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S. HRG. 108–687

HEARING ON S. 1406, THE PESTICIDE HARMONIZATION ACT

HEARING

BEFORE THE

SUBCOMMITTEE ON PRODUCTION AND PRICE COMPETITIVENESS

OF THE

COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY

UNITED STATES SENATE

ONE HUNDRED EIGHTH CONGRESS

SECOND SESSION

JUNE 23, 2004

Printed for the use of the
Committee on Agriculture, Nutrition, and Forestry

Available via the World Wide Web: http://www.agriculture.senate.gov

U.S. GOVERNMENT PRINTING OFFICE

94–731 PDF WASHINGTON : 2004

For sale by the Superintendent of Documents, U.S. Government Printing Office
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CONTENTS

Page

HEARING(S):

Hearing on S. 1406, The Pesticide Harmonization Act 01

Wednesday, June 23, 2004

STATEMENTS PRESENTED BY SENATORS

Dole, Hon. Elizabeth, a U.S. Senator from North Carolina, Chairwoman, Subcommittee on Production and Price Competitiveness, Committee on Agriculture, Nutrition, and Forestry 01

Baucus, Hon. Max, a U.S. Senator from Montana 02

WITNESSES

Dorgan, Hon. Byron, a U.S. Senator from North Dakota 03

Sharp, Adam, Associate Assistant Administrator, Office of Prevention, Pesticides, and Toxic Substances, and Acting Agriculture Counsel to the EPA Administrator, U.S. Environmental Protection Agency, Washington, DC 05

Panel I

Gage, Mark, President, National Association of Wheat Growers, Page, North Dakota 11

Gray, Jim, Pesticide Registration Coordinator, North Dakota Department of Agriculture, on behalf of the National Association of State Departments of Agriculture, Bismarck, North Dakota 09

Vroom, Jay, President and Chief Executive Officer, CropLife America, Washington, DC 13

APPENDIX

PREPARED STATEMENTS:

- Burns, Hon. Conrad 25
- Dorgan, Hon. Byron 22
- Gage, Mark 41
- Gray, Jim 35
- Sharp, Adam 27
- Statements submitted by Senator Dole from Ralph Peck, Bob Stallman, Jake Cummins, and Rob Rynning 110–116
- Vroom, Jay (with attachments) 47

DOCUMENT(S) SUBMITTED FOR THE RECORD:

- Agricultural Policy Brief 123
- Cochran, Hon. Thad 118
- Conrad, Hon. Kent 120
- Montana Farmers Union 133
- Provinces-States Advisory Group/Tri-National Agricultural Accord 149
- United States and Canadian Agricultural Herbicide Costs: Impacts on North Dakota Farmers 134

HEARING ON S. 1406, THE PESTICIDE HARMONIZATION ACT

WEDNESDAY, JUNE 23, 2004

U.S. SENATE,
SUBCOMMITTEE ON PRODUCTION AND PRICE COMPETITIVENESS, OF THE COMMITTEE ON AGRICULTURE, NUTRITION AND FORESTRY,
Washington, DC

The Subcommittee met, pursuant to notice, at 10:01 a.m., in room SR–328A, Russell Senate Office Building, Hon. Elizabeth Dole,

[Chairwoman of the Subcommittee], presiding.

Present or submitting a statement: Senators Dole and Baucus.

STATEMENT OF HON. ELIZABETH DOLE, A U.S. SENATOR FROM NORTH CAROLINA, CHAIRWOMAN, SUBCOMMITTEE ON PRODUCTION AND PRICE COMPETITIVENESS, COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY

Senator DOLE. Good morning. This meeting of the Senate Subcommittee on Production and Price Competitiveness will come to order.

Today, the Subcommittee will hear from various stakeholders and experts on the proposal to register Canadian pesticides for use in the United States. Specifically, we will focus on S. 1406 as proposed by Senator Dorgan and others.

Senator Dorgan, Senator Burns, and other cosponsors I know have long sought legislation to ensure pricing parity across the northern border with Canada. This subcommittee has a responsibility to consider many factors associated with this issue. Certainly, it is important that we evaluate the true price differential data, including currency valuation and patent considerations. Our responsibility goes beyond comparing prices. We must also look at any new legal liability issues, and we need to look at the effects such legislation will have on EPA's ability to ensure that chemicals registered for use in the United States are safe for humans and for the environment.

We have not previously tasked EPA with imposing penalties derived from price comparisons, nor have we asked our courts to answer the question of who is legally responsible for damages due to application of a pesticide produced outside of this country. It is my desire to have a full exploration of these issues during today's hearing.

Senator Baucus.

STATEMENT OF HON. MAX BAUCUS, A U.S. SENATOR FROM MONTANA

Senator BAUCUS. Thank you very much, Madam Chairwoman. I regret I cannot stay for the entire hearing. We are marking up in the Finance Committee now the Australian Free Trade Agreement. I deeply appreciate your holding this hearing.

I might remind people who don't know this, but agriculture accounts for over half of the economy in the State of Montana, and it has been tough. Years of drought and low prices and record high costs for fuel and for pesticides have contributed to quite low profit margins, in some cases no profit margin, and that is one reason why this hearing is so important. That is why it is so important that we harmonize the prices between the United States and Canada with respect to pesticides.

Montana shares 445 miles of border with Canada. That is the longest of any State in the nation. The border isn't everything that we share with Canada. We also share a similar climate. We share some of the same crops. When it comes to protecting these crops with the same chemicals made by the same companies, we face very different prices.

We in Montana estimate that our farmers lose millions of dollars in increased pesticide costs a year. We are very pleased, frankly, by the study done by the University of North Dakota, which I know that the Senator from North Dakota will talk about more explicitly, but essentially, that study showed that the North Dakota producers' total pesticide expenditures were at least 8 percent higher, 8.3 percent higher, than they otherwise should have been.

There is a grower in Montana named Herb Carst. He is a barley and wheat farmer, and this is a quote from him when he talked to me about this. He said, "Agriculture chemicals are one of my most expensive inputs, at an annual cost of approximately $50,000. I should be able to drive to my local dealer and purchase those products for the same price as my Canadian competitor. It is a barrier created through labeling." He has anticipated he could save $4,000 if the prices were the same.

He went up to Canada and poked around a little bit and he found that for the chemical Achieve, there is a difference of 5.3 percent. For Fellowmaster, a 24 percent difference. For Puma, a 29 percent difference. The average of those differences is 19.6 percent.

For all these reasons, I am a strong supporter of Senator Dorgan's bill, S. 1406. There are many other Senators, as you mentioned, Madam Chairwoman, who are also cosponsors, including my colleague Senator Burns from Montana.

This legislation amends the Federal Insecticide, Fungicide, and Rodenticide Act to permit the EPA in certain States to register a Canadian pesticide for distribution and use in the United States if the pesticide is substantially similar or identical to one already registered in the United States. It is very important that this legislation or something very close to it pass very quickly. The current regime is just unfair and we believe very strongly that the approach taken by the Senator from North Dakota is very much in the right direction.

Thank you very much, Madam Chairwoman, for holding this hearing and for also allowing me to speak at this time.

Senator DOLE. Thank you, Senator Baucus.

We will hear first from Senator Byron Dorgan, sponsor of the legislation. Welcome, Senator Dorgan.

STATEMENT OF HON. BYRON DORGAN, A U.S. SENATOR FROM NORTH DAKOTA

Senator DORGAN. Madam Chairwoman, thank you very much. As you know from your service in the Senate, it is much harder to get things started than it is to get things stopped. We have been working a long while on this subject of chemical harmonization.

As you know, the trade agreement that was done with Canada, including the U.S.-Canada Free Trade Agreement and NAFTA, offered promises of chemical harmonization, but as is usually the case with trade agreements, there is much more effort to negotiate them than there is to follow up on the details of the trade agreements themselves, and that is certainly true with this subject.

I noted this morning that there was a new story about this issue and the chemical companies confidently predicted that this issue will go nowhere. They perhaps made that prediction based on past results. It has been a difficult and tortured trail to try to get this kind of legislation passed in the Congress.

The cosponsors of this bill are myself, Senator Burns, Senator Conrad, Senator Daschle, Senator Crapo, Senator Johnson, Senator Baucus, a big, pretty broad, bipartisan group of Senators who believe very strongly that what is happening with respect to cross-border trade, or the absence of it, with respect to agricultural chemicals is unfair to our farmers.

I might just put up a couple of charts to show you a couple of examples. I will, of course, do it from the standpoint of the impact on North Dakota farmers. These are price differentials, Stinger, Puma, Liberty, Glyphosphate, which is commonly called Roundup. You will see the price differentials there.

The second chart, if you will put the second chart up just for a moment, the second chart talks about in the year 2002, according to a North Dakota State University study, North Dakota farmers paid $20 million more than they would have had they bought chemicals at the prices that the identical or nearly identical chemical was sold at in Canada. The point of that study is markets must be segregated if different prices are to be charged. The international border and trade restrictions then offer that capability to segregate and that is why we have these price disparities.

If I might have that box of Liberty, that is the herbicide that—I am told by the manufacturer that they actually have a different color box or a different kind of box. I assume they are putting the same chemical in it, however. This is used on canola acres. We plant a lot of canola acres in North Dakota. You can purchase this chemical called Liberty in Canada or you can purchase it in the United States. The names aren't different and the chemical composition is not different in any significant way.

The North Dakota cost would be $14 per acre applied and the Canadian cost, $9.60 per acre. That is a difference of $4.40 an acre. As I said, we have a substantial number of acres in North Dakota and it makes a big difference with respect to this price differential.

In fact, our farmers are engaged in an international competition with respect to pricing. When you have input costs that are dramatically different, it has an impact on our ability to compete.

Roundup is a chemical that has not as much price differential, $1.40 to $1.83 price differential, but we have 2.25 million acres on which Roundup is applied in North Dakota. That is $3.7 million in increased chemical costs for North Dakotans.

The question here is, should this exist? We are having a similar debate with respect to reimportation of prescription drugs, not just from Canada but from other countries. Should we be able to reimport FDA-approved prescription drugs? It is an interesting question. Congress is coming down on the side of, yes, we should. The Senate has voted on that. The House has voted on it. We haven't yet made that a law change because it has been opposed up the line by the Speaker and some others.

In many ways, this is a similar question, and with respect to cross-border trade with Canada, should American farmers be prevented from accessing this chemical in Winnipeg, Canada, and being able to import it back into this country. The answer now is no. We suggest that with this legislation that this chemical be labeled and that the EPA—we don't take this out of the hands of the EPA, but that we would allow the State agricultural authority, with the consent of EPA, to label an identical chemical and allow it to be imported into this country.

Madam Chairwoman, the question has been around for a long while. It is long past the time to solve it. You will hear from my colleagues, as well. You heard from Senator Baucus today. You will hear from Senator Burns and Senator Crapo in Idaho.

There is a reason this refrain comes from those of us who are on the border, because a farmer who farms just south of the Canadian border discovers that the identical product is sold just north but that he or she cannot purchase it and bring it south at this point without violating the law, and the chemical company understands this segregation of markets and they refuse to label it in this country. Therefore, they are able to hold up our farmers for a much, much higher price than is fair or is reasonable.

We can correct that here in the Congress. This is where it should be corrected, and it has taken far too long already for this to have been done. My hope is that with your chairmanship and with the subcommittee, we can begin the process of marking this bill up, send it to the full committee, and send it to the floor of the Senate, where I believe you will find very strong support for the legislation.

Thank you, and let me thank Senator Cochran, as well, for your willingness to hold this hearing.

Senator DOLE. Yes, indeed. Thank you, Senator Dorgan. I appreciate your concern regarding this issue, your hard work on it, and your excellent presentation. Thank you very much.

Senator DORGAN. Thank you.

[The prepared statement of Senator Dorgan can be found in the appendix on page 22.]

Senator DOLE. I would like to include in the record the prepared statement of Senator Conrad Burns, who could not be with us this morning.

[The prepared statement of Senator Burns can be found in the appendix on page 25.]

Senator DOLE. We will hear next from Mr. Adam Sharp, who is the Associate Assistant Administrator of the Office of Prevention, Pesticides, and Toxic Substances of the Environmental Protection Agency. Welcome, Mr. Sharp.

STATEMENT OF ADAM SHARP, ASSOCIATE ASSISTANT ADMINISTRATOR, OFFICE OF PREVENTION, PESTICIDES, AND TOXIC SUBSTANCES, AND ACTING AGRICULTURE COUNSEL TO THE EPA ADMINISTRATOR, U.S. ENVIRONMENTAL PROTECTION AGENCY, WASHINGTON, DC

Mr. SHARP. Thank you. Good morning, Madam Chair, members of the subcommittee. I am Adam Sharp, Associate Assistant Administrator, EPA's Office of Prevention, Pesticides, and Toxic Substances. I am also currently the Acting Agricultural Counselor to the EPA Administrator.

Let me ask first if I can have my full testimony, of course, submitted to the record.

Senator DOLE. Yes. Without objection, yes.

Mr. SHARP. Thank you. This morning, I will provide an overview on the long-term approaches that EPA is taking that will help address this issue as well as discuss the current legislation under consideration.

First, I want to say that we have worked closely with Congressional staff over the last several years as well as with State officials and others to explore remedies that would help address price differences that U.S. farmers may be experiencing. As a result of those discussions, EPA has made significant progress on a variety of administrative and regulatory approaches that help facilitate equal access and harmonization.

In the long term, let me describe some of our strategies and actions that EPA has taken, has been a part of over the last several years, as well as partnerships that we have developed with the Canadians and others in helping to establish some footholds on this very important issue.

First, under the North American Free Trade Agreement, under the NAFTA Technical Working Group for Pesticides and through other international forums, EPA has been working closely with Canada and other trading partners to break down barriers and facilitate trade competitiveness. These partnerships have led to more consistent regulatory and scientific requirements, which in turn has increased harmonization between the U.S. and Canada. Over the years, EPA has achieved real success in facilitating freer trade in pesticides.

For example, since 1998, the U.S. and Canada have been guided by a Record of Understanding. This agreement included provisions specific to pesticide harmonization and has encouraged greater cooperation among government regulators, growers, and the pesticide industry. This coordination has helped advance harmonization efforts between our two regulatory systems.

The NAFTA TWG recently issued a 5-year strategy which put forward its goals for establishing a North American pesticide market. This vision promotes equal access to pesticides by offering in-

centives, including a harmonized review process for new pesticide products and work sharing across national boundaries.

To date, the vast majority of data requirements and test guidelines have been harmonized. The submission procedures and formats have also been harmonized, resulting in significant efficiencies for both registrants and also government reviewers. As a result, both work sharing and joint reviews of recent pesticide registration submissions and harmonization of risk assessment procedures between the U.S. and Canada have significantly improved.

On priority pesticides, since 1999, EPA has worked very closely with the North Dakota Department of Agriculture, growers, industry groups, and others, trying to get a list of the products that we think are the priorities that the growers are telling us that they need and that there are real cost differences for. We came up with a list of 23 identified priorities. EPA has since registered 15 of those for growers' use. We also have work underway to continue on the rest of those.

Over the years, EPA has reached out to grower groups in an ongoing effort to reflect grower priorities in our current registration plans and priorities. We are focusing our resources on products that are most needed by growers.

Another important piece of the TWG's efforts is the creation of a NAFTA label, and some of the other folks after me are also going to talk a little bit about the NAFTA label. This is something we have been very supportive of. This label can help enable the sale and distribution of a pesticide across North America, thereby helping to make products available in Canada and the U.S. at the same time.

The joint review program has resulted in simultaneous registration of 22 new pesticide products in the U.S. and Canada, with 12 additional products currently under review. The governments are also sharing resources and scientific expertise or work sharing in reviewing data on several other pesticide products.

You have our commitment to continue work within our current authorities to promote a level playing field for U.S. growers. We believe regulatory harmonization will continue to bear fruit and help create a more level playing field for pesticides. In the near term, EPA stands ready to continue to work with Congress and others on possible legislative solutions that effectively address observed differences in pesticide pricing, as long as the protection of public health and the environment are not compromised.

However, there are some broad policy implementation concerns that the current legislation—that could have, I believe, additional ramifications for ourselves as well as potentially on other trade agreements, et cetera.

Specifically for EPA, one of our concerns is implementation issues. For example, there are important questions regarding an individual registrant's ability to assume the legal, financial, reporting, and other requirements of FIFRA. Of course, any legislation should not place unreasonable resource burdens on the government's pesticide registration program or cause any unintended consequences on other priorities in regulating pesticides.

In the long term, EPA is working to harmonize the availability of pesticide products between the U.S. and Canada through the

NAFTA Pesticide Working Group, in cooperation with stakeholders, States, growers, and others. International harmonization on pesticide regulation efforts continue to be a key focus of EPA and these efforts hold significant promise to help alleviate some of the alleged pricing issues.

In closing, I look forward to working with you, other Members of Congress and other affected stakeholders on this important issue, and I will take any questions that you have at this time.

Senator DOLE. Thank you, Mr. Sharp.

[The prepared statement of Mr. Sharp can be found in the appendix on page 27.]

Senator DOLE. The proposed legislation requires the Environmental Protection Agency to obtain the confidential statement of formula for any Canadian pesticide proposed for U.S. registration to determine if it is, in fact, identical or substantially similar to a product currently registered domestically. Now, how will EPA determine if a Canadian pesticide is substantially similar in composition to a domestically registered chemical? How will "substantially" be interpreted?

Mr. SHARP. Right. We have talked with Senator Dorgan's staff and others about technical advice on this legislation and there is certainly a list of issues that we have provided advice on. This is one of those, and for us, this is a key one.

If the legislation passed, it would have a requirement on us to make a substantially similar finding, and the way the legislation currently is written, that burden is on EPA to make that decision.

Our problem with that is the question that you just asked. Do we have any legal ability to get that information, the confidential business information, from a Canadian company to make that finding? The answer to that is no. We don't have an ability to do that. Do we make substantially similar findings? Yes, we do, and we do all the time on "me too" types of registrations. It is a very specific type of registration activity that we take part of on a constant basis. That type of decision, a "me too" decision, is based on the confidential statement of formula that we have. If we can't get it, it creates a real problem for us.

Senator DOLE. Companies registering a product in the United States currently pay registration fees to help generate resources for EPA to conduct the necessary reviews. Now, under the proposed legislation, no such fee would be required, yet the EPA has to approve or disapprove the application within 60 days. How would this be paid for?

Mr. SHARP. That is an unknown. I mentioned actually in my testimony the resource constraints. We have, and we are very happy to have, actually, the support of Congress recently in passing the PRIA legislation, a new fee system, and that is a terrific opportunity for us, for growers, for companies and others to be able to produce the results that folks have been wanting to get, which is a more timely assessment of products and registration of products. It also sets up a new fee system and a fee of scheduling for moving products through that system.

This legislation would be outside that realm. I am not sure how it would actually fold in with the fee system or with our current resources. It would be potentially a resource drain on us to have

to pull a priority and/or workloads from priority areas that we currently have and move them into doing this type of work. I guess one of our concerns has been if you move this legislation without additional resources, it certainly would cause a problem.

One of the other issues that you mentioned is the 60-day time limit. I mentioned the "me too's" a few minutes ago, of how we register products that are substantially similar within this country if we have the proper information. One of the challenges that we would have with this legislation is that currently, we have 90 days to make that type of finding. This would require 60 days. You certainly are even pushing the time limits down and the constraints even more so on the agency.

Senator DOLE. You are saying it could divert attention away from registering new products?

Mr. SHARP. Yes, it could. We currently have a priority system set up where we are registering newer, safer products all the time. Methyl bromide alternatives and others have priority standing within our systems and that is why we would have to shift probably resources from those to this area.

Senator DOLE. S. 1406 allows EPA to delegate its authority to register a pesticide to a State, possibly resulting in a patchwork of pesticide registrations. At the same time, EPA is bound by NAFTA to work toward harmonization, as you said, at the Federal level and it is responsible for enforcing treaty obligations intended to result in harmonization throughout the States and territories. How will EPA reconcile these conflicting directives?

Mr. SHARP. The legislation has changed a number of times. Certainly, at one point in time, and I am not sure if it is the current version or a prior version, but one of the prior versions has set up this type of a system where the delegation of registration would be moved from EPA to a State. That would potentially cause the type of situation where you would have individual States setting their individual standards or making individual regulatory decisions on products that are different from the Federal level.

Senator DOLE. You would end up with a patchwork there.

Mr. SHARP. Create a patchwork. That is a situation that we don't currently have. We have several States that do extensive work on pesticides, but in this type of an arena, this type of a situation, we don't have that currently and it could be troubling. I guess I look at it as it could actually lead to slowing down registrations.

Senator DOLE. How will the U.S. meet its NAFTA obligation to protect confidential proprietary information supplied in connection with harmonization efforts if it has delegated authority to a State to compel confidential information?

Mr. SHARP. Obviously, we have protections under FIFRA for protecting CBI information, confidential business information. One of the challenges that I know has come up in the past with this legislation and certainly one of the pieces of advice we have given Congress is that we would be very concerned if you moved the delegation to a State where you do have sunshine provisions and other types of requirements that could have that information moved out of the protected arena. That has been a concern for us.

We, of course, under FIFRA have certain responsibilities, as well, when we are looking at information that we are making decisions

on, that there are certain types of agreements made with the protection of that information and compensation and other requirements so that we can use that information. It would raise a lot of questions if you did move that type of an authority to a State as far as protection of information.

Senator DOLE. How will EPA coordinate with Customs in processing the commerce of third party registrant chemicals?

Mr. SHARP. This is a question that is unclear to us of how we would answer that if you had this legislation passed, because the question on coordinating with Customs, currently, we have a system in place where if you are going to import a pesticide into this country, there is a system set up where the importer notifies the EPA. We check the proper paperwork. We send back documentation that that product is allowed to come into this country. Then that paperwork comes with the product into this country.

This legislation, when it talks about any person being a registrant, we are not sure what that means and who specifically would then be the registrant, who would be responsible for that paperwork movement and how you could coordinate it then with Customs in order to move product across the border. We have talked with and given our advice on this in that it is difficult for us to understand exactly practically how this could work for an individual to go across the border literally and purchase a product and bring it back, given that it does have to move across an international border. How that practically could work has been not real clear to us, the way the legislation is currently drafted.

Senator DOLE. Thank you very much, Mr. Sharp. I appreciate your testimony this morning and look forward to working with you on this and other issues.

Mr. SHARP. Absolutely. Thank you.

Senator DOLE. Thank you very much.

Now, I would like to call our panel to the front, please, Mr. Jim Gray, Pesticide Registration Coordinator for the North Dakota Department of Agriculture; Mr. Mark Gage, President of the National Association of Wheat Growers; and Mr. Jay Vroom, President and Chief Executive Officer of CropLife America. Welcome, gentlemen.

Let me begin with Mr. Gray. Mr. Gray, certainly the North Dakota Department of Agriculture is qualified to address some of these registration requirements. What principally do you view as your role under this proposal?

STATEMENT OF JIM GRAY, PESTICIDE REGISTRATION COORDINATOR, NORTH DAKOTA DEPARTMENT OF AGRICULTURE, ON BEHALF OF THE NATIONAL ASSOCIATION OF STATE DEPARTMENTS OF AGRICULTURE, BISMARCK, NORTH DAKOTA

Mr. GRAY. Thank you, Madam Chair. My role under this proposal as a State regulator would be to work with EPA. If they delegated that authority to a State, I would review that package. Otherwise, I would be a stakeholder in the process.

Would you like for me to present the oral testimony now?

Senator DOLE. Yes, please.

Mr. GRAY. Thank you. Thank you, Madam Chair. My name is Jim Gray, Pesticide Registration Coordinator for the North Dakota

Department of Agriculture, and I am here to testify in full support of S. 1406. I speak today on behalf of the National Association of State Departments of Agriculture, which represents the Commissioners, Secretaries, and Agriculture Directors of the State Departments of Agriculture in the 50 States and four U.S. territories.

S. 1406 deals with the issue of pesticide price harmonization with Canada, a pressing issue in northern border States with nationwide impact. By granting EPA the authority to issue registrations to those parties that wish to import certain Canadian pesticides, the bill desegments the U.S. market with Canada, thereby eliminating significant pesticide price disparities.

There are currently barriers in Federal statutes that prevent American farmers from legally importing and using Canadian pesticides without the consent of the product registrant, even if the products are identical in composition to pesticides already registered with the U.S. EPA. As a result, product registrants have been able to use the U.S.-Canadian border as a real artificial barrier to create two separate pesticide markets. Similar to the situation with pharmaceuticals, these artificially segmented pesticide markets can cause significant pesticide price disparities.

Senator Dorgan presented many of those price disparities this morning. There is no need for me to go into those again. However, the price disparities are simply a symptom of this system of two segmented pesticide markets.

The system of segmented pesticide markets is simply unfair to U.S. farmers, especially since grain from Canada treated with those lower-cost Canadian pesticides travels south of the border every day to compete with U.S. grain on the open market. We cannot continue to ask U.S. farmers to compete on such an unlevel playing field.

Furthermore, the current system is a clear violation of Article 102 of NAFTA, which states that the parties shall eliminate barriers to the trade in and facilitate the cross-border movement of goods and services between the territories of the parties. It is evident that existing Federal statutes pertaining to pesticide labeling create a clear barrier to the free trade in and cross-border movement of pesticides.

Now, the ability to issue registrations for these Canadian pesticides without the consent of the registrants is a needed component of this bill. State pesticide regulators and farmers have tried to work in the past with registrants to import their pesticides from Canada, and so far, not one pesticide company has given its consent to purchase their products in Canada and import and use those products. Therefore, it is essential that a mechanism be created in which access to these Canadian pesticides is not contingent upon primary registrant consent and this bill provides that mechanism.

I would also like to suggest two minor changes to the bill to focus efforts as well as to create a real long-term solution to this problem. Mr. Sharp this morning raised some resource concerns with EPA, and the issue with disparate pesticide prices between the U.S. and Canada is most prominent with farmers and ranchers, in the agricultural sector. Therefore, to focus on the most pressing

needs of the agriculture user community, I recommend that the scope of S. 1406 be limited only to agricultural pesticides.

Second, while S. 1406 is a real critical need to address pesticide price harmonization, it is not a long-term solution to the problem. Instead, the long-term solution to desegment the U.S. market with Canada is to label pesticides with joint pesticide labeling that meets the requirements of both the U.S. and Canada. Labeling products in such a way would negate the need for registrant consent for those products to cross the border. Instead, those jointly labeled products could cross the U.S.-Canadian border freely based solely on market forces.

It is my understanding that the regulatory barriers to the creation of joint pesticide labeling have been largely resolved. However, use of joint labeling remains a voluntary option for the pesticide manufacturers. Because of this, the use of joint pesticide labeling has been virtually nonexistent.

I suggest that language be added to S. 1406 mandating the use of joint U.S.-Canadian pesticide labeling in those situations where an identical or substantially similar pesticide is registered for use in both countries. However, such a requirement for use of joint pesticide labeling should become effective only when a similar mandate exists in Canada. Such language would be a logical complement to the existing bill. S. 1406 provides a real workable short-term solution, while mandatory use of joint pesticide labeling is the ultimate long-term solution.

American farmers have proven that they can produce the safest, highest-quality food in the world. However, to compete in today's agricultural economy, they need to be able to operate on a level playing field with their major competition. This bill is one step in the creation of that level playing field. Thank you.

Senator DOLE. Thank you, Mr. Gray.

[The prepared statement of Mr. Gray can be found in the appendix on page 35.]

Senator DOLE. Mr. Gage?

STATEMENT OF MARK GAGE, PRESIDENT, NATIONAL ASSOCIATION OF WHEAT GROWERS, PAGE, NORTH DAKOTA

Mr. GAGE. Madam Chairman, members of the committee, my name is Mark Gage. I am a wheat, barley, and soybean producer from Eastern North Dakota and I am currently President of the National Association of Wheat Growers. I would like to thank the committee for holding this hearing today to help answer a simple but extremely important question. Why should I, as an American producer, have to pay a significantly higher price for crop protection products than my Canadian counterpart when we are both using the same product on the same crop?

The National Association of Wheat Growers strongly supports S. 1406, introduced by Senators Dorgan and Burns, as the best means to address this problem. I would urge the committee to favorably consider this legislation as part of any future deliberation. Prices on crop protection products between the United States and Canada have varied over the years for a number of reasons. However, even when taking exchange rates into consideration, many of these prod-

ucts have consistently been priced lower in Canada than their identical counterpart sold in the United States.

Considering the fact that the cost of crop protection products represents anywhere from ten to 15 percent of variable production costs, minor differences in these prices add a significant amount to the cost of doing business when competing with Canadians to sell our products in a global marketplace.

As mentioned in my written testimony, a number of studies have shown that this price disparity exists. I would simply like to quote from an updated study completed in 2003 by North Dakota State University. The controversy between the U.S. and Canadian chemical prices is over 6 years old. With the exception of a few herbicides, very little has changed. The overall cost difference in 2002 is about $1.56 per acre, but producers who use Liberty, Puma, Far-Go, or Assert are disadvantaged by more than $3 per acre. Whether the situation is due to market manipulation or other economic factors is undetermined, but the cost difference exists and the cost for North Dakota farmers is over $20 million annually.

Therefore, to eliminate price disparities, the U.S. and Canadian herbicide markets must be desegmented. This bill can best remedy this inequitable pricing structure by allowing the purchase of a less costly Canadian product to be registered for use by EPA in the U.S. if its identical or substantial product is already registered for domestic use. This product would remain under EPA regulation. It would not pose a health or environmental risk. It simply brings an additional degree of competitive pricing into the marketplace.

Every competitive edge is needed in a global market. However, much is made of the current high commodity prices as if that should serve as cushion against high production cost, whether they are chemicals, fertilizer, or energy. Wheat is currently bringing $3.81 per bushel at my local elevator. My Canadian competitor, the state trading enterprise, can sell at the same elevator and get $3.81. I can't get the Canadian price of $5.80 an acre for certain chemicals.

This brings up a larger problem affecting all American agriculture. I attached to my written testimony a Wall Street Journal article dated June 18, 2004, titled, "New Farm Powers Sow the Seeds of America's Agricultural Woes." While the focus of this article is on wheat, implications for all of agriculture are very stark and very real. As the article notes, America's run as a wheat powerhouse and dominant player in global agriculture is under attack from a crop of newly emboldened international rivals who are striking at one of the main pillars of American agricultural might, food exports. U.S. farmers are increasingly under pressure as they compete with commodities including Brazilian soybeans, Indian wheat, Chinese apples, Mexican tomatoes, and Argentine peanuts. This "farms race" has implications beyond agriculture. America's influence on issues such as international trade owes much of its domination to food.

Madam Chairman, jump-starting America's farms race for the 21st century ought to be the top priority not only for the U.S. agricultural community, but also for all of America. Providing access to competitive production input costs is crucial, and that is why I

strongly urge you to favorably report on S. 1406, the Pesticide Harmonization Act of 2004.

Thank you, and I would be happy to answer any questions.

Senator DOLE. Thank you, Mr. Gage.

[The prepared statement of Mr. Gage can be found in the appendix on page 41.]

Senator DOLE. Mr. Vroom, welcome.

STATEMENT OF JAY VROOM, PRESIDENT AND CHIEF EXECUTIVE OFFICER, CROPLIFE AMERICA, WASHINGTON, DC

Mr. VROOM. Thank you, Madam Chairman. Thank you for this opportunity to represent the industry here this morning. I am Jay Vroom, President of CropLife America, the trade association that proudly represents the manufacturers, distributors, and formulators of virtually all the crop protection chemical and crop biotechnology products used by our most valued customer in the entire world, the American farmer.

I want to express my appreciation to you for inviting me to present our views. My remarks will highlight some items out of our written testimony, which I appreciate the inclusion in the record, and also respond to some of the other comments that already have been made this morning.

As regards the attachments to our advance written testimony, we have those items on posters. The first one illustrates the notations that have already been made this morning about the fact that the Canadian dollar has strengthened against the United States dollar and that has contributed significantly to addressing the disparities that have been addressed previously.

This next chart illustrates the fact that American farmers overall are paying much, much less for the same or greater amounts of our industry products in the last 10 years or so. This is driven by the fact that we have more and more competitors, many of our products have gone off patent, and the fact that the approximately $1.5 billion that have come off of our total sales earnings by industry in the United States really has gone straight to the bottom line of the American farmer.

This chart illustrates the comparative relativity of the green line across the bottom, which is barely visible and represents the cost of pesticides as part of the American farmers' expense over the last 12 or so years, and the fact that it is essentially a flat line when cast against the larger economics of gross farm income, total farm expenses, and the like.

Despite the fact that our industry sales have gone down, our industry's investment in research and development to find newer, better products and defend older products' safety has continued, and as Mr. Sharp has indicated in his testimony earlier this morning, the EPA has continued to register more new products of our industry as presented for licensing application in recent years. The total number of new use products adopted and approved by EPA has also continued to improve.

These are important illustrations that provide a backdrop to the discussions that we are having here this morning around S. 1406.

My organization has been involved and I have led it in this regard for more than 15 years around these issues related to U.S.-

Canada pesticide harmonization. In fact, I and my staff were involved before there was a NAFTA, when we called it the U.S.-Canada Free Trade Agreement and we were very pleased with the support that we got even in the early days of the Canada Free Trade Agreement during the Reagan administration.

As the issue expanded into the controversy of price perceptions across the border 6 years ago, I have been personally engaged at every stage of the way. I have testified now at each of the four U.S. Congressional hearings on the price perception issue. I have engaged in attempts to dialog, compromise, fix, and respond to the 13 separate Congressional bills that have been introduced on this subject over these 6 years. I have represented my industry at two U.S.-Canada summit meetings convened by USDA during the Clinton administration, spent countless hours with our industry experts and grower organizations as we partner together with EPA, working in the NAFTA Technical Working Group that Mr. Sharp referred to earlier.

Maybe most importantly, I still own my family farm in Illinois and I have to look my brother-in-laws and cousin in the eye when we talk about these very issues. After more than 30 years of working in various agribusiness segments in the United States, I take this role seriously. I want U.S. agriculture overall and my personal little part of it to prosper, to compete fairly, and succeed.

I mentioned previously that on this U.S.-Canadian legislation we have offered previously to seek common ground, to consider compromise to legislative solutions. That is no longer my position nor the position of CropLife America. As you can see from my written testimony, we have done the most comprehensive analysis yet of S. 1406 and have both more completely articulated the problems with the legislation that we had previously pointed out and have identified a significant host of additional concern areas.

Most, if not all of these areas, I am confident, are unintended consequences in Senator Dorgan's drafting, for he would not purposely set out to propose legislation with such negative side effects. They are problems nonetheless. The significant list includes five I would like to lift up in just a few moments.

No. 1, the legislation does not advance the already substantial progress of regulatory harmonization accomplished under the TWG. In fact, we believe honestly that S. 1406 would seriously dilute the continued progress of the TWG and our EPA's ability to advance real regulatory progress. Mr. Sharp's comments supported that notion, as well.

No. 2, we believe that S. 1406 is not in harmony with our existing NAFTA and WTO treaty obligations, and as such is probably not even the exclusive jurisdiction of the Agriculture Committee.

No. 3, S. 1406 contravenes many crucial U.S. intellectual property laws and international trade obligations.

No. 4, S. 1406 creates potential user safety concerns.

No. 5, potential for crop application and mistakes and crop risks.

On the latter two points, I refer you to several product label examples that we brought along today that are attached to our written testimony showing the comparable U.S. and Canadian labels for what have been portrayed by many in this debate in recent

years as products that farmers use on both sides of the border and depend on heavily.

Concerns of note that these labels illustrate include the fact that labels in the United States are in English only, while Canada requires French companion language presentations on the labels. No. 2, U.S. products bear measurements in English units, Canadian labels are in metric units. The two countries require different warning pictograms for safety communications. Different product question toll-free numbers apply on both sides of the border, and in fact, you cannot access from most United States telephone exchanges Canadian 800 numbers, raising the question that if, in the case of an emergency, someone tried to dial one of those numbers, would help not be able to be provided?

Often, products that appear to be identical are actually not. Significantly different product formulations are used in the two markets and one might be too strong and damage crops if used in the other market using practices that farmers in that domestic market were used to employing.

Another important point Mr. Sharp alluded to. How would Customs officials figure out if the correct S. 1406 supplemental labels applied to the correct Canadian product container when presented for import into the United States? What are the security considerations that follow along that track?

Finally, Madam Chairman, we point out that when examined overall and not on the basis of selective price comparisons, any previously existing significant price differentials that disadvantage allegedly North Dakota farmers compared to Canadian farmers have evaporated. In fact, the most recent North Dakota State University study that Mr. Gage just referred to, the 2003 study, shows that overall, North Dakota farmers were better off by over $1 million on the list of 35 products on the chart as opposed to what Canadian farmers paid.

We do not find anything about S. 1406 that we can agree with or suggest a compromise for. Indeed, Senator Dorgan and others who have proposed such legislation in these past 6 years have drawn a great deal of attention to the issues of more fair product availability and cost and they have been heard by the marketplace and by those who have had the continued impact of progress around regulatory harmonization. The price problem, to the extent that it previously existed, has been extensively addressed.

Senator Dorgan can take credit, just as President Reagan won the Cold War without firing a shot, of helping resolve an issue without having to amend U.S. law. We propose to continue to work with Mr. Dorgan and others on the Hill and in the administration to ensure continued progress around real regulatory harmonization and that we continue this journey of positive interchange under the context of NAFTA.

I look forward to responding to your questions, particularly around some of the product-specific issues that have been raised.

Senator DOLE. Thank you, Mr. Vroom.

[The prepared statement of Mr. Vroom can be found in the appendix on page 47.]

Senator DOLE. Mr. Gray——

Mr. GRAY. Yes?

Senator DOLE. The legislation allows the Administrator of EPA to delegate functions under this subsection to a State. Do you believe that most State Departments of Agriculture have the financial resources and the expertise necessary to carry out such functions as determining that the chemical is identical or substantially similar to a domestically-registered pesticide or obtaining a confidential statement of formula or determining tolerances for food use chemicals?

Mr. GRAY. Thank you, Madam Chair. The answer is yes. As a pesticide regulator, I review confidential statements of formula all the time as part of my State regulatory duties. I would urge the EPA, if they did delegate this authority, to delegate it only to those States that they are convinced have expertise and adequate resources and adequate State laws that do protect that data as being confidential.

The real process of that review is to lay the Canadian confidential statement of formula side-by-side with the U.S. confidential statement of formula and make sure that the products have the same ingredients at comparable concentrations, and most State regulators have that technical expertise.

Senator DOLE. What are the standards? How is an applicant to demonstrate that a pesticide is identical or substantially similar? What kind of standards——

Mr. GRAY. We would need to work with EPA on really developing what that definition of "substantially similar" means. My definition would be that the Canadian product only contains U.S.-approved active and inert ingredients at the same concentrations. To me, that would be identical or substantially similar. Then you get into questions of, what if it is 2 or 3 percent concentration different? Is that substantially similar? We would need some guidance from EPA on that.

Senator DOLE. I note the legislation limits the liability of both the EPA and the individual registrant. Do you believe there are instances in which a State Department of Agriculture could be held legally liable for injury or damages resulting from use of a Canadian product registered under the new subsection? This assumes, of course, that much of the data used to support the registration will be furnished by the State Agriculture Departments.

Mr. GRAY. I don't see liability as being a major issue with this bill. What the bill does limit EPA's liability is as the registering agency, not as the registrant. Now, the supplemental registrant, for lack of a better term, for this bill, and for the most part, that is not going to be an individual farmer going north of the border to purchase a Canadian product.

I envision if this bill passes that the majority of registrants are going to be the major chemical distributors and dealers that are going to source Canadian wholesale sources of these products. Their liability really centers upon those stages of production that are under their knowledge or under their control.

The way EPA's enforcement viewpoint works now is that if there is a problem with the formulation or packaging of a product, that party that had the direct control over the formulation or packaging would have that liability. I don't see that changing with this bill.

If there is a problem with the importation or the relabeling, the secondary registrant would have to assume liability for that.

Senator DOLE. Thank you very much.

Mr. Gage, under the proposed legislation, any person may seek to register a Canadian pesticide, including an individual farmer or farmer cooperative that might then sell it to other farmers. The registrant or farmer cooperative in this case is responsible for labeling the product appropriately, and I note that the proposal, for example, holds the farmer cooperative harmless if the product becomes adulterated. However, I do not see any protection for mislabeling. Do you think the farmer cooperative could be held liable for any inadvertent crop damages resulting from mislabeling?

Mr. GAGE. As I understand the bill, when they pick up the product, it would be relabeled at that point. I do not believe that there would be—that there is a problem with mislabeling, and so I don't foresee that problem. I don't see a problem with—for my local cooperative in liability.

Senator DOLE. S. 1406 does not speak to whether Canadian or U.S. intellectual property laws apply to Canadian pesticides sold in the United States. Are intellectual property laws in the U.S. and Canada the same, and if they are not, which intellectual property laws would apply to Canadian pesticides sold in the United States if S. 1406 is passed?

Mr. GAGE. I really don't know if the intellectual property laws are exactly the same in the U.S. and Canada. Since we are in the United States, I would assume that U.S. laws apply here.

Senator DOLE. How do your growers feel about a NAFTA label?

Mr. GAGE. We are very supportive of a NAFTA label. Ultimately, that will be our ultimate goal. We need remedies before that takes place. I know that there have been examples cited, how the agencies are working together and passing products through under that format now. There are things that can happen in that process that can throw that out of line.

I personally know of an example of a chemical that I was told by a company that was under joint review, and so I was at EPA and I was asking how the registration process was coming on this because it is under joint review, as I understood it. EPA told me that it wasn't under joint review. They were sharing some information, but it didn't qualify for joint review because you have regulations on determining what qualifies for joint review. One of those regulations was that it had to be—the registration had to be applied for on the same day in the United States and Canada, and under that particular product, the company applied in Canada months before, earlier than they applied in the U.S. Really, it wasn't under joint review, which throws that process out of whack and raises questions with growers.

Why are we being penalized? We need something in the meantime when we are working toward a NAFTA label. We need this legislation in the meantime to equalize some of the disparities in prices.

Senator DOLE. Thank you, Mr. Gage.

Mr. Vroom, the domestic companies you represent are not seeking to register Canadian product in the United States. However, under this proposal, they must supply EPA with information about

the Canadian chemical simply because it is produced by an affiliate. The Canadian affiliate is not bound by U.S. law to provide this information, leaving the domestic company vulnerable to litigation in a situation that they have little control over. It seems that domestic chemical companies carry the entire burden with none of the financial benefits.

Could the increased costs associated with this proposal result in the need to raise prices on products that they sell domestically?

Mr. VROOM. Senator, there is a very real possibility of that and we certainly understand that the litigation question is not theoretical. Our industry faces substantial product liability litigation on an ongoing basis across the country, and in fact, as we look at our global marketplace, the United States is the most expensive to operate in with regard to the litigation overhead cost, defense, settlement of cases, and the like.

Senator DOLE. I understand that Liberty herbicide is sold in both the United States and Canada, correct?

Mr. VROOM. Yes.

Senator DOLE. If a grower were to purchase the Canadian 150 formulation in Canada and bring it to the United States to use on his corn crop, what would be the result?

Mr. VROOM. We would anticipate that there would be a very real possibility of crop damage by way of misapplication of the product because of what appears to be a slight, but a substantial, differentiation in the product concentration. We actually have brought as props for my presentation copies of the Liberty boxes and labels. There are two here and one is on the floor.

As you can see, they look very similar in the United States formation, which is this one, to the Canadian one, but, in fact, the bottles inside are different size, one being in metric and the other being in English units. The container instructions and language are also different. We feel that it would be very easy to make a mistake in crop application and damage the crop, and then back to your earlier question, whose liability is that?

Senator DOLE. Is Liberty more or less expensive in the United States today than in Canada?

Mr. VROOM. According to the experts that we have consulted, including the manufacturer of the product, if you compare the like product, active ingredient concentrations, the price per gallon in the United States today is lower. Senator Dorgan referred to 2002 comparative data on Liberty. The 2003 data clearly show that that relationship has switched.

Senator DOLE. If Liberty is now cheaper in the United States than in Canada on a per gallon basis, what happened in the past few years to effectuate this change?

Mr. VROOM. Well, a number of factors as is the case when markets are working. In the case of Liberty, the manufacturer have heard from their growers and part of that was amplified by the work that Senator Dorgan and Congressman Pomeroy and other proponents of their legislation on the Hill. They have reduced their price in the United States by nearly a third.

I can't speak to their other specific reasons for changing pricing, but the result of generic competitors that have come into the marketplace with competing products, the impact of the change in the

relationship of currency valuations, and many other factors contribute.

Senator DOLE. Gentlemen, I thank all three of you very much for being here today.

I would like to include for the record written statements from Ralph Peck, Director of the Montana Department of Agriculture; the Montana Grain Growers Association; Bob Stallman, President of the American Farm Bureau Federation; Jake Cummins, Executive Vice President of the Montana Farm Bureau Federation; and Rob Rynning, President of the National Barley Growers Association.

[The prepared statements can be found in the appendix on page 110.]

Senator DOLE. Since there are no other questions, I declare this Subcommittee hearing adjourned.

[Whereupon, at 11 a.m., the Subcommittee was adjourned.]

APPENDIX

JUNE 23, 2004

Honorable Byron L. Dorgan

Opening Statement for the Record of the Hearing on S. 1406

Good morning, Senator Dole and members of the Senate Subcommittee on Production and Price Competitiveness of the Senate Committee on Agriculture, Nutrition and Forestry.

I want to thank you very much for scheduling this hearing regarding a very important issue with the farmers in my state of North Dakota, as well as with farmers throughout the northern tier of states in this country. That issue is the gross disparity between pesticide prices charged to American farmers and those prices charged to their Canadian counterparts.

Currently, American and Canadian farmers use the same chemicals on their fields; but they are marketed under different labels and sold at much lower cost north of the border. S. 1406, the bill before you, simply eliminates that inequity by setting up a process that would allow American farmers to access these lower-priced--but substantively identical--pesticides.

This bi-partisan legislation would direct the Environmental Protection Agency, EPA, upon the request of anyone who can comply with the pesticide registration requirements of the Federal Insecticide, Fungicide, and Rodenticide Act, FIFRA, to register a Canadian pesticide for use in the United States. This registration would take effect if, after analysis by the EPA, the pesticides are of similar use and composition in both countries. The bill also has provisions to allow EPA to delegate portions of the registration process to individual states with EPA having the final authority over the process. This is to conserve the resources of the EPA and at the same time utilize the expertise of State agriculture departments around the country.

According to a 2003 updated study done by North Dakota State University on pesticide pricing, price disparities exist between the United States and Canada. These price disparities cost North Dakota farmers $20 million in increased pesticide costs in 2002 ALONE. That's just North Dakota.

Markets must be segregated if different prices are to be charged for herbicides. The international border and trade restrictions provide the necessary segregation. To eliminate price disparities, U.S. and Canadian herbicide markets must be de-segmented. S. 1406 seeks to eliminate this segregation.

Let me give you some examples:

- Take the chemical "Liberty", a burn down chemical for use in canola. There is a $4.40 per acre price differential (USD) between Canada and the United States. To North Dakota a farmer that is $491,000 in increased costs that they don't need.

- Look at the chemical glyphosate (commonly known as Roundup), which on the surface only has a $1.40 to $1.83 per acre price differential between the U.S. and Canadian prices, but on the 2.25 million acres treated in North Dakota it means $3.7 million in increased chemical costs for North Dakota farmers in 2002.

- The chemical Puma cost North Dakota farmers over $11 million more to apply.

- The chemical "Stinger" sold as "Lontrel" in Canada. Both are similar use pesticides and both contain the same active ingredient. There is a whopping $9.35 per acre difference between the chemicals.

This is outrageous!!!

I have come before the Senate time and again to talk about the hidden inequities of trade. Trade must be fair, and the pricing inequities of Canadian and United States similar use pesticides have been a glaring weakness of the free trade initiative. For far too long, American farmers have watched their neighbors to the north apply pesticides that are used in both countries, used on the same crops, and yet Canadian producers get a price cut.

Article 102 of NAFTA states:

1. The objectives of this Agreement, as elaborated more specifically through its principles and rules, including national treatment, most-favored-nation treatment and transparency, are to:

   a) eliminate barriers to trade in, and facilitate the cross-border movement of, goods and services between the territories of the Parties;

   b) promote conditions of fair competition in the free trade area;

This pesticide price disparity that exists is a classic example of an trade barrier between the U.S. and Canada that prevents free trade that further promotes unfair competition between our nations' farmers. This condition ought not be allowed to continue.

Our farmers are also concerned that similar use pesticides are being utilized by farmers in Canada to produce wheat, barley, and other agricultural commodities which are subsequently imported and consumed in the United States. They rightfully believe it to be unfair to import commodities produced with agricultural pesticides that are not available to U.S. producers. If commodities grown with the use of these Canadian pesticides are deemed safe enough for import and consumption in the United States, why would we make American producers pay 117 percent to 193 percent more in chemical costs to produce the same crops? The current scenario doesn't make sense.

By not addressing the chemical pricing problems we have between the U.S. and Canada, we put our farmers at a severe disadvantage globally. This is totally unacceptable.

S. 1406 is not an ending, but a beginning. Hidden trade barriers and schemes riddle the fabric of our trade agreements. We cannot continue to accept trade practices that on the one hand hamstring Americans, and on the other hand, unduly promote our competitors. We cannot allow our competitors to sell us commodities treated with lower priced chemicals that are used both in Canada and the United States, tell our consumers that the chemicals used on those commodities are perfectly safe, and yet not give our producers access to those same chemicals at a lower price. This is a classic example of free trade gone bad.

We ought not accept second best all of the time, and today the United States Senate can take a step in bringing American producers back to a level playing field.

Statement
Senator Conrad Burns
before the Senate Committee on Agriculture
Subcommittee on Production and Price Competitiveness
June 23, 2004

Thank you, Madame Chairwoman, for holding this hearing today on pesticide harmonization. I am pleased to join my colleague, Senator Dorgan, in support of S. 1406. We have worked together on this issue for a number of years now, and I remain committed to ending this serious trade imbalance burdening our agriculture industry.

I would like to begin by complimenting Senator Dorgan and his staff for their hard work and dedication to this issue. Senator Dorgan is a vocal advocate for his North Dakota farmers, and I look forward to working with him on this important issue.

I also want to commend all the parties who have worked hard to improve this issue over the years. The Environmental Protection Agency is making progress in working with its Canadian counterpart to harmonize regulatory structures, thereby reducing additional obstacles to fair chemical pricing. The pesticide industry has been working with the agricultural community to pursue agreement on procedures for evening out inequities in pricing structures. The pesticide industry is a responsible industry working to support American farmers, and I am pleased to see Jay Vroom here to speak on its behalf. Low commodity prices hurt you too, and I am confident that we can come to agreement on a bill that benefits all.

But much remains to be done. American farmers should not have to continue to tolerate artificial barriers that prevent fair pricing of crop inputs. We must make progress in ending these disparities.

With the passage of the 2002 Farm Bill, Congress attempted to move farmers of off ad hoc emergency assistance into a long-term risk management strategy. We want farmers to run a smart business, carefully assessing and mitigating their risk exposure. Yet any smart business person will tell you that controlling the price of inputs is the key to a successful business. That's why this legislation is so important. It levels the playing field for the second-biggest input cost to farming – chemicals.

Pesticide Harmonization will allow the EPA to issue registrations to people who want to import Canadian pesticides that are identical or substantially similar to products already on the shelves here in the U.S. Dealers and distributors, with their expertise in labeling and handling pesticides, will likely comprise the majority of registrants, but individuals or organizations could be certified as well. Over time, the price disparities will level out somewhere in the middle and the incentive to import Canadian pesticides will largely disappear.

It is important to understand that we are talking about the same chemicals on both sides of the border. But that border is preventing the free market from doing its job and smoothing out price disparities. There will be no increased risk of environmental harm and no food safety concerns.

These are the same chemicals our farmers are already using – but paying much more for. Let me give you an example. Roundup is a chemical that we are all familiar with, and one used on millions of acres of U.S. and Canadian farmland. But our farmers pay nearly $2 per acre more for the exact same chemical. How can we expect U.S. and Canadian crops to compete fairly in this environment?

S. 1406 is important to our farmers. This bill is supported by the National Association of State Directors of Agriculture, the National Association of Wheat Growers, National Barley Growers Association, and many more organizations committed to serving our American farmers, including Montana farm organizations.

Grain prices are as low as they've been in years. High natural gas prices are causing skyrocketing fertilizer costs. And another year of drought looms on the horizon. Our farmers are facing a serious economic recession, multiplied by the fact that they're being forced to pay twice as much for chemicals that almost always have the exact same chemical make-up as those sold in Canada.

Canadian commodities, produced with significantly cheaper chemicals, are competing freely with our crops. We simply can not continue to hamstring our farmers with the high costs of pesticides. This imbalance prevents our agricultural community from being competitive in the world market. The only way to achieve fair trade is to make sure we all play under the same rules.

TESTIMONY OF
ADAM SHARP
ASSOCIATE ASSISTANT ADMINISTRATOR
OFFICE OF PREVENTION, PESTICIDES, AND TOXIC SUBSTANCES
U.S. ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE
PRODUCTION AND PRICE COMPETITIVENESS SUBCOMMITTEE
COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY
UNITED STATES SENATE
JUNE 23, 2004

Introduction

Good morning, Madam Chair and members of the Subcommittee. Thank you for the opportunity to appear before this Subcommittee to discuss the concerns of American farmers with regard to pesticide pricing between the U.S. and Canada. The U.S. Environmental Protection Agency (EPA) is committed to working with Congress, the states, farmers, other Federal Agencies, and industry to address this ongoing concern.

Today, I will provide you with information on the long-term approach EPA is taking to address this issue, as well as discuss the current legislation which attempts to remedy these alleged pricing discrepancies in the near-term. As you know, EPA's legal authority over pesticides is to ensure the protection of public health and the environment; our authority does not extend to pricing. Current U.S. pesticide laws require an extensive scientific evaluation and a pesticide registration before it can be sold and distributed in the U.S. Further, EPA is not aware of any evidence that indicates that national pesticide regulatory requirements contribute significantly to existing price differences. Many factors contribute to pricing, such as marketing, availability, and demand. As all parties have acknowledged, this is a highly complex issue.

That said, EPA has worked very closely with congressional staff over the last several years, as well as with state officials and others, to explore remedies that would help address price differences that U.S. farmers may be experiencing. EPA has made significant progress on a variety of administrative and regulatory approaches that help facilitate equal access and harmonization. However, these long-term approaches will likely not fully resolve this issue in the near-term, although these efforts, over time, should significantly help alleviate some of the potential pricing issues that exist today.

A Long-Term Solution: Harmonization

First, let me describe some of the longer-term strategic actions that EPA has been taking over the past several years, as well as partnerships that EPA has established, to address this important issue. Under the North American Free Trade Agreement (NAFTA) Technical Working Group on Pesticides (TWG) and other international fora, EPA has been working closely with Canada and other trading partners to break down barriers and facilitate trade and competitiveness. Together, we have developed more consistent regulatory and scientific requirements and registered needed products in support of the principles of sustainable pest management. EPA's work on pesticide harmonization with Canada, which began in earnest in 1993, is providing benefits directly to the American farmer. In the long term, the creation and ongoing support of a North American harmonized market for pesticides will ensure a level playing field across borders while maintaining our high standards of protection for human health and the environment.

Over the years, EPA has achieved numerous successes in facilitating freer trade in pesticides. In December of 1998, for example, the U.S. and Canada signed a formal agricultural trade "Record of Understanding." This agreement included provisions specific to pesticide harmonization by encouraging greater cooperation among government regulators, growers, and the pesticide industry. Subsequently, two public meetings, co-chaired by the Deputy Secretary of the U.S. Department of Agriculture (USDA) and the Deputy Minister of Agriculture and Agri-Food Canada (AAFC) were held in May 1999 and April 2000. These discussions resulted in significant improvements in the approach EPA and the Canadian Pest Management Regulatory

Agency (PMRA) pursued toward international harmonization. The Record of Understanding also led to more frequent and open dialogue among EPA, grower groups, and industry, which in turn, helped accelerate regulatory harmonization. We learned through this process that harmonization depends on a partnership with our key public stakeholders, growers, and industry, so that strategic planning and priority setting across borders can occur simultaneously.

In addition to these efforts, the United States has accomplished several milestones in collaboration with Canada and Mexico on NAFTA pesticide harmonization issues through the NAFTA Technical Working Group on Pesticides. The NAFTA TWG was established in 1996 and is a trilateral extension of the earlier bilateral pesticide forum created by the 1988 Canada-U.S. Free Trade Agreement. The NAFTA TWG recently issued a Five-Year strategy which puts forward goals and objectives to realize the long-term vision of establishing a North American market for pesticides. This vision promotes equal access to pesticides by offering incentives, including a harmonized review process for new pesticide products and work sharing across national boundaries.

The TWG's efforts are helping to break down the regulatory barriers with respect to the delivery and use of pest management tools on both sides of the border. Since 1999, EPA has worked closely with the North Dakota Department of Agriculture, growers, and industry, to prioritize the growers' many pesticide needs. Of their identified priorities, EPA has since issued new registrations and tolerances for at least 15 of these and has work underway for many of the other priorities. Over the years, EPA has reached out to other grower groups as well in an on-going effort to reflect grower priorities in our registration plans. Based on our earlier experience registering products to address grower priority needs, the TWG is pursuing a more streamlined and commodity-specific approach for addressing priority trade irritants through two pilot projects - one for tomatoes and another for "pulse" crops. Pulse crops include dry lentils, beans, chickpeas, and peas (excluding soybeans). Growers from both the United States and Canada are in the process of identifying their top trade concerns, including such issues as differences in tolerances (or maximum residue limits) that have the potential of causing trade barriers, or the

lack of a tolerance in either country. The governments are evaluating these priorities and diligently working together to delineate effective strategies for resolving the growers' most critical trade concerns. The TWG has also launched a new project to develop a statistically-based method for establishing tolerances with the goal of further minimizing or eliminating differences in U.S. and Canadian tolerances for pesticides used on the same crops under the same use patterns.

Another important piece of the TWG's work is the creation of a "NAFTA label," which will help enable the sale and distribution of a pesticide across North America, thereby guaranteeing its availability at the same time in the U.S. and Canada. We have already made strides in putting this into practice, building on the existing Joint Review program for simultaneously registering pesticides in two or more of the NAFTA countries. The joint review program has resulted in the simultaneous registration of 18 new pesticide products in the U.S. and Canada, with 12 additional products currently under review. The governments are also sharing resources and scientific expertise, or "work sharing," in reviewing data on several other pesticide products. In 2001, the U.S. and Canada worked together on a pilot NAFTA label for use on northern crops under the joint review process. The governments identified some label differences and were in the process of resolving them when the registrant decided to move ahead with separate U.S. and Canadian labels due to timing concerns. In another example, the governments developed a NAFTA label for a bio-fungicide. However, due to registrant concerns about future label amendments, the registrant opted to use the NAFTA label in Canada, but not the United States. More recently, the non-agricultural sector is actively pursuing a NAFTA label and the U.S. pulse crop growers have identified eight candidates for previously registered products that could benefit from the development of NAFTA labels. Of these eight, one product was jointly registered by Canada and the United States. The governments will be evaluating the feasibility of developing NAFTA labels for these in consultation with registrants who are interested in pursuing them. Through the NAFTA TWG forum, and in our domestic outreach efforts, we continue to encourage registrants to submit candidates for NAFTA labels in order to help break down potential trade barriers. Such harmonization efforts will facilitate the development of a NAFTA label as well.

Overall, the NAFTA pesticide working group has enabled EPA and PMRA to work together on the entire range of pesticide regulatory requirements, review procedures, and programs. Mexico is our other important partner, and the Mexican pesticide regulatory authority participates on individual projects as its resources permit. The NAFTA pesticide working group has improved governments' capacities to address trade irritants by building national scientific and regulatory capabilities, by sharing the data review burden, and by coordinating scientific and regulatory decisions. To date, the vast majority of data requirements and test guidelines that must be adhered to in the registration process have been harmonized. The submission procedures and formats have also been harmonized, resulting in significant efficiencies for both the registrants and the government reviewers. Specifically, three major submissions have been made recently in electronic, dossier format to both Canada and the United States for joint review, which are likely to result in further time and cost savings in registering products and promote harmonization. As a result of work sharing and joint reviews of recent pesticide registration submissions, the harmonization of risk assessment procedures between the United States and Canada has advanced significantly as well. These are important milestones that are establishing the framework for facilitating equal access to pesticides, which could lead to more uniform pricing across borders. You have our commitment to continue to work within our current authorities to promote a level playing field for U.S. and Canadian farmers.

A Near-Term Solution

EPA stands ready to continue to work with Congress and others on possible legislative solutions that effectively address observed differences in pesticide pricing, as long as the protection of public health and the environment are not compromised. As you know, two bills were introduced in 2001, S.532 and H.R. 1084, and more recently in 2003, S. 1406 and H.R. 3319, which would amend the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) to permit Canadian products that are substantially similar to U.S. registered products to be imported and registered in the U.S. The intent of this legislation is to help alleviate as quickly as possible the inequities U.S. farmers may be experiencing today as a result of pricing differences.

EPA's understanding of the most recent legislation is that in general, if passed, the legislation seeks to authorize registration of certain Canadian pesticides to allow such pesticides to be imported into the United States. Any person may seek registration of a qualified Canadian pesticide. To be qualified for registration under this proposed legislation, a Canadian pesticide must be identical or substantially similar in composition to a U.S. registered pesticide that is not subject to any enforcement, administrative, or regulatory review, control or action. There must also be a tolerance or tolerance exemption for any intended food or feed use of the Canadian pesticide. In addition, the Canadian pesticide must be registered in Canada by the registrant of the comparable domestic pesticide or an affiliate of that registrant. Once registered, the Canadian pesticide must bear only the labeling required under this bill, which is essentially the EPA approved labeling for the comparable domestic pesticide but excludes use directions unrelated to the intended use(s) of the Canadian pesticide in the U.S. Furthermore, the registrant must affix the labeling required under this proposal to the Canadian pesticides at an establishment registered with EPA.

The legislation would require that the registrant of the comparable domestic pesticide provide any information that is necessary to make the determinations required for registration. As drafted, the registrant of the Canadian pesticide could not seek compensation for data supporting the registration of such pesticide.

EPA understands that this legislation is intended to create a structure where appropriate safeguards remain in place to enable EPA to achieve its primary mission: the protection of public health and the environment. However, there are some broad policy and implementation concerns with this legislation that will need to be fully addressed, and the consequences fully considered. For example, a legislative approach like this, with a scope that is limited to one country alone, may raise broader trade issues.

Another area of potential concern is that of implementation issues. For example, there are important questions regarding an individual registrant's ability to assume the legal, financial, reporting, and other requirements of FIFRA. Also, given the data compensation section of the current legislation, there is a concern that it seeks to insulate registrants from data compensation,

potentially denying manufacturers their rights to be compensated for the use of their data to support registration. We must also ensure that intellectual property rights are protected. Also, implementation would require involvement of U.S. Customs and Border Protection for the registrant's importation of Canadian products. Furthermore, any legislation should not place unreasonable resource burdens on EPA's pesticide registration program, or cause any unintended consequences on other priorities in regulating pesticides. Finally, impacts associated with the recently enacted Pesticide Registration Improvement Act (PRIA) on pesticide fees would also need to be considered. Again, EPA will work closely with your staff to help determine if these types of implementation concerns can be addressed.

Conclusion

In conclusion, again, I would like to emphasize that EPA has worked very closely with congressional staff over the last several years, as well as with state officials, growers, industry, and others, to explore remedies that would help alleviate the concerns of U.S. farmers regarding differences in pesticide pricing. EPA continues to seek and create effective mechanisms that will ensure the safety of our health and environment, while also ensuring an equal playing field for our farmers.

In the long-term, EPA is working to harmonize the availability of pesticide products between the U.S. and Canada through the NAFTA pesticide working group in cooperation with stakeholders, including registrants, growers, and concerned states. International harmonization of pesticide regulation efforts continues to be a key focus for EPA, and these efforts hold significant promise to help alleviate some of the alleged pricing issues.

In the near-term, with no adequate administrative or regulatory option available to fully address the potential pricing disparity between the U.S. and Canada, EPA understands the interest in seeking an appropriate legislative solution to this problem. However, although the legislation as drafted does not directly compromise protection of human health or the

environment – EPA's principal criterion – there are numerous implementation issues and potential international trade concerns that EPA will continue to address, working closely with congressional staff and other relevant agencies.

Thank you for the opportunity to discuss these matters. I look forward to working with you and other members of Congress, and other affected stakeholders on this important issue.

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POSITION STATEMENT

TESTIMONY OF
JIM GRAY
PESTICIDE REGISTRATION COORDINATOR
NORTH DAKOTA DEPARTMENT OF AGRICULTURE

ON BEHALF OF
THE NATIONAL ASSOCIATION OF STATE DEPARTMENTS OF AGRICULTURE
(NASDA)

BEFORE THE

SENATE COMMITTE ON AGRICULTURE, NUTRITION AND FORESTRY
SUBCOMMITTEE ON PRODUCTION AND PRICE COMPETITIVENESS

WEDNESDAY, JUNE 23, 2004
10:00am

TESTIMONY OF
JIM GRAY
PESTICIDE REGISTRATION COORDINATOR
NORTH DAKOTA DEPARTMENT OF AGRICULTURE

ON BEHALF OF
THE NATIONAL ASSOCIATION OF STATE DEPARTMENTS OF AGRICULTURE (NASDA)

BEFORE THE

SENATE COMMITTE ON AGRICULTURE, NUTRITION AND FORESTRY
SUBCOMMITTEE ON PRODUCTION AND PRICE COMPETITIVENESS

WEDNESDAY, JUNE 23, 2004
10:00am

Chairman Dole and members of the Subcommittee, I am Jim Gray, Pesticide Registration Coordinator for the North Dakota Department of Agriculture and I am here to testify in support of S.1406, the Pesticide Harmonization Act. I speak on behalf of the National Association of State Departments of Agriculture (NASDA), which represents the commissioners, secretaries, and directors of the state departments of agriculture in the fifty states and four territories. Our members are partners and co-regulators with the Environmental Protection Agency (EPA) as the lead state agencies responsible for administering, implementing, and enforcing federal pesticide laws and regulations. There are numerous pesticide related functions that states perform, and we support efforts to ensure that pesticide use does not cause unreasonable adverse effects to human health and the environment.

S.1406 deals with the issue of pesticide price harmonization with Canada, a pressing issue in northern border states with nationwide impact. By granting EPA the authority to issue registrations to those parties that wish to import certain Canadian pesticides, the bill de-segments the U.S. and Canadian pesticide markets, thereby eliminating significant pesticide price disparities.

Access barriers create pesticide price disparities

Barriers currently exist in federal statutes that prevent American growers from legally importing and using Canadian pesticides without the consent of the product registrant, even if the products are identical in composition to pesticides registered with the U.S. Environmental Protection

Agency (EPA) for the desired use. As a result, product registrants have been able to use the U.S./Canada border as an artificial barrier to create two separate pesticide markets.

Similar to the situation with pharmaceuticals, these artificially-segmented pesticide markets can cause significant price disparities, forcing U.S. farmers to pay substantially higher pesticide prices than their Canadian counterparts.

I have included a copy of a 2001 Northern Plains Trade Research Center report by Richard Taylor and Won Koo that determined North Dakota farmers would save approximately $24 million if they could purchase pesticides at Canadian prices (Attachment 1 – page 8, table 6). Furthermore, the authors concluded that net farm income for large, medium, and small farms would increase 3.8%, 4.6%, and 5.2%, respectively, if Canadian priced pesticides could be used in the United States.

In a 2003 report from Center for Agricultural Policy and Trade Studies tracking the prices of 35 common herbicides used in both the U.S. and Canada, it was concluded that the existing system of segmented pesticide markets cost North Dakota farmers $17.8 million in 2000, $15.2 million in 2001, and $14.8 million in 2002 (Attachment 2). Furthermore, the authors concluded that markets must be artificially segmented if different prices are to be charged for pesticides, and the U.S./Canadian markets must be de-segmented to eliminate these price disparities.

This system of segmented pesticide markets and the resulting price disparities is simply unfair to U.S. farmers, especially since Canadian grain treated with lower-cost Canadian pesticides travels south of the border to compete with domestic grain on the open market. We cannot continue to ask U.S. farmers to compete on such an uneven playing field.

Furthermore, the current system is a clear violation of Article 102 of the North American Free Trade Agreement (NAFTA) which states that the participating parties shall, "...eliminate barriers to trade in, and facilitate the cross-border movement of, goods and services between the territories of the Parties." It is evident that existing federal statutes pertaining to pesticide labeling create a barrier to the free trade in and cross-border movement of pesticides.

This is a national problem

This not an issue confined to a handful of northern border states. NASDA policy identifies pesticide harmonization as a priority issue. In addition, I have included copies of "Joint Communiqué(s)" from the Tenth, Eleventh and Twelfth Meetings of the States/Provinces Agricultural Accord (Attachment 3). In the communiqué(s), senior agricultural officials from Canada and the United States agreed on the importance of allowing farmers to purchase pesticides from neighboring countries.

S.1406 would solve the problem

S.1406 amends the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) to grant EPA the authority to issue registrations to parties who wish to import Canadian pesticides that are

identical or substantially similar to products already registered for use in the United States. By eliminating access barriers, the bill would de-segment U.S. and Canadian pesticide markets, and allow U.S. farmers to pay the same pesticide prices as their Canadian counterparts.

The ability to issue registrations for Canadian pesticides without the consent of primary registrants is a critical component of this bill. State pesticide regulators and farmers have attempted repeatedly to work with product registrants to import Canadian pesticides for use in the U.S. For example, the North Dakota Department of Agriculture sent letters to at least five different agricultural chemical companies in the fall of 1999 requesting their support to issue Section 24(c) Special Local Needs registrations for certain Canadian pesticides that were allegedly identical to more expensive products registered for use in the U.S. Not one of those companies granted their consent to allow access to their products at Canadian prices. This lack of support from the pesticide industry was not surprising. From their point of view, there is no logical reason to de-segment the U.S./Canadian pesticides markets, because doing so would directly reduce profitability. Therefore, it is essential that a mechanism be created in which access to Canadian pesticides is not contingent upon primary registrant consent. This bill provides that mechanism.

S.1406 Sustains high safety and environmental standards

A second major issue addressed in this bill deals with access to proprietary chemical composition data. To prevent unreasonable adverse effects to humans or the environment and to ensure a safe and high-quality food supply, registrations under this bill are limited to Canadian products that are identical or substantially similar to products currently registered with EPA for the desired use. The bill creates a mechanism that allows EPA to compare the Confidential Statement of Formula (CSF) for the Canadian and comparable domestic pesticide products. This access to proprietary chemical composition data is critical to ensure that the Canadian and U.S. products are identical or substantially similar, and that the Canadian products do not contain unregistered active or inert ingredients.

The bill only allows access to Canadian pesticides that are identical or substantially similar to pesticides already registered in the U.S. for given uses. In addition, the bill would not result in a pesticide being used in a manner that has not already been approved by EPA. Because of this, I am confident that the mechanism created by S1406 does not increase the risks of adverse effects to human health or the environment.

Chemical distribution system would be maintained

In many rural communities, the agricultural chemical dealer is a major part of the local economy. Therefore, we must ensure the economic viability of pesticide retailers and the contributions that they make to small towns across America. If this bill is enacted, I envision that very few farmers will serve as registrants. Instead, the majority of registrants will most likely be chemical distributors who will use the authority in the legislation to access Canadian pesticides from Canadian wholesale markets. Relabeling for purposes of the bill will still be considered pesticide production, and it must be conducted at registered EPA establishments. Unlike farmers or

commodity groups, distributors already have networks to accommodate product movement, and registered establishments where relabeling can occur. Therefore, the majority of Canadian pesticides imported under this bill will most likely move through the existing pesticide distributor/retail networks. The net effect will be a new, competitive, free market for these products, and manufacturers will be forced to discontinue segmenting U.S. and Canadian pesticide markets.

Recommendations for minor changes to the bill draft

I would like to recommend two changes to improve the bill. These changes are suggested in an effort to focus efforts on those pesticide users that are most affected by disparate prices and to provide a long-term solution to the current system of segmented pesticide markets.

First, the issue with disparate pesticide prices between the U.S. and Canada is most prominent in the agricultural sector. To focus attention on the most pressing needs of the pesticide user community, I recommend that the scope of S.1406 be limited to agricultural pesticides.

Second, while S.1406 is a critical need to address pesticide price harmonization, it is not a long-term solution the problem of segmented markets and disparate pesticide prices. Instead, the long-term solution to desegment pesticide markets is to label pesticides with joint labeling that meets the requirements of both the U.S. EPA and Canada's Pest Management Regulatory Agency (PMRA). Because relabeling would not need to occur prior to importation and use, use of joint labeling would negate the need for registrant consent to access Canadian pesticides. Instead, products labeled with joint labeling could cross the U.S./Canadian border freely based solely on market forces.

The EPA and PMRA have devoted significant time and resources to develop joint pesticide labeling, and feedback from the Agencies indicates that regulatory barriers to creation of joint labeling have been largely resolved. However, use of joint labeling is currently a voluntary option for pesticide registrants. Because registrants continue to see an economic advantage to keep their markets segmented, use of joint pesticide labeling has been extremely limited. In fact, not a single agricultural pesticide is currently labeled with joint labeling. It is apparent that we will see neglible use of joint labeling unless registrants are compelled to use this option.

I suggest that language be added to S.1406 mandating the use of joint U.S./Canadian pesticide labeling in those situations where an identical or substantially similar pesticide is registered for use in both the U.S. and Canada. However, such a requirement for use of joint pesticide labeling should become effective only when a similar mandate exists in Canada. With this contingency, we can be assured that jointly-labeled pesticides will be available to customers in both countries.

Such language requiring joint pesticide labeling would be a logical compliment to the existing bill. While the existing S.1406 language provides a short-term solution to de-segement U.S./Canadian markets, mandatory use of joint pesticide labeling provides the ultimate long-term solution.

American farmers have proven repeatedly that they can produce the safest, highest quality food in the world. However, in order to survive economically and compete in today's markets, they need to be able to operate on a level playing field with their competitors. Unfortunately, American farmers are not competing on a level playing field for pesticides. Instead, they compete in a free market with their outputs, while being forced to purchase pesticide inputs in a segmented, unfair and often higher-priced market. This bill provides an avenue for American farmers to purchase pesticides at prices now only available to their Canadian counterparts. I urge you to pass S.1406 and look forward to working with the Committee

TESTIMONY OF MARK GAGE
President, National Association of Wheat Growers

Before the Senate Agriculture Subcommittee on Production and Price Competitiveness

Hearing on S. 1406, the Pesticide Harmonization Act
June 23, 2004

Madam Chairman, Ranking Member Conrad and Members of the Subcommittee.

My name is Mark Gage. I am a wheat, barley and soybean producer from eastern North Dakota and am currently President of the National Association of Wheat Growers.

I would like to thank the Committee for holding this hearing to address the problem of pricing disparities among similar or identical crop protection products sold in both the United States and Canada. The National Association of Wheat Growers strongly supports S. 1406 introduced by Senator's Dorgan and Burns and co-sponsored by Senator's Baucus, Conrad, Crapo, Daschle, Dayton and Johnson and believes this legislation provides the best near term remedy to equalize the pricing disparities between Canadian and US products.

In the longer term, we would hope that a joint pesticide registration process between the United States and Canada would produce joint labels and allow equitably priced products to be sold on both sides of the border.

While prices on crop protection products between the United States and Canada have fluctuated over the years due to a variety of reasons, a number of these products have been consistently priced lower in Canada – after taking exchange rate differences into account – than their identical counterparts sold in the United States. And considering the fact that expenditures on crop protection products represent a significant percentage of the cost of ongoing farming operations – anywhere from 10% to 15% - what may seem to be a small difference in price can add up to be a major factor in keeping an operation running.

A number of studies have researched and documented this pattern of pricing inequality over the past several years. In 1999, a joint study commissioned by the U.S. Department of Agriculture and Agriculture and Agri-Food Canada reviewed price differentials between the U.S. and Canada on 25 major crop protection products used on wheat, barley and canola. The study tracked the pricing of these products over a six-year period between 1993 and 1999 and found that 21 out of the 25 products were consistently less expensive in Canada than in the United States. The degree to which these products were less expensive in Canada ranged anywhere from 5% to 45%.

Another study entitled "United States and Canadian Agricultural Herbicide Costs: Impacts on North Dakota Farmers."
conducted by the Center for Agricultural Policy and Trade Studies at North Dakota State University reached similar conclusions. An update of this study completed in September of 2003 reached the following conclusion:
"The controversy between U.S. and Canadian chemical prices is over 6 years old. With the exception of a few herbicides, very little has changed. The price differences of Liberty, Achieve, Assert and Puma have narrowed during the last 3 years; however, cost difference for several herbicides have widened during the same period. The price differences for Discover, Basagran and Curtail are now wider than in 2000. Basagran, which was lower-priced in 2000, is now higher-priced in the United States than in Canada.

The overall cost difference in 2002 is about $1.56 per acre, but producers who use Liberty, Puma, Far-Go, or Assert are disadvantaged by more than $3.00 per acre. Producers in certain areas and producers of certain crop mixes face a much higher cost disadvantage.

Whether the situation is due to market manipulation or economic factors is undetermined, but the cost difference exists and it costs N.D. farmers over $20 million annually...Therefore, to eliminate price disparities, the U.S. and Canadian herbicide markets must be de-segmented."

We believe S. 1406 can best remedy this pricing disparity problem by giving the Environmental Protection Agency (EPA) the authority to register a Canadian pesticide in the United States if it is identical or substantially similar to a product presently registered for use in the United States by the E.P.A.

In order to make the determination that the Canadian pesticide is identical or substantially similar to a U.S. registered product, the E.P.A. Administrator is required to obtain the confidential statement of formulation for the Canadian product. It has been suggested that the E.P.A. may not be able to obtain such documentation from a foreign corporation or a foreign government and may not have the legal authority to compel the production of such documents. I believe the better view is that few foreign firms would resist the submission of documents in a proceeding if it were in their best economic interest to do so. In any event, I believe the E.P.A., with few exceptions, has the authority to compel the production of any documents relative to action on a regulatory matter within their jurisdiction.

In all other respects, it is the understanding of NAWG, and I believe the intent of the authors of this legislation, that all other matters regarding the U.S. registration of a Canadian pesticide be handled as the registration and regulation of any domestic pesticide would be addressed under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).

I know that concern has been expressed by the agriculture retailers that if this legislation were enacted, their business would suffer as a result. I do not know why that would be the case since I do not envision individual farmers filing an application as a registrant under this legislation in order to bring in just enough Canadian product to meet their own needs. I believe the registrant requirements under this legislation are such that only larger entities such as co-ops, states or even the retailers themselves would be bringing Canadian products into the U.S. and would most likely want to market them through the usual and customary marketing channels. This would place the existing agriculture retailers in a very competitive position to handle this market.

In any case, the Agricultural Retailers Association (A.R.A.) in a letter dated January 23, 2004 to Senator Byron Dorgan stated, "ARA, which represents the interests of retailers throughout our nation on legislative and regulatory issues, is taking a NEUTRAL position on S. 1406 and the issue of Canadian pesticide price harmonization at the present time."

Although interested parties may differ in the particulars as to how this problem should be addressed, few would argue that it should be addressed. As the North Dakota State study indicated, the annual cost to North Dakota farmers of $20 million is enormous. I know that the Montana Grain Growers Association has estimated that the impact on Montana producers is equally significant.

But I would suggest to the Committee that we must address this problem of pesticide harmonization if we are to take on a much broader and more serious problem facing all of American agriculture.

I have attached an article to my testimony from the Wall Street Journal dated June 18, 2004 titled "New farm powers sow the seeds of America's agricultural woes." While the focus of this article is on wheat, the implications for all of agriculture are very stark and very real as the article notes; "America's run as a wheat powerhouse, and the dominant player in global agriculture, is under attack from a crop of newly emboldened international rivals who are striking at one of the main pillars of American economic might: food exports. U.S. farmers are increasingly under pressure as they compete with commodities including Brazilian soybeans, Indian wheat, Chinese apples, Mexican tomatoes and Argentine peanuts. This 'farms race' has implications beyond agriculture, America's influence on issues such as international trade owes much to its domination of food."

The reality of American agriculture today is that while the market prices for our products are set on a global scale, the input costs for producing that product is often set on a local or regional scale.

Madam Chairman, jump starting America's "Farms Race" for the 21st century ought to be the top priority not only for the U.S. agricultural community but also for all of America. Providing access to competitive production input costs is crucial, and that's why I strongly urge you favorably report S. 1406, the Pesticide Harmonization Act of 2004.

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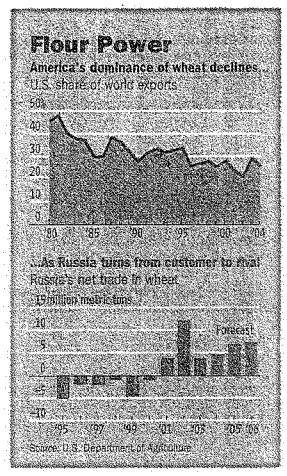
Grain Drain

New Farm Powers Sow the Seeds Of America's Agricultural Woes

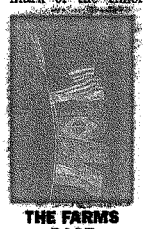
Long a Buyer of U.S. Wheat, Russia Is Now a Threat; Economic Clout at Risk

Mr. Grenz Contemplates Soy



On a vast, windy plain, a farmer swells with optimism as he surveys a carpet of wheat stretching toward the horizon. Bankers are throwing money at him to reap bigger harvests. Grain traders are elbowing their way to his front door, eager to export his wheat. Last year, he marvels, "they sold it to the Arab Emirates."

This tableau has long been a trademark of the American Great Plains, which flourished for more than a century on an export economy fueled by amber waves of grain. But this farmer, Yuri Bogomolov, is on the opposite side of the world. His tractor was made in Minsk. His seed variety is Don 95, named for a river that nurtured his Cossack ancestors. The nearest town is Zernograd—Grainville, in Russian.



THE FARMS RACE
First in a Series

Meanwhile, in Eureka, S.D., Greg Grenz is retreating from wheat. Seven years ago, he sowed 2,000 acres. This season he planted only 975. On the same spring day that Mr. Bogomolov was ad-

By Roger Thurow, Scott Kilman and Gregory L. White

miring his realm, Mr. Grenz was preparing to plant soybeans, which, at least for now, are more profitable. "You just can't make a living growing wheat anymore," he said from behind the wheel of his pickup truck.

America's run as a wheat powerhouse, and the dominant player in global agriculture, is under attack from a crop of newly emboldened, low-cost international rivals who are striking at one of the main pillars of American economic might: food exports. U.S. farmers are increasingly under pressure as they compete with commodities including Brazilian soybeans, Indian wheat, Chinese apples, Mexican tomatoes and Caribbean sugar. This "farms race" has implications beyond agriculture. America's influence on issues such as international trade owes much to its domination of food.

"The U.S. has been the superpower of agriculture," says Ben Pearcy, director of Eastern Europe operations for commodity processing giant Bunge Ltd. "Now it faces a number of new powers."

The shift is shaking a foundation of America's economic might. About two-thirds of the land in the 48 contiguous states is tied up in agriculture. Farming and related businesses account for about 12% of U.S. gross domestic product and about 17% of American jobs, according to the U.S. Department of Agriculture. America currently exports more agricultural goods than it imports, a rare bright spot in the nation's trade balance. Half of America's annual wheat harvest is sold overseas, a trade that's expected to fetch $5 billion this year.

There's a strong link between agricultural and political power, and the new farming players are feeling their oats. During trade negotiations last year, Brazil, India and China rallied opposition to agricultural subsidies handed out by the U.S. and European Union to their own farmers. That set back a critical round of trade talks.

Wheat is at the vanguard of this change. In the 1980s, America controlled half the world's trade in the hardy grain, competing with Europe, Canada and Aus-

Please Turn to Page 48, Column 1

Grain Drain: New Competition for U.S. Farmers

Continued From First Page

tralia. Now more than 90 countries grow wheat and many have lower costs and closer proximity to key markets. China, in a drive for self-sufficiency, has become the world's top wheat producer and is nurturing a sophisticated biotechnology program. India, a land long associated with hunger, became an important exporter three years ago when it released part of its huge wheat reserves onto the world market.

But it's the return of the Black Sea wheat belt, home to Mr. Bogomolov, that stands as one of the great turnarounds in global agriculture. In the early 19th century, Russia was an important grain producer, but it stumbled midcentury amid war in the Crimea. The U.S., with the help of Russian immigrants, took advantage and built a thriving agricultural economy. American supremacy was cemented in the 20th century as the Soviet Union's collectivized farm system faltered. The communist government imported so much U.S. wheat that by 1988 it was buying 18% of America's total production.

Now, wheat is once again pouring out of Russia in volumes rarely seen since the days of the czars. Long a sleeping giant with an abundant supply of cheap, fertile soil, Russia is now putting that land to work through political and market reforms. Combined with neighbors Ukraine and Kazakhstan, Russia will supply 11% of the world's wheat exports over the next 12 months, according to the USDA. Some economists see the region controlling 20% in about a decade. Using mostly American equipment, a farm in Ukraine set the record last year for the most acres of grain planted in a day (1,413).

Meanwhile, American wheat acreage has shrunk to its smallest size since the Nixon administration. The U.S. now claims just one quarter of the world export market, as other nations with cheaper land and labor become better at farming and take advantage of falling trade barriers. Some economists predict that within 20 years America may no longer be a net exporter. Terry Zetterlund, the loan officer at Great Plains Bank in Eureka, advises clients to get out of wheat if they want to stay in business. "We aren't the big player anymore," he says.

America's agricultural balance of

part of a privatization process. From his original 170 acres, he's expanded to 2,470, including his grandfather's confiscated field. This season, he planted about 700 acres of wheat and plans to double that as fast as he can.

"Freedom," he says, inhaling deeply on a cool spring day. "You're working for yourself." Mr. Bogomolov won't divulge his earnings but says he makes a "comfortable" income.

The tortured history of the Bogomolovs mirrors the saga of the Black Sea wheat belt. In the 19th century, imperial Russia was a titan on the world grain market, with the vastness of its fields making up for farming techniques that hadn't advanced since the Middle Ages. It took the Crimean War of the 1850s to block Russian exports to Europe. That was one of a series of events that gave American wheat farmers their chance to expand overseas.

Yuri Bogomolov

The Black Sea business collapsed after the 1917 revolution as the Bolsheviks tried to harness Russia's peasant farms to power the country's crash industrialization. The numbers are disputed, but historians believe as many as 10 million people died in famines in the 1920s and 1930s. When communism collapsed in 1991, so did its big, state-run industrial farms. By late that decade, cities such as Moscow and St. Petersburg imported more than half their food, according to the USDA.

Russian agriculture's comeback was sparked by Russia's financial crisis, during which it defaulted on its foreign debt and devalued its currency. Consumers suddenly found locally grown farm produce, priced in rubles, much cheaper than imports. Russia's wheat harvest grew every year from 27 million tons in 1998 to 50.6 million tons in 2002. With markets around the world increasingly open to international trade, the Russians found plenty of willing takers for their inexpensive surplus.

grain terminal in Rostov with a 40,000-ton capacity. When the 2002 bumper wheat harvest arrived, Rostov's silos overflowed. It has now completed construction that increased capacity to 100,000 tons.

Awaiting the coming harvest, the new complex glistens in the sun, as does a shiny Mercedes sedan and an SUV, badges of success for Russian businessmen. "We can fill and empty the silos five times a month," Mr. Vikoulov boasts.

An hour's drive from Rostov, vast wheat fields welcome visitors to Zernograd, as do a couple of relics of the old Soviet days: a hammer-and-sickle monument and a statue of Lenin. Zernograd became a showpiece of the Soviet collectivized farm system with help from American sympathizers who arrived in the 1920s with U.S. tractors and combines. Now, the town is again in the vanguard of Russian agriculture.

Yegveny Semikov, an agronomist who works in the town for the Kalinenko All-Russian Scientific Research Institute for Sorghum and Other Grains, walks though one of the center's test fields and likes what he sees. "Better crop varieties, better technology, better management of fertilizer and pesticide and growing techniques," he says. "The law of agriculture economics is the same now, here and in the U.S."

IN AMERICA, few wheat farmers understand the challenges posed by Russia's rebirth as a food power better than Mr. Grenz and the farmers around Eureka, population 1,100. Eureka lies on a similar latitude to Rostov close to the 45th parallel. Both towns have fashioned icons to the local economy. Zernograd's museum doubles as a Hall of Fame for its wheat farmers; Eureka has a monument to wheat in front of its museum.

"We never thought Russia could come back," says Mr. Grenz. "We always looked at them as our customer. Now, out of the clear blue sky, they are producing crops we didn't dream they

exporter. It hasn't repeated that [illegible] USDA economists say Russia's wheat production could soar 30% within a decade if it adopts further reforms. The world pressure U.S. exports in place [illegible] Middle East.

Growing wheat is now a risky proposition for American farmers. In [illegible] the U.S. controlled such a large [illegible] the world's exports that the quality of its harvest had a big influence on [illegible] drought in the U.S., for example, would create a world-wide shortage [illegible] up the cost of wheat, mitigating [illegible] for U.S farmers. Now, they don't have [illegible] much leverage.

Some farmers in Eureka are [illegible] to corn and soybeans. These crops are harder to grow, requiring more money, [illegible] ter and skill. They are also not [illegible] foreign competition. The U.S.'s corn industry is healthy, but Brazilian soybean [illegible] are rising fast and will likely overtake [illegible] exports in a few years. Fertile [illegible] cheap in Brazil that some American [illegible] ers are migrating there.

This spring, Dean N. Schumacher [illegible] planted the smallest amount of wheat ever on his farm. "The wheat [illegible] ing," says the fourth-generation descendant of Russian émigrés as he stands near his idling tractor. Banking on China's growing appetite, he's growing [illegible] acres of soybeans this year, compared with just 358 acres of wheat. For now, [illegible] acre of soybeans could generate twice [illegible] much revenue as wheat.

For some local merchants, the initial flush of spending by farmers making the switch is good business. DeWayne Weiszhaar, owner of Haberer's Implement Inc. in nearby Bowdle, says he has sold [illegible] tractors so far this year compared with just one tractor in all of 2003. He's also selling machine parts to harvest corn and soybeans and figures only about 25% of his business is tied to wheat.

For others, the winnowing of the wheat economy is creating hard choices. Farmer Jim Fischer, 48, grows and sells wheat seed around Eureka. He cut his wheat acreage by 20% this spring and is traveling farther to find customers. Some companies are getting out of the wheat business entirely. Monsanto, the St. Louis crop biotechnology company, cited [illegible]

America's agricultural balance of trade is being pressured by the country's growing appetite for largely imported foods such as olives and avocados. The Bush administration forecasts that farming's trade surplus will drop to $10 billion for the fiscal year ending Sept. 30, about a third of the record $27.3 billion surplus logged in 1996. If current trends continue, the U.S. might run an agriculture trade deficit by the end of the decade, according to calculations by economists at Purdue University in West Lafayette, Ind.

It will be difficult for the U.S. farm belt to regain its momentum. Despite subsidies from Washington, America's advantages as a farming power are slipping. Emerging food powers are pumping money into infrastructure such as ports and river navigation. In the U.S., new land is hard to come by and farming and environmental groups are fighting over whether to modernize the aging system of locks and dams that let grain barges use the Mississippi River.

Many American farmers are finding it difficult to squeeze more out of their land every year. Wheat's average per-acre yield has been flat for several years, agronomists say. Improvements in biotechnology enable U.S. farmers to better deal with weeds and bugs, but companies such as Monsanto Co. and DuPont Co. will export that technology anywhere in the world.

In perhaps the sharpest sign that American agriculture is stagnating, the combined acreage dedicated to the nation's major crops slipped this spring despite the broadest rally of farm commodity prices in decades.

ON THE SOUTHERN Russian steppe, just outside Zernograd, 49-year-old Mr. Bogomolov points to a field beyond a line of trees. It belonged to his grandfather, who Mr. Bogomolov says was shot by the Bolsheviks in 1923 for resisting their increasing control over farming regions.

The Bogomolovs nonetheless continued to toil on collectivized farms. After the Soviet Union collapsed in 1991 Mr. Bogomolov decided to become an independent farmer and began to accumulate land distributed by the government as their inexpensive surplus.

Last year, bad weather hurt production and the harvest declined by about one third. Black Sea farms are more than most vulnerable to changing weather patterns and their supplies to world markets are sometimes erratic.

Nonetheless, as the market boomed, farmers and trading companies that scraped for cash during the 1990s started spending their newfound revenue on fertilizer, equipment and land. They found plenty of room for expansion. A third of Russia's arable land lies fallow and production costs are one-third lower than those for American wheat farmers. The government, which wants to bolster Russia's reputation as a wheat exporter, has supported farmers with reforms such as lifting restrictions on land ownership.

The farm belt's renaissance has attracted the attention of Moscow's millionaire magnates, many of whom made fortunes in currency speculation, metals and oil. In 2001, the Interros banking and metals group acquired a company that was once the Soviet Ministry of Bread for an undisclosed price. Interros spent an additional $20 million buying farms and replacing dilapidated equipment.

Interros farms still butting heads with some Soviet-era habits; managers go house to house after weekends to get workers back on the job. But the company is aggressively pushing into new markets. Last year, it landed a contract to supply grain to Iran. Russia's proximity allowed the company to undercut firms from Canada and Australia, Tehran's traditional suppliers. U.S. wheat shipments to Iran fired up after Washington imposed a series of trade sanctions.

In Rostov-on-Don, a bustling key town, Vadim Vikulov ships Russian wheat to southern Europe, the Middle East and North Africa. He smiles at his change of career. "I carried U.S. grain to Russia from 1985 to 1991," he says. In the past six years, his company, Aston Agro-Industrial Corp., has invested $75 million in grain exporting.

In 1994, Aston took over a bankrupt and abandoned shipyard on the Don River. Three years later, it built its first

Greg Grenz

didn't dream they could."

It wasn't long ago that Eureka's families worked the Black Sea soil. Many of their great-grandfathers were part of a tide of wheat farmers that moved to the plains from the Russian steppes in the 1880s, fleeing conscription in Russia's imperial military. The U.S. federal government offered 160 acres of land to homesteaders on the Great Range of American breadbasket, where blizzards rule the winter and tornadoes haunt the summer.

Based on their experience in Russia, the new arrivals knew how to grow the one crop hardy enough to survive. By 1892, the fledgling town was booming. Eureka produced so much wheat it would require a train 30 miles long. Farmers piled wheat in the streets until it could be transported elsewhere and with hotels jammed, many slept on store floors or patronized all-night saloons.

America's "amber waves of grain," enshrined in the second line of the late-19th-century anthem "America the Beautiful," became an instrument of foreign policy. The U.K. didn't side with the Confederacy during the Civil War in part because it needed the North's wheat more than the South's cotton.

After the Russian revolution, when the country's farm belt declined, generations of farmers across the Great Plains prospered by shipping their crops there and wheat again became intertwined with politics. After the 1979 Soviet invasion of Afghanistan, the Carter administration embargoed U.S. grain exports to the Soviet Union. President Reagan scrapped the ban in 1981 after farm groups complained that competing exporters were simply filling the void.

Two years ago, the U.S. wheat harvest was stunted by drought. At the same time, the Black Sea region—comprising Russia, Ukraine and Kazakhstan—stunned the American farm belt by temporarily surpassing the U.S. as a wheat

Louis crop biotechnology company, cited the drop in wheat acreage as a big factor in its decision to shelve plans to introduce the world's first genetically modified wheat plant.

Farmers giving up on wheat will be more vulnerable to fickle weather patterns. Mr. Schumacher's farm, for example, usually averages just 17 inches of rainfall annually, barely enough for a crop of soybeans. There isn't a river or underground aquifer for irrigation water. Last year, when Eureka suffered through a dry August, farmers ended up with a soybean crop a quarter of the size they anticipated.

To husband a thirsty crop in an arid climate, Mr. Schumacher practices no-till farming, which means he doesn't turn over the soil for planting. Instead, he plants directly into last year's stubble. The old plants hold the dirt in place and prevent the wind from taking the topsoil, retaining moisture. Mr. Schumacher figures that stretches out his annual rainfall by the equivalent of another two to three inches.

How far will the American wheat belt shrink? Some parts of the Great Plains will continue to plant wheat simply because nothing else will grow. Regions including eastern Montana and western Kansas face a future of lower prices and thinner profits.

By shifting away from wheat to more weather-sensitive crops, farmers are taking bigger risks to stay on the land. As a result, farmers are becoming wedded to federal aid, such as subsidized crop insurance, at a time when Washington is under pressure to cut farm assistance.

Mr. Grenz, who figures he reaps as much as 40% of his income from government farm programs, talks proudly about his 26-year-old son, a data programmer who has worked for International Business Machines Corp. He doesn't mind that his son's career choice will likely end a bloodline of farmers stretching back four generations to Russia.

"Farming is only getting riskier," says Mr. Grenz, 56, as he scouts the progress of his fields in his pickup truck. "I don't have any romantic notions about it."

JAY VROOM
PRESIDENT and CEO
CROPLIFE AMERICA
WRITTEN TESTIMONY
BEFORE THE SUBCOMMITTEE ON
PRODUCTION AND PRICE COMPETITIVENESS
HEARING ON S. 1406
JUNE 23, 2004

Madam Chairwoman and Members of the Subcommittee:

I am Jay Vroom, President and CEO of CropLife America (CLA), a trade association which represents the manufacturers, distributors and formulators of virtually all crop protection chemicals and biotechnology products used by U.S. farmers. I appreciate the opportunity to testify before you today. CLA and our member companies have been monitoring cross-border pesticide issues between the U.S. and Canada and have stood ready to assist farmers by providing the crop protection tools they need to be successful and prosperous. I am pleased to report that many of the conditions that caused pricing disparities in the past have diminished greatly, removing the need for S. 1406. If passed by Congress, this legislation will surely cause more problems through its unintended consequences than it seeks to solve.

Over the last six years that we have been monitoring pesticide prices in the U.S. and Canada, many things have changed. Farm operators' household income has grown steadily for the past three years: 2004 brings the second highest level of farm household income on record. Commodity prices are strong: Since 1998, canola prices are up three percent, barley is up 37 percent, and wheat is up 34 percent. The more balanced exchange rate between the U.S. and Canadian dollar has benefited cross-border trade by improving prices for farmers and bringing parity to their costs (figure 1).

While farm prices are currently generally high, the cost of production is down dramatically according to a recent USDA Annual Report on Cost of Production. The lower cost of production reflects a ten-year trend of the overall leveling out of our domestic market for crop protection chemicals. Between 1998 and 2001, the total U.S. sales for agriculture chemicals suffered a loss of $1,417,000,000 (figure 2). Correspondingly, the number of acres planted with genetically modified varieties of corn and cotton increased by 29 percent and 31 percent, respectively. I highlight these figures to illustrate the fact that the market for crop protection chemicals is mature; while other costs of production may fluctuate and even be on the rise proportionally, such as fuel or biotech, chemical costs have leveled off considerably. In fact, the May 28, 2004, edition of Doane's Agricultural Report indicates that the U.S. Department of Energy forecasts that "fuel costs will trim $1 billion from farm profits" in just one year. Out of all of the costs of production, pesticides account for a very slight portion of a farmer's overall expenditures (figure 3).

Despite this loss to our industry, our member companies have still invested in research and development to improve crop protection products. Since 1997, 149 new active pesticide ingredients and 2,489 new uses have been registered by U.S. EPA, providing greater variety and a more effective array of crop protection tools (figure 4, 5).

While S. 1406 purports to harmonize prices by amending Federal Insecticide Fungicide and Rodenticide Act (FIFRA) and granting new authorities to the Administrator of EPA, a more level playing field should be the goal and the end product of harmonizing pesticide regulations. Regulatory harmonization is within the current authority of EPA through their efforts with the NAFTA Technical Working Group. Since our last hearing on this issue in 2002, progress has been made in the joint review process with varying degrees of success. We are optimistic that our industry, EPA and our farmer customers are on the right track towards addressing the concerns expressed by proponents of S. 1406.

The unintended consequences of S. 1406 lie in the ambiguities that are created in areas of substantial difference between U.S. and Canadian systems. These differences represent serious obstacles to accomplishing a harmonized process and thus, a more level playing field of product availability and cost: regulatory approval processes, labeling practices, and intellectual property laws. S. 1406 would also result in a host of unintended consequences such as NAFTA violations, user safety, security and minor use registration and state law impacts. Legislation that attempts to harmonize prices without acknowledging these underlying issues will only cause more problems for the farmers that it seeks to benefit.

First, I would like to review the data which was the cornerstone of the hearing in 2002, the USDA report on Pesticide Price Differentials Between Canada and the U.S. Reexamining this data in the context of current conditions reveals that while regulatory harmonization is still a worthy principle to strive towards, American farmers are no longer at the disadvantage that was argued six years ago. In fact, according to a 2003 study conducted by North Dakota State University, North Dakota farmers experience a net benefit by purchasing their products in the U.S. It simply is not worth jeopardizing our steady efforts towards regulatory harmonization to solve a perceived pricing problem that no longer exists, which would be the case if S. 1406 became law.

1999 USDA Study in a 2004 Context

In 1999 USDA and Agri-Food Canada conducted a comprehensive study of products and price differentials between the two countries, as mandated in the U.S.- Canada Record of Understanding. The study was conducted by expert researchers at the North Carolina State University and University of Guelph in Ontario, Canada. The conclusions of the study show that on a cost-per-treated acre basis during the period of 1996-1999, Canadian farmers actually spent far more on chemical inputs in general than farmers in the U.S. northern plains states. Selective use of the data has misrepresented the author's findings, and we feel it is important to look at the entire picture which illustrates that on the whole, U.S. farmers are better off under the current legislative and regulatory scenario.

Gerald Carlson, the NCSU researcher who coauthored the USDA study, has provided additional insights which shed light on those earlier findings within the current context (attachment 1). According to Carlson, the major economic issue to farmers is not pesticide price differences between the U.S. and Canada for particular pesticides, but rather the per acre cost of pest control. While it is possible to find pesticide products that have higher or lower prices per gallon or other physical measure adjusted for concentration in Canada relative to prices found in the U.S., this is not the correct comparison for examining economic benefit differences between U.S. and Canadian farmers. When examining benefits of a legislative change to farmers, the per acre pest control costs for a given crop is a more complete and better comparison.

In the 1999 U.S. and Canada Pricing Study, researchers found that farmers in two Canadian provinces were spending more per acre for pest control because they used different products and often had higher use rates per acre than the North Dakota/ Minnesota farmers. This was true even when some products with relatively high use rates were higher priced per unit in the U.S. The use pattern of pesticides is dynamic because of product price changes, changes in availability of substitute products, patent changes, and changes in other factors such as crop prices, pest densities, and pest types. Comparisons of unit prices of a limited set of products without consideration of rates per acre and acre treatment patterns can seriously bias farmer cost comparisons. The direction of the bias will be to overestimate price penalties in the higher-price region.

Other conclusions from the USDA Report that need to be highlighted again are:

- Individual Northern U.S. growers may have higher overall costs of production than Canadian counterparts, but these differences have much more to do with non-chemical issues such as land, labor and management costs.
- Some pesticide products have lower prices in Canadian provinces than similar products in North Dakota. Conversely, others are listed as being the opposite: lower priced in North Dakota. The marketplace factors given for price differentials include: differences in patent protection length; differences in market size and costs; differences in farmer demands; differences in availability of alternative products.
- North Dakota growers generally spend less on weed control products than their northern counterparts.
- Frequently used products in Manitoba and Saskatchewan differ from those frequently used in North Dakota or Minnesota.
- There is a difference of U.S. $3 – 4 on a per treated acre basis, with North Dakota growers spending less then growers in Manitoba or Saskatchewan.
- Overall, cost-per-treated acre in North Dakota is significantly lower than in Canadian provinces.
- The percent difference that Manitoba growers spend above North Dakota growers by crop was: +209 percent for wheat, +169 percent for barley, +41 percent for canola, +29 percent for potatoes.
- "The estimated impact of purchasing lower priced pesticides in either Manitoba or North Dakota using existing herbicide market shares is small on a per treated acre basis (usually less than US $0.50 per acre)."

As a supplement to the USDA study, the North Dakota Department of Agriculture published a report in September 2003 that tracked the price differences among 35 different herbicides. This study showed that for many products, U.S. and Canadian prices reached greater parity, while for others, prices continued to diverge. However, the overall net benefit to North Dakota farmers is $1,125,100 (attachment 2).

Despite this apparent savings to North Dakota farmers, some caution must be exercised in relying on the Report's findings. The Report's tables comparing a selective basket of herbicides weighted by herbicide acres treated in 2000 in North Dakota have many shortcomings that bias the estimates of farmer benefits on specific products from a legislative change to facilitate the import of Canadian pesticides.

First, the Report assumes that the 2000 year herbicide treatment pattern in North Dakota and Canada are the same and that they do not change from year to year. The second assumption is that the herbicide treatment pattern in both acres treated by product and the per acre treatment rates are the same in the U.S. and Canada. This was clearly shown to not be the case in the 1999 USDA Study. Third, it leaves out insecticides and fungicides and non-chemical methods that are often higher priced or sometimes not available in Canada. Similarly, it does not consider pest control costs of the other crops grown.

Another factor to consider when comparing prices in both the USDA and North Dakota Report is that the products that contribute the most to higher expenditures in North Dakota (when the 2000 use rates are assumed) are Roundup (glyphosate-based products), Puma and Liberty. However, U.S. prices of these products have been declining systematically in recent years. For example, independent information on Liberty shows sizeable reductions in U.S.-Canada unit price spreads for 2003 and 2004. These data show higher unit costs in Canada than in the U.S. for 2003 and 2004. It is widely reported that there was decline in price for Liberty by 30 percent in 2003. The reason for the decline of the price of glyphosate products in recent years is two-fold: imports of generic material from China have flooded the markets, increasing supply, and certain formulations went off of U.S. patent protection.

Additionally, unit price comparisons for products must take into account currency exchange rate changes. The U.S. dollar has declined in value relative to the Canadian dollar by approximately 15 percent between 2002 and 2004. This means that Canadian prices of pesticides in U.S. dollars are increasing by about 15 percent.

In addition, any potential pricing benefits of the proposed legislation would need to take into account the additional direct costs of registration, transport and other transaction costs of importing pesticides as envisioned under S. 1406, and these costs would have to be passed on to farmers. Additionally, some of the direct costs of new registrations, monitoring, and enforcement carried out by EPA and state agencies will result in higher public costs, impacting either federal taxpayers or becoming "unfunded Washington mandates" at the expense of state taxpayers.

Regulatory Process Differences Result in Differential Pricing

Regulatory approval process differences between Canada and the U.S. can affect product availability and cost and thereby help result in differential pricing differences in pesticide regulatory processes between the U.S. and its North American trading partners can have differential costs to industry, which affects pricing of pesticide products in respective markets. Although U.S., Canadian, and Mexican systems are moving towards more common practices, significant differences still persist and will for many years ahead.

Before granting registrations for pesticides, national regulatory authorities perform thorough assessments to ensure that unreasonable adverse effects to human health and the environment will not result from approved uses. The processes involved are generally similar between the U.S. and Canada, but actual data requirements vary, which can have a differential effect of registering a pesticide product in one country versus the other. For example, the U.S. may require submission of data on spray drift to support a particular use, while Canada would not. Conversely, Canada may review studies of the efficacy of the pesticide product, while the U.S. would not. These differences can contribute to the unbalanced costs of doing business in the U.S. and Canada, and thus the need to charge different prices for the products.

Over the past decade, there has also been a significant increase in the amount and complexity of data needed to support registration of pesticides, which has placed extensive burdens on regulators and pesticide manufacturers. As a result, there is great interest among both groups to work toward international harmonization of registration of pesticides. To this end, the most noticeable efforts are occurring in the cooperative government organizations such as the NAFTA Technical Working Group on Pesticides (NAFTA TWG).

Harmonization of NAFTA countries' registration processes for pesticides is a priority for the crop protection industry. CropLife America, along with CropLife Canada and AMIFAC (Mexican Association of Crop Protection Products Companies) has formed an industry working group to work with the NAFTA TWG for achieving mutual goals in harmonization.

Over the past several years, the NAFTA TWG has made significant progress in harmonizing science-based test protocols and test guideline requirements, i.e., what studies need to be conducted and submitted to the EPA, Canada's Pest Management Regulatory Agency (PMRA), and the Mexican regulatory authority "Intersecretarial Comission for the Control of the Process and Use of Pesticides, Fertilizers, and Toxic Substances"(CICOPLAFEST).

However, significant differences in the regulatory approval processes between the national authorities still exist, including:

- registration review time for a new active ingredient or new use of a registered product,
- the ability of a registrant to amend a petition after submission,

- communication between the reviewers and applicants during the review process,
- dietary risk assessment procedures,
- procedures for establishing tolerances or maximum residue levels (MRLs) and the timing of establishing MRLs in relationship to obtaining the product registrations,
- requirements for disclosure of active ingredients,
- the content of the pesticide product labels, and
- the processes for amending pesticide product labels.

Until these differences are resolved, companies will continue to struggle with meeting different demands for each system and incurring differential costs in Canada and the U.S. that are ultimately reflected at the purchaser level.

Labeling Complications Under S. 1406

Labeling differences between Canadian and U.S. versions from the same or affiliated producers will create significant difficulties for EPA and S.1406 registrants in determining the terms of S.1406 labels. S. 1406 includes a provision whereby the Administrator of EPA must approve a label which would then be affixed over the Canadian label.

However, differences between Canada and the United States such as culture, climate, soil, crops, pests, measurement systems, terminology and agricultural practices must be considered in determining an appropriate U.S. label for Canadian products. There are two practical issues that need to be resolved before a U.S.label can be affixed to product from Canada: what appears on a product container itself and the label's legibility to the farmer or applicator regarding the products usage.

The label that appears on a container typically includes the product name, formulation type, net contents, hazard symbols, toxicological , disposal and precautionary statements and directions for use. However, there are a number of variables that determine different specifications on a particular product for Canada and the U.S. Formulation specifications of somewhat similar products may differ between the U.S. and Canada, because, for example of the use of different inert components, rendering some Canadian versions of products different enough from U. S. versions to require EPA to conduct time consuming assessments before the Canadian version could be responsibly registered by EPA. Regulations currently require net contents to be listed in both metric and English units, which could complicate the adaptation of the Canadian product label.

Differing criteria for setting hazard symbols in the three NAFTA countries will result in different pictograms on the same container, confusing applicators. This would be especially problematic between Canada and the U.S. because two labels, both in English, would carry different hazard symbols. Canadian labels must be in French as well as English. Different disposal statements would confuse applicators and could ultimately lead to improper disposal. All of these differences need to be resolved before a Canadian product could be registered and relabeled under S. 1406. (Figure 6, 7).

The next set of issues relates to the use aspects of the Canadian product label itself which must be revised to be understood by the U.S. grower.

Terminology for crop names and crop pests would have to be standardized and harmonized in the U.S. vernacular. Application rates would have to be adapted to the U.S. conditions and variations in different parts of the U.S. It would be extremely difficult to harmonize application methods for widely varying local conditions.

Furthermore, there are 16,115 registered pesticide products containing 1,015 active ingredients in the U.S., and 5,274 registered pesticide products containing 525 registered active ingredients in Canada. The universe of labels EPA could be required to review and approve under S. 1406 is immense. Congress would have to appropriate substantial economic resources to support EPA in its new responsibilities under S. 1406.

There are potential benefits to utilizing a single label for pesticides sold in the U.S. and Canada, such as facilitating trade and shipment of products, and the potential for efficiency gains in manufacturing, labeling, distribution and marketing. However, the obstacles are formidable and equal access to and pricing of products is not guaranteed under a common label. Focusing efforts on key prerequisite regulatory harmonization activities that are essential to both growers and registrants are of higher priority and should be addressed first, as they are at present.

Intellectual Property Differences in Canada and the United States May be One Cause of Differential Pricing

On its face, S. 1406 only seeks to address pesticide price harmonization. However, I hope it is becoming apparent that true harmonization is much more far reaching than simple price parity. When we consider differential prices on both sides of our northern border, we must also consider differences in the regulatory approval process, labeling, and intellectual property laws. U.S. intellectual property law provides a vital safeguard for our industry's proprietary interests and investment in research and product development. Opening markets to the free flow of goods requires the assurance that industry is no less protected from intellectual property pirating or from less protective aspects of Canadian intellectual property law than under our current domestic system of laws.

S.1406 does not speak to which countries' intellectual property laws apply in the event of pesticide harmonization, nor does it result in harmonization of intellectual property laws surrounding pesticide products. Since S.1406 does not address these issues, a number of complex intellectual property legal questions will result from this legislation.

In recent years, steps have been taken to increase similarity of intellectual property systems among numerous countries, including the U.S. and Canada. While significant steps have been made to minimize the differences between the two countries' systems, the following are important distinctions between U.S. and Canadian copyright, patent and trademark laws which currently prevent meaningful harmonization.

In the area of copyright law, moral rights refer to the right of an author to prevent revision, alteration, or distortion of her work, regardless of who owns the work. The U.S. recognizes moral rights as limited to visual works, whereas in Canada this principle applies to all works. Both Canada and the U.S. are party to the Berne Convention for the Protection of Literary and Artistic Works, which established the recognition of copyrights between sovereign nations. However, the U.S. does not consider itself bound by the Article regarding moral rights while Canada does. The U.S. is not a party to the Rome Convention, another international copyright agreement which protects performers, manufacturers of phonograms and broadcast organizations, while Canada is. The U.S. recognizes fair use, which treats scholarship and research as exempt from copyright infringement. Canada's application of the fair use doctrine is known as fair dealing and is far stricter in its application than its U.S. counterpart.

Harmonization of copyright laws could disrupt the U.S. defense of fair use that allows considerable latitude for the flow of scholarship and research that development of our products depends on. Beyond our industry's interests, reforming copyright law has long-ranging implications for other American literary, artistic, dramatic, musical and intellectual works.

In the U.S., a patent protects an inventor's right to exclude others from making, using, selling or importing their invention. The American system of "first to invent" establishes priority by allowing the first inventor who has not suppressed, abandoned or concealed his invention to obtain a patent. Canada follows the "first to file" system, which awards priority to the first inventor that files a patent application. Almost every country other than the United States follows this system.

Novelty and obviousness are also distinguished between the two systems. Under the American patent system, novelty and obviousness are assessed as of the date of the invention while the critical date for assessing obviousness and novelty in Canada is either the filing date or the Paris Convention priority date. In the U.S., novelty may be questioned by showing that the invention was in "public use or sale" more than one year before the filing date while in Canada, novelty may be attacked by showing that the invention was disclosed in such a manner that the subject matter became available to the public, anywhere in the world, prior to the application date. Obviousness is more vulnerable to question in the U.S. because there must be some suggestion or motivation to modify or combine the references to the invention in question, a reasonable expectation of success, and prior art reference or combined references must teach or suggest all of the claim limitations. The Canadian standard for obviousness is whether the subject matter of the patent would be obvious to a technician who has no scintilla of inventiveness or imagination, and is wholly devoid of intuition. This standard makes obviousness a more difficult element to attack under Canadian law.

In its 1992 Report to the Secretary of Commerce, The Advisory Commission on Patent Law Reform stated that it is likely that "harmonization" would force the U.S. to abandon the "first to invent" system and follow the widely accepted "first to file" system. The

U.S. has been hesitant to change systems because it is widely believed that the "first to invent" system provides better protection to individual inventors. Again, our industry is only one of many involved in the processing, manufacturing and production that relies on constant improvement to ensure efficiencies and product development. The continued protection and reliability of patent law is vital to continued innovation.

The Paris Convention was the first major attempt to "harmonize" trademark laws on an international level. The U.S. and Canada have both agreed to be bound by the Paris Convention, which requires that well known trademarks in foreign countries be protected. However, interpretation of certain provisions differs between the two countries. The question of what constitutes a "well known trademark" has been the topic of much debate. In Canada, a foreign trademark is protected so long as the trademark is known over a substantial part of Canada, regardless of whether the trademark is actually used in the country. The U.S., on the other hand, requires that the trademark actually be used in the U.S. before it will be protected under U.S. law.

Despite these international attempts to harmonize trademark laws, there are many differences between the U.S. and Canadian systems that concern owners of trademarks. A trademark in the U.S. protects words, names, symbols, sounds, or colors that distinguish goods and services from those manufactured or sold by other others. In Canada, a trademark is only used to identify wares or services. In the U.S., the registrant of the trademark does not gain a right to use the mark; they merely obtain the right to exclude others from using the mark. In Canada, the registrant of a trademark obtains an affirmative right to use the trademark as well as being permitted to exclude others from using the mark. Trademarks in the U.S. can be renewed forever, as long as they are being used in commerce, while registration of a trademark gives an individual an exclusive right to use the mark across Canada for 15 years, renewable every 15 years thereafter.

Trademarks are particularly important to name brand identification. Our industry, among others, has invested a great deal of time and resources into building recognizable and reputable brand-name identifiers for our products. Trademark protection is key to maintaining the integrity of branding, and any harmonization effort must include provisions which maintain American standards.

These differences in intellectual property laws between Canada and the U.S. can have a significant effect on prices for the same or similar products in the two countries. For example, if no Canadian patent exists on the Canadian version of a U.S. product that is protected by a patent, the price of the Canadian product might well be lower than the U.S. version. The same might be true if products competitive to the Canadian version have gone off patent while the U.S. version of those competitive products is still protected by a U.S. patent. Allowing the Canadian version of the original product to be imported at the lower Canadian price would undermine the patent protection to which the U.S. version of the product is entitled to under U.S. law. This could be a serious unintended consequence on intellectual property protection and the incentive to research and development in the crop protection industry in the United States.

NAFTA Trade Concerns from S. 1406

Since S. 1406 is specifically focused on opening the U.S. market to Canadian pesticides, possible trade implications must be examined.

Based on three different analyses (attachments 3, 4, 5) on S. 1406 provided by NAFTA experts, S. 1406 appears to be inconsistent with U.S. commitments under various provisions of the North American Free Trade Agreement (NAFTA) and the World Trade Organization (WTO) Agreements.

First, S. 1406 appears to be inconsistent with the Objectives and Scope of NAFTA, which are delineated in Article 105: In order to achieve harmonization, the federal authorities are responsible for the international treaty obligations throughout its territory, including state and provincial governments. Under S. 1406, the Administrator of EPA can delegate registration authority to state officials, resulting in a chaotic patchwork of registration requirements rather than national and ultimately tripartite harmonization that is the goal of the Agreement. Steps towards harmonization must be made at the federal level, and all actions by states and territories must be consistent with these actions. S. 1406 focuses only on accomplishing harmonized prices in a piecemeal and uneven fashion, while possibly compromising international harmonization efforts.

Second, S. 1406 creates a special privilege for Canadian pesticides to avoid normal pesticide registration requirements under FIFRA that no other country is allowed. This discriminatory process violates provisions under NAFTA and the WTO. Under Article 904.3 of NAFTA, the U.S. is obligated to treat goods of other NAFTA countries with the same treatment it gives to like goods of any other country. Because S. 1406 specifically singles out Canadian pesticides for a regulatory short-cut, other North American countries will be accorded less favorable treatment by having to go through the existing FIFRA process. Additionally, under the WTO Technical Barriers to Trade (TBT) Agreement, the U.S. must ensure that all countries are treated equally under all U.S. technical regulations. The goods of one country must be treated no less favorably than those of another.

Third, S. 1406 appears to implicate Sanitary and Phytosanitary Measure provisions (SPS) under NAFTA and the WTO. NAFTA Article 712.2 provides that parties will ensure that SPS measures will not arbitrarily or unjustifiably discriminate between goods of other NAFTA parties where similar conditions prevail. Similarly, The WTO SPS Agreement also requires that regulations do not discriminate between countries where like conditions prevail. Under S. 1406, Canadian pesticides are given special access to the U.S. market that is not afforded to any other country. This access is unrelated to any objective standard and results in discrimination among member countries. The benefit S. 1406 bestows upon Canada cannot be justified under U.S. WTO or NAFTA obligations.

Fourth, the special privilege afforded to Canada raises a problem with the most favored nation principle of GATT. Under Article 1, the same advantages, favors, privileges, or immunities must be granted to all member countries. Again, the short-cut through the

U.S. pesticide registration process created by S. 1406 is only afforded to Canada; no other countries benefit.

Lastly, Delegation of authority to states also raises data confidentiality issues under NAFTA. Article 717 requires each signatory country to "accord confidential or proprietary information arising from, or supplied in connection with, the procedure conducted for a good of another Party." Such confidential or proprietary information shall be given "treatment no less favorable than for a good of the Party," and "in any event, treatment that protects the applicant's legitimate commercial interest, to the extent provided under the Party's law."

Since NAFTA is an agreement involving the federal governments of Canada, U.S. and Mexico, ensuring confidentiality as required by Article 717 is the responsibility of federal authorities. Delegating registration responsibilities to the states raises a host of confidentiality questions that would likely be inconsistent with Article 717.

S. 1406 exposes the U.S. to numerous violations under NAFTA and the WTO Agreements. These international trade quagmires created by S. 1406 are potentially the most troublesome of all of the many unintended consequences of S. 1406.

User Safety May be Compromised by S. 1406

An immediate concern to user safety is the confusion created by the uncertain and complicated labeling scheme proposed in S. 1406. Some Canadian labels are printed in French, hazard symbols are different, and measurements are listed in metric units versus English. Some Canadian labels have "help" or "emergency" 800 numbers printed on their labels that are accessible only from Canadian telephone exchanges. If a farmer in the U.S. were in an emergency situation, they could be precluded from vital information or assistance at a critical time. Furthermore, an applicator unfamiliar with Canadian labeling could misapply the product, jeopardizing human health, the environment and at the very least, the viability of the crop it is applied to. These risks also raise the issue of liability for the adaptation of the Canadian label to make it applicable to the U.S. and the adoption of proper stewardship practices by the S. 1406 registrant.

Another concern is for the licensing of applicators. In order to purchase a pesticide in the U.S. that has been classified as a restricted use product, the buyer must have an applicators license, whether they are a retailer or private individual. In applying for an applicator's license, the individual or retailer is educated in the proper and safe use and handling of the pesticide product.

Although there are similar licensing programs in Ontario, Canada, there is not a comparable system in place in Manitoba, directly across our northern border from our plains states where most interest in S. 1406 has emanated. In Manitoba, there are three categories of toxicity under which pesticides are classified. For the two most toxic classes of chemicals, it is up to a Manitoba dealer's discretion to ensure that the purchaser of a product is aware of safe handling procedures.

Any individual or retail pesticide purchaser who has had their license revoked or who has not obtained an applicators license could exploit this loophole, intentionally or unintentionally, causing damage to their crops, or injuring themselves or unsuspecting farm workers in the process.

We all agree that applicator education and safety is necessary to the safe and effective use of our products. EPA has worked hard to implement this program; it is important to recognize that compromising applicator safety is one of many potential unintended negative consequences of S. 1406.

Security of Imports May be Undermined by S.1406

Many of our member companies participate in C-TPAT (Customs-Trade Partnership Against Terrorism), a joint government-business initiative to build cooperative relationships that strengthen the overall supply chain and border security. Through this voluntary initiative, the U.S. Customs Service asks business to ensure the integrity of their security practices and communicate their security guidelines to business partners within the supply chain.

In order to participate, businesses must conduct a comprehensive self-assessment of supply chain security which encompasses procedural, physical, personnel, and conveyance security measures; education and training; access controls and manifest procedures. Aside from the benefits inherent to national security and a safer supply chain for the protection of employees, suppliers and customers, Customs officials are better able to target their inspection efforts and ensure the orderly processing and movement of crop protection chemicals across the border.

S. 1406 jeopardizes these efforts by allowing individuals to cross borders while carrying quantities of chemicals with uncertain labels. Our companies work closely with Customs to ensure the safe movement of chemicals in international commerce. Customs has an increasingly difficult job scrutinizing every article that passes through U.S. borders. While the C-TPAT partnerships serve to facilitate Customs' work, S. 1406 not only undermines those efforts but will add to their responsibilities by requiring Customs officials to sort through American labels, Canadian labels, and the third label proposed by S. 1406 as well as identifying the contents of the containers, which could be uncertain as well.

Minor Use Registration Impacts from S. 1406

Forced price harmonization under S. 1406 could lead to loss of some pesticide registrations for minor crops. For example, a Canadian version of a pesticide could be registered for use on broad-acre commodity crops in Canada, but due to different soil, climate or pest conditions is only registered for use on minor crops in the U.S., with another formulation by the same producer registered for commodity crops. Under S. 1406, the fact that the producer has a similar registered pesticide in the U.S. for commodity crops, allows a third party to apply for registration for the pesticide sold in Canada, and bring it in to the U.S. for use on a major commodity crop. If the Canadian formulation is not intended for use on that particular crop under U.S.-specific conditions,

the possibility of damage to that crop is significant. The registrant might choose to discontinue the registrations for the minor crops that represent small markets, rather than risk the increased liability for injury to a major crop on which the product was never intended to be applied. Minor crop commodity groups have cause for concern regarding this legislation.

State Law Implications

All state governments have various forms of state sunshine laws that require public disclosure of data held by public agencies. Under S. 1406, any state agency can be delegated the authority to process registrations and/or compare product formulations of Canadian products. If sued under their respective State sunshine laws, those state agencies could be required to disclose those confidential statements of formula, as well as other sensitive information gathered in the course of their registration/comparison activities. Anyone can sue a state agency for such information. In this situation, competitor companies could easily access private commercial information that is the product of a registrant's investment of more than $100 million in research and development and more than a decade of work. Additionally, disclosing such confidential information would again raise federal and international intellectual property law issues. This is one of the reasons most state governments do not conduct this type of data review, particularly relating to chemical products.

Most Northern U.S. border states do not have adequate statutory protections against state agencies having to disclose confidential business information; state legislation would be necessary to fully implement these provisions of S.1406. In order to be in compliance with federal and international intellectual property laws, state laws would also need to be amended to prohibit formulaic disclosures. State legislatures along the Northern border would have to pass legislation creating exemptions for state agencies from sunshine law-related disclosures for patented formulas. Opening up pesticide laws in states such as Washington, Minnesota or any New England state (none of which have these protections for statements of formulation), could be very harmful for growers, as well as industry. These are states where anti-pesticide activism has been growing and attempts to curtail or ban pesticide use is highly prevalent. Revising those state's pesticide laws, in whole or in part, will raise the opportunity to introduce onerous and ill-conceived bans or restrictions on pesticide use that could impact crop protection options currently available to growers in those states. Rather than helping growers in those parts of the country gain better access to pesticides, a result from this scenario could ultimately be wholesale losses of tools important to U.S. agriculture.

Confusing the U.S.-Canada Pesticide Issue with the Prescription Drug Issue

According to recent news reports, Sen. Dorgan has stated that his bill is aimed at reducing pesticide prices for U.S. farmers, similar to efforts to permit drug reimportation from Canada where prescription drug costs are lower. The only similarity between pesticides and pharmaceutical drugs in this context are the two countries in question, the U.S. and Canada. Beyond that, it is a mistake to claim parallels.

Pesticide marketing structures in the U.S. and Canada are quite similar. In both the U.S. and Canada, pesticides are sold by manufacturers mainly through a network of wholesale and retail business partners. Also, many of the products in question are recommended and applied by professional applicators at the retail dealer level in both countries.

In contrast, pharmaceutical drugs have vastly different marketing and distribution systems in the U.S. and Canada. In the U.S., pharmaceuticals are sold via commercial drug stores and mail-order drug stores as retail price-establishments and service providers. In Canada, the federal government is the sole purchaser for distribution throughout the country, giving the government a great deal more negotiating clout when it comes to pricing than the individual purchasers for retail distribution in the U.S.

Lastly, the physical characteristics of pesticides and pharmaceuticals invalidate the comparison between pharmaceutical drugs and pesticides. Most quantities of farm pesticides are delivered in truck loads while pharmaceutical products are small enough to be mailed to a foreign purchaser. Further, pesticides must be scientifically developed and regulated, taking into account vastly different weather and natural environment conditions between the U.S. and Canada. Such differences are not a factor for pharmaceutical products.

Comparison between pharmaceutical drug sales and pesticide sales is inappropriate and misleading. These two product categories are vastly different and their respective issues should not be confused for the sake of superficial and convenient comparison.

Additional Committees of Jurisdiction Must Consider the Potential Impacts of S. 1406

Because this legislation has far reaching potential impacts, other committees may be important to a thorough examination of S. 1406. As this bill inappropriately circumvents and undermines U.S. intellectual property law via pesticide regulations, the Judiciary Committee may have jurisdiction. The Foreign Relations Committee has jurisdiction over international law as it relates to foreign policy, measures to foster commerce with foreign nations and relations of the U.S. with foreign nations. All of these issues are raised by S. 1406, since it seeks to regulate trade between the U.S. and Canada. Finally, S. 1406 impacts customs practices, NAFTA and the transportation of dutiable goods, raising the possibility that the Finance Committee may also have an interest in this bill.

Conclusion

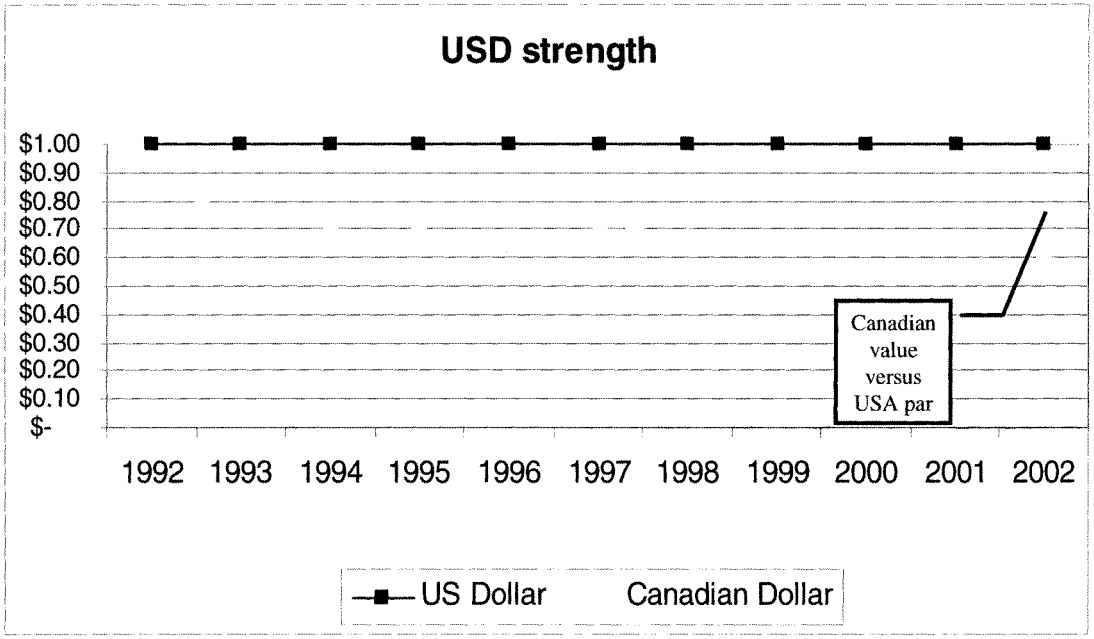
The changes proposed to FIFRA under S.1406 will not do anything to hasten harmonization efforts under NAFTA, which is the proper forum to achieve international regulatory and thus pricing, harmonization. Harmonization must be aggressively pursued at an international level, and cannot be properly effected through an individual state or pesticide product basis. S. 1406 jeopardizes the consistency of state registration programs, the sovereignty of U.S. intellectual property laws, our domestic regulatory approval process and labeling practices, and raises NAFTA concerns, and user safety issues. S. 1406 should not be advanced further because it raises significant and complicated unintended consequences in an attempt to solve a problem that does not exist.

CropLife America Written Testimony
Figures and Attachments

Figure 1: U.S./Canada Exchange Rate Chart
Figure 2: Total U.S. Sales: Agriculture Chemicals Chart
Figure 3: Farm Expenditures and Income Chart
Figure 4, 5: EPA New Product/Use Registrations Chart
Figure 6: Round Up Labels, Differences
Figure 7: Liberty Labels, Differences
Figure 8-A: Achieve SC Label
Figure 8-B: Dual II Magnum Label
Figure 8-C: Discover Label
Attachment 1: Analysis by Gerald Carlson
Attachment 2: NDSU Updated Charts
Attachment 3: Sue Esserman Letter and Bio
Attachment 4: Barry Smith Letter and Bio
Attachment 5: Jorge Molina Letter and Bio

Additional Correspondence:
South Dakota Agribusiness Letter

Figure 1
Currency Exchange
USA vs Canada
1992-Current- in $USD



Source: Statistic Canada, 1997, DRI-WEFA 1998 through 2001

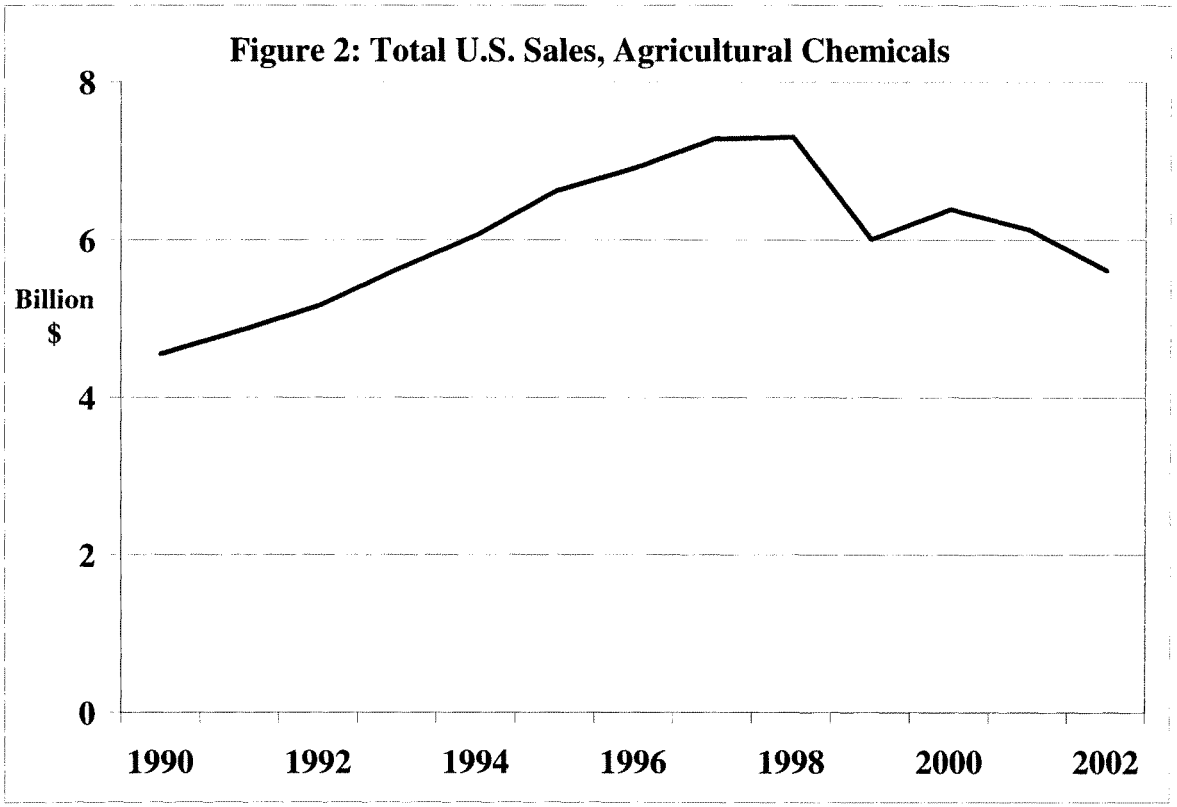


Figure 2: Total U.S. Sales, Agricultural Chemicals
Billion $
8
6
4
2
0
1990
1992
1994
1996
1998
2000
2002

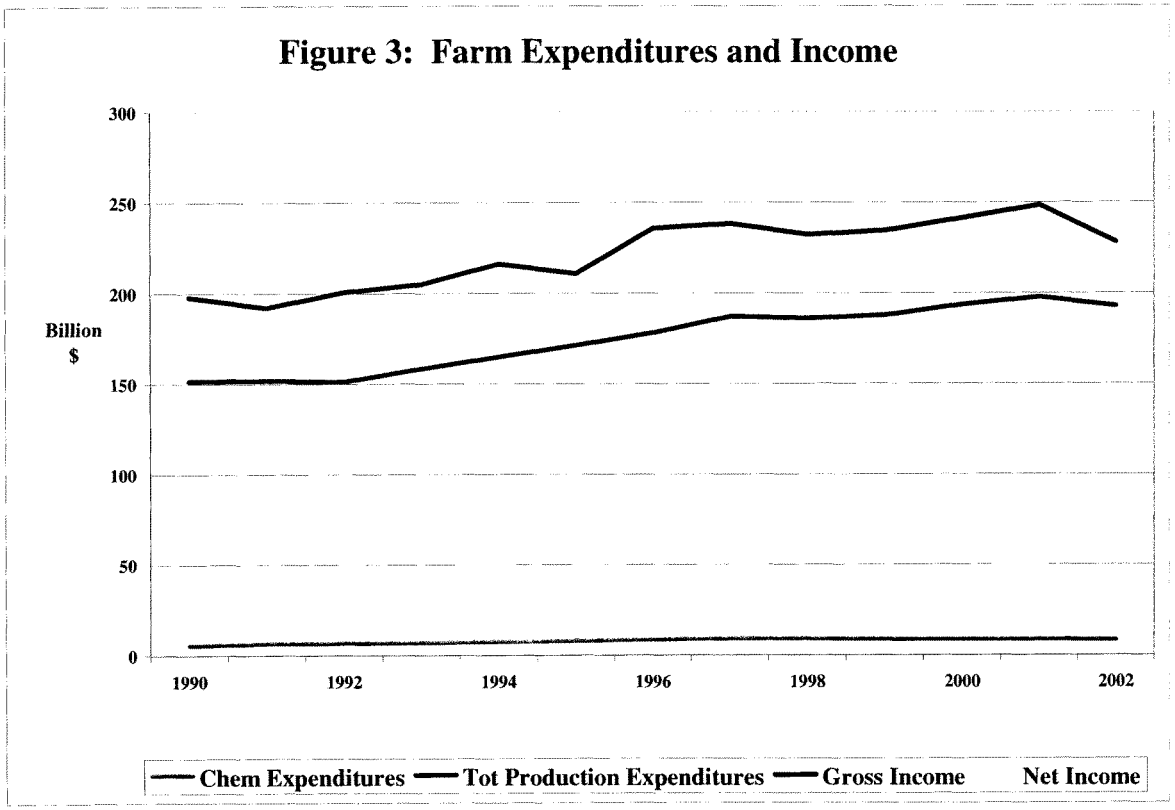


Figure 3: Farm Expenditures and Income
Billion $
300
250
200
150
100
50
0
1990
1992
1994
1996
1998
2000
2002
Chem Expenditures
Tot Production Expenditures
Gross Income
Net Income

Figure 4 EPA New Product Registrations

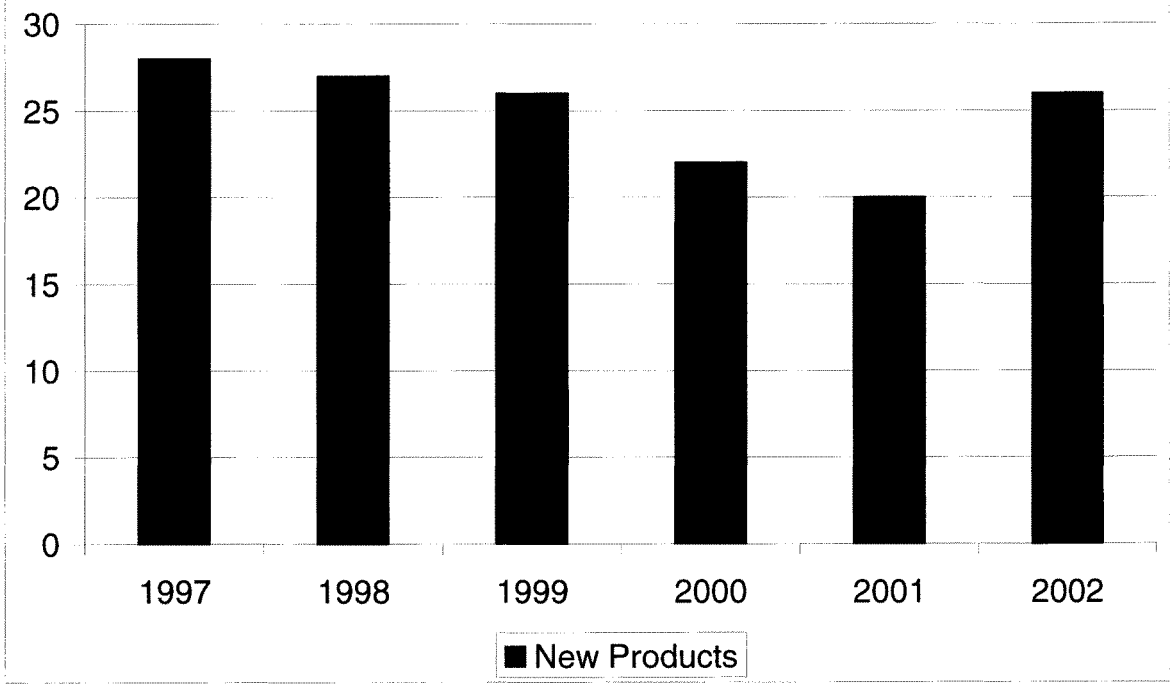


Figure 5: EPA New Use Registrations

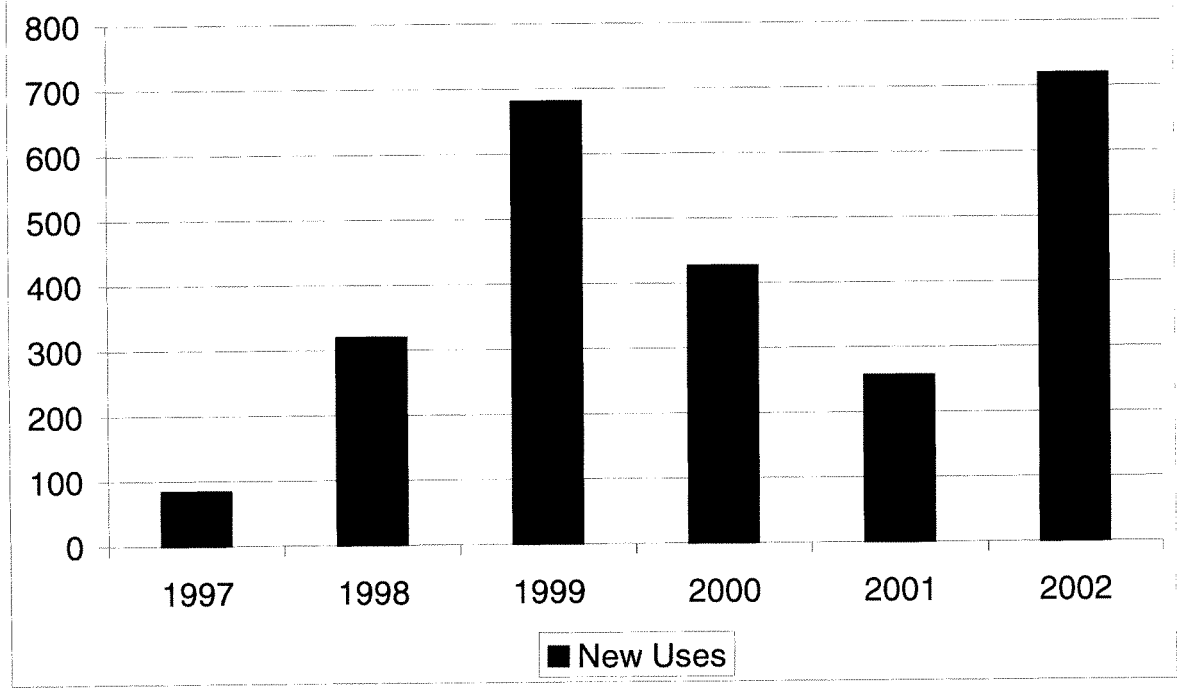
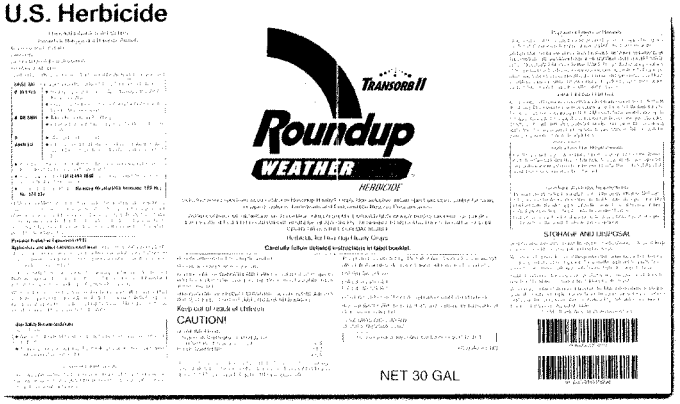


Figure 6

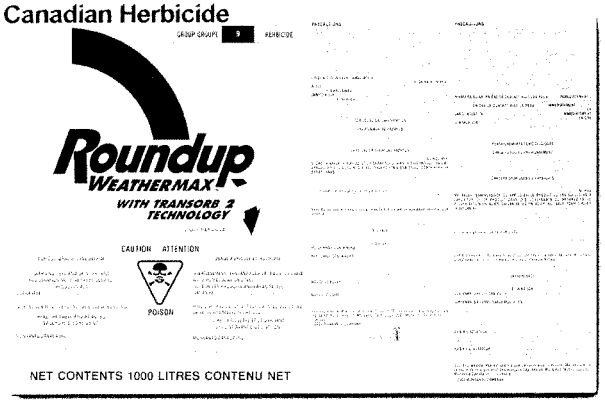
U.S. Herbicide



Label Differences

- For agricultural use
- English Language
- Not considered a hazard to domestic animals

Canadian Herbicide

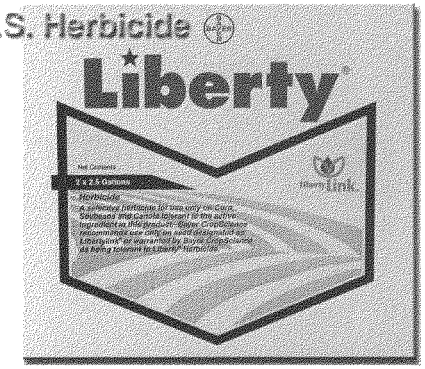


Label Differences

- For agricultural and industrial use
- French and English
- PPE recommendation
- Signal words and symbols/cautionary language
- Units of measurement metric vs. English units
- Emergency tel. nos.

Figure 7

U.S. Herbicide

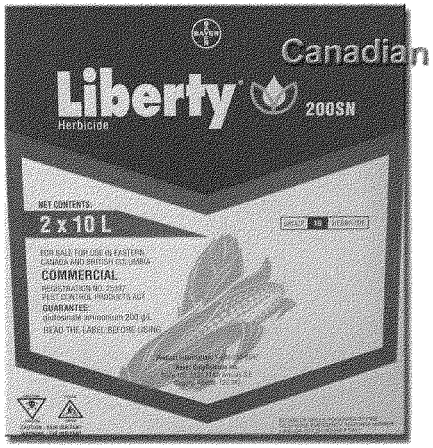


Differences in Concentration
200 gm/liter
150 gm/liter

Differences in Product Efficacy
Canola vs. Corn/Soybean/Canola

Differences on Label
English vs. French
English vs. metric units
U.S. vs. Canadian mail address
U.S. vs. Canadian Emergency tel. nos.

Canadian Herbicides



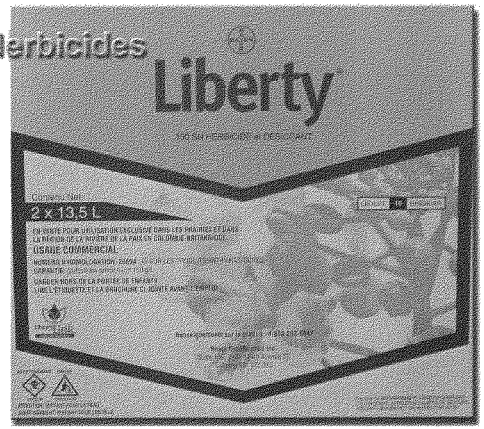


FIGURE 8-A

PULL HERE TO OPEN

ACHIEVE® SC

Herbicide

Postemergence Herbicide for Control of Certain Annual Grassy Weeds in Wheat and Barley

Active Ingredient:
Tralkoxydim
2-Cyclohexen-1-one, 2-[1-(ethoxyimino)propyl]-3-hydroxy-5-(2,4,6-trimethylphenyl)-(9Cl) 35.0%

Other Ingredients:	65.0%
Total:	100.0%

Contains 3.33 lbs. active ingredient per gallon or 400 grams a.i./L.

KEEP OUT OF REACH OF CHILDREN.

CAUTION

See additional precautionary statements and directions for use inside booklet.

EPA Reg. No. 100-1130
EPA Est. 100-NE-001
Product of United Kingdom
Formulated in the USA

SCP 1130A-L1A 0603
116986

2.16 gallons
Net Contents

syngenta

SCP 130-1130A-L1A

FIGURE 8-B

PULL HERE TO OPEN

Dual II MAGNUM®

Herbicide

For weed control in corn, cotton, peanuts, pod crops, potatoes, safflowers, grain or forage sorghum, and soybeans

Active Ingredient:

S-metolachlor (CAS No. 87392-12-9)	82.4%
Other Ingredients:	17.6%
Total:	100.0%

Dual II MAGNUM contains 7.64 lbs. of active ingredient per gallon.

KEEP OUT OF REACH OF CHILDREN.

CAUTION

See additional precautionary statements and directions for use inside booklet.

EPA Reg. No. 100-818

EPA Est. 11773-IA-01VWC

EPA Est. 070989-IA-001OMH

(Superscript is first three letters of batch code on container)

SCP 818A-L1L 0702
154404

2.5 gallons

U.S. Standard Measure

syngenta

SCP 130-818A-L1L

FIGURE 8-C

PULL HERE TO OPEN

Discover®

Herbicide

A single pass liquid postemergence herbicide for control of grass weeds in wheat (including Durum)

Active Ingredient: Clodinafop-propargyl (CAS No. 105512-06-9)	22.3%
Other Ingredients:	77.7%
Total:	100.0%

This product contains petroleum distillates, xylene, or xylene-range aromatic solvent.

Discover Herbicide contains 2 lbs. of clodinafop-propargyl active ingredient per gallon.

KEEP OUT OF REACH OF CHILDREN.

WARNING/AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See additional precautionary statements and directions for use inside booklet.

EPA Reg. No. 100-907

EPA Est. 71478-CAN-001

Product of Canada

SCP 907A-L1D 0103

1.25 gallons

U.S. Standard Measure

syngenta

Attachment 1

US and Canadian Pesticide Prices

Gerald A. Carlson
North Carolina State University

Introduction

In 1999, Ken McEwan of the University of Guelph and I conducted a comprehensive study of price differentials for Canada and the US for agricultural pesticides (Carlson, G. A. and K. McEwan et al, 1999). We had the help of two assistants (John Deal and Bill Deen) and we relied extensively on dealer surveys and all available statistics of USDA and Ag Canada. We attempted to make the study comprehensive by considering other pesticide trade studies, providing the business and economic theory for price differences, and examining all major pesticides and four major crops in both the US and Canada. The study was requested and financially supported by the US Department of Agriculture and Agriculture and Agri-Food Canada. Some of the major finding were: 1) although there were individual pesticide products that had higher unit prices in the US, there were other products that had higher prices and the same price as those in Canada, 2) farmers in the US (North Dakota/Minnesota) and Canada (Manitoba/Saskatchewan) use very different herbicides for the four study crops, and 3) North Dakota farmers spent less per crop acre for each of the four crops (29 to 202%) than did farmers in Manitoba because of more use of low-priced herbicides and lower use rates. (Bayer Crop Science, 2004, finds higher chemical costs per acre and lower profits for Canadian than US wheat farms.) In the Carlson and McEwan study we find lower herbicide expenditures per acre in North Dakota, but this does not mean that farmers have higher profits than their Canadian counterparts because profits depend upon other

production, financing and marketing costs, crop yields and crop prices. However, given that the estimated savings were small (less than $.50 per treated acre for wheat, barley and canola) from assuming that US farmers could take advantage of the full difference in purchasing Canadian herbicides with no cost to middlemen, it was our conclusion that the price differentials did not warrant a change in how US or Canadian pesticides were traded along our common border.

I was recently asked by CropLife America to look at the price differentials again without the time to conduct surveys or contact pesticide dealers or pesticide industry specialists as we did in the earlier study. I was able to examine the North Dakota State University study of March 2003 (Taylor and Gray, 2004) on comparable herbicide prices of North Dakota and Saskatchewan and a business confidential study by Bayer Crop Science (Bayer Crop Science, 2004). This report is a brief summary of my current findings and conclusions on the border trade issue.

Pesticide Trade Between the US and Canada

As explained in both the theoretical and empirical parts of our 1999 study, there are many reasons for unit price differences besides trade regulations for pesticide products. In addition, FIFRA requires that full social costs must be considered in implementing this law. This includes costs and benefits to farmers, industry costs and benefits and costs and benefits to third parties, the most important part of the latter are changes in external or environmental costs. I will examine each of these three sectors as it relates to the proposed Senate Bill, S.1406 (S.1406, 2003).

Farmer Costs and Benefits

The major economic issue to farmers for trade in pesticides is not unit price differences between the US and Canada for particular pesticide products, but rather the per acre cost of pest control. Since there is relatively free trade in wheat, barley, canola and potatoes between the US and Canada, per acre costs to produce these products is relevant to US farmers. It is possible to find pesticide products that have higher (or lower) prices per gallon or other physical measure (adjusted for concentration, unit size and currency exchange rates) in Canada relative to prices found in the US. (I refer to this as price per unit here.). However, this is not the correct comparison for estimating the benefits of a policy change to US farmers or more broadly to the pest control process in the US economy.

When examining benefits of a legislative change to US farmers, the per acre pest control costs for a given crop is a more complete and better comparison than unit prices of particular pesticide products. The major reason for this is that use rates per acre and treatment acres by pesticide product vary widely by region, year and crop in both the US and Canada. In the 1999 US and Canada Pricing Study, (for years 1997-1998) we found that farmers in two Canadian provinces were spending more per acre for pest control because they used different products and often had higher use rates per acre than the North Dakota/ Minnesota farmers. This was true even when some products with relatively high use rates were higher priced per unit in the US. Therefore, merely finding that a few herbicides are priced higher per unit does not mean that pest control costs are higher as was asserted in the North Dakota studies.

The major specific problem with the North Dakota study (one study, covering North Dakota prices in 4 crop years, 2000-2003) is that they assume that the farmers use recommended use rates per acre and that they use the pesticide products found in a single year (2000) in all years and in both North Dakota and Saskatchewan. However, I know based on our 1999 study, many farmer surveys and over 35 years of experience in pest control economics that farmers examine weed densities, weed types, non-chemical options, and other factors in choosing weed control practices (Carlson and Wetzstein, 1993). The use pattern of pesticides is dynamic over time because of product price changes, changes in availability of substitute products, patent changes, and changes in other factors such as crop prices, pest densities, and pest types. It is a gross simplification to assume that a one-time use pattern of pesticides in one location (North Dakota) applies to changing pest conditions over crop years and widely different areas such as other US locations and the Canadian provinces.

Comparisons of unit prices of a limited set of products without consideration of rates per acre and acre treatment patterns can seriously bias farmer cost comparisons. The direction of the bias will be to overestimate price penalties in the higher-price region. The first reason for this bias is that the static assumption of fixed use rates means that farmers do not change to lower-priced herbicides or non-chemical methods when they become available. Secondly, it assumes that Canadian farmers use the same herbicides at the same rates as North Dakota farmers do in all regions in all years. The 1997 and 1998 survey of North Dakota and Canadian growers used in our 1999 study showed that this was not the case.

Another problem with the North Dakota study is that it was not comprehensive. It seems to only consider herbicides and it only considers one US state, North Dakota and one province, Saskatchewan rather than what is happening in other states, provinces and other crops. A change in FIFRA would open the entire US-Canada border. Our more comprehensive study shows that insecticides and fungicides are often lower-priced in the US (Carlson and McEwan, 1999). This means that with a more open border, Canadian farmers may be able to lower their production costs and compete more directly with US farmers.

Finally, the North Dakota study does not consider transfer or transaction costs of implementing a trade change. Clearly, there are going to be increases in pesticide costs to farmers from the private costs of purchasing, transportation, storage, marketing, of pesticides between Canadian and US locations. Our 1999 study shows that these costs are often large relative to raw product costs.

In addition to the factors described above, normal competitive forces for pesticide products and currency exchange rate changes will tend to reduce unit price differences over time. The herbicide products that contribute the most to higher expenditures in North Dakota (when the 2000 use rates in North Dakota are assumed) are Roundup (glyphosate based products), Puma and Liberty. However, US prices of these products have been declining systematically in recent years. Independent information on Liberty and Puma from Bayer Crop Science show sizeable reductions in US-Canada unit price spreads for 2003 and 2004. The Bayer data show declining and finally higher unit prices of Liberty in Canada than in the US in 2003 and 2004. For Puma the average US grower cost per gallon (adjusted for concentration and currency exchange rates) has dropped

from US$74 to US$25 between 2000 and 2004. Finally, glyphosate prices have also been declining in the US. Even the North Dakota prices have declined by about 30% between 2000 and 2003. The importation of generic glyphosate and the change in patent status of Monsanto's glyphosate products will result in even lower prices in 2004 and going forward.

Farmers, legislators and others can not change pesticide prices of the past, and the focus should be on the future. The falling US dollar relative to the Canadian dollar will tend to make Canadian pesticides more expensive relative those purchased in the US. There has been about a 15 % decline in the US dollar relative to the Canadian dollar between 2002 and 2004 and currency futures for the near future indicates a continuation of this trend.

Industry Benefits and Costs

Changes in trade arrangements as specified in Senate bill S. 1406 are likely to be costly to the pesticide industry. FIFRA changes must consider costs and benefits to the pesticide industry participants. There are three major economic changes that are likely to occur with opening the US market to Canadian imports. These have to do with product quality, marketing costs and long-term returns to research and development.

Bulk products like pesticides are frequently changed by formulators and sellers of these products. This is sometimes a short term advantage to farmers in terms of prices, but additives and other changes in formulation can change product performance in terms of pest control duration, movement of product to non-host sites and even pest control efficacy (Marra and Carlson, 1983). Farmers will notice these performance changes

when they suffer weed escapes, when extra applications are needed or when reduced yields occur. Pesticide firms that give guidance for their brands may lose sales because of reduced performance of the altered products. In addition, major pesticide firms will lose market shares and will have higher average total costs. This can lead to higher unit costs of goods sold and lower profits. If profits become negative, firms will exit the market segment. This can result in higher long-term prices of pest control for farmers even with the trade products.

Marketing costs can increase with open borders. This includes the higher direct costs of middlemen as described above for transport, and other transaction costs, but it also will mean higher marketing costs in both the US and Canada for the major pesticide firms. One of the ways pesticide companies recover marketing, development and discovery costs is to segment markets and charge higher prices in market segments where farmers are willing to pay more. This occurs between regions in the same country and for the same active ingredient packaged for different crops. Pesticide firms that can not maintain market segmentation will have lower profits and tend to exit market segments where profits are low or negative. In addition pesticide firms will not enter new market segments since the fixed costs may increase with higher unit marketing costs. The consequence of non-available pesticides is that costs of pest control increase in the short term. In the long run, pesticide firms will reduce their research and discovery efforts.

Pesticide manufacturers are granted patent protection to encourage research and discovery efforts. Open transport of pesticides across international borders means that the prices will tend towards the prices in the country where patent protection is weakest. Patent protection is often higher in the US markets because the larger market size can

help cover long-run discovery and development costs. Because of the high cost of research and development with increasing costs for human and environmental safety (Ruttan, R, G. Carlson, et al., 1981; Ollinger, M. and G. Fernandez-Cornejo, 1998) fewer new products are coming to market. Re-registration, withdrawal and maintenance decisions of pesticide firms are also influenced by economic and safety considerations (Courbois, C., 2000). Therefore, changes in FIFRA that can damage the pesticide research and discovery process or the pesticide re-registration decisions to save a little money for a few growers will usually not be in the interests of the US pest control industry and all growers.

Changes In Social Costs

FIFRA changes are primarily directed at environmental and safety considerations. S. 1406 does not address the environmental and safety aspects that could result from the changes in trade. Farmers tend to consider off-farm effects of their herbicide choices particularly as it affects their own safety and nearby environmental costs (Beach and Carlson, 1993). However, with new trade products their can be new containers, changes in use of inert materials and changes in pesticide placement that can increase pesticide runoff. If there is more use of pesticides that have negative off-farm effects because of the increase use of Canadian pesticides, then social costs can go up. If there is less use of non-chemical weed control, water quality can be either increased or decreased.

The major issue in terms of external costs is that it is not addressed in either the S. 1406 Bill, the North Dakota or Carlson and McEwan studies. It should be before any major change in FIFRA is considered.

A final social cost issue is that of taxpayer costs. Pesticide regulation to insure safety and long term incentives to innovate are core considerations of the statute. There are major costs of development and registration. Trade issues as described in S. 1406 are likely to add new public costs of regulating the proposed border transfers. This cost will get passed on to farmers, industry and taxpayers. In the past, there have been no major changes in FIFRA to accommodate small differences in prices across international borders. Changes in the use of this safety statute to accommodate small, short- term gains to a small group of growers does not seem to be economically advisable.

Findings and Conclusions

The FIFRA law primarily deals with pesticide safety and environmental quality. Pesticide firms in cooperation with farmers, and pest management advisors conduct and submit numerous efficacy studies in the registration and re-registration process. Trade and pricing of pesticides once they are registered for use has been left to the industry. My analysis of recent reports and data leads to the conclusion that any gains to North Dakota growers from passage of S. 1460 would be very small and temporary. Adoption of the legislation is likely to increase costs to the pest control industry, to farmers and to those who value safety and environmental quality because of less innovation, exit of companies from certain markets, possible increases in environmental costs and higher taxpayer costs.

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NDSU Pesticide Price Update 2000-2003

Attachment 2

2000 Pesticide Retail Prices

Canadian Product	Active Ingredient	Formulation	Prod. Rate	g ai/A	Cost (CAN)[a]	Cost (USD)[b]	U.S. Product	Formulation	Prod. Rate	g ai/A	Cost (USD)[c]	Price Diff (USD)	ND Treated Acres (000)[d]	Total ND Cost (USD)
Aatrex	atrazine	480 g/L	0.85 L/A	408	4.98	3.34	Atrazine 4L	4 L	1.8 pt/A	408	3.15	-0.19	139.4	-26,486
Atrazine Nine-O	atrazine	90% ai	0.45 kg/A	405	4.98	3.34	Atrazine 90DF	90 DF	1 lb/A	408	3.15	-0.19		
Basagran	bentazon	480 g/L	0.91 L/A	437	26.44	17.60	Basagran	4 SL	1.93 pt/A	437	17.37	-0.43	403.2	-175,376
Buctril M	bromoxynil + MCPA	280 g/L (each)	0.405 L/A	113.4	6.38	4.30	Bromac	2 EC	1 pt/A	113.4	5.50	1.20	1757.6	2,115,525
Pardner	bromoxynil	280 g/L	.465 L/A	136	9.62	6.48	Buctril	2 EC	1.2 pt/A	136	8.25	1.77	139.2	246,634
Select	clethodim	240 g/L	.15 L/A	36	31.50	21.21	Select	2 EC	5.1 fl oz/A	36	6.97	-14.24	81.9	-1,166,454
Horizon	clodinafop-propargyl	240 g/L (EC)	0.095 L/A	23	16.21	10.92	Discover	2 EC	3.2 fl oz/A	23	12.75	1.83	72.3	132,600
Lontrel	clopyralid	360 g/L	.23 L/A	83	31.52	21.23	Stinger	3 SC	0.5 pt/A	83	30.00	8.77	63.2	554,524
Curtail M	clopyralid + MCPA	50 g/L clo/200 g/L MCPA	0.8 L/A	40/224	11.50	7.74	Curtail M	0.42 + 2.35 SL	1.75 pt/A	40/224	9.00	1.26	70.8	88,910
Banvel II	dicamba	480 g/L	0.127 L/A	61	4.18	2.81	Banvel	4 SL	4.3 fl oz/A	61	2.75	-0.06	2520	-163,432
Avenge 200C	diflenzoquat	200 g/L	1.42 L/A	284	16.78	11.30	Avenge	2 SL	2.5 pt/A	284	11.90	0.60	30.6	18,366
Eptam 8-E	EPTC	800 g/L	1.72 L/A	1376	18.48	12.44	Eptam EC	7 EC	3.5 pt/A	1376	13.56	1.12	16.5	18,404
Eradicane 8-E	EPTC	800 g/L	2.23 L/A	1784	22.74	15.31	Eradicane EC	6.7 EC	4.75 pt/A	1784	16.00	0.69	19.2	13,184
Edge	ethalfluralin	5% ai	8.9 kg/A	445	17.80	11.99	Sonalan 10G	10G	9.8 lb/A	445	9.21	-2.78	961.6	-2,670,073
Muster Toss-N-Go	ethametsulfuron-methyl	75% ai	12 g/A	9	23.90	16.09	Muster	75 DF	0.42 oz/A	9	11.35	-4.74	NS[e]	NS
Pumа Super	fenoxaprop-p-ethyl	92 g/L	0.405 L/A	37	15.50	10.44	Puma	1 EC	0.67 pt/A	37	15.00	4.56	2803.6	12,790,430
Everest	flucarbazone	70% ai	17.4 g/A	12.18	14.75	9.93	Everest	70 WDG	0.6 oz/A	12.18	12.00	2.07	NS	NS
Reflex	fomesafen	240 g/L	0.23 L/A	55.2	NA[f]	NA	Reflex	2 EC	0.5 pt/A	55.2	5.13	NA	134.1	NA
Liberty	glufosinate	150 g/L (EC)	1.1 L/A	165	18.44	12.42	Liberty	1.67 SL	28 fl oz/A	165	21.85	9.43	111.6	1,052,647
Glyfos	glyphosate	360 g ae/L	0.5 L/A	180	4.48	3.02	Glyfos	3 SL	1.1 pt/A	180	4.66	1.66		
Roundup Transorb	glyphosate	360 g ae/L	0.5 L/A	180	4.90	3.30	Roundup Ultra	3 SL	1.1 pt/A	180	5.23	1.93	2255.3	3,946,775
Vantage	glyphosate	356 g ae/L	0.5 L/A	178	4.48	3.02	Glyphomax	3 SL	1.0 pt/A	178	4.50	1.48		
Vantage Plus	glyphosate	360 g ae/L	0.5 L/A	180	4.90	3.30	Glyphomax Plus	3 SL	1.1 pt/A	180	5.23	1.93		
Assert 300SC	imazmethabenz	300 g/L	0.54 L/A	162	12.20	8.22	Assert 2.5S	2.5 S	1.1 pt/A	162	13.75	5.53	323.8	1,792,038
Dual II Magnum	metolachlor	915 g/L	0.7 L/A	641	30.03	20.22	Dual	7.62 EC	1.5 pt/A	641	19.69	-0.53	14.5	-7,721
Escort	metsulfuron	60% ai	12 g/A	7.2	21.00	14.14	Escort	60 DF	0.42 oz/A	7.2	10.50	-3.64	90.1	-328,109
Accent	nicosulfuron	75% ai	13.5g/A	10.1	23.14	15.58	Accent	75 DF	0.5 oz/A	10.1	15.50	-0.08	286.6	-23,704
Assure II	quizalofop-p-ethyl	96 g/L	0.3 L/A	27.6	16.50	11.11	Assure II	0.88 EC	8.9 fl oz/A	27.6	8.69	-2.42	450.7	-1,091,264
Pinnacle	rimsulfuron	25% ai	24 g/A	6	17.50	11.78	Matrix	25 DF	.85 oz/A	6	12.75	0.97	NS	NS
Poast Ultra	sethoxydim	450 g/L	0.19 L/A	85.5	15.34	10.33	Poast	1.5 EC	1 pt/A	85.5	8.15	-2.18	594.2	-1,295,421
Refine Toss-N-Go	thifensulfuron + tribenuron	50% thif/25% trib.	8 g/A	4/2	5.63	3.79	Harmony GT	50 + 25 DF	.3 oz/A	4/2	3.60	-0.19	348.9	-66,744
Achieve 80DG	tralkoxydim	80% ai	0.1 kg/A	80	15.75	10.61	Achieve 40DG	40% ai	7 oz/A	80	16.10	5.49	280.4	1,540,459
Avadex BW	triallate	400 g/L	1.42 L/A	568	10.81	7.28	Far-Go EC	4 EC	2.5 pt/A	568	12.50	5.22	119.2	482,760
Avadex BW	triallate	10% ai	5.67 kg/A	567	14.34	9.66	Far-Go 10G	10 G	12.53 lb/A	567	11.53	1.87		
Remedy EC	triclopyr	480 g/L	1.6 L/A	768	47.92	32.27	Garlon EC	4 EC	1.7 qt/A	768	42.50	10.23	NS	NS

[a]Canadian prices were obtained from Guide to Crop Protection 2001 from Saskatchewan Agriculture and Food. Prices reflect 2000 retail prices.

[b]A conversion factor of 0.67341 was used (1 Canadian dollar equals 0.67341 USD). This was the average exchange rate for 2000.

[c]U.S. prices were obtained from 2001 North Dakota Weed Control Guide from NDSU Extension Service. Prices reflect 2000 retail prices.

[d]Treated ND acres were obtained from a year 2000 ND grower survey conducted by NDSU Extension Service.

[e]NS = Not Significant, meaning no treated acres were reported in the year 2000 ND grower survey.

[f]NA = Not Available, meaning the product was not available in at least one country.

Net Total: 17,778,471

Total Pos 24,793,255

2001 Pesticide Retail Prices

Canadian Product	Active Ingredient	Formulation	Prod. Rate	g ai/A	Cost (CAN)[a]	Cost (USD)[b]	U.S. Product	Formulation	Prod. Rate	g ai/A	Cost (USD)[c]	Price Diff (USD)	ND Treated Acres (000)[d]	Total ND Cost (USD)
Astrex	atrazine	480 g/L	0.85 L/A	408	4.97	3.21	Atrazine 4L	4 L	1.9 pt/A	408	2.70	-0.51	139.4	-74,579
Atrazine Nine-O	atrazine	90% ai	0.45 kg/A	405	4.97	3.21	Atrazine 90DF	90 DF	1 lb/A	408	2.53	-0.68		
Basagran	bentazon	480 g/L	0.91 L/A	437	26.52	17.13	Basagran	4 SL	1.93 pt/A	437	18.83	1.70	403.2	687,125
Buctril M	bromoxynil + MCPA	280 g/L (each)	0.405 L/A	113.4	6.56	4.24	Bromac	2 EC	1 pt/A	113.4	5.60	1.26	1757.6	2,221,165
Pardner	bromoxynil	280 g/L	.485 L/A	136	10.02	6.47	Buctril	2 EC	1.2 pt/A	136	8.25	1.78	139.2	247,890
Select	clethodim	240 g/L	.15 L/A	36	31.50	20.34	Select	2 EC	5.1 fl oz/A	36	7.40	-12.94	81.9	-1,059,930
Horizon	clodinafop-propargyl	240 g/L (EC)	0.095 L/A	23	16.66	10.77	Discover	2 EC	3.2 fl oz/A	23	15.25	4.48	72.3	323,800
Lontrel	clopyralid	360 g/L	.23 L/A	83	32.05	20.70	Stinger	3 SC	0.5 pt/A	83	30.00	9.30	63.2	587,954
Curtail M	clopyralid + MCPA	50 g/L clo/280 g/L MCPA	0.8 L/A	40/224	11.55	7.46	Curtail M	0.42 + 2.35 SL	1.75 pt/A	40/224	9.00	1.54	70.6	109,126
Banvel II	dicamba	480 g/L	0.127 L/A	61	4.19	2.71	Banvel	4 SL	4.3 fl oz/A	61	2.76	0.05	2520	136,844
Avenge 200C	diflenzoquat	200 g/L	1.42 L/A	284	16.96	10.95	Avenge	2 SL	2.5 pt/A	284	12.50	1.55	30.6	47,361
Eptam 8-E	EPTC	800 g/L	1.72 L/A	1376	18.48	11.93	Eptam EC	7 EC	3.5 pt/A	1376	13.47	1.54	16.5	25,347
Eradicane 8-E	EPTC	800 g/L	2.23 L/A	1784	22.74	14.68	Eradicane EC	6.7 EC	4.75 pt/A	1784	16.00	1.32	19.2	25,252
Edge	ethalfluralin	5% ai	8.9 kg/A	445	18.18	11.73	Sonalan 10G	10G	9.8 lb/A	445	9.23	-2.50	961.6	-2,401,291
Muster Toss-N-Go	ethametsulfuron-methyl	75% ai	12 g/A	9	23.92	15.45	Muster	75 DF	0.42 oz/A	9	11.35	-4.10	NS[e]	NS
Puma Super	fenoxaprop-p-ethyl	92 g/L	0.405 L/A	37	15.85	10.24	Puma	1 EC	0.67 pt/A	37	14.10	3.86	2803.6	10,834,640
Everest	flucarbazone	70% ai	17.4 g/A	12.18	14.75	9.53	Everest	70 WDG	0.6 oz/A	12.18	12.00	2.47	NS	NS
Reflex	fomesafen	240 g/L	0.23 L/A	55.2	6.90	4.46	Reflex	2 EC	0.5 pt/A	55.2	5.00	0.54	134.1	72,975
Liberty	glufosinate	150 g/L (EC)	1.1 L/A	165	15.07	9.73	Liberty	1.67 SL	28 fl oz/A	165	18.70	8.97	111.6	1,000,856
Glyfos	glyphosate	360 g ae/L	0.5 L/A	180	4.46	2.89	Glyfos	3 SL	1.1 pt/A	180	4.68	1.79		
Roundup Transorb	glyphosate	360 g ae/L	0.5 L/A	180	4.90	3.16	Roundup Ultra	3 SL	1.1 pt/A	180	5.03	1.87	2255.3	3,963,690
Vantage	glyphosate	356 g ae/L	0.5 L/A	178	4.48	2.89	Glyphomax	3 SL	1.0 pt/A	178	4.25	1.36		
Vantage Plus	glyphosate	360 g ae/L	0.5 L/A	180	4.90	3.16	Glyphomax Plus	3 SL	1.1 pt/A	180	4.95	1.79		
Assert 300SC	imazmethabenz	300 g/L	0.54 L/A	162	12.54	8.10	Assert 2.5S	2.5 S	1.1 pt/A	162	11.69	3.59	323.6	1,163,104
Dual II Magnum	metolachlor	915. g/L	0.7 L/A	641	25.02	16.16	Dual	7.62 EC	1.5 pt/A	641	18.59	2.43	14.5	35,276
Escort	metsulfuron	60% ai	12 g/A	7.2	18.72	12.09	Escort	60 DF	0.42 oz/A	7.2	8.49	-3.60	90.1	-324,253
Accent	nicosulfuron	75% ai	13.5g/A	10.1	23.59	15.23	Accent	75 DF	0.5 oz/A	10.1	16.00	0.77	286.6	219,617
Assure II	quizalofop-p-ethyl	96 g/L	0.3 L/A	27.6	24.75	15.98	Assure II	0.88 EC	8.9 fl oz/A	27.6	9.03	-6.95	450.7	-3,133,630
Prism	rimsulfuron	25% ai	24 g/A	6	17.85	11.53	Matrix	25 DF	.85 oz/A	6	10.63	-0.90	NS	NS
Poast Ultra	sethoxydim	450 g/L	0.19 L/A	85.5	15.29	9.87	Poast	1.5 EC	1 pt/A	85.5	8.15	-1.72	594.2	-1,024,296
Refine Toss-N-Go	thifensulfuron + tribenuro	50% thif/25% trib.	8 g/A	4/2	5.74	3.71	Harmony GT	50 + 25 DF	.3 oz/A	4/2	3.60	-0.11	348.9	-37,235
Achieve 80DG	tralkoxydim	80% ai	0.1 kg/A	80	15.75	10.17	Achieve 40DG	40% ai	7 oz/A	80	14.00	3.83	280.4	1,073,886
Avadex BW	triallate	400 g/L	1.42 L/A	568	10.75	6.94	Far-Go EC	4 EC	2.5 pt/A	568	12.50	5.56	119.2	482,760
Avadex BW	triallate	10% ai	5.67 kg/A	567	14.35	9.27	Far-Go 10G	10 G	12.53 lb/A	567	11.50	2.23		
Remedy EC	triclopyr	480 g/L	1.6 L/A	768	46.80	30.22	Garlon EC	4 EC	1.7 qt/A	768	42.48	12.26	NS	NS

[a]Canadian prices were obtained from Guide to Crop Protection 2002 from Saskatchewan Agriculture and Food. Prices reflect 2001 retail prices.

[b]A conversion factor of 0.64577 was used (1 Canadian dollar equals 0.64577 USD). This was the average exchange rate for 2001.

[c]U.S. prices were obtained from 2002 North Dakota Weed Control Guide from NDSU Extension Service. Prices reflect 2001 retail prices.

[d]Treated ND acres were obtained from a year 2000 ND grower survey conducted by NDSU Extension Service.

[e]NS = Not Sig nt, meaning no treated acres were reported in the year 2000 ND grower survey.

Net Total: 15,202,856

Total Pos: 23,258,070

2002 Pesticide Retail Prices

Canadian Product	Active Ingredient	Formulation	Prod. Rate	g ai/A	Cost (CAN)[a]	Cost (USD)[b]	U.S. Product	Formulation	Prod. Rate	g ai/A	Cost (USD)[c]	Price Diff (USD)	ND Treated Acres (000)[d]	Total ND Cost (USD)
Aatrex	atrazine	480 g/L	0.85 L/A	408	5.53	3.52	Atrazine 4L	4 L	1.8 pt/A	408	2.48	-1.04	139.4	-131,036
Atrazine Nine-O	atrazine	90% ai	0.45 kg/A	405	4.97	3.17	Atrazine 90DF	90 DF	1 lb/A	408	2.50	-0.67		
Basagran	bentazon	480 g/L	0.91 L/A	437	26.76	17.06	Basagran	4 SL	1.93 pt/A	437	18.82	1.76	403.2	711,603
Buctril M	bromoxynil + MCPA	280 g/L (each)	0.405 L/A	113.4	6.78	4.32	Bromac	2 EC	1 pt/A	113.4	5.50	1.18	1757.8	2,077,640
Pardner	bromoxynil	280 g/L	.485 L/A	136	10.22	6.51	Buctril	2 EC	1.2 pt/A	136	8.55	2.04	139.2	284,148
Select	clethodim	240 g/L	.15 L/A	36	32.25	20.54	Select	2 EC	5.1 fl oz/A	36	7.37	-13.17	81.9	-1,078,519
Horizon	clodinafop-propargyl	240 g/L (EC)	0.095 L/A	23	17.14	10.92	Discover	2 EC	3.2 fl oz/A	23	15.25	4.33	72.3	313,364
Lontrel	clopyralid	360 g/L	.23 L/A	83	32.43	20.65	Stinger	3 SC	0.5 pt/A	83	30.00	9.35	63.2	590,707
Curtail M	clopyralid + MCPA	50 g/L clo/250 g/L MCPA	0.8 L/A	40/224	10.85	6.91	Curtail M	0.42 + 2.35 SL	1.75 pt/A	40/224	9.40	2.49	70.8	176,297
Banvel II	dicamba	480 g/L	0.127 L/A	61	4.62	2.94	Banvel	4 SL	4.3 fl oz/A	61	2.76	-0.18	2520	-459,379
Avenge 200C	diflenzoquat	200 g/L	1.42 L/A	284	17.32	11.03	Avenge	2 SL	2.5 pt/A	284	10.00	-1.03	30.8	-31,531
Eptam 8-E	EPTC	800 g/L	1.72 L/A	1376	19.49	12.41	Eptam EC	7 EC	3.5 pt/A	1376	14.00	1.59	16.5	26,195
Eradicane 8-E	EPTC	800 g/L	2.23 L/A	1784	21.63	13.78	Eradicane EC	6.7 EC	4.75 pt/A	1784	16.00	2.22	19.2	42,715
Edge	ethalfluralin	5% ai	8.9 kg/A	445	18.42	11.73	Sonalan 10G	10G	9.8 lb/A	445	8.82	-2.91	961.6	-2,799,180
Muster Toss-N-Go	ethametsulfuron-methyl	75% ai	12 g/A	9	23.86	15.21	Muster	75 DF	0.42 oz/A	9	11.75	-3.46	NS[e]	NS
Puma 120 Super	fenoxaprop-p-ethyl	120 g/L	0.29 L/A	37	15.33	9.76	Puma	1 EC	0.87 pt/A	37	13.80	4.04	2803.6	11,317,954
Everest	flucarbazone	70% ai	17.4 g/A	12.18	15.05	9.58	Everest	70 WDG	0.8 oz/A	12.18	12.00	2.42	NS	NS
Reflex	fomesafen	240 g/L	0.23 L/A	55.2	7.04	4.48	Reflex	2 EC	0.5 pt/A	55.2	5.00	0.52	134.1	69,263
Liberty	glufosinate	150 g/L (EC)	1.1 L/A	165	15.07	9.60	Liberty	1.67 SL	28 fl oz/A	165	14.00	4.40	111.6	491,321
Glyfos	glyphosate	360 g ae/L	0.5 L/A	180	4.48	2.85	Glyfos	3 SL	1.1 pt/A	180	4.68	1.83		
Roundup Transorb	glyphosate	360 g ae/L	0.5 L/A	180	4.90	3.12	Roundup UltraMA	3.75 SL	.85 pt/A	180	4.99	1.87	2255.3	3,726,883
Vantage	glyphosate	356 g ae/L	0.5 L/A	178	4.48	2.85	Glyphomax	3 SL	1.0 pt/A	178	4.25	1.40		
Vantage Plus	glyphosate	360 g ae/L	0.5 L/A	180	4.90	3.12	Glyphomax Plus	3 SL	1.1 pt/A	180	4.95	1.83		
Assert 300SC	imazmethabenz	300 g/L	0.54 L/A	162	13.32	8.48	Assert 2.5S	2.5 S	1.1 pt/A	162	11.69	3.21	323.8	1,038,435
Dual II Magnum	metolachlor	915. g/L	0.7 L/A	641	25.02	15.93	Dual Magnum	7.62 EC	1.5 pt/A	641	18.75	2.82	14.5	40,829
Escort	metsulfuron	60% ai	12 g/A	7.2	19.20	12.23	Escort	60 DF	0.42 oz/A	7.2	8.40	-3.83	90.1	-344,877
Accent	nicosulfuron	75% ai	13.5g/A	10.1	24.07	15.33	Accent	75 DF	0.5 oz/A	10.1	16.00	0.67	288.6	192,245
Assure II	quizalofop-p-ethyl	96 g/L	0.3 L/A	27.6	16.51	10.51	Assure II	0.88 EC	8.9 fl oz/A	27.6	9.03	-1.48	450.7	-669,091
Prism	rimsulfuron	25% ai	24 g/A	6	18.72	11.92	Matrix	25 DF	.85 oz/A	6	10.63	-1.29	NS	NS
Poast Ultra	sethoxydim	450 g/L	0.19 L/A	85.5	15.58	9.92	Poast	1.5 EC	1 pt/A	85.5	8.15	-1.77	594.2	-1,053,088
Refine Toss-N-Go	thifensulfuron + tribenuron	50% thif/25% trib.	8 g/A	4/2	5.92	3.77	Harmony GT	50 + 25 DF	3 oz/A	4/2	3.60	-0.17	348.9	-59,387
Achieve 80DG	tralkoxydim	80% ai	0.1 kg/A	80	16.15	10.29	Achieve 40DG	40% ai	7 oz/A	80	12.25	1.96	280.4	550,905
Avadex BW	triallate	400 g/L	1.42 L/A	568	11.11	7.08	Far-Go EC	4 EC	2.5 pt/A	568	12.50	5.42	119.2	470,244
Avadex BW	triallate	10% ai	5.67 kg/A	567	14.81	9.43	Far-Go 10G	10 G	12.53 lb/A	567	11.90	2.47		
Remedy EC	triclopyr	480 g/L	1.6 L/A	768	44.80	28.53	Garlon EC	4 EC	1.7 qt/A	768	42.50	13.97	NS	NS

[a]Canadian prices were obtained from Guide to Crop Protection 2003 from Saskatchewan Agriculture and Food. Prices reflect 2002 retail prices.

[b]A conversion factor of 0.63586 was used (1 Canadian dollar equals 0.63586 USD). This was the average exchange rate for 2002.

[c]U.S. prices were obtained from 2003 North Dakota Weed Control Guide from NDSU Extension Service. Prices reflect 2002 retail prices.

[d]Treated ND acres were obtained from a year 2000 ND grower survey conducted by NDSU Extension Service.

[e]NS = Not Significant, meaning no treated acres were reported in the year 2000 ND grower survey.

Net Total: 15,494,661

Total Pos: 21,530,042

2003 Pesticide Retail Prices

Canadian Product	Active Ingredient	Formulation	Prod. Rate	g ai/A	Cost (CAN)[a]	Cost (USD)[b]	U.S. Product	Formulation	Prod. Rate	g ai/A	Cost (USD)[c]	Price Diff (USD)	ND Treated Acres (000)[d]	Total ND Cost (USD)
Aatrex	atrazine	480 g/L	0.85 L/A	408	6.47	4.63	Atrazine 4L	4 L	1.8 pt/A	408	2.25	-2.38	139.4	-331,772
Atrazine Nine-O	atrazine	90% ai	0.45 kg/A	405	6.47	4.63	Atrazine 90DF	90 DF	1 lb/A	408	2.25	-2.38		
Basagran	bentazon	480 g/L	0.91 L/A	437	26.78	19.17	Basagran	4 SL	1.93 pt/A	437	18.82	-0.35	403.2	-140,227
Buctril M	bromoxynil + MCPA	280 g/L (each)	0.405 L/A	113.4	6.82	4.88	Bromoxynil+MCPA	2 EC	1 pt/A	113.4	5.50	0.62	1757.6	1,087,225
Pardner	bromoxynil	280 g/L	.485 L/A	136	10.39	7.44	Bromoxynil	2 EC	1.2 pt/A	136	8.25	0.81	139.2	113,219
Select	clethodim	240 g/L	.15 L/A	36	32.50	23.26	Select	2 EC	5.1 fl oz/A	36	7.36	-15.90	81.9	-1,302,364
Horizon	clodinafop-propargyl	240 g/L (EC)	0.096 L/A	23	17.10	12.24	Discover	2 EC	3.2 fl oz/A	23	12.00	-0.24	72.3	-17,303
Lontrel	clopyralid	360 g/L	.23 L/A	83	33.31	23.84	Stinger	3 SC	0.5 pt/A	83	30.00	6.16	63.2	389,209
Curtail M	clopyralid + MCPA	50 gL clo/280 g/L MCPA	0.8 L/A	40/224	10.90	7.80	Curtail M	0.42 + 2.35 SL	1.75 pt/A	40/224	9.40	1.60	70.8	113,161
Banvel II	dicamba	480 g/L	0.127 L/A	61	4.62	3.31	Banvel	4 SL	4.3 fl oz/A	61	2.75	-0.56	2520	-1,403,048
Avenge 200C	diflenzoquat	200 g/L	1.42 L/A	284	17.78	12.73	Avenge	2 SL	2.5 pt/A	284	10.00	-2.73	30.6	-83,417
Eptam 8-E	EPTC	800 g/L	1.72 L/A	1376	19.87	14.22	Eptam EC	7 EC	3.5 pt/A	1376	14.00	-0.22	16.5	-3,662
Eradicane 8-E	EPTC	800 g/L	2.23 L/A	1784	21.63	15.48	Eradicane EC	6.7 EC	4.75 pt/A	1784	NA[f]			
Edge	ethalfluralin	5% ai	8.9 kg/A	445	18.98	13.57	Sonalan 10G	10G	9.5 lb/A	445	8.82	-4.75	961.6	-4,568,196
Muster Toss-N-Go	ethametsulfuron-methyl	75% ai	12 g/A	9	24.37	17.44	Muster	75 DF	0.42 oz/A	9	11.75	-5.69	NS[e]	NS
Puma 120 Super	fenoxaprop-p-ethyl	120 g/L	0.29 L/A	37	15.93	11.40	Puma	1 EC	0.67 pt/A	37	14.25	2.85	2803.6	7,984,940
Everest	flucarbazone	70% ai	17.4 g/A	12.18	15.82	11.18	Everest	70 WDG	0.6 oz/A	12.18	12.00	0.82	NS	NS
Reflex	fomesafen	240 g/L	0.23 L/A	55.2	7.19	5.15	Reflex	2 EC	0.5 pt/A	55.2	5.65	0.50	134.1	67,554
Liberty	glufosinate	150 g/L (EC)	1.1 L/A	165	15.07	10.79	Liberty	1.67 SL	28 fl oz/A	165	13.35	2.56	111.6	286,103
Glyfos	glyphosate	360 g ae/L	0.5 L/A	180	4.48	3.21	Glyfos	3 SL	1.1 pt/A	180	4.25	1.04	2255.3	2,785,296
Roundup Transorb	glyphosate	360 g ae/L	0.5 L/A	180	4.90	3.51	Roundup UltraMAX	3.75 SL	.85 pt/A	180	4.93	1.42		
Vantage	glyphosate	356 g ae/L	0.5 L/A	178	4.48	3.21	Glyphomax	3 SL	1.0 pt/A	178	4.25	1.04		
Vantage Plus	glyphosate	360 g ae/L	0.5 L/A	180	4.90	3.51	Glyphomax Plus	3 SL	1.1 pt/A	180	4.95	1.44		
Assert 300SC	imazmethabenz	300 g/L	0.54 L/A	162	13.89	9.80	Assert 2.5S	2.5 S	1.1 pt/A	162	11.70	1.90	323.8	615,668
Dual II Magnum	metolachlor	915. g/L	0.7 L/A	641	25.02	17.91	Dual Magnum	7.62 EC	1.5 pt/A	641	18.75	0.84	14.5	12,208
Escort	metsulfuron	60% ai	12 g/A	7.2	19.80	14.17	Escort XP	60 DF	0.42 oz/A	7.2	8.40	-5.77	90.1	-520,044
Accent	nicosulfuron	75% ai	13.5g/A	10.1	24.57	17.59	Accent	75 DF	0.5 oz/A	10.1	16.00	-1.59	286.6	-454,541
Assure II	quizalofop-p-ethyl	96 g/L	0.3 L/A	27.6	25.38	18.17	Assure II	0.88 EC	8.9 fl oz/A	27.6	9.03	-9.14	450.7	-4,117,476
Prism	rimsulfuron	25% ai	24 g/A	6	19.72	14.11	Matrix	25 DF	.85 oz/A	6	10.63	-3.48	NS	NS
Poast Ultra	sethoxydim	450 g/L	0.19 L/A	85.5	15.73	11.26	Poast	1.5 EC	1 pt/A	85.5	8.15	-3.11	594.2	-1,847,218
Refine Extra Toss-N	thifensulfuron + tribenuron	50% thif/25% trib.	8 g/A	4/2	6.09	4.36	Harmony Extra XP	50 + 25 DF	.3 oz/A	4/2	3.60	-0.76	348.9	-284,786
Achieve 80DG	tralkoxydim	80% ai	0.1 kg/A	80	16.15	11.56	Achieve 40DG	40% ai	7 oz/A	80	12.25	0.69	280.4	193,655
Avadex BW	triallate	400 g/L	1.42 L/A	568	11.11	7.95	Far-Go EC	4 EC	2.5 pt/A	568	12.50	4.55	119.2	280,716
Avadex BW	triallate	10% ai	5.67 kg/A	567	15.54	11.12	Far-Go 10G	10 G	12.53 lb/A	567	11.28	0.16		
Remedy EC	triclopyr	480 g/L	1.6 L/A	768	44.80	32.07	Garlon EC	4 EC	1.7 qt/A	768	42.50	10.43	NS	NS
													Net Total:	-1,125,100
													Total Pos:	12,841,729

[a]Canadian prices were obtained from Guide to Crop Protection 2004 from Saskatchewan Agriculture and Food. Prices reflect 2003 retail prices.

[b]A conversion factor of 0.71575 was used (1 Canadian dollar equals 0.71575 USD). This was the average exchange rate for 2003.

[c]U.S. prices were obtained from 2004 North Dakota Weed Control Guide from NDSU Extension Service. Prices reflect 2003 retail prices.

[d]Treated ND acres were obtained from a year 2000 ND grower survey conducted by NDSU Extension Service.

[e]NS = Not Significant, meaning no treated acres were reported in the year 2000 ND grower survey.

[f]NA = Product no longer available.

Attachment 3

STEPTOE & JOHNSON LLP

TEL: 202.429.6753
FAX: 202.429.3902
sesserman@steptoe.com

1330 Connecticut Avenue, NW
Washington, DC 20036

AREAS OF PRACTICE
International Trade

EDUCATION
University of Michigan Law School
J.D., *magna cum laude*, 1977
Administrative Editor, Editorial Board, *Michigan Law Review*

Wellesley College
B.A., *with honors*, 1974
Wellesley College Scholar

PROFESSIONAL AFFILIATIONS
Council on Foreign Relations

Board of Directors, U.S.-India Business Council

Board of Directors, Digital Partners

Intellibridge Expert Network

JUDICIAL CLERKSHIPS
Judge Oliver Gasch, US District Court for the District of Columbia, 1977-78

MEMBERSHIP IN STATE BARS
District of Columbia
Florida

Susan G. Esserman

Susan G. Esserman is a partner in the Washington, DC office of Steptoe & Johnson LLP, where she is Chair of the firm's International Department.

Ms. Esserman assists clients with their international business challenges by providing legal and strategic advice on expanding access to foreign markets and all facets of international trade litigation and dispute resolution. Ms. Esserman draws on her experience in administering the US trade laws and in trade policy and negotiations, as well as her extensive knowledge of the workings of the World Trade Organization (WTO) rules and dispute resolution.

Prior to joining the firm, Ms. Esserman held four senior-level positions with the Office of the US Trade Representative (USTR) and Commerce Department during the Clinton Administration. She was appointed by President Clinton and confirmed by the US Senate as Deputy US Trade Representative, the second-ranking official at the USTR, with the standing of Ambassador. She was responsible for US trade policy and negotiations with Europe, India, Russia and the former Soviet Union, Africa, the Middle East and in the WTO. She also held the position of USTR General Counsel where she played a lead role in devising US litigation strategy in the critical early years of WTO dispute resolution.

Ms. Esserman also served as the decision maker in literally hundreds of antidumping and countervailing duty cases as Assistant Secretary of Commerce for Import Administration. In addition, she played a lead role in developing comprehensive antidumping and countervailing duty trade legislation and regulations implementing the WTO Uruguay Round Agreement. In that capacity, she was the administrator of the Foreign Trade Zones program. As Acting General Counsel of Commerce, Ms. Esserman counseled the Secretary of Commerce and senior Department heads on a wide range of issues, including trade laws, regulatory reform, litigation strategy, ethics, Freedom of Information, congressional reviews and oversight, intellectual property, and procurement issues.

Prior to her government service, Ms. Esserman was a partner at Steptoe & Johnson LLP where she concentrated her practice on international trade litigation and policy.

STEPTOE & JOHNSON LLP

ATTORNEYS AT LAW

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June 21, 2004

Mr. Jay Vroom
President
CropLife America
1156 Fifteenth St. N.W.
Washington, D.C. 20005

Dear Mr. Vroom:

You have asked us to evaluate whether S.1406 is consistent with U.S. international obligations. It is our view that S.1406 is inconsistent with U.S. commitments under several provisions of the North American Free Trade Agreement (NAFTA) and the World Trade Organization (WTO) Agreements.

S.1406 provides a short-cut to the normal pesticide registration requirements under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), 7 U.S.C. § 136(a) *et. seq.*, for Canadian-registered pesticides.* The special access granted to Canadian-registered pesticides under S.1406 is not extended to pesticides registered in any other country. This discriminatory framework does not conform with provisions of both the NAFTA and WTO Agreements. Because the regulation of pesticides potentially relates to food safety, health, and environmental concerns, S.1406 appears to implicate non-discrimination provisions of NAFTA and the WTO pertaining to both Sanitary and Phytosanitary Measures (SPS) and Technical Barriers to Trade (TBT), as well as the most favored nation principle of GATT Article I.

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* The proposed legislation would allow the Administrator of the Environmental Protection Agency (or a delegated authority) to register Canadian pesticides if the pesticide is: (a) registered for use as a pesticide in Canada; (b) identical or substantially similar in composition to a comparable domestic pesticide that is registered in the United States under FIFRA ; and (c) registered in Canada by the registrant of the comparable domestic pesticide or by an affiliated entity of the registrant.

STEPTOE & JOHNSON LLP

Mr. Jay Vroom
CropLife America
June 21, 2004

Under Article 904.3 of NAFTA, which governs standards-related measures, the United States is obligated to accord to goods of other NAFTA parties treatment no less favorable than that it accords to like goods of any other country. By singling out Canada, S.1406 conflicts with this provision. With respect to SPS measures, Article 712.2 of NAFTA provides that parties will ensure that SPS measures will not arbitrarily or unjustifiably discriminate between goods of another Party and like goods of any other country, where similar conditions prevail. S.1406 grants special access to the U.S. market for Canadian-registered pesticides, with no objective standards for including or excluding the registered pesticides of *any* country, including Canada. The proposed legislation arbitrarily provides a discriminatory benefit to Canada without justification.

Under the normal FIFRA registration procedures, all pesticides sold and used in the United States must be registered by the EPA -- a status achieved only through a lengthy review of data designed to ensure appropriate levels of protection for an array of objectives, including human health, worker safety, and environmental protection. S.1406 would, for the first time, partly rest registration on an implicit recognition of the efficacy of a foreign government's system of registration. S.1406 does so, though, without any justification for singular recognition of Canadian registration, and without any opportunity for any other country to demonstrate objectively that its registration system also provides the same, or better, level of protection. In offering the opportunity for equivalence solely to Canada on an arbitrary, unjustified and discriminatory basis, the proposed legislation appears to violate NAFTA's provisions on equivalency under Articles 906.4 and 714.2.

The proposed legislation appears to be similarly inconsistent with WTO provisions on nondiscrimination. Under Article 2.1 of the TBT Agreement, the United States is obligated to ensure that technical regulations result in no less favorable treatment to goods of one Member than like products originating in any other country. The United States also has committed under Article 2.3 of the SPS Agreement that its SPS measures will not arbitrarily or unjustifiably discriminate between Members where identical or similar conditions prevail. In addition, like NAFTA, the WTO requires that any offer to demonstrate equivalency be extended on a non-discriminatory basis.

Sincerely,

Susan G. Esserman

Attachment 4

B.L. Smith & Associates
57 Hodgson Court
Kanata, Ontario, Canada
K2K 2T4

June 11, 2004

Mr. Jay Vroom
President
Croplife America
Suite 400
1156 15th Street N.W.
Washington, D.C.
20005

Dear Mr. Vroom:

Re: Bill S. 1406 (and H.R. 3319)

In my capacity as a consultant and former senior Canadian public servant, it is my opinion that Bill S. 1406 (and H.R. 3319) is inconsistent with the rights and obligations of signatory countries established under the North American Free Trade Agreement (NAFTA).

In the first instance, Bill 1406 (and H.R. 3319) is inconsistent with a basic principle of the NAFTA (Article 712) in that the proposed legislation involves only two of the signatories to the Agreement. Such action is discriminatory in that the provisions of the bill would not be applicable to Mexico.

Secondly, Article 105 of the NAFTA defines "Objectives and Scope" of the Agreement. In order to achieve harmonization, the federal authorities in the signatory countries are responsible for the international treaty obligations throughout its territory, including state and provincial governments. The concept of delegating registration authority to state officials would result in a patchwork of registration requirements rather than national and tripartite harmonization that is the objective of the Agreement.

Finally, Bill S. 1406 (and H.R. 3319) is also inconsistent with Article 717 of the NAFTA. This section of the Agreement deals with the confidentiality of data. As NAFTA is an agreement involving the federal governments of Canada, U.S.A. and Mexico, ensuring confidentiality as required by Article 717 is clearly the responsibility of the federal authorities. Delegating registration responsibilities to the states raises a host of confidentiality questions that could result in a contravention of Article 717.

Attached is a copy of my C.V. that outlines my thirty-two years experience in government and my past ten years as a consultant.

Yours sincerely,

Barry L. Smith

PERSONAL RECORD
BARRY L. SMITH

EDUCATION

University of Manitoba, B.Sc. (Chemistry, Microbiology)
1960

Other courses and training: Toxicology, Pharmacology, Physiology, Food-Borne Disease Control, Correspondence and Report Writing, Economics, Business Administration, Sociology, Systems Analysis, Microcomputers, Food Engineering, Chemical Instrumentation, Negotiating Skills, Managing the Consultation Process, French Language Training to the "B" Level, Canadian Government Senior Management Orientation Course.

WORK EXPERIENCE

Microbiologist, Defence Research Board, 1960 - 1962

Food and Drug Inspector, Toronto, 1962 - 1965

District Food and Drug Officer, Brandon, 1965 - 1968

Food Inspection Specialist, Toronto, 1968 - 1970

Food Additive Evaluator, Health Protection Branch (HPB), Ottawa, 1970 - 1974

Head, Office of International Standards, HPB, Ottawa,
1974 - 1976; designated as Codex Contact Point for Canada

A/Chief, Office of the Adviser, Legislative Policy, HPB, Ottawa, 1976-1981

1981 to July, 1994 - Director, Bureau of Regulatory & International Affairs, Food Directorate, Health Protection Branch

Retired from the Federal Public Service, July, 1994 and established **B.L. Smith & Associates Inc.** in September, 1994

INTERNATIONAL AND EXPERT COMMITTEES AND RELATED ACTIVITIES

Head of Canadian Delegation to meetings of the Codex Alimentarius Commission, 1983 to retirement in 1994.

Head of Canadian Secretariat for meetings of the Codex Committee on Food Labelling and the Codex Committee on Vegetable Proteins,1974 to retirement in 1994.

Designated Canadian Contact point for the Joint FAO/WHO Food Standards Program (Codex Alimentarius) and North American Representative to the Executive Committee of the Codex Alimentarius Commission.

Served as member of the WHO Task Group on Environmental Health Criteria for Pyrrolizidine Alkaloids, Tashkent, USSR, December 1-5, 1986.

Secretary of the Canadian Expert Advisory Committee on Herbs and Botanical Preparations, April - September, 1985.

Contributing author on the subject of "Food Legislation" in both the first and second editions of the "Canadian Encyclopedia".

Designated as Secretary to Deputy Minister level committee established by Cabinet in 1986 to coordinate food regulatory activities in Canada.

OTHER INTERNATIONAL ACTIVITIES

Served as a food regulation (food standards, food additives, pesticide residues and GATT SPS requirements) and food control consultant (including nutrition) in the following countries:

- Burma
- Thailand (three missions; 1984,1997, 1999)
- Indonesia
- Seychelle Islands
- Sri Lanka
- Brazil
- Namibia (provided assistance in drafting the country paper for the International Conference on Nutrition, December, 1992)
- Vietnam
- China (Instructor - Food Control Management Course with emphasis on GATT SPS requirements)
- Grenada (Instructor - Food Control Management for the Caribbean)

- Mongolia (two separate missions - food control management)
- Costa Rica
- Brunei (quality control in the fishing industry)

Engaged by FAO for three month period, January - March, 1977 to design the Codex Acceptance Summary System.

Served as editor of the second edition of the FAO Food Inspection Manual, 1982

Served as author engaged by FAO (1987) to produce a summary of the Codex Alimentarius. This task entailed summarizing some 4000 pages of material into 550 pages of information suitable as a desk reference for food control officials.

Served as a member of official Canadian missions to Japan and China for the purpose of establishing bi-lateral agreements dealing with food safety.

Served as departmental delegate/negotiator to the negotiating sessions involving "Sanitary and Phytosanitary" issues which took place in the MTN (GATT) and the North American Free Trade Agreement (NAFTA).

Served as author engaged by FAO (1993/94) to write a paper for consideration by the Executive Committee of the Codex Alimentarius Commission on "Strategies for Achieving the Medium Term Objectives of the Codex Alimentarius Commission".

Served as member of an international Secretariat formed by FAO and WHO to service the March 1991 FAO/WHO/GATT Conference on Food Standards, Chemicals in Food and Food Trade.

Served as the delegate of the International Life Science Institute (ILSI) to the FAO Technical Meeting on Hazard Analysis Critical Control Points (HACCP) and was elected as co-rapporteur for the meeting; December 12 -16, 1994 Vancouver, B.C.

Drafted and presented a paper on "Imported Food Control, the Past, the Present and the Future" to a Joint FAO/PAHO Workshop on Imported Food Control, April 3, 1995, Brasilia, Brazil.

Served as consultant for the International Life Sciences Institute (ILSI) at seminars in Ecuador and Costa Rica (September and October 1995) dealing with "Emerging Trends in Food Control"

PARTIAL LIST OF CLIENTS - B.L. SMITH & ASSOCIATES

- Coca-Cola Limited, Toronto, Canada
- Canadian Health Food Association (In association with Inter/Sect Alliance)
- Food & Consumer Products Manufacturers of Canada
- Canadian Soft Drink Association
- Flavour Manufacturers Association of Canada
- Association of Canadian Distillers
- Brewers Association of Canada
- Health Canada
- Agriculture Canada
- Canadian Food Inspection Agency
- Fisheries and Oceans Canada
- Ontario Food Protection Association
- Memorial University, Newfoundland, Canada (special lecturer on food regulation and international issues to graduate students taking the Diploma Course in Food Safety)
- Brazilian Food Manufacturers Association
- Food & Agriculture Organization of the United Nations
- University of Toronto Food Safety Program
- International Life Sciences Institute
- Procter & Gamble Canada Inc.
- General Mills Canada Inc.
- Small Planet Foods

June 11, 2004

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June 16, 2004

The Honorable Elizabeth Dole
United States Senate
Washington, DC 20510

Dear Senator Dole:

I am writing this letter on behalf of the members of the South Dakota Agri-Business Association (SDABA) to register our opposition to S. 1406, which would amend the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) to allow the Administrator of the Environmental Protection Agency to register a Canadian pesticide for use in the U.S.

SDABA is an organization of crop input professionals that promotes safe and economical crop production. We have approximately 350 members and are South Dakota's unified voice for the promotion of environmental stewardship and educational information for the crop input industry.

The measure seeks to address perceived price disparities between the US and Canadian pesticides. Although prices among pesticides sold in the U.S. and Canada are closer in comparison than they have been in the past, many factors contribute to price variances and fluctuations, including regulatory compliance costs, research and development costs, dealer and distributor incentives, volume discounts, liability costs, the crops being planted and the overall farm economy. Prices may never line up perfectly even under ideal conditions, but harmonizing the regulations that govern the manufacturing, sale, distribution and use of pesticides is a goal long desired, by pesticide companies and their customers, farmers. If this were to be accomplished it would be a logical extension to work toward consistently closer prices.

We are additionally concerned about the impact of S. 1406 on NAFTA trade issues, product labeling, user safety, security, intellectual property and also the accuracy and timeliness of the economic data on which this measure if predicated.

Sincerely,

Kathleen M. Zander
Executive Director

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Mexico City, 21 June 2004

Mr. JAY VROOM
President
CropLife America
1156 Fifteenth Street, N.W. Suite 400
Washington, D.C. 20005

Dear Mr. Vroom,

In response to your request to review whether S.1406 is consistent with United States international trade obligations, particularly under the North American Free Trade Agreement (NAFTA) and the World Trade Organization (WTO), it is our conclusion that ***S.1406 is not consistent with several articles under both agreements***. If S.1406 becomes law, the United States could become subject of an international trade dispute with its international partners under either agreement. A table is provided at the end of this letter with the articles that third parties could challenge under these agreements.

1. Non-Discriminatory Treatment

S.1406 may raise complaints of discriminatory treatment in favor of Canadian pesticides and against third countries with proven methods of testing and approval of pesticides. According to Chapter VII-B of NAFTA, Sanitary and Phytosanitary Measures, the United States "shall ensure that a sanitary of phytosanitary measure[1] that it adopts, maintains or applies does not arbitrarily or unjustifiably discriminate between its goods and like goods of another Party, or between goods of another Party and like goods of any other country, where identical or similar conditions prevail.[2]" Also, Chapter IX, Technical Barriers to Trade, states that the U.S. must accord to goods of another Party national treatment according to with Article III of the General Agreement on Tariffs and Trade (GATT),[3]" where national treatment is defined by the WTO as "giving all imported products the same treatment as own's nationals." Article 2.3 of the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) and Art. 2.1 of the Agreement on Technical Barriers to Trade (TBT) make the same statement. It would be very difficult for the United States to argue before a NAFTA or WTO panel why Canadian pesticides may get such preferential treatment from S.1406 especially when S. 1406 says very little about the procedures used in Canada and the United States to register and approve a pesticide.

[1] According to NAFTA Art. 201.1, "Measure includes any law, regulation, procedure, requirement or practice." According to NAFTA Art. 724, a Sanitary or Phytosanitary Measure "includes testing, inspection, certification or approval procedures." Definitions in NAFTA Art. 724 are congruent with those in Annex A of the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) of WTO as those in NAFTA Art. 915 are with those in Annex 1 of the Code on Technical Barriers to Trade (TBT).
[2] NAFTA Art. 712.4
[3] NAFTA Art. 301.1 and 904.3.a

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2. Most-Favored Nation Principle

As it stands, S.1406 offers Canadian pesticides the possibility of a "fast-track" procedure for registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as long as such pesticide "is registered for use as a pesticide in Canada; is identical or substantially similar in its composition to a comparable domestic pesticide registered under [Section 1 of S.1406]; and is registered in Canada by the registrant of the comparable domestic pesticide or by an affiliated entity of the registrant.[4]" S.1406 offers no argument or explanation to support such favorable treatment for Canadian pesticides vis-à-vis pesticides of similar or better quality from any other country with whom the United States has normal trade relations[5].

In this case, S.1406 represents a violation of the Most-Favored Nation principle, a fundamental principle of the international trading system included in WTO[6], NAFTA[7], and other international or regional trade agreements[8], which prohibits discrimination between trading partners of one country and the goods and services provided by such partners.

In the case of NAFTA, while the United States may "adopt, maintain or apply any standards-related measure[9], including any such measure relating to safety, the protection of human, animal or plant life or health, the environment, or consumers,[10]" and, "in pursuing its legitimate objectives of safety or the protection of human, animal or plant life or health, the environment or consumers, establish the levels of protection that it considers appropriate, in accordance with a level of protection that it considers appropriate,[11]" it must accord to "goods and services providers of another Party treatment no less favorable than it accords to like goods or in like circumstances to service providers of any other country.[12]" The same principle applies to all sanitary and phytosanitary measures according to, respectively, NAFTA Articles 712.1 (Right to take Sanitary and Phytosanitary Measures), 712.2 (Right to Establish Level of Protection), and 712.4 (Non-Discriminatory Treatment).

Both the Non-Discriminatory and the Most-Favored Nation principles apply regardless of the comparative size of the pesticide industries in different countries. Scientific evidence is the key factor to justify the design, application, and implementation of new standards-related or sanitary and phytosanitary measures, and S.1406 does not mention such evidence at all.

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[4] S.1406 Section 1 Registration of Canadian Pesticides, subsection 1.
[5] This includes Mexico, Canada, and the 144 other WTO country members besides the United States.
[6] TBT Art. 2 and SPS Art. 2
[7] The Most Favored Nation principle is not written in NAFTA, but Art. 103.1 incorporates all WTO rights and obligations of the Parties, namely, Canada, Mexico, and the United States.
[8] It is now common to reproduce NAFTA's Art. 103.1 in regional negotiations, like those between the U.S. and Central America (CAFTA), Singapore, and Chile, or the Free Trade Area of the Americas (FTAA).
[9] A standard, technical regulation or conformity assessment procedure – NAFTA Art. 915.1
[10] NAFTA Art. 904.1
[11] NAFTA Art. 904.2 and 907.2
[12] NAFTA Art. 904.3.a

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3. Assessment of Risk

S.1406 does not explain the procedure of risk assessment of the United States that may grant such preferential treatment to Canadian pesticides vis-à-vis other pesticides of similar or superior quality from any other country. While NAFTA allows each country to conduct an assessment of risk, according to the level of protection it deems appropriate, taking into consideration, among other issues, available scientific evidence or technical information, intended end uses, processes or production, operating, inspection, sampling or testing methods, or environmental conditions[13], the bill does not explain why Canadian pesticides would satisfy risk assessment requirements of the United States. Similar arguments are found in the WTO under the TBT and SPS Agreements[14].

4. Labeling

Labeling provisions may represent another potential source of conflict. The United States has been particularly sensitive over the last decade to labeling requirements of imported products, especially those that may present a potential problem for the health and safety of humans, animals, plants, and the environment, requesting labels in English that show all the necessary information for the consumer to make an informed choice.

As it stands, S.1406 requires each container containing a Canadian pesticide registered by the Administrator to bear the label that is approved by the Administrator, under subsection 5, "securely attached to the container and shall be the only label visible on the container. The original Canadian label on the container shall be preserved underneath the label approved by the Administrator[15]." S. 1406 offers no explanation of why the United States' approved label must show while the original label remains in place. Third countries may complain under NAFTA[16] and WTO[17] such requirement represents an advantage for Canadian pesticides over producers from other countries that need to have labels in English made especially for the United States market. Third countries may also complain that labeling preferences granted to Canadian pesticides may lower costs of Canadian pesticides vis-à-vis other countries by not having to design a label for the United States market.

5. Notification / Transparency

If S.1406 becomes law, all WTO members must be dully notified to provide comments before the law enters into force, and in the case of Mexico, at least 60 days before the bill enters into force[18]. This provision has proven effective in the past to discuss issues that

[13] NAFTA Art. 907.1 and 907.2
[14] TBT Art. 2.1 and 2.2 and SPS Art. 5
[15] S.1406 Section 1 Registration of Canadian Pesticides, subsection 5.
[16] NAFTA Art. 712.4 and 904
[17] TBT. Art. 2 and SPS Art. 2
[18] NAFTA Art. 718.1, 909.1, and 1803

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violate the agreements and the WTO makes special emphasis on compliance with this issue[19] for all country members, regardless of their level of economic development.

6. Summary

The following table offers a summary of NAFTA and WTO articles that third countries may challenge if S.1406 becomes law.

Potential NAFTA & WTO Challenges of S.1406

	NAFTA		WTO	
Principle	**Chapter VII-B**	**Chapter IX**	**SPS**	**TBT**
Non-Discriminatory Treatment	712.4	904.3.a 303.1	2.1	2.1
Most Favored Nation	712.1 712.2	904.1 904.2 904.3.b	2	2
Risk Assessment	715	907.1 907.2	5	2.2 2.5
Labeling	712.4	904.3 904.4	2	2
Notification / Transparency	718.1	909.1 1803	7 Annex B	10

Please do not hesitate to contact us at your earliest convenience to discuss or further explore any of these issues.

Sincerely,

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[19] TBT Art. 10 and SPS Art. 7 and Annex on Transparency.

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JORGE MOLINA

Jorge Molina has spent the last twenty years working on international trade policy, strategic studies, and government affairs both as an official for the Mexican International Trade Undersecretariat and, for the past seven years, as General Manager of JML Strategic, Market & Government Advice, a private consulting firm. Mr. Molina is an expert on technical barriers to trade (TBT), sanitary and phytosanitary measures (SPM), illegal trade practices, general negotiating strategy, and dispute settlement. He has recently served as a SPM consultant to the government of Colombia prior to the start of free trade negotiations between the United States and the Andean Community; as TBT, environmental, and legislative advisor to the Dominican Republic during the negotiation of the free trade agreement with the United States and the incorporation into the Central American Free Trade Agreement (CAFTA); and as SPM and strategic consultant to Lithuania.

Mr. Molina prepared for the Mexican government a comprehensive risk assessment of the possible renegotiation of the agriculture chapter of the North American Free Trade Agreement (NAFTA) and drafted an agenda for the second decade of NAFTA (2004-14). He developed a portfolio for foreign direct investment on infrastructure projects in Mexico and the Central American countries that belong to the Puebla-Panama Plan. Mr. Molina helped giant steel producer Tenaris to reposition itself in the Andean market, assisted ADM exploring market opportunities in Cuba, and developed a comprehensive assessment of the Latin American beer market for Interbrew, one of the two largest beer companies worldwide.

As a government official, Mr. Molina was responsible for the negotiation, implementation, and dispute settlement of technical barriers to trade and sanitary and phytosanitary measures of NAFTA and eight other free trade agreements (FTAs) and the World Trade Organization (WTO), the Latin American Integration Association (ALADI), APEC, and FAO. He drafted the original version of the ALADI Agreement on Technical Barriers to Trade, served as Technical Secretary of the NAFTA Environmental Agreement; and he was the Mexican representative before NAFTA and other FTA committees and international organizations.

Mr. Molina helped design the general negotiating strategy of NAFTA and other free trade agreements, overseeing NAFTA-related issues at the US Congress and the Canadian Parliament. He coordinated the political assessment of Latin American trade negotiations and was responsible for lobbying campaigns in North and Latin America.

"Blaming NAFTA: the lack of foreign trade policies of the Mexican agriculture sector," to be published in the US-Mexico Law Journal in late 2004, is his most recent article. He has also written on China, standardization, and the privatization process in Mexico, among other topics. Mr. Molina earned a B.S. in Economics, magna cum laude, from Mexico City's Instituto Tecnologico Autonomo de Mexico (ITAM); a M.S. in Public Policy, with distinction, from Georgetown University; and studied in Indiana University the Ph.D. in Political Science and International Business. He speaks fluently English, Spanish, French, Italian, and Arabic, and he is an expert on quantitative and statistical methods.

JORGE MOLINA - LARRONDO

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PROFESSIONAL EXPERIENCE

JML Strategic, Market & Government Advice, Mexico City **(Since 2001)**
Consulting firm specialized in strategic studies, international trade, and communications
General Manager

- Policy, trade, investment, and legislative advisor;
- Consults on technical barriers to trade, sanitary and phytosanitary measures, general negotiating strategies, antidumping, safeguards, and intellectual property rights;
- Advisor to the Dominican Republic government on technical barriers to trade, environmental, and US legislative issues;
- Advisor to Colombia and Lithuania on sanitary and phytosanitary measures, technical barriers to trade, and legislative issues;
- Prepared for the Mexican government a detailed risk study from the renegotiation of NAFTA's agriculture chapter;
- Drafted for the Mexican government an assessment of opportunity areas for NAFTA for 2004-2014;
- Developed a $200 million foreign investment portfolio in the 8 countries of the Puebla-Panama Plan;
- Prepared feasibility studies for foreign investment projects in Central America for $37 million;
- Authored a comprehensive assessment of costs and opportunities for FDI in Cuba and another on the scope and consequences of the Helms-Burton Law;
- Developed an international program to promote FDI in Cuba attracting projects from Europe and the Americas;
- Writes risk and market assessments and feasibility studies on Latin America, the Caribbean, and China;
- Helped Tenaris reposition itself in the Andean steel market;
- Prepares market intelligence reports for Intebrew and other European, US, and Mexican companies;
- Publishes *Latin American RoundUp*, *The Week in China*, and *The Week in Japan*, weekly business newsletters; and
- Coordinator of the 5th NAFTA Standards-Related Measures Forum and other events.

Grupo Cementos de Chihuahua S.A. de C.V., Chihuahua, Chih./ Mexico City **(2000-01)**
Produces almost 50% of the $340 million annual Mexican cement exports to the United States
Corporate Adviser

- Designed strategies to counteract a $168 million antidumping order & developed new business opportunities for $18 million;
- Managed corporate communications and investors relations, keeping stable the price of the stock;
- Helped design the quality program and the technology management model of the company; and
- Liaison with the Mexican and US Congress, federal and state agencies, and the private sector.

Office of the National Quality, Export, and Technology Awards, Mexico City **(1998-00)**
Managing trust of the three major prizes presented each year by the President to the private sector
Director General

- Increased 37% participation in the National Export Award, introduced the e-business category and a special award for the outstanding company in this area, provided contestants with feedback reports, and improved winning prizes by 40%;
- Developed and launched the National Technology Award under a $35,000 budget;
- Positioned the National Quality Award among the 48 international awards of its kind as the one with the highest annual number of participants, with more than 100;
- Created the corporate image of the National Awards and designed promotional campaigns for the winners;
- Established training seminaries for the judges and awarded medals and diplomas for their participation; and
- Strengthened the financial situation of the Trust and developed non-government funding sources.

Secretariat of Trade and Industrial Development, Mexico City **(1997-98)**
Special Advisor to the Secretary for Strategic Planning

- Designed a comprehensive public relations program that created a positive image of the agency, increasing 52% its media presence; improved the image of the Secretary, and substantially enhanced internal communications;
- Devised promotional campaigns for the programs and services offered by the agency, progress in international negotiations, deregulation, and ISO-certification;
- Wrote speeches and testimonies for the Secretary, media releases, and helped create the "Consumer Assistance System."

Fleishman-Hillard México, S.A. de C.V., Mexico City/ Miami, Fla. **(1995-97)**
One of the three major public relations firms in the world
Vice-president / General Manager

- Responsible for the opening of the Mexico City office, first Latin American full-service branch, reaching first-year billing targets in less than 7 months, regardless of a major devaluation;
- Corporate counsel on trade, environmental, government, and economic issues for F-H clients worldwide;
- Designed a campaign distancing Fresh del Monte Produce's CEO from political scandals and helped maximize the resale value of the company at $130 million;
- Devised lobbying campaigns in Mexico for Matra-Achete and Amoco;
- One of the advisors that prevented Wal-Mart from leaving Mexico and firing 25,000 employees;
- Advised Amoco, Anheuser-Bush and Monsanto on new business opportunities;
- Built the first system in Mexico to gather and process market and economic data nationwide the same day it happened; and
- Wrote a daily economic and market analysis newsletter on Latin America.

Secretariat of Trade and Industrial Development, Mexico City
Technical Barriers Chief Negotiator **(1991-94)**

- Led the negotiation, implementation, and dispute settlement of technical barriers to trade and SPS of NAFTA and 8 other FTAs, and the WTO, ALADI, APEC, and FAO;
- Drafted the original version of the ALADI Agreement on Technical Barriers to Trade;
- Technical Secretary of the NAFTA Environmental Agreement;
- Counsel on environmental disputes; and
- Mexican representative before NAFTA and other FTA committees and international organizations.

Director for Legislative Oversight **(1991-94)**

- Helped design the general negotiating strategy of NAFTA and other free trade agreements;
- Oversaw NAFTA-related issues at the US Congress and the Canadian Parliament;
- Coordinated the political assessment of Latin American trade negotiations;
- Responsible for lobbying campaigns in North and Latin America; and
- Liaison with the private sector, Congress, and federal agencies.

Fisheries Secretariat, Mexico City **(1990)**
Foreign Affairs Advisor to the Promotion and Development Undersecretary

- Coordinated the team that prevented a $29 million embargo of shrimp exports to the US;
- Designed strategies to fight a $46 million US tuna embargo;
- Liaison with NGOs and helped design and implement the "One-stop window for fisheries investments".

Erb & Madian, Inc., Washington, D.C. **(1985-87)**
Consulting firm specialized in Latin American issues. Key advisor for the $5.2 billion Telmex privatization
Economist

- Wrote financial and feasibility studies of Latin American companies;
- Prepared periodic risk assessments on the Latin American economies, markets, foreign debt, and stock markets; and
- Drafted Congressional testimonies for the president of the company and other officials.

SOME PUBLICATIONS

- ***TNT (Trade and Terrorism): balancing trade flows and health and safety non-tariff measures.*** G8 Research Group. University of Toronto (to be published summer 2005).
- ***Blaming NAFTA: the lack of foreign trade policies of the Mexican agriculture sector.*** US-Mexico Law Journal (upcoming fall 2004).
- ***China: business challenges and opportunities at the largest world market. (China: Retos y Oportunidades de Negocios en el Mercado más Grande del Mundo).*** Vinculo December 2003
- ***The key role of the private sector in standardization processes in North America (El Papel Central del Sector Privado en el Proceso de Normalización en América del Norte).*** Industria January 1997
- ***The strategic importance of standards-related measures in international trade (La Importancia Estratégica de las Medidas Relativas a la Normalización en el Comercio Internacional).*** Industria December 1996
- ***The rules of the game: delays in the privatization process in Mexico.*** 1996 American Political Science Association Annual Meeting Proceedings
- ***The Mexican financial crisis: genesis, impact and implications.*** Journal of Interamerican and World Affairs Studies, 1995
- ***Mexico-US commercial relations: the politics of free trade.*** 1991 Southern Political Science Association Proceedings.

TEACHING EXPERIENCE

Public Policy and Government

- **Economic diplomacy.** Masters in International Studies. ITESM-Mexico City, since 2003.
- **Public policy analysis.** Indiana University 1990.
- **Public policy formation.** Indiana University 1989.
- **Application of quantitative & computer methods to political science.** Indiana University 1987-88.
- **The US Congress.** Indiana University 1986.

International Trade and Economics

- **International agreements.** Universidad Iberoamericana, Mexico City 1999.
- **Overview of the North American Free Trade Agreement.** INAP, Mexico City 1994.
- **Technical barriers to trade. Training course for NAFTA panelists.** Mexico City 1993.
- **Macroeconomics.** Masters in Public Policy. Georgetown University 1984.
- **Microeconomics.** Masters in Public Policy. Georgetown University 1984.
- **International trade laboratory.** Prepared working book. ITAM 1983.
- **Coordinator of microeconomics laboratories.** ITAM 1982-83.

SKILLS

- Works in English, French, Italian, Arab, and Spanish;
- Specialist in statistical and quantitative methods (SPSS, SAS, NLREG);
- Expert use of computers;
- Published several articles on e-mail networks;
- Member of the US-Mexico policy groups of the ODC, Brookings Institution, and Institute for International Economics; and
- Winner of the $64,000 Quiz (Super Bowls).

EDUCATION

- **Doctorate in Political Science / International Business (AIBD)**, Indiana University. 1986-89 Indiana University Scholarship. 1990 American Political Science Association Foreign Student Grant.
- **Masters in Public Policy (DIS)**, Georgetown University. 1985 Georgetown University Scholarship.
- **Bachelor of Science, Economics (MCL)**, Instituto Tecnológico Autónomo de México. 1984 Tlacaélel National Economics Award 3rd Place for the thesis "Commercial Oil Policy."

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PROFESSIONAL ACTIVITIES

- 1954.- Lab Technician at The Di-Noc Chemical Arts Inc. Div. of 3M in Cleveland, Ohio, manufactures of photographic emulsions and specialized photographic films for graphic arts, industry and medical use.
- 1956.- General Manager of Laboratorios Gutfol, S.A., Mexico D.F., pharmaceutical manufacturer.
- 1957.- Founder of Analisis y Control, S.A., analytical Lab.
- 1962.- Still with Laboratorios Gutfol, S.A., becomes founder and General Manager of Fries & Fries International de Mexico, S.A., in partnership with Fries & Fries Inc. of Cincinnati, Ohio, flavor and perfume manufacturers, the later acquired by Mallinkrodt Inc. of St. Louis, Mo., which became part of Avon Cosmetics, in 1979. In 1983 sells his interest on Fries Mexico being at that time the largest flavor manufacturer in Mexico, to Avon Mexico.
- 1964.- Founder of Spectrum, S.A., food colorings and additives, Chairman of de Board. This operation had manufacturing facilities in the town of Atlacomulco, State of Mexico, represents Otsuka Chemicals (Osaka), sole distributors of Ajinimoto products in Mexico, and Kalsec Co. spice extract and concentrates manufacturers.
- 1967.- Founder of Centro de Control Total de Calidades, S.A. (CENCON) enterprise working in quality control mainly in the food area. In 1989 sells his interest in this Company.
- 1979.- Founder of Radiac S.A., manufacturer of electronic and radiocommunication products.
- 1980.- Shareholder and partner of Laboratorios Mixim, S.A. Executive Board (botanical extracts manufacturer) and Aromáticos Finos, S.A. de C.V. (aromatic products manufacturer), food, cosmetic and pharmaceutical products suppliers.
- 1987.- Founder of Arista, S.A., de C.V., company working in the areas of export and import of products, machinery, chemicals, etc. from and to Mexico.
- 1990.- Founding and associate member of Sargent Technologies Consultants for the food industry.
- 1991.- Founder of ILSI Mexico, A.C. (International Life Science Institute) and President at present.
- 1993.- Founder of American Quality Laboratories (Mexico), S.A., de C.V., certifying, analytical and quality assurance lab, Chairman of the Board.

PROFESSIONAL LIFE

- 1957. Founder and member of the Board of Directors of the National Chamber of Pharmaceutical Manufacturers.
- 1958. Founding member of Section 26 of the Institute of Food Technologists.
- 1961-1975. Founding member and Secretary of the Mexican Association of Food Technologists Section 26 of the Institute of Food Technologists.
- 1963-1967 Founder and later secretary of the National Association of Pharmaceutical Manufacturers.
- 1964. Member of Sales and Marketing Executives Association (Mexican Chapter).
- 1965. Member of Kiwanis Mexico.
- 1966. Founder of the Phi Tau Sigma Chapter in Mexico.
- 1964-1973. Founder and Chairman of the Food Industry Standards Committee of the Ministry of Industry and Commerce.
- Since 1966. Becomes involved as representative of the Mexican Government in the Codex Alimentarius FAO/WHO Programme on Food Standards. Appointed Coordinator for Latin-American and the Caribbean, later Representative of this area in the program. Vice-chairman for four periods and elected Chariman of the Commission, reelected for a second term (1987-1991), been the first Chairman from a developing country in the 24 years of existence of the FAO/WHO Programme.
- 1974. Elected councilor of the Executive Committee of the Institute of Food Technologists (IFT), Chairman of the International Committee, also of the International Award, member of the Finance Committee, and the Committee on Global Interests, founder of the Codex Alimentarius Committee and member of the Science Communicators Committee.
- 1975. Promotes the first Masters in Food Technology course in Mexico that became the Nutrition and Food Technology degree. Starts first Food Technology magazine in Latin-America. Flavoring Materials and Additives first teacher.

- 1976-1979. Founder and later Chairman of the Mexican Association of Aromatic Materials Manufacturers.
- 1978. Named the first foreign Fellow of the Institute of Food Technologists.
- 1979 to Present. Member of the Food Standards Committee of the International Union of Nutrition Sciences.
- Since 1980. Chairman of the Committee on the Needs of Developing Countries, the Committee on Education, the Finance Committee and Member of the Executive Committee of the International Union of Nutrition Sciences.
- 1981. Member of the Laws and Regulations Committee of the Flavor and Extract Manufacturers (FEMA) and member of the Executive Committee of the Food and Drug Law Institute.
- 1985. Elected Honorable member to the Mexican Academy of Pharmaceutical Sciences.
- 1988. Nominated and elected Emeritus Member of the Mexican Association of Flavor Chemists.
- 1990. Elected member of the Boards of Trustees of the International Life Science Institute (ILSI).
- 1990.- Founding member of Sargent Technologies food technology Consultants.
- 1991.- Founder and President of ILSI de MexicoA.C. until the year 2000.
- Since 1992. Advisor to the Industry and Commerce and Health Ministries, Expert in the Mexican Supreme Court on food related matters. Professor on Flavor Technology and Food Standards. Industry Consultant. Consultant to the Food and Agriculture Organization of the United Nations (FAO).
- 1992. Scientific Advisor to the Mexican Government for the North American Free Trade Agreement (NAFTA).
- 1993. Member of the Executive Committee of the Institute of Food Technologists as membership representative.

MEMBERSHIPS

Mexican Food Technologists Association(ATAM)
Chemical Society of Mexico(SQM)
Mexican Institute of Chemical Engineers(IMIQ)
Latin-American Association of Food Manufacturers(ALICA)
International Union of Food Science and Technology(IUFoST)
International Union of Nutrition Sciences(IUNS)
Food and Drug Law Institute(FDLI)
Mexican Academy of Pharmaceutical Sciences
American Association for Advancement of Science(AAAS)
American Association of Cereal Chemists(ACC)
American Association of Enologists(AAE)
Phi Tau Sigma Honorary Society
Council for Agriculture Sciences and Technology(CAST)
Sales and Marketing Executives Association(SMEA)
Latin-American Association of Transactional Analysis
College of Psychosomatic Medicine
National College of Chemists and Chemical Engineers(CONNIQ)
American Society of Testing and Materials(ASTM)
Mexican Radio-Amateur Federation(LMRA)
American Radio Relay League(ARRL).

EDUCATION

Chemical Engineer, Industrial Chemist, Electronic Engineer, granted by Universidad Nacional Autonoma de Mexico.
Electronic Engineering.-From National Schools from Los Angeles, Calif. U.S.A.
Research and Thesis: Utilization of Refuses from a Silver Refining Plant, Research on Silver Refining by Electrochemical Means using different Electrolytes, Design of a Silver Refining Plant by Electrochemical Process using Asbestos-Concrete Tanks. This research was used by de Mexican Mining Commission in their silver production facilities at Pachuca, Hidalgo.

PERSONAL

Born in Mexico City, 27 March 1931.

June 22, 2004

The Honorable Elizabeth Dole
Chair, Senate Agriculture Subcommittee on Production and Price Competitiveness
United States Senate
Washington, D.C. 20510

Dear Senator Dole:

The Montana Agricultural Business Association appreciates the opportunity to submit comments concerning S 1406. We support harmonization of the United States and Canadian registration process, but we do not support S 1406. We think it would be detrimental to small rural agricultural retailers in Montana—our members—and ultimately the growers.

We recognize that many Montana farmers truly believe they are at a disadvantage compared to farmers in Alberta in terms of input costs. Because of that, we conducted a survey of 18 retail locations in Alberta last fall to compare Montana prices for input costs to determine if this is perception or reality. (We are aware that often perception becomes reality.) There has been differences in pesticide prices which have narrowed over the years. Because pesticides are not the only cost of producing a crop, we also asked about other input costs—fertilizer, fuel, consulting services, delivery charges, credit availability.

The telephone survey of 18 Alberta retail locations by our association president Arleen Rice, Havre, last fall showed farmers in Montana pay less overall for their crop inputs than farmers in Alberta and that Alberta farmers enjoy fewer services than Montanans do when they buy pesticide products—such as free consulting services with purchase of product at most locations, credit availability, and ability to return any amount of unopened product.

The 18 locations surveyed included independent retail locations, United Farmers locations and Agricore locations which cover the majority of pesticides sold in Alberta. All contacts were made asking for the average price that a large grower would purchase their chemical at, including discounts and grower programs—then compared to the same prices for these growers in Montana.

Some of our findings:

- Many of the Alberta retail locations expressed concern over markets, liability, financial responsibilities and security issues. When we asked if they get inquiries from U.S. growers to purchase pesticides, the overwhelming majority said either never or very rarely. One location said "Your country can pass whatever they want to pass. It doesn't mean we would sell to them."

MONTANA AGRICULTURAL BUSINESS ASSOCIATION
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- Of the 18 Alberta locations surveyed, 13 charge a restocking charge to all growers of 3-5 percent, irregardless of amounts purchased or returned. Only full case lots are allowed to be returned except at two locations. In Montana, growers are able to take back even a single container of unopened pesticide product at no charge--a benefit that is built into the cost of the pesticide. Montana growers also enjoy immediate availability of pesticide product in most case—a cost that must be recovered in the cost of product sold by a retailer.

- Terms for payment are nearly non-existent in Alberta. They are cash, or 10 days, no exceptions. Alberta retailers said this is not a service they offer or even intend to and were surprised Montana retailers would ever consider it. Credit card transactions, however, are very common and 1.5-2.25 per cent is charged to the grower at the 14 locations that accepted credit cards. In Montana, retailers provide credit to growers and, in some cases, have to go through the effort of filing liens to provide growers credit.

- Alberta growers are required to pay for their own shuttles, pumps and meters or leave a large deposit. The average deposit for a shuttle is $810.50. Only two locations lease or rent pumps and/or meters. In Montana, for bulk products such as Roundup, the basic manufacturer provides the shuttles, pumps and meters to the grower.

- Eleven of the Alberta locations surveyed offered field scouting services ranging in price from $2.50-$5.00/acre. Seven locations did not provide the service. Consultants are widely used. The most common scenario is that a grower has a private agronomist that gives recommendations and scouting services for a fee; they go to a retail location for the pesticide product. In Montana, the common scenario is that the retailer gives recommendations and advice, sometimes scouting services, free when the grower purchases pesticide products.

- Fertilizers and fuel are more expensive in Alberta than in Montana.

- In terms of pesticides, Montana growers still rely heavily on 2,4-D and Banvel mixes which are less expensive in the United States. With a 23 per cent exchange rate, the prices we found for products used widely in Montana are below.

	Montana	Alberta
Roundup Original	33.00	24.03
Roundup Transorb	27.00	24.74
Maverick or Renegade (generic glyphosate)	19.00	20.00
Puma	175.00	142.24
Achieve (40-acre case)	475.00	470.47
Banvel 2	82.00	98.90
Ally (per 1/10 oz)	22.50	18.90
Buctril M		42.56
2.4-D #6 Ester	18.00	22.37

The price of glyphosate (Roundup) had been an issue for Montana growers, but with the generic market, the price dropped in the spring of 2004—after our survey. We have not researched other or specific changes in the market in 2004.

The introduction of one generic glyphosate this spring in Montana that was "substantially similar" to Roundup had a pH that was more acidic and thus more dangerous to applicators, including burns and danger to the eyes and more corrosive to equipment than growers expected from handling Roundup in the past. Safety of "substantially similar" products is a definite issue, given different formulations and surfactants. For growers' safety, any legislation must provide the products are "identical," not just "substantially similar" to protect growers from unexpected health and other consequences.

We also want to note that pesticide prices vary from state to state, and, indeed, within a state—not just between the U.S. and Canada. A December 2001 Idaho document details the difference in pricing in areas of Idaho, not only for pesticides but also for other input items. It is "Idaho Crop Input Price Summary for 2001" by Paul E. Patterson and Robert L. Smathers, A. E. Extension Series No. 01-15, Department of Agricultural Economics and Rural Sociology, College of Agricultural and Life Sciences, University of Idaho, Moscow, Idaho.

We think S 1406 could be detrimental for Homeland Security, it will hurt main street retail businesses in rural Montana and presents a host of other legal and liability issues, with limited, if any, benefit to growers when they consider their per/acre costs. We understand growers concerns with the drought in Montana, but their Montana retail suppliers are in the same situation and once our members close, the likelihood of them returning is not good.

Within a year or two, all but four or five pesticide products used in Montana will be off patent or generic, dropping the price due to free market conditions. We believe the market should dictate prices and urge you to not pass S 1406, but instead work to provide for harmonization of pesticide registration between the U. S. and Canada.

Sincerely,

Pamela J. Langley
Executive Director

C: Sen. Conrad Burns
Sen. Max Baucus

NORTH DAKOTA AGRICULTURAL ASSOCIATION

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June 16, 2004

The Honorable Elizabeth Dole
United States Senate
Washington, DC 20510

Dear Senator Dole:

As President of the North Dakota Agricultural Association I would like to communicate to you our concerns about S 1406, which would amend the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) to allow the Administrator of the Environmental Protection Agency to register a Canadian pesticide for use in the U.S.

The North Dakota Agricultural Association membership consists of agri-business firms engaged in manufacturing, distribution, and wholesaling as well as individuals providing services, farm supply dealers, and retailers of crop production inputs and services.

The measure seeks to address perceived price disparities between the US and Canadian pesticides. Many factors contribute to these price variances, which appear to favor Canadian farmers in some cases and American farmers in others, including regulatory compliance costs, research and development costs, dealer and distributor incentives, volume discounts, liability costs, the crops being planted and the overall farm economy. Of all these factors, the regulatory process is the most significant. Harmonizing the regulations that govern the manufacturing, sale, distribution and use of pesticides is a goal long desired, by pesticide companies. If this were to be accomplished it would be a logical extension to work toward harmonized prices.

We are also very concerned about the potential adverse economic impact this could have on our local agronomy centers in our Northern rural communities, many of whom are the primary employers and retail centers in the community. If the agronomy retailer suffers, who will meet the needs of locally servicing the pesticide industry ensuring safe handling, application, compliance and product security.

Thank you for your consideration.

Sincerely,

Duane Poynter

Duane Poynter, President
North Dakota Agricultural Association

Representing Crop Protection, Equipment, Plant Food and Seed Trade

MONTANA
DEPARTMENT OF AGRICULTURE

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JUDY H. MARTZ
GOVERNOR

June 22, 2004

Senate Agriculture Committee
Room SR-328A
Russell Senate Office Building
Washington D.C. 20510-6000

Madam Chair and Members of the Subcommittee:

Thank you for allowing me to comment on the S. 1406, the Pesticide Harmonization Act.

A 2001 study by the Northern Plains Research Center at North Dakota State University determined that a medium-sized wheat farm in the region annually pays $2,458 more for crop chemicals than a similar farm situated across the border in Canada. This is a significant additional cost to Montana and U.S. producers, which under the North American Free Trade Agreement are expected to compete head-to-head for grain markets with their Canadian counterparts.

The Provinces-States Advisory Group (PSAG), which I co-chair with Agriculture Minister Rosann Wowchuk of Manitoba, has worked on this issue for several years and recently wrote to officials of both countries, urging pesticide harmonization. The April 2004 PSAG letter also urged lawmakers and regulators to require in the future that manufacturers register pesticide products with a single label for similar uses on both sides of the border.

The National Association of State Departments of Agriculture, which I serve as secretary-treasurer, also is on record supporting this legislation.

By establishing a mechanism that would allow distributors, retailers and crop producers to import substantially similar products under state licenses reviewed by the U.S. Environmental Protection Agency, the Pesticide Harmonization Act goes a long way toward eliminating discriminatory pricing. I applaud the hard work on this issue of Senators Byron Dorgan, Conrad Burns and others, and I strongly support quick passage of the Act.

Sincerely,

Ralph Peck
Director

Written Statement of the
Montana Grain Growers Association

S. 1406, Pesticide Harmonization Act

Senate Agriculture Committee
June 23, 2004

Madam Chairman and Members of the Subcommittee, on behalf of the 1,600 grain producers we represent across the state, the Montana Grain Growers Association would like to submit this statement in support of S. 1406, a bill to amend the Federal Insecticide, Fungicide, and Rodenticide Act to permit the Administrator of the Environmental Protection Agency to grant registrations of Canadian pesticides.

Our producers believe this legislation is about establishing a fair playing field to compete in a global marketplace. The prices they receive for their products are determined by Australia, Canada, the EU and every other exporter around the world. The artificial pesticide price barrier between the U.S. and Canada only serves to put our producers at a competitive disadvantage. If these pesticides were different products with different formulations, price differentials would be understandable. But this bill addresses those that are substantially similar products, applied to the same crops and approved through an equally stringent registration process. Market segmentation through the creative use of EPA registration rules certainly runs counter to the spirit of open trade with our neighbors, and places American farmers at a distinct disadvantage.

Equalizing the price that farmers pay for agricultural inputs has been a long-standing issue for Montana producers, and the passage of this bill would represent annual savings of millions of dollars to our farmers. A 2003 survey by our neighboring state of North Dakota showed that farmers would save over $20 million per year in that state alone if they could access a few common pesticides at Canadian prices. In addition, a Northern Plains Trade Research Center report determined North Dakota farmers would save approximately $24 million if they could purchase pesticides at Canadian prices. A survey by the Montana Grain Growers Association in November 2003 confirmed this disparity. No doubt the recent strengthening of the Canadian dollar has narrowed the gap in pesticide prices between the two countries, but the price differentiation still exists for many products.

A common protest to this bill is the claim that local chemical dealers will be displaced in the process. We believe this to be an unfounded fear. In the first place, chemical manufacturers have every ability to preserve their dealer network through equitable product pricing on both sides of the border. This would effectively eliminate applications for the registration process outlined and authorized by S. 1406. Further, should chemical companies choose to continue disparate cross-border pricing, we believe established retail dealers are best positioned to take advantage of the opportunities this bill would provide. Our farmer-members value the service their local dealers offer, and would prefer those dealers to handle import functions. A strong retail network is not jeopardized by this legislation.

A potential solution is the establishment of a North American ("NAFTA") pesticide labeling system. Canada, Mexico and the U.S. would approve products at the same time and thus pesticides would be allowed to freely cross international borders once the common label was granted. However, NAFTA labeling is currently only voluntary and chemical manufactures have no incentive to pursue a common approach unless they see an economic incentive for moving away from country-specific labeling. We believe S. 1406 to be a more direct solution to this inequitable situation.

In plain English, chemical manufacturers appear to be taking advantage of EPA regulations in order to segment and protect a pricing structure that extracts whatever these isolated markets will bear. As an industry defined by world trade, agriculture cannot abide by archaic economics which infringe on the fair exchange of the products we use.

We support S. 1406 and ask your Subcommittee to promote passage.

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June 22, 2004

VIA FACSIMILE
202.224.2682

The Honorable Elizabeth Dole
Senate Russell Building
Room 120
Washington, DC 20510

Dear Chairwoman Dole:

The Senate Agriculture, Nutrition and Forestry Production and Price Competitiveness Subcommittee is holding a hearing this week on domestic registration of Canadian pesticides. The American Farm Bureau Federation (AFBF) is grateful to subcommittee Chairman Dole and Committee Chairman Cochran for their willingness to allow public input on this important issue.

AFBF supports the United States, Canada and Mexico harmonizing pesticide registration guidelines, and information and labeling requirements. We believe that U.S. farmers and ranchers, especially those in border-states, gain from improved process consistency and access to pesticides.

At the hearing, the subcommittee will hear testimony on S. 1406 sponsored by Sens. Dorgan, Burns, Baucus, Johnson, Crapo, Daschle and Conrad. The bill amends the Federal Insecticide, Fungicide and Rodenticide Act to establish a process for the Environmental Protection Agency to register Canadian pesticides. AFBF believes S. 1406's introduction is a productive first step in addressing full North American harmonization of pesticide registration.

However S. 1406 in its current form, does have disparities in the structure that could preclude its practical implementation and usefulness to agriculture. Farm Bureau encourages the Senate to address the following concerns related to the current version of S. 1406:

- *Liability of End-Users*: The bill appears to appropriately limit the liability of new registrants, manufacturers and EPA. But, it does not address liability of the farmers and ranchers using the pesticides. If a Canadian pesticide were to be inappropriately registered then used in the United States, would end-users be charged with FIFRA violations and/or damages from their use of the wrong product?

- *Compelling Information from Foreign Entities*: The bill creates the expectation that information from foreign companies registering pesticides in Canada will automatically be made available to the U.S. federal government if a domestic registrant

seeks to make the product available here. But, legal limits exist on the extent to which the U.S. government can compel foreign entities to submit information when those entities are not seeking to do business here. How should these limitations be factored into S. 1406 to ensure that all appropriate information is available for U.S. registrations?

- *Data Compensation*: FIFRA rules require that domestic pesticide registrants be compensated for data used by other entities in registering similar products. Data compensation is an expensive, yet much needed component to ensuring that accountable, serious registrants use all the best information available to register pesticides. How should data compensation for new, domestic registration of Canadian pesticides factor into discussion on S. 1406?

- *U.S. Customs Allowance of Pesticides*: If a Canadian pesticide were to be registered for use in the United States, the product would first need to be transported across the border for the new registrant to apply a new label, since without a U.S. label the pesticide cannot be used here. Currently, U.S. Customs procedures do not allow importation of pesticides lacking domestic labels. How should customs limitations on importation of non-labeled products factor into S. 1406?

- *Existing Agency Obligations and Resources:* The bill charges EPA with ultimately ensuring that only appropriate Canadian pesticides are registered in the United States. The bill also creates timelines for EPA to review the process and products seeking registration. Given existing EPA obligations, timelines and resource limitations, legitimate concerns arise in adding to the agency's charge and burden. How should existing agency obligations and maintaining the integrity of the entire EPA registration be addressed?

AFBF supports harmonization of the North American pesticide registration processes to benefit all of agriculture. We believe that our concerns along with those voiced by other stakeholders can and should be addressed to ensure the practical, effective implementation of S. 1604 or any other system allowing for pesticide harmonization among nations.

We appreciate your consideration of AFBF's position and comments on this issue. If you have questions or comments, please contact Rebeckah Freeman at 202-406-3663 or rebeckah@fb.org.

Sincerely,

Bob Stallman
President

We Care For The Country

MONTANA
FARM BUREAU
FEDERATION
502 S. 19th, Suite 104
Bozeman, MT 59718

June 21, 2004

The Honorable Elizabeth H. Dole, Chair
Production and Price Competitiveness Subcommittee
Committee on Agriculture, Nutrition and Forestry
SR-328A Russell Senate Office Building
Washington DC 20510-6000

The Honorable Kent Conrad, Ranking Member
Production and Price Competitiveness Subcommittee
Committee on Agriculture, Nutrition and Forestry
SR-328A Russell Senate Office Building
Washington DC 20510-6000

RE: Pesticide Harmonization, S. 1406

Dear Senator Dole and Senator Conrad,

Thank you for your serious consideration of S. 1406, Pesticide Harmonization. Pesticide Harmonization is an important issue in Montana, especially considering the border we share with our Canadian neighbors. Working towards a solution for pesticide harmonization will be of great benefit to our farmers and ranchers in Montana.

We are currently faced with unfair market disadvantages to our crops due to differences in rules between the two countries when dealing with pesticides. Difference in pricing and availability hinder our ability to play in a level market. The passage of S. 1406 would help level the playing field by allowing the Administrator of EPA to register Canadian products.

One of the largest input costs that our producer's bear is chemical inputs. Leveling this playing field will help create more competition and help insure that agriculture economies continues to support rural communities in all Border States.

Thank you for you consideration.

Sincerely,

Jake Cummins
Executive Vice President

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June 21, 2004

The Honorable Elizabeth H. Dole, Chair
Production and Price Competitiveness Subcommittee
Committee on Agriculture, Nutrition and Forestry
SR-328A Russell Senate Office Building
Washington DC 20510-6000

The Honorable Kent Conrad, Ranking Member
Production and Price Competitiveness Subcommittee
Committee on Agriculture, Nutrition and Forestry
SR-328A Russell Senate Office Building
Washington DC 20510-6000

Dear Chairwoman Dole and Ranking Member Conrad:

The National Barley Growers Association is writing in support of S 1406, the pesticide harmonization bill, and urges the Senate Committee on Agriculture, Nutrition and Forestry to favorably report this legislation out of Committee to be considered by the full Senate.

For far too long, Congress has not acted to remedy the longstanding inequity in pesticide prices that have been documented to exist between Canada and the United States. Because of this inaction, U.S. barley producers continue to face unfair competition from their counterparts in Canada. It is a known fact that barley grown in Canada is being treated with pesticides that are considerably less expensive to purchase in Canada than those that are available in the United States. And in many cases, the pesticides available to Canadian producers are virtually the same product as those used by U.S. producers – manufactured by the same company but sold under a different name. Yet, U. S. producers are unable to access the less expensive Canadian pesticides because they are not labeled for use in the U.S. This legislation would change this inequity and provide a level playing field for U.S. producers.

For ten years, the North American Free Trade Agreement (NAFTA) has enabled Canadian barley to be shipped across the border and consumed in the U.S., displacing U.S. grown barley. When NAFTA came into effect, part of the agreement was that Canada and the U.S. were to move rapidly toward the harmonization of pesticide regulations so that inequities such as this did not take place. Unfortunately for barley and other producers in the U.S., this has not been the case.

For a number of years, the various stakeholders that would be affected by S 1406 – and previous versions of this legislation – have worked to address the concerns of all. The NBGA believes that all parties have put forth a good faith effort to resolve these concerns and that S 1406 is the product of those deliberations. Now is the time to move forward. The NBGA supports S 1406 and urges the Committee to act favorably in consideration of this legislation.

Respectfully yours,

Rob Rynning

Rob Rynning
President
National Barley Growers Association

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DOCUMENTS SUBMITTED FOR THE RECORD

JUNE 23, 2004

Chairman Thad Cochran
Senate Committee on Agriculture, Nutrition and Forestry
Subcommittee on Production and Price Competitiveness Hearing
June 23, 2004
Permitting the Administrator of the Environmental Protection Agency to register Canadian pesticides

Opening Statement

Thank you Madam Chairman for agreeing to hold this subcommittee hearing. I also appreciate Senator Burns and Senator Dorgan appearing this morning and giving the committee a better understanding of their proposal, and I welcome our other witnesses who will testify later.

Certainly farm input costs, including pesticide expenditures, have long been a part of the farm policy debate, but normally input pricing policies focus on research and development, efficiency and supply. This legislation, however, amends the Federal Insecticide, Fungicide and Rodenticide Act (more commonly known as FIFRA) - a law that has very little, if anything, to do with input pricing. Rather, FIFRA is designed to protect human health and the environment. Therefore, we have a responsibility, as the Committee with jurisdiction over FIFRA to go beyond the pricing debate and also explore the unintended consequences that such a proposal may present.

It is true that the Environmental Protection Agency is the appropriate agency to register pesticides for use here in the U.S., but under recently enacted legislation, when a domestic company proposes to register a pesticide, that might for instance be used by soybean farmers in Iowa or Mississippi, that company pays a registration fee so that EPA can devote proper resources to timely review of the chemical. I note that this new proposal provides a timeframe for the review of Canadian pesticide registration applications, but no registration fee is assessed. Even if the Canadian chemical is identical to a product on the U.S. market, EPA

will have to verify the supporting information, without the fee for service that other products are subject to. I fear that this will consequently result in EPA diverting resources away from registering chemicals that farmers here in the United States need.

Additionally, the proposed legislation requires EPA to obtain the confidential statement of formula for any Canadian pesticide proposed for U.S. registration. We have no legal authority to compel a Canadian pesticide company, even if they are an affiliate of a U.S. company to share this information with the United States government. Subjecting U.S. companies to potential liability due to the unwillingness of their Canadian affiliate to share information is concerning to me.

Speaking of liability, it is unclear to me who would be responsible for damages caused by mislabeling, negligence, and counterfeit or faulty product. I note that the proposal holds the registrant of the Canadian pesticide harmless for adulteration or composition alteration, and the EPA is held harmless from injury or damages. So who has the burden of responsibility, once the chemical is registered? I am somewhat concerned that a group of farmers may seek to register a product and then find themselves in court due to inadvertent mislabeling which is not the same as adulteration.

I understand many Northern border farmers are frustrated by this situation, due to their proximity to Canada, and I commend their Senators for seeking a solution. However, I would caution that a number of unintended possibilities exist with regard to this proposal. I remain concerned that we may unfairly disadvantage U.S. farmers elsewhere in the country, loose site of the intent of FIFRA, or even subject our U.S. companies or our farmers to increased liability in a situation where they have little control.

Again, thank you Senator Dole for providing an opportunity to allow the stakeholders to share their various perspectives.

REMARKS OF
U.S. SENATOR KENT CONRAD, RANKING MEMBER
SUBCOMMITTEE ON PRODUCTION
AND PRICE COMPETITIVENESS
COMMITTEE ON AGRICULTURE, NUTRITION, AND
FORESTRY
UNITED STATES SENATE
WASHINGTON, D.C.
June 23, 2004

First I would like to thank the Chair, Senator Dole, for scheduling this hearing. I am pleased to be one of the original cosponsors of the bill S. 1406, which would allow the Administrator of the Environmental Protection Agency to register a Canadian pesticide.

This is an issue that has long frustrated American producers who live along the U.S.-Canada border. They have been told, time and time again, that the U.S.-Canada Free Trade Agreement created an essentially open North American market. And U.S. producers have certainly experienced evidence of that in terms of record flows of Canadian grain and livestock into U.S. markets over the past 15 years or so.

However, in other respects, the border seems closed to U.S. producers, including when it comes to imports of products that may be

directly beneficial in their farming operations. The issue of cross-border pesticide sales is a case in point.

Many American producers cannot understand why pesticides registered in Canada for the same use on the same crops cannot be purchased and imported for use in the United States. These pesticides are fundamentally the same as their U.S.-registered counterparts, except in one respect: they're often cheaper. What's more, we often import the commodities that are grown with the benefit of the Canadian pesticides.

Certainly if there was some evidence that the Canadian regulatory system was not as rigorous as the U.S. pesticide registration system, U.S. producers might accept the barrier. But all the evidence is to the contrary, leaving our producers wondering if the whole issue isn't driven simply by concern for the profits of pesticide manufacturers. But just as we've seen on the issue of prescription drug imports from Canada, I think the patience of the American public is wearing rather thin.

I am particularly pleased that the witness list today includes two of our colleagues who also represent the front lines in our efforts to

ensure fair trade along the border. My colleague from North Dakota, Senator Dorgan, has championed the pesticide hamonization issue from the start, and he has been joined in this effort by the Senator from Montana.

I am also pleased that we have as witnesses both a producer and a state official from North Dakota. Both of these individuals are very knowledgeable on the issue and bring a wealth of real-world expertise.

I look forward to hearing from them and I look forward, Madame Chair, to seeing some long-overdue progress on this issue in the form of enacted legislation.

Thank you.

Center for Agricultural Policy and Trade Studies
North Dakota State University

AGRICULTURAL POLICY BRIEF

No. 2 September 2003

United States and Canadian Agricultural Herbicide Costs: 2003 Update

Richard D. Taylor
*James A. Gray**

ABSTRACT

Herbicide prices differ between Canada and the United States. Price disparities may be symptoms of the different pesticide regulatory systems between the two countries. The price diferences may be due to the size of the respective pesticide markets or different business environments. Traditional economic theory states that price is determined by supply and demand. For the prices to remain different, the two markets must be segregated by some barrier. If not, arbitrage will occur and eliminate the price differences. An international border with trade restriction provides an excellent barrier. The price difference between the two countries costs North Dakota producers over $20 million annually. Higher herbicide costs in North Dakota raised total pesticide expenditures about 8.3% and total crop expenses by 2.3% in 2002. Differences in the economic structure of the two countries provide the incentive for different prices, but market segregation is required for successful price discrimination. Therefore, to eliminate price disparities, the U.S. and Canadian herbicides markets must be de-segmented.

INTRODUCTION

The purpose of this paper is to estimate the cost differences which exist between Canadian and U.S. herbicides. The controversy between the United States and Canada over herbicide pricing began in late 1997 when it became apparent that some herbicides were substantially lower priced in Canada than in the United States. Also, several herbicides that were labeled in Canada were unavailable for use in the United States. There are several possible explanations for the differences, with varying explanations from the chemical industry, state government, political leaders, and farm organizations.

Some members of the pesticide industry contend that current U.S./Canadian pesticide price disparities are simply a symptom of the different pesticide regulatory systems that exist between the two countries. However, the U.S. Environmental Protection Agency (EPA) and Canada's Pest Management Regulatory Agency (PMRA) have been working for several years to harmonize their pesticide regulatory programs and registration processes, and feedback from both Agencies suggests that data requirements to support pesticide registrations have been largely harmonized. Therefore, the extent to which regulatory factors contribute to pesticide price disparities could be insignificant.

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Another rationale for higher pesticide prices relative to fixed costs is the size of the respective markets. For example, the Canadian spring grown cereal market is roughly twice as large as the U.S. market, and the Canadian canola market is approximately 7 times larger than the canola market in the U.S. Presence of competing pesticides in a given market can also have a significant effect on prices. For example, Canadian cereal producers have a larger selection of herbicides than their U.S. counterparts, thus increasing herbicide price competition in Canada. Similarly, herbicide price competition benefits U.S. corn and soybean producers.

In addition, feedback from the pesticide industry suggests that the business environment is generally more litigious in the United States than in Canada, and this can add significantly to the cost of doing business in the United States. Some contend that the higher pesticide prices paid by U.S. farmers is a symptom of the greater liability faced by pesticide companies that market their products in the United States.

This report updates a previous study titled, "United States and Canadian Agricultural Herbicide Costs: Impacts on North Dakota Farmers." During the past several years there have been changes in the pricing structure of herbicides in both Canada and the United States, but have those changes narrowed the cost differences?

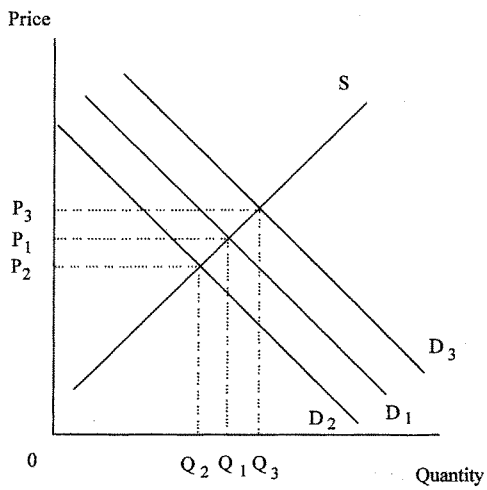

Figure 1. Price Determination of Different Demand Curves

Herbicide Uses and Price

Traditional economic theory states that price is determined by supply and demand. Supply is a function of product price, resource prices, the technique of production, taxes and subsidies, prices of other goods, price expectations, and number of sellers in the market. Demand is a function of product price, tastes and preferences of consumers, number of consumers in the market, income of consumers, prices of related goods, and consumer expectations with respect to future prices and incomes (McConnell). Price is determined by the intersection of the downward sloping demand curve and the upward sloping supply curve. Since the price of herbicides varies between Canada and the United States, the demand and/or supply curves in the two countries differ. Figure 1 shows the direct effect of different demand curves on price. If the United States has a demand curve represented by D_1, and Canada has a demand curve represented by D_2, then the price in the United States will be higher (P_1) than the price in Canada (P_2).

On the other hand, if Canada has a demand curve D_3,then the Canadian price will be at P_3. Any changes in the determinants of demand will shift the demand curve in the market. Different supply curves will also change prices, but since most chemical companies are multi-nationals, the supply curve in the two countries should be similar except for costs involved in registration differences and availability of competing products.

There are substantial differences in economic conditions, however, between the two countries. Canada has a higher federal tax rate and a slightly lower standard of living, which may affect the cost of doing business in Canada. Canadian agricultural subsidies are lower than U.S. subsidies, which may provide lower net farm incomes to Canadian producers. Government payments in the United States increase U.S. farm income and affect the demand for farm inputs. Some of the difference in income between the two countries may be offset by payments from the Canadian Wheat Board, but the income gap traditionally favors the United States. With the higher net farm income, one of the determinants of demand, the related demand curve will shift to the right, which will increase prices of all inputs, not just herbicides. U.S. land prices are the most obvious example. Past, present, and future government payments are capitalized into the price of farmland in the United States, and it is not unreasonable to expect the same to occur with other farm inputs. However, for those difference to persist, the two markets must be segregated by some barrier. An international border with trade restrictions on chemicals provides an excellent barrier.

U.S./Canadian herbicides used in the pricing comparisons are those with similar formulations which contain the same percentage of active ingredient(s) and are being sold by the same manufacturer and registered for similar uses in the U.S. and Canada. All prices are based on the same rate of active ingredient per acre, using Canadian use rate recommendations (Appendix Table 1). Canadian prices were converted to U.S. dollars using the average currency exchange rates for a given year as obtained from an internet exchange rate website (www.x-rates.com). Average currency exchange rates for a given year were obtained by taking the mean of the 12 monthly averages. Canadian dollars were converted to U.S. dollars using currency exchanges of 0.67341, 0.64577, and 0.63686 for 2000, 2001, and 2002, respectively.

U.S. herbicide prices were obtained from the North Dakota Weed Control Guides for 2001, 2002 and 2003, respectively. The North Dakota Weed Control Guides are published annually by the North Dakota State University Extension Service, and prices are based on cash-and-carry retail price estimates provided by the major pesticide suppliers in the state. Pesticide prices published in each edition are based on retail prices from the previous year. For example, prices published in the 2001 North Dakota Weed Control Guide are based on year 2000 retail prices.

Saskatchewan herbicide prices for 2000, 2001, and 2002 were obtained from the Guides to Crop Protection for 2001, 2002, and 2003, published by Saskatchewan Agriculture and Food. As with the North Dakota Weed Control Guides, prices published in each Guide to Crop Protection are based on retail prices from the previous year. Manitoba herbicide prices for 2002 were obtained from the Guide to Crop Protection 2003, published by Manitoba Agriculture and Food.

Estimates of the number of North Dakota acres treated with a given herbicide were obtained from Pesticide Use and Pest Management Practices for Major Crops in North Dakota - 2000, a grower survey conducted by the North Dakota State University Extension Service.

The authors acknowledge that cropping patterns have changed since 2000. The number of acres

of all wheat grown in North Dakota decreased from 10.17 million acres in 2000 to 9.08 million acres in 2002 (North Dakota Agricultural Statistics Service). Plantings of barley also decreased from 1.9 million to 1.6 million acres. The planted acres of corn and soybeans have increased since 2000; all corn acres increased from 1.08 million in 2000 to 1.23 million acres in 2002, and soybean plantings increased from 1.9 million to 2.67 million acres. Other crop production has remained somewhat constant. The shift in planted acres will change herbicide use slightly. For example, under these conditions, less herbicide would be used on small grains statewide and more would be used on row-crops. In addition, the increased plantings of glyphosate-tolerant soybeans would decrease the use of traditional soybean herbicides and increase the use of glyphosate. However, since 2000 was the last year that the survey was conducted, those estimates of glyphosate-treated acres were used in this study. The total cost of each pesticide price difference to North Dakota was obtained by multiplying the price difference per acre by the number of treated acres.

Differences in Herbicide Costs

Table 1 shows the per acre herbicide costs for chemicals used in both Canada and the United States. The first column lists the trade names in the United States. The next two columns list the per acre costs for both countries as they were listed in the previous study. The next columns list the per acre costs for Saskatchewan and the United States for the years 2000, 2001, and 2002. For 2002, a list of per acre costs for Manitoba is also included. The table shows that there has been some price movement over time, both positive and negative. Atrazine has increased in cost in Saskatchewan and decreased in cost in the United States. Basagran has decreased in cost in Saskatchewan and increased in cost in the United States. Puma, Dual, and Liberty have decreased in cost in both countries. Costs of glyphosate products (Roundup, Glyfos, Glyphomax) and Far-Go decreased in Saskatchewan and were unchanged in the United States.

The per acre herbicide cost differences between Canada and the United States are shown in Table 2. Positive numbers indicate higher costs in the United States. The per acre cost differences increased for Basagran, Discover, Eptam, Eradicane, Dual, and Far-Go, while the cost differences narrowed for Liberty, Assert, and Achieve. The differences for several herbicides which cost less in the United States have narrowed during the last few years. The cost advantages for Muster, Assure and Poast have dwindled since 2000.

Table 3 shows the changes in per acre cost differences for the 20 most popular herbicides. Negative numbers in the last column indicate a narrowing of the cost difference between Canada and the United States. The largest changes were in the price relationships of Liberty, Achieve, and Assert ($5.03, $3.53, $2.33, respectively). The herbicides still cost more in the United States, but the gap is narrowing. Minor changes occurred in Puma, Far-Go, Escort, Sonalan, and Banvel ($0.53, $0.32, $0.19, $0.13, and $0.12, respectively). Puma and Far-Go cost more in the United States, and Escort, Sonalan, and Banvel cost more in Canada.

Table 4 shows the total cost difference by herbicide between North Dakota and selected Canadian locations. The largest cost difference is for Puma. Puma was used on 2.8 million acres in North Dakota, and in 2000, North Dakota producers paid $12.8 million more for Puma than did similar producers in Saskatchewan. The price difference has narrowed somewhat, but in 2002, the cost difference was still between $11.3 and $11.4 million. The next highest cost was for herbicides containing glyphosate. Glyphosate (Roundup, Glyfos, Glyphomax) was used on 2.3 million acres. The difference narrowed from $3.9 million in 2000 to $3.7 million in 2002. Bromac was used on 1.8 million acres in North Dakota, and the cost difference was between $2.2 million and $2.1

million.

Several chemicals are lower-priced in the United States than in Canada. However, Canadian producers have a program called the Own-Use Import Permit which allows them to access lower-priced U.S. herbicides for their own use. The United States does not have a similar program to obtain lower-priced Canadian pesticides.

The net cost difference between U.S. and Canadian herbicides has narrowed in the past several years. The net difference was $17.8 million in 2000, $15.2 million in 2001, and $14.8 million in 2002 based on Saskatchewan prices, and $13.1 million in 2002 based on Manitoba prices. If only the herbicides which cost more in the United States are considered ("Total Postive in Table 4), the cost difference is higher, but that gap has also decreased.

Conclusion

The controversy between U.S. and Canadian chemical prices is over 6 years old. With the exception of a few herbicides, very little has changed. The price differences of Liberty, Achieve, Assert, and Puma have narrowed during the last 3 years; however, cost difference for several herbicides have widened during the same period. The price differences for Discover, Basagran, and Curtail are wider now than in 2000. Basagran, which was lower-priced in 2000, is now higher-priced in the United States than in Canada.

The overall cost difference in 2002 is about $1.56 per acre, but producers who use Liberty, Puma, Far-Go, or Assert are disadvantaged by more than $3.00 per acre. Producers in certain areas and producers of certain crop mixes face a much higher cost disadvantage.

Whether the situation is due to market manipulation or economic factors is undetermined, but the cost difference exists and it costs N.D. farmers over $20 million annually. According to NASS, total pesticide expenditures in North Dakota in 2001 (last year published) were $261 million. Higher herbicide costs in North Dakota compared to Canada raised total pesticide expenditures about 8.3% and total crop expenses by 2.3%.

Markets must be segregated if different prices are to charged for herbicides. The international border and trade restrictions provide the necessary segregation. Differences in the economic structure of the two countries provide the incentive for different prices, but market segregation is required for successful price discrimination. Therefore, to eliminate price disparities, the U.S. and Canadian herbicides markets must be de-segmented.

Table 1. Per Acre Costs for Herbicides Used in Canada and the United States

	1999[a]		2000[b]		2001[b]		2002[b]		
	Can.	U.S.	Sas.	U.S.	Sas.	U.S.	Sas.	Man.	U.S.
Product	US$								
Atrazine 4L	2.53	2.65	3.34	3.15	3.21	2.70	3.52	3.52	2.48
Atrazine 90DF	2.53	2.65	3.34	3.15	3.21	2.53	3.17	3.17	2.50
Basagran	12.77	13.50	17.80	17.37	17.13	18.83	17.06	17.06	18.82
Bromac			4.30	5.50	4.24	5.50	4.32	4.32	5.50
Buctril			6.48	8.25	6.47	8.25	6.51	6.51	8.55
Select			21.21	6.97	20.34	7.40	20.54	20.54	7.37
Discover			10.92	12.75	10.77	15.25	10.92	10.92	15.25
Stinger	16.05	24.00	21.23	30.00	20.70	30.00	20.65	20.65	30.00
Curtail M			7.74	9.00	7.46	9.00	6.91	6.91	9.40
Banvel			2.81	2.75	2.71	2.76	2.94	2.94	2.76
Avenge			11.30	11.90	10.95	12.50	11.03	11.03	10.00
Eptam EC	19.57	20.30	12.44	13.56	11.93	13.47	12.41	12.41	14.00
Eradicane EC			15.31	16.00	14.68	16.00	13.78	13.78	16.00
Sonalan 10G	8.59	9.18	11.99	9.21	11.73	9.23	11.73	11.66	8.82
Muster			16.09	11.35	15.45	11.35	15.21	15.21	11.75
Puma	6.04	9.00	10.44	15.00	10.24	14.10	9.76	9.73	13.80
Everest			9.93	12.00	9.53	12.00	9.58	9.58	12.00
Reflex			NA	5.13	4.46	5.00	4.48	4.48	5.00
Liberty	12.21	21.85	12.42	21.85	9.73	18.70	9.60	9.60	14.00
Glyphosate	4.07	6.90	3.02	4.68	2.89	4.68	2.85	2.85	4.68
Roundup Ultra			3.30	5.23	3.16	5.03	3.12	3.12	4.99
Glyphomax			3.02	4.50	2.89	4.25	2.85	2.85	4.25
Glyphomax Plus			3.30	5.23	3.16	4.95	3.12	3.12	4.95
Assert 2.5S	4.16	7.50	8.22	13.75	8.10	11.69	8.48	8.48	11.69
Dual Magnum	14.19	21.90	20.22	19.69	16.16	18.59	15.93	15.93	18.75
Escort			14.14	10.50	12.09	8.49	12.23	12.23	8.40
Accent			15.58	15.50	15.23	16.00	15.33	15.33	16.00
Assure II			11.11	8.69	15.98	9.03	10.51	15.76	9.03
Matrix			11.78	12.75	11.53	10.63	11.92	11.92	10.63
Poast	7.43	8.15	10.33	8.15	9.87	8.15	9.92	10.11	8.15
Harmony GT	3.66	3.15	3.79	3.60	3.71	3.60	3.77	3.77	3.60
Achieve 40DG			10.61	16.10	10.17	14.00	10.29	10.29	12.25
Far-Go EC	5.55	10.00	7.28	12.50	6.94	12.50	7.08	7.08	12.50
Far-Go 10G			9.66	11.53	9.27	11.50	9.43	9.25	11.90
Garlon EC			32.27	42.50	30.22	42.48	28.53	28.53	42.50

a: From United States and Canadian Agricultural Herbicide Costs: Impacts on North Dakota Farmers

b: Saskatchewan Agriculture and Food and Manitoba Agriculture and Food

Table 2. Herbicide Cost Difference Between the United States and Canada[a]

U.S. Product Name	Study 1999	Saskatchewan 2000	Saskatchewan 2001	Saskatchewan 2002	Manitoba 2002
	U.S. $/ acre				
Atrazine 4L	0.12	-0.19	-0.51	-1.04	-1.04
Atrazine 90DF	0.12	-0.19	-0.68	-0.67	-0.67
Basagran	0.73	-0.43	1.70	1.76	1.76
Bromac		1.20	1.26	1.18	1.18
Buctril		1.77	1.78	2.04	2.04
Select		-14.24	-12.94	-13.17	-13.17
Discover		1.83	4.48	4.33	4.33
Stinger	7.95	8.77	9.30	9.35	9.35
Curtail M		1.26	1.54	2.49	2.49
Banvel		-0.06	0.05	-0.18	-0.18
Avenge		0.60	1.55	-1.03	-1.03
Eptam EC	0.73	1.12	1.54	1.59	1.59
Eradicane EC		0.69	1.32	2.22	2.22
Sonalan 10G	0.59	-2.78	-2.50	-2.91	-2.84
Muster		-4.74	-4.10	-3.46	-3.46
Puma	2.96	4.56	3.86	4.04	4.07
Everest		2.07	2.47	2.42	2.42
Reflex			0.54	0.52	0.52
Liberty	9.64	9.43	8.97	4.40	4.40
Glyphosate	2.83	1.66	1.79	1.83	1.83
Roundup Ultra		1.93	1.87	1.87	1.87
Glyphomax		1.48	1.36	1.40	1.40
Glyphomax Plus		1.93	1.79	1.83	1.83
Assert 2.5S	3.34	5.53	3.59	3.21	3.21
Dual Magnum	7.71	-0.53	2.43	2.82	2.82
Escort		-3.64	-3.60	-3.83	-3.83
Accent		-0.08	0.77	0.67	0.67
Assure II		-2.42	-6.95	-1.48	-6.73
Matrix		0.97	-0.90	-1.29	-1.29
Poast	0.72	-2.18	-1.72	-1.77	-1.96
Harmony GT	-0.51	-0.19	-0.11	-0.17	-0.17
Achieve 40DG		5.49	3.83	1.96	1.96
Far-Go EC	4.45	5.22	5.56	5.42	5.42
Far-Go 10G		1.87	2.23	2.47	2.65
Garlon EC		10.23	12.26	13.97	13.97

a:A positive number indicates higher cost in the United States

Table 3. Changes in Cost Differences Between Saskatchewan and North Dakota, 2000 and 2002

U.S. Product Name	Per acre cost difference 2000	2001	2002	Difference[a] 2000 and 2002
	U.S. $			
Puma	4.56	3.86	4.04	-0.53
Banvel	-0.06	0.05	-0.18	0.12
Glyphosate	1.75	1.76	1.65	-0.10
Bromac	1.20	1.26	1.18	-0.02
Sonalan 10G	-2.78	-2.50	-2.91	0.13
Poast	-2.18	-1.72	-1.77	0.41
Assure II	-2.42	-6.95	-1.48	0.94
Basagran	-0.43	1.70	1.76	2.20
Harmony GT	-0.19	-0.11	-0.17	0.02
Assert 2.5S	5.53	3.59	3.21	-2.33
Accent	-0.08	0.77	0.67	0.75
Achieve 40DG	5.49	3.83	1.96	-3.53
Atrazine	-0.19	-0.54	-0.94	-0.75
Buctril	1.77	1.78	2.04	0.27
Far-Go	4.05	4.05	3.74	-0.32
Liberty	9.43	8.97	4.40	-5.03
Escort	-3.64	-3.60	-3.83	0.19
Select	-14.24	-12.94	-13.17	1.07
Discover	1.83	4.48	4.33	2.50
Curtail M	1.26	1.54	2.49	1.23

a: A negative number indicates a narrowing of the cost difference between Canada and the United States

Table 4. Total Cost Difference by Herbicide Between North Dakota and Selected Canadian Locations

U.S. Product Name	ND Treated Acres (000)	Previous Study	Additional Cost Paid by ND Producers U.S.$ Compared to Saskatchewan			Manitoba
		1999	2000	2001	2002	2002
Puma	2,803.6		12,790,430	10,834,640	11,317,954	11,407,229
Banvel	2,520.0		-163,432	136,644	-459,379	-443,330
Glyphosate	2,255.3		3,946,775	3,963,690	3,726,883	3,726,883
Bromac	1,757.6		2,115,525	2,221,165	2,077,640	2,077,640
Sonalan 10G	961.6		-2,670,073	-2,401,291	-2,799,180	-2,731,816
Poast	594.2		-1,295,421	-1,024,296	-1,053,088	-1,166,615
Assure II	450.7		-1,091,264	-3,133,630	-669,091	-3,034,241
Basagran	403.2		-175,376	687,125	711,603	711,603
Harmony GT	348.9		-66,744	-37,235	-59,387	-59,387
Assert 2.5S	323.8		1,792,038	1,163,104	1,038,435	1,038,435
Accent	286.6		-23,704	219,617	192,245	192,245
Achieve 40DG	280.4		1,540,459	1,073,686	550,905	550,905
Atrazine	139.4		-26,486	-74,579	-131,036	-131,036
Buctril	139.2		246,634	247,690	284,148	284,148
Reflex	134.1		NA	72,975	69,263	69,263
Far-Go EC	119.2		482,760	482,760	445,212	445,212
Liberty	111.6		1,052,647	1,000,856	491,321	491,321
Escort	90.1		-328,109	-324,253	-344,877	-344,877
Select	81.9		-1,166,454	-1,059,930	-1,078,519	-1,078,519
Discover	72.3		132,600	323,800	313,364	313,364
Curtail M	70.8		88,910	109,128	176,297	176,297
Stinger	63.2		554,524	587,954	590,707	590,707
Avenge	30.6		18,366	47,361	-31,531	-31,531
Eradicane EC	19.2		13,184	25,252	42,715	42,715
Eptam EC	16.5		18,404	25,347	26,195	26,300
Dual Magnum	14.5		-7,721	35,276	40,829	40,829
Net			17,778,471	15,202,856	15,469,629	13,163,746
Total Positive		23,935,603	24,238,731	23,258,070	22,036,330	21,594,390

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Appendix Table 1. Herbicide Trade Names in Canada and the United States

Canadian					U.S.			
Product	Active Ingredient	Formulation	Prod. Rate	g ai/A	Product	Formulation	Prod. Rate	g ai/A
Astrex 4L	atrazine	480 g/L	0.85 L/A	408	Atrazine 4L, Astrex 4L	4L	1.8 pt/A	408
Atrazine Nine-O	atrazine	90% ai	0.45 kg/A	405	Atrazine 90DF, Astrex Nine-O	90 DF	1 lb/A	408
Basagran	bentazon	480 g/L	0.91 L/A	437	Basagran	4 SL	1.93 pt/A	437
Buctril M	bromoxynil + MCPA	280 g/L (each)	0.405 L/A	113.4	Bromac, Bronate	2EC	1 pt/A	113.4
Pardner	bromoxynil	280 g/L	.485 L/A	136	Buctril	2EC	1.2 pt/A	136
Select	clethodim	240 g/L	.15 L/A	36	Select	2EC	5.1 fl oz/A	36
Horizon	clodinafop-propargyl	240 g/L (EC)	0.095 L/A	23	Discover	2EC	3.2 fl oz/A	23
Lontrel	clopyralid	360 g/L	.23 L/A	83	Stinger	3 SC	0.5 pt/A	83
Curtail M	clopyralid + MCPA	50 gL clo/280 g/L MCPA	0.8 L/A	40/224	Curtail M	0.42 + 2.35 SL	1.75 pt/A	40/224
Banvel II	dicamba	480 g/L	0.127 L/A	61	Banvel	4 SL	4.3 fl oz/A	61
Avenge 200C	diflenzoquat	200 g/L	1.42 L/A	284	Avenge	2 SL	2.5 pt/A	284
Eptam 8-E	EPTC	800 g/L	1.72 L/A	1376	Eptam EC	7EC	3.5 pt/A	1376
Eradicane 8-E	EPTC	800 g/L	2.23 L/A	1784	Eradicane EC	6.7 EC	4.75 pt/A	1784
Edge	ethalfluralin	5% ai	8.9 kg/A	445	Sonalan10G	10G	9.8 lb/A	445
Muster Toss-N-Go	ethametsulfuron-methyl	75% ai	12 g/A	9	Muster	75 DF	0.42 oz/A	9
Puma Super	fenoxaprop-p-ethyl	92 g/L	0.405 L/A	37	Puma	1EC	0.67 pt/A	37
Everest	flucarbazone	70% ai	17.4 g/A	12.18	Everest	70 WDG	0.6 oz/A	12.18
Reflex	fomesafen	240 g/L	0.23 L/A	55.2	Reflex	2EC	0.5 pt/A	55.2
Liberty	glufosinate	150 g/L (EC)	1.1 L/A	165	Liberty	1.67 SL	28 fl oz/A	165
Glyfos	glyphosate	360 g ae/L	0.5 L/A	180	Glyfos	3 SL	1.1 pt/A	180
Roundup Transorb	glyphosate	360 g ae/L	0.5 L/A	180	Roundup Ultra	3 SL	1.1 pt/A	180
Vantage	glyphosate	356 g ae/L	0.5 L/A	178	Glyphomax	3 SL	1.0 pt/A	178
Vantage Plus	glyphosate	360 g ae/L	0.5 L/A	180	Glyphomax Plus	3 SL	1.1 pt/A	180
Assert 300SC	imazmethabenz	300 g/L	0.54 L/A	162	Assert 2.5S	2.5 S	1.1 pt/A	162
Dual II Magnum	metolachlor	915. g/L	0.7 L/A	641	Dual Magnum	7.62 EC	1.5 pt/A	641
Escort	metsulfuron	60% ai	12 g/A	7.2	Escort	60 DF	0.42 oz/A	7.2
Accent	nicosulfuron	75% ai	13.5g/A	10.1	Accent	75 DF	0.5 oz/A	10.1
Assure II	quizalofop-p-ethyl	96 g/L	0.3 L/A	27.6	Assure II	0.88 EC	8.9 fl oz/A	27.6
Pinnacle	rimsulfuron	25% ai	24 g/A	6	Matrix	25 DF	.85 oz/A	6
Poast Ultra	sethoxydim	450 g/L	0.19 L/A	85.5	Poast	1.5 EC	1 pt/A	85.5
Refine Toss-N-Go	thifensulfuron + tribenuron	50% thif/25% trib.	8 g/A	4/2	Harmony GT	50 + 25 DF	.3 oz/A	4/2
Achieve 80DG	tralkoxydim	80% ai	0.1 kg/A	80	Achieve 40DG	40% ai	7 oz/A	80
Avadex BW	triallate	400 g/L	1.42 L/A	568	Far-Go EC	4EC	2.5 pt/A	568
Avadex BW	triallate	10% ai	5.67 kg/A	567	Far-Go 10G	10 G	12.53 lb/A	567
Remedy EC	triclopyr	480 g/L	1.6 L/A	768	Garlon EC	4EC	1.7 qt/A	768

MONTANA FARMERS UNION

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June 25, 2004

The Honorable Conrad Burns
United States Senate
187 Dirksen Building
Washington, DC 20510

Dear Senator Burns:

Montana Farmers Union wants to thank you for co-sponsoring S. 1406, a bill that allows us to purchase Canadian pesticides for the use on our farms. While high inputs and market fluctuations continue, getting an even break with pesticide harmonization will help keep families on the farm.

Farmers Union has supported legislation of this type for several years. On July 25, 2001, Hank Zell, a Montana Farmers Union member from Shelby, traveled to Washington, D.C. testified for pesticide harmonization. He reported on the need for "fair market conditions and competition" in world markets. NFU President Dave Frederickson testified July 18, 2002, before the Agriculture, Nutrition and Forestry Subcommittee on Production and Price Competitiveness in support of legislation to amend the Federal Insecticide, Fungicide and Rodenticide Act. That amendment, S. 532, allowed states to register a pesticide approved for use in Canada for distribution and for use in that state if it meets specific Environmental Protection Agency requirements. Frederickson stated that the issue is about fairness and breaking down country borders. He commended the senators for understanding the importance of the issue and for taking action.

In February 6, 2003, Montana Farmers Union also supported a bill sponsored by Senator Bryon Dorgan (D-N.D.). His pesticide harmonization bill (S. 332) was offered as an amendment to the FY04 VA-HUD appropriations bill. The proposal would allow U.S. farmers equal access to Canadian crop protection products that may be priced lower than identical U.S. registered pesticide products. He withdrew the amendment after Senate Agriculture Committee Chairman Thad Cochran (R-Miss.) agreed to hold a hearing on the legislation early in 2004.

It is essential to Montana farmers that this bill pass assuring them an equal opportunity to purchase pesticides free of artificial barriers to competition. Co-sponsoring S. 1406 demonstrates your leadership and commitment to the success of this measure. Montana Farmers Union members urge you to speak for them and vote to move this bill forward.

Sincerely,

Brooks Dailey

Brooks Dailey

Agribusiness and Applied Economics Report No. 456 May 2001

United States and Canadian Agricultural Herbicide Costs: Impacts on North Dakota Farmers

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Acknowledgments

The authors extend appreciation to Mr. Dwight Aakre, Dr. Roger Johnson, Mr. Jeremy Mattson, and Mr. Andrew Swenson for their constructive comments and suggestions. A special word of thanks goes to Ms. Mindy Schmitz and Mr. Tim Semler for their helpful information and data. Special thanks go to Ms. Norma Ackerson who helped to prepare the manuscript.

We would be happy to provide a single copy of this publication free of charge.You can address your inquiry to: Carol Jensen, Department of Agribusiness and Applied Economics, North Dakota State University, PO Box 5636, Fargo, ND 58105-5636, (Ph. 701-231-7441, Fax 701-231-7400), (e-mail: cjensen@ndsuext.nodak.edu). This publication is also available electronically at this web site: http://agecon.lib.umn.edu/.

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Abstract

Pesticides have become a major farm production cost over the past 25 years. There are price and label differences for agricultural herbicides between the United States and Canada. Trade names are different in some cases, label restrictions vary, and weights and measures are different. The reasons for the price differences are unclear. Whether they are due to increased costs in labeling requirements, different levels of competition and use, or market segmentation is not determined. The largest total impact of using lower priced Canadian herbicide is on HRSW, followed by durum and corn. The largest per acre impact is for canola, corn, and HRSW. Herbicides with the largest total impact are Puma, followed by Roundup and Fargo. Net farm income for large, medium, and small size representative farms would increase 3.8%, 4.6%, and 5.2%, respectively, if Canadian priced herbicides could be used in the United States. The statewide impact is $1.46 per acre, but regional or individual impacts could be much greater depending on crops grown or the specific weed problem faced by the individual producer.

Key Words: Agricultural Herbicide Costs, Trade Harmonization, North Dakota Representative Farm, Land Value, Pesticides

Highlights

Pesticide expenses in the United States increased from 1.2% of total production expenses in 1965 to 5.1% in 1999. Pesticide expenses in North Dakota increased 1.7% of total production expenses to 8.1% over the same time period.

A controversy between the United States and Canada began in late 1997 when it became apparent that some pesticides were substantially lower priced in Canada than in the United States, and many pesticides that were labeled in Canada were unavailable in the United States.

Many herbicides carry different trade names in Canada than they do in the United States. For example, Basis in the United States is Prism in Canada, Fargo in the United States is named Avadex BW in Canada, and Harmony in the United States is Refine Extra in Canada.

There is a wide range of cost differences between the two countries. Cost per acre for Liberty in the United States is $9.64 higher than in Canada, while that for Pursuit in Canada is $3.63 higher than in the United States. Stinger, Dual, Fargo, and Assert are also higher priced in the United States. Treflan is lower priced in the United States than in Canada, along with Harmony, 2,4-D, and MCPA.

The largest impact of higher herbicide prices in the United States is on hard red spring wheat, $11.6 million, followed by durum, $4.6 million. The impact on corn and canola is $2.9 million and $2.8 million, respectively. The total impact is $23.9 million, or $1.46 per acre.

Puma would have an $11.4 million impact if the price in the United States were lowered to match the Canadian price. Roundup would have almost a $6 million impact. Fargo and Stinger would each have a $4.1 million impact.

The North Dakota Representative Farm Model was used to estimate the impact of different herbicide prices. The savings in herbicide costs are $4,635 for the large size farm, $2,458 for the medium size farm, and $1,341 for the small size farm. As the savings were capitalized into land values, increases in net farm income fell throughout the time period estimated.

Land values were the same until 2001 when the land value under the Canadian herbicide price scenario began to increase. The land value under the Canadian herbicide price scenario increased to $510 per acre in 2009 compared to $488 under the U.S. herbicide price scenario. Cash rents also increased. The average cash rents in North Dakota increased by $2 per acre from 2004 through 2009.

United States and Canadian Agricultural Herbicide Costs: Impacts on North Dakota Farmers

Richard D. Taylor and Won W. Koo[1]

Introduction

Pesticide use became important for U.S. agriculture in the late1960s. In 1965 pesticide use was $5.2 million for North Dakota and $474.1 million for the United States. By 1970 the use of pesticides doubled to $11.2 million for North Dakota and $960 million for the United States and between 1975 and 1999 pesticide use grew 383% for the United States and 588% for North Dakota (Table 1). Pesticide use in North Dakota has followed the same trend as the rest of the United States (Figure 1). In 1965 pesticide expenses were 1.2% of total production expenses in the United States and 1.7% in North Dakota. By 1999, pesticide expenses had increased to 5.1% of the total production expenses in the United States and 8.1% in North Dakota.

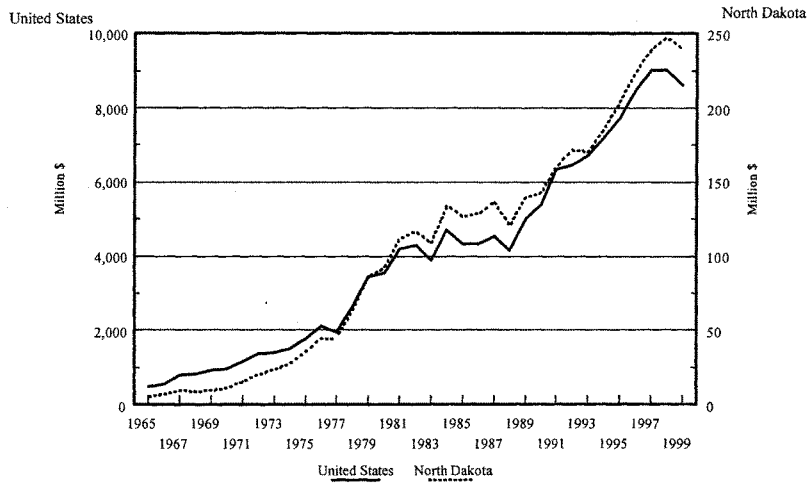

Figure 1. United States and North Dakota Agricultural Pesticide Expense

[1]The authors are research associate and professor, respectively, in the Department of Agribusiness and Applied Economics, North Dakota State University, Fargo. Koo is also Director of the Northern Plains Trade Research Center.

Table 1. Total Pesticide Cost in the United States and North Dakota

Year	United States	North Dakota
	--------- Million $---------	
1975	1,782.5	34.9
1976	2,107.8	44.6
1977	1,938.0	44.0
1978	2,656.3	64.5
1979	3,436.0	86.1
1980	3,538.6	91.3
1981	4,200.8	111.5
1982	4,282.2	116.9
1983	3,870.1	108.0
1984	4,687.8	133.8
1985	4,333.7	126.3
1986	4,323.7	128.7
1987	4,512.2	137.1
1988	4,147.7	120.7
1989	5,011.5	139.6
1990	5,363.2	142.8
1991	6,320.5	160.8
1992	6,470.6	171.6
1993	6,719.7	170.2
1994	7,219.6	185.8
1995	7,718.7	203.7
1996	8,518.4	223.9
1997	9,017.5	239.2
1998	9,017.8	247.2
1999	8,618.2	240.3

Source: USDA, ERS.

A controversy between the United States and Canada began in late 1997 when it became apparent that some pesticides were substantially lower priced in Canada than in the United States. Also, pesticides that were labeled in Canada were unavailable in the United States. There are many possible explanations for the differences. The explanations differ depending whether you are hearing from the chemical industry, state government, political leaders, or farm organizations.

The chemical industry maintains that each country has separate labeling procedures and requirements. The registration process is about twice as expensive in the United States and requires about one more year than in Canada; therefore, the increased fixed cost of labeling plus the one lost year of potential sales must be added to the cost of the herbicide. Another rationale for higher prices

relative to fixed costs in the U.S. market is that the Canadian market for spring grown cereal grains is about twice as large as in the upper Midwest and about seven times larger for canola. Canadian producers also have a larger selection of herbicides than do the U.S. producers, which increases competition in Canada. Therefore, the chemical industry argues that the higher fixed cost of labeling and smaller market for certain crops in the United States and greater competition in Canada, justifies the price differences. Agricultural organizations and political leaders maintain that the chemical companies are using the Canadian border to segment the United States and Canada into two separate markets, allowing them to charge higher prices in the United States.

Another potential problem is that each country uses a different weights and measure system. Canada is on the metric system (liters and grams) while the United States maintains the English system (pints, gallons, and pounds). Application rates and label requirements are different between the two countries and would have to be converted before application.

Pesticides can be divided into three groups based on the target host. Herbicides are directed towards plants. Insecticides are used for insect control, and fungicides are used to control disease on leaves, seed, or final production. This study will examine herbicide costs in North Dakota.

The objective of the study was to estimate the total additional cost paid by North Dakota producers for agricultural herbicides for hard red spring wheat, durum wheat, barley, corn, soybeans, sunflowers, and canola compared to the cost of herbicides in Canada. In addition, the impact of each herbicide was estimated to determine which herbicides had the largest impact on North Dakota producers. The estimated cost saving for a North Dakota producer, if they could use Canadian herbicides, was estimated using the North Dakota Representative Farm Model which is operational at the Northern Plains Trade Research Center at North Dakota State University.

Several internal studies have been conducted by North Dakota farm organizations. The studies estimated the impact of higher herbicide prices on North Dakota producers, but they did not identify the impact on individual crops grown in North Dakota. Data were used from the *1998 Agricultural Chemical Use Estimates for Field Crops* and the *Agricultural Chemical Usage, 1999 Field Crops Summary* (USDA, NASS) along with the NDSU Extension Service publication *Pesticide Use and Pest Management Practices for Major Crops in North Dakota, 1996* to estimate herbicide usage in North Dakota. North Dakota prices were obtained from the NDSU Extension Service Publication *2001 North Dakota Weed Control Guide,* and Canadian prices were obtained from a herbicide cost calculator at the Alberta Agriculture, Food, and Rural Development website.

Method

A spreadsheet was developed to calculate herbicide costs for each county in the state, each crop in the study, and each herbicide with substantial use within the state. North Dakota and Canadian prices were used to estimate differences in herbicide costs. Application rates for Canadian herbicides were adjusted to equal U.S. application rates, i.e., pints per acre, pounds per acre. Canadian prices in Canadian dollars were converted into U.S. dollars using the exchange rate on March 26, 2001, and

Canadian measures were converted into U.S. weights and measures, liters were converted into U.S. gallons.

Herbicides which were not labeled in North Dakota were not part of the study. Also, several herbicides labeled for corn and soybeans were not labeled in Canada. In the second part of the study, the Canadian price of each herbicide was used to estimate the impact of that price on North Dakota herbicide costs.

It was assumed that the usage of agricultural herbicides did not change when the Canadian prices were incorporated into the model. Data that would indicate substitution rates between competing herbicides were not available. The substitution would increase the cost savings under the Canadian scenario because farmers would shift usage towards lower priced herbicides and away from the higher priced herbicides. Also, different herbicides provide different effectiveness for weed control which would change yield potential. It was further assumed that herbicide use was constant throughout the state and between the large, medium, and small size representative farms.

Empirical Results

Analysis of Herbicide Prices

Table 2 shows the herbicide usage in North Dakota for small grains. The 2,4-D herbicide was used on 57% of HRSW acres, 62% of durum, and 45% of barley. MCPA was used on 63% of HRSW acres, 29% of durum, and 47% of barley. These older phenoxy herbicides are still the most widely used post-emergent broad leaf herbicide followed by Express, which was used on 25% of the acres of HRSW, 48% of durum, and 9% of barley. Banvel and bromoxynil were used as tank mixes with other herbicides except in durum. Puma had the largest use of any grass herbicide, 39% of HRSW, 34% of durum, and 18% of barley. Roundup use was minor except for durum (21%).

Table 2. Herbicide Usage in North Dakota for HRSW, Durum Wheat, and Barley

Trade Name	Active Ingredient	HRSW	Durum	Barley
		-------% of acres---------		
2,4-D	2,4-D	0.57	0.62	0.45
MCPA	MCPA	0.63	0.29	0.47
Bromoxynil	Bromoxynil	0.07		0.21
Banvel	Dicamba	0.03	0.09	
Stinger	Clopyralid	0.05		
Harmony	Thifensulfuron	0.09		0.06
Express	Tribenuron-methy	0.25	0.48	0.09
Treflan	Trifluralin	0.04	0.21	0.09
Puma	Fenoxaprop	0.39	0.34	0.18
Fargo	Triallate	0.08	0.07	0.12
Roundup	Glyphosate	0.03	0.21	0.01

Source: USDA, NASS; NDSU Extension Service.

Table 3 shows the herbicide use in North Dakota for corn. Harness is used on 31% of the corn and is the most widely used herbicide for corn followed by Atrazine (23%) and Dual (13%). Accent (22%) is the most widely used post-emergent herbicide followed by Basis (17%) and 2,4-D (12%).

Table 3. Herbicide Usage in North Dakota for Corn

Trade Name	Active Ingredient	Corn
		-% of acres-
Harness	Acetochlor	0.31
Dual	Metolachlor	0.13
Frontier	Dimethenamid	0.11
Eptam	EPTC	0.03
Lasso	Alachlor	0.03
Atrazine	Atrazine	0.23
Python	Flumetsulam	0.05
Bladex	Cyanazine	0.04
Basis	Rimsulfuron	0.17
2,4-D	2,4-D	0.12
Banvel	Dicamba	0.11
Stinger	Clopyralid	0.09
Bromoxymil	Bromoxynil	0.08
Accent	Nicosulfuron	0.22
Beacon	Primisulfuron	0.06
Marksman	Dicamba, Pot.Salt	0.05
Roundup	Glyphosate	0.08

Source: USDA, NASS; NDSU Extension Service.

Table 4 shows the herbicide usage for sunflowers, canola, and soybeans. Sonalan is the most widely used pre-emergent herbicide for sunflowers and is used on 61% of the sunflower acres and 12% of the non-GMO canola acres, followed by Treflan, 28% of sunflowers and 10% of non-GMO canola. Treflan is the most widely used pre-emergent for non-GMO soybeans (23% of all soybean acres) followed by Prowl at 17%. Pursuit is the most widely used post-emergent herbicide on soybeans (60%). GMO seed are planted on 69% of canola acres and 49% of soybean acres. Roundup is used on 55% of the canola acres and 42% of the soybean acres.

Table 4. Herbicide Usage in North Dakota for Sunflowers, Canola, and Soybeans

Trade Name	Active Ingredient	Sunflowers	Canola	Soybeans
		----------% of acres----------		
Sonalan	Ethalfluralin	0.61	0.12	
Prowl	Pendimethalin	0.11		0.17
Treflan	Trifluralin	0.28	0.10	0.23
Assert	Imazamethabenz	0.10		
Poast	Pendimethalin	0.14	0.08	
Muster	Ethalfluralin		0.08	
Stinger	Clopyralid		0.10	
Pursuit	Imazethapyr			0.60
Basagran	Bentazon			0.20
Flexstar	Fomesafen			0.06
Cobra	Lactofen			0.05
Fusilade	Fluazifop-P-butyl			0.08
Classic	Chlorimuron-ethyl			0.09
Roundup	Glyphosate	0.05	0.55	0.42
Liberty	Glufosinate		0.07	
Raptor	Imazamox		0.07	0.07

Source: USDA, NASS; NDSU Extension Service.

Table 5 shows the trade names and typical per acre cost for North Dakota and Canadian priced agricultural herbicides. Many of the herbicides carry different trade names in Canada than they do in the United States. For example, Basis in the United States is Prism in Canada, Fargo in the United States is named Avadex BW in Canada, and Harmony in the United States is Refine Extra in Canada. There is a wide range of cost differences between the two countries. Cost per acre for Liberty is $9.64 higher in the United States than in Canada, while Pursuit is $3.63 higher in Canada than in the United States. Stinger is $7.95 per acre higher in the United States, Dual is $7.71 higher, Fargo is $4.45 higher, and Assert is $3.33 higher. Treflan is $2.02 lower in the United States than in Canada, Harmony, 2,4-D, and MCPA are $0.51, $0.41, and $0.11 lower, respectively.

Table 5. Herbicide Trade Names and Estimated Per Acre Herbicide Costs in North Dakota and Canada

Trade Name			Typical Cost Per Acre		
North Dakota	Canada	Active Ingredient	North Dakota	Canada	Difference
			----------US$/acre----------		
2,4-D	2,4-D	2,4-D	1.40	1.81	-0.41
Assert	Assert 300-SC	Imazamethabenz	7.50	4.17	3.33
Atrazine	Atrazine	Atrazine	2.65	2.53	0.12
Banvel	Banvel	Dicamba	10.30	9.92	0.33
Basagran	Basagran	Bentazon	13.50	12.77	0.73
Basis	Prism	Rimsulfuron	5.45	3.73	1.72
Bladex	Bladex	Cyanazine	15.00	12.27	2.73
Bromoxynil	Buctril M	Bromoxynil	6.90	4.58	2.32
Dual	Primextra Light	Metolachlor	21.90	14.19	7.71
Eptam	Eptam	EPTC	20.30	19.57	0.73
Express	Express Pack	Tribenuron-methy	4.40	3.95	0.45
Fargo	Avadex BW	Triallate	10.00	5.55	4.45
Fusilade	Fusilade II	Fluazifop-P-butyl	9.40	9.49	-0.09
Harmony	Refine Extra	Thifensulfuron	3.15	3.66	-0.51
Liberty	Liberty	Glufosinate	21.90	12.21	9.64
MCPA	MCPA	MCPA	1.75	1.86	-0.11
Poast	Poast	Sethoxydim	8.15	7.43	0.72
Puma	Puma 120 Super	Fenoxaprop	9.00	6.04	2.96
Pursuit	Pursuit	Imazethapyr	9.45	13.08	-3.63
Raptor	Odyssey	Imazamox	14.10	11.26	2.79
Roundup	Roundup	Glyphosate	6.90	4.07	2.83
Sonalan	Edge	Ethalfluralin	9.18	8.59	0.59
Stinger	Lontrel	Clopyralid	24.00	16.05	7.95
Treflan	Treflan	Trifluralin	6.25	8.27	-2.02

Source: NDSU Extension Service; Alberta Agriculture, Food, and Rural Development.

Table 6 shows the impacts of higher herbicide prices on North Dakota producers. The impact was calculated using the USDA's estimated herbicide usage for each crop (% of crop) in the state, times the number of acres of that crop, times the average rates and prices in the two countries. The largest impact is on HRSW, $11.6 million or $1.86 per acre, followed by durum, $4.6 million or $1.45 per acre. The impact on corn and canola is $2.9 million and $2.8 million, respectively. Herbicide costs for soybeans are lower in the United States than in Canada. The total impact is $23.9 million, or $1.46 per acre, for these seven crops.

Table 6. Impacts of Higher Herbicide Prices for North Dakota on Herbicide Costs for Various North Dakota Crops

Crop	Total Herbicide Costs U.S. Prices	Total Herbicide Costs Canada Prices	Total Difference	Per Acre Difference
	----------US$----------			
HRSW	58,693,633	47,047,332	11,646,301	1.86
Durum	31,626,330	26,954,510	4,671,820	1.45
Barley	11,193,188	9,054,548	2,138,640	1.28
Corn	24,256,999	21,325,461	2,931,538	2.84
Soybeans	26,478,663	27,514,851	(1,036,189)	-0.70
Sunflowers	18,977,556	18,217,330	760,225	0.41
Canola	8,606,524	5,783,256	2,823,268	3.30
Total	179,832,891	155,897,288	23,935,603	1.46

Table 7 shows which herbicides have the largest potential for cost savings if U.S. prices were lowered to match Canadian prices. Puma, which is a post-emergent grass herbicide, would have an $11.4 million impact if the price in the United States were lowered to match the Canadian price. Roundup, which is a non-selective herbicide, would have almost a $6 million impact. Fargo and Stinger would have a $4.1 million impact.

Table 7. Impacts of Higher Herbicide Prices for Individual Herbicides on North Dakota Total Herbicide Costs

Trade Name	Total Herbicide Cost	Impact
	----------US$----------	
Base	179,832,891	
Puma	168,482,564	11,350,327
Roundup	173,878,416	5,954,475
Fargo	175,709,699	4,123,192
Stinger	175,722,208	4,110,683
Bromoxynil	178,002,643	1,830,248
Express	178,365,243	1,467,648
Dual	178,797,665	1,035,226
Sonalan	179,168,156	664,735
Assert	179,217,840	615,051
Liberty	179,256,274	576,617
Raptor	179,378,594	454,297
Poast	179,506,991	325,900
Basis	179,530,886	302,005
Basagram	179,618,030	214,861
Banvel	179,675,194	157,697
Bladex	179,720,104	112,787

Representative Farm Analysis

The impact on individual North Dakota farms was estimated using the Representative Farm Model. Two scenarios were evaluated, (1) the base model where U.S. herbicide prices were used and (2) Canadian herbicide prices were used. Table 8 shows those impacts on state net farm income for small, medium, and large size farms. The net income differences for large, medium, and small size farms for 1999 were $4,635, $2,458, and $1,341, respectively. This implies that savings in herbicide costs are $4,635 for the large size farm, $2,458 for the medium size farm, and $1,341 for the small size farm. The increases in net farm income fell throughout the estimated time period because the herbicide cost savings were capitalized into land values. This implies that while the cost savings of lower priced herbicides remained the same, increased land values raised cash rents which offset some of the herbicide cost savings. The average increases in net farm income for the large, medium, and small size farm over the time period was $3,712, $2,084, and $1,232, respectively.

Table 8. State Average Net Farm Income for Representative Farms with U.S. and Canadian Herbicide Prices

	U.S.	Canadian	Diff	U.S.	Canadian	Diff	U.S.	Canadian	Diff
		Large			**Medium**			**Small**	
	US$								
1999	119,811	124,446	4,635	52,965	55,423	2,458	25,705	27,046	1,341
2000	101,296	105,977	4,681	45,420	47,903	2,483	15,282	16,637	1,354
2001	91,521	96,272	4,751	36,401	38,920	2,520	6,809	8,183	1,375
2002	97,347	101,696	4,349	40,533	42,881	2,348	8,962	10,277	1,315
2003	101,455	105,265	3,810	46,919	49,037	2,117	11,978	13,213	1,235
2004	103,601	106,780	3,179	47,205	49,051	1,845	11,811	12,950	1,139
2005	107,114	110,140	3,026	50,065	51,851	1,787	11,792	12,918	1,126
2006	110,184	113,188	3,003	51,460	53,245	1,785	12,562	13,695	1,133
2007	113,229	116,286	3,057	53,244	55,061	1,817	13,127	14,282	1,155
2008	114,830	117,960	3,130	54,483	56,340	1,858	13,485	14,663	1,178
2009	114,403	117,619	3,216	54,293	56,198	1,905	13,979	15,183	1,204
Average	106,799	110,512	3,712	48,453	50,537	2,084	13,227	14,459	1,232

Table 9 shows the estimated land values for North Dakota Representative Farms under the two different scenarios. Land values were the same until 2001 when the land value for the Canadian herbicide price scenario increased to $430 per acre compared to $415 per acre for the U.S. herbicide price scenario. By 2009 the land value for the Canadian herbicide price scenario increased to $510 per acre compared to $488 for the U.S. herbicide price scenario. Cash rents also increased. The average cash rents in North Dakota increased by $2 per acre by 2004.

Table 9. North Dakota Land Prices and Cash Rents for Representative Farms with U.S. and Canadian Herbicide Prices

	U.S.	Canadian	Diff	U.S.	Canadian	Diff
	----------U.S.$/acre----------					
1999	435	435	0	35	35	0
2000	427	427	0	34	34	0
2001	415	430	15	33	33	0
2002	406	425	19	32	33	1
2003	404	425	21	32	33	1
2004	409	431	22	31	33	2
2005	431	453	22	31	33	2
2006	450	472	22	33	34	1
2007	464	486	22	34	36	2
2008	473	496	23	35	37	2
2009	488	510	23	36	38	2
Average	437	454	17	33	34	1

Conclusions

Pesticides have become a major part of agriculture over the past 25 years. North Dakota producers used more pesticides on average than do producers in the rest of the United States. There are price and label differences for agricultural herbicides between the United States and Canada. Trade names are different in some cases, label restrictions vary, weights and measures are different. The reasons for the price differences are unclear. Whether they are due to increased costs in labeling requirements, different levels of competition and use, or market segmentation is not determined.

Liberty, Stinger, and Dual have the largest price differences between the two countries while prices of Pursuit, Treflan, and Harmony are higher in Canada than in the United States. The largest total impact is on HRSW followed by durum and corn. The largest per acre impact is for canola, corn, and HRSW. Herbicides with the largest total impact are Puma, followed by Roundup and Fargo.

Net farm income for large, medium, and small size representative farms would increase 3.8%, 4.6%, and 5.2%, respectively, if Canadian priced herbicides could be used in the United States. Through the time period of the estimation, some of the cost savings would be capitalized into land values in North Dakota. In 2009 with Canadian priced herbicides, land value would increase 4.5% over land values with U.S. priced herbicides.

The statewide impact is $1.46 per acre for the 1999 crop year, but regional or individual impacts could be much greater depending on crops grown or the specific weed problem faced by the individual producer.

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Provinces-States Advisory Group/Tri-National Agricultural Accord

June 17, 2004

The Honorable Robert Zoellick
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The Honorable Thomas Daschle
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The Honorable Nancy Pelosi
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The Honorable Ann Veneman
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The Honorable Bill Frist
Senate Majority Leader
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The Honorable Dennis Hastert
Speaker of the House
235 Cannon House Office Building
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Dear Distinguished Officials:

Senior agricultural officials from five Canadian provinces, 22 U.S. states, and 18 Mexican states met during the Tri-National Agricultural Accord in Puerto Vallarta, Mexico on March 10-13, 2004. This was the fourteenth in a series of rotating annual conferences intended to improve understanding and strengthen collaboration among the agricultural sectors of the three neighboring countries. These continuing discussions among the states and provinces are critical to identifying and resolving trade issues.

While progress continues to be made in achieving regulatory harmonization between the United States and Canada, nagging problems remain in the agricultural sector. Differences in labeling rules have created segmented U.S. and Canadian markets for agricultural chemicals, which provide agriculture chemical companies opportunities to employ what many perceive as discriminatory pricing practices. Several studies suggest that, in some cases, the artificially segmented markets result in situations where major cross-border price differences exist for similar or identical crop protection products.

In addition to concerns regarding labeling, unharmonized Maximum Residue Levels (MRLs) and differences in use patterns for various agricultural chemicals have created barriers to trade. Previous Accord meetings have identified the need for regulatory changes to achieve cross-border harmonization of agricultural chemicals. The prior Accord supported legislation to allow for such harmonization.

In order to facilitate cross-border movement, we urge your support for harmonized product registration and a requirement that agricultural pesticide products that are or will be registered in both countries must be labeled with mutually acceptable labels for use in both countries.

The Tri-National Agricultural Accord has identified harmonization of agricultural chemical regulations as an important priority. As co-chairs of the Provinces-States Advisory Group (PSAG), we urge members of the U.S. Congress and the Government of Canada to take steps to end discriminatory pricing practices by pesticide producers and the use of Sanitary and Phytosanitary measures as barriers to trade.

Sincerely,

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PSAG Co-Chair

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PSAG Co-Chair

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