), chairman, and Pete Domenici (R), ranking minority member.

In 2000, about 6% of U.S corn production went into ethanol. In 2005, about 14% of the corn crop was so used. This past year, 20% was converted into motor ethanol; and next year it could be 30%. In volume terms in 2006, the amount of corn going into ethanol was the same as the United States typically exports annually. Now, either that corn export flow is eliminated, or use of corn for domestic livestock feed is shorted, or some other trade-off occurs, if corn-for-ethanol becomes king. Something has to give. Corn is milled and processed into a wide range of foods, from table sugar, to beverage sweeteners, oils, vitamin C, and many other by-products, besides animal feeds.

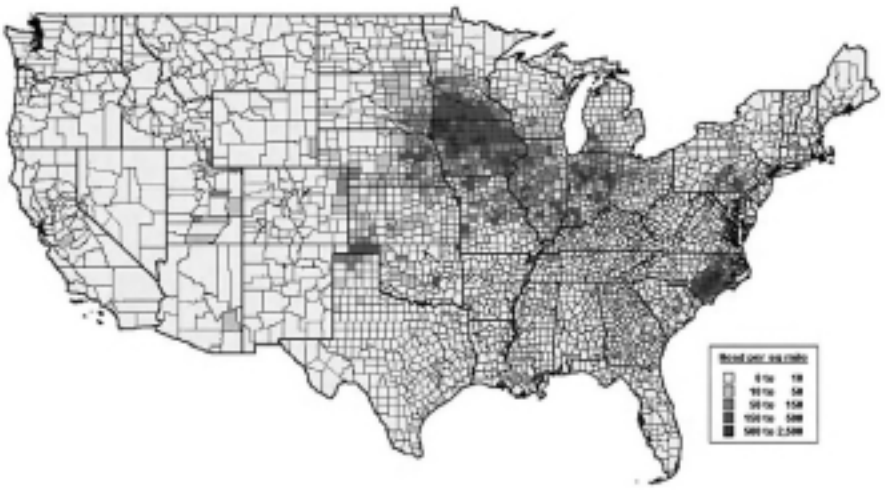
In 2006, U.S. corn went as feedstock into some 110 operating ethanol distilleries, in 20 states; an additional 73 facilities are now being planned, or under construction (see **Figure 2**). Iowa and neighboring Minnesota, Nebraska, and Illinois are home to the leading corn counties of the nation, indicated in terms of density of bushels of corn produced per square mile (see **Figure 3**). But new projects are talked about for many of the outlying states. Five are actively proposed right now for Pennsylvania. At the present rate of ethanol expansion, half the entire U.S. corn crop could be siphoned off into ethanol during 2008!

Iowa State University economist Robert Wisner calculates that if all the present and planned bio-refineries in his state come on line, 2.7 billion bushels of corn will be needed for ethanol in-state, when Iowa harvests "only" 2.2 billion bushels in a good year—the lead corn state in the nation. Then what? Will hog feed be imported into Iowa, or the animals eliminated? **Figure 4** shows the current concentration of hogs in the corn belt.

FIGURE 4

Geographic Distribution of U.S. Hog Inventory

(53.5 Million; Average over 2000-04, in Head per Square Mile, by County)



Sources: USDA National Agriculture Statistics Service; Kansas State University.

Bio-foolery is leading to extreme shifts in land use and agriculture practices, amounting to chaos. However, U.S. Department of Agriculture (USDA) Chief Economist Keith Collins has testified to Congress in "value free" terms about these implications. On Sept. 6, 2006, at a Senate Agriculture Committee hearing on the "Renewable Fuel Standards Program," Collins said, "If exports and feed use are to be maintained, corn acreage would have to rise to about 90 million acres in 2010 . . . nearly 10 million more than the average planted during 2005 and 2006." Collins' estimate to the Senate on Jan. 10, was that U.S. corn acreage in 2007 is expected to be 82 million, up from 78.6 million in 2006.

Collins proposes that farmers could start corn-growing on land now in the Conservation Reserve Program, which originated in the 1970s, supposedly to protect the environment (by not growing row crops). A USDA study looks to 4.3 to 7.2 million acres available that way for corn or soybeans. The trend line is for almost one-third of the U.S. cropland base to go into corn, at the very least.

On Jan. 10, the Senate Agriculture Committee heard testimony on how corn can start displacing other crops, and gain new acreage, because new bio-tech corn seeds can be developed that are more drought- and cold-resistant. So corn planting can move northward and westward out of Iowa, displacing wheat. Farmers will cease rotating crops, and grow "corn-on-corn" every season. Already a "corn rush" is on. This past Fall, Cargill offered a special deal to corn growers: any farmer who would contract in advance to sell Cargill his corn crop, would receive a free grain storage bin, which the farmer could erect on his farm (at his own expense).

What's the payback of all this frenzy in terms of "domestic" biofuel? The 5 billion gallons of ethanol produced in 2006 amount to 3% of U.S. gasoline consumption.

But a vastly bigger vision is seen by the Department of Energy. DOE Assistant Secretary Alexander Karsner, of the Office of Energy Efficiency and Renewable Energy, is plugging the "Billion-Ton Study," done by the USDA and DOE in 2005, which, Karsner told the Senate on Sept. 6, 2006, "indicates that there are enough agricultural and forestland resources in the U.S. to sustainably produce up to 1.3 billion tons of biomass feedstocks by 2030. This would be enough feedstock to potentially produce at least 60 billion gallons of ethanol." This would be roughly 30% of yearly motor gasoline used. Hence, it's called the "30 by 30" program.

Karsner gives a wild-eyed vision of the new American agricultural landscape, where formers and foresters everywhere are producing "dedicated energy crops. . . . Different regions could potentially support different feedstock crops—for example, switchgrass in the South Central region and willow in the Northeast."

International Biofuel Bubble

On a lesser scale, the same bio-fool process is under way on other continents with ethanol and biodiesel, and even with "blends" of edible oils and fats of all kinds, going into petroleum products at existing oil refineries. DuPont and Chevron are now at work on bio-butanol. World food trade logistics—port storage, handling, and shipping—are now pressed into service to meet the sudden demands to transport agriculture commodities for new, non-food use.

Asia:

In China, PetroChina, a unit of China National Petroleum Corp., is currently producing ethanol from corn, and plans to produce 200,000 tons of biodiesel a year by 2010. However, in December, Beijing reportedly stopped approving new corn-based ethanol plants, while continuing to pursue plans for offshore deals. In mid-January, Chinese Prime Minister Wen Jiabao was expected to sign bilateral agreements to participate in ethanol plants in the Philippines. The Association of South East Asian Nations (ASEAN) has agreed to adopt common standards on biofuels, in the spirit of furthering alternatives to fossil fuel imports. China is also committed to non-food biofuels. On Jan. 11 PetroChina announced intentions to pro-

EIR/Andrew Spannaus

An ethanol plant under expansion in South Dakota in 2006, one of 14 in the state, despite scarce water supplies for crops and processing.

duce 2 million metric tons of ethanol a year from non-grains, by 2010. A deal was signed in January with the State Forestry Administration, to work on joint wood-energy projects in Yunnan and Sichuan.

In Malaysia, palm oil is being channelled into biodiesel, bound for European markets. For example, in 2006, a contract was announced in which Cargill Palm Products Sdn Bhd will supply crude palm oil, as the primary feedstock for a new biodiesel plant, designed for a 100,000-ton annual capacity. The facility is part of Mission Biofuels Ltd., listed on the Australian stock exchange. Austria-based commodity trader Godiver Handelsgesellschaft GmbH will market the product in Germany. This typifies the rush into bio-oils in Southeast Asia.

Europe:

In Spain, some 60 ethanol and biodiesel plants are either operating or planned, making this country a leading producer. Spanish production of biodiesel—the most common biofuel in Europe, was 125,000 metric tons in 2006, up from 73,000 in 2005, and the current projection is for 600,000 tons in 2008. The bio-feedstock is imported soy or palm oil; other countries are using rapeseed. Spanish ethanol is from wheat or barley.

In France, Cargill has strategically located biodiesel facilities next to its rapeseed crushing operations in Montoir, in western France, and elsewhere.

In Germany, Cargill has a new biodiesel plant in the Hoechst Industrial Park near Frankfurt, intended to process rapeseed oil and other vegetable oil feedstocks. A new trading venue for rapeseed oil options contracts is starting up Jan. 22 by Euronext, to serve all the activity in biofuels in Europe.

In Britain, Cargill has a 25% holding in Greenergy Biofuels, Ltd., otherwise owned by Greenergy Fuels—the leading bio-energy group. Among the Cargill/Greenergy Biofuels projects, is a Liverpool biodiesel plant, next to Cargill's existing crushing mill on the Mersey River, using imported oilseeds. Cargill's February 2006 press release proclaimed its plans: "With biodiesel plants on the east coast Humber estuary and West Coast Mersey estuary, Greenergy will have a presence in two of the most important oil refining regions in the U.K. . . . [with] unmatched access not only to the raw materials for production but also to the fuel supply chain."

This sweeping trend of private, global biofuels control was furthered by a wave of national laws over the last two years, mandating timetables and standards for what percentage of vehicular fuel had to come from bio-sources by what date.

In the United States, the 2005 "EPAct"—the Energy Policy Act of 2005—decreed what are called the annual Renewable Fuel Standards (RFS), on the volume and make-up of biofuel that must be blended into gasoline. EPA Acting Assistant Administrator William Wehrum told the Senate in September 2006: "The renewable volume [to be blended into gasoline] begins at 4 billion gallons in 2006, and increases to 4.7 billion gallons in 2007, 5.4 billion gallons in 2008, and continues to scale up to 7.5 billion gallons in 2012. EPAct requires that EPA annually establish the percentage requirement, which will apply individually to refiners, blenders, and importers to ensure the total volume of reneable fuels specified for that year in EPAct is achieved." On Sept. 7, 2006,

Ford Motor Company

Rep. Jerry Moran (R-Kans.) in a Ford E85 pick-up truck, in support of bipartisan Federal legislation to further bio-fuels, May 17, 2006.

Warnings: Bio-Foolery Will Prompt Food, Farm Crises

Poverty: "Biofuels Boom Pinches the World's Poorest; Ethanol Means Money for Farmers, But Hunger for Many Poor People," reports a Jan. 14, 2007 Gannett News Service article. Its point is that the price of corn and other crops is soaring because of the demand for grain to make ethanol, and that means a government's budget won't buy as much food as it used to. The price of corn alone, a key food in Africa, has more than doubled in the past year.

Food Relief Cut: "In the long run, it means that we are fueling our cars with food that people might have eaten. There are important trade-offs," said Lisa Kuennen-Asfaw, director of public resources for Catholic Relief Services in Baltimore, in the same Gannett News Service article.

Low Grain Stocks: "[T]he soaring demand for corn comes when world grain production has fallen below consumption in six of the last seven years, dropping grain stocks to their lowest level in 34 years. . . . The grain it takes to fill a 25-gallon tank with ethanol just once will feed one person for a whole year. Converting the entire U.S. grain harvest to ethanol would satisfy only 16% of U.S. auto fuel needs," reports Lester Brown, in his Jan. 15 article, "Distillery Demand for Grain to Fuel Cars Vastly Understated." Brown is at the Earth Policy Institute, which specializes in data on the scale of the impact on agriculture,

"The competition for grain between the world's 800 million motorists who want to maintain their mobility, and its 2 billion poorest people who are simply trying to survive, is emerging as an epic issue. Soaring food prices could lead to urban food riots in scores of lower-income countries that rely on grain imports, such as Indonesia, Egypt, Algeria, Nigeria, and Mexico. . . ."

Biodiesel Trade-offs with Food: "If we took all of the vegetable oil produced in the world, it would only produce 54% of the total U.S. annual demand for diesel fuel," commented John Baize, an oilseeds consultant at the Prairie Grains Conference, which was reported on Jan. 5, 2007 in the *Farm and Ranch Guide,* of North Dakota. "One of the questions we are soon going to have to deal with is, will a guy in Germany be able to fill up his tank with biodiesel or is a father in India going to be able to buy vegetable oil so his family can eat?"

EPA issued its new rules for 2007, which introduced a new feature: a "marketplace" for buying and selling under- and over-used allotments among the entities involved in meeting the RFS.

To re-emphasize: The 2006 U.S. output of nearly 5 billion gallons of ethanol, exceeding the RFS, amounts to barely 3% of the gasoline used nationally, but that's not the point of bio-bubblenomics. Size doesn't matter. What matters, in Wall Street lingo, is that the laws are necessary to guarantee the climate for "market reliability" and "investor security"—meaning that biofuels could become a safe bet for speculators and the cartel players in the game.

Such national mandates have been enacted around the globe. For example, in September 2005, France set quota allocations for selected biofuels operations, to implement a government mandate for having 5.75% of fuel come from biofuels in 2008; 7% by 2010, and 10% in 2015.

Behind 'Big Ethanol'

Thus, a huge biofuels financial bubble is now aloft, with hedge funds, equity partnerships and banks involved, as well as the long-time ADM, Cargill, Monsanto, and DuPont agro-cartel giants, plus a few local farmer-owned ventures. Morgan Stanley owns the second biggest private ethanol company in the world, Aventine Renewable Energy Holdings, LLC. U.S. state budgets have been throwing scarce revenues into the biofuels mania.

Who was behind the national law mandates and "popular opinion" manipulation to get to this point? The very same financial interests behind what's known as Big Oil and the Merchants of Grain, to begin with—from Chevron Oil and BP, to ADM and Cargill. First, look at a short list of the active "names," and then, a brief history.

One recent event makes the point. On Oct. 10-12, 2006, in St. Louis, Missouri, a national biofuels "summit" was jointly hosted by the Departments of Energy and Agriculture, under the title "Advancing Renewable Energy." This government event was officially financially sponsored by the very crowd raking it in off Federal subsidies, and government biofuels mandates: Chevron, Monsanto, Goldman Sachs, and others. President Bush appeared to make a pitch for "making sure we diversify away from oil." An additional featured speaker was James Woolsey, who has been tasked by behind-the-scenes financial interests to peddle the line that biofuels are essential for energy security.

Next, look at the upcoming Agriculture Department 2007 Agricultural Outlook Forum (March 1-2, Arlington, Virginia), an annual event held for over 80 years. The plenary panel is titled "Renewable Energy—Inroads to Agriculture." Speakers will include Patricia Woertz, currently president and CEO of Archer Daniels Midland, who joined the firm in May 2006, after being a Chevron Oil vice president in charge of refining, marketing, and trading oil. Other scheduled speakers are Warren R. Staley, chairman and CEO of Cargill. Mod-

EIRNS/Finn Hakansson

A Wall Street event on June 14, 2006, promoting the initial public offering of an ethanol company, VeraSun Energy Corp., with ethanol plants in Iowa, South Dakota, and Minnesota.

erating the panel will be *Wall Street Journal* reporter Scott Kilman.

On the history of the principal players in the Great Biofuels Game, it should be understood that before there was Halliburton or Enron, there were the agro-cartels seeking to control agriculture commodities of food, livestock feed, and fiber. The short list includes ADM, Cargill, Bunge, Louis Dreyfus, and a few others. Their pedigree traces back to the private financial networks, self-named during the early 20th Century as the "Synarchists," which among other things, referred to the fascist economic practices they backed in Europe in the 1920s-1940s rise of Hitler and Mussolini.

In particular, ADM and Cargill have all along been making a bundle off the the U.S. biofuels hoax, and now they are key parts of the global biofuels bubble. ADM and Cargill dominate all U.S. corn processing—for oils, feed, sweetener, and by-products. Today, the two companies own over one-third of the current U.S. ethanol capacity. They also dominate U.S. soy processing for potential feedstock to biodiesel. Over 71% of U.S. soybean crushing is owned by ADM, Cargill, and Bunge, in that order. Cargill and ADM also have a lock on seed supplies for soy and corn, through their partnerships with Monsanto, and DuPont/Pioneer Hi-Bred. This came about, as traditional U.S. patent law was changed over the past 30 years, to permit the granting of sweeping patent rights to private interests, for techniques of bio-genetic engineering of food plantlife.

ADM and Cargill each have outstanding records of criminal charges and plea-bargining, for their illegal food industry practices. ADM, a public company based in Illinois, founded in the mid-20th Century by Dwayne Andreas, a former Cargill employee, overcharged the Food for Peace program in the 1970s, pled no contest to short-weighting and mis-grading U.S. grain relief grain shipments, and in 1996 agreed to pay multimillion-dollar fines for criminal price-fixing of corn by-products. Top ADM official Michael Andreas, son of the founder, did jail time in 1999. His cousin, G. Allen Andreas, took his place in line to become head of the firm. ADM today operates in 180 countries, commanding the world's largest capacity for processing corn, soybeans, and wheat.

Cargill, the world's biggest wholly private company, is headquartered in Minnesota, and functions in 59 countries, with a workforce of 124,000. Its history extends farther back than ADM, but its practices are the same. For example, in 2004, under CEO Warren Staley, Cargill agreed to a $24 million settlement of charges against it by 18 plaintiff food firms, from a 1995 conspiracy with ADM, to fix corn sweetener prices. The same Staley was appointed by Bush in 2003, to the President's Export Council, to represent the food industry; and Staley is listed as a featured speaker at the 2007 Annual Outlook Conference of the USDA.

A detailed account of the facts of these companies has been most recently published by *EIR* (June 2, 2006), and is in mass circulation in the LaRouche PAC White Paper " 'Ethanol Madness'—End the Great 2006 Biofuels Swindle" (June 2006), in a dossier called "ADM, Cargill—The Enron and Halliburton of the Ethanol Swindle," including a timeline from 1945 to 2006 of their record of global corruption.

As of the 1960s, ADM and Cargill were in on the ground floor of U.S. ethanol production, with small operations in the farm states. Then, over the 1970s, numbers of Federal acts

were passed to subsidize ethanol producers, in the name of "energy independence." In particular, a 51¢ per gallon Federal tax break was given for use of ethanol blends in gas, which remains in effect today.

A line-up of right-wing and left-wing personalities and arguments was activated to justify "alternative" and "renewable" bio-mass energies, all the while that the national nuclear power program was being thwarted by the same operation.

A leader of the pack was Albert Wohlstetter of the RAND Corp., who from the 1950s, to his death, fought to keep civilian nuclear power from spreading. With him on the right were such figures as Paul Wolfowitz and Richard Perle; and on the left, Barry Commoner and Ralph Nader. Today, the fake "right and left" are epitomized by George Shultz and Al Gore.

James Woolsey is just the latest in the continuation of the operation. In 2005, he signed on to a 129-page energy program, from a newly formed, right/left Energy Future Coalition, which calls for energy from all kinds of biomass, including corn stalks and sawdust. This gang helped ram through the Energy Act of 2005.

Behind all this programmatic bio-energy claptrap for the gullible, *the intent of private financial and commodity cartels to impose private food control,* over and above the interests of nations, is to be seen in the blatant assault on the farmer-related institutions of the Wheat Boards in Canada and Australia, by none other than ADM and Cargill and cohorts. There is no camouflaged rhetoric about energy involved, but just an all out grab for private control. Nation-states and food supplies are directly at stake. The dossiers on this are provided in this *Feature.*

Farmers Go for the Green

Why does the farmer—who knows better—go for the biofools hoax? Money; plus pessimism and cynicism. At present about 50 out of the 110 operating ethanol plants across the United States are owned in part or whole by farmers, commonly as cooperatives. For over 40 years, the U.S. farmer has been stiffed, by receiving prices for his output that were under his costs of production—for commodities ranging from eggs, to meat, milk and crops. He remained in operation only by off-farm income and various Federal supports, and/or, by converting his farm operation into a "mini" mega-farm—in effect, falling into vertical integration with the cartel system.

But as the rounds of increasing free trade came into effect—1986 GATT, 1992 (signed) NAFTA, and 1995 WTO—it has become harder and harder for family-scale farming to persist in any form at all. (Before the 1960s, the FDR-era policy of parity pricing was in effect, where the farmer received prices that covered his costs of production, as a safeguard for guaranteeing the public a secure, domestic food supply.) Now almost total "global sourcing" for food has been imposed. Huge factory farm operations and neo-plantations are gaining ground in the United States, similar to the neo-colonialization projects in Third World nations. Family-scale operations are driven under.

USDA Agricultural Research Service

The Voyager Ethanol Llc plant, in Emmitsburg, Iowa. Note the rail cars, as well as roadways. Ethanol cannot be conveyed by pipeline. This is one of 50 plants in Iowa, either operating or under construction.

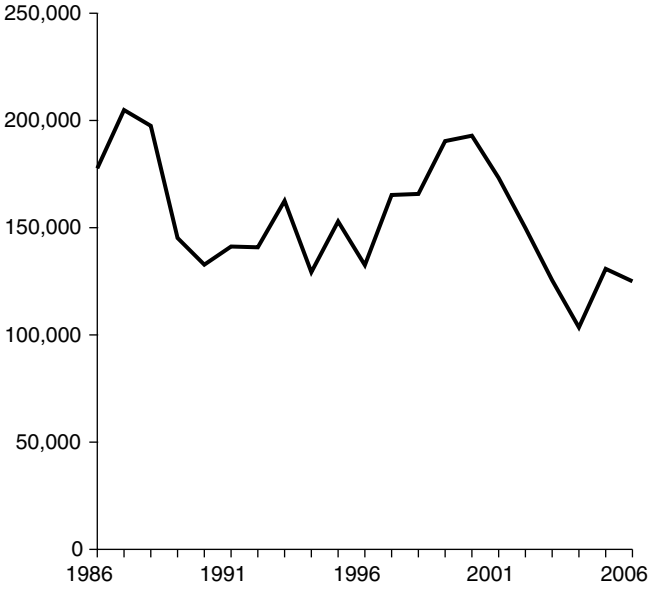
Therefore, when the government-sanctioned ethanol swindle came along, hundreds of farmers jumped in on it as investors, as the only game in town. "If Washington had backed nuclear, and backed prices for farmers, we never would have touched this," said one farm leader, who organized a cooperative ethanol distillery, presently making multi-millions. "But," he added, "Washington is hopeless, so we're just going to make all the money we can, while we can. . . ."

Dozens of these farmer-owned cooperative ethanol projects are now in jeopardy, from the simple math that when corn prices climb high enough, there won't be a profit in ethanol. Farmers have sunk their family money in deals at a time when corn was in the $2 range; it is now above $4 and climbing.

On Jan. 12 and Jan. 16, two consecutive business days on the Chicago Board of Trade, the corn futures price jumped up 20¢—its daily trading limit—following the Jan. 12 release of the Agriculture Department's "Supply and Demand" monthly grain report, showing lower than expected corn inventories. While such trading mania somewhat reflects "supply and demand," it also stems from wild speculation, and even rigging—an infamous practice on the commodities exchange. The same financial interests that contrived the biofuels stampede to begin with, can pull the plug on farmer-distilleries, by having corn prices skyrocket. And/or, they can have the price of oil and gasoline plummet, and sock farmers on the other side of the profit equation.

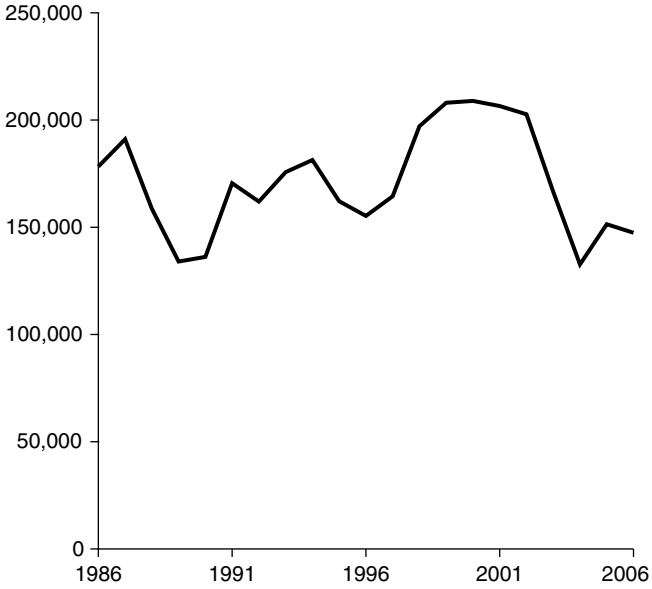
Farm state officials, worried that their farmer ethanol operations are in already trouble, are now appealing for "countercyclical Federal corn supports" to farmer-ethanol producers, for when corn prices rise, ethanol prices fall. The

FIGURE 5
World's Ending Stocks of Corn, 1986-2006
(Millions of Metric Tons)



Source: UN Food and Agriculture Organization

FIGURE 6
World's Ending Stocks of Wheat, 1986-2006
(Millions of Metric Tons)



Source: UN Food and Agriculture Organization.

November 2006 *Successful Farming* magazine, in its "Biopower" feature issue, runs a formula from Purdue University economist Wally Tyner, on how to protect farmers' "biorefineries from expensive corn, cheap ethanol, or both."

Farmers well recall the rigged corn price in 1996. That was the year of the infamous radical "Freedom To Farm/ Starve Act," which was premised on the neo-con line that farmers will benefit from a totally "free" market, and therefore over seven years all government subsidies would be phased out. Mysteriously, corn growers saw corn prices shoot up over $4 a bushel, from under $1.90, as if to prove all would be rosy. Within months of its signing, corn prices again fell back to under $2. After five years of chaos, the law itself was replaced in 2002; and now a new five-year law is due.

Two caveats for the non-farmer: The high corn prices going to the farmer right now, welcome to some crop producers, are not at all reflective of a Federal policy intervention to restore decent price levels to all farm commodities (crops, dairy, meat, fiber), and trust-bust the cartel food control, but rather, an aspect of the "chaos and confusion" of the biofools stampede.

Secondly, the argument that mass ethanol won't cause bad food trade-offs because the by-product called "distillers grain"—dry or wet—can be fed to livestock, has a only a grain of truth. Yes, the animals will eat it, but the energy value is sapped because of the distillation of the sugars and starch. For those abroad, distillers' grains are irrelevant. Cancellation of their U.S. corn imports or food aid means hunger and starvation.

Low Grain Stocks, High Disease Threats

Figures 5, 6 and 7 show the low levels of annual worldwide ending stocks of corn, wheat, and rice, indicating the danger inherent in diverting any food and farm capacity into non-food purposes. Grain ending stocks—also called reserves or carryover—have been declining in recent years, in absolute tonnage levels, and even more extremely, in per-capita terms, to below minimal food security levels. World grain consumption has exceeded grain production in six out of the last seven years, forcing a draw-down of reserves.

Total world grain stocks (corn and all coarse grains, wheat and other small grains, and rice) in 2004 were 408 million metric tons, and fell 23% to an estimated 318 mmt by 2006. Stocks at this level, relative to the level of annual utilization (for any and all purposes—food, feed, energy) of 2,045.44 mmt in 2006, are at a stocks-to-use ratio of 15%, which is below the minimal food security level set by the United Nations of a 17% ratio. Plus, to improve diets in large parts of the world, especially sub-Saharan Africa, far more grains and other foods are required.

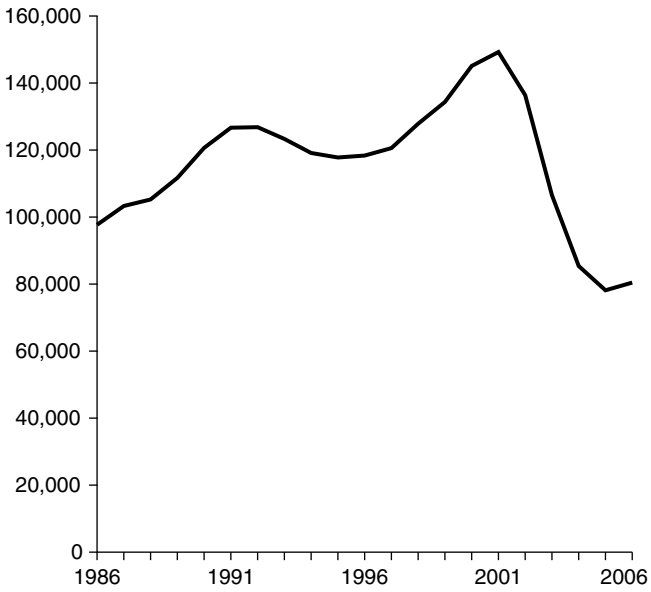
The level of 124,991 mmt of world corn ending stocks in 2006 is about a 12% stocks-to-use ratio. Wheat and rice 2006 ending stocks, shown in Figures 6 and 7, are, respectively, 19 and 18% of 2006 utilization of those grains.

Even without the escalating diversion of corn to ethanol,

FIGURE 7

World's Ending Stocks of Rice, 1986-2006

(Millions of Metric Tons)



Source: UN Food and Agriculture Organization.

the world grains supply picture is "an accident waiting to happen." The most obvious danger is adverse weather. Australia's current wheat crop has been cut more than half by drought, which is an international disaster, because Australia is a leading wheat exporter. The water and other infrastructure that would mitigate weather problems has not been built over the past 30 years.

Even more ominous, is the threat of disease. Over the decades of increasing globalization, less and less funding and resources have gone into worldwide cooperative efforts to monitor for plant and animal diseases, and develop contingencies. For crops in particular, the kind of precautionary botanical work which grew up from the efforts of FDR's Vice President Henry Wallace's backing of what became the "Green Revolution" research centers (CGIAR, Consultative Group on International Agricultural Research), was downsized at the same time as the private agro-cartel companies came to dominate more of the food chain—from seeds, to food on the table.

Now a very dangerous wheat disease has broken out. The highly virulent strain of wheat stem rust (*Puccinia graminis*) called Ug99 (see photo), emerged in Ugandan wheat fields in 1999, and has since spread to several other east African countries, notably Kenya and Ethiopia, where it has inflicted major damage on local crops.

Then, on Jan. 16 this year, the International Maize and Wheat Improvement Center (CIMMYT) in Mexico, announced what the wheat world has been dreading. Ug99 has been detected in wheat fields in Yemen. It has jumped the Red Sea to the Arabian Peninsula. Some 25% of world wheat production capacity lies in the potential spread path of the disease. On the wings of a strong wind, the spores of the fungus can pass from the Arabian Peninsula to the heavy wheat-producing countries of the Indian subcontinent, and beyond.

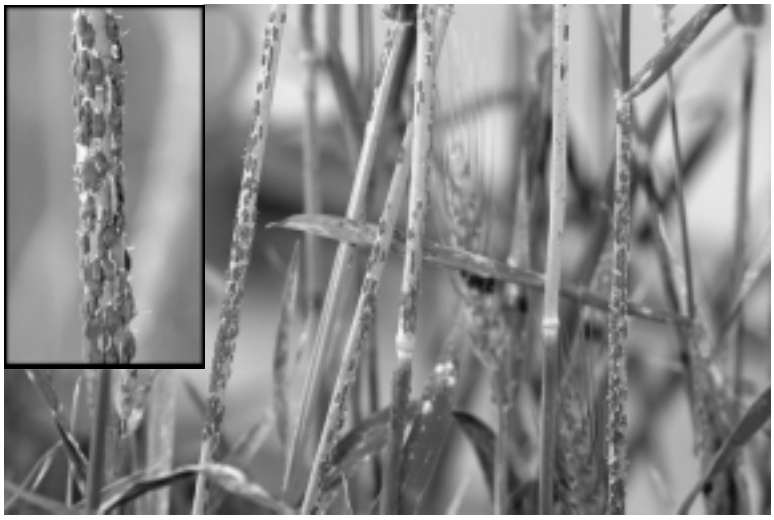
The chairman of Pakistan's Agriculture Research Council, M.E. Tusneem, warned, "If we don't control this stem rust threat, it will have a major impact on food security, especially since global wheat stocks are at an historic low."

Norman Borlaug, the Nobel Prize-winning creator of the Green Revolution, concurred: "If we fail to contain Ug99, it could bring calamity to tens of millions of farmers and hundreds of millions of consumers."

Almost all of the rust-resistant wheat varieties bred in the last 40 years have proven highly susceptible (in test plots) to the disease, leaving the world wheat producers at the mercy of one of the age-old agents of famine. Instead of breeding up contingency varieties of potentially new resistant wheats, funding was cut for this activity. Now there is a mad scramble under way. In September 2005, agronomists formed the Global Rust Initiative to do everything possible, including sifting through old genome libraries, but pickings are slim.

Borlaug, 91 years old, said at the September 2005 meeting, "Nobody's seen an epidemic for 50 years, nobody in this room except myself. . . . Maybe we got too complacent." Or went crazy.

There is no longer any excuse for being a bio-fool.



Wheat stem rust, Puccinia *graminis, a highly virulent strain, present on the Arabian Peninsula, after it emerged in East Africa in 1999. For over 50 years, the varieties of wheat in use worldwide had been bred to be rust-free, but the new outbreak threatens to spread around the globe. In the mid-1950s, a related wheat rust destroyed 40% of the U.S. crop.*