8TH ANNUAL FIELDS ON WHEELS CONFERENCE

TRACEABILITY IN THE GRAIN SUPPLY CHAIN

Presented by:
The University of Manitoba
Transport Institute
Western Transportation
Advisory Council (WESTAC)

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The University of Manitoba
Transport Institute
FOREWORD

In developing this conference, a few things came to mind. The agriculture environment is in the midst of a large change involving safety and security. This partly stems from 9/11 and the fallout that we have seen from that event. But it also occurs because of some food safety compromises that we have seen. There was an issue with a soft drink in Europe, a corn variety not registered for human consumption in the U.S. and, of course, more recently, the BSE problem in Canada and previously in the U.K. These events are leading to a greater demand for food security and traceability in terms of our supply chains.

In addition to these isolated events, the advent of GMO crops has added a certain amount of confusion, in terms of world markets. The logistical problems of handling GMO grain should not be confused with food safety but in the minds of some consumers they may be the same.

Traceability issues are likely to become more problematic for the logistical systems if only because more GMO grains are on the way. The problem with traceability in the bulk handling system is related to its initial design. If you examine the history of bulk handling, you see that it was designed to create a fungible product and to remove the costs of maintaining owner identity. Bulk handling was designed to mix everything together and to eliminate the accounting cost of linking ownership to individual products. It has been very successful in creating a consistent quality at a low unit cost. In fact, it has been a great success for 150 years. The question is whether the bulk handling system can be adapted to preserve identity when it means reversing the very basis upon which it was established. At some cost, anything is possible but what we do not know yet is what the costs are really going to be.

Over the last 25 years, we have also seen tariff barriers being lowered through GATT and, more recently, through the WTO. But, while this is happening, there is a risk that non-tariff barriers will be erected to protect markets. Food safety regulations can protect markets as effectively or more effectively than tariffs. First, they can stop imports absolutely or make it very expensive for imports to actually meet the conditions under which they could enter a country. It is also impossible to protest a sovereign nation’s food safety concerns. How do we tell our buyers, “No, you are just silly and wrong? This product is safe. You should buy it.” This simply does not fly. It is very hard to change a foreign buyer’s food policy and, of course, retaliation is not very easy. The only defence is to have a system in place where you can demonstrate that, if a problem develops in your domestic or your export supply chains, you can very quickly isolate and eliminate the problem. This is the challenge that we are facing today in food safety and in product identification.
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WELCOME

Dr. Barry Prentice
Director, Transport Institute
I.H. Asper School of Business, University of Manitoba
Morning Chairman

Before I introduce our first moderator, I would like to acknowledge the sponsors of Fields on Wheels. The sponsors are: Thunder Bay Terminals, Ltd., the Manitoba Department of Transportation and Government Services, Aikins, MacAulay & Thorvaldson, the Canadian Wheat Board and OmniTRAX Canada. We also have in-kind sponsors: the Fort Garry Hotel, WESTAC, Port of Montreal, Vancouver Port Authority and the Canadian Wheat Board. Thanks to all our sponsors, for helping us to make this event a success.

We have an excellent group of speakers today. Let me begin by introducing the Chair for the first panel session, Dr. Ed Tyrchniewicz. Dr. Tyrchniewicz is very well-known to this community: a Professor in Agricultural Economics for years, a Department Head, the first Director of the Transport Institute, and the Dean of Agriculture at the University of Alberta. We have attracted him back, on a part-time basis, to the Transport Institute. I am very happy to report that Dr. Tyrchniewicz will be serving as the Acting Director from January to July at the Transport Institute while I am taking a sabbatical. So, with that, I will turn it over to Dr. Tyrchniewicz.

SESSION 1:
TRACEABILITY AND FOOD SECURITY IN INTERNATIONAL SUPPLY CHAINS

Dr. Ed Tyrchniewicz
Professor
I.H. Asper School of Business, University of Manitoba
Moderator

Thank you very much, Barry. We have an additional speaker this morning and you may have noticed on your program that Dan Lutz is going to be part of this panel. When we looked at putting this panel together – although the focus of the conference is on Traceability in the Grain Supply Chain – there were a lot of things going on beyond the grain sector itself that I think are very instructive. Clearly, the BSE issue is a very striking example of what happens and how a disease outbreak can bring an industry virtually to its knees, and the importance of traceability. At noon today, we have been very fortunate to get Betty Green,
the President of the Manitoba Cattle Producer’s Association, to reflect on some of the lessons from BSE for the grain industry.

Dan Lutz
National Team Leader, Traceability Food Safety and Quality
Agriculture and Agri-Food Canada Panellist

It is a great pleasure to be here as part of a panel with Denis Stephens and Eric Aubin. I am here as a Team Leader for Traceability at Agriculture and Agri-Food Canada. The work is directed through the Agri-Food Policy Framework, under which it was agreed by all Provincial, Territorial and Federal Governments to set a goal for food safety and quality of 80 percent traceability by the year 2008 for our domestic food products. I would like to give you a context on that Agri-Food Policy Framework, and talk about the ‘why’ and the ‘what’ of traceability. I am going to give you a sense of where we are across the food chain in Canada on traceability activities. I will share with you some of our Federal/Provincial/Territorial activities in an across-the-country sense and close with a very quick look at across the globe.

I was in Barcelona at the Second European Conference and if I have a central message at the end of today, it will be that we have approached traceability in a very Canadian way. In terms of the international environments around the globe (Japan, United States, and Europe) we have taken a very good path; even though today I have 2.5 billion reasons from the cattle sector why we should be moving forward on traceability.

We have come together as Federal/Provincial/Territorial governments in a context where we have an opportunity to brand Canada through three product attributes: our strong environmental base; our innovation capabilities through our research centres, federally, provincially and at universities; and, finally, through food safety and quality.

This was done in order to address some challenges that were in the marketplace. We have rising consumer expectations. There are various programs and players. There are new and emerging risks, such as the BSE experience that we have just gone through. There are new barriers to trade, whether it is Japanese requirements on meat imports, or what we see in Europe in terms of the GMO issue.

This is the first time that both levels of government have agreed on a single set of goals for an area of activity. We are going to improve our systems to protect human health. We are going to increase consumer confidence, both domestically and abroad in our products. Probably the most important is that we want to improve market access to maximize the opportunities for industry. The APF is about finding ways to put more value back into our sector.
We have some principles within that framework. We are going to develop national systems and then roll those out across the country. We want to do that in a fashion that is industry-led. We want to do that in an integrated fashion across the chain and so that we can link traceability and HACCP initiatives together. We want to do it in a way that will be credible in international and domestic markets. On administrative processes within the Department, we aim to be timely and responsive, transparent and open, and accountable to Canadians.

There are many reasons for traceability. One is food safety: that, if you know what is coming into your system and need to do a recall, you can be much more precise and probably save some money. There are firms in Canada that are very concerned about the issue of credibility and protecting their brand. They would like to know: if there were another BSE animal in Canada and it did get into the food chain, is it in MY food chain?

Wal-Mart is very interested in the logistics aspect of traceability. Logistics is one of the cornerstones of their business model. Companies like Gillette are looking at traceability because some 30 percent of their product disappears from the time that it leaves the plant door to when it goes through a checkout. Logistics and inventory management are reasons for traceability.

There are all kinds of market niches to approach, whether it is organic or GMO-free or natural beef that can be supported by a traceability program. There are places in the world where, if you do not have information on product origin, you are not going to be able to enter that market. The South American countries are scrambling to put in livestock traceability systems so that they can maintain access for their European sales. Finally, as we have seen through this last summer on animal and plant health, there are very, very good reasons for implementing traceability.

So, what is traceability? There is no dictionary definition. There is one in ISO; there is one that was adopted into our APF Framework Agreement; and CODEX is trying to work on a definition and elaboration of traceability. This is what Canada is saying at the CODEX level: “Traceability is a tool and it consists of some three components.” An identifier that can distinguish your product could be a snippet of DNA, an animal tag or it could be that you put your product into a bag or a boat. It does not matter whether you put something on the outside of your product or whether it is intrinsic to the product, such as DNA, or whether you put something around the product. The process of identification is still the first step. The second element is some type of link between the identifier and the product information that you want to carry with it. It does not matter whether that link is your best employee who knows your operation inside out or some more sophisticated electronic data transfer through, perhaps, a radio frequency identification system. Finally, you want to be able to store that information
somewhere: perhaps in a ledger, in a manual or, perhaps, on a computer database.

I have avoided selecting a particular definition, because we can express what traceability is about much more simply. It is simply standing behind your product. It is about saying, “I am going to deliver what I said I would deliver. I am going to be able to prove it. When it goes wrong, because things are always going to go wrong, I am going to be able to fix it faster than anybody else.”

Traceability is about the arrival of the information age in a biological sector. Almost every other manufacturing sector does these types of things. If you buy a pick-up truck with Goodyear tires on it, you expect to be able to go back if there is a problem and talk with whoever created the problem in that system, to fix it. This is the same challenge that we are getting now in the Agri-Food sector.

In approaching the traceability issue in a national context, under the Agri-Food Policy Framework, we started out by trying to build some understanding and a general basis of knowledge on the issue. A small conceptual paper was done to get discussion going. We, as a department, participated in a multi-client study done by Sparks about 2 years ago. We engaged Dr. Robert MacDonald of Calgary to do a strength/weaknesses/opportunities and threats analysis for us and he presented that at Traceability Rendezvous in Montreal. I worked with my provincial colleagues to produce a discussion document for regulators. We are just in the process of putting out a paper that begins to get at some guidance from governments to industry on traceability. There have been surveys done in Quebec of awareness and attitudes and plans towards food safety and traceability. I hope very soon that we will have completed an international trade policy discussion document.

We have tried to build community around traceability. This started in the fall 2001, with an industry workshop that was held in Ottawa, and followed up with:

- A CFI sponsored traceability science forum;
- A traceability dialogue in Toronto with the Canadian Coalition on Food Safety;
- The Canadian Pork Council for Traceability Rendezvous in Montreal;
- Farm Gate to the Dinner Plate in Edmonton section on traceability; and
- The Atlantic Conference on Food Industry “Executive Briefing on Traceability” followed up by a full-day conference on the same topic for a wider audience.

I want, specifically, to invite you to the Global Traceability Produce Conference, which is coming up February 7-8 in Calgary. This is an effort by the Canadian Produce Marketing Association to bring the global community together to look at traceability because so much of their product moves across international borders. They see that as an essential first step before even beginning to adopt traceability systems within their sector.
Numerous sectors in Canada have various activities going on in traceability. At the input level, feed mills already have HACCP systems and traceability systems in place. This may be one of the major drivers for the grain sector beyond the European requirements.

We have a study under way sponsored by the Pork Council, the Canadian Cattlemen, and the Animal Health Coalition to examine a model for premises identification of farms across Canada. There have been probably ten different approaches to geo-reference farm locations in Canada. This will not help us much when there is urgency to trace back for animal health.

The Cattle/Bison/Sheep/Hogs/Horse/Cervid sectors are moving forward with their own particular initiatives on traceability. But they have come together as livestock industries and they may even invite the fish industry to the table to examine how they can create a single structure that will address larger issues, such as a foot-and-mouth outbreak.

The Canadian Produce Marketing Association is trying to develop a North American template for traceability. Because so many products move across the border, it has to be in line with Mexico and the United States.

Flowers Canada does not represent a food product, but they have a full control system through their greenhouses into export. They are trying additional protocols to lead to an advanced approval process at the Canadian-American border. This is an important opportunity because, if they are successful, that will create some models that we can then use within the agri-food sector to, perhaps, do the same thing.

I am sure you are all familiar with the Canadian Identity Preservation Recognition System that the Grain Commission and the Canadian Seeds Institute have been trying to move forward. We have companies such as Agricore and a number in the pulse sector that are looking at HACCP and traceability as a profit opportunity. If you have more information about what is coming into your plant and where it came from, and the inventory controls within your system, you can better target your buyers, and your banker in terms of the cash flows and management of lines of credit.

I was on a conference call with a couple of major fast-food chains and it was very interesting to hear their perspective. One is very interested in brand protection and the other really wants to drill in on food safety. Everybody has a different reason for doing traceability. It has to fit your business model and your strategic approach but it is important for all these sectors in the agriculture industry.

We have some industries still to work with. We are just initiating discussions with the poultry sector. Dairy believes that they have a very rigorous food safety and
control system in place already. We have not done a lot yet to link traceability into HACCP systems, which is an important step. This will be emerging work over 2004. So, we wind up with a picture of the complexity of traceability and perhaps the inevitability of traceability, as well.

I want to update you on the Electronic Commerce Council of Canada (ECCC). This was an initiative sponsored by the Canadian Federation of Independent Grocers, the Canadian Council of Grocery Distributors and the Food and Consumer Products Manufacturers of Canada. They want to create an open and collaborative approach towards a single whole-chain traceability road map to internationally accepted standards. They have established a 25-member steering committee that includes people right from the production level through to retail buyers. They have produced a white paper and have held eight consultation sessions across Canada. The website is http://www.can.trace.org/.

Here are some of the comments from the ECCC consultation sessions about the benefits of traceability and why this initiative should proceed:

- first, it was timely and needed by industry;
- common standards would provide company and industry advantages in an international context;
- it would improve data availability and quality in the system;¹
- industry felt that traceability would help limit the impact of recalls and aid the ability to recall product; and,
- it would provide for increased accountability within the sector.

But there were also concerns and advice:

- The “KISS principle” (keep it simple) to balance the risk, the cost and the scope: how much, who pays, how is it going to be transferred and shared within the system;
- Traceability is a very complex topic; start with fresh products (meat, fruit and vegetables) and then move into processed products;
- Try to keep a level playing field across the food chain with these data systems;
- The issue of small company solutions. It is easier for large companies who already have the elements of these systems in place to move forward. Perhaps for smaller companies, where we have a few people do everything, it is going to be a much different challenge;
- Data security and access to proprietary data was raised as a significant issue; and,
- Finally, to integrate wherever possible.

¹ I was talking with a representative of a major Canadian retailer. Over half of their invoicing information is incorrect. Just by making the step forward to improving that system, they see traceability systems as a major profit-turner. This will help their supply chain management and also their marketing
Where does this come to? The Steering Committee has had a first meeting since the consultation sessions and they have set up a structured approach. A business casework group will develop case studies. A standards group will further develop those EAM.UCC codes for traceability. A communications group will get the messages out as well as listening to the feedback.

Brian Cleaver, who is the representative of the Canadian Federation of Independent Grocers on the committee said, "When I think of traceability, I think of a cascade of Lego blocks, where the connection points at the ends are the standards that we are seeking and the blocks represent various levels of the food industry along the way. Depending on the supply chain you are in, your block might be very transparent, as for example if you are supplying hamburgers to McDonald’s. On the other hand, if you are doing specialized chocolates, your little block may be very dark and you cannot see inside. Inside there will be proprietary systems for quality, for safety, such as HACCP, or whatever. But the key thing being that we can create a system where the data points allow us to move forward and have traceability."

We also work federally and provincially to look at government interests in traceability. We have come up with four: across the top axis, they are food safety and public health; animal health and plant health; labelling and credibility of labels and finally, trade regulations and standards. Against those four interests, we try to describe what we think are the basic and essential criteria of traceability systems. We came up with four categories for that, as well: that systems be effective; compatible; credible; and equitable. So this gives us a four-by-four matrix. What we are trying to do for each of the boxes is say something precise and clear, from the government perspective to the industry, on what we think traceability is about. As one example at the intersection of ‘food safety’ and ‘effective’, we think that the message from government should be that, in the case of a food safety or quality incident, the ability to effectively trace product forward or backward should be timely, precise and allow for efficient recall.

We have produced that as a draft. This is a very complex topic, and we want to have an open dialogue with the industry. We are just in the process of sending a draft version of this paper and these ideas out to groups like the Canadian Pork Council and the grains industry to get their reaction.

The issue across the globe is something we really need to focus on this coming year. We all know that there are a number of international requirements. This is where I want to re-emphasize that message - having been to Europe and spent some time examining how those people are trying to pull together a common approach to traceability across the diversity of their regulations and the number of countries in the EU - we are in a much better position in Canada.
I hope that I have given you a reasonable idea of the context of the Agri-Food Policy Framework and how Federal/Provincial/Territorial governments are approaching this together; a little bit about the ‘why’ and the ‘what’ of traceability; and given you a very quick overview of what we have going on across the food chain, across the country, and across the globe.

**Dr. Ed Tyrchniewicz - Moderator**

Thank you very much, Dan. That was an excellent overview of making sure we at least have some common thoughts and perspectives, on what we mean by traceability and what is happening in the broader agricultural sector.

Now we turn to looking at a couple of sectors more specifically and, particularly, the grain sector as our next presentation.
Denis Stephens  
Consultant to  
Canada Grains Council  
Panellist

We are, indeed, in a very interesting time in the sense that globalization is having a profound impact on international trade. Some of the trends that are emerging are:

- The increased world food trade – not necessarily in the bulk commodities but in terms of processed food. This is increasing at a very, very significant rate.
- Secondly, without question, customers worldwide are demanding greater assurances that the food that they are consuming is safe. This is being reflected through demands for more detailed labelling leading to traceability.
- At the same time, we have seen a significant globalization of food companies. What this means, in effect, is that the market signals globally are being reflected back at a much faster pace. Therefore, as food-processing companies are preparing food for distribution in other parts of the world, they have to be very much in tune with the regulatory requirements of that import country.
- Finally, global agreements are impacting trade. The Bio-Safety Protocol is having a very profound impact. It came into effect on September 11th of this year and, of course, CODEX is very active in developing new and stricter food labelling, and feed labelling requirements.
- Overriding all of this – we are seeing increased anti-terrorism regulations that are all having much the same effect.

What do these trends mean to Canada’s grain industry? First, retailers are demanding new food safety management systems throughout the whole food chain. At the same time, we look at food safety; we look at food security. We see increased demand for more specific quality specifications or quality assurance. What does all that mean? It basically leads to increased demands for traceability.

If we are going to have traceability in the food chain, we must begin on the farm. Historically in Canada’s grain industry, I would suggest that our quality assurance program essentially began at the primary elevator. When the farmer delivered his grain to that primary elevator, the grain was graded and binned according to grade. If we are going to meet the challenges of tomorrow, we must move that quality control system from the primary elevator upstream to the farms themselves and, one might even add, to the seed that is used in the production. So, therefore, traceability is creating an increased demand for IP segregation systems of different types.
Within the industry, most of the organizations are focussing in on the HACCP program developed by CODEX. The basic principles are: conduct a hazard analysis; determine the critical control points; establish the critical limits; monitoring procedures; corrective action; a verification plan; and, most importantly, record-keeping and documentation procedures.

In terms of Canada, there are now some 20 different sectors of agriculture that are involved at different stages of introducing a HACCP program - food safety program - at the farm level. In this, there are different stages: prepare a strategic plan; develop a generic HACCP model and a producer’s manual; submit that to a technical review by the Canadian Food Inspection Agency; develop a verification process, auditor’s training program, farmer’s certification program, and delivery systems. That, in turn, goes through a certification process by CFIA. Finally, the full program is ready for implementation. It is not an easy process. It takes considerable time; numerous years of activity are involved.

In the case of the grains, oilseed, pulses, and special crops, in terms of the On-farm Food Safety Initiative, in 2001, we actually created a strategic plan. In 2002, we developed a generic model. We introduced that model on pilot grain farms in all provinces of Canada except Newfoundland. In 2003, we extended the pilot project to look at not only the whole farm but also to see whether or not the HACCP model could be introduced as part of a production contract by a processor or an exporter. We, I would suggest, have about 95 percent completed the generic model for producers – a producer’s manual. The Council has its semi-annual meeting in December in Ottawa. At that time, the farmers who participated and the industry that participated in that program this year will discuss that Initiative and possibly make some suggestions for changes. But, basically, we are pretty close to being completed. Therefore, in all likelihood, the Initiative will move forward for technical review early in 2004.

In the meantime, we will be looking at developing a verification system – in other words, what are the scope, frequency and cost of audits that would be necessary, recognizing that risk varies with different agricultural sectors. At the same time, we are looking at different delivery models. Should it be a multi-commodity delivery model? Should it be delivered as an individual grain sector model? What should the role of the Canadian Grain Commission be in such activities? Historically they have been the Agency responsible for quality assurance within Canada’s industry. We are also examining the possibility of a whole-farm approach, with the flexibility to enable a single commodity to move through for HACCP certification. In other words, if the malting industry wished to introduce an HACCP program as part of their production contract, could they in effect do that before the whole-farm initiative had been completed and available?

One of the big issues that has evolved in this examination is pesticide application and HACCP. The pilots did identify that pesticide application on small acreage crops could pose a significant problem. As a result, the Council undertook a
study over this past summer. The study showed that Canada had an outstanding record. The quality assurance system in our country really is something we can all be proud of. In a study covering ten years of cargo testing involving 10 commodities, 80 chemicals, and 114,231 tests. 99.97 percent of those tests showed that the pesticide residues were within the minimum limits. Maybe even more importantly, 99.4 percent actually had zero percentage pesticide residues. No matter what we end up doing in terms of food safety, we are unlikely to improve that in any meaningful way.

We found that 97.2 percent was the compliance level on pesticide applications of the major crops. However, when it came to the smaller acreage crop, we found that compliance fell to 81.2 percent. The basic reason is that the chemicals are simply not available; they are not registered for that particular use. Farmers could not obtain HACCP certification if the chemicals were not applied according to the label. This is a very critical issue in terms of the grain industry. I cannot overemphasize it because most farmers produce some of these smaller acreage crops. In fact, the Canadian Agricultural Policy has been to facilitate the diversification of our grain crops to get a broader range of commodities that our farmers are producing. We must, somehow, find a way to resolve this issue at the earliest possible time.

In the meantime, the Farm Management Committee that was established to oversee the development of an on-farm HACCP program said to the Council, “It does not make much sense to develop an on-farm program if we cannot have assurances that the integrity of the food safety system could be carried through the entire chain to the processor or to export point.” As a result, we created a Post-Farm Food Safety Management Committee that is now overseeing the development of HACCP-based food safety modules for each link of the chain. These will be available now for use in December of this year. This includes HACCP programs for the trucking industry, the primary elevators, the railways, the terminal elevators, the lake freight and the transfer elevators.

One of the key issues pertaining to food safety in the grain industry is micro-toxin, micro-flora levels. We have been working with the Canadian Grain Commission on a very comprehensive analysis looking at the extent of this on our farms and how that may vary over time under different handling conditions. This study is expected to be complete by March 31st and that may impact the final design of some of the programs we are creating.

We can take some preliminary food safety conclusions from what we have learned today – and I re-emphasize that Canada’s current grain quality assurance system can provide safe food. However, we have to recognize as an industry that consumers are demanding an improved food safety assurance system that does include some elements of traceability. HACCP is increasingly being recognized internationally as providing an effective food safety system. HACCP does not require, our pilot programs are telling us, significant changes at
the operational level, but more so in terms of record-keeping and facilitating the capability of a third-party audit to ensure that things are, indeed, done as they have been said to have been done. But HACCP does provide the basic record-keeping necessary for traceability. It is the first step, if you will.

We see that food safety and quality assurance are converging. Initially, when we started this exercise, the Food Safety Management Committee wanted to make a very clear distinction between food safety and quality assurance. But as we have moved along, we are now finding that these two issues must, indeed, come together because the consumer wants not only good quality but also the assurance that the food is indeed safe. We know it must come together; we just do not know where it should come together or when.

The On-Farm HACCP-based Food Safety System provides the basic information requirements for quality assurance. Under the food safety template, the farmers must record the variety that they are seeding. They must indicate the field that it is being used in. They must indicate all the pesticide applications, in terms of rates, the time of the year, the conditions, etc. There has to be provisions for recall, essentially the basic ingredients of a traceability system. So we see that food safety, quality assurance, means traceability, which, in turn, leads to IP segregation.

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**Figure 1: Canada Grains Council Study**

The Council did do a study this past summer, a rather cursory one. But it did provide some interesting information on the identity preservation segregation systems within a bulk industry. This is not a new issue. Obviously, we have been doing identity preservation segregation systems with malting barley in significant tonnages for a long, long period of time.

The Mexican industry came to us because their government was taking a look, under the Bio-Safety Protocol, at developing new regulations. Many in their country were asking for the documentation accompanying cargos to identify the specific events within each shipment. We said that was impossible. They asked us, “Well, could we not give to our government some indication of what the cost
implications would be in terms of providing greater information in a bulk shipping system?” We asked the industry, “Essentially, what would it cost if we attempted to provide a non-LMO cargo of a commodity where there is commercial LMO (LMO is simply the acronym for Living Modified Organisms or GMO, which is Genetic Modified Organisms) production in the country?” The companies said, “Well, what are the terms of this? What do we need?” We would like those costs on the basis of two different purity levels: one at 95 percent purity (and we selected that because the International Grain Trade Coalition, of which the Council is a member, has been advocating that this be used within the Bio-Safety Protocol for triggering when documentation should or should not be used in LMO shipments); and the second time we asked that 98 percent be used, because we felt this was likely the highest level of purity that could exist within a bulk system. The reason is that certified seed is 99.5 percent and if you are actually looking at genetic purity using DNA testing, this is now moving closer to 99 percent. So, if you are starting at 99 percent, you certainly are not going to do much better than that as you go through the production cycle and then through the bulk handling and transportation system.

Those were the two levels of purity. We gave a cost template. We asked that the cost be based on the sample testing, associated costs, farmer delivery to the primary elevator, the primary elevator costs, the loading to truck, rail cars, the terminal costs, fobbing, management and risk.

We found a significant variability among companies in terms of the various costs. If you took the costs in terms of the low range at the 95 percent level, it turned out to be about $4.50 CDN. These would be the added costs over and above the existing costs, ranging upwards to a total of $15.35 CDN. At the 98 percent level, it ranged from $14 to about $48. The significant thing is not so much the individual numbers but that there is a significant added cost to IP segregation. These costs increase dramatically when there is no visual distinguishability, thereby requiring DNA testing. The cost also will vary significantly by company. The higher the threshold, the higher the costs. At the 95 percent level, it averaged $10 per tonne. At the 98 percent level, it averaged $30 – a threefold increase going from 95-98 percent.

It also illustrates, without question, that 100 percent purity is never possible. This raises significant liability issues. The most significant differences are in the ‘management risk’, which is the management’s decision as to what is the outstanding liability associated with that particular activity. It impacts the amount of sampling you wish to do, or the amount of management supervision you wish to do. It all hinges on the risk that you associate as management.

In terms of the coming year – we are currently having discussions about additional pilot projects as we ramp this up into large-scale commercial tonnage going through the bulk handling system. We are looking at 30,000 tonnes of wheat in an arrangement involving the Canadian Wheat Board and Agricore
United that will have shipments going to domestic millers and export both in terms of f.o.b Vancouver and also rail export in terms of this continent.

Malting barley – there will be a program with WestCan Malt and Cargill involving domestic crushers.

Canola, working with the Canola Council of Canada; JRI – and their shipments will be going to domestic crushers as well as for export through Vancouver and by rail - and we are also working with the Canadian special crops. The details have not yet been finalized but we will be doing a pilot project that will involve both rail and container shipments. So we get a better understanding of the differences associated with this, both in terms of cost as well as in terms of purity levels.

In terms of the traceability and food security conclusions, we do see that there is increasing demand for traceability. Traceability must extend through the entire food chain. The grain input – we must remember that the grain is the input for most food products, whether those be eggs or meat or milk, etc. The grain industry is going to get pulled by the marketplace, not only in terms of the grain processors themselves, but also in terms of these other commodities and their food markets.

Traceability, we know is possible, but at what cost? The costs are going to vary, depending upon the distinguishability of the commodities. The thresholds that are involved – I cannot overemphasize the threshold element – mean that we are walking down a path at this stage where we do not know what the target is. We do know, for example that there is a zero percent threshold for unapproved events. We also know that not all events, in terms of genetically modified material, are going to be approved in every country at the same time. Therefore, if you have a zero percent threshold, it is only a matter of time until someone will discover trace elements of that event. An unapproved event could bring shipments to a halt. Therefore, it is imperative that governments attempt to resolve some of these issues and evolve thresholds that are meaningful and that are practical in terms of operations.

We also know that this all requires price differentials. I cannot, again, overemphasize: there are costs associated with this. It is very important, therefore, that the marketplace be polled and that our farmers and our industry are responding to a market poll and that it is not driven through a regulatory framework.

**Dr. Ed Tyrchniewicz - Moderator**

Thank you very much, Denis. This was a good overview of some of the activities that are going on and have been going on for some time in the grain industry. We now turn our focus to another sector of agriculture that has been dealing with
traceability and that is the hog sector. To do that, we have a representative from the Canadian Pork Council, Eric Aubin.

**Eric Aubin**  
**Policy Analyst**  
**Canadian Pork Council**  
**Panellist**

Thanks to the Committee for inviting me to this conference. The last speaker just spoke about the costs of implementing traceability systems, a statement that we are reminded of by pork producers on numerous occasions, because it is a very difficult time right now for hog producers.

First, here is a synopsis about the swine industry. Statistics from 2002: the farm cash receipts were $3.3 billion; there were 28 million hogs marketed; 58 percent of the production is exported, half of which is through the United States, one quarter to Japan and the other quarter to about 80 countries. Value of exports is $2.16 billion. There were 5.7 million piglets exported to the United States, mainly from Manitoba and Ontario. This highlights the importance of exports for the Canadian swine industry.

Right now, the Canadian swine industry is enjoying an excellent situation in terms of animal health. There are few diseases that endanger our access to markets. There has been a lot of investment in terms of buyer security from hog farmers in the last years. However, the Canadian swine industry is highly vulnerable because of increased animal movements, increased livestock density and dependence on exports.

What are the stakes? The most important one is a foreign animal disease outbreak. There has been a study made by the Canadian Animal Health Coalition by a private company that looked at three different scenarios. The smallest scenario was an outbreak of foot-and-mouth disease on Vancouver Island for which the impact would have been $13 billion on the Canadian economy. The most critical scenario – I think it was foot-and-mouth disease in a feedlot alley that would have spread all the way to U.S. Midwest. The costs would have been $45 billion.

There are also food safety issues. Recently, we had the example of a BSE crisis. There are some other food safety issues that could pertain directly to the hog sector. Also the image of the industry – recall the 1997 outbreak of classical swine fever, where up to 12 million hogs were slaughtered, and where the Dutch Television showed images of millions and millions of carcasses being destroyed. The support of the Dutch population to the swine industry was never the same after that; the same as you have seen also with the BSE crisis that occurred in the U.K.
For the last year, the CPC has been pushing for the creation of zones. A zone is an administrative process undertaken on a national scale to demonstrate areas of disease containment and exclusion. The purpose is to limit the breadth and duration of trade embargoes, which accompany serious disease incursions. So, basically, a zone is an area where you would have a disease and all of the animals within that zone would not be allowed to be exported.

There is an ongoing discussion on the creation of a control point at West Hawk Lake, which is at the border between Manitoba and Ontario, where only one road passes from eastern Canada to western Canada. By having one control point there, we could control the movements of all animals and materials that could carry diseases, such as grain. We would be in a position to have a zone.

The control would need to be done in peacetime, not just when there is a crisis. A representative of the USDA is needed on that committee so that we could have recognition from our trading partners of that control point prior to a potential crisis.

If you have a control point, you would have two zones in the country – everything east of West Hawk Lake and everything west of West Hawk Lake. So if there would be an outbreak of FMD, for example, in Manitoba, all of the provinces west of West Hawk Lake would not be in a position to export. All of the provinces east could.

The problem is that it is a very good first step, but it is not good enough. We would like to have smaller zones so that more people would be in a position to export if there were an outbreak of a foreign animal disease. The only way to have smaller zones is to have a traceability system. This was recognized by the CPC Board of Directors in July 2002, when our Board of Directors asked our organization to coordinate the development of a national traceability system – not just an identification system, but an identification and traceability system - for the swine sector, where CPC would coordinate a program that would cover the time from the birth to the slaughter of the pigs.

Coordination with other livestock sectors is needed because, of course, there are diseases that would impact many species. Also coordination with abattoirs is needed because some abattoirs have already developed their own traceability systems. For example, Maple Leaf has a DNA traceability system that allows them to trace from meat to the sow, but without taking into consideration the movement of the animals.

So our goals are:

- To minimize the impacts of a foreign animal disease outbreak or a food safety crisis:
  - by reducing the response time;
  - by being compatible with other traceability systems; and
by helping to ‘zone’ Canada in meeting our trading partners’ expectations.
• To reinforce our export and domestic market access:
  ✓ by responding to the growing desire of consumers to know the origin of their food; for example, the United States and now Japan;
  ✓ by eradicating domestic animal diseases; and,
  ✓ by responding to the development of traceability systems by exporting countries, such as the Dutch, and the Danes.
• To improve the competitiveness also of our industry:
  ✓ by having a traceability system, you would be in a position to identify which genes lead to traits which are not desirable so they could eliminate these boars and sows from the reproductive system.

The means to achieve our goals:
• First, we need to know the requirements from CFIA and from OIE, and from the World Health Organization. We need to know from them what should be the data collection and transfer requirements;
• Second, we would like to develop a National Swine Slaughter Database. It is estimated that from 60-80 percent of hogs remain within the same ownership throughout their lifetime. If you are able to identify the last farm of ownership, you indirectly know what is the farm of origin. We could improve our potential for trace-back before the implementation of a National Traceability System. This would be an early action to improve our foreign disease preparedness.

Right now, we have marketing boards in all provinces except in the three Prairie Provinces. These marketing boards already have information on swine slaughter. The three Prairie Provinces are now discussing where there are packers in order to know how they could be in the position to collect information on a provincial basis on swine slaughter data.

We are going to need to develop confidentiality agreements and also an agreement from farmers to release the data. As I said, it would be just an early action before the implementation of our traceability system.

Geo-referencing all livestock premises is needed. Before knowing where the animals are, we need to know where the farms are. Last year, CPC conducted a survey of all provincial governments and the FRA to know their level of GIS – geographic information system. Because there is no national template, there is a patchwork of GIS developed across the country, which is incompatible. If there were an outbreak of an animal disease that could spread to other provinces, it would be very difficult to have information from these non-compatible databases in order to respond adequately to that crisis.

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2 For example, PRRS (Porcine Reproductive and Respiratory Syndrome) is a disease that stops us from fully accessing the Australian market.
The hurdles include hobby farms, which are not captured as farms under the definition of Stats Can, which could also be a factor of foreign animal disease. So we are looking at exploring a mandatory farm registry.

Also, data confidentiality and update is necessary. Rarely is information on livestock premises being updated. Most of the time, it is just a one shot deal without any mechanism to update this information and, without updated information, it is totally useless. Who will be responsible for developing and updating a national database? So CPC, a credible identification agency, and Canadian Animal Health Coalition engaged a private company called Angus Geo Solutions to develop a national template for geo-referencing the livestock premises. This report will be available on December 4th from the Canadian Animal Health Consultative Committee.

We are now looking at developing our traceability system. Very few swine traceability systems have been developed. They have been developed mostly for cattle, in order to control BSE. We did organize on March 17th and 18th with Agriculture Canada Traceability Rendezvous to know what were the traceability systems specific for swine. We came to the conclusion that we wanted to develop our own traceability system, not just take one developed for the cattle industry and implement it for hogs. Why? Well, because the cost of identification compared with the cost of the animal differs considerably. If you tell a cattleman to pay a dollar for an electronic tag for each cow, it is not the same as if you tell a pig producer to pay a dollar for each pig. Also, the behaviour differs, the movements differ. So, we want to develop our own system. It is difficult to impose another system to our conditions.

We are going to conduct some pilot studies funded by Agriculture Canada with some cash and in-kind contributions from the industry. We are going to have input from packers. We have a steering committee that has been struck in which packers and swine breeders are being represented. We are also looking at other benefits that we could get from traceability in terms of improving our health management, address recalls, and address country of origin labelling. For the pilot study, we are going to do a preparatory phase, which has been almost completed, that involves identification of the farms and the plants. We are going to have an on-farm and abattoir evaluation phase for the cost and for the efficiency of identification and traceability means. We are going to have an analysis and reports.

What are we going to test? We are going to have four scenarios that are going to look at non-automated permanent identification means: shoulder tattoo, visual ear tags, and so on. We are going to have three scenarios that are going to look at electronic identification; half duplex, full duplex and anti-collision tags. We are also going to assess whether identification traceability by lot with a group of pigs could be possible. Then we are going to look at the lot integrity. If a producer is able to prove that there is no co-mingling, that the groups of animals always stay
together throughout their lifetime, then they are going to be able to identify their pigs by lot.

We are going to need to monitor the movements into and out of every premise. So, we are going to need the involvement of the trucking companies because we are going to need to monitor the movement between premises. They will participate in the pilot study.

The importance of the trucking company is illustrated by classical swine fever – what occurred in the Netherlands was caused by a shipment of hogs from Yugoslavia to the Netherlands at Christmas time. It was very cold – so cold that the trucker decided not to clean the truck when he arrived in the Netherlands, which led to the outbreak of classical swine fever, which led to the destruction of 12 million pigs.

We have identified 20 production units in Manitoba. We are going to have 20 production units in Quebec – they are going to ship their hogs to a plant in Princeville. Also 12 production units in PEI are going to ship their hogs to Garden Meat in Charlottetown. We are also going to have technicians who will be trained by manufacturers on how to identify and chart their animals and then they, in turn, are going to train the farmers. They are going to do 3 visits per farm and they are going to be supervised by 3 centres, one of which is the Manitoba Pork Council.

The results will be available in November 2004, presented to a Board of Directors. CFI would draw a regulation based on these results and then direction given by the CPC. If it is not fast-tracked, the regulation would be implemented in about 18 months after the draw.

Also, we are looking at co-ordination with other initiatives – for example as I said, traceability with packers. We also are discussing with other commodity groups for the creation of the Canadian Livestock Identification Agency, which is basically the Canadian Cattle Identification Agency, which is already holding information on cattle, elk, dairy and bison. They invited the goat, hog and horse industry to join in. There is also the sheep industry, which is also in CCIA.

We are also trying to follow the initiatives of ECCC, CCGD, and FCPMC. There are so many initiatives ongoing on traceability, it is difficult to keep track of all of them. We are also looking at the identification work plan in the United States. It is very similar to what we are planning, which is: first to identify the premises, second to identify the animals, and third to be in a position to track the movements of these animals.
Dr. Ed Tyrchniewicz - Moderator

Thank you very much, Eric for a good overview. I would like to raise the question: what is the status of the traceability issue in the U.S.? You alluded to it but perhaps each of the panellists might comment on that from their sector and then generally from where USDA is coming on this.

Eric Aubin - Panellist

The NPPC (National Pork Producers Council) in the United States indicated that they would like to identify – they never used the word “track” – the pigs based on lot. They already made their assessment that they are not going to try to identify or to allocate an identification number for every pig, which is very inexpensive but it remains to be seen whether it is really effective. If you are not in a position to prove that there is no co-mingling, that you do not take some animals from a different herd, then lot integrity is not secured. In the United States, they already have some tracking of animal movements between every state that dates back to 1992, in order to control bursilosis. So they already have some kind of identification and tracking system.

Their timeline is the identification of the premises in a year from now. I do not have a lot of information on how they are going to do that because there is a law of access of information in the States. The USDA is cautious because, basically, all the information collected by the USDA would be public. There is even a website that anyone could access, in which you click on a map where you have all the hog farms in Iowa and get information on every Iowa hog farm, the names of the owners, phone numbers, and so on. So there is a lot of fear by hog producers in the United States with respect to a traceability system.

It is also going to be a big challenge to have one harmonized initiative. Some U.S. states have already developed a traceability system and it is only since September 11th that the United States is able to force all the states to work together, in order to have one national approach.

Denis Stephens – Panellist

I am not aware, in the United States, of any national effort with regards to traceability, and food safety systems in the grain sector. Having said that, individual corporations are responding to market demands through the development of their own traceability systems. At the Canada Grains Council meeting a year ago, we had a representative from Con-Agra who actually discussed and presented their program which involved a computer-driven system where the farmer had a Palm Pilot and basically introduced into that Palm Pilot all of the data as he was producing that grain over the production season. This information went into a central computer and the buyers could actually access the status of that particular crop as it was evolving through that information in the
software program. These sorts of activities are happening in the industry but, as I said before, they have happened in response to a particular market demand and I suspect – he did not say, but – there was a significant premium associated with that particular demand.

Dan Lutz – Panellist

There are four drivers: the two were just covered – the animal health and also the amount of activity within the U.S. business sector. The last two would be their bio-terror regulations, which are really traceability by another name; and we will have to wait and see where country-of-origin labelling goes.

Dr. Ed Tyrchniewicz - Moderator

Okay, thank you, gentlemen. Another question for the whole panel – how long do we have to get effective technology or traceability systems in place before we start to see our market access being impacted? Make like economists and make projections.

Dan Lutz - Panellist

Because I am an economist by training, I will take the first shot at that. I think that is a very complex question. The answers are different by sector. Certainly, in hogs for example, we have a couple of firms that have already moved forward to put systems into place whereas, in other sectors, they are still talking about it. The key issue is: have folks had the time to examine the strategic reasons why they want to take on traceability and how it might be a tool to accomplish one of the objectives that was on the slides that were shown.

Denis Stephens – Panellist

Yes, from a grain industry perspective, I think that is a very difficult question. It depends on how you define traceability and to what extent you want traceability. There already is traceability in the system at certain levels. As an example: the Canadian Grain Commission would be taking cargo samples of every export shipment and those samples are retained. When that grain is unloaded in the importing country, if there is a problem, they will go back to that particular sample and they will be able to determine through that what the problem was. The challenge is taking that forward or upstream all the way to the farm level. I think, personally, that this is likely to be driven through individual production contracts. I mean by this, using my comment earlier - I see malting companies requesting that that traceability element be tied into the production contract that they would have with the farmer to produce the particular malting barley. But, in terms of timing, that is a difficult one. My guess is that it is going to be evolutionary; that it will be starting smaller with particular commodities, probably driven by the
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malting industry, possibly the feed industry which was mentioned earlier; and it will be done very much on a step-by-step basis.

**Dr. Ed Tyrchniewicz - Moderator**

Okay, another question for all the speakers and this relates to COOL (Country of Origin Labelling). Some industry participants claim that COOL legislation in the USA represents a major threat to Canadian agricultural economic viability. Do you agree? I would add: how does this relate to the traceability question, from your sector’s perspective?

**Eric Aubin – Panellist**

COOL is not one of my files, so it is difficult for me to answer but I have to say that the CPC is following very closely the implementation of COOL. As there are a lot of weanling piglets being shipped to the United States, there is a lot of fear, especially from pig-exporting provinces such as Manitoba and Ontario about the implementation of COOL. We are happy to see that the National Pork Producer Council is against the implementation of COOL. How will traceability help? We are going to be in a position to identify the farms of origin and even more than that. But it is going to be interesting to see whether there are not going to be other things coming out of COOL, especially now with the Bio-terrorism Act, which some people think may even lead to greater problems than the Country of Origin Labelling. It remains to be seen exactly what would be the impact of the implementation of COOL and the Bio-terrorism Act.

**Denis Stephens – Panellist**

Just as a general statement – we were talking about this earlier – our American friends, as advocates of free trade, can certainly evolve more means by which they can bring trade to a halt than, I think, any other country of the world. The Country of Origin Labelling can, indeed, present challenges; but, in the same way, all of these things are happening at the same time. I think, personally, that, whether it be consumer pressure for increased labelling requirements, whether it be government pressures in terms of bio-terrorism or threats of that nature, all of these factors are kind of hitting us at the same time. I am not sure it really matters too much which pressure is pushing us at any particular moment, because they are all kind of coming the same way. Ultimately, it is going to demand a greater degree of sophistication within our industry. Our greatest challenge in the grain industry is to be able to meet these new demands while at the same time maintaining efficiencies of the bulk handling system. This is the great challenge. It is true that container traffic is going to increase and increase significantly. But you have 300 million tonnes plus of grain that is traded worldwide. It would be a tremendous tragedy to the world if we were forcing increased costs all the way through the system and making food, that is very healthy food, unavailable to the people of the world. Somehow we have to bring realism to
temper some of this enthusiasm and bring some pragmatic resolution to the challenges that we are all facing.

Dan Lutz – Panellist

I agree with Denis that these challenges will lead to opportunities. I also agree with Eric that I really appreciate easier questions. These things are very complex issues and we have such a diverse sector that it is a little bit different for everybody. But I have to say that, from my experience on this file in two years, if somebody can turn this into an opportunity, it will be Canadians. We do not realize how nimble we are because we have mechanisms to talk to each other - at government levels, government to industry and industry across the country.

Dr. Ed Tyrchniewicz - Moderator

Well, carrying on with these easy questions. How can we ensure that farmers are rewarded for meeting the higher customer expectations rather than being penalized for not doing so?

Eric Aubin – Panellist

Let us say that the margin that the producer has is diminishing with time. In a situation where there is a concentration of the killing capacity in the country, the livestock producers have less and less say in how to manage business. So, will the producer gain any financial benefits, from the implementation of a traceability system? My best guess would be ‘No’. But, on the other hand, if we do not do it, we still open ourselves to being very vulnerable to an outbreak of an animal disease or to a food safety crisis. We are going to be over-competed by other countries that are exporting meat that will be in a position to address our trading partners’ expectations or exporting countries because they would have better support from their packing industry, since they could be in a highly integrated, vertically integrated, organization, like in Denmark, or having more financial support from their government. It is more a question of keeping our market access and improving foreign animal disease preparedness than having more money in their pockets. I do not think consumers, Canadian consumers or domestic consumers or foreign consumers, would be in a position to pay more for meat that they were able to trace back.

Denis Stephens - Panellist

Yes, that is a very good question and, unfortunately, the answer to it is not a very pleasant one. I do not think that the increase in demand for food safety or demand for traceability is going to bring increased returns to the producers. It is a matter of market access. In certain markets, the ability of the farmer to continue
to participate in that market may well be determined by the farmer’s adoption of some of these new things we are talking about. I know, in terms of agricultural policy issues – and I have been involved in a lot of these issues for many years – my most difficult sessions are across the kitchen table from my daughter, who is a large farmer in Saskatchewan who says, “Yes, Dad – but what does this mean to my bottom line?” Unfortunately, I do not see a great benefit to that bottom line.

I can see increased costs associated with segregation - that increased cost could mean additional bins at the farm level to keep individual fields separate in terms of their production; increased operational costs associated with cleaning equipment – before you change from one variety to another in terms of air-hosing out combines or seeders, or what have you. I can see all sorts of additional management requirement at the farm level. These are things that are going to come as we move down this path but I do not see any significant increase in terms of benefits. There may be on the short-term. There may be in terms of some individual contracts, as this starts, in order to pull some of this new requirement forward to the marketplace. There may be some premiums in some of these production contracts. But that will, over time, disappear and it will be a market-access situation.

**Dan Lutz – Panellist**

You have had two very good responses here. The food industry has been around a long time. We know it is a very competitive business and if you find a quick bonus or margin, you very quickly have competitors. Traceability is not going to give us some short-run benefits that can help us hold market share. But it is going to be a cost in the longer run and I will give you two examples of why I think that, unless you have affordable systems that work for you, traceability just simply will not be around. One is in the cattle sector where they went through a very arduous and difficult process of getting to a farm of origin system and they have now made the commitment to go for electronic identification and track animal movements by January 1, 2005. That is their decision. They know they have to have a workable system but they know they have to make that happen. Another example would be perhaps in the pork sector where we are seeing major companies come forward. They are using DNA tracking because, when they put that product into an export market, they want to be able, if there is a problem, to say that it is or is not my product. There are reasons you have got to do it and you have got to be able to do it in an affordable way.

**Dr. Ed Tyrchniewicz - Moderator**

Now we put Denis on the hot seat for a little while. He is good at it. Denis, what requirements do you foresee for declaring or documenting previous land use for grain producers, e.g., previous crop rotations, previous pesticides, chemicals, and how far back in history will this be required?
Denis Stephens - Panellist

I could not answer that with any degree of intelligence. If we are talking food safety, I do not think there are very many factors that would significantly impact food safety in terms of prior use application. I do not think it would make it through. I know that our technical committee, the On-Farm Food Safety Committee, examined these issues, and that, essentially, was the conclusion that came from that exercise. So I do not think that is a particular problem.

Having said that, where you could run into problems - as I mentioned earlier in terms of threshold levels – is, if you are producing a product where you need to have 100 percent purity, I am saying that is impossible. Therefore, we could have volunteer material that could come up from previous years or pollen drift or all sorts of things that could create some type of challenges. This is why it just is so imperative that, from a government point of view, we try to evolve a process or some detailed discussions to attempt to resolve the threshold issue - particularly on the GMO side is what I am referring to.

If we are going to be able to take advantages of, say, modern technology to develop, through agriculture, specific inducements say for plastics or for industrial products, then we have to have the capability to keep that material separate. At the same time, we have to recognize there is a likelihood that some trace amounts of that may show up. Therefore, we must have the capability to be able to manage that within a commercial system. We do not at the present time.

Dr. Ed Tyrchniewicz - Moderator

One more question for Denis. The administrative processes associated with HACCP will be very complex. Can you tell us what is being done in terms of research to leverage the information technology that is necessary to make this happen?

Denis Stephens – Panellist

I would say, at the present time, we do not really know yet exactly what that is going to entail. There are two different types of approaches that might be taken. One approach is at the whole farm level and the second approach is in terms of HACCP being introduced as part of a production contract to an individual company.

In the latter case, this would then become part of the production contract of the company and the interface of the HACCP program would, in effect, be the interface of the farmer to that company. Therefore – taking audits for example – if it is a company that is exporting, that company may, in effect, indicate that this has been a HACCP produced and delivered product but the audit function would apply to the whole chain. It would have to, in effect, start from the farm, go
through the trucking, through the primary elevator, through the rail, through the terminal, through the ocean vessel to that final destination. Under the ISO-HACCP Food Safety Management System, that whole chain, then, would be audited and the individual farmer's part in that chain would simply be a case of having his record-keeping available such that, should an audit be required, it would then be done and he would have to be able to support that initiative.

On the other hand, if it became a whole-farm approach, then in this case, it is at the farmer's own initiative to go through the certification process and that farmer, himself, would then undertake to arrange to have his farm audited as required.

In terms of the delivery method, this has not yet been resolved in terms of the process that is going to be employed. As I mentioned, there are a number of different possibilities. Some possibilities include a multi-commodity approach, where there would be a delivery agency created. The Canadian Federation of Agriculture's working group is doing some work on that concept. At the same time, the grain industry is a little nervous because they feel that it could become too burdensome a system. The grain industry does not have the same degree of risks and, therefore, does not maybe need the degree of bureaucracy required to oversee such a program as maybe some of the other commodities, which have greater challenges.

So, what is being done within the Council? Our On-Farm Food Management Committee is looking at these different options and they, in turn, will be bringing forward recommendations. But we are not at that stage so I cannot say much more than that.

**Dr. Ed Tyrchniewicz - Moderator**

I think we will bring this session to a close. Those were good tough questions and good straightforward answers. Please join me in thanking the speakers for their presentations.

**Dr. Barry Prentice - Chairman**

Thank you very much Ed. Before everybody leaves, I do have some small gifts for you. So, on behalf of ‘Fields on Wheels’, I would like to present each of you with a small gift and thank you. Thank you very much. Thank you, Ed.

I have had a question as to whether we can get a copy of Bryan Schwartz's speech. I believe he has a prepared speech and we will include that in the proceedings of the conference in which, as you are well aware, we always try and guarantee that we will have these proceedings finished and out to you while there is still snow on the ground. We do not say which year but we try to do it in the current year.
We do have a draw thanks to the Port of Montreal and there is a basket, I believe, at the registration desk to put business cards in. But, given that the snow was such that many people were late arriving and I am sure rushed into the room and perhaps did not have a chance to put their card into the basket, I would like to invite everybody to make sure you do have your card in the basket and that will be an incentive for you to come back quickly and begin at 10:50 sharp. We will have the draw and then move on to the next session. So, at this point I will call it closed. Please enjoy the coffee. Thank you.

Although Dr. Bryan Schwartz was scheduled to speak earlier this morning, he was unable to attend. We have incorporated his paper in these proceedings.
Dr. Bryan Schwartz  
Professor  
Faculty of Law  

THE ROLE OF CONSUMER PREFERENCE IN THE REGULATION OF GENETICALLY MODIFIED ORGANISMS  

“People fear that which they do not understand.”

With progress comes increased fear of the unknown. Technological advance in recent years has led to such controversial topics as the ethics of cloning, the morality of harvesting stem cells for scientific research, and the safety of genetically modified food and organisms. The consumer frenzy over genetically modified organisms (GMOs) has been strongest within the European Union, where even public figures such as Prince Charles have actively participated in the dialogue. As the debate over GMOs continues to rage, governments across the world are left to consider the appropriate extent to which consumer preference and scientific risk assessment should factor into their decision-making process. Though it must be acknowledged that governments will to some extent be politically motivated by consumer preference, the authors conclude that the regulation of GMOs must be based on scientific principles and evidence in order to avoid the imposition of discriminatory trade barriers which violate the principles of international trade law.

INTERNATIONAL FRAMEWORK

The international framework governing issues surrounding GMOs is centred around the General Agreement on Tariffs and Trade and two complementary agreements thereto – The Sanitary and Phytosanitary Measures Agreement, and The Technical Barriers to Trade Agreement. More recently, this framework has been supplemented by the coming into force on September 11, 2003, of the Cartagena Protocol on Biosafety (otherwise known as the Montreal Protocol). A brief overview of the key points of these international agreements follows:

(1) General Agreement on Tariffs and Trade (GATT)

As the pre-eminent multilateral agreement governing international trade, the GATT provides an overall framework for the reduction of tariffs and other trade barriers and the elimination of discriminatory treatment in international commerce, through specific measures that include general most-favoured nation

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3 See, for instance, the article by Prince Charles entitled “Questions About Genetically Modified Organisms”, which was published in The Daily Mail on June 1, 1999 and is currently found on his website at [http://www.princeofwales.gov.uk/speeches/agriculture_01061999.html](http://www.princeofwales.gov.uk/speeches/agriculture_01061999.html)
4 GATT, Preamble.
treatment, national treatment with respect to international taxation and regulation, and non-discriminatory administration of quantitative restrictions.

While the primary purpose of the GATT is to promote international trade through the reduction of both tariff and non-tariff trade barriers, Article XX thereof sets out certain general exceptions which allow for the imposition of trade barriers in certain circumstances. Specifically, Article XX(b) provides as follows:

Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures…necessary to protection human, animal or plant life or health.

The scope of this provision as it impacts on the regulation of GMOs is further clarified in The Sanitary and Phytosanitary Measures Agreement.

(2) The Sanitary and Phytosanitary Measures Agreement (SPS Agreement)

The SPS Agreement provides an overall framework of rules with respect to the imposition of sanitary and phytosanitary measures, with the goal of minimizing the negative impact on trade that may result from the imposition of such measures. The provisions of the SPS Agreement apply to all sanitary and phytosanitary measures that may, directly or indirectly, affect international trade. Sanitary and phytosanitary measures are defined in Annex A of the SPS Agreement as follows:

Any measure applied:

(a) to protect animal or plant life or health within the territory of the Member from risks arising from the entry, establishment, or spread of pests, diseases, disease-carrying organisms or disease-causing organisms;

(b) to protect human or animal life or health within the territory of the Member from risks arising from additives, contaminants, toxins or disease-causing organisms in foods, beverages or feedstuffs;

(c) to protect human life or health within the territory of the Member from risks arising from diseases carried by animals, plants or products thereof, or from the entry, establishment or spread of pests; or

(d) to prevent or limit other damage within the territory of the Member from the entry, establishment or spread of pests.

5 GATT, Article I.
6 GATT, Article III.
7 GATT, Article XI.
Article 2 of the SPS Agreement sets out the basic rights and obligations of member states and provides that all members have the right to impose sanitary or phytosanitary measures (hereinafter referred to simply as measures) necessary for the protection of human, animal or plant life or health so long as such measures: (i) are applied only to the extent necessary to protect human, animal or plant life or health; (ii) are based on scientific principles; and (iii) are not maintained without sufficient scientific evidence. The requirement for scientific evidence is reiterated in the risk assessment provisions found in Article 5 of the SPS Agreement, which shall be discussed in greater detail towards the end of this section.

With respect to the general application of international trade principles, Article 2 states that any measures applied by a member state must not arbitrarily or unjustifiably discriminate, or be applied in a manner that constitutes a disguised restriction on international trade and concludes that all measures which conform to the SPS Agreement shall also be presumed to be in accordance with the GATT (specifically, Article XX(b) thereof).

Further, in order to ensure a certain degree of harmonization amongst all member states, Article 3 of the SPS Agreement provides that measures applied by members must be based on international standards, guidelines or recommendations, where such exist, and concludes that all such measures which conform to international standards, guidelines or recommendations shall be deemed to be necessary to protect human, animal or plant life or health, and shall be presumed to be in accordance with the SPS Agreement and the GATT (specifically, Article XX(b) thereof). However, Article 3 goes on to provide that member states may impose measures that go beyond international standards if scientific justification exists, or if a member state determines that such measures are appropriate in accordance with the risk assessment requirements of Article 5.

The risk assessment requirements outlined in Article 5 of the SPS Agreement are formulated on the premise that all measures applied by member states shall be based on an assessment of risk to human, animal or plant life or health which takes into account:

(i) risk assessment techniques developed by relevant international organizations;
(ii) available scientific evidence;

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8 SPS Agreement, Article 2, paragraph 2.
9 SPS Agreement, Article 2, paragraph 3.
10 SPS Agreement, Article 2, paragraph 4.
11 SPS Agreement, Article 3, paragraph 1.
12 SPS Agreement, Article 3, paragraph 2.
13 SPS Agreement, Article 3, paragraph 3.
(iii) relevant processes and production methods;
(iv) relevant inspection, sampling and testing methods;
(v) prevalence of specific diseases or pests;
(vi) existence of pest- or disease-free areas;
(vii) relevant ecological and environmental conditions;
(viii) quarantine or other treatment;
(ix) relevant economic factors;
(x) potential damage in terms of loss of production or sales in the event of an entry, establishment or spread of a pest or disease;
(xi) costs of control or eradication in the territory of the importing member state; and
(xii) relative cost-effectiveness of alternative approaches to limiting risks.\(^{14}\)

When conducting a risk assessment pursuant to Article 5, member states are required to take into account the objective of minimizing negative trade effects\(^{15}\) and must ensure that measures such member state imposes are not more trade-restrictive than required to achieve the appropriate level of sanitary or phytosanitary protection, taking into account technical and economic feasibility.\(^{16}\)

The leading WTO decision considering risk assessment in the context of the SPS Agreement is the decision of the WTO appellate body in “EC Measures Concerning Meat and Meat Products (Beef Hormones)”.\(^{17}\) The WTO appellate body concluded that any risk assessment undertaken pursuant to Article 5: (i) must be scientific (as opposed to policy-driven); (ii) need not necessarily embody the majority view of the relevant scientific community; and (iii) must address the specific product and risk in question.

Notably, one short-term exception to the necessity for scientific evidence is found in Article 5, paragraph 7 of the SPS Agreement (the precautionary principle), which allows for the temporary imposition of measures without sufficient scientific evidence, on the basis of available pertinent information. Factors to be considered when seeking to apply this exception include information from relevant international organizations and measures applied by other member states. If this exception is relied upon, additional information must be sought in order to conduct a more objective assessment of risk and the member state relying upon the exception must review the measures against such risk assessment within a reasonable period of time.

(3) **The Technical Barriers to Trade Agreement (TBT Agreement)**

\(^{14}\) SPS Agreement, Article 5, paragraphs 1-3.
\(^{15}\) SPS Agreement, Article 5, paragraph 4.
\(^{16}\) SPS Agreement, Article 5, paragraph 7.
The goal of the TBT Agreement is to ensure that regulations, standards, testing and certification procedures do not create unnecessary obstacles to trade. The TBT Agreement specifically provides that it does not apply to sanitary or phytosanitary measures.

Other than their respective applications, the primary difference between the TBT Agreement and the SPS Agreement is that the TBT Agreement provides for the adoption of technical barriers based on “legitimate objectives”, whereas the SPS Agreement does not. Legitimate objectives are defined as: (i) national security requirements; (ii) prevention of deceptive practices; and (iii) protection of human health or safety, animal or plant life or health, or the environment. In assessing risks under the TBT Agreement, relevant factors to be considered are: (i) available scientific and technical information; (ii) related processing technology; and (iii) intended end-uses of products.  

(4) **Cartagena Protocol on Biosafety (the Protocol)**

Generally, the Protocol is designed to ensure that “the development, handling, transport, use, transfer and release of any living modified organisms are undertaken in a manner that prevents or reduces the risks to biological diversity, taking also into account risks to human health.” It is applicable only to living modified organisms (LMOs), and not to products derived there from.

Article 18 of the Protocol provides certain labelling and traceability requirements, and the documentation required for (i) LMOs intended for direct use as food or feed, or for processing; (ii) LMOs intended for contained use; (iii) LMOs intended for intentional introduction into the environment of the importing party, and any other LMOs falling within the scope of the Protocol.

An Advanced Informed Agreement Procedure (set out in Articles 7, 8, 9, 10 and 12 of the Protocol) applies to the first intentional transboundary movement of an LMO for intentional introduction into the environment of the importing party. A separate notification and decision procedure (set out in Article 11 of the Protocol) applies to domestic use, including placing on the market, of an LMO that may be subject to transboundary movement for direct use as food or feed, or for processing. Although the notification and decision-making procedures to be followed for each use are different, both require that a risk assessment be undertaken.

Articles 15 and 16 and Annex III of the Protocol provide the principles to be followed for risk assessment and risk management. At a minimum, risk assessment is to be based on (i) the information required to be provided by the exporting party; and (ii) other scientific evidence available; and such risk assessment is to be conducted in order to identify and evaluate the potential

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18 TBT Agreement, paragraph 2.2.
19 Cartagena Protocol, Article 1.
negative effects of living modified organisms on the conservation and sustainable use of biological diversity, taking also into account risks to human health.\textsuperscript{20}

Similar to the precautionary principle found in the SPS Agreement, Paragraphs 10.6 and 11.8 of the Protocol provide that an importing party may in certain circumstances make a decision with regard to an LMO even without scientific certainty:

Lack of scientific certainty due to insufficient relevant scientific information and knowledge regarding the extent of the potential adverse effects of an LMO on the conservation and sustainable use of biological diversity in the party of import, taking also into account risks of human health, shall not prevent that party from taking a decision, as appropriate, with regard to the import of (i) the LMO in question, or (ii) that LMO intended for direct use as food or feed or for processing, in order to avoid or minimize such potential adverse effects.

However, unlike the precautionary principle found in the SPS Agreement, this exception to the general rule requiring scientific evidence is not a temporary measure. Perhaps recognizing the inevitable influence of consumer preference over the political sphere, the Protocol goes another step further than the SPS Agreement and specifically allows the parties thereto to take socio-economic factors into account in the course of their decision-making process:

The Parties, in reaching a decision on import under this Protocol or under its domestic measures implementing the Protocol, may take into account, consistent with their international obligations, socio-economic considerations arising from the impact of LMOs on the conservation and sustainable use of biological diversity, especially with regard to the value of biological diversity to indigenous and local communities.\textsuperscript{21}

and even goes so far as to provide for public awareness and participation in a nation’s decision-making process with regard to LMOs. Parties to the Protocol are required to “promote and facilitate public awareness, education and participation concerning the safe transfer handling and use of LMOs in relation to the conservation and sustainable use of biological diversity, taking also into account risks to human health” and are also required to consult the public with regard to their decision-making process on LMOs.\textsuperscript{22}

While it could be argued that the Protocol signifies too great a shift in favour of consumer preference at the expense of scientific evidence, it is questionable as to the influence that the Protocol will exert. Notably, the United States is not a party to the Protocol. In addition, while the Protocol and the WTO regime are intended to be mutually supportive, it remains to be seen whether the two will clash in practice. The preamble to the Protocol states that “this Protocol shall not be interpreted as applying a change in the right and obligations of a Party under

\begin{footnotesize}
\textsuperscript{20} Cartagena Protocol, Article 15, paragraph 1.
\textsuperscript{21} Cartagena Protocol, Article 26.
\textsuperscript{22} Cartagena Protocol, Article 23.
\end{footnotesize}
any existing international agreements” but then goes on to provide that the foregoing “is not intended to subordinate this Protocol to other international agreements”. Therefore, it is uncertain as to whether the Protocol or the WTO regime would apply in a situation of conflict.

(5) **Trade-Related Aspects of Intellectual Property Rights (TRIPS)**

Found in Annex 1C to the GATT, it is questionable as to whether the provisions of TRIPS apply to GMOs. However, as will be discussed in more detail in the following section, Canadian courts have recently had the opportunity to consider intellectual property rights in the context of GMOs, in the case of *Monsanto Canada Inc. v. Schmeiser*\(^23\), which focused on the conflict between intellectual property rights (patentability) and the tort of nuisance.

**CANADA**

(1) **Regulatory Framework**

The Canadian regulatory framework as applicable to GMOs is centred around:

(i) “novel food”, including genetically modified foods;\(^24\)
(ii) “plants with novel traits”, including genetically modified plants;\(^25\) and
(iii) “livestock feed derived from plants with novel traits”\(^26\)

The regulatory process for approval of a GM food is a seven to ten year course of action that is largely based around a scientific safety evaluation and involves the following steps:

(i) pre-submission consultation with Health Canada;
(ii) pre-market notification;
(iii) scientific safety evaluation;
(iv) requests for additional information, if required;
(v) summary report of findings from scientific safety evaluation;
(vi) preparation of food rulings proposal (if there are no health risks associated with consumption of the GM food product in question);
(vii) letter of no objection (if the GM food product receives approval);
(viii) decision document on the Health Canada website.\(^27\)

With respect to labelling requirements - a primary concern for European Union nations - labelling is mandatory in Canada only if there is a health or safety issue with a GM food that might be mitigated through labelling. However, the

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\(^24\) *Novel Foods Regulation*, under The Food and Drugs Act (Canada).

\(^25\) The Seeds Act (Canada).

\(^26\) The Feeds Act (Canada).

Canadian General Standards Board has been working to develop a draft Canadian standard for the voluntary labelling of GM foods to address issues that do not involve health or safety.28

(2) Recent Court Decisions

(A) *Monsanto Canada Inc. v. Schmeiser.*

As previously indicated, Canadian courts have recently had the opportunity to consider the applicability of intellectual property rights to GMOs in the recent case of *Monsanto Canada Inc. v. Schmeiser.*

Percy Schmeiser was a Canadian farmer who grew conventional (non-genetically modified) canola. Schmeiser’s land was bordered by farms that grew genetically modified canola (known as “Roundup Ready canola” due to its resistance to an herbicide present in Roundup). Roundup Ready canola was manufactured by Monsanto and was the subject of a Canadian patent held by Monsanto. The patent mandated that every purchaser of the Roundup Ready canola sign a Grower’s Agreement and a Technology Use Agreement, which set out the terms and conditions under which a purchaser could use the patented seeds and provided that a purchaser of Roundup Ready canola (i) was entitled to use the seeds for one-time planting; and (ii) could only sell the seeds to a commercial purchaser authorized by Monsanto for consumption. The purchaser was not entitled to sell or give the seeds to anyone else, and could not save the seeds for replanting the following year.

Roundup Ready canola was detected on Schmeiser’s land, and Monsanto sued both Schmeiser individually and Schmeiser’s farm corporation for patent infringement. Monsanto argued that Schmeiser had purposely reproduced Monsanto’s patented gene and cells without proper authorization. Schmeiser argued that the presence of Roundup Ready canola on his property had resulted from genetic drift and/or cross-pollination from neighbouring lands.

The Federal Court of Canada (Trial Division) stated that “patent infringement is any act which interferes with the full enjoyment of the monopoly rights of the patentee” and that “intention is immaterial for infringement occurs when the essence of an invention is taken, regardless of the intention of the infringer”. Therefore, for the purposes of determining whether Monsanto’s patent had been infringed, it was held to be immaterial as to how the Roundup Ready canola came to be on Schmeiser’s land (a strict liability test, of sorts).

McKay J. concluded that even if Roundup Ready canola was accidentally spread to Schmeiser’s land in 1996/97 (as Schmeiser contended), Schmeiser continued in 1998 to cultivate Roundup Ready canola from seed saved from his 1997 crop,

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28 Ibid.
which Schmeiser knew or ought to have known was Roundup resistant. The Court also pointed to the fact that two other farmers who had suspected and/or known that their crops contained Roundup Ready canola had called Monsanto, who had come and removed the undesired Roundup Ready plants from the crops at Monsanto’s expense. In other words, even if the spread of Roundup Ready canola onto Schmeiser’s land had been accidental, Schmeiser had done nothing to alleviate the situation and, in short, was using Monsanto’s patented materials without paying for a license. Therefore, the Court ruled in favour of Monsanto and held that Schmeiser had infringed Monsanto’s patent.

Justice McKay stated:

Thus a farmer whose field contains seed or plants originating from seed spilled into them, or blown as seed, in swaths from a neighbour’s land or even growing from germination by pollen carried into his field from elsewhere by insects, birds, or by the wind, may own the seed or plants on his land even if he did not set out to plant them. He does not, however, own the right to the use of the patented gene, or of the seed or plant containing the patented gene or cell.

and concluded that:

While I acknowledge that the seed or plant containing the plaintiff’s patented gene and cells may be owned in a legal sense by the farmer who has acquired the seed or plant, that “owner’s” interest in the seed or plant is subject to the plaintiff’s patent rights, including the exclusive right to use or sell, and they alone may license others to use the invention.

This decision was upheld by the Federal Court of Appeal. Leave to appeal to the Supreme Court of Canada was filed on June 9, 2003.29

(B) **Hoffman v. Monsanto Canada Inc. and Aventis Cropscience Canada Holdings Inc.**

While the Schmeiser decision focused primarily on patent rights, the lawsuit represented by the statement of claim filed in the matter of **Hoffman v. Monsanto Canada Inc. and Aventis Cropscience Canada Holdings Inc.** is an attempt by producers to shift focus to the tort of nuisance, and the effect that genetic drift and/or cross-pollination has on those who produce non-genetically modified crops.

Members of the Saskatchewan Organic Directorate brought a class action lawsuit against Monsanto and Aventis on behalf of all organic grain farmers in Saskatchewan, alleging that the organic farmers have lost the ability to market organic canola due to the contamination of organic canola crops caused by

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29 Editor’s Note: since this paper has been written, the Supreme Court of Canada upheld the decision of the Federal Court of Appeal with a slim 5-4 majority, but overruled the remedy of an accounting for profits by Schmeiser. Notably, as a related issue, Monsanto has recently elected not to pursue its development of Roundup Ready wheat in the face of opposition by the Canadian Wheat Board.
adventitious cross-pollination from genetically modified canola. The action further alleges that the defendants’ ability to conduct field trials of genetically modified wheat will have a similar effect on organic wheat crops and the market therefore. The producers seek an injunction restraining the release of genetically modified wheat into the Saskatchewan environment.

The plaintiffs rely in part on The Environmental Management and Protection Act (alleging that the defendants’ genetic modifications fall under the definition of “pollutant” thereunder) and The Environmental Assessment Act (alleging that the defendants were required to conduct an environmental impact assessment thereunder). In addition to the aforementioned injunction, the plaintiffs also seek damages in tort and statutory damages.

Currently, the parties are still undergoing the certification process for the class action.

EUROPEAN COMMUNITY

On September 22, 2003, the European Parliament and the European Council passed the following regulations dealing with GMOs: (i) Regulation 1829/2003 (on genetically modified food and feed); and (ii) Regulation 1830/2003 (on the traceability and labelling of genetically modified organisms and the traceability of food and feed products produced from genetically modified organisms).

In brief, these regulations provide for:

(i) the import and placement on the European market of GMOs, provided that authorization is first obtained (in accordance with the regulations, including the labelling and traceability requirements thereunder);
(ii) scientific risk assessment and cost/benefit analysis;
(iii) the establishment of an independent central repository whereby the public can access non-confidential information with regard to genetically modified food and feed; and
(iv) exemption from labelling and traceability requirements for trace amounts of GMOs (using such trace amount thresholds as determined by other EC directives, regulations and legislation) as

30 Chapter E-10.21 of The Statutes of Saskatchewan, 2002 (effective October 1, 2002) as amended by the Statutes of Saskatchewan, 2003, c.29.
32 Editor’s Note: since this paper has been written, the parties have received certification to proceed with the class action, which will be heard in the Saskatchewan Court of Queen’s Bench on September 14 and 15, 2004.
long as such trace amounts are adventitious or technically unavoidable.

It is questionable, however, as to whether a scientific basis for such stringent labelling requirements exists, or whether the labelling requirements are merely a response to consumer preference and public anxiety over food safety, given that as support for such labelling requirements, the European Commission has explicitly stated that:

In the European Community, concerns and demands of citizens and interest groups are part of the political, democratic process...The fact that the European Parliament and the vast majority of member States have endorsed the proposed labeling requirements with the objective of ensuring transparency in the marketplace and facilitating consumer choice indicates that there is widespread democratic support of meeting the consumer demands in the European Community.\(^{33}\)

Further, the question arises as to whether traceability is implemented only in furtherance of labelling requirements, or as a beneficial practice in its own right. As with labelling, traceability is limited to genetically modified food and feed – if the concern truly is consumer safety, why not extend the application of labelling and traceability requirements to hybrid plants or, given the recent BSE crisis, beef products? WTO Committee documents indicate that:

[I]n its presentation, the European Communities recognize that, according to its risk assessment, genetically modified plants and products therefrom authorized for marketing in the European Communities do not represent a higher risk than their conventional counterparts, in other words they have the same “level of safety”.\(^{34}\)

Therefore, in light of the recognition by the EC itself that no scientific basis exists, what is the true justification for setting up a different regime for the approval, labelling and traceability of GMOs in comparison with their conventional counterparts? With regard to both labelling and traceability, the principle of non-discrimination should apply (ie. both GMOs and conventional products should be treated equally).

**CONSUMER PREFERENCE**

Arguably, EC developments with regard to labelling and traceability are based more on consumer preference than on independent scientific analysis. The social psychology of consumer preference has shown that people are generally bad risk assessors and, therefore, international law should not be based upon consumer

\(^{33}\) World Trade Organization, Committee on Sanitary and Phytosanitary Measures, G/SPS/GEN (June 19, 2003)

\(^{34}\) Ibid.
preference but should be based upon independent scientific risk assessment and cost/benefit analyses.

In addition, when independent scientific assessment and cost/benefit analysis are taken out of the equation, the question must then be asked as to whether barriers such as labelling and traceability are simply discriminatory measures and therefore contrary to international law.

However, practical reality dictates that people are generally averse to a challenge to their common sense (even if such challenge is backed up by scientific data) and therefore, no politically savvy government will completely ignore widely-held consumer beliefs. For instance, in the face of public pressure, the EC will not likely abandon labelling and traceability requirements just because the WTO may consider them illegal trade barriers. As a result, either (i) the parties involved will be thrown into lengthy and costly trade wars; or (ii) the EC may choose instead to completely ban the import and use of GMOs.

Further, any move away from transparency may be viewed as conspiracy or cover-up by a public already cynical when it comes to the ability of government to effectively manage the safety of the food supply.\(^{35}\)

Therefore, despite the fact that bowing to consumer preference may not make good law, it is inevitable that consumer preference will be a factor that is taken into consideration by governments when making decisions about GMOs. However, rather than bowing blindly to consumer preference, governments must take a constrained approach to dealing with the electorate. As regards GMOs:

(i) Government must not contribute to consumer anxieties by propagating false or misleading information;

(ii) Government must not prevent producer countries and companies from freely getting their message across to the public that GMOs are safe;

(iii) Government must actively conduct or sponsor cost/benefit analyses (which must include a credible risk assessment) and, if the product is deemed safe yet is treated differently from other products in light of consumer concern, must make a reasonable effort to inform the public about the cost/benefit analyses and scientific studies which have been undertaken. Ideally, such cost/benefit analyses should be conducted by independent, arm's length organizations;

(iv) Government must take steps to ensure that consumer concern is genuinely based on health and safety concerns (not xenophobia or discrimination based on country of origin, governmental policies, ethnic composition, etc.). For

\(^{35}\) BSE, SARS and hoof & mouth disease being prime examples.
instance, in human rights law, consumer preference based on racial attitudes is not given any deference;

(v) Government must review consumer preference limitations periodically (ie. every three years).

With regard to whether the international agreements previously referenced permit consideration of consumer preference, it should be noted that: (i) the SPS Agreement does not include either a general reference to “legitimate objectives” or a specific reference to consumer preference as a consideration; (ii) the TBT Agreement does allow for “legitimate objectives” to be taken into account, but does not expressly reference consumer preference; and (iii) the Cartagena Protocol makes consider of consumer preference mandatory (by permitting socio-economic considerations).

In the long run, the conduct of cost-benefit analyses should stress the extent to which GMOs are supportive of the values held by those concerned with the environment and human safety. For instance, GMOs may permit the reduced use of pesticides, result in plants that better resist soil erosion, and result in plants, food and/or other organisms with increased nutritional or medicinal benefit. In essence, ironically, GMOs may best serve to meet the ends sought by their opponents/critics.
SESSION 2:  
COSTS AND BENEFITS OF KVD GRAIN MARKETING

John Morriss  
Publisher and Editor  
Farmers’ Independent Weekly  
Moderator

Kernel Visual Distinguishability (KVD) has been an issue for a long time. I cannot ever think of this subject without remembering a Canada Grains Council meeting in the late 70’s. There were discussions on the merits or otherwise of high-yielding wheat and the problem with KVD. There were three excellent speakers, from the Grain Commission, the Wheat Board and United Grain Growers. There was a bunch of people sitting at the press table, one of which was John Clark. Some of you would know John but, if you do not, John was kind of an ultimate backroom boy of the grain industry, in charge of information for United Grain Growers. Somebody at the press table turned to John after these presentations and commented, “You know, those were really good speeches.” And John said, “They should be. I wrote all three.”

Dr. Brian Oleson  
Agribusiness Chair  
University of Manitoba  
Panellist

KVD is one of those phrases like BSE – the words have great meaning only for those religious priests in the inner sanctum examining the entrails of the beast, in this case the kernel. However, most of this audience are quite familiar with the general concept of KVD. It basically boils down to the notion that there are different classes of wheat and each of these classes is distinguishable by kernel type. Two points: first, KVD has served Canada extremely well. It has allowed Canada to be a world leader in terms of quality, consistency, and uniformity. Second, this system is not as crisp and clean as it once was. Furthermore, no country has a crisp, clean system.

It is important to look at the benefits and costs of KVD. KVD is not the only alternative. The profile of alternative systems has been elevated with the Canadian Grain Commission examination of the Varietal Eligibility Declaration System (VED). Alternatives such as VED must be feasible and viable in both a technical and economic sense. In the final analysis, someone is going to have to try to estimate the benefits and costs of the system in terms of system performance and in terms of the cost to implement the new system. The
question is: “What are the costs associated with the current KVD” or alternatively, “What benefits could be realized if a move were made away from KVD?”

I would look at it this way, if asked to study this question: first, we must understand the current system with its strengths and weaknesses. Second, we must identify criteria for an effective system, as wheat moves through the entire supply chain. This includes the value we might place on being able to control unlicensed or unregistered varieties. The third is the need to identify or quantify the benefits to be gained from moving away from KVD. My presentation will focus on this final question.

This is primarily a plant-breeder question. If the plant breeders have more latitude is there a greater variety of products in the system? If there are more products/qualities in the system, can we manage this diversity? These are the two key questions. As well, there is the cost side. What are the costs of a new system? KVD is a low cost system. Visual distinguishability at the elevator and terminal is a cost effective tool for segregation.

Let me introduce a new term of my own making - ‘KVD drag’. By this I mean that the plant-breeder have to ‘drag’ along KVD, along with a whole host of other requisite attributes as varieties move through the plant-breeding process.

However, the notion of ‘KVD drag’ is not the only motivation for change. There are other concerns including industry petitions for change; farmers’ desires for more flexibility in varieties; seed industry petition for change; plant-breeder pressures given plant-breeder rights; customer demands for more specific attributes in terms of end-use; and then the more undefined pressures related to identity preservation whether these pressures relate to health, safety, terrorism or concerns regarding GMOs.

To begin, where did KVD come from? It was introduced as the solution to prevent poorer quality USA varieties from destroying the integrity and reputation of Canadian wheat in the 30’s and 40’s. It is reminiscent of the old saying: the more things change, the more they stay the same. Again in the 1990’s we had this same challenge regarding USA varieties. At that time, KVD was the answer. Today, some feel it is part of the problem.

There are 7 classes of wheat in western Canada: CWRS, CWAD and 5 minor classes. The 5-year average production is 17 million tonnes of CWRS, 5 million tonnes of CWAD and approximately 2 million tonnes of the minor classes in total. John Morriss made a reference to the big move towards 3M wheats (medium protein, hardness and gluten strength) in the late 70’s and early 80’s. I would have to conclude that the move to Canadian Prairie Spring classes (3M varieties) has been a disappointment. After almost two decades, production is low.
My focus will be on the different segments of the wheat supply chain in Canada. The alternatives focus around visual distinguishability, technology or truth telling. We can segregate wheat by a combination of varietal registration and visual distinguishability as is currently the cases. Alternatively, we can segregate wheat based on affidavit or truth telling. Finally, we can try to find some black box technology that will tell us details regarding variety or intrinsic quality. There is a really interesting interplay between those various approaches.

There are a number of terms and definitions that are important and I will touch on a few of these. Varietal Registration is a key concept and sits at the heart of the KVD question. The question of KVD cannot be discussed without an understanding of the Varietal Registration system. The role of the CGC, as well, is central to the discussion. KVD is founded on the concept of "equal to" a check variety. In the early days, the check variety was Marquis. As a result, Canadian wheat has been very consistent and uniform. To illustrate consistency let me give you an example. If a large flour milling company in Indonesia buys a shipment of wheat in May and again in November, the miller will feel the product is consistent if both shipments are basically the same. By uniformity I mean that the wheat is the same from hold to hold within the same shipment. Some will carry the notion of consistency even further and say, “It is ‘sameness’ of kernel characteristic within the hold that is the major determinant of that uniformity.” Affidavit is basically the notion of truth telling by a legal declaration of variety.

KVD is primarily a wheat issue. I coined the phrase ‘KVD drag' to capture the notion of distinguishability reduction of approved genotypes. The cost of KVD to the system is a matter of trying to track this ‘drag' through all the segments of the wheat value chains. These segments include plant breeding, the seed sector, production, grain handling, transportation, sales, merchandising, and the processor. In theory, the net benefit is going to be a total of all of these segments.

There is a strong interdependence between KVD, the affidavit system and technology. In the short term, an affidavit is likely KVD-assisting. In the medium term, it is likely KVD-replacing. In the long term, technology conceivably will replace both KVD and affidavit adac. Technology can, in theory, focus on varietal identification or it can focus on end-use characteristics. There are two streams of technology to go with different time frames regarding development and adoption. An alternative system should retain the benefits of KVD in terms of quality and consistency. It also has to deal with the problems that KVD is not handling, specifically, unregistered varieties. It should broaden registration of varieties currently restricted by KVD. This means giving the plant breeders more freedom. Finally, the system has to be flexible in terms of incorporating technology and dealing with these emerging pressures.

Consider KVD contrasted over time against VED that can be KVD-replacing or assisting. Of course, if a KVD approach is supplemented by a strong affidavit system, then the combined approach is likely as good as it gets. On the other
hand, if KVD is removed without a good replacement such as affidavit you might call the result a perfect storm. Until technology is available to do the job there is a need for some type of system to ensure the integrity of Canadian wheat. This was the purpose of the Canadian Grain Commission VED proposal.

In considering the various segments of the wheat supply chain, the big segment, in terms of impact of KVD, is the plant-breeding segment. Can the impact of KVD be isolated? That is a really big question. It is important to recognize that KVD is only one of several factors. One scientist said to me, “Brian, look at it this way. The plant breeder is dragging about 20 characteristics along in terms of quality, agronomic characteristics and disease. KVD is only one of these characteristics.” Can that impact be isolated and quantified? Is this a partial move or a full move from KVD? Is KVD only negative? For example, KVD forces breeders to cull a lot of their crosses and in doing so reduce experimental plot costs but, in culling the breeder may very well throw out valuable potential varieties.

There are few examples of quantitative estimates of ‘KVD drag’. Barry Campbell, one of the most prominent wheat breeders of our time, suggested that there might be a 5 percent cost in wheat yield associated with KVD. It was an informal estimate with no formal economic study as the basis. Nobody knew exactly how Dr. Campbell arrived at this estimate but it did gain a certain credibility in the industry because of the source of the statement. There are feelings among some breeders that the growth rate in wheat yield is higher in the United States than it is in Canada. There is confusion with other factors like protein yield.

The quantification of this ‘KVD drag’ question really comes back to this fundamental question: What are the assumptions? One industry person said to me: “We would get a 20 percent increase if we just got rid of KVD.” Yes, this may be true if you get rid of all other requirements in the process! On the other hand, if the requirements are all maintained other than KVD then there are no additional degrees of freedom afforded to the wheat breeder. For example, what is the result if all of the current quality guidelines are maintained to meet varietal registration requirements and if some kernel size restrictions are imposed on top of that? Millers do not want 5 and 10 different kernel types in every shipment. This is very important. Uniformity is something that customers want and are willing to pay for.

The question is: do we throw this wide open or do we assume that a varietal registration system with current quality parameters is maintained? What is the best strategic positioning of these classes for farmers of western Canada? This question is fundamental. As well, how do we expect black-box technology to change and at what pace?
These questions are not easy but there is a certain amount of analysis that we can do. Important starting points are to solicit the expert opinion of plant breeders themselves, to look at culling rates at various stages of the crosses, to look at cross-border data. This data is in part available but it has flaws. Finally, there are illustrative case examples.

In terms of seed sector, its impact is limited in terms of the aggregate impact. Seed growers have a strong opinion because they are involved in bringing new seed forward to the farmer. The big impact is on production or at the farm sector. As a side comment, I might point out that there is a difference between research plot yields, individual farm yields and Prairies-wide yield. I would ask you to give thought to the following question: Is this a yield increase for the two dominant classes (CWRS and CWAD) or is it for the minor classes? This is important because the acreage is greatest for the two dominant classes. The yield increase for the minor classes may be important for feed. If a new use such as ethanol develops, these minor classes might become much more important if yield is high enough. However, if yield increase in the minor classes in not accompanied by increased area then there is little impact.

The CWB has carried out long-term demand projections by class of wheat. The main growth in the export market is the major classes. For the minor classes, the yield potentials are large if KVD is abandoned. For CWRS and CWAD, I would not expect there to be very much yield increase in those classes because that is where the rich genetic material is and this germ plasma is readily available to plant breeders. The dominant kernel type is CWRS.

Regarding the grain handling and transportation segment, this really is at the heart of the cost question. What is the cost that has to be attributed to any alternative systems and moving through the system?

Regarding the sales and merchandising segment, the concern is always going to be maintenance of quality, uniformity and consistency. Associated with cost is the question of attribution of responsibility and accountability in the event of problems? There are benefits to merchandizing more varieties and classes if segmentation costs are contained. This is what I would call the bigger basket effect, the broader basket effect and the cheaper basket effect.

In terms of the impact on value added, there is an interesting study that was carried out by Sparks for the National Association of Wheat Growers. They explored the question of long-term potential growth of wheat use: new and improved uses for wheat, new and improved characteristics, and the new and improved uses of wheat by-products. They came to the conclusion that for the United States, a country ten times the population of Canada, there might be another 2 million tonnes growth potential over the next 10 years. Applying this to Canada, growth would appear to be limited. Furthermore, given this limited growth, is KVD a factor in any way? Is KVD currently preventing anything from happening that would otherwise happen?
In terms of the feed sector, ask yourselves this question: What is the potential growth of the hog industry over the next 10 years? What is the potential growth of the cattle industry? Looking at that, one of the interesting aspects of feed grain dynamics is that the corn belt has moved north in recent decades. The low price point for corn in the United States is most often southern Minnesota and southern North Dakota. What does that mean? It means we can import U.S. corn into Manitoba and often be price competitive with Iowa, the heart of the corn belt. That is very interesting. What it implies is that if feed wheat is to crowd out corn (or displace high value crops like canola and peas), the wheat yields need to be very high. Current CPS yields are a long way from achieving this. Winter wheat yields are closer. For this reason winter wheat may have a lot of promise.

In terms of wheat use for energy through the production of ethanol, I do not think there is anything I can say that would add to the polarized opinions that exist now. Some of the interesting cases that may be instructive are HY644, BW295, BW90 and the feed wheat class, as well. HY644 is a variety that was rejected for registration but had better fusarium resistance. BW295 was one variety that Warberton favoured. BW90 was a high yield CWRS variety that was rejected because of gluten strength differences with CWRS. The wheat breeder, Ron DePauw took it back to the lab and redeveloped it as AC Barrie. It was registered 5 years later and is now one of our dominant varieties on the prairies. In this case, there is a timeframe and a yield loss that can be measured with some confidence.

In conclusion, I will come back to the fundamental question: What are the assumptions? To be more specific, does varietal registration continue in its current form? Do the key quality guidelines and parameters stay the same? If KVD is eliminated will there be additional guidelines for wheat breeders to follow regarding kernel size because millers want kernel uniformity? What is the optimum long-term positioning of our wheat classes? How will “black box” technology evolve in future years?

**John Morriss - Moderator**

It is vital to have a producer reaction on a panel like this. We will begin with Cam Henry, a seed grower and processor from Oak River. He has an excellent perspective on these issues and I would invite him to come forward.
Cam Henry  
Principal  
J.S. Henry & Son Ltd.  
Panellist  

Thank you, John and good morning, ladies and gentlemen.

It is funny how things in your life intertwine and cause you to think. I was talking to my sister last week and I find, as I get older, my sisters tend to keep tabs on me a little more often, kind of like Mother used to do when I was young. But in response to her question about, “What is new in your life?”, I said, “Well, next week I am going to Winnipeg. I am taking part in a conference and on a panel looking at KVD.” Of course, she said, “What is KVD?” And I said, “Well, it is an acronym for kernel visual distinguishability.” She thought for a moment and replied, “If you wore your glasses all the time, you would not have to worry about that.” It did not hit me at the time; but later I realized, what we are doing is talking about taking our glasses off. There are those of us who have operated all our lives under the assumption that we could look at a sample of grain and have a pretty good sense of what class it fell into just by the way the kernels were shaped.

The seed business is about segregating by variety, not by class. We keep the Domain separate from the Barrie, separate from the Superb wheat. We already do this in the seed business. The KVD factor is nice, however, because, if there are any errors – and there can be errors – they usually would occur within a class rather than between classes. As we move away from KVD, the potential for more damage from errors becomes greater.

Can we move away from KVD? Should we move away from KVD? There is no doubt in my mind it could be done at the farm level. The big question for me, and Brian asked: What is the cost versus the gain?

I am old enough and cynical enough now, that I know that moving away from a regulated and efficient system to a less-regulated, more efficient, more commercial system, does not necessarily put more money into my pocket. Witness the grain transportation changes.

I was at a meeting about two weeks ago, where one of the players in the specialty canola oil or the high oleic oil market stated that their company’s program was considerably more expensive to operate than they had projected. Now, they were not walking away from it but just that the cost had been a little higher than they thought. So, before we move away from KVD in the CWRS and the CWAD classes, we need a good economic study to be done making sure costs do not outweigh benefits.

In the seed business, we say, “You grow what you sow”. In the seed industry, from breeder seed down through Select Foundation, and Registered, there is
going to be more testing being done for varietal purity if we move away from KVD. This is going to add more cost to the system. From the producer perspective, about 20 percent of the seed they sow in the cereal section is certified seed; 80 percent is commercial, grown from farm-saved seed – nothing wrong with it but you need to know what it is. Testing could be a good business to get into.

All farms carry some form of liability insurance. We are going to need more; you are going to need to protect yourself and your business. It is not cheap and, if you do the mathematics down the line, when you look at some of the potential of what a contamination issue could cost, it scares me. But do not tell my insurance company that.

On the benefit side – as we move to some kind of a replacement for KVD, traceability back to the producer will enhance food safety and hence marketability. Just to illustrate that, I was talking to a producer in Saskatchewan who had a reporter from a British farm paper out at his place doing an article this summer. He happened to be there in the fall and this guy had about 60,000 bushels of oats in a pile in his yard. The reporter wanted to take a picture of it so the producer and his son climbed up on the pile. They took a picture. He had, when I talked to him, in excess of 100 e-mails back from Europe after that picture appeared in the paper asking him, “What was that grain doing outside uncovered and what were you doing climbing all over it?” Clearly, those people were seeing that pile of oats as food and I think it gives you some sense of the expectation of consumers as we move back in this traceability and food safety issue.

Plant breeding – I often talk to Dr. Ron De Pauw as I happen to be married to his sister so we go back and forth in this plant breeding game a fair bit. Also through my involvement with the Western Grain Research Foundation, I have come to know the breeding community quite well. Always producers are asking for more, as they have been putting money forward now through check-offs and that sort of thing. In bringing some money to the table we get some clout in terms of asking for things. But the breeders have always told us, “This is a numbers game – the more you ask for, the tougher and more complex the job becomes.” Ron often uses the term yield drag. Every time you ask for something extra, there is an “exponential increase in the complexity of the job”. Now, that is not to say that they cannot do it. I have not heard the 5 percent figure. I do not know what the drag is in terms of T-yield. I do know if you look at barleys – malt barleys and feed barleys are not yielding that much differently these days and we have, for a number of years now, had the KVD issue with barley. So it has not had a really big impact right there.

Out of 20 million metric tonnes of wheat production probably 1/4 to 1/3 goes to high value customers that pay well and reward the Pool. The rest competes with lower quality wheats in the world and at a lower price. If we can, through modification or through simply adding different characteristics to hard red spring
wheat and to the durums - if we can get products with specific traits that go to customers that will enhance some of that 70 percent of the product that is sold at very low prices - it can be beneficial to the industry in terms of returns to the country. I am thinking of the Navigator Durum, an extra-strength durum. We are in the seed business. We sell Barrie wheat and Teal because Warburton’s have determined that there are some differences within our class of hard red spring wheat. There are some characteristics intrinsic to those varieties that they like for their milling and baking process. If we can enhance that kind of thing, we can generate some more money for the system.

But bottom line for me as a producer – what are the costs? What are the benefits? Show me the numbers. Thank you.

John Morriss – Moderator

Thank you very much. Our next responder is Cam Brown. Cam has one of the broadest bases of experience that I can think of in the industry and I invite him to come forward with his views on this subject.

Cam Brown
Principal
J.C. Brown Consulting Services
Panellist

Brian, your discourse elucidated the problem clearly and I do not know that I can add too much to it. Except that I will do it from a perspective of a feed manufacturer and my experience in western Canada.

Number one, all grains are feed grains. The only differentiation is price. So that the word ‘feed’ should not be used in designations of grades for grain. The Canadian Grain Commission has removed the word ‘feed’ out of the barley grades – 1, 2 and 3CW. In the old days, we used to have 1, 2 and 3CW barley and 1, 2 and 3 feed. The problem with that application was that, when you pulled a selected malting barley and it graded one feed, you had this anomaly where it was a malting barley because of selection but it was graded one feed. So, finally, they straightened out that contradiction in terms.

On wheats - I dealt with Glenlea Wheat when I was at the Canadian Wheat Board. At the time, there was no class or grade for it and consequently was graded feed wheat, which was the bottom for CW grades. It was distinguishable as well. Finally they made a utility grade for Glenlea.

Now, I want to go to what happened with the so-called ‘feed wheat’ designation. In the hard red springs, in the early 1980’s, there was a severe frost that hit the crop in western Canada – about the 28th or 29th of August, if my memory is
correct. It knocked down the grades so that the Wheat Board had to contend with 10 million tonnes of 'feed wheat' because of the severe frost that had taken place. But the wheat was almost mature and it weighed 64-65 pounds to the bushel. So the Wheat Board had to get the 'feed' designation because they wanted to sell it as milling wheat, which they could if they removed the designation from the grade. So they special-binned it. My view is – to the Canadian Grain Commission, it still is - get rid of that 'feed' designation and call it a number. I do not care if it is one special, seven special, whatever. But do not use the word 'feed' because it restricts the use of that grain in the marketplace. They still have the feed designation so my advice is: get rid of it to avoid marketing problems.

Number two – it is the same problem with oats that also has a 'feed' designation. Get rid of it. Now, the facts of the matter are that the feed industry in western Canada has used all grades for 'feed'. It is only a 'feed' because of its price and it goes into the formula. Perhaps we need higher yields because it would give us maybe lower prices and we could be more competitive in the United States than with corn for animal feeding. That is the straight-gut view of it. Now, in the long run, the restriction for yield has been caused by kernel distinguishability. It is a cost-benefit thing. Cam Henry is right – is the feed industry going to be, should it be given its head and the losses in sales of hard red spring wheats? Is that a view for the future? Are cattle and hogs, a large industry in western Canada, going to consume the potential high-yielding barley/wheat/oats?

On that point, I am somewhat apprehensive. As we speak, the U.S. is going to implement the 'COOL' program, which is 'country of origin labelling', in October of '04 (since been delayed to 2006). The impact, in my view, will be enormous. It will cause severe price reductions here in western Canada for cattle, hogs, sheep, etc. The feed industry is not very happy. It has enormous implications for the plant breeders and what is coming in the future.

Now, a long time ago, I worked in Alberta. I talked to a man at that time named Donald Cameron who was a big man in irrigation. He was a man my age at that time, so that is a long time ago - 1950's. There were piles of wheat all over western Canada. You go into that country – Acadia Valley, Oyen, Bindloss, to Kindersley – there was all this wheat outside: there were arenas full of it. We had the greatest backlog of wheat in Canada I have seen in my lifetime. It all graded Number One Northern in that area of Canada; there was no 1CW. I remember bemoaning the fact that we could not get rid of this wheat. Donald Cameron said to me, "My friend, my young friend," he said. "Do not worry about those piles of wheat. We will get rid of them. The big problem in western Canada is growing the grain and always will be." I think history has shown that he is right. The last two years, we have had droughts. So growing the grain, producing the grain, is going to be the number one problem and this is just part of it. Thanks very much.
John Morriss – Moderator

Thank you very much, Cam. We will now move to Richard Wansbutter. Rick is the Vice-President of Commercial Relations with Saskatchewan Wheat Pool.

Richard Wansbutter
AgPro Grain
Panellist

Some of the notes I have here today were prepared in conjunction with my counterparts at the Western Grain Elevator Association. I am here to give a grain company and industry perspective on KVD. It is fair to say, as companies, we certainly recognize the challenges to the current ‘kernel visual distinguishability’ system. We recognize these challenges include demand for specialty quality types, and examples were already given with Navigator Durum. We recognize the need for the production of non-registered varieties and the potential misrepresentation and difficulties arising from breeders to make improvements, such as fusarium-resistant wheat.

What I want to concentrate on are some of the pitfalls, the costs, and perhaps, some potential solutions. One of the things that has not been touched on and needs to, is this whole area of legislative and administrative change. I am going to talk about some of the unregistered varieties and how this dovetails with KVD and with VED.

Deliveries of unregistered varieties, and those are varieties that are indistinguishable from CWRS or CPRS, into the licensed primary elevator system have become a problem. As was mentioned earlier this is nothing new and we are seeing greater instances of this. Our company, in the last year, had two major wrecks where a variety was misrepresented as CWRS and was put into the system. One we caught right away in the primary elevator where it was not blended with anything else. Another one, unfortunately, was not caught until 33 days after the vessel sailed.

Our position is that problems posed by unregistered varieties must be dealt with prior, or at the same time, as any variety eligibility declaration proposal is implemented. Dealing with the problem of unregistered varieties will require both legislative and administrative changes.

Now, as companies, we face and are subject to, a significant amount of regulation. We have to be registered and bonded. We fall under the Canadian Wheat Board Act; in how we conduct our business, the Canada Grain Act. We have all sorts of regulations that we must conform to, as put out by the Canadian Grain Commission. We also deal with the CFIA. So our rules are quite detailed. Our responsibilities and liabilities are quite detailed.
One of the issues we have with KVD and unregistered varieties is liability. If a producer chooses to take his indistinguishable variety and misrepresent it, the consequences are minimal. Right now, for something like a U.S. variety that looks like a CWRS – if he declares it as such, puts it into our elevator system - the worst that is going to happen is that, if we discover it, it is going to be downgraded to feed. This is all it ever was (nothing more than a feed). This is the producer’s financial consequence.

Flip that around – I said we had a wreck. If we take an unregistered variety and mix it with CWRS - we could face the consequence of taking that bin of 5 or 10,000 tonnes, depending where it is, and having that 1CWRS downgraded to a feed. You could see a price spread of $100 a tonne, depending, of course, on the prices and the spread between feed and CWRS. On one vessel hold, not an entire vessel but a vessel hold, the downgrade could cost half a million dollars.

Now, I want to be very careful here. I am not for a second suggesting that a majority of producers choose to misrepresent their commodity. From our experience, I like to think that that is probably less than 1 percent of producers. But the financial consequences must be there for those who choose to abuse the system. This is absolutely critical. As companies, we have asked for legislative change over the last 5 or 6 years. Here we are, still talking about the same thing. There is a huge reluctance to go into the Act and open it up and make the necessary changes to the Canada Grain Act, primarily, or look at changes to the Seed Act.

So we talk about this risk and liability – again, very important aspects that have to be covered off. When we talk about the affidavits themselves, or declarations, do we have to invent an entirely new system? I would suggest that we do not have to. We currently have a very elaborate system, well documented, and a lot of experience with the Wheat Board contracting system. As everybody knows, Wheat Board contracts with its producers. This, in effect, is a declaration. When the producer signs up for a 1CWRS, that is what he is expected to deliver to the Wheat Board. If that producer chooses to misrepresent it, then the Wheat Board should be involved in dealing with the producer to get those costs back. It should not be solely the responsibility of the grain company to bear all of those risks and liabilities.

Straight up – if we make a mistake in blending, we take a variety and inadvertently mix it with something because we pulled the wrong bin – we will take that responsibility. We put it onto the wrong vessel or the wrong hold – that is our responsibility and we will suffer the consequences. But you cannot expect grain companies to assume all of the liability for the delivery of unregistered varieties or varieties that are indistinguishable and are mixed because someone perceives that as an avenue to command or to gain a premium.
To very quickly go through some other issues – talking about costs and liabilities and risks, certainly we need avenues or processes or procedures to mitigate costs. It does not help just to slap someone with a fine. If there is an incidence of co-mingling, we need to have procedures to mitigate those costs, whether it is working with the Wheat Board in blending it off, arriving at a new sale, or working with an end-use customer to reduce the costs to the system.

Denis Stephens earlier talked about what it costs to segregate and what it costs to guarantee purity. There was quite a range in costs. The reason for the range in costs, in large part, was due to the amount of testing that any one company feels it has to do to mitigate or minimize its risk and, believe me, that testing is not cheap. Very simply, if you assume an 18 million-tonne crop and what was being proposed under VED – I do not know if it is going to go ahead this way; I am not pretending that it is – the concept initially was to have a sample taken, each time grain changed hands. So, if you are looking at producer deliveries in semi-trailer trucks and the railcar shipments, railway unloads, terminal-to-vessel, you are probably looking in the range of about a million and a half samples, that would need to be taken. Now that is at one extreme. The other proposals have fewer samples taken. But, again, it is dependent upon the risk that the company wants to take. If you are looking at testing costs under the current system, you are looking at about – and I am not exaggerating here - $51 million. If you want to go to more sophisticated DNA testing by kernel, you are probably looking at doubling those costs. So we are looking at significant costs to the system for one aspect only, and that aspect is testing.

What I do not have for you is all the additional costs. When we start segregating all these new varieties, superimposing that on the current system that we have, what are the additional costs for special binning, for special segregations that move forward from the farm through the elevator system, ultimately to terminal and then to export? That is where we need to see what the benefits are. Those benefits may very well outweigh those costs. But what benefits do we see, or ultimately see, in garnering a premium for that new type of variety? Do we see extra sales being made? This is what we look forward to from the Commission when it does release those costs and benefits.

The ultimate answer to all of this is a technology where we can do driveway tests. It is no use finding out after the fact. You need to know in the driveway what is happening and what is being delivered. I know very well that is some years down the road but that is the answer and that is where the efforts should be concentrated.

Is there a hope in this system? Yes, there is. One example I would like to use is what recently happened with Allson Wheat. It is no longer registered due to some of the problems with its milling characteristics. We had a big problem on our hands – potentially half a million tonnes of this grain entering the system being graded as a feed and potentially being mixed in because, again, it is
indistinguishable. I would like to commend Sue Wickland from the Wheat Board who was instrumental in working with the grain companies. We came to a solution. A special program was set up for Allson to encourage the producer to sign up. We have declaration systems in place in our country elevators where managers sign. They declare that they will not knowingly take in a variety and mix it – the Allson variety. We have our producers signing declarations and that system is in place. Now, time will tell how effective it is but I believe it will be effective. So there are ways we can address some of these issues. Thank you.

**John Morriss – Moderator**

Thank you very much. Those were some excellent presentations. If we change the system, are we transferring that liability down to the producer level? Is that transfer either economically or politically possible?

**Cam Henry – Panellist**

It would only be transferred down to the producer, until he delivered it. I do not have any problem with producers being asked to do their fair share in this. If it is by accident, then that is one thing. But if it is by deliberate act, then I do not condone or support that.

**Richard Wansbutter – Panellist**

I want to talk about this producer liability issue. I have given this presentation a couple of times in various forms to our delegate body and to other producer groups. Quite frankly, initially I did not know what the response would be about this transference of liability and potential of risk for the farmer. What was interesting was that, almost to a person, every farmer said, “You know what? I am tired of being branded with those who choose to abuse the system. We have no problems, as producers, to change the law, to change the Act, to make it a severe penalty to misrepresent a variety and let us just get on with it.” So, from that issue, a lot of producers are certainly willing to accept it because 99 percent or better manage their systems and their farms professionally and with a lot of integrity.

**Dick Dawson - Attendee**

I wonder if I could have the opinion of the panel on two issues that I think are pertinent. When this whole thing started, a couple of comments were made about the history of KVD’s beginnings. We pushed KVD because we wanted to have the world’s best wheat. It was a quality issue and the scientists did that with KVD and we did have the best wheat in the world. I have heard people like Dr. Keith Tipples, at major conferences, point out today that that is no longer true. Number One Hard, in the United States in Kansas, is at least equal to ours in quality but nowhere near consistent. We still see, today, American millers
coming up to Canada to get wheat because of the consistency of the product that they get for their grist and they cannot get that consistency out of the United States. So, there are two different things here: KVD’s great value to us today may not be the quality issue, it may be the consistency issue.

The other one is that all the comments and all of the graphs and everything were all about a thing called ‘milling’ wheat. I wish it were the Canadian 'Milling' Wheat Board instead of the Canadian Wheat Board. We need to think about the gigantic opportunities in the feed business and the gigantic opportunities in ethanol and in other products and differentiate them from the milling problems. We do not want to threaten that very large milling business. I do not see why we have to. Am I not right in thinking – I am not a plant scientist but every time I see a really good huge-yielding feed wheat - it has a great big fat kernel; it is larger – it should not be difficult, I thought, to produce a really good high-yielding feed wheat without endangering, and having a clearly distinguishable kernel from, the milling industry.

**John Morriss - Moderator**

Anyone care to respond?

**Cam Henry - Panellist**

Certainly, Dick, in terms of kernel size, it has been my experience over time that, I do not care what crop kind you go to, kernel size has some relevance to yield, whether it is pea varieties, canola varieties. I mean, just look at the wheats – the extra strongs, the durums. There is yield drag in the smaller size of kernel for CWRS wheats, in my opinion. We have just recently, in these last half dozen years, received some accommodation on the high end in terms of kernel size. I believe Cadillac Wheat and now Superb – some of you are familiar with Superb – quite a larger kernel size – we are seeing some yield increase from that. I am not sure what breeders would say but I think that is true.

Now, back to the whole business of feed wheats and other alternatives. I do not know the exact numbers, but the problem that I see, is that we do not have enough customers for the amount of high quality hard red spring wheat we grow, that are willing to pay what our best customers will pay. So we have one of two options: 1) we can grow less of that wheat but yet nobody dictates what quantity producers grow; they grow what they see potential for the most economic benefit to them. 2) Or we can expand that CWRS class with specific traits to other customers that are willing to pay the same as the Japanese and the Europeans and the Americans pay now for our wheat. Then we do not need to sell it to the Indonesia’s and some of the others that may not pay as much. So I see some potential there.
Where we go in this feed market; who would have thought Manitoba corn and soybeans? That was Iowa to me, all through my life, and yet in these last few years soybeans are doing very well in the Valley. If we continue to have the kind of summers we are having, corn has been doing surprisingly well. I am in northwestern Manitoba and I am selling corn seed – not for grain but for silage and for grazing. You would not have expected that so I am not sure where that feed market is going.

**John Morriss - Moderator**

Cam Brown, did you have some thoughts on that?

**Cam Brown – Panellist**

Well, this year in the Red River Valley, there were some yields of hard red spring wheats and barleys and oats that were unbelievable. I have a friend that farms out at Starbuck. He went to university with me and he farms about 3,000 acres. He had 1,500 acres of wheat – averaged 60 bushels to the acre. Well, we have yield potential in a good year now. Of course, the last two years, we have been importing corn because we had drought on the Prairies. We imported a couple of million tonnes of corn a year to feed the livestock in Western Canada. But corn has disappeared now, because it is not economical. So that is the point I was trying to make – it is a function of yield. You can have anything that gives you a high yield and a price that puts it into the feed formula – we will buy it. There is no question about that.

Dick is quite right in his observation that this market has changed and we are trying to get our arms around it. It is a tough thing. We do not want to sacrifice a high yielding wheat market if we can maintain it and if we can build up another quality market, let us do it. But the cattle and the pig industry – sure, we require something that yields high and does not have fusarium and hopefully we will get that. But this year, fusarium is at low, low levels and it is not a problem with this year’s crop. It changes all the time. We are dealing with a biological entity.

When I go back to the year that we had the frost that made 10 million tonnes of ‘feed’ wheat – that was a particularly good crop and it was just about ready to cut and the frost hit it at that time. Normally, when frost hits it shrivels the kernels. This time, it was still heavy wheat. You do not get that every year with frost. So it is not something you say absolutely all the time, that yield for feed wheat or feed barley alone because it is tied in with other factors. Plant breeders have to deal with many, many variables.
Brian Oleson – Speaker

Your question is at the core. KVD only gets us down the road of asking the big interesting questions. That is: what are the classes that we want? How do we want them positioned? How important is consistency (your fundamental question)? How many of these classes, say off the CWRS side and other classes, can we handle and how do we handle them?

There is a question of vision. KVD does not answer the big questions. It only takes us to the door of the important question, which is your question – what is the future vision.

Richard Wansbutter - Panellist

Just to answer you, Dick, and you have certainly been in the business a long time. But, just look – we all know how much wheat and durum the U.S. produces and why do they import from Canada? The issue is consistency. When they are sourcing from the primary elevator system, at times, they do not know what they are going to receive. This is why Canadian grain is attractive because they do know that cargo after cargo will be consistent. Consistency means it will mill and bake the same way. This is a very critical factor. So, when we go down this path, or if we do, and do away with kernel visual distinguishability, the issue then is: can we segregate? Can we maintain those varieties that meet the end-use requirements?

John Morriss - Moderator

Well, thank you very much. I would like you to join me in thanking the panel for an excellent presentation.
LUNCHEON ADDRESS

Dr. Ed Tyrchniewicz
Professor, University of Manitoba

This morning we had a panel on traceability and had some excellent perspectives from Dan Lutz, Denis Stephens and Eric Aubin on various sectors. Virtually everybody made some reference to the beef sector and BSE. So we thought it would be appropriate to invite the President of the Manitoba Cattle Producers Association, who has been living this issue in very real terms. Our speaker at lunch today is Betty Green who, along with her husband Robert, owns a cattle ranch in the Interlake area of Manitoba. They run a cow-calf operation and a small feedlot, along with a grain and forage component. Betty is President of the Manitoba Cattle Producers Association and also serves on the Executive Committee of the Canadian Cattlemen’s Association. During the last two years, she has been active in the Canadian Animal Health Coalition and is Chair of the Emergency Management Committee. She has a particular interest in tools such as tracking and traceability, which are obviously an essential component, in terms of emergency management. So, Betty, we invite you to come and give us some of your thoughts, some reflections, on what we should learn from the BSE situation when we are talking about traceability and the rest of agriculture.

LESSONS FROM BSE FOR THE GRAIN INDUSTRY

Betty Green
President, Manitoba Cattle Producers Association

It is a pleasure to be here today and to address a little different sector than I am normally speaking to. Certainly, we have learned a lot of lessons over this summer and I would like to just give you a bit of perspective. My husband and I have a cattle operation, in the Interlake. We have just over 1,000 head of cattle. On May 20th, we entered into this realm of new reality for the cattle industry. It had an impact on our operation, as it did the industry, and one that we probably will never really recover from. We will learn from it; we will be stronger by it. But I am not sure we will ever return to what was before.

I also speak to you as a member of an industry organization and I will be speaking this afternoon about some of the lessons we have learned from the industry perspective, from the Association perspective and some of the issues that we have identified as being tremendous shortfalls and in need of immediate resolution.

So, with that, I am just going to give you an idea of what it is like to be a cattle producer. From a very personal perspective, my husband and I and some of our
children work on the ranch. On May 20th, we had all of our last-year’s calves in the feedlot, so all of last year’s income was still tied up. We had the challenging issue to address and that was: how were we going to maintain all of these animals during a time where, in essence, the markets had come to a complete halt? Now, those cattle were ready to go. They were in prime condition for a U.S. market. Ninety percent of the Manitoba production goes to the South and so we had prepared those animals for that market, which is, in most part, a little larger weight than what we would find acceptable here in Canada. Before the day was over on May 20th, we knew that we had over-conditioned animals that, in all likelihood, we were going to have to market in Canada: to packers and processors that we did not know and with whom we did not work and who were in a position where they had their choice of prime carcasses anywhere in Canada.

There is nothing that will ever prepare a primary producer for those kinds of challenges. As the days went on, we saw producers go from denial, first of all – nobody could believe that that was actually going to happen and the border would close. I mean, it just could not happen. A few weeks later, there was resignation to the fact that, yes, it would happen but it would be over soon – weeks, just weeks. Well, we got past weeks and into about the 60-day period producers started to realize that, not only were they in here for the long haul, but the resolutions were not forthcoming. We saw spirits drop and almost a defeated approach to it - producers finally deciding that those animals, even though, by this time, they were only 30¢/pound live, that they just simply had to go.

This kind of a disaster, has long-term repercussions and producers are never prepared for that. The industry is not prepared, either. What we found was an immediate fast tracking of all of the activities that an Association had to enter into. Within the day on May 20th, I had been on three conference calls all about an hour long, all discussing what the Canadian Animal Health Coalition should be doing, what Manitoba Cattle Producers should be doing, and what the National Association – the Canadian Cattlemen’s Association – should be doing. Thereafter, virtually every day, there were conference calls. As the weeks went on, they became less frequent but, certainly, the challenge of the issues became much greater. It was, I believe, a lack of planning for emergency management for a foreign animal disease or any other disaster or event that can impact an industry that really created some challenges for us.

Before BSE, the beef industry really felt that we understood the things that were really critically important to our industry. Consumer confidence, of course, has always been one. We have three marketing arms of the Canadian Cattlemen’s Association. One of our provincial ones deals with marketing to our consumers and ensuring that they are getting a good product, ensuring that they are seeing that as one of the options for choice. We were also convinced that we had very good international domestic standards, so that our industry was viewed well by the rest of the world. We felt that we had good quality controls at the government
level and, at least from the primary producer’s perspective, we had more
traceability than we needed. We could trace our animals from our farms to the
packers, at least if there were a problem we could, and certainly the packers
would find us first if there were something wrong with the final product.

Well, what we learned was, that all of those assumptions were quite challenged
during the time of a disaster. The first one – the consumer confidence: every
other country in the world that has faced BSE, within a week of having the first
case diagnosed, they have lost in excess of 50 percent of their consumer
confidence. On that very first day, the most chilling thought was: Denmark, who
had only had one case of BSE, had lost 75 percent of their consumption within a
week. What were we going to do with all of that product when we knew we could
not eat our way out of it?

The second lesson that became abundantly clear was the need for very clear
government standards and regulations in an emergency. Can you recall? Can
you trace? Can you ensure that you have the right answers when the industry is
faced with an onslaught of media and consumers and public and government
officials who want to know those answers? Did we have any emergency
planning? Who were the first people to be called? What kinds of arrangements
did you have to make in terms of dealing with animals for disposal, dealing with
product that was perhaps in shipment and had nowhere to go? It was sitting at
the border; what do you do with it? We also found out very quickly just how
dependence on export markets creates the largest challenge in those situations.

Perhaps the most enlightening, as we moved through the weeks, was the need
for broad industry and public awareness of what your industry actually does. If
you are going to garner understanding and support, there needs to be an
attached awareness of what the industry is all about.

So, first of all, I will talk about the food safety and the traceability issue. We have
the Canadian Food Inspection Agency that deals with the quality controls and the
assurance that our food products are safe. We have processing inspections and,
of course, that is why the cow was found. On inspection, there were tissues
taken; she was condemned and later the investigation was undertaken. The
international confidence in that system, and the domestic confidence, shone
clearly during those first few days. The follow-up to that was: did our system
work beyond that? Could we trace and find out where that cow came from,
whom she belonged to, how she had been infected, and where the product of her
remains had gone? The very fortunate part, again, was that we could, indeed, do
that. We not only were able to trace that animal to the herd of origin - to the
owner - but back to where the most likely source of that cow had been. We were
able to trace forward so that we knew that the render product had gone into
feedstuffs, not for ruminant feeds for cattle but to other products. We were able
to trace that all out, recall it and have it come back in to ensure that it did not get
into feed where cattle would consume it.
We found out very quickly that our CCIA tagging system for cattle, that had only been in place for a couple of years, was insufficient to really trace – in a case like BSE where the incubation period of the disease is so long. Therefore, we had to rely on some of the older systems: the branding and tracing back with that system. Just on a side bar, we will be much more prepared for a similar kind of a disease in the future when that system has been in place for longer.

The weeks during the investigation were most enlightening. As we saw the idea that it was a single cow take hold, we saw the uneasiness in the consumer and the public start to back off. Certainly from our perspective, that was critically important. The ability to trace and retract or recall all of those products really served us well in that particular case. At that point, the consumers were reassured that there was just one cow, that we knew where the feed and the products had gone, that none of it had gone into the food chain. This resulted in the consumer confidence.

From the perspective of a producer, it was at about that time that we really began to accept that the tracing system that we have with the CCIA was going to be critically important in the future, if not in this particular case. As producers, you have to understand that cattle producers, as independent as we tend to be, do not like to have to do anything that the industry tells us we need to do and putting an extra tag in a cow’s ear was one of those cases.

In terms of emergency planning, we found out very quickly that we were fortunate that the case that we were dealing with was BSE. If it had been foot-and-mouth disease, we would have had a very challenging situation. BSE did not have the infection rate; it did not spread. Therefore, you could contain the situation very quickly and that gave you time to communicate with your industry, with your producers. But we found just how important it was to have those liaisons with other parts of the industry, with other commodities, with government and with producers so that you can share the information. We set up a 1-800 line to try and offset the onslaught of calls that were coming in to staff who were trying to deal with the ongoing information gathering, in terms of preparing ourselves with information. We had to have a whole other track that dealt with responding to the requests from others. This was something that we were very ill prepared for.

CCA and the Canadian Animal Health Coalition also found the same challenge. Everyone that was involved found that there needed to have been more thought given to that emergency planning.

We have also come to realize, during this situation, how important it is to be able to have the regulations in place that will empower you to do the right thing at the right time. For example, “cease movement regulations”: in Manitoba, we have the ability through the provincial veterinarian to seize or to stop movement on a
product that he thinks has the potential to be contaminated or to be harmful or to cause some human health issues. Most provinces do not have that.

We also have a bit of experience in Manitoba with the idea of zoning. We zone an area in the Riding Mountain National Park area for bovine tuberculosis. But that is really the test case for all of Canada. If we had in fact been dealing with a foot-and-mouth outbreak, that would have been critically important.

We have to deal with issues around, depending on the disease, destruction and disposal. Of course, the timing very much is determined by the commodity. For beef, we are able to stretch out the shelf life of the product. They get heavier and they consume the feed but, for the most part, we have the capacity to hold them longer whereas, in the hog industry or the poultry industry, that time frame is much shorter.

We also found that we had not given the kind of thought to the whole issue of marketing and contingency plans. As the weeks went on, we found that we had this whole backlog of fat steers and heifers and fed cows that were just simply backing up. The processors were cutting and processing for domestic demand but, since well over 60 percent of our product normally went to the South, we had no back-up plan in terms of storage or capacity to freeze anywhere in Canada. We could have processed them; that was not the problem. The problem was: what do you do with them after? During that whole time frame, one of the most frightening thoughts or events that we could not control was the incoming or the importation of supplementary quotas: the product from other countries. So, while we were trying to eat our way through twice as much beef as we needed or would ever eat, we still had some coming in from all of the other countries that we normally traded with. At one occasion I asked, “Why cannot we just put a stop to this?” Well, most of it had been ordered three months in advance or four months in advance. It was all contracted. You cannot just turn a ship around in the ocean and tell them to go back home.

We found that we did not have any flexibility to move the product from one part of Canada to the other, certainly not in Manitoba – not the flexibility that we needed. In Manitoba, we have only one federally inspected plant. This is the only plant that could ship product from Manitoba into any other province. There were no emergency plans or contingency plans to deal with that reality. So, even though we had the opportunity to perhaps process more within the province by double shifting, they could not remove the product to Ontario or to where the consumers were.

One of the biggest challenges in marketing was 90 percent of what we produce heads to the U.S. So, without the slaughtering plants during a disaster, we were an island without a connection to the people that we needed. As primary producers, we were making phone calls to people we had never talked to before, trying to pawn off beef that they did not need but just simply trying to cut our
losses. It was costing us about $1,000 a day to feed the ones that were on feed in the pens and those were all animals that should have been gone.

One of the other challenges, the issue of the broader understanding, hit us smack in the face about June or early part of July when the main issues started to subside. The general public started saying, “Oh well, that is an old issue. Let us talk about other things.” You would hear a radio announcer, who was talking about the issue, be told by one of his listeners, “You know, we have heard enough about that.” They really had come to the conclusion that they were not seeing cattle die and so everything must have been alright.

We love to listen to the media but, when you are in the middle of a disaster, you are in the centre of attention and the last thing you want to do is to draw more attention to the situation. Yet you have to. In order to have the public understand the true magnitude, we had to go to the media and educate the public, educate our own producers about the situation that we were in and the needs that were becoming very critical. We spent a great deal of time doing that and meeting with government officials, something that I think it is fair to say the cattle industry had not done a lot of. When we first approached the Department of Agriculture and said, “You know, we think we had better start talking about some of these issues, about what is needed to help the industry through the disaster.”, it was very difficult. We did not have a working relationship where you could just walk in and say that today we have come up with a new challenge or a new solution.

The Department, about mid-June, decided that that was, indeed, what had to happen. Since that time, virtually on a weekly basis we meet with them and discuss, not only the programs that are in place, but also the challenges that we foresee and some of the solutions that we think we need to work on. When you are building an emergency plan and the strategies in the middle of a disaster, sometimes mistakes get made and certainly that has been the case. Ad hoc is never the way to go.

The issues that, perhaps, would suggest that we had been better prepared than we might have been certainly leads to consumer confidence. We did have a highly accepted food inspection system. Our system worked. Certainly in the first month or two, we repeated that to ourselves a hundred times, sometimes in one day. The system did work. As a result of that, we saw recognition from international trading partners early in the system suggesting that maybe the 7-year rule did not have to pertain to us. Perhaps we could see the border open in a shorter time period. In fact, we did. For the first time in the world, a country has reopened its borders to a BSE country, like Canada, in a shorter period of time. As much as the producers felt that the time frame was very long, that was quite an accomplishment. Now, albeit it is going to be in a staged event, staged progression – initially, just boxed beef which is flowing now – and, hopefully, in the first quarter of next year we will see live animals start to move forward,
particularly those under 30 months of age. But those are significant accomplishments that will, in all likelihood, result in the success of our industry surviving this event.

We also had the tracing ability. We have tags in our cattle and I can tell you, from experience, yesterday I spent about 8 hours tagging cattle – not once but twice so that if one tag fell out I could trace it back with the second tag. Did I resent those hours? Well, I was cold but I did not resent them. I am absolutely convinced that our industry and every other food-producing industry is going to have to be accountable for every step of our production. I believe that those cattle tags have been and will continue to be one of the most valuable tools that we use. It is not easy. Cattle do not really like them and we do not really like putting them in. You have to replace them. There is no sure way of doing it. But I think, in time, we will get better. Certainly, initially, we had a tough time convincing the producers to put a tag in that they could write on because producers want to be able to use it for their own records. Well, we have now convinced them, I think, that we have to go to an electronic tag. It is of no use to them, in essence. They cannot use it for their own ID but it is the system that, with electronic readers, will be able to trace those animals, not just from our place - the farm – but it will be put into the calf within a day of birth and it will be traced from our farm through to the packers or, if we are just primarily a cow-calf producer, from our place to the feedlot to the packers and on to the supermarket shelf.

We also found out, during this event, that we had a pretty strong infrastructure for our industry, one that I do not think we had ever really recognized. We found out very quickly how important the communications and the dialogue were going to be. We were able to convince our industry that, within weeks of the event, we needed to do some things differently. We needed to be able to increase our surveillance and understand, by science – using science – whether there were any other cattle in that age group that would have been infected. We also needed to change our practices in terms of dealing with the by-products of those cattle so what we do with the specified risk materials has all changed. We are starting the research on what our options are, in terms of dealing with those by-products. We do not want to put them into landfill. We want to use them for an effective use, if there is one; and whether that means rendering or utilizing it in some way through further processing for fertilizer, then those are the kinds of things we are going to have to investigate. But it was with the strength of the industry and the organizations within it that we were able to sit down and very quickly come to conclusions about what needed to be changed, so that the industry could move forward.

We were lucky. There was just one cow. Consumers’ confidence was not affected. They kept coming all summer, quite honestly, and enjoyed the beef that we produced. We had a reputation and I do not think we can overlook that, and a reputation with the OIE, the Organization for Animal Health for the world,
and with our international trading partners – that, when we said we were going to do something, we did it. When the International Review Committee came into Canada and watched to see whether we investigated thoroughly, they came away with the report that said that we had not only done it thoroughly, but we were transparent. We invited them in to watch and they were confident in the rigour that was put into that investigation. This confidence leads the rest of the world to accept that we have had a feed ruminant-to-ruminant feed ban since 1997. They trust us. They trust our surveillance and our inspection system.

So what have we come away from the BSE event with? – a clear indication that we have to keep moving forward. We are in the very early stages of having that tracing and ability to track our product right through the system. But it was one that proved itself this summer. We also have come away with an understanding that we need to prepare ourselves much better – prepare ourselves for the eventual case of some other foreign animal disease. Certainly all you have to do is to go to the EU and talk to some of the countries like Belgium or the Netherlands. The Netherlands has experienced 5 foreign animal diseases in the last 7 years. They have a system for emergency planning and management probably unparalleled – one that we will never see, I hope we never see, here. We can have one that will be equally effective, less costly, and perhaps more consumer-friendly and producer-friendly.

With the Canadian Animal Health Coalition, I was fortunate to have attended their zoning fact-finding mission just a month or so ago. We went to the EU to find out how they control a foreign animal disease. What we want to be able to do is to have some of those safeguards and those plans in place to better prepare our industry in the future, and not only our industry but for all of the other commodities that face the possibility of a real challenge or disaster in the future. There is a lot of work to be done that is going to be very challenging: the ability to compartmentalize Canada or zone Canada to contain a disease in a small area when we have such a sparse population - which actually is a strength but it is also a challenge when you are trying to contain diseases. But that is what we need to do. We need to build on the experience and not wait for the next foreign animal disease because, if we wait for the next one, the cost will be even greater.

The summer has been a most challenging one. As we work to understand, as producers, our link with the rest of the industry, it is one that producers do not always think about. Cow-calf producers do not realize how important their product and the safety of their product is to the feedlot which is to the packer which is to the grocery store attendant. We have learned a lot about that. Producers will no longer be able to say that we are independent, that we are the last entrepreneurs, the sole ownerships, because we finally have realized just how connected we are with the rest of our industry. We have also learned just how connected we are with the rest of the world. We feed our neighbours and our neighbours may be in Japan; they may be in the U.S.; they may be in Taiwan. They could be anywhere in the world. Those consumers do not meet
us on the street, as our consumers did several years ago. They have to trust by understanding our system and knowing that it is safe. We have to be prepared to offer them that proof. We have learned that lesson. If we have not, it will be at our own peril because this experience has been a wake-up call for all of the food producers in Canada. If it does not serve as a warning to us this year, then each of us as export-dependent producers will have to pay the price. Thank-you.

David Gardiner
Executive Director, WESTAC
Afternoon Chairman

On behalf of the whole group, I want to thank you on really two levels: one, I think from a professional level, for giving us a picture of what it would be like to face an unprecedented situation, a disaster if you like. The kinds of questions you had to ask yourself, the kinds of steps you had to take, be instructive for all of us, no matter how we define our market. To think what we would do if we woke tomorrow morning and (found) our market were paralysed or gone – would we be ready? Would we be professional? Would we be able to survive?

On a personal note, I picked this summer to go to Kelowna to visit friends and, while there, lived through a one-hour evacuation notice and then an evacuation because of the forest fires. It was an interesting process to see, if you were given one hour to decide what in your life is important, what you would take with you because you might not see it again. It brings thought processes in very clearly, very focussed and we commend you for giving us the whole range of things. On behalf of the group, I would like to offer you a small gift and ask everyone again to thank Betty for her presentation.

SESSION 3
EMERGING TRENDS IN GRAIN LOGISTICS

David Gardiner
Executive Director, WESTAC
Afternoon Chairman

WESTAC, which is the Western Transportation Advisory Council, has been involved with the University of Manitoba almost since the beginning of the Fields on Wheels series, initially as presenters and participants and, as time evolved, a closer collaboration on the program development and mounting the event, largely because we believe that it is an ideal place for the transportation logistics sector to understand and relate to the main drivers in the agricultural business. Over
the years, we have been able to develop that level of understanding and hopefully reaction that makes sense.

I think it was Cam Henry this morning who said something to the effect that, if you asked for something more, you had an exponential increase in the complexity of the job. I think, as the agri-food business evolves, so does the complexity of the task of the logistics and transportation industry to respond. This afternoon, we have two sessions: Session 3 which will deal with the emerging trends in grain logistics and Session 4 which will talk about the new shipping options for producers. Our moderator for Session 3 is John Spacek who is the Senior Director of Manitoba Transportation and Government Services with an emphasis on strategic planning and policy development.

John Spacek  
Senior Director, Transportation and Government Services  
Moderator

Welcome to the afternoon session on the emerging trends in grain logistics. In terms of our session this afternoon and our speakers, I am pleased to welcome Tom Kleysen. For those of us in Manitoba, Kleysen and trucking is like Skidoos and Bombardier – they are kind of synonymous and Tom is well recognized in our community. Tom is a third-generation Kleysen in the trucking business and a major force in Manitoba and in the West.

Tom Kleysen  
President, Kleysen Transport Ltd.

I certainly do not consider myself as qualified on the grain business or as academically astute as some of the presenters I saw this morning. In fact, my reason for being here today, in part, is to learn more about the grain industry.

Today I want to talk about emerging trends in grain logistics from my perspective and, again, not necessarily an academic perspective.

Today, there are many interesting topics in the grain logistics business:

- There is ongoing concern about the aging grain car fleet, the construction of large inland terminals and the continuing construction of large inland terminals;
- The ever-increasing bulk rail incentives - I understand recently both railways have offered greater incentives to load unit trains from the high-throughput terminals to the coast;
- There is a lot of financial pressure on both producers and grain companies; and,
The rationalization and consolidation that are taking place in the agri-food business.

Another trend is the emergence of smaller-volume shipments. Now, smaller-volume shipments still might be in the thousands of tonnes but, when we bat around 17-18 million tonnes of wheat, that is small for the purpose of this presentation.

So, what is causing this emergence of smaller-volume shipments in the grain business?

- Well, we have heard a lot about identity preserve crops: the pulses, branded-grain products, the movement to organic grains in certain instances;
- We are seeing a growth in producer car shipments, again, leading to smaller shipments;
- And what I call ‘focussed specialty application’ which is a catchall for all those other special or narrow developments that are taking place.

What is driving the emergence of some of these smaller-volume shipments?

- One of the traditional things that has been heard about in the press and discussed a lot is the fear of GMO – a lot of people are concerned what GMO is, what is it going to do? There is certainly negative public perception and fear.
- The threat of bio-terrorism – everyone is concerned with terrorism in the world. Since 9/11, it is a different world. Everyone now has a concern: are they going to attack the food chain?
- Greater health consciousness – everyone is more aware of their health, certainly in North America, than they were in the past.
- Buyers are more educated and more aware of what is going on.

Last week I was in the United States at a conference. One of the big topics was the Hepatitis-A outbreak that was associated with a Chi-Chi’s in Pennsylvania. In the end, approximately 575 people were infected and there were several deaths. I was travelling so I was not necessarily reading a lot of papers or looking at a lot of television but I certainly became aware of it. The media can get to you and publicize anything. It dawned on me that there is an identity preservation issue. As I went to several restaurants, I overhead people saying to their waiter, “Did you get your onions from Mexico?” Of course, the waiters could not answer and the next question was, “What foods do you put onions in?” So I would venture to say that everybody today is more aware from the media of the foods they eat and there is going to be growing concern as to where products come from.

I want to talk about what I see is an industry-wide consolidation. Companies all along the food supply chain are consolidating and it affects some of the more traditional movements of finished food products. The Kraft organization continues to buy up and become a stronger, more dominant player in the marketplace. We are seeing General Mills, here in Canada in the last year, buy Pillsbury and a number of other groups becoming more dominant in the marketplace.
As well, the grain industry is following this trend, towards food consolidation. The Manitoba Pool Elevators, Alberta Wheat Pool, UGG, Agricore United, ADM-type transition is one of the many consolidations that are taking place in western Canada. These organizations - with the rationalization of elevators, the movement to large cement elevators - have developed a system that is designed for high throughput unit train type operations. The larger organizations are having difficulty embracing the smaller IP grain systems because they do not lend themselves to that type of operation.

In addition to the other factors, consumers are becoming concerned about the food origin. Sometimes – I will not go into all the economics today of consolidation and why it is being done but – as a consumer, when you think of a very large organization, it creates further concerns. It certainly does in my mind about where my food is coming from. This is increasing the demand for IP or specialty food products and, increasing the velocity of which it is taking place.

Consolidation and IP

It is reasonable to say that there is growth and demand for the IP and specialty-type products. Large-scale companies are not well positioned to handle the IP-type products. They are totally focussed and their infrastructure allows them to concentrate on bulk shipments. This is creating somewhat of a vacuum in the market. I do not suggest that the large elevators/unit train concept is not a good one. It will continue to serve a large segment of the transportation needs. The bigness itself is creating new demand for smaller shipments and so, in addition to some of the more traditional drivers for relatively smaller shipments.

Big consolidated food companies and grain companies are producing products or services that are geared toward the low-cost, mass-produced, generic food-type products. I see emerging smaller niche food products, markets, that will be premium price, identity-preserved, differentiated or branded, specialty food products. I read with interest, in an article from an American source a couple of weeks back – where market research has shown that 30 percent of the population in the United States is willing to pay more for food that comes with a story, a different quality or a different attribute. The market in the United States is prepared to pay a greater dollar for the specialty chains, identity-preserved, specialty segment, whatever you want to call it.

To me, it is encouraging that there is an opportunity emerging for the smaller grain shipments that are taking place. This creates an opportunity for a firm our size and for producers, as well.

Kleysen Transport, while known as a trucking company – and certainly trucks are still an important vessel within our organization – today is comprised of six inter-related strategic business units:
- our bulk transportation solutions business unit;
• our deck transportation solutions business unit;
• our intermodal express solutions business unit;
• our fleet repair and maintenance which repairs our fleet, designs specialized equipment, as well as the work for outside;
• our multi-commodity distribution or, as we call it, the multi-commodity transload storage and distribution;
• and we have our products and commodities operation; we are also involved in the manufacture and distribution of road salt, calcium chloride, and a number of other products.

In 1999, our organization decided to enter into a new venture and started construction of a 60-acre transload storage and distribution site in Calgary, Alberta, in cooperation with CN. We tagged this as a multi-commodity transload storage and distribution centre. It was designed to provide high-volume transload services between truck and rail, including state-of-the-art warehousing, storage, inventory, and management distribution centres. The multi-commodity transload storage and distribution centres were designed to extend the reach of rails, taking into account the long-haul strength capabilities of rail, with the flexibility and the efficient pick-up and delivery capabilities of trucks. Today we have transload centres in various stages of construction and development in Edmonton, Saskatoon, Winnipeg, several commodity-specific sites in B.C. and a couple of others.

Let me tell you about our leading venture in Calgary and why I am more interested in the grain business. CDC at the centre - and we call it a multi-commodity on the 60-acre site - we have a metals transloader distribution centre; we have a lumber and forest products distribution centre; we have a bulk commodities and transload centre; we store fertilizers and a number of other bulk products – again, transferring back and forth between truck and rail. What we are interested in today is our grain transload and storage business.

In Calgary, our storage sites include about 2,000 tonnes of grain storage. We have a 50-car spot. I should add that this facility is not designed to handle bulk movements to the coast; we are not in that game. We do not view ourselves as competing with large grain companies. We are not a unit train operation. In fact, the 50-car spot can be used for grain but is also used for some of the other commodities on-site.

We are focussed on the feed grain products, primarily geared towards the feedlot and feed industry. I was told, when we put a number of capital dollars into the site that, at the time, our target market was barley from northern Alberta, Saskatchewan, Manitoba and a few other locations. I was wisely informed, that about every 1 in 20 years corn will overtake or be cheaper than barley. After our first year of operation when corn defeated barley, it happened again in our second year. At the end of two years, I felt really good because now I have a 40-year run because, statistically and academically and scientifically, this could only
happen 1 in 20 years. I was feeling really good this fall then we had BSE. Welcome to the grain business! It is an industry that is always changing; there are always channels and, whenever you think you have it figured out, it throws you a few challenges.

In spite of some of the crop issues, when we got going, the timing was wrong. Initially, the volume was going to be generated by the railroad. We had discussions with rail and they saw this as an avenue to utilize the efficiencies of rail, to handle certain geographical areas of the country, to some extent gain back business that had gone over to road. A number of the large grain companies had expressed interest in the facility and accommodation of the volume was really being pushed at the time by those two main sources. The drought crop resulted in limited volume and success in the first year. I made a lot of wrong decisions in my life; getting into that one and ensuring that I had a multi-commodity base was a good one. I had a few other challenges there. At the same time the grain problem occurred, we got into the problem with the lumber trade. So, again, I was thanking God for a couple of years there was multi-commodity - some steel and a whole bunch of other commodities - that kept our head above water. It has been a tremendous adventure and it is moving along well.

This story has been as much about free enterprise and, to some extent, my background in the trucking business. So, what did we do? We had this vast investment in place. It was not necessarily going the way we wanted it to go. There was still a lot of product moving; there were still a lot of cattle being fed. We just were not getting the share of it. So I went on the offensive and, with a couple of our people, went to a number of the feedlots and got to know, right at the core level – what do the people really want? What are they looking for? How can we make this work? So we talked to the feedlot owners – the people using the product. What they started saying to us was: “Well, we have this guy, we have that guy. Can you just buy grain for me?”

Our organization, well known as a trucking company – and certainly that has been in our roots and heritage – view ourselves today as a solutions company using all modes and technology to ultimately derive value. We listened to them. In January of this year, we established a grain merchandising operation. When we first got into it, I talked to a number of the people and started investigating myself. I looked at taking a couple of courses myself in that business. I quickly realized that I have been too far removed from university to spend that kind of time in hours of dedication to it and started looking in the marketplace for somebody who might be able to fill our grain merchandising position and use that strength to combine a bundled service in what we were trying to accomplish. I was very fortunate that we hooked up with the Stowe family – a well-respected family in the grain business in Manitoba. Since January of this year, Warren Stowe has been running our grain merchandising operation.
We established the grain merchandising operation. We decided we were going
to be high-touch – talk to the customers, go to the feedlots. We became high-
touch – in terms of talking to the people, communicating with the people, going to
their site. Obviously, we need to be competitive because, no matter what you do,
you still have to be competitive and create an efficient service. We decided that
what they want is: to always have a little bit of grain on demand. They are always
going to buy at a price, but if you can have some on demand, they will pay a little
premium when they need it because cattle just have to eat. So we keep a little bit
of grain on demand.

We were understanding and meeting the needs of the end-user. We have been
in the trucking business for a while. We had the handling operation through our
multi-commodity transload storage and distribution centres. We have done a lot
of work with the railroads and, with those involvements, we understand and really
believe in the capabilities of the rails to a larger extent than we ever had in the
past. So we are combining those strengths in this case to give a full service to
the end-user – combining our strengths and getting to the merchandising end.

Today, I am happy to report that we are becoming accepted very well in that
marketplace – again, a relatively small feedlot-type area, in southern Alberta.
Our customer base is growing; volumes are growing. Our commodity base is
growing beyond some of the traditional barleys into some by-products. The
financial viability is rewarding. This could be a story of “Never give up” and/or
listen to what your customer really wants. I think I have a better understanding
through this experience and what I have learned here today.

So, what does this all mean going ahead? While the consolidation and the
movement towards larger conglomerates might be frightening to small and
medium-sized firms, we have demonstrated, in our own special application of the
grain market, that those producers, small manufacturers, logistic organizations
who are willing to listen to their customers and communicate with them, bear
some added responsibilities:

• Change their traditional perspectives. We are known as a trucking company,
but we are transloading rail; we are buying rail freight; we are buying
commodities; we are selling it.
• Develop some new business relationships.
• If you can find your way to do that in your business, you can successfully find
your niche in any marketplace. I would suggest that, while there are lots of
challenges related to that identity preserved and specialty issue; in fact, it is
going to create an opportunity. It is going to create a market for those willing
to take the risk, those willing to look beyond their traditional channels and,
hopefully, it will also give those producers the opportunity to squeeze out a
few more dollars and better reward the risk that they take each and every day
to provide the food and lifestyle we all enjoy in Canada.
In summarizing, the velocity towards the growth in the identity preserved crops – pulses, specialty branded grain products, organic grains and, in our case, specialty-focused applications - will create new challenges and opportunities for producers and small manufacturers and the formation of new focussed, value-added logistics chains.

John Spacek - Moderator

Our next speaker is Tamara VanWechel. Tamara works at the Upper Great Plains Transport Institute in the Agricultural Transport Centre. Welcome to Winnipeg, Tamara.

Tamara VanWechel  
Associate Research Fellow  
Upper Great Plains Transportation Institute, North Dakota State University

We surveyed businesses in the United States for shipping oilseeds and grains by container. Although it was done strictly in the United States, hopefully it will be interesting to you, as far as the current trends in marketing practices in containerization go. This project is entitled, “U.S. Containerized Grain and Oil Seed Exports – Industry Survey.” I will be quickly going over the background and I will go into the survey itself: the design, administration and response of the survey and, in a little bit more detail, about the results which are split up into four sections: shipper characteristics, market practices, container export activity and market growth.

Demand for specialized and higher-value grains is increasing, thus creating a need for these IP movements. Containerized shipping developed as a result of the need to transport general cargo or product in lots too small for traditional bulk system as well as the need to move high value and delicate cargo. Due to this greater IP grain marketing, there is a real need for research in this area. In Phase One, we used secondary data sources to profile the containerized grain industry in the United States. We then decided that we wanted to get some primary data, so we decided to do a survey of shippers who were actually using containers to transport grain.
This map shows the leading container terminals based on average annual volume, 1990-1998. This map and the data come from Phase One of this project and are based on public rail use data. The circles represent the top leading container terminals for all commodities and the squares are for farm products. The five leading container terminals for farm products, at the time of this report which was April 2002, were: Portland, Oregon; Los Angeles, California; Lubbock and Dallas, Texas; and Memphis, Tennessee.

Data from the Journal of Commerce Peers database indicate grain container export origins and numbers of TEU’s by state. The states with the greatest originating number of TEU’s include: Washington, Oregon, California along the west coast, and Minnesota and New York.

The overall trend toward containerization in agricultural shipping is evident in temporal statistics. By weight, an estimated 15 percent of all agricultural product exports were shipped by container in 2002. This is a 40 percent increase compared to 1992. It is estimated that, in the U.S., over 600 companies are currently involved in shipping containerized grain and grain products to over 130 countries. The container shipments are obviously trending upward, and have been over the past decade. Container export TEU volumes have increased by 500 and 200 percent for soybean and animal feed industries respectively over the past decade. The reason these commodities are chosen for illustration is because of their prevalence and consistency in historical data. Containerized
U.S. exports’ share of market by weight for soybeans, in 1992, was 0.4 percent. In 2002, it was 1.8 percent. For animal feed it was 2.6 percent in 1992 and 6.7 percent in 2002. Pulses are also included at 66 percent in 1992 and 70 percent in 2002.

In developing a survey instrument for this project, a committee of nine governmental and private industry experts were consulted. The committee not only helped design the survey but also helped to identify the survey population. The resulting survey product was designed to cover four aspects of the grain container market including: shipper characteristics, marketing practices, commodity activity and industry growth factors.

Initially, the mail survey was sent out to 570 potential shipper respondents. It was supplemented by a phone survey of a random sample of those shippers and then an additional phone survey of 40 potential containerized grain and oilseed shippers. In total, a response rate of 37 percent was generated from 228 responses to the survey. Twenty percent of these businesses reported that they were actually active in marketing containerized grain and oilseeds to foreign customers.

The research findings are based on the 228 survey responses of which 47 were actually active shipper survey responses. These businesses covered 19 states, 13 commodities and are based on the activities from 2000 through 2002. In the first section of the survey, we asked about shipper characteristics and they resulted in the following statistics:

- an average annual volume of 187 TEU’s per year was reported;
- 80 percent of the businesses said they had been in business for 10 years or more;
- 67 percent reported a corporation business structure;
- there were 19 primary business locations;
- 23 primary intermodal terminals; and,
- the distance from business location to primary intermodal terminal ranged from 0 to over 2,000 miles with an average of 366 miles for all shippers.

Of the 23 primary intermodal terminals identified, some of the most common terminals were: Seattle, Spokane and Tacoma, Washington; Portland, Oregon; Los Angeles, California; Columbus, Ohio; Houston, Dallas and Amarillo, Texas; and Chicago, Illinois.

In the second part of our survey, we asked the shippers questions regarding their market practices. When asked about contracts:

- 51 percent said they handled negotiations with ocean carriers themselves;
- The second most popular contract negotiators are freight forwarders or brokers;
• The number of buyers served by an individual shipper was found to range from one to 600 with the average number of annual contracts with foreign buyers being 83; and,
• The typical contract duration for shippers is 12 months with a range from 2 to 17 months.

Then we asked shippers to specify which regions they were serving with containerized field products:
• By far, the most common region containers are being shipped to is Asia, with 91 percent of respondents reporting doing business in this region;
• Europe is second among regions with 54 percent of shippers reporting doing business in this region;
• Then, the Middle East was identified by 22 percent; and,
• North America, 17 percent.

We also asked reasons for shipping by container. The most common answers were:
• buyer-request, which was stated by 54 percent of the respondents;
• food grade product; and,
• non-genetically modified products.

Other popular answers were:
• deficiencies in foreign infrastructure; and,
• small quantity sales.

As far as what shippers used to monitor the market and manage their business:
• Over half of the respondents said that they use the Internet;
• Over 40 percent said they utilize consultants, brokers and printed media; and,
• 33 percent said they use federal and state public agencies.

The third section of the survey included questions about container export activity:
• Soybeans were reported as being the greatest volume grain exported by container, with 73 percent of total respondent grain and oilseed volume;
• Pulse crops accounted for 18 percent;
• Wheat, 5 percent of the volumes; and,
• The last 7 percent are other commodities that include: buckwheat, corn, popcorn and sunflowers.

The most common product packaging methods for containerized moves are bag, tote and bulk. Bags are the most prevalent form of packaging for all commodities. For shippers of soybeans:
• Bags were used by 99 percent of the respondents who were shipping soybeans;
• Bulk - 90 percent; and,
• Tote - 60 percent.

For pulse crops:
• Bags were used by 75 percent;
• Bulk – 50 percent; and
• Tote – 12 percent.

One hundred percent of shippers that are shipping wheat reported using bags as the package method.

Shippers reportedly receive an average $5 premium per hundredweight for containerized grain and oilseed exports compared to local bulk market price. Going into more detail for the premium:
• Soybeans had an average of $4.60 per hundredweight or $2.75 per bushel;
• For pulse crops, there was an average of $1.10 per hundredweight.

In the last section of the survey, we asked the survey respondents to rate factors that are important in the future success of their containerized trade. These factors were rated on a scale of 1 to 5 with 1 being not important and 5 being very important:
• The number one factor for future success in containerized trade was ocean shipping rates with an average rating of 4.6;
• Availability of containers had an average rating of 4.2; and
• Rail shipping rates for containers rated 4.1 on average.

So those were the things that shippers say are the most important in their future success.

John Spacek - Moderator

We now are open for questions from the audience.

Tom Kleysen – Speaker

Tamara, if I could begin the questions, perhaps. You had some data that showed the shipping differences between containers and bulk as being about $15 difference. Do I interpret that premium of $5 per hundredweight meaning there’s about $100 a tonne premium that offsets the $15 of higher costs for containers?

Tamara VanWechel – Speaker

The premium is actually just what we asked the shipper. I do not know anything about the cost comparison. This was before I even worked at the Institute. If you
Want more information on that slide, I would have to refer you back to Kimberly Vachal.

**Attendee**

Tamara, amongst your reasons for why shippers or customers choose containers: identity preservation was not on the list. What is your view of how, if you did that survey again, would it show up, or is it basically economic issues that are driving the choices?

**Tamara VanWechel – Speaker**

It was not on the list but, when I was involved in looking at the survey data, identity preservation came up occasionally. If we did do the survey again, it would have to be one of the options because it is becoming more and more prevalent.

**Attendee**

Tom, from time to time, we get comments from the industry saying that container availability is an issue and a problem, particularly for a location that I am familiar with here in Winnipeg. Is that an issue and, if it is, how do we address that?

**Tom Kleysen – Speaker**

I do not think there is any shortage of containers in Canada, to go back to the Pacific Rim. The last time I took a look at any of the numbers, it would indicate that containers coming from the Pacific Rim - landing in Vancouver, on their head haul with manufactured goods - that less than 20-30 percent on an annualized basis will receive a load going back to the Pacific Rim. So there is 70 percent of capacity of containers that are going back empty to the Pacific Rim. It is not an issue of availability of containers. They are available. Now, whether or not the ocean steamship lines want to make them available to load products or whether their arrangements with the railroads will allow them to stop and pick up products, that is what is at issue – not the capacity. The capacity exists today, and well into the future to handle specialty or pulse crops.

**Attendee**

Tom, I noticed in Tamara’s presentation that the average container haul to terminal was 600 kilometres or 366 miles. Is that typical? Would that be our experience in Canada? It sounds like a long haul.
Tom Kleysen – Speaker

I would think that is a long haul but I believe in Canada we are uniquely positioned that we can cover a larger distance than our American counterparts and that is primarily a function of our B-train weight laws where we can haul two containers – in this case, 20-foot containers. So that would be excessively long for a drayage haul but, certainly in Canada with our weight laws in place and the use of 20-foot containers, we have a tremendous ability to have an economical cost to perform the drayage function related with overseas shipments in containers.

David Gardiner – Afternoon Chairman

Tom, I was wondering as you were describing your distribution centres – these multi-modal centres – what do they cost and do you get any participation from your customer base, either in some form of throughput agreement or partnership in actually owning a facility or is it all at your risk?

Tom Kleysen – Speaker

We have a number of arrangements, actually. The centre in Calgary I will speak specifically to because it is a full-blown one. The centre in Calgary is 100 percent of our capital. There were some minor switching facilities that CN put in at the time. Our commitment on the site is only, from our customers, as good as the service and the value we drive into their business. We have signed contractual agreements but, at the end of the day, it is the value we create and the service we create for our customers.

Now, we do have other arrangements where we operate terminals for people that are on different arrangements but the one in Calgary is 100 percent owned.

Attendee

Do you have numbers for the supply of containers in the hinterland?

Tom Kleysen – Speaker

I would suggest that most of the containers you see in Canada on a westbound basis are empty and available. A lot of the containers had moved inland from Vancouver. There was a growing trend to destuff those containers and use domestic containers. But every time you see a rail line and a container on it going west, you can bet that 70 percent of those containers are empty. I do not believe it is an issue of capacity in any way, shape or form. It is whatever arrangements the ocean lines have with the railways and their willingness to stop and load cargo. They are available in western Canada.
SESSION 4:
NEW SHIPPING OPTIONS FOR PRODUCERS

David Gardiner
President
WESTAC
Afternoon Chairman

New Shipping Options for Producers continues the theme of the logistics and transportation opportunities and developments. Our moderator is Paul Earl who is a Professor at the University of Manitoba Transport Institute.

Paul Earl
Professor
University of Manitoba
Moderator

This session that we are dealing with ‘New Shipping Options for Producers.’ This is one I am looking forward to with great anticipation. There are, as you know, rights in Canada for farmers to ship their own cars. There have been various ways in which that has been done and various conditions under which there have been quite a number of producer cars being shipped. What farmers are generally looking for is more competition for their grain.

The first speaker is Mr. Ron Witherspoon. He is with the Pike Management Group. Ron has over 30 years of experience in agriculture and finance.

Ron Witherspoon,
CFO
Pike Management Group

When we are hearing about Kleysen Transport’s experience in setting up their terminal, nothing ever goes according to the business plan. One of my favourite expressions is: “It is a long way from PowerPoint to Profit,” I am not here to tell you that this industry is going to change very easily. I am going to tell you why we, as an organization, view this change as inevitable and why we, as an organization, a group of large-scale successful farmers, are already on the IP bandwagon.
I have to take issue with two things that were said this morning. One was that tracing or doing IP in grain does not pay. Our members disagree with that. Our Ag coaches are already using AgTrace software – (http://www.agtrace.com/) software that we developed, which costs them less than 1¢/acre to do all of their tracing and they are getting 50¢/bushel premium – because they can provide this information to a processor that provides it to a Japanese customer that is paying that level of increased price because you are tracing. They are finding, as a secondary benefit, that they get far more useful farm management information that helps them run their farms. Every one of their staff use a Palm Pilot and enter everything that they do on every day. We bale that together with the software. They can use it for environmental plans, a whole bunch of other purposes and, as I said, that software can be uplinked to end-customers.

The second issue is on the livestock side: Canada is behind Brazil in tracing cattle. It is really a shame that we have done such a poor job of being competitive. Our main fear is not the U.S. producer. Our main fear is countries like Brazil that have tremendous cost advantages and a tremendous ability to uptake technology and compete with us. We have brought AgInfolink software (http://www.aginfolink.com) into Canada; that links into the largest database in North America. Our producers will be able to put their cattle anywhere in the world with the end customer being able to see everything that has been done with that cattle. Is it cost-effective? $5 an animal. We are seeing at least $50 additional profit per animal, sometimes $100. So our view is that tracing makes business sense.

I am here to tell you that the Marine Container Services has opened a terminal in Moose Jaw. Dory Tuven could not be here to speak.\textsuperscript{36} CN is partnering to provide rail service. Major container shipping lines have committed resources to the project. When you were asking whether containers were short – of course, they are. Certain people cannot get containers when they ask for them. It is like, as a banker, I would say, “Well, money is not short. It is short for certain people.” So not everybody can call up and get containers delivered to their farm. One of the things that we see with this container terminal is that it is going to help make containers more available.

\textbf{Wal-Mart} – short story: dominant player in the world in many areas. They are going to be dominant in the food industry and, so, one of the things that we focus on is – ‘What does Wal-Mart want as a customer?’ For meat, they want an RFID tag in every package of meat that comes into their store sometime in the near future. So, if you want to be a supplier to them, you are into tracing. Why? Proctor & Gamble – 15 percent of all of their products go through Wal-Mart. Well, we are going to be in a position sometime, as agriculture producers, where a large portion of our product goes through Wal-Mart. I do not call them a ‘store;’ I call them a software company that has a warehouse. They are not a store.

\textsuperscript{36} He is on the Board of a university in Haifa and, unfortunately, he was not able to attend.
They have a warehouse-type building; they have shelves in it. Really, the thing that creates the most value for that company is that they use software systems well – all about arranging delivery, managing quality.

Supply Cooperation – it is a big thing with us. We – Gary Pike and Ann Anderson - are speaking in Regina at Agribition about setting up some alliances that we see can take out $100 of cost per animal in the beef industry. It is all about cooperating with other players in the food chain and creating more value. As an example, they are estimating $8 billion in Europe and $7 billion in the U.S. will be generated through alliances through cooperation by 2010.

The key to success is the exchange of data. Raw material supply has been identified as a major source of savings. We are working with one company that has increased their bun-yield by 12 percent from every bushel of wheat by knowing where they are sourcing that wheat and what its traits are. When you produce 4 million buns a day, that is a fair amount of additional profit. How is this going to be divided? We believe there will be ways for this to be shared by all participants and that includes farmers.

Soybeans - I checked my fridge this morning. I had 5 containers of soy product for every dairy product. The amount of differentiation that has occurred in the soy industry in the past 10 years. We do not see this as being a product that is as differentiated as some others.

John Deere’s vision – we are on retainer to John Deere’s new products group – the group that reports to the Board that is supposed to take the company in new directions. As an organization, they know that you cannot maintain a constant business model. So we helped them establish a division called ‘Food Origins’ (http://www.deere.com/en_US/foodorigins/index.htm). It is part of their strategy to participate in the industrialization of the food chain. The people that are building the backbone for this system: a lot of them worked on developing ‘Visa.’ As a banker, I know the impact of being able to exchange data in real time over a backbone like Visa. When you apply it to the food chain, it is going to result in substantial cost savings in the long run.

John Deere has substantial IT capabilities. When you think about it - the size of that organization and what they do to maximize efficiency in their organization - they have the ability to apply that to the food chain.

Containers provide numerous benefits and IP is one of the most significant. So you will not hear me talking about shipping rates. To us, the whole issue about containers is: new value, ways to segregate, and ways to protect your value.

John Deere has quite a few patents in the area of containers. There are three key things that they look at: relationships centred on differentiated agriculture product supply will grow significantly; environmental and food safety regulation
will result in agriculture production becoming a permitted, highly documented activity; and production will become increasingly industrialized. Coping with regulations is going to require a tremendous amount of data management, IP, in order to ensure that we are complying with all regulations.

As a banker, I know from an alliance I set up of Farm Credit Services in the U.S. that, if you wanted to get a loan in the pork industry and you were a beginning farmer, you did it through having a relationship with a processor. This shows how much each of the industries moved to being in a contractual relationship or being in an alliance. So it significantly changes the amount of information that is available to members of the alliance. Production level data, chain data sharing and management are the key impediments for getting a lot of the value out of this. So, the key needs that have been identified are more infrastructure and related services (containers are part of that infrastructure).

Production will continue to become increasingly industrialized - very large-scale, very efficient farms. A young farmer, not yet 30 years old, does not produce anything but 5,000 acres of lentils a year. His strategy for the development in the future is to be the most efficient lentil producer in his area. Gary was down in Chicago showing the group there, that is working on a project that will help farmers manage their farms much more efficiently, how to really increase their ability to know what is going on in their farms. The key guy there farms 2,000 acres – very wealthy, productive farmer in the United States. After we showed him the financial returns for one of our typical clients, he came in the next morning and said, “I did not sleep all night. You guys can kick our ass. We are nowhere near as profitable as you are in Canada. We do not have anywhere near the opportunity that you have.” The information that we have is showing us that, by changing the way we operate, focussing less on who owns the asset – whether it be land, whether it be containers, that type of thing – and focussing on return on investment, we are going to see a dramatic change in the industry. Right now, 3 percent of the farmers in North America produce 50 percent of the food. Our focus is on helping get that to 1 percent, helping our members be part of that 1 percent. So – widespread use of industrial practices is going to move into agriculture. This will produce major opportunities in the agriculture service areas for the right folks.

**Industry model change** – we are going to move from supply-based, commodity-oriented, open-spot market to demand-based, attribute-specific, production contracting. We see that for an awful lot of the product that we are producing right now. Business model shifts from independent production practices to coordinated production practices with potential buyers. So, basically, the majority of what you produce will be produced under contract for a specific buyer.

We see tremendous opportunity to move product into Asia. When you get product over to China, they have to have humans take that product out of a bulk boat on their backs in sacks and carry it around. So, when you look at the ability
to take a container of feed peas from Bugtussle, Saskatchewan to wherever in China, the all-in cost – containers are very competitive.

These forces affect the storage and handling requirements. Growth in specialty products will stress current bulk systems, will require more smaller storage facilities – so it is an opportunity for containers.

How these forces will affect the prospects of containerization – tighter relationship between producers and buyers enable the attribute-specific purchases; security and safety in the food supply can be more reliable. There is a lot of hidden value that we feel exists in being able to put products into containers. It allows producers and processors to identify units of production. Traceability between supply chains and participants is one of the first steps.

Containers are the physical side of traceability. Everybody already understands this model of segregation tracking and containment leading to the other items.

This one surprised me. The analysis of infield loading significantly reducing the risk in supply chain handling, where risk is: every time you move grain to a different storage or vehicle, it might become contaminated. The product gets handled 57 times and goes into 14 different storages in a traditional bulk system. It is exposed only 7 times, if you are putting it into containers. So, again, do not look at containers just in terms of shipping cost.

Infield loading is constrained by several factors:
- Virtually none of the 3 million containers used today in North America are field-loaded;
- The products exported in containers today require processing of some kind;
- Challenging phyto-sanitary requirements and documentation requirements for anything put into containers;
- Ship-line limitations on TEU domestic use; and
- Field loading will require tight logistics, coordination and infrastructure.

Is containerization an emerging trend or wishful thinking? Well, in John Deere’s view, it is not a matter of ‘if’ but ‘when’ containerization transitions from a niche market to a common delivery and segregation alternative.

Railways – CN became involved with the project at the onset in July 2000. They have been part of the planning process. The Moose Jaw facility has received support all the way up the organization. It is a new and innovative opportunity with a vision to bring the container to the farmer instead of the farmer bringing the grain to the container. This has enhanced CN’s presence in southern Saskatchewan and CN views this new venture as a partnership in action. We do not see containerization as something that can be driven just by one force and we are very pleased with the work that CN has done in helping develop this.
Domestic fleet – Dory Tuven’s vision is to modify containers or have containers built in China that are very easy to fill – you just put top-loading hatches on. Domestic fleet of cans could be better designed, condition-specific to our industry and climate.

These containers would only circulate on the Prairies. The farmers could own these containers instead of owning traditional grain storage. This is an issue where we feel - as a group, the way we look at things – that we need to do more assessment of this in the future. It is not something that we see as low-hanging fruit right now. But it is a direction that we feel merits some assessment.

International fleet – conventional containers are readily available from a number of companies for the purpose of international transportation. We have talked to companies that are willing to put a container on your farm for free! How does that compete with the cost of a bin? It sits there for free until you move that grain. These containers can be utilized for short-term storage. After six months, one is supposed to pay a tariff. Well, the emphasis is on the word ‘supposed to’. There are currently a lot of containers that are sitting with nothing to do. The supply already exists and companies like MCS Containers can make these available when required.

How to load? Utilizing existing trucking capacity to haul from the farm to a central location is a cost-effective method. So I found Kleysen’s presentation very interesting. Processors such as Crown Ag (http://www.crownag.ca) have their own container loading facilities: as well, MCS Containers. I cite them as one example because, in Deere’s assessment, they are one of the best IP companies in the world. They are located in Regina. They do very good segregation and, as part of their business model, they are looking at expanding into utilizing containers as part of their advance- and post-storage. Other private sector players will come in. There will be shared ownership with a group of farmers.

How to do on-farm loading of domestic containers? Very easy – you can do it right from the combine. On-farm handling requires some specialized equipment and MCS is going to be doing a pilot on this, this year. MCS Containers will provide drop-off and pick-up service. So, basically, you could order as many containers as you needed, fill them, have them picked up at your farm.

SGS Canada is a global company that started out as a bank. They provide quality inspection and grading in over 140 countries. Back in the 1700s, there was a problem with moving wheat between the Ukraine and France. They stepped in, solved that business problem and have grown to what they are today. They recognize the value of IP and having information coming directly from the farmers. They are one of the players that are looking at using our tracing information to create more value. They are considering a broad range of products and logistical management on and off the farm. Basically, what they
would be able to do is: put grain in without conditioning it or condition it and put it in; they would sample it, seal it and certify the quality of it; and then web-expose this information to any vendor that you wanted to deal with in the world. You could basically become a direct seller, on e-Bay, for your grain using containers to get it from your farm to an end-customer.

**Financing** – Canadian Grain Commission's bonding process has significant deficiencies. When we have farmers that are keeping track of everything that goes on in their farm every day and baling that together every night, we find it inexcusable that the Grain Commission is, only once a month, able to figure out whether a processor is within his bond or not. So, collateralization is the financing of a product that has been graded, sealed and warehoused in an appropriate area. Starting to see the picture? SGS grades it, seals it. It is warehoused at a container terminal and then you get a bank, financial institution, to collateralize that, to give you 90 percent of the value of that. So basically, you could harvest it, condition it, put it into a container, and get paid for it. You have only 10 percent of your value at risk. We could be in a situation where containers will remove a lot of risk and increase the marketability of a product for producers.

**Tracing** – The second-largest grocer in Canada now requires this capability. So it is not just 9-11 that is driving it. Containers make the whole process of proving security a much easier issue to manage.

**Grain Heating** – John Deere has carried out extensive testing on this issue and has developed a model that basically says that, if you put the grain in under certain conditions, this is one that will start to heat. They are also working on some technology that will tell you what is going on in a container. You can use infrared technology to drive by and scan them all. This may be less of a problem in containers than in bins. This is what we are finding already from a U.S. study that has been done on corn on this issue. Well, I have had the experience of shovelling canola when it was 40 degrees below zero, while my head was freezing and my feet were burning. So there's potential.

**Volumes** – MCS has got three times the volumes they were hoping for in their first year. Containers may be cheaper, or are cheaper, than boxcars. There are 700 thousand tonnes going out per year and the potential for 400 thousand tonnes of peas to China.

It is not rocket science to build and develop a terminal. It is rocket science to have the logistics and IP systems to create all the value.

So, we are ready for the discussion stage. In our view, this project is still under development and input from producers and processors is greatly appreciated. With any significant change, not all of the opportunities and problems and solutions have been identified so I really appreciate your identifying some more issues for us to try and deal with. Thank you very much.
Paul Earl – Moderator

The next speaker is Bob Zelenka, who is with the Minnesota Shippers’ Association. That is his current role. He is Executive Director. The Shippers’ Association is a new cooperative designed to promote and facilitate the sale of IP agricultural products directly from farmers.

Bob Zelenka
Executive Director
Minnesota Shippers’ Association

I manage the Minnesota Shippers’ Association but, for the last 22 years, I have managed the Minnesota Grain and Feed Association, representing grain elevators and feed mills in the State of Minnesota.

Just a little profile of Minnesota:
- 4.97 million population;
- Urban population – 71 percent, rural population – 29 percent. Obviously, it changed quite a bit over the last number of years, with the rural population continuing to dwindle in record numbers.
- And there are actually 15,291 lakes, not 10,000 lakes;
- Number of farms – 79,000 farms in Minnesota: 28.5 million acres or 56 percent of the State of Minnesota is agricultural farmland; deep rich nutrient soil and, of course, May to September growing season, which you are familiar with here.

Minnesota agricultural exports – and some of this was talked about earlier:
- 7th largest agricultural exporting U.S. state: 2001 total agricultural exports was 2.3 billion and soybean and corn account for 56 percent of the commodity exports and soybeans account for 1/3 of that total.

There was a federal law passed in 1984 and then amended in 1988 that essentially allowed the creation of a shippers’ association. It was the Ocean Shipping Reform Act. What a shippers’ association can do is operate as a cooperative or group of similarly organized shippers. In this case, this is producers/small and medium-sized elevators. The things with shippers are:
- You are not required to be licensed;
- You do not have to be bonded;
- You do not have to file any tariffs;
- You do not have to have any published rates;
- You can maintain confidentiality; and
- It allows us to focus on service.
The reason we got into this in the first place was that, in Minnesota, as in a lot of other places including Canada, the country elevator system has been dwindling for years. Over the last 20 years in Minnesota, we have lost close to 30 percent of our country elevators through mergers and consolidations. They are fewer and they are larger. The move - and you are seeing it in Canada, preceded by the States – was to unit train loading facilities. In Minnesota alone, we have probably 45-50 unit train shuttle loading facilities in and around the state to load 100 to 110 cars at one time. You have 15 hours to load that train and get that grain out of there. But there are another 540 elevators out there that are not shuttle loaders and they are sitting around wondering what their future is.

One of the things that we looked at was this whole concept of a shippers’ association. Since the Shipping Act was enacted, the only shippers’ associations that existed in the States were on the coasts. Their basic function is to consolidate freight. They bring small shippers together. By bringing them together, they can get economies of scale, get better rates from the steamship lines and can move and hopefully compete with the larger shippers out there. That is essentially what we attempted to do.

It is essentially a non-profit cooperative designed to facilitate international trade direct from the fields of Minnesota to global end users. We have also expanded into a Midwest Association, including North and South Dakota, Iowa and Wisconsin. I guess there is really no reason why we should not be looking at Manitoba, as well, when you think about it. There is a lot of commonality, obviously, in the Red River Valley as you go farther north of Minnesota. It is something that I think we need to maybe look at.

The Minnesota legislature is where this came from. There was a study done about four years ago. Some producer got really irate because he wanted to sell some grain to this guy in Egypt – and I know we all probably get calls from this guy in Egypt. But this was, apparently, a realistic idea and opportunity and he could not get a freight forwarder that would really help him out that he thought seemed reasonably priced. He would not get any elevation from the elevators, so he went to his legislator. He was madder than hell, and said, “You have got to do something about this.”

They were initially going to look at building a publicly-financed elevator around the Minnesota River which connects with the Mississippi River to take barges down to New Orleans. They early on realized that that did not make any sense because on one side you would have Cenex and the other side you would have Cargill and others. So they came up with another idea – they thought, “Well, maybe we should develop a system, some sort of a system that anybody can tap into – small producers, specialty grain producers, small- and medium-sized elevators.” And that is essentially what the legislator went to the legislature with that following year; he enacted this legislation and came up with the concept.
We took it on and called it the Minnesota Shippers’ Association. It is about a year old now, so it is still a relatively new entity. Ron is looking at maybe a larger group. We are looking at focusing in on the small guys: small producers, especially grain growers, small- and medium-sized grain elevators.

We had a steering committee, as I mentioned about the legislature. Our steering committee that we pulled together was a broad cross-section of Minnesota agriculture and agencies. So it is not only a non-profit cooperative, it is a public/private partnership. We had the Department of Agriculture, Department of Transportation and the Minnesota Trade Office involved, along with the corn growers, wheat growers, soybean growers, Farm Bureau, Duluth Seaway Port Authority as well as our organization. It was a good way to get started, to bring everybody to buy into this whole concept.

Some of the things that we do:

1. We do get involved in the negotiation of volume contracts. We have a very good contract with a steamship line right now that identified the value of working with a group of shippers as we brought to them. We also are in a position to help with the documentation that is needed. I am a licensed insurance agent so we have marine coverage that we can make available.

2. We can concentrate on service issues. We do have a shortage right now. Or I should not say maybe a shortage but not everybody can get access to containers right now. We are working with our steamship line to see if we can address that. I think part of the problem seems to be that they seem to be taking care of some of their other long-term clients at the expense of others but, hopefully, we will work ourselves up that pecking order here over time.

3. We see ourselves, not only as a consolidator of freight, but as an advocate of the industry. There really is no one out there advocating on behalf of the specialty grains industry. What I found is that it is a very secretive industry. It seems like it is almost underworld. People have these customers and they are very protective. The information they have they are unwilling to share with you. You almost have to sign some sort of confidentiality agreement with people, with your members. What we do have, though, is confidence. I think our members have confidence in us that we are not going to be sharing any sensitive information with other members because we are dealing with members who are sophisticated exporters already; some are just starting out. But they are concerned about their clients and their customers and so on. So we have to make sure we keep that very confidential.

4. We also are providing access to foreign trade delegations through our connection with the Minnesota Soybean, Corn and Wheat Growers Associations. They are always bringing trade missions through Minnesota but they have never had a follow-up mechanism. They take them around,
show them around, take them to an elevator, take them to a farm, bring them to the Minneapolis Grain Exchange and then they go back to Taiwan. The guy then says, “I would like to buy some grain.” Well, they give him Cargill’s phone number. What the hell are they doing that for? We have 600 grain elevators out in the country and there are only 12 that are Cargill elevators. So we like the opportunity where we can access some of our country elevators this way by doing the follow-up that the grain groups do allow us to do. It is a process that never really existed before. So we do that. We collect a lot of product trade leads through the internet and other sources, as well. We have connections with American Soybean Association in Asia and other places such as that. Of course, we have been on trade shows.

A colleague who works with me was in Thailand and Japan this last summer - a young kid just out of college. The trade show in Thailand was about a week after the explosion they had there. But he wanted to go so that was great. He made some great contacts there because there were not very many people at that particular trade show. So it was a nice opportunity for us.

5. Market news and intelligence – Yes, there is information you can get through the Peersdad or the Journal of Commerce and so on. But there is a lot of other information that we are trying to find and disseminate to our members.

6. Member Profile – We have, again, relationships with buyers. We offer large and medium size – we have a variety of members. We have country elevators; we have individual producers - some that are sophisticated, some less sophisticated. Some have relationships; some are looking for relationships with buyers. So it is kind of a profile of our members. It is kind of hard to differentiate but we are taking on all that come aboard at this point in time and appreciate the members that we have so far.

IP has been talked about, obviously:
• Bio-technology, end-use characteristics, value retention, food safety, competition, traceability which is not on there but should be on there – those are the kinds of things that are influencing this IP world as we talked about earlier.
• Again, I think we are looking at organic, as well as anything else. We have some organic growers that just came on board recently. Their biggest problem has been logistics. So, hopefully, we can help them out with that here in the States, as well. Again, these are the things that were talked about previously.
• There is a progression in Minnesota. We used to look at some traditional things: waxy corn, clear Hilam soybeans, of course varieties of wheat up in the Valley. We are looking at now, of course, new genes, organics, high-oil corn, non-GMO, and other things. In the State of Minnesota, they are looking at about 25 percent IP in the next decade – non-GMO and other things, based on health food, nutriceuticals, bio-technology and so on.
• Minnesota Wheat – of course, they have a wide variety of wheat, as you do up here and they are trying to get an obvious IP market that has been in existence for years. These people know how to separate grain and it is a great opportunity for us in the Valley.
• Corn – again, a lot of varieties of corn in Minnesota, as well, that are grown for basic needs.
• Soybeans as well. In addition, we have the University of Minnesota growing about 40 more lines of food-grade soybeans for testing. So there is always new stuff coming on board - a lot of it driven not only by this end but by end-users. That has been a real change for us in agriculture in the States. Instead of just growing, first find out what the end-users want and then maybe grow what they need. It is a real mindset change for a lot of producers but they are getting there slowly.
• Other things we have are: red potatoes, edible beans, organic edible beans, flax, canola; stuff you would see up here as well.

Organic Production

Minnesota has the highest number of soybean and corn acres in any state of the United States in terms of organic: 29,000 plus acres of soybeans, almost 20,000 acres of organic corn. It is a big chunk and very active in moving a lot of organics, mainly domestically, but they are starting to look more and more at international trade on organics as well, primarily Europe.

IP Soybeans

Food-grade soybean to East Asia is our biggest market. Traceability – preserved traits – is a big thing. 4 to 6 percent of Minnesota soy is separated as IP and, by 2012, they are thinking it could be as high as 25 percent of Minnesota crops into IP.

So it is a real growing area. What we are trying to do is to get our country elevators – small- and medium-sized – and producers to understand that this is, in fact, a trend that is occurring. It has been talked about a lot – container movement, and so on – it is just hard to get your hands around it. We need to try to educate and bring our people up to understanding that value and that opportunity.

It has been too easy over the years for a country elevator to hand off the risk to a Cargill or to a Cenex out of state, and so on, but they are giving away a lot of margin by doing that as well. But they are afraid to manage the risk. If we can help them manage the risk locally and make sure they get paid, they are willing to work with us and we are finding more and more of them coming on board all the time.
Growth of U.S. Market

Soybeans really is an IP market. GMO soybeans continue to creep even higher and higher all the time. The growth of IP is starting to get closer to that 10 percent. So that sinister GMO is still there but it does create some opportunities for non-GMO, which we are seeing occur more and more all the time.

Soybean Exports

Just an idea again – I think Tamara had this in her slide earlier, from 1992 to 2002 – 6,000 20-foot containers to probably 35-36,000 20-foot containers. So, quite a growth in containerized soybeans and that is certainly going to continue to be in that range.

Minnesota Intermodal Loading Facilities

We only have two: Twin Cities and Dilworth. Dilworth is over by Moorhead and it is operated by the BNSF. They threaten all the time to close that facility but a lot of the specialty grain growers, of course, are out in that north-western, western, south-western part of the state. It is a concern of ours and we are trying to work on a project right now. We are looking at trying to work with the container yard to do pooling – working with our steamship line – to pool containers there: to pool chassis, to try to improve the efficiency of that yard, demonstrate an interest in that yard, and hopefully help to keep that yard going. The main reason that Dilworth Yard stays open is through UPS. UPS is the main user of that yard right now. But that is also a big point for people out in the rural areas moving specialty grains.

One project we have in relation to this is that we are working with the State of Minnesota, on the feasibility of locating container-loading facilities on short-line railroads. We had a lot of railroads in Minnesota that were abandoned over the last 15 years. We had about 10 of them that were picked up and are run now by a regional railroad. They still connect with the major carriers but they provide local service. We are figuring that, with their lower overhead, they might be a prime candidate for container-loading facilities: again, providing access to the growers, to the small- and medium-sized elevators, to these container yards, to load these containers and move them into market.

Of course, Dilworth is also a prime location for container and specialty grains coming out of North Dakota, South Dakota, as well as in Minnesota. The “Twin Cities” are drawing as far as the Iowa border. There are people growing specialty soybeans in northern Iowa that truck their beans to Minneapolis and then they are taken to Chicago and over to the east coast. So that is a project we are hopefully going to work on.

Participating in container movements does allow the producers to participate more in this process, all the way through the chain. Some are very sophisticated
and do their own paperwork, have their own contracts or are using our contract, with our steamship line to get to those markets. But we are positioned to help out, again, the sophisticated shipper as well as the unsophisticated shipper to get to this market.

We are seeing a growing industry:
- larger ships, and operational efficiencies;
- container export of TEU volumes has increased 500 percent;
- 500 percent and 200 percent for soybean and animal feed industries respectively;
- by value, 52 percent of all US agriculture trade done by container; and
- 600 U.S. companies are shipping containerized grain to over 130 countries and shippers report that exports will increase again another 20-25 percent by 2005.

These are the market growth factors, again, that were mentioned earlier. These are the kinds that we are looking at:
- We looked at the ocean shipping rates. We have negotiated a very good rate with a steamship line. We are looking at negotiating with two other steamship lines on behalf of our members.
- Availability of containers – a real problem last year with the strike on the west coast. It is always a problem in the fall. The biggest thing is actually the power that is available. BNSF power is short. Hauling their grain hopper cars has been a real problem. We have 20 million bushels of grain still on the ground in Minnesota right now because of the shortage of hopper cars. But that power to pull the hopper cars and the containers is at a limited supply. So availability is a concern this year, as it has been, but not as bad as last year.
- Shipping rates – try to influence those as best you can.
- Routes and services – that is why we are looking at two other container companies who serve different routes to offer some advantages and some other opportunities.
- Distance to container terminals was mentioned. Again, we are looking at that in a study we are working on as well.
- Truck weight limits – we do have that limitation in Minnesota, a little less than what you have here but it is kind of restricting. We get about 20 metric tonnes on a 20-foot container. That is about all we can do based on our limits, unless you can haul it and load it right on the rail. Then you can go over the weight limits.
- Access to market information – again, something we are working on and are also involved in. We work on and provide help to get certificates and things of that nature.
- 250 percent increase since 1989 in containerized grain movement – 11 million containers globally, 48 million loads.
- Shift from bulk to containers has been a large shift and it will continue.
- Demand for higher quality product.
• Just-in-time service, things of that nature.

The other idea we are looking at is container on barge service. Right now, it does not seem – at least people think it does not seem – feasible to move container by barge down the Mississippi River. We think that maybe it does make sense. We are looking at some back-hauls out of Mexico. We are looking at the possibility of transferring to an inter-coastal barge to move some commodities from Minnesota to the Caribbean. We already have moved some product into Cuba and we would like to continue to do that and I think we can do this in a kind of unique way. The Corps of Engineers keeps the Channel open all the way to Brownsville, Texas which is very seldom used but, by going all the way to Brownsville, you can off-load or on-load in Brownsville to either take merchandise into Mexico or out of Mexico, for that matter. So it is another study that we are involved with where we are looking at trying to think outside the box a little bit.

**Bulk Movements**

There are advantages so you can get some cheap product but you do not get the quality. You do not have that direct relationship. You do not have the transparency, maybe the communication that you need. You certainly do not have that direct control, either.

There always will be bulk grain movement but, I in Minnesota, as I mentioned, we have close to 50 unit train loaders. I think that has peaked. We are not going to see a growth of any more, in my opinion. Even though bulk train loaders, after spending $4 million of their own money to upgrade their facilities, in some cases are just not getting the kind of return that they had hoped for. Some are – many are; some are not. Some are even considering going bulk specialty grain. When they have consolidations - you have 8, 9, 10 locations - it is easy to designate one location for specialty grain. So they are looking at that.

The Minnesota Grain and Feed Association, which has been around for 96 years, manage the Shippers’ Association representing the grain and feed industry in the State of Minnesota. There are 338 grain elevator companies in Minnesota in 600 locations.

Just to finish up, I will talk about a few things we are looking at. We are also looking at some specialty products. We are looking at some ‘Nor’ products – these are Minnesota products, if you will.

**NorSoy** – we are looking at trying to sell soybeans based on amino acid content instead of protein. The further north you go, the less protein you have in a soybean. But the further north you go, the better the thiamine and cystein content. I bet up into Manitoba it is even better than Minnesota. It is a different way to look at selling soybeans. Who is going to take down that initiative? I do not think anybody stepped forward so we are going to give this a shot. We have
some feeding trials in Mexico right now and it looks like it is going to be a way to save some money on adding those thiamine and cysteine to feed rations when you can get it regularly in the soybeans originating from Minnesota or Manitoba.

NorGold – this is a product that we are looking at. This is dried distiller’s grain out of the 12 ethanol plants in Minnesota. It is an excellent feed ingredient for swine and poultry. Again, we had some feeding trials both in Cuba and in Mexico and the feeding trials have turned out to be very positive. The poultry – the egg is more yellow and they have seen a better gain by the use of about 5-10 percent inclusion rate in the feed. We are selling it as NorGold. One of the things in this is, of course, low micro-toxins as well in this product.

NorCorn – again, that is a little slant. Basically, it is No. 2 yellow corn, yes, but when you are selling into Mexico, having low aflatoxin makes a lot of sense. So why not try to differentiate your product? That is what we are trying to do – sell these three as branded products in Mexico and other markets. We will see how this goes but we are giving it our best shot – to try to differentiate Minnesota product from other products.

One last little note: we are having a specialty grains conference in Minneapolis in September. It is basically a regional event. We are inviting foreign buyers to come together; having a trade show with an educational programming, grower processor tours and, as I mentioned, international participation. It is a way to try to showcase the upper Midwest, not just Minnesota but also the upper Midwest. What we have – the variety of products that we have in this region – there is a lot that people, I think, would be very interested in. We are seeing growing interest by foreign buyers in the products that are grown in the upper Midwest and into Manitoba, as well, for that matter. This is an opportunity to bring those folks together.

With that, this is kind of where we are at. We do have a website if you want to check it. I appreciate the opportunity to be here. It is just, I guess, an attempt to try to do things a little bit differently. I appreciate the opportunity for being last on the agenda. Thank you very much, Barry. If you have any questions, we will be here for a few more minutes. Thank you very much.

Paul Earl – Moderator

Well, we have had two very interesting speakers and I am sure some of the audience has questions for them on some of the things they have given us.

I think, just to kick things off, I would have a question, myself, for the speakers. One, first, for Ron. You had shown a slide that showed soybean product differentiation and how it had grown over time. I wondered whether that were just a matter of better measurement or, in fact, are there more products and more secondary products that are made from soybeans?
Ron Witherspoon – Speaker

One of the constraints on being able to differentiate the product to the extent that the marketplace wants it, is the ability to handle the infrastructure. One of the things that we found from our analysis is: if you look at wheat – a product we grow a lot of - we sell our wheat in a bulk fashion. What would it do to the value of wine in France if they sold all of their wine in tanker cars? We are missing tremendous opportunities. I suggest you go to a website called ‘Wheat Montana’ (http://www.wheatmontana.com/index.asp). It is a family-run farm operation producing wheat at very high elevations that has a special amino-acid string that creates a different, sort of sweet taste for the bread. FedEx is shipping an unbelievable number of loads of fresh wheat from that farm to New York every night. So the whole issue of segregation – we are of the opinion that we have just seen the tip of the iceberg.

Attendee

How is MCS at Moose Jaw operating today? If a seed company in the Moose Jaw region wants to send a container to Japan today, whom do they contract with – the steamship line, MCS, a freight-forwarder? What service does MCS provide today? Would MCS be able to provide one with six containers today? Will MCS deliver a container to MY seed plant, to MY farmyard today? Do you have containers with rooftop hatches today?

Ron Witherspoon – Speaker

Okay. I am trying to find the name or the phone number of the fellow that you should contact. His name is Gary Schellhauser at Marine Container Services in Moose Jaw. Yes, they will help you to arrange for containers to be dropped off and picked up at your seed processing plant. There is going to be a pilot that they are running next year to put containers on farms and test farms. No, the domestic fleet is not available now. There is a prototype of a domestic can at the Marine Container site and, in our mind, we will only ship to domestic containers once there is enough business volume and enough processors in Canada that are accepting them. How many am I missing?

Paul Earl – Moderator

I guess one is: “Whom would someone who wanted to send a container to Japan today contract with – the steamship line, MCS, a freight forwarder? What service does MCS provide today?”
Ron Witherspoon – Speaker

I would suggest that you touch base with Blaine Phillips, in terms of helping you deal with a lot of issues. Marine Container Services definitely has the ability to put you in touch with shipping lines and container services. The whole core of their business is helping to provide the level of service that you need in order to solve your business problem. That is how they have grown their business.

Attendee

How will turning farmers into direct sellers work in the light of the expertise needed to do business overseas? What happens if the money does not come? What happens if there is a claim or rejection of the cargo?

Ron Witherspoon – Speaker

I do not have a short answer for that because the existing system does not work perfectly. My best/worst loan application was when I was asked to look at processing a loan to buy the 13,000 hopper cars. Best from an intellectual challenge; worst from the aspect that I can envision myself in front of the Board and they ask me a question and the answer is, “Well, it depends on this political decision or it depends on one thing or another.” The issue of being able to ship directly: in our view, the farmers that are going to be able to do that are the farmers that have proven ethics, proven traceability systems, have collateralized-type financing, are working with the right partners on both ends, such as SGS, so that you could ensure that the product gets there – there is no quibbling about the quality. We are looking at bringing in global financial institutions to help handle the financing. So, if that product goes into China, that bank will make sure that the funds come from China.

We have just put together an alliance with the National Australia Bank – they are the category killer in soft commodity derivatives – and they are coming to Canada to make their services available. We have done that through a partnership with another global bank. So the ability of farmers to solve these problems – we are quite convinced that it is doable and it is one of our objectives to try and resolve – handle – all of those issues.

Attendee

How are your organizations funded?

Bob Zelenka – Speaker

The funding was initially received from the Minnesota Legislature. We did receive some grant funding through USDA, a specialty grant program. We also
have membership income and income we derive from our insurance program. We have income from a small administrative fee that we garner off of the contract that we have negotiated on behalf of our membership. We have also received some funding from the Corn and the Soybean Commodity Councils to help. Again, we are opening up and looking at new market opportunities for their producer members so they will funnel a few dollars our way, as well. Also, the Minnesota Grain and Feed Association, which manages the Shippers’ Association, is only charging about 15 percent of the cost of operating an office to the Shippers’ Association. It is sort of our donation to the cause – and a lot of free time.

Ron Witherspoon – Speaker

We are a private company that is owned by farmers. We have a network where farmers can apply, pay a fee, and become a member of the network. That network is still open in many areas of the Province. We are planning on closing membership in certain areas because we already have all of the farmers in certain areas that we can accommodate and not have members that are in direct competition. Some of our funding comes from consulting projects that we do for private sector companies for a fee.

Attendee

What is the process you foresee to get the railways, steamship lines, and terminals, to talk out problems and issues?

Ron Witherspoon – Speaker

We had Blaine Phillips from CN speak to our farmer organization. They are one organization which, like John Deere, feels that, in order to be competitive in the future, they have to continue to change their business model. We have worked with Marine Container Services to help get them established. While Dory has been in Israel, he has arranged for one of the largest container shipping lines in the world to bring containers to Moose Jaw. The approach that we go after, in trying to build business that our producers can participate in, is to try and find some of the best partners in the world, bring them together, see if there is mutual interest and mutual benefit, and then put together joint ventures. We are quite certain that there is not any issue in the whole area of containers moving product that cannot be solved. We are also quite convinced that looking at shipping costs is the wrong way to view the issue. Looking at how you can get greater value is entirely our focus.

Paul Earl – Moderator

I picked up on a comment that you made, Ron, about dealing with Wal-Mart. I just read a most interesting article about Wal-Mart in which they, not to do an
injustice to the author, said it was not clear whether doing business with Wal-Mart was worse than not doing business with Wal-Mart. Which is the worse situation to be in? The whole issue is the amount of market domination and market power that Wal-Mart now exercises. Do you have a comment on that and what do you see the emergence of such large organizations doing to the competitive environment?

Bob Zelenka – Speaker

There is a great opportunity. We are differentiating ourselves. We are finding niche markets. People are looking for quality; they are looking for a good price but they are also looking for good quality. A lot of it is based on relationships – whether it is an Asian customer or a Mexican customer. They have had enough of dealing with their basic competitor and their basic supplier being one and the same – e.g., Cargill or ADM in grain. They are looking for direct-buy. They are looking at associations like ours that make that connection with the producer directly. We are in a position to help facilitate that trade by helping that producer get paid, understand what the paperwork requirements are, and make it as simple as possible.

Paul Earl – Moderator

Do you want to comment, Ron?

Ron Witherspoon – Speaker

I get asked a lot what the Canadian dollar is going to do. The position I have taken with our clients is that we do not have a made-in-Canada dollar policy. Global issues – I have explained to them the whole issue of velocity of money and some changes that are occurring that Canada can do nothing to stop. The ‘Wal-Marting’ of industry or the industrialization of industry is not something that a country can control. I was out to the largest farm in Canada this spring – 106,000 acres – puts that farm in with 10 John Deere tractors and Beaugault air-seeders. That is a level of efficiency of 10,600 acres per unit. So what we are dealing with, with our farmers, is that we are saying, “Yes, you might think you are efficient but here are the benchmarks. Here is what somebody else is able to do and here is what our goals are for expansion and efficiency.” So I do not want you coming away from the conference thinking that we are trying to ‘Wal-Mart’ the agriculture industry. What we are trying to do is to create the opportunity for our clients to be profitable in a world that is changing into more industrialization.

Dr. Barry Prentice – Morning Chairman

Who are the beneficiaries of a system that would give traceability and identity preservation? It could be the life sciences companies that are coming up with new GMO’s. In fact, they need a system that is going to be able to guarantee
that they will actually be able to get their product with unique traits to market, just as NorGold would or other products. Have these companies approached you? Are they interested in what you are doing? And is that part of that new supply chain?

**Ron Witherspoon – Speaker**

Yes, we have had some conversations with those firms. There is some great opportunity for us in that area. We have not gotten much farther than that at this point but I would say that it would be most definitely in their best interest to look at the container use and container movements. I have mixed feelings about that whole area. They have just found traces of genetically-modified organisms – not wheat but from corn or soybean – in some wheat crops. So if you are going to try and separate GMO and non-GMO, that could be a real challenge. I guess that is another whole area. Suffice it to say, there is, opportunities with our Association to work with firms like that. Because they are looking at working with the growers directly, to try and do what you need to do to have the buffers and things that you need but also to maintain that traceability all the way through. So, yes, I think they are very interested – at least, the people I have talked to in the system that we have developed here.

**Bob Zelenka – Speaker**

Two points I would make: Wurkrey Land Trust in Australia is a company that has acquired a large block of land and is able to get special contracts because they can isolate the product that they are producing for their end-customer, deal with the gene drift and all of those issues. So one focus is to try and create opportunities for our clients to have blocks of land that are large enough and isolated enough so that they could produce special crops under special license where you want to really limit what happens in that crop and what might drift into that crop. We see it as an emerging trend that is a high-value opportunity for our clients.

**David Gardiner – Afternoon Chairman**

On behalf of all here, I thank you, Paul, and Ron and Bob for a very interesting session – an apt closing to the many things that we have learned and heard this day. Please join with me in thanking the panel for their contributions.

The job of succinctly summarizing and prioritizing and putting into focus all the things that we have heard and all the things that have been said and done for the past day falls to Dr. Al Loyns who is the President of Prairie Horizons. If you have looked at his resume, you will see that he is a farmer with no time for farming, as far as I can see, with all of his other involvements. I am sure he will have some interesting things to help us go away from here with an understanding of those things that we have heard.
Before I sit down, though, I will note that, when Dr. Loyns is finished, Barry will be up just for a few closing remarks. I want to thank him and the Institute for including WESTAC as prominently as you have in this event. When you are with a small organization in British Columbia and an event is being organized and managed and operated from Manitoba, the work falls on the Manitoba residents. On my behalf and your behalf as well, I would like to thank him and the able staff who have put on the event for us all and did a wonderful job in doing that. Without further ado, I will now turn the floor over to Dr. Loyns.

Dr. Al Loyns  
President  
Prairie Horizons  
Rapporteur

It was very unfortunate that Bryan Schwartz was not able to make his presentation and I would urge you to look at it when it becomes available. In fact, I would urge, given the debate that is going on in GM’s these days, for the Transport Institute to get that out before the publication from this operation is out. We need objective non-interest motivated analysis in that area. I am sure that Bryan Schwartz would be part of that and there would be a market for it.

So I picked up with Eric Aubin’s discussion of traceability. I do not know much about traceability in the livestock sector. I know a little bit more about what is going on in the grain sector. I just want to make two comments quickly in that context. First of all, there is a most unfortunate separation between traceability and the IP, VED, KVD discussions that are going on these days. They are not the same things but they are related. The ISO work – that is my second point here – that some elevator companies already have is part of that whole picture as well. Instead of building our little empires around each one of these, we should get together and follow them through, not only for what they mean by themselves but, as importantly, on what they mean together.

Now, at least one elevator company, and I have personal experience with this, is already ISO-compatible where every truck that is unloaded has a sample retained, I am told by the people at the elevator, until the product is marketed as far as they are concerned. That is my understanding of the point at which those samples are abandoned.

The reason for raising it here is that the discussion on traceability rarely ever notes that we are already there with at least one grain company and I have not bothered checking other companies. There are probably others. We do not discuss it but it is there as a live example and I think we could do it. If you have been around the grain industry as long as I have and around marketing in western Canada as long as I have, you almost think back, when you see those
beautiful little plastic bottles sitting there, of the good old days when the Grain Exchange made elevator companies take a metal can and leave it sit for awhile – same process, brought back in a different environment. But it is already there and operating.

Rick Wansbutter’s comment about the cargo that was co-mingled – liability aside, I could not help but ask myself: Was that particular contamination traceable and was it traced? If not, why not?

Then Brian Oleson on KVD: Brian started out by saying that KVD has served Canada well, although there are warts showing up at the present time and KVD has worked as a low-cost system for Canada. I would characterize that as the ‘KVD-brag’ model. This is the conventional wisdom. When all of the costs of the KVD system have been considered, you cannot quite make those categorical statements. If you can – if you recognize that there are warts developing in the system today – you need to recognize that there have been warts around for quite some period of time.

It was unclear to me whether the analysis that Brian is working on will reflect the full economic costs of KVD or whether it will be simply something related to what it is that producers have to deal with in terms of costs and benefits and perhaps handling system costs. There is more to the picture than that. I would point out that there was some pretty good analysis done by some reasonable economists in the middle 1980’s that produced estimates of some of these costs. At least one estimate that I was involved in putting together at a different period in time – middle 1990’s – suggested that there could be $400-500 million per year in costs associated with the KVD system. Somebody had pointed out that, at that time, that was approximately equal to the net farm income in Manitoba. So, juxtaposing those situations together, perhaps the costs are not as small as would be implied by the notion that this system has served us well.

Cam Henry and his observations in that section observed that he wanted to see the numbers. Now, he was referring to the benefits and the costs at the producer level. I would urge that we do, in fact, need to see the numbers and we need to see them in the entire system. I would hope that this work becomes a public document very quickly after it is completed so that it can be reviewed and assessed.

Rick Wannsbutter’s comments about the wrecks that have occurred because of co-mingling I found most interesting in the sense that I have been involved in researching and following that debate since 1980. This is the first year – this is the second time this year – that I have heard an elevator company report one of their wrecks. He reported two. What is significant to me is that this is the first time I have heard any elevator company ever report that kind of problem. Now, he did say that the problem is getting worse. I am led to believe that perhaps that issue, even though, when it happens, is a major problem in terms of a global
problem within Canada or a general problem in Canada, is not as important as we perhaps attribute to it.

Now, in terms of Tom Kleysen’s comments – he drew a nice linkage between the way in which the industry is consolidating (larger companies; more bulk handling). This is at odds with the way some markets are developing towards consumer specifications, business specifications and, therefore, identity preservation and special products. He is implying that there is not a ‘fit’ between that development and the consolidation that is going on. He said, if I quote him correctly, that, “Bigness is creating demand for smaller units.” I am a little afraid that that is the market and that is what he is implying, as well - the kind of markets in Canada that we are missing with our ‘bigness’ mentality and our bulk handling system mentality. I would not be surprised that that is why the Transport Institute perhaps had some of the last papers that we have just heard on this program. I will leave that point at that one. Although I would like you to carry these numbers home with you and think about them and think about their implications.

Tom indicated that 60 percent of the containers going back to Asia are empty. There is container capacity available. Most of the containers going past us are empty. What a wasted resource going off the Prairies! It is incumbent of us in the various sectors of this industry that we are associated with to think about doing something about it. This is a huge wasted resource that we have to find a way to tap into.

Finally, I will comment on Bob Zelenka. If I understood his presentation correctly, the Minnesota Shippers’ Association is a cooperative organization to help manage the risk in export marketing for small shippers, small organizations. He indicated that there are a lot of people involved. What a novel idea to have little people involved in big markets! I have to say that, I do not know who posed the question there at the end about – what about the risks? Who gets paid or does not get paid if your buyer at the other end collapses in some form? But there are ways of handling that. We hear so much in this system that individual farmers cannot deal in international markets. I do not think that is what Minnesota Shippers’ Association is, per se, doing. I do not think that is a real problem in the Canadian system and we ought to, perhaps, learn from others and put some organizations together of this sort that facilitate entrepreneurship by little people on the Prairies. There are lots of folks that can do it.

This brings me to what Ron Witherspoon is talking about where some producers got together and funded another marketing alternative. I will relate it to one particular area, which has not been mentioned much today. I found interesting, for example, that Bob Zelenka almost sounded unfriendly to the development of GM crops. He did, however, acknowledge – and this is the point I want to make – that, if GMO development proceeds on into wheat and so on, that also creates a
market for IP services and segregation and so on. This is where I am going to end up with in terms of Ron Witherspoon’s comments.

I am not taking a side on GM. But, when I look at the debate that is going on about GM wheat on the Prairies at the present time, what we are doing – and this became institutionalized on CBC two weeks ago on the Sunday Night News – we are attempting to cut off the adaptation of this technology in the largest sector of the grain industry in Canada, that is wheat, because we are arguing that we cannot IP and it will cost us markets. Now, there may be good reasons for not going with this particular technology but I do not think either one of those is a valid reason for not pursuing the technology for what it might be worth. We have heard three or four presentations this afternoon that demonstrate that we can IP. Containers may be a significant component of that. If we look at the grain industry, we are already IP-ing all kinds of things. I am not exactly sure why genetically-modified wheat would be very much different. I know that Denis Stephens would not agree with that comment and we need to have a debate and consider each other’s information on that one. But I give you the alternative argument: everybody else in the world is doing this stuff and getting ready to do this stuff. If we get left at the altar and China and the United States or others pursue that technology, we will, again, have moved the industry backwards a little bit and, in the end, it will be Canadian producers that pay the price.

Now, there are lots of other things that could be said. I know I have gone over time. That is where I am going to end. My congratulations to the Transport Institute on a very, very good conference – a lot of good information – and I think you would agree with me that it has been a wonderful conference. Thank you.

CLOSING REMARKS

Dr. Barry Prentice
Director
Transport Institute, University of Manitoba

Well folks, lots of food for thought. I would like to end where I started which is to thank our sponsors: Thunder Bay Terminals, the Manitoba Department of Transportation and Government Services, Aikins MacAulay & Thorvaldson, the Canadian Wheat Board and OmniTRAX. In addition, the door prizes came from the Hotel Fort Gary and the Port of Montreal. Of course, the lanyards that you are wearing are from the Vancouver Port Authority.

I do want to thank you all for coming and to thank our speakers and our moderators. It was a very successful day. I have been asked to draw one thing to your attention. Inside your folders you will find a small CD. Now, just before you
get too excited, it is not Chicago Blues or Golden Oldies or even disco. It is a compendium of transportation statistics that has been put together by the Transport Institute, thanks to support from the provincial Department of Transportation and Government Services. We have collected all the data for transportation with all modes of transport since 1988. We have put them together in one place so that you do not have to go searching through all the Statistics Canada documents and others to find data on Manitoba transportation. It will also take you to our website where you can find all the previous publications from ‘Fields on Wheels.’ So, if you wanted to look back and see what happened at other conferences, they are there and, of course, we will be posting the new proceedings as well.

I would like to close by thanking our staff at the Transport Institute. My Executive Assistant, Kathy Chmelnytzki and many others have worked hard to organize this conference. I would like to give special thanks to Dr. Tyrchniewicz who helped organize the program and identify interesting speakers.
2003 PARTICIPANTS

SPEAKERS
(in order of appearance)

Barry Prentice    Transport Institute
Ed Tyrchniewicz   Transport Institute
Dan Lutz          Agriculture & Agri-Food Canada
Dennis Stephens   Canada Grains Council
Eric Aubin        Canadian Pork Council
John Morriss      Farmer's Independent Weekly
Brian Oleson      University of Manitoba
Cam Henry         J.S. Henry & Son Ltd.
Cam Brown         J.C. Brown Consulting Services
Richard Wansbutter AgPro Grain
Betty Green       Manitoba Cattle Producers Association
David Gardiner    WESTAC
John Spacek       Manitoba Transportation & Government Services
Tamara VanWechel  UGPTI, North Dakota State University
Tom Kleysen       Kleysen Transport Ltd.
Paul Earl         Transport Institute
Ron Witherspoon   Pike Management Group
Bob Zelenka       Minnesota Shippers' Association
Al Loyns          Prairie Horizons

PARTICIPANTS

Laura Anderson   Canadian Grain Commission
Jack Arthur      Vancouver Port Authority
Patty Atkinson   Transport Canada

Chris Beckman    Agriculture & Agri-Food Canada
Mary-Jane Bennett Canadian Transportaion Agency
Terry Betker     Meyers Norris Penny
Pamela Bishop    Saskatchewan Highways & Transportation
Monica Blaney    Alberta Agriculture, Food & Rural Development
Marlene Boersch  Mercantile Consulting Venture
Rachel Bosc      Manitoba Agriculture and Food
Bernie Boucher   OmniTRAX Inc.
Harvey Brooks    Saskatchewan Highways & Transportation

Claude Carles    Weyburn Inland Terminal Ltd.
Keith Carlson    Keg Agro Ltd.
Francois Catellier Canadian Special Crops Association
Amar Chadha      Manitoba Transportation & Government Services
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<tr>
<td>Delon Chan</td>
<td>Agriculture &amp; Agri-Food Canada</td>
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<td>Brad Chase</td>
<td>Kleysen Transport Ltd.</td>
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<td>Jack Craven</td>
<td>Manitoba Transportation &amp; Government Services</td>
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<td>Allan Dawson</td>
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Richard Kamchen     Manitoba Co-operator  
Pat Keena          Canadian Wheat Board  
Lorne Keller       Prince Rupert Port Authority  
Jurgen Kohler      Agriculture & Agri-Food Canada  
Alexandra Lamont   Canadian Wheat Board  
Eric Larson        Agriculture & Agri-Food Canada  
Lee Ling           Agriculture & Agri-Food Canada  
Greg Loewen        Online Business Systems  
Bruce Love         Canadian International Grains Institute  
Lasby Lowes        Manitoba Agriculture and Food  
Gordon Machez      Warburton Foods Ltd.  
Janice Malo        Canadian Wheat Board  
David Marit        S.A.R.M.  
Jim Marsch         Agricore United  
Barry Martin       Saskatchewan Highways & Transportation  
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Gail Prociuk       Cargill Limited  
Terry Romanishen   Agricore United  
Patty Rosher       Canadian Wheat Board  
Barry Routledge    Manitoba Rural Adaptation Council (MRAC)  
Jean-Marc Ruest    James Richardson International Limited  
Dan Schmeiser      Saskatchewan Agriculture, Food & Rural Revitalization  
Barry Senft        Canadian International Grains Institute  
Doug Shumilak      Credit Union Central of Manitoba
Scott Shurvell  
Jason Skotheim  
Darren Smith  
Warren Stow  
Tim Stuart  
Robert Sutton  
Mavis Taillieu  
Jack Taylor  
Brenda Tjaden Lepp  
Karen Tucker  
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Connie van Rosmalen  
Neil van Ryssel  
Ron Vanderzwaag  
B. Ward  
Jason Watson  
Susan Wiklund  
Jim Wilson  

Mavis Taillieu  
PC Caucus  
Jack Taylor  
Neptune Bulk Terminals (Canada) Ltd.  
Brenda Tjaden Lepp  
Mercantile Consulting Venture  
Karen Tucker  
Canadian Transportation Agency  
Brent Van Koughnet  
Vancouver Port Authority  
Connie van Rosmalen  
Manitoba Transportation & Government Services  
Neil van Ryssel  
Manitoba Rural Adaptation Council (MRAC)  
Ron Vanderzwaag  
Walinga Inc.  
B. Ward  
Manitoba Agriculture and Food  
Jason Watson  
Weyburn Inland Terminal Ltd.  
Susan Wiklund  
Canadian Wheat Board  
Jim Wilson  
Agricore United

**TRANSPORT INSTITUTE**

Jurgens Bekker  
Kathy Chmelnytzki  
Doug Duncan  
Allister Hickson  
Lindsey Routledge  
Christy Sokol  
Megan Warachka  
Jill Winograd  

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8th Annual Fields on Wheels
Speaker Profiles

Morning Chairperson - Dr. Barry E. Prentice, Transport Institute
Barry E. Prentice is the Director of the Transport Institute and Professor in the I.H. Asper School of Business.

Dr. Prentice has held a joint teaching and research appointment at the University of Manitoba since 1985. His major research and teaching interests include logistics, transportation, agribusiness marketing and commercial trade policy.

From 1986-89, he was Professional Associate and Assistant Professor at the University of Manitoba and became Acting Director of the Transport Institute in 1991. He was appointed Director of the Transport Institute in April 1996.

Dr. Prentice has authored or co-authored more than 100 research reports, journal articles and contributions to books. His scholarly work has been recognized for excellence in national paper competitions and awards. In 1999 he was named Manitoba Transportation Person of the Year by National Transportation Week. Barry has participated in task forces, expert committees, and is frequently asked to speak on the topics of trade and transportation.

Opening Keynote Presentation

Dr. Bryan Schwartz, University of Manitoba
Bryan Schwartz has a master's and law degree from Yale Law School, has been a professor of law at the University of Manitoba since 1981, and in 1999 was appointed the inaugural Asper Professor of International Business and Trade Law. In addition to producing about sixty academic articles, he is the author or editor of 10 books, including Asper Review of International Business and Trade Law, an annual publication that reviews cutting-edge developments in the area an annual review of legislative developments in Manitoba. Volume I contains an article by Bryan and Pearl Reimer on genetically modified foods and international trade law. Bryan has recently published a Law Commission of Canada report on proportional representation for Canada, and is the editor of Underneath the Golden Boy, an annual review of legislative developments.

Bryan is also counsel at the Pitblado law firm, has served on the international arbitration panel in the SD Myers dispute, has been appointed to a dispute panel under the Canadian Agreement on Internal trade, is an experienced labour arbitration. His litigation work has including arguing cases at all levels of court, including a number of Charter of Rights cases, at all levels including the Supreme Court of Canada.
**Session 1**

**Dr. Ed Tyrchniewicz, Transport Institute, University of Manitoba**

Dr. Ed Tyrchniewicz trained as an Agricultural Economist (PhD – Purdue University), and has worked in Universities for more than 30 years with 20 of those years being in various academic administrative positions. While at the University of Manitoba ((1967-88), he was a Professor of Agricultural Economics, Head of the Department of Agricultural Economics, and Founding Director of the Transport Institute. He then served as Dean of the Faculty of Agriculture and Forestry at the University of Alberta (1988-96).

Since taking early retirement from the University of Alberta in 1997, he has held a variety of part-time appointments, including Senior Fellow at the International Institute for Sustainable Development (1996-99), founding Executive Director of the Manitoba Rural Adaptation Council (1997), and Adjunct Professor at the University of Manitoba from 1998 to the present. Effective July 1 2003, he was appointed a Professor (part time) in the Transport Institute, I.H. Asper School of Business at the University of Manitoba.

He is also involved in consulting and public service advising in the areas of agricultural and transportation policy, international food security, natural resource management, and organizational management and change.

**Dennis Stephens, Canada Grain Council**

Dennis was born, raised and educated in Manitoba. He began his career as a journalist, working first with the Winnipeg Tribune and then the Globe and Mail. He started in the grain business in 1967 with Federal Grain Limited, first as Director of Corporate Relations and then as Manager of Transportation.

In 1972 Dennis left Federal to become one of the first staff members of the Canadian International Grains Institute and was in charge of grain handling and transportation instruction before being named Executive Director in 1981. In 1989 he became Assistant Deputy Minister, National Grains Bureau, Agriculture & Agri-Food Canada. In 1995 Dennis formed his own consulting firm, Meadowood Consultants and continues today to provide consulting services.

His consulting contract with the Canada Grains Council has Dennis heavily involved in on-farm and post-farm food safety initiatives for Canada’s grain industry as well as the Biosafety Protocol. The Council is doing considerable work in examining the operational and cost implications of introducing IP/segregation systems within Canada’s grain industry.

Dennis also serves as Administrator of the International Grain Trade Coalition, a new organization that represents the commercial interests of the grain industry.
worldwide. The Coalition has 17 trade organizations representing more than 1000 members operating in more than 80 countries.

**Eric Aubin, Canadian Pork Council**

Eric was born in the region of Montreal. He graduated in Soil Science at Macdonald College of McGill University in 1989. He then obtained a Diploma in Groundwater Contamination and Waste Management in 1990, and his Master degree in Science in 1994 at McGill University.

From 1994 to 1997, he worked as a research assistant at the Soil and Agricultural Engineering department of the Université Laval. He then worked in 1998 and 1999 at the head office of the Union des producteurs agricoles. He acts as an agricultural policy analyst for the Canadian Pork Council since October 1999. His main files are traceability, foreign animal disease preparedness and environment.

**Session 2**

**John Morriss, Farmers’ Independent Weekly**

John Morriss started his career in agriculture operating a traveling information display for the Justice Emmett Hall commission on grain transportation in the mid-1970s. He then became a freelance agricultural writer, serving as field editor of Grainews and contributing to other publications. In 1977 he joined the Canadian Wheat Board as an information officer, and was appointed director of information in 1982.

In 1989 he left to become publisher and editor of the Manitoba Co-operator, a weekly newspaper for Manitoba farmers. In March of 2002, John and eight other staff were terminated following the takeover of Agricore, the Co-operator’s parent company, by United Grain Growers. A week later, six of that group met to begin plans for a new Manitoba farm newspaper, the Farmers’ Independent Weekly. The first issue was published three months later, and the FIW has enjoyed steady progress since, with the newspaper and its writers receiving several awards for excellence in farm journalism.

**Dr. Brian Oleson, University of Manitoba**

Dr. Brian T. Oleson is the holder of the Agribusiness Chair in Cooperatives and Marketing at the Department of Agribusiness and Agricultural Economics at the University of Manitoba. The Chair was established in 2001 as a result of collaborative efforts among co-operatives, group marketing organizations and the University of Manitoba. Brian is a Professor in the Department and inaugural holder of the Chair. His duties include teaching, research and extension.
Brian grew up in Manitoba and received degrees from the University of Manitoba (Bachelors and Masters degrees in Economics) and from the University of Minnesota (PhD in Applied Economics). He has traveled extensively in both a marketing capacity and a trade negotiations role. This includes trade missions and GATT/WTO negotiations. As an industry advisor, he was part of the Canadian negotiation team in Doha, Qatar for the launch of the current WTO Round. His experience includes several years in the position of Senior VP, Corporate Affairs with the Canadian Wheat Board (CWB). This position included the policy, trade, market analysis and planning functions. In his current position at the University of Manitoba his interests include co-operatives, marketing, agriculture policy and trade, governance and strategic planning.

Reaction Panel

Cam Henry, Farmer
Cam is a seed grower/processor. He operates J.S. Henry and Son Ltd. with his daughter Marnie and son in law Eric McLean at Oak River, MB. He has a degree in Agriculture from the University of Manitoba and farms approximately 4000 acres.

Some of his past experience includes:

Past President - Manitoba Seed Growers Association
Past Chair - Western Grains Research Foundation
Past Vice Chair - Keystone Agricultural Producers

Cam Brown, J.C. Brown Consulting Services
Cam Brown is a retired Vice President of Marketing for Feed Rite Ltd.

He is currently a Director of Ridley, Inc. Cam is also a Principal of J.C. Brown Consulting Services and the Business Manager of EPB Environmental Services Ltd.

Cam is married and has four grandchildren.

Richard Wansbutter, AgPro Grain
Richard Wansbutter is responsible to the Senior Vice-President, Grain Group, for representing and advancing Saskatchewan Wheat Pool's commercial interests within the business community.

Mr. Wansbutter has extensive experience in the grain marketing and transportation industry. In 1973, he became a Policy Analyst with the Province of Manitoba. He later joined the Grain Transportation Agency, holding several positions before becoming Executive Director of Operations.
In 1992, he joined CN Rail as System Market Manager Grain, where he was involved in strategic planning related to the method of payment changes.

He joined Saskatchewan Wheat Pool and its affiliates in 1992 as Vice-President Marketing, AgPro Grain Ltd. In 1994, he was appointed to the position of Vice-President of Marketing and Transportation.

Mr. Wansbutter assumed the responsibilities of his current position in October of 2001. His current role was expanded in October, 2002 to include responsibility for government relations.

Mr. Wansbutter has a degree in Economics from the University of Manitoba and is also a graduate of the Canadian Institute of Traffic and Transportation.

**Luncheon Keynote Speaker**

**Betty Green, President, Manitoba Cattle Producers Association**

Betty and her husband Robert own a cattle ranch in the Interlake area of Manitoba. They run a cow-calf operation and a small feedlot, along with a grain and forage component.

Betty Green is the President of the Manitoba Cattle Producers Association and serves on the executive committee of the Canadian Cattlemen’s Association. During the last two years, Betty has been active on the Canadian Animal Health Coalition and is Chair of the Emergency Management Committee. She has a keen interest in tools such as tracking and traceability, which will be essential components of an emergency management plan.

**Afternoon Chairperson - David Gardiner, WESTAC**

David Gardiner is currently the Executive Director, Western Transportation Advisory Council (WESTAC) – providing strategic advice to management, expanding the membership base, and making presentations on industry issues for a multi-modal, tri-partite association of transport industry leaders in Western Canada.

He is a Member, WESTAC Facilitation Services Program – offering facilitation services to resolve transportation-related problems in a neutral and confidential manner.

David is a Principal, COMFAC Services Ltd. – leading Strategic Planning Retreats, conducting Workshops, serving on Review Panels and Boards, and acting as Ambassador for organizations in the transportation industry.
Between 1994 and 2002, David served as President, WESTAC – directed the affairs of the Council, focusing on fostering cooperative effort among senior political, private sector, and labour individuals and organizations throughout the transportation industry in Western Canada.

From 1980 through 1994, David was the President & CEO, Great Lakes Bulk Carriers Inc. and Misener Shipping – directed the management and operation of a fleet of lakes and ocean-going bulk carriers held in a partnership arrangement with Misener Shipping, Canada Steamship Lines, and James Richardson & Sons.

Prior to 1980, David held the following positions:
Vice-President, CanPac International Freight Services Ltd.
Manager Business Development CP (Bermuda) Ltd.
Executive Assistant, CP Ships (UK)
Research Analyst, Canadian Pacific

**Government Liaison/National Awards/Interests**
Member, Canada Marine Act Review Panel
Achievement Award, National Transportation Week
Member, Canadian Flag Shipping Review Task Force
Medal of Merit, CHPA
Chairman, Canadian Shipowners’ Association
Chairman, Canadian Lake Carriers Association
Chairman, FACTS Coalition
Leader/Instructor Project Business (Niagara)

**Session 3**

**John Spacek, Manitoba Transportation & Government Services**
Mr. Spacek is Senior Director, Transportation Policy and Service Development. He is responsible for the development and implementation of integrated multi-modal transportation policies and service development strategies and programs. In this capacity, Mr. Spacek establishes, leads, and directs project teams to support, develop and promote Manitoba’s transportation sector, private sector service developments, and general transportation sector initiatives supporting international trade and industrial developments in Manitoba. He also leads and directs the development of transportation policy options and provides policy advice to government.

**Tom Kleysen, Kleysen Transport Ltd.**
Winnipeg based, Kleysen Transport Ltd. is a third generation company founded by Harry Kleysen in 1935. Hubert Kleysen, Harry’s son, held the position of President and CEO from 1962 to 1997.
Tom Kleysen grew up in transportation! Tom's desire to learn and his thirst for knowledge propelled him through the ranks of the organization. He wanted to ensure his knowledge of the organization was diversified, so over the next two decades he worked in every aspect of the business: Owner/Operator, Assistant to the Executive Vice-President, Operations Manager, Marketing Manager, Vice-President, Marketing, Vice-President, Operations and Executive Vice President. In August 1997, Hubert passed on the day-to-day operations to his son Tom Kleysen, appointing him President and Chief Operating Officer.

In 1997, Tom launched an innovative driver education program called Knights of the Road.

Tom and his wife Barb live in Winnipeg with their six year old children, Stephen and Shannon. Tom enjoys golf, skiing and spending as much time as possible in the outdoors, fishing and snowmobiling with his family at their cottage on Lake of the Woods near the Ontario/Manitoba border. Tom is involved in various organizations including the World Entrepreneurs' Organization (WEO), Young Presidents' Organization (YPO), the University of Manitoba Transport Institute External Advisory Committee, and has been a board member of the Canadian Trucking Alliance for ten years.

Under Tom's leadership and guidance, the Kleysen Group of Companies continues to thrive as a Canadian leader and innovator in the transportation industry.

Tamara VanWechel, UGPTI, North Dakota State University
Tamara completed her M.S. degree in Natural Resources Management with an Agribusiness and Applied Economics emphasis from North Dakota State University. She works at the Upper Great Plains Transportation Institute in the Agriculture Transport Center. Her research focuses on grain movement, and she has worked in cooperation with the USDA on several projects. Tamara was born and raised in rural North Dakota, and understands the fundamental relationship between economics and agriculture. She is pleased to be working on agricultural transportation issues and hopes to have a positive influence in this area.

Session 4

Paul Earl, Transport Institute, University of Manitoba
Paul Earl comes to the Transport Institute from a long and varied career in the grain industry. He has worked for the federal government in Ottawa, for Canadian Pacific Railways, for United Grain Growers, the Grain Transportation Agency, and, most recently, for the Western Canadian Wheat Growers. In 1992, Paul also completed a doctoral degree, which examined the farm movement in Western Canada and how the institutions that have shaped the grain industry for many years came into existence.
While at UMTI, Paul would like to see the Institute’s reputation as a vibrant centre for transportation research and development enhanced, and its role as a major centre for transportation education expanded.

**Ron Witherspoon, Pike Management Group**
Ron has over 30 years of experience in agricultural finance and investment. Most recently, he managed an agricultural venture capital firm that established over two dozen new businesses, all of which are in the agricultural value added sector. Ron has participated on the board of numerous profit and nonprofit organizations, and was Saskatchewan’s representative on the Federal Provincial investment attraction committee.

Raised on a farm in Carberry, Manitoba, Ron graduated from the University of Manitoba and worked in four provinces with Farm Credit Corp. While at FCC, Ron held the positions of A.V.P. Business Development, A.V.P. Portfolio Management in Corporate office and then A.V.P. Lending, and A.V.P. Administration in the Saskatchewan region. Ron has led alliances with multinational companies and has extensive connections in the agricultural sector in the United States.

Ron is Past President of Saskatchewan Institute of Agrologists, Past President of the Canadian Agri-Marketing Association in Saskatchewan, Past Chairman of the Board of Aginfonet. ([www.AgInfonet.com](http://www.AgInfonet.com)) Ron designed and built a passive solar home, which is just another indication of his love for being in on the ground floor of new and exciting innovations. Ron is also functionally bilingual.

**Bob Zelenka, Minnesota Shippers’ Association**
The Minnesota Grain and Feed Association is a 96-year-old voluntary non-profit association, composed of nearly 400 competing cooperative and independent country grain elevators and feed mills operating in Minnesota.

Bob Zelenka has served as Executive Director of the Minnesota Grain and Feed Association (formerly known as the Farmers Elevator Association of Minnesota) since 1981. Bob received a Bachelors and Masters degree from Mankato State University and is active in and past president of: The National Agricultural Association Executives’ Council and the Minnesota Society of Association Executives. Prior to his employment with the Minnesota Grain and Feed Association, Bob spent 5 years as a transportation and land-use planner with the Region Nine Development Commission in Mankato.

Bob also serves as Executive Director of the Minnesota Shippers’ Association (MSA), a new cooperative that is designed to promote and facilitate the sale of identity preserved (IP) agricultural commodities directly from Midwest producers to end-users. The MSA was created through an appropriation made through the
Minnesota Legislature and is managed by the Minnesota Grain and Feed Association. Now serving the upper Midwest, MSA has become a recognized leader in the area of specialty grains and provides information, education and representation for the growing upper midwest IP industry.

Rapporteur – Dr. Al Loyns, Prairie Horizons
Al Loyns is currently the President of Prairie Horizons Ltd. He owns and operates a grain and oilseed farm, Red River Valley of Manitoba.

Al is the Vice President of the Prairie Oat Growers Association; Member, Renewal Committee, Western Canadian Wheat Growers Association; Member, Cereals Value-Added Roundtable, an AAFC initiative under the APF; Member, Oat and Barley Subcommittee, Prairie Registration Committee on Grains. He is also a Member of BOD Domain PorkPlex Ltd., a hog finishing operation in the Red River Valley.

Al is a Former Member and Senior Editor (1994-2003), Policy Disputes Information Consortium.

He obtained his Ph. D. in Agricultural Marketing at the University of California (Berkeley) From 1968-98, Al was a Professor of Agricultural Marketing at the University of Manitoba. Al is a recipient of the Fulbright Research Award, (1997) taken at the University of California, Davis.

Al is an Expert Witness, Canadian Wheat Board Charter Challenge (1996), and the Constitutional Challenge (1998). He currently performs various consulting duties within and outside Canada, mainly Policy and Program Analysis.

He is the author or editor of over 140 papers, reports and books on agricultural and food marketing, especially market regulation/deregulation, research management, farmer marketing strategies, and trade disputes.
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