

June 1998: We have at best two years, and at worst six months to safeguard the right of farmers as seed-savers and breeders.

See the summary listing of ongoing UPDATES (last updated: 3/29/99) from the
Rural Advancement Foundation International (RAFI) Press Release Index at the bottom of this file.

From ie@tln.org Tue Aug 18 17:57:58 1998

From: Mary Jo Olsen <ie@tln.org>

Organization: Indigenous Earthlings

To: Dave Ratcliffe, rebecca lord

Subject: Terminator technology, "policing the unauthorised use of American technology"

Your site is wonderful! Didn't see any info specifically on this topic, so am sending you mine. I'm sorry it is so long, it is as short as I could make it. Included at the end are the places the info came from, so you can do your own checking.

I've gotten some feedback suggesting my concern is an over-reaction, but I think that is the same argument we heard when AIDS was new ("why worry, it only kills gay men"!). Right.

This file is *RICH* with hyper-links. Find it at <http://www.ratical.org/co-globalize/terminatorTech.html>

TERMINATOR UNLEASHED

patenting life -- patenting death

by Mary Jo Olsen

The only thing that can keep pace with the rate of agricultural biotechnological change these days is the speed with which the transnational Life Industry is eating itself. In the last couple of years, Monsanto has spent more than \$6.7 billion buying seed and other agbiotech companies. Now, American Home Products is merging with Monsanto for another \$33 billion. Other massive mergers are inevitable with the next few months. That transnational agri-business wants to stop farmers from saving seeds and conducting their own plant breeding is hardly news. That the battle over Farmers' Rights has come so abruptly to a crisis is news that governments and the scientific community are trying to ignore. We have at best two years, and at worst six months to safeguard the right of farmers as seed-savers and breeders. Rather than coming to their defence, public sector institutions are keeping silent or joining in the attack. Either way, public researchers could be contributing to the destruction of agricultural biodiversity. Who's interests are being served? The 12 thousand year-old right of farmers to save and improve seed could be coming to an end -- now.

Terminator Trends: The Silent Spring of Farmers' Rights
Seed Saving, the Public Sector, and Terminator Transnationals
(PDF format), RAFI, Occasional Paper Series, June, 1998

On March 3, 1998 the USDA (United States Department of Agriculture) and Delta & Pine Land Company of Mississippi announced a new patent (US # 5,723,765) which uses genetic engineering to program a mature plant's seed to sterilize itself by destroying its own embryos. If a farmer or gardener saves seed from these plants, it will not grow. If you want another tomato plant or crop of soybeans, you must go back to the company for their seeds. This patent (which they have now applied for world-wide) applies to all plants and seeds.

"With this patent announcement, the world's two most critical food crops -- rice and wheat -- which are staple crops for three-quarters of the world's poor, potentially enter the realm of private monopoly." ("RAFI Communique," March/April 1998)

And it seems that is exactly why it was developed. According to inventor Melvin Oliver of the USDA ("End of the germ line", *New Scientist*, 3/28/98) "Our system is a way of self-policing the unauthorised use of American technology. It's similar to copyright protection." That analogy will be accurate when copyright protection means your tapes and CDs erase themselves after one play and your books are printed with light-activated disappearing ink.

India's Devinder Sharma, coordinator of the Forum for Biotechnology and Food Security says, "For some time now the US has viewed farmer's rights [to save, cross, and replant seed] as incompatible with intellectual property rights that emphasises private monopolies. . . . Having been thwarted at international fora by world opinion, the US has now developed a biotechnological solution." ("AGRICULTURE-INDIA: Biotech Firms Sow Seeds of Discord", InterPress Service (IPS) News Report, 7/15/98)

The Indian Council of Agricultural Research (ICAR) is trying to ban imports of Terminator seeds, because "farmers could be enslaved to the seed market and indigenous crops could be destroyed by cross-pollination." But Dr. R.S. Paroda, director-general of ICAR has admitted that there is no reliable way of ensuring that Terminator seeds can't be sneaked past the inspectors. (*Ibid.*)

Camila Montecinos of Centro de Educacion y Tecnologia (CET) of Chile is calling for a global boycott. "This is an immoral technique. . . . The sole purpose is to facilitate monopoly control and the sole beneficiary is agribusiness." ("RAFI News Release, 3/13/98") Furthermore, she says "We've talked to a number of crop geneticists who have studied the patent. They're telling us that it's likely that pollen from crops carrying the Terminator will infect the fields of farmers who either reject or can't afford the technology. . . . (*WINDS*, "New Technology 'Terminates' Food Independence," 4/1/98) This is the neutron bomb of agriculture." ("RAFI News Release, March 20, 1998")

According to a listing of scientific studies posted by San Francisco State University from Andy Savage of South Downs EarthFirst!, UK, there is enough solid scientific evidence for a complete ban on genetically engineered plants, at least for the present. (He references 8 studies showing dangers ranging from cross-pollination, to gene transfer from plants to microorganisms, to seed spillage during transport, and a further 10 studies on the extreme danger of using cauliflower mosaic virus (CaMV) to "promote" the spliced gene.) Andy says, "The campaign for labeling is making a life-threatening technology appear to be merely a civil-rights issue . . . [but] no one has the right to choose [technology] that threatens the lives of others." ("Why Labeling Genetically Modified Organisms is Pointless", 2/97)

And don't think that only 'eco-freaks' are worried. According to Charles Clover, Environment Editor of *The Telegraph*, "All four of the [British] Government's nature advisory bodies have called for a five-year moratorium on herbicide-resistant crops [because with them] farmers can now kill all the weeds which form the food for birds and host plants for insects in spring. This could spell disaster for millions of already-declining birds and plants." Meanwhile, a review has been launched to examine the possible "effect of genetically-engineered crops on non-target insects. This follows a study in which the lacewing (which eats aphids) was shown to be at risk if they ate corn borers killed by genetically-manipulated maize." ("Genetic Crops Study to Address Widespread Concerns". *Electronic Telegraph*, 6/16/98)

Scary as these considerations are, concerns about the effects of Terminator don't end there. RAFI (Rural Advancement Foundation International) Research Director Hope Shand points out "Terminator was developed by the public sector together with the private sector [the USDA gets about 5% of net sales]. There will be enormous pressure on public breeders to adopt the technique in order to feed cash-starved government and university research departments." Edward Hammond, RAFI Programme Officer adds, "The biotech companies will probably insist that licensees use the Terminator as protection for their patents. It won't take long before farmers run out of choices." ("RAFI News Release, March 13, 1998")

Terminator technology proponents insist that poor farmers won't be affected, while more affluent farmers will have the choice of buying Terminator seed or sticking with standard varieties. Neth Dano of SEARICE (Southeast Asian Regional Institute for Community Education) based in the Philippines, says "That's not how it will work. Public breeders wanting access to patented genes and traits will be forced to accept Terminator as a licensing requirement. The better-off farmers in the valleys will be forced to pay. Their poor neighbors on the hillsides will no longer be able to exchange breeding material with their counterparts in the valleys. This could drive hundreds of millions of poor farmers out of farming." Hope Shand of RAFI adds, "these poor farmers grow 15 to 20% of the world's food and directly feed at least 1.4 billion people." ("RAFI News Release, March 20, 1998")

But is it likely that the Terminator technology will be so aggressively promoted?

At the UN Convention on Biological Diversity in Bratislava, May 4-15, 1998, where the US was an observer, not a party to the convention, several members attacked the Terminator technology "arguing that it would destroy farmer-based plant breeding; jeopardise the food security of at least 1.4 billion people; and wipe out the South's remaining in-situ agricultural biodiversity." To the member's surprise, the US delegation "did not actively defend the USDA-supported technology".

This situation changed on May 11, 1998, when Monsanto "a company with close White House and FDA (Food and Drug Administration) connections and major multinational muscle" bought Delta & Pine Land, and with it control of the Terminator technology. The US delegation swung into action and began "lobbying hard to rewrite the Friends of the Chair report . . . throwing its weight around, trying to squelch concerns and amend the CBD's [UN Convention on Biological Diversity] conclusions." From Bratislava, RAFI's Edward Hammond wrote, "This is a technology that deliberately sterilises farmer's fields, that offers zero agronomic benefit, that is openly aimed at the South, and that is now in the hands of a giant, aggressive multinational with more than enough resources to follow through. . . ." ("RAFI Press Release, May 14, 1998")

Then on June 1, 1998 it was announced that Monsanto will be bought by the New Jersey based American Home Products Corporation (AHP) for \$33.9 billion. It is estimated that this will now be the largest agrochemical/life industries company in the world ("AHP and Monsanto Announce Plan to Combine To Create \$96 Billion Life Sciences Company", 6/1/98, from <http://www.ahp.com/>), displacing European giant Novartis (Ciba-Geigy & Sandoz) in crop chemicals and plant breeding.

But while they compete in specific products, the biotech multinationals cooperate in other

ways. Novartis, for example, is one of the 39 multinational biotech corporations (made up of about 600 companies like DeKalb, DuPont, Monsanto, and Zeneca) and 14 national research associations that have joined together into EuropaBio, an umbrella organization formed to represent the industry's interests in Europe. Their mission is, according to their website: "To establish an encouraging climate for biotechnology [the technology formerly known as genetic engineering] in Europe, and thereby promote the creation of wealth and skilled employment." (<http://www.europa-bio.be/corporate/>)

To this end, they have hired public relations (PR) giant Burson-Marsteller (B-M). B-M is the PR arm of the well-known advertising firm Young & Rubicam, whose clients include AT&T, Colgate/Palmolive, DuPont, Sears, Ford, Phillip Morris, the US Army, and so on. If you are familiar with the phrases 'Quality is Job 1' or 'Be all that you can be' then you know Young & Rubicam.

The work done by B-M may be equally influential, but it is much less well-known because, unlike advertising, PR is not labelled as what it is. PR is positioned in that gray area between paid ads and news stories -- activists are calling it 'disinfotainment' and 'advertorials'.

B-M (according to its own website) "targets the financial community, policy-makers, consumers, trade groups, employees, and, importantly, the influencers who impact each of these audiences. The agency ensures that the perceptions that surround a client are consistent with the client's desired business objectives." (<http://www.yr.com/companies/burson-marsteller/>)

Perception management is their key corporate mission phrase. B-M's global website at www.burson-marsteller.de states boldly, "Perceptions are real. They color what we see . . . what we believe . . . how we behave. They can be managed . . . to motivate behavior . . . to create positive business results."

Who needs and uses this kind of service? B-M clients include:

- the Nigerian government during the Biafran War
- the fascist junta in Argentina during the 1970's and '80's
- the totalitarian regime of South Korea
- Babcock & Wilcox (nuclear power plant on Three Mile Island)
- Union Carbide (Bhopal gas leak in 1984)
- Exxon (Exxon-Valdez oil spill in 1989)
- Mexican government (selling NAFTA to US in 1990) and ongoing

B-M also creates many industry-sponsored 'public interest' groups to counter the activities of independent grass-roots activist groups. These have names like the British Columbia Forest Alliance, Keep America Beautiful, the Business Council for Sustainable Development, the National Smoker's Alliance, etc. ("Burson-Marsteller: PR for the New World Order", by Carmelo Ruiz).

And now EuropaBio has hired B-M to convince a reluctant Europe to accept genetically engineered products, including seeds and food.

[The following information comes from a document claiming to be a B-M strategy proposal

for EuropaBio from January, 1997, which was leaked to Greenpeace ("Propaganda Strategy of Gen-Multis leaked out", *Genetically Manipulated Food News*). I cannot verify its authenticity, but it has every appearance of reality. You should access the source and judge for yourself. ("EuropaBio - The leaked PR documents" Part 1 and Part 2"]

The overall strategy is in two parts, the first of which has already been successfully accomplished, i.e. becoming "firmly established . . . as the primary representatives of European bioindustrial interest within the political and regulatory structures of Europe." The second goal is to "generate favorable perceptions and opinions" in the general public.

They admit that genetic engineering is especially vulnerable in three areas: dangers to the environment; dangers to human health; and the profit motivation of the industries. B-M recommends that companies avoid these "killing fields". Nor should the industry be seen to be advocating their own products. "It is for those charged with the public trust in this area -- politicians and regulators -- to assure the public that bioindustry products are safe." Of course, these same politicians and regulators were dealt with in Part One of the B-M strategy plan. But as long as our perceptions are 'properly managed' we shouldn't perceive them as industry spokespersons.

All press releases to the media are to tell a good story and appeal to the emotions with "symbols of hope, satisfaction, caring, and self-esteem" instead of dishing up dull facts and logic. They should show people profiting from the products. And in every case they should present the products, and the company, as safe and environmentally friendly.

Each story should be 'localized', that is tailored to the specific region where it is used. This will help "overcome the perception that US interests have co-opted an unwilling Europe." Localized stories focusing on economic benefits "can be used to great effect to build pockets of strong support. (. . . consider the political support generated by the tobacco industry in the US in certain southern states.)"

B-M assures EuropaBio that there will be no difficulty placing this information in all media (print, radio, and TV). "Most reporters and editors . . . are preoccupied with producing salable material under extreme deadline pressure. Deadlines dominate journalism and largely shape what is reported. EuropaBio must turn itself into the journalist's best and most reliable continuing source of biotechnology/bioindustries inspiration and information."

The estimated fee for this campaign is \$1,880,000.00. B-M assures EuropaBio that "the potential pay-offs are a multiple of the investment."

So yes, this technology has been, and continues to be aggressively promoted, and for the usual reason: market control (read: power and money). But the Terminator technology is not business as usual. To reiterate:

- This technology offers no agronomic benefit.
- It deliberately sterilizes farmers fields.
- The Terminator (like other genetically engineered plants) presents us with unprecedented dangers. These range from the known (e.g. spread of genetically engineered characteristics through cross-pollination to nearby 'natural' plants) to the

predicted (there will be no way to protect oneself against unexpected and possibly life-threatening allergic reactions) to the completely unforeseen. We are all to accept these risks for a technology whose only benefit is the enrichment of multinational agribusiness.

- It is the human food supply which is put at risk.
- The openly-stated intended purpose of the Terminator technology is to bring the remainder of the 'third world' into the global market economy. This will, in effect, remove the subsistence safety-net from an estimated 1.4 billion people.

Concerned scientists and grass-roots groups from around the world have called for a ban on Terminator seed technology, its patent, and its applications. Dr. Vandana Shiva is the Director of The Research Foundation for Science, Technology and Ecology. In a paper she contributed to the Women in Agriculture Conference held in Washington this summer, she spoke to the profoundly significant and disturbing implications and meaning of this situation with great human intelligence :

Termination of germination is a means for capital accumulation and market expansion. However, abundance in nature and for farmers shrinks as markets grow for Monsanto. When we sow seed we pray "May this seed be exhaustless!" Monsanto and the USDA on the other hand are stating "Let this seed be terminated so that our profits and monopoly is exhaustless."

There can be no partnership between the terminator logic which destroys nature's renewability and regeneration and the commitment to continuity of life held by women farmers of the Third World. The two worldviews do not merely clash -- they are mutually exclusive. There can be no partnership between a logic of death on which Monsanto bases its expanding empire and the logic of life on which women farmers in the Third World base their partnership with the earth to provide food security to their families and communities.

Monocultures, Monopolies, Myths and the Masculinisation of Agriculture
by Dr. Vandana Shiva, Workshop on "Women's Knowledge, Biotechnology
and International Trade -- Fostering a New Dialogue into the Millenium", The International
Conference -- "Women in Agriculture",
Washington, June 28 - July 2 1998

And next: **the Verminator!**

RAFI announces that Zeneca BioSciences (UK) is applying for patents in 58 countries for a "new chemically activated seed killer. The Verminator kills seeds . . . by switching on rodent-fat genes that have been bioengineered into crops. . . . In the patent description, Zeneca described the source of one such 'killer' gene as coming from 'mammalian uncoupling protein isolated from . . . adipose tissue of *Ratus ratus*' -- or the 'Fat Rat' gene. . . . 'It looks like Zeneca can either choose to sell seeds that are already incapable of replanting -- or trigger the 'killer' by chemical spraying at a later date,' says Pat Mooney, Executive Director of RAFI. Or, plants . . . [may] not properly reproduce, or not resist disease(s) unless sprayed with Zeneca's chemical formula [at the proper time]." ("RAFI News Release August 24, 1998")

Greed is a human trait, we probably all have some. But do you get the feeling that these people have somehow slipped over the edge into madness?

The mind-numbing nature of all this is enough to challenge anyone's sense that these problems, created by human beings, *can also* be addressed and solved by human beings. In

responding the question, What can we do?, Carmelo Ruiz states at the close of Burson-Marsteller: PR For The New World Order

The awesome power of the 'manufactured consent' of the mass media, created in no small part by PR firms like Burson-Marsteller, can be discouraging to many politically aware citizens. However, despair is what the PR business sells: despair from even the smallest possibility of positive social change from below. If we are to believe that organized citizens cannot effectively challenge corporate and government power, then the PR flacks will have truly triumphed. But, as Rampton and Stauber say in their book, "The fact that corporations and governments feel compelled to spend billions of dollars every year manipulating the public is a perverse tribute to human nature and our own moral values".

So help spread the word. Join with your local environmental group or green party to call for a ban. Email your favorite folksinger and ask them to write a song. Get a cartoonist working on it. Exercise the extraordinary powers of creativity you possess and focus them on behalf of our ancestors, our descendants, and all life exploring itself here and now. Take every political action you can think of.

But the most important actions you can take are simple and joyous. Refuse to live in the pinched, poisoned, monocrop/monochrome world that agrobusiness is trying to form.

How? Read Seeding the Future (<http://www.ratical.org/ratville/heirloomSeeds.html>) by Christina Waters. That world of happiness, freedom, and natural richness is our world if we want to keep it. So vote with your pocketbook every day. Support these people. Become one yourself. Teach kids to love real food. Make a real alternative visible and available.

Zi (Mary Jo Olsen) ie@tln.org
September 9, 1998

The hypertext version of this exists at <http://www.ratical.org/co-globalize/terminatorTech.html>

SOURCES AND FURTHER READING:

The Ark Institute. <http://www.arkinstitute.com/>

- Seed Terminator and Mega-Merger Threaten Food and Freedom, by Geri Guidetti, 6/5/98
- by Geri Welzel Guidetti:
 - Build Your Ark!, Book I: Food Self-Sufficiency
 - Build Your Ark!, Book II: Living Well On Wheat, How to Cook - Eat - Survive on the Golden Grain
 - The Grain Supply Update, Find Out What's Happening With Our World's Food Supply...

InterPress Service. <http://www.oneworld.org/>

- AGRICULTURE-INDIA: Biotech Firms Sow Seeds of Discord, 7/15/98
- one world news by theme: Genetics
- Guide focusing on Genetic Engineering
- "LET NATURE'S HARVEST CONTINUE", an aggressive publicity campaign organized and financed by Monsanto, 6/98
 - ...Rather than stretching a helping hand to farmers, Monsanto threatens them with lawsuits and jail. In the USA, the company employs detectives to find and bring to court those farmers that save Monsanto soybean seeds for next year's planting. Backed by patent law, the company demands the rights to inspect the farmers' fields to check whether they practise agriculture

according to Monsanto conditions and with Monsanto chemicals.

Rather than developing technology that feeds the world, Monsanto uses genetic engineering to stop farmers from replanting seed and further develop their agricultural systems. It has spent US \$18000 million to buy a company owning a patent on what has become known as Terminator Technology: seed that can be planted only once and dies in the second generation. The only aim of this technology is to force farmers back to the Monsanto shop every year, and to destroy an age-old practice of local seed saving that forms the basis of food security in our countries.

- 'Terminator Technology' - One Step Too Far?, By Senthil Ratnasabapathy, 5/30/98
- OneWorld Search

MoJo Wire. <http://www.motherjones.com/>

- A Seedy Business, by Leora Broydo, 4/7/98
 - USDA Inc., When USDA research goes corporate, the results can be visionary, disturbing, or just goofy. by Leora Broydo
- A Growing Concern, 1/97
 - No Way Around Roundup, Monsanto's bioengineered seeds are designed to require *more* of the company's herbicide. by Mark Arax and Jeanne Brokaw
 - Paid Protection, Why Monsanto and other industry giants love EPA regulations. by Rachel Burstein
 - Flavor Saved?, Genetically engineered foods are in the supermarket now, and more are coming soon. by Susan Benson and Leora Broydo

The New Scientist. <http://www.newscientist.com/>

- End of the germ line, 3/28/98

Rural Advancement Foundation International. <http://www.rafi.org/>

- Traitor Technology, The Terminator's Wider Implications, 1/99
- How Suicide Seeds Work / Where They are Being Patented, 1/99
- The Terminator Technology, New Genetic Technology Aims to Prevent Farmers from Saving Seed, 3/98
- First Terminator, Now "Verminator", Terminator Trend Continues: Fat Cat Corp. with Fat Rat Gene can Kill Crops, 8/24/98 (PDF format)
- Seed Industry Consolidation: Who Owns Whom?, 7/98
- Index of RAFI documents on the Terminator Technology
 - American Home "Monster"?, Implications of the Monsanto / American Home Products Merger, 6/11/98
 - RAFI Takes Terminator to COP IV in Bratislava... and COP IV Responds, 6/2/98
 - **PDF format:** Terminator Trends: The Silent Spring of Farmers' Rights Seed Saving, the Public Sector, and Terminator Transnationals, RAFI Occasional Paper Series, 6/98
 - Monsanto Takes Terminator, Its Now or Never for Agricultural Biodiversity in Bratislava, 5/14/98
 - Terminating Food Security?, The Terminator technology that sterilizes seed also threatens the food security of 1.4 billion people and must be terminated, RAFI News Release 3/20/98
 - Biotech Activists Oppose the "Terminator Technology" New Patent Aims to Prevent Farmers from Saving Seed, RAFI News Release, 3/13/98
 - The Terminator Technology, New Genetic Technology Aims to Prevent Farmers from Saving Seed, RAFI Communique, 3/98
 - US Patent on New Genetic Technology Will Prevent Farmers from Saving Seed, 3/11/98
- Mother Jones Gene Patenting Feature :
 - Who Owns Your Genes? ? A Brief Introduction to Gene Patenting Issues
 - Raw Materials: Examples of Populations Being Sampled
 - Big Bucks: Genomic Companies and their Multinational Backers
 - Private Property: Examples of Patented and Patent Pending Pieces of our Genome
- GENO-TYPES, Timely news and opinion briefs
- Patenting People: a collection of resources on the privatization of human tissue, the Human Genome

- Diversity Project, and the U.S. government's patent applications on human cell lines
- The Life Industry 1997, The Global Enterprises that Dominate Commercial Agriculture, Food and Health
- The Patenting of Human Genetic Material, 1/94
- Patents, Indigenous Peoples, and Human Genetic Diversity, 5/93
- Complete New Books:
 - *The Parts of Life, Agricultural Biodiversity, Indigenous Knowledge, and the Role of the Third System*, 1997
 - *HUMAN NATURE, Agricultural Biodiversity and Farm-Based Food Security*, 1997

The World Internet News Distributary Source (WINDS). <http://www.thewinds.org/>

- New Technology "Terminates" Food Independence, Seed Sterilization Has Profound Implications, 4/1/98

San Francisco State University. <http://online.sfsu.edu/~rone/gedanger.htm>

- Genetic Engineering and Its Dangers, Compiled by Dr Ron Epstein, Philosophy Dept, College of Humanities, SF State Univ.
- local copy: Why Labeling Genetically Modified Organisms is Pointless, 2/97

Electronic Telegraph. <http://www.telegraph.co.uk:80/>

- Genetic Crops Study to Address Widespread Concerns, 5/16/98
- points to:
 - Greenpeace International Genetic Engineering Campaign
 - International Centre for Genetic Engineering and Biotechnology, Trieste, ITALY
 - Genetic Engineering News (GEN), "the leader in biotechnology information"
 - National Centre for Biotechnology Education, University of Reading, UK
 - The Genetical Society, "the learned society for Genetics in Britain"

Genetically Manipulated Food News. http://www.home.intekom.com/tm_info/

- Propaganda Strategy of Gen-Multis leaked out, by Ursel Fuchs, Düsseldorf, 1/24/98
- EuropaBio - The leaked PR documents, Part 1, 1/97
- EuropaBio - The leaked PR documents, Part 2
- See Alternate Representation in **corpwatch.org**'s feature "The Corporate Planet"
- Burson-Marsteller: PR For The New World Order, by Carmelo Ruiz
- "Terminator" technology leads to widespread chemical pollution, 6/3/98
- 'Terminator' Seeds Threaten A Barren Future For Farmers, 3/22/98
- Other Websites About Genetic Engineering (GE) -- **very** extensive

Liberated Existence <http://www.people.memphis.edu/~dhenke/>

- Monocultures, Monopolies, Myths and the Masculinisation of Agriculture, 6/98

Research Foundation for Science, Technology and Ecology.

<http://www.indiaserver.com/betas/vshiva/>

- local copy: Monocultures, Monopolies, Myths and the Masculinisation of Agriculture, 6/98
- Intellectual Property Rights (IPRs), by Vandana Shiva
- The Biopiracy Factsheets, by Dr Jyotsna and Gitanjali Bedi
- IPRs, Community Rights and Biodiversity: A New Partnership for National Sovereignty, by Vandana Shiva
- Protecting Our Biological and Intellectual Heritage in the Age of Biopiracy, by Vandana Shiva
- Protecting the Pirates, Biopiracy and the WTO Dispute by Vandana Shiva
- Brief on The Enclosure of the Commons: Biodiversity, Indigenous Knowledge and Intellectual Property

- Rights
- People's Commission on Biodiversity, Indigenous Knowledge and People's Rights: A Report by Afsar H. Jafri
- Sustainability and Equity in an Era of Globalisation

See Also :

- Profile of Vandana Shiva, PCDForum Paradigm Warrior Profile #3 Release date June 1, 1996
- An interview with Dr. Vandana Shiva, published in *In Motion* magazine
- Bioethics: A Third World Issue, by Dr. Vandana Shiva
- Greenpeace Genetic Engineering resource entry point
 - Greenpeace Reveals Monsanto's Uncontrolled Field Test in Eastern Europe, 8/24/98

UPDATES

- **March 29, 1999:**
 "Traitor Technology: "Damaged Goods" from the Gene Giants, RAFI News Release 3/22/99
 New report from RAFI details over two dozen "Terminator II" patents that link suicide seeds to proprietary chemicals genetically-weakened plants, and the patented power to make genetically-inviabile plants rise from the dead"
- **March 9, 1999:**
 "Monsanto - Handled with Care?, ... or, Care - Handled by Monsanto?, Major U.S. Relief Agency Holds Talks With Troubled Agbiotech Multinational - Who's Helping Who?," RAFI News Release 3/9/99
 CARE, the high-profile U.S. food aid non-profit, is holding talks today with Monsanto Corporation at the company's world headquarters in St. Louis, Missouri (US). According to information received by RAFI, Monsanto's CEO Robert Shapiro contacted CARE's President, Peter Bell, inviting CARE officials to discuss ways in which Monsanto may be able to use its technologies for the benefit of food security in the South. Whether this is an attempt to resurrect Monsanto's scheme to provide micro-credit ("soft") loans to Third World farmers in order to market its proprietary pesticides and genetically-modified seeds remains to be seen.
- **March 7, 1999:**
 "Monsanto is Behind Anti-Farmer Legislation to Regulate Open-Pollinated Seed Cleaners, Ohio Bill Discriminates Against Seed-Saving Farmers," RAFI News Release 3/7/99
 A bill has been introduced in the U.S. Ohio state legislature that would require registration and state-level regulation of anyone who cleans or conditions self-pollinated seed. According to the RAFI, the proposed legislation is part of Monsanto's aggressive corporate strategy to police rural communities and intimidate seed-saving farmers. . . .
 Monsanto has waged an aggressive, Draconian campaign against seed-saving farmers in North America. The company has hired Pinkerton investigators to root-out seed-saving farmers and it is using radio ads and telephone "tiplines" in farming communities to identify and intimidate farmers who might save or re-use the company's patented seed. Under Monsanto's gene licensing agreement, the company reserves the right to come onto the farmer's land and take seed samples to insure that the farmer is not violating patent law.
 "It appears that Monsanto's newest strategy is to shift the expense and burden of policing rural communities to the seed cleaners and state governments. If the bill becomes law, Monsanto's "gene police" will ultimately become state regulators who are working on behalf of Monsanto," explains Pat Mooney, Executive Director of RAFI. . . .
 Ohio farmer and custom seed cleaner Roger Peters opposes the proposed bill to regulate open-pollinated seed cleaners. "Why should any farmer be forced to keep records on law-abiding farmers who clean their own seed?" asks Peters. "And why should public tax dollars be used to protect the patents of private seed companies like Monsanto?" questions Peters. . . .
- **January 27, 1999:**
 "Genetic Seed Sterilization is "Holy Grail" for Ag Biotechnology Firms, New Patents for "Suicide Seeds" Threaten Farmers and Food Security Warns RAFI," RAFI News Release, 1/27/99
 The Rural Advancement Foundation International (RAFI), a Canadian-based rural advocacy organization, announced today that it has uncovered over three dozen new patents describing a wide range of techniques that

can be used for the genetic sterilization of plants and seeds. "The patents reveal that engineered seed sterility is not an isolated research agenda - it's the Holy Grail of the ag biotech industry," says Pat Mooney of RAFI. . . .

"The notorious Terminator patent is just the tip of the iceberg," explains RAFI's Mooney, "Every major seed and agrochemical enterprise is developing its own version of suicide seeds," he adds.

"We've uncovered dozens of patents that disclose new and more insidious techniques for genetic sterilization of plants and seeds - and even animals," says Edward Hammond of RAFI. "Novartis, AstraZeneca, and Monsanto are among the Gene Giants who have sterile seeds in the pipeline, while others like Pioneer Hi-Bred, Rhone Poulenc, and DuPont have technologies that could easily be turned into Terminators." The primary goal of several of the the newly patented techniques is to sterilize seed so that farmers cannot save and re-plant seed.

A number of the patents use benign-sounding technical terms such as "controlled gene expression" linked to "inducible promoters" to describe their sterilization techniques. Other patents describe "killer genes" that destroy pollen, or "GRIM proteins" that do the same to invertebrates or even mammalian cells. A patent owned by Astra/Zeneca candidly admits that their sterilization processes "are not desirable per se." . . .

- **December 13, 1998:**

"Monsanto Terminates Terminator?, ... or is the "Monster" just taking its own sterility strategy underground? Get Ready for Terminator II - the "T'nT" of agriculture," RAFI News Release, 12/11/98

Monsanto may choose to avoid negative publicity by giving up its high-profile association with the Terminator patent, and instead conduct in-house research on a second-generation variation of the suicide seed.

"Unfortunately, this isn't goodbye to Terminator, it's probably hasta la vista," explains Mooney, "It's likely that Monsanto's research on genetic seed sterilization will move under-ground where it can be conducted away from public scrutiny and negative publicity." Mooney adds, "After all, this is a technology that is still in the early stages of development, why invite more negative publicity when its still some years away from commercialization?" . . .

A handful of multinationals are racing to dominate the "Life Industry." Zeneca is proposing to merge with Sweden's Astra to create AstraZeneca - possibly the third largest life industry company. Hoechst and Rhone-Poulenc are also merging and they could be the largest of all in this field. Novartis, DuPont and Monsanto will likely respond to these mega-mergers by creating more and bigger alliances. "Together, these five account for virtually one hundred per cent of the global transgenic seed market," explains Mooney. "They aren't about to abandon a profitable monopoly opportunity like Terminator. If Monsanto does what rumours suggest - and low-keys the Terminator," Mooney concludes, "we can take heart in knowing that the Terminator can be terminated. We can win this fight. But the battle is far from over." . . .

- **November 2, 1998:**

"Terminator Seeds Rejected by Global Network of Agriculture Experts," RAFI News Release, 11/2/98

The Terminator - and related genetic seed sterilization technology - has been banned from the crop breeding programs of the world's largest international agricultural research network. The strong and unambiguous policy was adopted by the Consultative Group on International Agricultural Research (CGIAR) at a meeting at the World Bank in Washington on Friday, October 30th. . . .

Although RAFI's report, Monsanto's 'Spectre' Dims, provides an insightful timeline on the "'Goldfinger' of biotechnology"'s crash-and-burn activities, the fact of such utterly inappropriate human activities -- as the Terminator patenting of life and death -- *require ongoing vigilance and awareness by our entire, single human family* to avert these life-annihilative "bids" during this time of massive transformation.

- **October 2, 1998:**

RAFI invites you to join an international e-mail campaign to protest the licensing and commercial development of the Terminator technology. At <http://www.rafi.org/usda.html> you can automatically send a customized e-mail to US Secretary of Agriculture Dan Glickman and others to politely demand the USDA both immediately ceases negotiations to license Terminator technology to a Monsanto subsidiary and abandon its worldwide patent applications on this immoral and dangerous technology.

See also: 1. *Terminator Science Explained: How the Terminator Terminates*

2. list of people who have written the USDA about terminator tech

- <http://www.monsanto.com/monsanto/about/movie/default.htm> :
"There's a family that lives here, a family that's lived here for thousands of years, getting to know the land and oceans and the sky above" - Monsanto, Food · Health · Hope™
" . . . There's a family that lives here . . . A family of six billion, each with the possibility of living longer and healthier through the discovery we, the people of Monsanto, have just begun . . . "