

Development on Coastal Waters



Permeable pavement in parking areas not only allows water to infiltrate the ground but reduces runoff.



School Green Roof, Portland.



YardScaping for Healthier Waters

YardScaping seeks to inspire Maine residents to create and sustain healthy landscapes using ecologically based practices not dependent on irrigation, pesticides and fertilizers. The idea for this program first arose in 1997 after the Maine Legislature passed a resolve encouraging the State to minimize reliance on pesticides. In 1999, the Maine Board of Pesticides Control (BPC) and Friends of Casco Bay launched a pilot BayScaping project to reduce yard chemical runoff into Casco Bay.

The success of that initiative and similar programs across Maine prompted the BPC to reach out to homeowners and businesses statewide through its YardScaping Partnership (www.yardscaping.org), which advocates a new approach to lawn care. "Lower the bar on perfection," counsels Gary Fish of the BPC. "Beautiful yards don't have to be completely weed-free and bug-free: your yard can be an ecosystem instead of a monoculture."

To help people appreciate the benefits of ecological landscaping, the program is creating Maine's first public yardscape at a 2.5-acre site along Portland's Back Cove. The yardscape will have 4 demonstration plots with interpretive signage so that interested landowners and landscaping professionals can see how to create beautiful yards without pesticides and fertilizers.

For more information on YardScaping, contact Gary Fish (gary.fish@maine.gov, 287-2731) at the Maine Board of Pesticides Control.

Questions to Ask Lawn Care and Landscaping Services

According to the BPC, 2.9 million pounds of yard care pesticides came into Maine in 2004—three times the amount used in 1995. That increase coincides with a tripling of yard care companies during the same period. If you hire out yard care, ask your provider the following questions:

- What is your company's approach to pest control? Do you monitor pests (versus applying insect or weed control on a fixed schedule)? Do you use non-chemical controls when possible, and use spot treatments rather than broadcast applications? Does your company use watering, mowing and aeration methods that reduce pest infestations?
- Do you apply fertilizer without testing to determine the soil's needs? (Find a company that applies fertilizer only when test results show it's needed.)

YardScaping Tips

- Reduce the size of your lawn; replace turf with native vegetation (groundcovers, shrubs, perennial flowers and ferns);
- Convert your high-input lawn to a low-input lawn by over-seeding with tall or fine fescue grass varieties;
- Mow high (2.5–3 inches) and let the clippings lie;
- Monitor precipitation with a rain gauge and water only as needed (lawns and plants typically need an inch a week of water during the growing season); and
- Test your soil before applying any fertilizers and apply a slow-release nitrogen formula only once in the fall (between Columbus Day and Halloween) when no rain is forecast (fall fertilization feeds the grass, not the weeds). Soil test kits are available from your county Cooperative Extension office.

Coastal Protection

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Secret Monsanto Genetically Engineered Potato Study Suppressed for 8 Years

Press Release

GM Potatoes are "unfit for human consumption"

GM Free Cymru, Feb 16, 2007

Straight to the Source

A secret feeding study of Monsanto GM potatoes, conducted in 1998 by the Institute of Nutrition of the Russian Academy of Medical Sciences and suppressed for 8 years, showed that the potatoes did considerable damage to the organs of the rats in the study (1) (2). In comparison the rats in the "control groups" which were fed on normal potatoes or on a non-potato diet were healthier, and had much less organ and tissue damage. This research, fully supported by Monsanto through the provision of the GM potatoes, was conducted at approximately the same time as Arpad Pusztai's research in the Rowett Institute.

The potatoes used in the study were Monsanto GM NewLeaf potatoes bred in 1995 from the Russet Burbank variety to be resistant to the Colorado Beetle. The GM event was registered as 082, and the potatoes are included in the Bt group of GM crops. They also contain an antibiotic resistance marker gene (3). The potatoes were deregulated in the USA in 1998, without any feeding studies being required. Another line was deregulated in 1999. Even earlier, in 1996, Monsanto started to introduce the potatoes into Russia and Georgia, and probably into many other countries with lax approval regimes as well (4). For some reason (probably to assist in the consent process) Monsanto co-operated in some feeding studies involving rats from the Institute of Nutrition of the Russian Academy of Medical Sciences. Something "inconvenient" showed up in these feeding studies, but the Institute refused to release all the information into the public domain and in 1999 the researchers presented a "doctored" version of their Report in support of Monsanto's application for Russian commercialization. The consent was duly given in 2000 by the Russian regulators on the basis of this corrupt piece of science.

However, Greenpeace and other consumer groups mounted a protracted and immensely frustrating campaign to obtain a sight of the feeding study Report. In May 2004 the Nikulinski District Court in Russia ruled that information relating to the safety of GM food should be open to the public. On the basis of this ruling Greenpeace tried to obtain the GM potato report; but the Institute and Monsanto refused to release it. So Greenpeace and local activist groups again took the Institute to court, and in October 2005 won a ruling that the Report must be released. At last it was handed over, and examined by Dr Irina Ermakova at the request of Greenpeace. She produced a brief Russian paper on her findings, and we have now produced an English- language version with the kind agreement of Greenpeace (5).

Ironically, the NewLeaf GM potato was a failure, and it proved to give poor yields and to be susceptible to disease in European environments. While Monsanto was enthusiastically promoting its GM potatoes in Eastern Europe, it was having second thoughts in the United States and Western Europe, and pulled out of GM potato development in 2002 (6). The results of the 1998 GM potato rat feeding study may well have had a bearing on that decision.

Dr Irina Ermakova, the Greenpeace consultant, has herself conducted animal feeding experiments with GM materials. In her very restrained commentary on the Russian study (1) she criticized the small scale of the experiment and its design, and was especially critical of the complacent conclusions drawn by the authors from evidence which was actually profoundly worrying. The GM potato was nutritionally inferior to its conventional counterpart and to other Russian potato varieties. The research results showed that both "normal" Russet Burbank potatoes and the GM variety caused "serious morphological changes in the internal organs" of the animals in the trials. They also showed that the group of animals fed on the GM potatoes suffered greater weight loss than the other animals, and statistically significantly greater damage to kidneys, liver and large gut. There was also greater damage to blood serum, testes and prostate. Dr Ermakova concluded: "The GM potatoes were the most dangerous of the feeds used in the trials..... and on the basis of this evidence they CANNOT be used in the nourishment of people."

Given the small scale of the feeding trials (only ten animals in each feeding group) and doubts about the statistical significance of some of the Report's findings, Dr Ermakova stressed the importance of follow-up studies on a larger scale and with more careful experimental design. But no matter what the shortcomings of the work may be, the Institute of Nutrition research did nothing to show that the Monsanto GM potatoes are safe. That should not be a surprise to anybody,

since Bt potatoes are classified as pesticides in the US and have never been tested for toxicity or allergenicity (7).

According to Dr Brian John of GM Free Cymru, it is incredible that Monsanto and the Institute of Nutrition have kept the research secret until now. "That obsessive secrecy has clearly been against the public interest," he says, "and it tells us a great deal about Monsanto's priorities. If the company had any regard at all for the health of consumers, it would have published these results world-wide in 1999, and at the very least it would have commissioned follow-up research which might have confirmed or discredited the study's findings. Instead of that, it connived with the Russian researchers to keep the information away from public scrutiny, just as it did with the feeding study results for MON863 maize in 2005. On that occasion too, it took a court case and massive media coverage to obtain sight of the research team's raw data and to reveal evidence of damage to health." (8)

While Monsanto attempted to suppress the information from the 1998 Russian study, it connived in the vilification of Dr Arpad Pusztai, a respectable and careful scientist whose findings were very similar (9) (10). The company must have known that the release of its own feeding study information would have supported his findings and would have contributed to a general understanding on health concerns specific to GM potatoes. "The actions of Monsanto in this case have been utterly reprehensible," says Dr John. "The company has continued to promote its GM potatoes as perfectly harmless, while for eight years it has managed to keep out of the public domain clear evidence that they are harmful to animals and hence to human beings also. And it has got away with it because the science establishment and the GM regulators within the EU -- as in Russia -- cannot see scientific corruption when it is staring them in the face." (11)

ENDS

Contact: Brian John or Ian Panton GM Free Cymru Tel 01239-820470 or 01437-720075

NOTES

- (1) Medical-biological investigations of transgenic potatoes, resistant to the Colorado beetle (under agreement with Monsanto Co.) Russian Academy of Medical Sciences, Institute of Nutrition Moscow, 1998. Signed off by VA Tutelian, Deputy Director. Physiological, biochemical and morphological investigations in rats. Full Report 275 pp, including raw data.
- (2) The commentary on the rat feeding study by Dr Irina Ermakova is here: www.gmfrecymru.org/
- (3) www.agbios.com/dbase.php?action=ShowProd&data=RBMT21-129%... Full petition (240 pp) for the deregulation of New Leaf GM potatoes (event 082) in the US: www.agbios.com/docroot/decdocs/05-242-028.pdf
- (4) GM potatoes in Georgia: www.foei.org/publications/link/gmo/16.html
- (5) www.greenpeace.org/russia/en/news/evidence-of-food-produc...
- (6) www.mindfully.org/GE/Monsanto-Dumps-Potatoe.htm www.gmo-compass.org/eng/grocery_shopping/crops/23.genetic...
- (7) www.plant.uoguelph.ca/research/homepages/eclark/safety.htm www.cathnews.com/news/409/doc/15colgm2.doc www.natural-law.ca/genetic/geindex.html www.epa.gov/oscpmont/sap/meetings/2000/october/brad3_envi... www.epa.gov/pesticides/biopesticides/pips/bt_brad.htm
- (8) www.organicconsumers.org/monsanto/rats060205.cfm www.spinwatch.org/index2.php?option=com_content&do_pdf=1&...
- (9) www.monsanto.co.uk/news/98/august98/81798world_in_action.... www.voteyeson27.com/monsanto.htm www.theecologist.co.uk/archive_detail.asp?content_id=753
- (10) Ewen SWB, Pusztai A (1999) Effect of diets containing genetically modified potatoes expressing Galanthus nivalis lectin on rat small intestine. Lancet 354:1353-1354
- (11) See, for example: www.rowett.ac.uk/gmo/ajp.htm www.agbioworld.org/biotech-info/articles/biotech-art/pusz... news.bbc.co.uk/1/hi/sci/tech/291105.stm www.lobbywatch.org/profile1.asp?PrId=113

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