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national farmers union

In Union Is Strength

GENETICALLY-MODIFIED WHEAT

A Report by the National Farmers Union
to the
House of Commons Standing Committee on
Agriculture and Agri-Food

June 5, 2003

Ottawa

Preface

The NFU is the only voluntary, direct-membership, national farm organization in Canada. It is also the only farm organization incorporated through an Act of Parliament (June 11, 1970).

The NFU is non-partisan and works toward the development of economic and social policies that will maintain the family farm as the primary unit of food production in Canada.

The NFU welcomes this opportunity to present the views of farmers concerning genetically-modified* wheat to the Standing Committee on Agriculture and Agri-Food.

* For the purposes of our policy and of this brief, the NFU uses the terms "Genetic Modification", "Genetic Engineering", and "Biotechnology" as fully synonymous terms, referring exclusively to the direct transfer or modification of genetic material using recombinant DNA techniques. Any references to non-rDNA techniques are referred to as "traditional animal/plant breeding". These definitions are consistent with those used by the Royal Society of Canada Report entitled Elements of Precaution: Recommendations for the Regulation of Food Biotechnology in Canada, which was released in January of 2001.

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GM Wheat

The NFU was the first farm organization to develop a comprehensive policy on the products of genetic modification. (Copies of this policy are available on request and are posted on our website at www.nfu.ca)

Our membership has determined that not all products of genetic modification are necessarily negative or positive, but that each product must be evaluated on an individual basis.

Therefore, for the purposes of this presentation, we will focus on "Roundup Ready Wheat" (RR wheat) as it is the first wheat variety to be submitted to the Federal Government for approval. This brief has three sections:

- A. About the variety
- B. Negative consequences of approving genetically-modified RR wheat
- C. Recommendation

A. About the variety

Genetically-modified (GM) Roundup Ready wheat has had its genes altered so that it will not be killed by applications of the herbicide glyphosate. This is the same immunity shared by Roundup Ready canola, which has been grown extensively in western Canada.

B. Negative consequences of approving genetically-modified RR wheat

1. Market loss The international customers that buy 82% of Canada's wheat crop say that they will stop buying if Canada introduces GM wheat. These customers have been clear—they will stop buying all wheat from us—GM and

non-GM alike. *This market loss issue applies to all GM wheat, not just RR wheat.*

2. Lower prices for farmers Building on point 1, GM wheat will dramatically decrease demand for Canadian wheat. Decreasing demand automatically means lower prices. Other wheat exporters, like Australia, are ready to step in and supply non-GM wheat to buyers. *This price issue applies to all GM wheat, not just RR wheat.*

3. Destruction of a viable organic industry GM canola has made it nearly impossible for organic farmers to grow that crop: seed supply contamination, pollen drift, and lack of practical segregation mean that organic farmers cannot be sure that their canola will be free of GM. At this time, GM patent holders have not taken responsibility for the care and control of GM seeds outside of the laboratory. This issue is currently before the courts in two separate cases in Canada. The introduction of more GM crops will leave organic farmers fewer and fewer crops to grow. *The organic issue applies to all GM wheat, not just RR wheat.*

4. Increased agronomic costs Some farmers now grow GM RR canola, and many other fields have been unintentionally contaminated with RR canola. Spray that canola with glyphosate and most of the weeds die leaving the canola unscathed. But introduce RR wheat into the crop rotations on that farm and the equation changes. Now there are two crops that cannot be killed by glyphosate—farmers will need to apply more and different chemicals to the land in order to kill unwanted volunteers. Based on current chemical choices and prices, researchers in Manitoba have estimated these increased costs at up to \$400 million per year in western Canada.

5. Links between formulations of glyphosate and increased disease Fusarium is a very serious and costly disease in wheat. Studies have shown that formulations of glyphosate increase the growth of fusarium. The growing of RR wheat would dramatically increase the amount of glyphosate applied during the growing season, and this may dramatically increase the growth and incidence of fusarium. Very low levels of fusarium (less than 10%) are enough to render wheat useless as food or feed and therefore completely valueless. More work needs to be done in this area, but RR wheat should not be approved until we understand the links between formulations of glyphosate and fusarium. *Different strains of fusarium attack different crops, but fusarium is also an important disease in potatoes.*

6. Segregation of GM wheat is not possible The recent NFU convention heard from Rene Van Acker, a Manitoba plant scientist, that seed-stock contamination is inevitable. Wheat pollen drift, out-crossing, gene bridging, mechanical mixing (seeds not cleaned out of combines, augers granaries etc.), and contamination due to weather events will create exactly the same problems

that we have with the contamination of registered canola seed. Segregation is not possible on the farm, much less the handling system, so we would be left with various levels of contamination throughout the system.

7. Environmental risks Environmental damage and damage to third party crops is certain to occur. Recent news events originating with Agriculture Canada have focussed on a new gene technology that involves producing sterile seed. With this product, the genetically-modified seed is viable, but any seed produced by out-crossing with non-GM seed is sterile. This means that non-adopters will have their seed killed by the genetically-modified seed. Farmers wishing to re-use their own seed will be prevented from doing so. In the case of organic farmers, their seed will again be contaminated by the GM crop.

The older "terminator" technology sterilized the GM seed—it sterilized itself. This new technology sterilizes someone else's seed—in effect becoming "predator" technology. This again raises the question, are patent holders responsible for damage caused by their products?

This methodology also raises another question. For thousands of years, our food supply has been based on seed that grows. Are we choosing the right option if we decide from now on to base our food supply on seed that will not grow—"terminator" or "predator" technology? The natural environment has a way of adapting and incorporating change in unpredictable ways. Should we be providing the natural environment with the option of producing sterile seeds?

8. Who decides? Eventually an individual or group will say "Why not let the market decide?" This sounds like a simple solution, but it is not. First, at the consumer end of the market, the buyer does not have any information on which to base a decision. The government of Canada has not endorsed mandatory labelling for products that contain GMOs and, therefore, the consumer is in the dark when it is time to make the purchase.

Second, at the farmer end of the equation, unfortunately there will always be some farmers that will grow or use a product if it is not specifically banned. Dieldren is a highly effective insecticide when used to control grasshoppers, and if it was not banned, some farmers would still be using it. Due to harmful side-effects to the rest of the environment, dieldren had to be banned. The same is true for freon, the CFC that used to be used in air conditioning systems. Freon and dieldren were used by a society that was ignorant of the harmful side-effects on the environment. The market is incapable of making these types of responsible decisions.

9. Control of our food Approval of GM wheat further consolidates the control of our food supply into the hands of a handful of transnational seed and pesticide corporations. These corporations, through privatization of research and development, intellectual property rights legislation, and widespread

genetic contamination, are fundamentally changing our food supply system. The issues involved are outlined in a paper written by Devlin Kuyek titled Contamination and Corporate Control of Canada's Seed Supply.

By reducing public research and creating a legislative framework that rewards patent holders of living organisms, government has spearheaded the change. One consequence of the transformation is that we have at least two court cases in process between farmers and seed companies, with others sure to follow. In these cases, farmers' money is being used to pay for both sides of the cases, and the outcomes will form the basis of public policy. If citizens are formulating public policy through the courts, then why are citizens electing and paying politicians. This may actually tie in to the Prime Minister's intended changes to the way that political fundraising is done in this country, and if his changes proceed as planned, we may in time return to public policies that again provide some balance between the public good and the private good.

C. Recommendation

The National Farmers Union recommends in the strongest possible terms that the government of Canada prevent the introduction of GM wheat into Canadian food and fields unless the concerns of Canadian farmers, industry, and consumers are adequately addressed.

**Respectfully submitted by the
National Farmers Union**