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**STATEMENT OF TODD LEAKE
For the Dakota Resource Council
and the
Western Organization of Resource Councils
before the
DOMESTIC POLICY SUBCOMMITTEE
OVERSIGHT AND GOVERNMENT REFORM
COMMITTEE**

***“ IS THE U.S. DEPARTMENT OF AGRICULTURE (USDA) ACCOUNTING FOR
THE COSTS TO FARMERS FROM CONTAMINATION CAUSED BY
GENETICALLY ENGINEERED (GE) PLANTS”***

**THURSDAY, MARCH 13, 2008
2247 RAYBURN HOB
2:00 p.m.**

I would like to thank the Chairman Kucinich, Ranking Member Issa, and the members of the Subcommittee for the opportunity to testify today on this matter of great importance to all U.S. farmers and American agriculture.

My name is Todd Leake. I own and operate a family farm near Emerado, North Dakota, which is located in Grand Forks County in the northern part of the state. We farm conventionally, growing approximately 1000 acres of wheat, 500 acres of soybeans and 500 acres of navy beans and sunflowers annually. I am a member of the Dakota Resource Council and the North Dakota Farmers Union. The Dakota Resource Council is a non-profit grassroots organization which formed in 1978 to protect North Dakota's land, air, water, rural communities and agricultural economy. The Dakota Resource Council belongs to the Western Organization of Resource Councils, a regional network of seven grassroots community organizations that include 9,500 members and 45 local chapters.

In North Dakota our crop options are limited due to a relatively short growing season and low number of growing degree days. North Dakota is a national leader in cool season crop production. Wheat is a cool season crop and can be grown profitably even in areas where soil quality is poorer. Wheat generates the greatest amount of income for the North Dakota crop producer and is critical to our economic well-being and to the rural communities we support. North Dakota is the nation's leading state in hard red spring wheat production.

Because wheat is so critical to our economic survival, I became concerned when the agricultural press began publishing articles in 1999 regarding ongoing research and field trials of a genetically engineered (GE) hard red spring wheat variety that would be tolerant to Monsanto's Roundup herbicide. As with GE corn, canola, soybeans and cotton varieties that had been deregulated a few years before, the research was a precursor to the commercialization of Monsanto's Roundup Ready (RR) wheat and the agricultural press was touting the new technology as the greatest innovation in the history of wheat production. If the new technology performed as advertised, RR wheat would increase yields, lower production costs and provide a significant environmental benefit through reduced pesticide use.

Despite the accolades, there were significant issues not being addressed by many farmers, agricultural researchers and economists and, most importantly, by policy-makers. The verdict was still out on the safety of these new genetically engineered crops. Major questions regarding environmental impacts, food safety and the adequacy of the regulatory processes were on the minds of consumers worldwide when the StarLink contamination debacle was exposed through independent testing conducted by U.S. consumer groups. And most importantly, the economic consequences of the uncertainty of consumers about the environmental and food safety impacts and the adequacy of U.S. regulatory processes had not been considered.

As testing confirmed StarLink contamination in a wide variety of products ranging from soup to taco shells, the global marketplace was quick to react. Consumer outrage resulted in the enactment of GE market restrictions, prohibitions and labeling requirements in many European and Asian countries. Corn exports dropped to zero in the European Union at a cost of \$300 million annually to American corn producers in that market alone.

It was against that backdrop that wheat producers in the Northern Plains and Canada began their assessment of the pros and cons of commercializing Roundup Ready wheat. It did not take a PhD in agricultural economics to realize that we were staring in the face of a potential economic disaster. North Dakota wheat growers export approximately 50% of our crop to foreign markets. By way of comparison, just 20% of the U.S. corn harvest is sold outside the U.S. To make matters worse, the vast majority of wheat importing countries had enacted GE import or labeling restrictions or restrictive tolerances. For the U.S. corn producer options remained. Although not as profitable, GE crops could still be sold as animal feed for livestock since the market restrictions and labeling generally applied only to GE content in food or food products. For the wheat grower those options simply don't exist. The global wheat market is highly competitive and selling wheat for animal feed is simply not an option. Loss of markets in Japan, other Pacific Rim countries and the European Union would have been devastating to North Dakota wheat growers and the economy of the entire state. Wheat growers in other states and Canada would have been devastated, as well.

With our livelihoods at stake, wheat growers in the U.S. and Canada began to organize and educate. We first educated ourselves, then our fellow wheat growers, our farm groups, our friends and allies among consumer and environmental groups, and policy-makers. We believed that if we raised the visibility of this issue and the economic importance of wise and thoughtful decision-making, we would slow the train long enough for clearer minds to prevail.

While there are many facets to the farmer driven campaign that ultimately led to Monsanto's decision to suspend – and later withdraw – its petitions for deregulation in both the U.S. and Canada on May 10, 2004, this testimony will focus on the constant battle with the U.S. Department of Agriculture (USDA) which, from my perspective, sees its job as serving the biotech industry to the detriment of the American wheat grower.

From the beginning of this campaign in 2004 we realized that in the end it would be USDA that would decide whether RR wheat would be commercialized. Early on we determined that a USDA decision to conduct an Environmental Impact Statement (EIS) involving a comprehensive assessment of the environmental and socio-economic impacts of commercializing RR wheat provided the best opportunity to present our case.

I'm not an attorney and don't pretend to be one, but our reading of the National Environmental Policy Act (NEPA) in consultation with well respected environmental litigators indicated that an EIS is required when an agency determined that a major federal action, such as permitting the commercial use of a genetically engineered crop, could have a "significant impact" on the human environment. In determining whether a significant impact exists, the agency weighs a number of factors both environmental and socio-economic. While the threshold question involves the existence of an environmental impact, our conclusion from a farmer's perspective was that the potential for contamination was a virtual certainty. We believed that the potential loss of markets alone should have required a finding of "significant impact," triggering the need for an EIS. As would become apparent to us during the next three to four years, that conclusion was anything but obvious to the USDA.

Between 2001 and 2004, numerous discussions were had with USDA officials regarding the need for an EIS in order to assess the economic impacts on wheat farmers in North Dakota and across the country. Farm group leaders had conversations with the head of the USDA/APHIS Biotechnology Regulatory Services, Cindy Smith. When informal discussions failed to produce an agreement, farm groups in consultation with environmental attorneys from the Center for Food Safety developed and submitted a formal Petition requesting that an EIS be conducted.

The Legal Petition Seeking an Environmental Impact Statement Concerning the Deregulation of Genetically Engineered Wheat sought inclusion of a socio-economic impacts analysis in any environmental impact analysis performed concerning the commercialization of genetically engineered wheat including: the loss of wheat exports resulting from market rejection of GE varieties, the potential loss of U.S. organic wheat

production due to contamination by GE traits and the effects of increased seed prices as a result of royalty and technology use fees.

In March of 2004, accompanied by our legal representatives, an agricultural economist, Dr. Robert Wisner, of Iowa State University, other wheat growers and farm group leaders, I met with Bill Hawkes, then APHIS Undersecretary for Marketing and Regulatory Affairs and Acting Director of APHIS on this issue. In that meeting we detailed the environmental consequences and the economic impacts of the proposed action to commercialize RR wheat, laying out the case for an EIS. Ultimately, despite all of our efforts, our request was denied.

Discussions on environmental impacts always came back to USDA's assumption that, because wheat is a self-pollinating plant and its pollen is viable for only a short period time contamination of non-GM wheat by GM wheat is impossible. However, studies by Drs. A.L Brule-Babel and R.C. Van Acker of the Plant Science Department at the University of Manitoba directly contradicted that assumption. Those findings concluded that while out-crossing events generally occur within 3 meters of the pollen source, out-crossing has been shown to occur up to 27 meters from the source. Those researchers also found that small amounts of gene flow with herbicide tolerant traits can lead to high levels of volunteers when herbicide is applied, since those volunteers will be unaffected. Further they determined that relatively low numbers of volunteers could result in a failure to meet tolerance standards and consequently the marketability of the wheat. They concluded that once GE wheat is released into the environment it is not possible to guarantee the production of 0% GE wheat.

The conclusion of Dr. Brule-Babel's research should in and of itself trigger a broader assessment under NEPA of environmental and socio-economic impacts. If you take those findings and apply them to the 62 million acres of wheat grown in the U.S., the potential for GE contamination is magnified tremendously.

One huge source of aggravation for wheat growers was the "head in the sand" mentality exhibited by USDA when it came to conducting a broader assessment regarding the potential for contamination. Anyone who farms or knows anything about the grain handling and processing system in the U.S. knows the difficulty in keeping Mother Nature contained in nice little boxes.

Even if you assume that pollen drift and out-crossing do not create the potential for contamination, you only have to take a cursory look at how farms operate and grain moves from field to fork. At planting, seed stock contamination would result if RR seed was not completely cleaned from trucks, augers and conveyers, totes, bins and seeding equipment. RR wheat seed would have to be stored in separate bins and harvested grain would have to be delivered to separate grain elevators or mills to prevent commingling.

During harvest combines "throw over" up to 5 bushels per acre and most of that seed is viable and straw choppers can throw seed up to 50 feet, which under the right circumstances can find its way into the neighbor's field. Trucks transporting harvested

grain typically go untarped, blowing viable seed into ditches and nearby fields. Each and every one of these typical farm operations can, and undoubtedly would, be a significant source of RR contamination.

A research study conducted by North Dakota State University (NDSU) in 2000 provides a perfect example of how contamination could occur. Researchers used a combine for a full harvest season cleaning it to the best of their ability at the end of harvest. The thoroughness of the cleaning operation went far beyond what is typical during the rush to get the crops out of the fields. After cleaning was completed, the researchers disassembled the combine and extracted 90 pounds of grain from the “clean” combine.

When you consider the fact that custom harvesters work the fields from Texas into Canada, it is hard to imagine a scenario in which conventional wheat would remain free of contamination, without even considering potential commingling during truck or train transport, at the terminal facilities in the Gulf, Mississippi or the Great Lakes, or on cargo containers and ships that transport the wheat to major foreign buyers.

Even the USDA – though not the Animal and Plant Health Inspection Service (APHIS) saw the handwriting on the wall. In 2002, GIPSA issued a statement published in the Federal Register to the effect that if RR wheat were to be commercialized, the agency could no longer certify that U.S. wheat export would be GE-Free.

While one could argue that all of these potential problems of contamination could be cured with an effective system of segregating GE and non-GE crops through identity preservation processes, you come to the conclusion that totally independent farm, transportation and infrastructure systems would be required. The cost of a separate system for growing, transporting and handling is beyond calculation. However, with competition fierce in the global wheat market, it is clear that those costs could not be passed onto the buyer or the consumer and would fall to the conventional wheat producer to pick up the tab. Our foreign customers made clear that such efforts would be futile, however – rather than mess with the time and cost of testing each bushel of our wheat they buy in order to meet the zero tolerance demands of consumers in Europe, Asia, and elsewhere, foreign pasta, bread and flour companies told us they would buy all of their wheat from Ukraine, Australia and other GM-free countries if any variety of genetically modified wheat was approved for commercial release and planting in the United States.

I am sure that plant biologists, soil scientists, agronomists and a whole host of applied science professionals could fill a library with other analyses on the environmental impacts related to the commercial release of RR wheat onto the farm fields of the northern U.S. and Canada. The fact remains that the USDA looked at the same picture, saw nothing and denied our request for an EIS without ever bothering to take the next step and conduct a realistic assessment of the economic devastation that would inevitably result from the commercialization of RR wheat.

As clear as the certainty of environmental impact, so to was the potential for economic disaster. From the time that wheat growers were told that RR wheat was being developed

for commercialization, we began to assess what would be the consequences to our industry if that became a reality.

Working closely with Canadian wheat producers we initiated a cross-border education program. As the education and media around this effort increased, the visibility of this issue in Canada, the Canadian Wheat Board (CWB) which markets the vast majority of wheat grown in that country, surveyed its clientele on attitudes regarding GE crops and the commercialization of RR wheat in 2002. The survey results confirmed our worst fears. 82% of Canada's international buyers of Hard Red Spring Wheat (by tonnage) and two-thirds of buyers in all classes did not want to buy GE wheat.

That same year the U.S. Wheat Associates (USWA) conducted a similar survey and concluded that "buyers in Japan, the European Union and Korea repeatedly and definitively stated that they would not accept genetically modified (GM) wheat, *at any tolerance*" (emphasis added). Those 3 countries accounted for 44% of total hard red spring wheat exports. My state, North Dakota, would be hit the hardest since we produce 50% of all hard red spring wheat and 50% of our wheat is exported.

In 2002 USDA's Foreign Agriculture Service assessed information being compiled in overseas branch offices regarding buyer attitudes and governmental regulation of GE crops. Their findings provided further support to the conclusions contained in the CWB in USWA surveys, of the top ten U.S. wheat importing countries all but two countries had laws on biotechnology with laws pending in the remaining two, all had laws regarding the importation of biotech crops, all had laws pertaining to the environmental release of biotech crops and all but two had laws specific for biotech labeling.

While the battle would rage for the next few years – and continues today -- over establishing tolerances for GMO crops in foreign countries, major buyers of U.S. wheat made it clear that their consumers had spoken, and regardless of the outcome of government action, the commercialization of genetically modified wheat would result in the loss of those markets. Statements to that effect were made by the Japanese Flour Millers Association, whose members account for 90% of the total wheat market in that country; the Japanese Food Agency; another major buyer of U.S. wheat, Rank Hovis (Britain's largest flour mill); Grande Molini Italiana SpA (Italy's largest miller, speaking on behalf of the European milling industry; and France's largest wheat miller.

During that period Norway, South Korea, Taiwan, Egypt, the Philippines, Algeria, China, Indonesia, Malaysia and Thailand reiterated their opposition to GE wheat through outright rejection, strict labeling laws, or restrictive tolerances.

Clearly, the global marketplace had spoken. GE wheat had no place in its collective breadbasket. As it became readily apparent that major buyers and markets were not going to change their position, Dr. Robert Wisner, a respected agricultural economist from Iowa State University assessed what the loss of those major markets who mean to the prices that farmers would be paid for their wheat if the RR variety was

commercialized.¹ The results were sobering, if not surprising. Using a variety of scenarios based on the likely loss of markets if RR wheat were commercialized, Dr. Wisner concluded that U.S. wheat growers would lose between 43% and 52% of their total exports resulting in a net loss in the price paid to farmers of between 32% and 35%.

Ultimately, it was U.S and Canadian farmers, working in collaboration with consumers and buyers in major wheat markets, who forced Monsanto's decision to stop its push to commercialize RR wheat. Throughout the four long years, while I tried to manage a farm while educating myself, fellow farmers and anyone who would listen about the perils of RR wheat, the USDA stood quietly by. For an agency chartered to protect the interests of U.S. farmers and American agriculture, their performance was abysmal. The agency ignored the facts and disregarded the law, doing a disservice to the very constituency it was established to protect.

Thank you, Chairman Kucinich and Ranking Member Issa for the opportunity to come before the Subcommittee and offer my testimony. If the Members have any questions, I will attempt to answer them to the best of my ability.

¹ Dr. Wisner's original 2003 report and two subsequent updates can be found at <http://www.worc.org/issues/marketrisk-reports.html>