The Seeds of a Good Idea:

The Evolution of Intellectual Property Rights for Genetically Modified Foods

Kate Sinnott, Graduate School of Library & Information Studies, McGill University
Email: catherine.sinnott@mail.mcgill.ca

Genetic Modification (GM): The alteration to an organism's genome by any number of methods, including inserting, transferring, or deleting genes or other DNA sequence.
National Research Council Canada

Patent: A government grant giving the right to exclude others from making, using or selling an invention.
Canadian Intellectual Property Office

Intellectual Property (IP): A form of creative endeavour that can be protected through a trademark, patent, copyright, industrial design or integrated circuit topography.
Canadian Intellectual Property Office

Selected Landmarks

1952: US patent law amendment states "anything under the sun" is patentable

1980: *Diamond v. Chakrabarty* - A GM bacterium which degrades fuel oil is awarded 1st patent for life by the US Supreme Court

1994: WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs) requires countries to make available & respect patents

End of 1990s: at least 70% of revenue-garnering patents and licenses owned by US universities are in life sciences sector

2000: Canadian Federal Court of Appeal grants patent to Harvard Oncomouse.

2002: Canadian Supreme Court reverses Harvard Oncomouse patent grant to (5:4 decision) until such time as Parliament chooses to amend the Canadian Patent Act to include higher life forms.

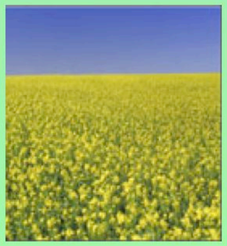
2004: *Monsanto Canada Inc. v. Schmeiser*: Monsanto sues a farmer who replanted seeds blown from their property onto his. Supreme Court of Canada rules in Monsanto's favour. It is an IP violation, even if the farmer was unaware that the violation was taking place.

Protections offered by patents are still limited by the jurisdiction of the country that conferred the rights

Life science patents may encourage further developments

BUT… patents with wide claims may block further invention.

IP can be contained within seeds produced at the end of a harvest. Evidence of piracy, whether unintentional or deliberate, may only be available through costly laboratory testing



As Schmeiser discovered, farmers can be held responsible for even unintentional piracy

Patents are only granted for organisms which are an invention. Naturally occurring organisms or genetic structures cannot be patented unless a process of refinement, extraction or isolation is used which allows the argument that it is the product of an invention, and not of evolution.

What is patentable under one system of law may not be patentable in another: The Harvard Oncomouse was granted patents by the US and the EU, becoming the first higher organism (non-plant, non-bacterium) to receive a patent. It was denied a Canadian patent.