Engdahl Newsletter Five: The Incredible Seralini Affair

Hello dear reader,

In this installment I want to share with you something I have written on one of the most shocking corruption scandals in the history of a very corrupt European Union Commission together with corruption by Monsanto and the related GMO agribusiness industry. Today Monsanto is being fused in a takeover with the giant German chemical group, Bayer AG, another advocate of GMOs and of toxic herbicides and pesticides. The arbitrary June 2016 decision by the EU Commission to ignore massive opposition on health safety grounds to a relicensing of the widely-used weed-killer, glyphosate, the main ingredient in Monsanto's Roundup, and to relicense glyphosate for use in the EU another 18 months indicates the pervasive extent of this life-threatening corruption. If you find this piece to be useful, I would suggest you buy a copy of my book, Seeds of Destruction: The Hidden Agenda of Genetic Manipulation. Thank you for your support,

--- F William Engdahl

What customers are saying about *Seeds of Destruction: The Hidden Agenda of Genetic Manipulation*:

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"Could not put it down till I read it through." -- Blue Rabbit

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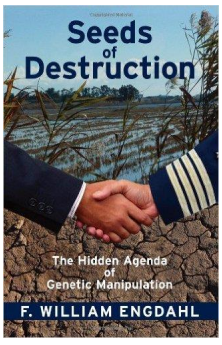


Cancerous rats, corruption and Terminator seeds

The Cancer of Corruption in Brussels

September 2012 a respected international scientific journal, *Food and Chemical Toxicology*, released a study by a team of scientists at France's Caen University led by Professor Gilles-Eric Seralini. The Seralini study had been reviewed over a four-month period by a qualified group of scientific peers for its methodology and was deemed publishable.

It was no amateur undertaking but rather, the carefully-documented results of tests on a group of 200 rats over a two-year life span, with one group of non-GMO fed rats, a so-called control group, and the other a group of GMO-fed rats.

Significantly, following a long but finally successful legal battle to force Monsanto to release the details of its own study of the safety of its own NK603 maize, Seralini and colleagues reproduced a 2004 Monsanto study published in the same journal and used by the European Food Safety Authority (EFSA) for its 2009 positive evaluation of NK603.

Seralini's group based their experiment on the same protocol as the Monsanto study but, critically, testing more parameters more frequently. And the rats were studied for much longer—their full two year average life-time instead of just 90 days in the Monsanto study. The long time span proved critical. The first tumors only appeared 4 to7 months into the study. In industry's earlier 90-day study on the same GMO maize Monsanto NK603, signs of toxicity were seen but were dismissed as "not biologically meaningful" by industry and EFSA alike. It seems they were indeed very biologically meaningful.

The study was also done with the highest number of rats ever measured in a standard GMO diet study. They tested "also for the first time 3 doses (rather than two in the usual 90 day long protocols) of the Roundup-tolerant NK603 GMO maize alone, the GMO maize treated with Roundup, and Roundup alone at very

low environmentally relevant doses starting below the range of levels permitted by regulatory authorities in drinking water and in GM feed." [1]

Their findings were more than alarming. The Seralini study concluded, "In females, all treated groups died 2–3 times more than controls, and more rapidly. This difference was visible in 3 male groups fed GMOs. All results were hormone and sex dependent, and the pathological profiles were comparable. Females developed large mammary tumors almost always more often than and before controls; the pituitary was the second most disabled organ; the sex hormonal balance was modified by GMO and Roundup treatments. In treated males, liver congestions and necrosis were 2.5–5.5 times higher. This pathology was confirmed by optic and transmission electron microscopy. Marked and severe kidney nephropathies were also generally 1.3–2.3 greater. Males presented 4 times more large palpable tumors than controls…" [2]

Four times meant four hundred percent more large tumors in GMO fed rats than in normally fed ones of the control group. Moreover, they reported, "By the beginning of the 24th month, 50–80% of female animals had developed tumors in all treated groups, with up to 3 tumors per animal, whereas only 30% of controls [*non-GMO-fed—w.e.*] were affected. The Roundup treatment groups showed the greatest rates of tumor incidence with 80% of animals affected with up to 3 tumors for one female, in each group." [3]

Such alarming results had not yet become evident in the first 90 days, the length of most all Monsanto and agrichemical industry tests to date, a clear demonstration of how important it was to conduct longer-term tests and apparently why the industry avoided the longer tests.

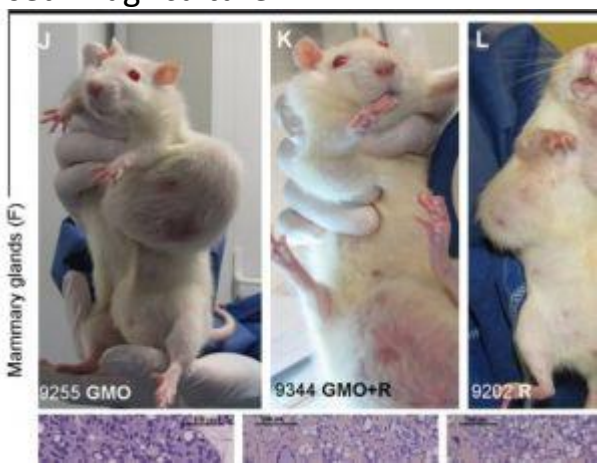
Seralini and associates continued to document their alarming findings: "We observed a strikingly marked induction of mammary tumors by R (Roundup) alone, a major formulated pesticide, even at the very lowest dose administered. R has been shown to disrupt aromatase which synthesizes estrogens (Richard et al., 2005), but to also interfere with estrogen and androgen receptors in cells (Gasnier et al., 2009). In addition, R appears to be a sex endocrine disruptor in vivo, also in males (Romano et al., 2010). Sex steroids are also modified in treated rats. These hormone-dependent phenomena are confirmed by enhanced pituitary dysfunction in treated females." [4]

Roundup herbicide, by terms of the license contract with Monsanto, must be used on Monsanto and most other GMO seeds. The seeds are in fact “modified” only to resist the weed-killing effect of Roundup, the world’s largest-selling weed-killer.

In plain language, as another scientific study noted, “GMO plants have been modified to contain pesticides, either through herbicide tolerance or by producing insecticides, or both, and could therefore be considered as ‘pesticide plants’” [5]

Further, “Roundup Ready crops [*such as Monsanto NK603 maize-w.e.*] have been modified in order to become insensitive to glyphosate. This chemical, together with adjuvants in formulations, constitutes a potent herbicide. It has been used for many years as a weed killer…GMO plants exposed to glyphosate-based herbicides such as Roundup…can even accumulate Roundup residues throughout their life…Glyphosate and its main metabolite AMPA (with its own toxicity) are found in GMOs on a regular and regulatory basis. Therefore, such residues are absorbed by people eating most GMO plants (as around 80% of these plants are Roundup tolerant).” [6]

Monsanto had repeatedly refused scientific requests to publish the exact chemicals used in its Roundup aside from one—glyphosate. They argued that it was a “trade secret.” Independent analyses by scientists indicated, however, that the combination of glyphosate with Monsanto’s mystery added chemicals created a highly toxic cocktail that was shown to toxically affect human embryo cells in doses far lower than used in agriculture.[7]



Mammary tumors that developed in rats fed GMO corn and/or low levels of Roundup. From the paper "Long term toxicity of a Roundup herbicide and a Roundup-tolerant genetically modified maize," published in *Food and Chemical Toxicology*.

What was more than alarming in the context of that first long-term independent study of the effects of a GMO diet on rats was that it took place some twenty years after US President George H.W. Bush gave the commercial release of GMO seeds the green light and mandated no government safety tests before release. Bush did so following a closed-door meeting with top officials of Monsanto Corporation, the world's largest GMO concern. The US President decreed that GMO seeds were to be permitted in the United States with not one single independent precautionary government test to determine if they were safe for human or animal consumption. It became known as the Doctrine of Substantial Equivalence, about which more in a subsequent chapter. The EU Commission dutifully aped the US Substantial Equivalence Doctrine of "hear no bad effects, see no bad effects…hear no evil, see no evil."

EFSA 'science' exposed

What the Seralini study set off was the scientific equivalent of a thermonuclear explosion. It exposed the fact that the EU "scientific" controls on GMO were nothing other than accepting without question the tests given them by Monsanto and the other GMO companies themselves. As far as the irresponsible bureaucrats of the EU Commission were concerned, when it came to GMO, the Monsanto fox could indeed "guard the hen house."

Suddenly, with worldwide attention to the new Seralini results, the EU Commission and its EFSA was under fire as never in their history. How they reacted was worthy of a bad copy of an Agatha Christie murder novel. Only it was no novel but a real-life conspiracy (yes, Virginia, there are conspiracies in the real world…). The conspiracy evidently involved some form of collusion between Monsanto and the GMO agrichemical cartel, EU commissioners, the GMO panel members of EFSA, complacent major media and several member governments of the EU, including Spain and Holland.

The Brussels EU scientific food regulatory organization, EFSA, was under the gun from the damning results of the long-term Seralini study. EFSA had recommended approval of Monsanto's NK603 Roundup-tolerant maize in 2009 without first conducting or insuring any independent testing. They admitted in their official journal that they relied on "information supplied by the applicant (Monsanto), the scientific comments submitted by Member States and the report of the Spanish Competent Authority and its Biosafety Commission." EFSA also admitted that the Monsanto tests on rats were for only 90 days. Seralini's group noted that the

massive toxic effects and deaths of GMO-fed rats took place well after 90 days, a reason why longer-term studied were obviously warranted. [8]

The Spanish report cited by EFSA was itself hardly convincing and was anything but independent. It stated, "according to the current state of scientific knowledge and after examining the existing information and data provided by the Monsanto Company, the Spanish Commission on Biosafety could give a favorable opinion to the commercialization in the EU of maize NK603…" And the scientific comments submitted by Member States seemed to include Spain and Holland which applied to license the Monsanto seed in the first place. [9]

The EFSA concluded at the time of its approval in 2009 that, "the molecular data provided [*by Monsanto-w.e.*] are sufficient and do not raise a safety concern." The Brussels scientific panel further declared amid scientific-sounding verbiage that, "The EFSA GMO Panel is of the opinion that maize NK603 is as safe as conventional maize. Maize NK603 and derived products are unlikely to have any adverse effect on human and animal health in the context of the intended uses." [10]

Now, in September 2012, three years after the commercial introduction of Monsanto GMO maize in the EU, Seralini showed, complete with ghastly photos, that Monsanto's GMO maize demonstrably caused severe rates of cancerous tumors and early death in rats.

The EU Commission in Brussels had stated clear guidelines that were as revealing for what they did not say as for what they did say about what precautions are taken to insure public health and safety from exposure to GMO plants and their paired toxic herbicides: "Toxicological assessments on test animals are not explicitly required for the approval of a new food in the EU or the US. Independent experts have decided that in some cases, chemical analyses of the food's makeup are enough to indicate that the new GMO is substantially equivalent to its traditional counterpart…In recent years, biotech companies have tested their transgenic products (maize, soy, tomato) before introducing them to the market on several different animals over the course of up to 90 days. Negative effects have not yet been observed." [11]

Because of US Government arm-twisting and of the obviously powerful lobby power of the Monsanto-led GMO agrichemical lobby in the US and EU, as of the

time of the Seralini study, no regulatory authority in the world had requested mandatory chronic animal feeding studies to be performed for edible GMOs and formulated pesticides. The only studies available were a tiny handful of 90 day rat feeding trials carried out by the biotech industry and no studies longer than that, apparently on the principle that conflict of interest in an area as important as the safety of food should not be taken as a serious matter.

Revealingly, the EU stated publicly the following seemingly reassuring policy: "GMO critics claim that feeding studies with authorized GMOs have revealed negative health effects. Such claims have not been based on peer-reviewed, scientifically accepted evaluations. If reliable, scientific studies were to indicate any type of health risk, the respective GMO would not receive authorization." [12] That was the EU official line until the 2012 Seralini bomb exploded in their faces.

EU Commission coverup

The September 2012 Seralini study was peer-reviewed, and it was published in a highly respected international scientific journal after such review. What was the response of the EU Commission and the EFSA? Nothing short of fraudulent deception and coverup of their corruption by the Monsanto GMO lobby.

On November 28, 2012, only a few weeks after the study was published, EFSA in Brussels issued a press release with the following conclusion: "Serious defects in the design and methodology of a paper by Séralini et al. mean it does not meet acceptable scientific standards and there is no need to re-examine previous safety evaluations of genetically modified maize NK603." Per Bergman, who led EFSA's work, said: "EFSA's analysis has shown that deficiencies in the Séralini et al. paper mean it is of insufficient scientific quality for risk assessment. We believe the completion of this evaluation process has brought clarity to the issue." [13] Nothing could have been farther from the truth.

At the very minimum, the precautionary principle in instances involving even the potential for grave damage to the human population would mandate that the EU Commission and its EFSA should order immediate further serious, independent long-term studies to prove or disprove the results of the Seralini tests. That refusal to re-examine its earlier decision to approve Monsanto GMO maize, no matter what flaws might or might not have been in the Seralini study, suggested the EFSA might be trying to cover for the GMO agrichemical lobby at the very least.

Instead of clarity, the EFSA statement once more fed EFSA critics who had long argued that the scientists on EFSA's GMO Panel had blatant conflicts of interest with the very GMO lobby they were supposed to regulate. Corporate Europe Observer, an independent EU corporate watchdog group noted about the EFSA response, "EFSA failed to properly and transparently appoint a panel of scientists beyond any suspicion of conflict of interests; and it failed to appreciate that meeting with Europe's largest biotech industry lobby group to discuss GMO risk assessment guidelines in the very middle of a EU review undermines its credibility." [14]

More damaging for the shoddy EFSA coverup on behalf of Monsanto was the fact that over half of the scientists involved in the GMO panel which positively reviewed the Monsanto's study for GMO maize in 2009, leading to its EU-wide authorization, had conflicts of interests with the biotech industry.[15]

A report by Corporate Europe Observatory (CEO) found that more than half of the GMO panel experts who signed the approval had conflicts of interest.
The conflicts ranged from receiving research funding from the biotech industry, being a member or collaborator in a pro-biotech industry association, to writing or reviewing industry-sponsored publications. Some conflicts revealed a conflict of scientific interests, with some panel members involved in working on the creation of transgenic plants – including potatoes – with antibiotic-resistant marker genes – including nptII.[16]

Secondly, although none of EFSA's GMO panel members were medical experts in the use of antibiotics in human medicine, they decided that neomycin and kanamycin were antibiotics with "no or only minor therapeutic relevance". The World Health Organisation (WHO) classified these antibiotics as "critically important" in 2005.

Dutch scientist Harry Kuiper, chair of the EFSA GMO panel who had close links to the biotech industry, played a key role in the framing of this disputed key scientific advice.

Kuiper himself was an open advocate of less controls on GMO seed proliferation in the EU. He led the EFSA GMO panel since 2003, during which time EFSA went from no GMO approvals to 38 GMO seeds approved for human consumption. The

criteria for approval were developed by Kuiper for EFSA in cooperation with Monsanto and the GMO industry and a Monsanto pseudo-scientific front group called ILSI, the Washington-based International Life Sciences Institute, between 2001 and 2003. The board of the noble-sounding ILSI in 2011 was comprised of senior people from Monsanto, ADM (one of the world's biggest purveyors of GMO soybeans and corn), Coca-Cola, Kraft Foods (major proponent of GMO in foods) and Nestle, another giant GMO food industry user. [17]

One critic of the blatant conflict of interest in EFSA regulator in bed with the industry whose practices he was mandated to objectively assess noted, "During that period, Harry Kuiper and Gijes Kleter (both members of the EFSA GMO Panel) were active within the ILSI Task Force as experts and as authors of the relevant scientific publications. It is a scandal that Kuiper has remained as Chair of EFSA's GMO Panel since 2003, and that he is still Chair in spite of the massive criticism directed at the Panel from NGOs and even from the Commission and EU member states." [18]

The brazen conflicts of interest between Monsanto and the agribusiness lobby and the EFSA went further. In May 2012 Professor Diána Bánáti was forced to resign as Chairman of the EFSA Management Board when it was learned she planned to take up a professional position at the Monsanto-backed International Life Sciences Institute (ILSI) in Washington. The same Diána Bánáti had been forced to resign, not as EFSA chairman but as a simultaneous Board Member of ILSI in 2010. Public interest groups made calls for her to resign from EFSA but to no avail. [19] At ILSI she would be able to use expertise and contacts gained from working for the EFSA to help GMO companies like Monsanto and other food industry companies influence policy across the world.

In sum, it came as no surprise to those familiar with the notorious "revolving door" in Brussels between the GMO industry and the regulatory body entrusted with making independent decisions on the risks of GMO in the EU, that EFSA condemned the Seralini study results. Most telling however of the brazen pro-GMO industry bias of EFSA's GMO Panel members was the fact that the final ruling statement by the EFSA GMO Panel reviewing Seralini's results announced, "Serious defects in the design and methodology of a paper by Séralini et al. mean it does not meet acceptable scientific standards and there is no need to re-examine previous safety evaluations of genetically modified maize NK603." [20]

The EFSA was not the only source of blatant and reckless pro-GMO sentiment in Brussels. Some weeks before release of the embarrassing Seralini study, Anne Glover, chief scientific adviser of the EU Commission, said in an interview on 24 July, 2012, "There is no substantiated case of any adverse impact on human health, animal health or environmental health, so that's pretty robust evidence, and I would be confident in saying that there is no more risk in eating GMO food than eating conventionally farmed food." She added that the precautionary principle also "no longer applies," which means the EU should not err on the side of caution on the approval of GMOs—equivalent of a "damn the torpedoes, full speed ahead with GMO" stance despite polls showing some 60% to 80% of EU citizens opposed to GMO.[21]

Were there any pretense of scientific responsibility in the clearly corrupt EFSA panel, or Professor Glover's office, they would have immediately called for multiple, independent similar long-term rat studies to confirm or disprove the Seralini results. They and the Monsanto GMO lobby influencing them clearly had no desire to do anything but try to slander the Seralini group with vague accusations and hope the obedient international media would take the headline and close the embarrassing story. It was typical of the entire history of the spread of patented GMO seeds and paired toxic herbicides like Roundup.

Pushing GMO on Africans

Some years before the EFSA scandalous ruling, Monsanto had launched a major project to push its patented GMO seeds and chemicals on unwary or corruptible African governments. It was called the Alliance for a Green Revolution in Africa (AGRA). The Rockefeller and Bill Gates foundations backing the scheme managed to get former UN Secretary General Kofi Annan, a man with a known bent to corruption, to become the head of the AGRA.[22] A black African was reportedly chosen to overcome criticism among African states that AGRA was a white man's neo-colonial effort. It was, but now with a face from a black African.

In 2006, the Rockefeller Foundation put up $50 million of initial funding toward the project and the Gates Foundation put up $150 million, the largest single grant of the Gates foundation worldwide that year. The stated focus of AGRA was to increase crop production, which involved the same harmful industrialized farming practices including heavy pesticide use, planting of GMO crops, and training of African scientists and farmers to spread that model throughout the continent.

AGRA, as it called itself, was an alliance again with the same Rockefeller Foundation which created the "Gene Revolution." A look at the AGRA Board of Directors confirmed the fact. In addition to former UN Secretary General Kofi Annan as chairman, the board numbered almost exclusively people from the Rockefeller or Gates foundations such as South African, Strive Masiyiwa, a Trustee of the Rockefeller Foundation, Sylvia M. Mathews of the Bill & Melinda Gates Foundation; Rajiv J. Shah of the Gates Foundation; Nadya K. Shmavonian of the Rockefeller Foundation; Roy Steiner of the Gates Foundation; Gary Toenniessen the Managing Director of the Rockefeller Foundation and Akinwumi Adesina, Associate Director, Rockefeller Foundation.

The new Africa Green Revolution was clearly a high priority of the Rockefeller Foundation. [23] How that fit the decades-long eugenics strategy of the same Rockefeller Foundation will become clearer during the course of this book.

While they tried hard to keep a low profile, Monsanto and the major GMO agribusiness giants were accused by researchers of using AGRA to spread their patented GMO seeds across Africa under the deceptive label, 'bio-technology,' the new euphemism for genetically engineered patented seeds. To date South Africa was the only African country permitting legal planting of GMO crops. In 2003 Burkina Faso authorized GMO trials. In 2005 Kofi Annan's Ghana drafted bio-safety legislation and key officials expressed their intentions to pursue research into GMO crops.

Africa was the next target after the EU in a US-government campaign to spread GMO worldwide. Its rich soils made it an ideal candidate. Not surprisingly many African governments suspected the worst from the GMO sponsors as a multitude of genetic engineering and biosafety projects had been initiated in Africa, with the aim of introducing GMOs into Africa's agricultural systems. They included sponsorships offered by the US government to train African scientists in genetic engineering in the US, biosafety projects funded by the United States Agency for International Development (USAID) and the World Bank; GMO research involving African indigenous food crops.

The Rockefeller Foundation had been working for years to promote, largely without success, projects to introduce GMOs into the fields of Africa. They backed

research that supports the applicability of GMO cotton in the Makhathini Flats in South Africa.

Green Revolution?

The decision by the Rockefeller Foundation to name their project Alliance for a Green Revolution in Africa was both calculated Public Relations and revealing. The original mis-named Green Revolution, developing hybrid sorts of dwarf wheat in Mexico and later India during the 1960's had also been a Rockefeller Foundation project. Norman Borlaug came from his post as a research scientist with the Rockefeller University to Mexico to develop his wheat varieties. For the Rockefeller's the original Green Revolution was an attempt to organize a global agribusiness monopoly structure based on their experience with oil. Along with Borlaug's wonder wheat strains came large-scale mechanization of the land in Mexico, introduction of chemical fertilizers and pesticides and a linking of Mexican agriculture with a global grain market controlled by Archer Daniels Midland, Cargill and other grain cartel giants close to the Rockefellers. [24]

Now the same Rockefeller circles wanted to globalize into their worldwide agribusiness food chain the incredibly rich land and food potentials of Africa and use the project to spread their patented GMO seeds via the back door. AGRA was being used to create networks of "agro-dealers" across Africa, at first with no mention of GMO seeds or herbicides, in order to have the infrastructure in place to massively introduce GMO later.[25]

Monsanto, which had a strong foothold in South Africa's seed industry, both GMO and hybrid, conceived of an ingenious smallholders' program known as the 'Seeds of Hope' Campaign, introducing a green revolution package to small scale poor farmers, followed, of course, by Monsanto's patented GMO seeds. Syngenta AG of Switzerland, one of the 'Four Horsemen of the GMO Apocalypse' was pouring millions of dollars into a new greenhouse facility in Nairobi, to develop GMO insect resistant maize. [26]

The collusion of the Gates Foundation with Monsanto Corporation was no accident. The Bill and Melinda Gates Foundation itself was one of the largest owners of stock shares in Monsanto and AGRA itself also purchased 500,000 stock shares in Monsanto stocks, proof of that close relationship. [27]

Despite many words by Gates officials since the inception of the AGRA agenda denying that GMO seeds would be used as part of AGRA, their close relationship with Monsanto had been uncovered as a key element in their agronomic "new green revolution" strategy, more appropriately called Alliance for a GMO Revolution in Africa. The Gates Foundation gave at least $264 million as of 2011 in grants to AGRA and hired Dr. Robert Horsch, a former Monsanto executive who developed Roundup, to head up AGRA.[28]

Gates Family Eugenics Agenda

Bill Gates and his Gates Foundation, contrary to their well-cultivated public image as philanthropic, had an evident and clear eugenics agenda for Africa, and it evidently included a large role for Monsanto's patented seeds.

Gates, along with billionaire banker David Rockefeller and a handful of other billionaires created something they called the "Good Club" at the home of the President of the Rockefeller University in New York in May 2009. Its aim, according to press reports was to impose a global series of programs to reduce population—in other words eugenics.[29]

Moreover, the chairman of the Bill and Melinda Gates Foundation, Bill's father, William H. Gates Sr., had been head of the Rockefeller-financed eugenics group Planned Parenthood, an organization spawned from the American Eugenics Society.[30]

In a 2010 Long Beach California TED conference, Bill Gates himself spoke enthusiastically of new vaccines that would reduce the planet's birth rate. In his titled, "Innovating to Zero!," along with his scientifically absurd proposition of reducing manmade CO2 emissions worldwide to zero by 2050, approximately four and a half minutes into the talk, Gates declared, 'First we got population. The world today has 6.8 billion people. That's headed up to about 9 billion. Now if we do a really great job on new vaccines, health care, reproductive health services, we lower that by perhaps 10 or 15 percent.' [31]

As one critic described the Monsanto and Gates focus on Africa through AGRA, "African governments are much weaker and easier to persuade than the governments of Europe to allow for GMO crops to be introduced into their

countries. Public awareness of the threats of GMOs has been slower to develop in Africa, and the democratic processes of citizen advocacy weaker." [32]

Africa was also the focus for a great global land grab by private companies from the USA to China in search of some of the planet's richest fertile soil. It has been estimated that were proper farming techniques using purely organic methods, without chemicals introduced across Africa the Continent could feed ten billion people. Were Africa to fall to the spread of patented GMO seeds as USA and Argentina had done, the powerful interests behind the creation of GMO would have reached a major advance in their global agenda to control the seeds of life on the planet.

Patrick Mulvany the head of a UK watchdog organization, UK Food Group, identified the strong interest of Monsanto and US-dominated agribusiness in Africa: "Agribusiness corporations see smallholder farmers of the developing world as only representing an opportunity for securing supplies of food at relatively cheap prices, using cheap labor and, most importantly, as representing a burgeoning market for proprietary agrochemicals, compliant GMO seeds and fertilisers." Mulvany added, "There are opportunities for smallholders to sustain a strong and vibrant bio-diverse food system using agro-ecological approaches … yet the only value for agribusiness are the chains which bind the food serfs to the food barons."[33]

Monsanto's 'Terminator' Project

The United States Government had been financing research since 1983 on a genetic engineering technology which, when commercialized, would give its owners the power to control the food seed of entire nations or regions. Research grants from the US Department of Agriculture went to a tiny company in Mississippi, Delta & Pine Land. In 2007 Monsanto completed a successful takeover of Delta and Pine Land in a move that confirmed there was truly a darker agenda behind Monsanto's GMO engagement than "feeding the world's hungry."

The takeover of the small Mississippi company in 2007 by Monsanto was significant because Delta and Pine Land, together with the US Government, jointly held the patent on what popularly was called "Terminator" technology, or by its scientific name, Genetic Use Restriction Technology (GURT).

For almost a quarter century, since 1983, the US Government had quietly been working to perfect a genetically engineered technique whereby farmers would be forced to turn to their seed supplier each harvest to get new seeds. The seeds would only produce one harvest. After that the seeds from that harvest would commit 'suicide' and be unusable—a high-tech new serfdom.

The patented Monsanto 'suicide' seeds, officially termed GURTs (Genetic Use Restriction Technologies), represented an unprecedented threat to poor farmers in developing countries like India, Nigeria or Brazil, who traditionally saved their own seeds for the next planting. In fact, GURTs, more popularly referred to as Terminator seeds for the brutal manner in which they kill off plant reproduction possibilities, was a threat to the food security as well of North America, Western Europe, Japan and anywhere Monsanto and its elite cartel of GMO agribusiness partners enters a market.

In March 1998 the US Patent Office granted Patent No. 5,723,765 to Delta & Pine Land for a patent titled, Control of Plant Gene Expression. The patent was owned jointly, according to Delta & Pine's Security & Exchange Commission 10K filing, 'by D&PL and the United States of America, as represented by the Secretary of Agriculture.' To quote further from the official D&PL SEC filing, 'The patent broadly covers all species of plant and seed, both transgenic (GMO-ed) and conventional, for a system designed to allow control of progeny seed viability without harming the crop'(sic).' [34]

D&PL claimed, 'One application of the technology could be to control unauthorized planting of seed of proprietary varieties…by making such a practice non-economic since non-authorized saved seed will not germinate, and, therefore, would be useless for planting.' D&PL calls the thousand-year-old tradition of farmer-saved seed by the pejorative term, 'brown bagging' as though it is something dirty and corrupt.

Translated into lay language, D&PL declared the purpose of its Patent No. 5,723,765, Control of Plant Gene Expression, was to prevent farmers who once get trapped into buying GMO seeds from Monsanto from 'brown bagging' or being able to break free of control of their future crops by Monsanto and friends. As D&PL puts it, their patent gives them 'the prospect of opening significant worldwide seed markets to the sale of transgenic (GMO-w.e.) technology in

varietal crops in which crop seed currently is saved and used in subsequent seasons as planting seed.'[35]

Terminator was the answer to the agribusiness dream of controlling world food production. No longer would Monsanto need to hire expensive detectives to spy on whether farmers were re-using Monsanto or other GMO patented seed. Terminator corn or soybeans or cotton seeds could be genetically modified to 'commit suicide' after one harvest season. The technology would be a means of enforcing Monsanto or other GMO patent rights, and forcing payment of farmer use fees not only in developing economies, where patent rights were, understandably, little respected, but also in industrial OECD countries.

With Terminator patent rights, once a country such as Argentina or Brazil or Iraq or the USA or Canada opened its doors to the spread of GMO patented seeds among its farmers, their food security would be hostage to a private multinational company which, for whatever reasons, especially given its intimate ties to the US Government, might decide to use 'food as a weapon' to compel a US-friendly policy from that country or group of countries.

If it sounded implausible that the US Government would back such a private and dangerous seed technology, one needed only go back to what Secretary of State Henry Kissinger did in countries like Allende's Chile to force a regime change to a 'US-friendly' Pinochet dictatorship by withholding USAID and private food exports to Chile. Kissinger dubbed it 'food as a weapon.' Terminator was merely the logical next step in food weapon technology.

The role of the US Government in backing and financing Delta & Pine Land's decades of Terminator research is even more revealing. As Kissinger said back in the 1970's, 'Control the oil and you can control entire Continents. Control food and you control people…'

In a June 1998 interview, USDA spokesman, Willard Phelps, defined the US Government policy on Terminator seeds. He explained that USDA wanted the technology to be 'widely licensed and made expeditiously available to many seed companies.' He meant agribusiness GMO giants like Monsanto, DuPont or Dow. The USDA was open about their reasons: They wanted to get Terminator seeds into the developing world where the Rockefeller Foundation had made eventual

proliferation of genetically engineered crops the heart of its GMO strategy from the beginnings of its rice genome project in 1984.

USDA's Phelps stated that the US Government's goal in fostering the widest possible development of Terminator technology was 'to increase the value of proprietary seed owned by US seed companies and to open up new markets in Second and Third World countries.' [36]

Under WTO rules on free trade in agriculture, countries are forbidden to impose their own national health restrictions on GMO imports if it is deemed to be an 'unfair trade barrier.' It begins to become clear why it was the US Government and US agribusiness which during the late 1980's pushed at the GATT Uruguay Round for creation of a World Trade Organization, with its supranational arbitrary powers over world agriculture trade. It all fits into a neat picture of patented seeds, forced on reluctant WTO member nations, under threat of WTO sanctions, and now of Terminator or suicide seeds.

Monsanto Terminator deception

What was so attractive about Delta & Pine Land that Monsanto made a second bid to add it to its global genetically-engineered seeds empire?

It was the patent that Delta & Pine Land, together with the US Government, held Patent No. 5,723,765, titled, Control of Plant Gene Expression. The USDA through its Agricultural Research Service (USDA-ARS) worked with Delta & Pine Land since 1983 to perfect Terminator GMO technology. Patent No. 5,723,765 was the patent for Terminator technology.

In early 1999 Monsanto, the largest producer of GMO seeds and related agri-chemicals, announced it was acquiring Delta & Pine Land along with Delta's Terminator patents.

In October 1999, however, following a worldwide storm of protest against Terminator seeds that threatened the very future of the Rockefeller Foundation's 'Gene Revolution' Dr. Gordon Conway, President of the Rockefeller Foundation, met privately with the Board of Directors of Monsanto. Conway convinced Monsanto that for the long-term future of their GMO Project, they must go public to indicate to a worried world that it would not 'commercialize' Terminator.

The Anglo-Swiss Syngenta joined with Monsanto in declaring solemnly that they would also not "commercialize" their work on GURTS or Terminator suicide seed technology.

That 1999 announcement took enormous pressure off of Monsanto and the agribusiness GMO giants, allowing them to advance the proliferation of their patented GMO seeds globally. Terminator would come later, once farmers and entire national agriculture areas like North America or Argentina or India had been taken over by GMO crops. Then, of course, it would be too late. Despite the Monsanto declaration of a moratorium on Terminator development, the US Government and Delta & Pine Land refused to drop their Terminator development.

In 2000, a year after the Monsanto Terminator moratorium announcement, the Clinton Administration's USDA Secretary, Dan Glickman, refused repeated efforts by various agriculture and NGO organizations to drop the Government's support for Terminator or GURTs. His Department's excuse for not dropping support for the work with Delta & Pine Land was that it allowed the US Government to put 'leverage' on D&PL to 'protect the public interest.'

Delta Vice President, Harry Collins, declared at the time in a press interview in the Agra/Industrial Biotechnology Legal Letter, 'We've continued right on with work on the Technology Protection System (TPS or Terminator). We never really slowed down. We're on target, moving ahead to commercialize it. We never really backed off.' [37]

Nor did their partner, the United States Department of Agriculture, back down on Terminator after 1999. In 2001 the USDA Agricultural Research Service (ARS) website announced: 'USDA has no plans to introduce TPS into any germplasm…Our involvement has been to help develop the technology, not to assist companies to use it.' They went on to say the USDA was, 'committed to making the [Terminator] technology as widely available as possible, so that its benefits will accrue to all segments of society (sic)…ARS intends to do research on other applications of this unique gene control discovery…When new applications are at the appropriate stage of development, this technology will also be transferred to the private sector for commercial application.'[38]

In 2001, the USDA and Delta & Pine executed a Commercialization Agreement for Terminator, its infamous Patent No. 5,723,765. The Government and Delta & Pine Land were not at all concerned about worldwide outcry against Terminator.

The key scientific member of the Delta & Pine Land board since 1993, Dr. Nam-Hai Chua was also head of the Rockefeller University Plant Molecular Biology Laboratory in New York, and had been for over 25 years, the labs which are at the heart of the Rockefeller Foundation's decades-long development, and spending of more than $100 millions of its own research grants to create their GMO Revolution. Until 1995, Chua was also a scientific consultant to Monsanto Corporation, as well as to DuPont's Pioneer Hi-Bred International. Chua was at the heart of Rockefeller's Gene Revolution. And their development of Terminator was in the center of that work. [39]

This vast global network combined with Monsanto's dominant position in the GMO seeds and agri-chemicals market along with the unique DP&L Patent No. 5,723,765, Control of Plant Gene Expression, now gave Monsanto and its close friends in Washington an enormous advance in their plans to dominate world food and plant seed use. It was an ominous goal and the US Government implemented it ruthlessly as the 2003 military occupation of Iraq was to prove.[40]

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