6TH ANNUAL
FIELDS ON WHEELS CONFERENCE

GETTING SUPPLY CHAINS RIGHT

NOVEMBER 20TH, 2001

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Getting Supply Chains Right

“FIELDS ON WHEELS”
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Preface

Some people read the last chapter of a mystery novel, before they read the whole book. I have always shied away from this temptation, but after going through the proceedings of the 6th Annual Fields on Wheels conference, I am going to recommend such a strategy. Everyone should start by reading the conference summation by Sandi Mielitz (page 70), who served as our rapporteur, and then read the rest of the report. Sandi captures the essence of the conversation during the day, and raises a number of insightful points that deserve further consideration.

In some ways, this conference addresses a turning point in the grain industry. The theme, *Getting Supply Chains Right*, set the basis for a discussion of whose supply chain is right. During the course of the day, two supply chains are discussed. An established bulk supply chain that is focused on moving large volumes of generic product at the lowest possible cost, and another identify preserved (IP) supply chain that is focused on maintaining the highest possible product value. These are separate supply chains that are trying to share the same infrastructure. Whether the bulk handling system is really capable of meeting the demands of the IP supply chain, and if so at what cost, is at the centre of this debate.

Over the course of the day, speakers examined the existing system of logistics and the supply chain challenges that confront change. A healthy dose of skepticism was expressed regarding what IP represents and whether customers either want it, or are willing to pay the costs entailed. Discussion also addressed the state of the existing bulk handling system, and ways in which improvements could be found with only more cooperation among the supply chain members. Getting the supply chains right for grain is always a work in process.

The session on regulation epitomizes the dilemma in trying to serve a heterogeneous marketplace in a fair and appropriate manner. Consistency in treatment of regulations can have undesirable impacts on logistical costs. At the heart of this discussion is the impact of falling shipment size. IP products are more likely to be shipped in smaller lots than bulk products. As the grain supply chain splinters into more and greater diversity, the regulatory system will be challenged to adapt in a manner that is acceptable to all parties.

Not everyone cares, or wants to be part of an IP supply chain. The statement, “I am a bulk guy” that is made in response to a question near the end of the conference, sums up one logical response to the challenges of the IP supply chain. Being very good at moving generic grain through an existing bulk system may be a better option for some firms, than trying to force their infrastructure to do something that it was not designed to handle. A non-IP grain system still has lots of future, and the Canadian system can deal with more segregations than competing bulk handling grain supply chains.
On behalf of the Transport Institute, and our partners, WESTAC, I wish to thank our sponsors that assisted in the 6th Annual Fields on Wheels conference. We had an outstanding set of speakers, who gave generously of their time to contribute to these discussions. We also wish to acknowledge the role of North Dakota State University, one of our Mid-continent Transportation Knowledge Network members, that provided the videoconference link. This added a valuable transborder dimension to the morning program. Finally, I want to thank all the participants who attended and provided the forum for these discussions.

Each year, we promise to complete the Fields on Wheels Proceedings while there is still snow on the ground. This year, thanks to a late spring, and a lot of help from my co-editors, we are able to live up to that promise. We have chosen November 5, 2002, as the date for the 7th Annual Fields on Wheels program that is now in the planning stages. I hope that you can join us again, at that time.

Dr. Barry E. Prentice
Director
Transport Institute
TABLE OF CONTENTS

Preface ........................................................................................................................................i
Table of Contents .....................................................................................................................iii
Welcome & Opening Remarks - Dr. Barry Prentice, Director, Transport Institute .................1

SESSION 1 - PERSPECTIVES ON SUPPLY CHAINS
Chairperson – Session 1 - Glenn Cheater, Editor, Canadian Farm Business Manager ..........6
Ray Lottie, Manager, General Mills ......................................................................................6
Gerry Carter, VP and Chief Operating Officer, CSL ..............................................................9

SESSION 2 - IDENTITY - PRESERVED GRAIN EXPORT SUPPLY CHAINS
Chairperson - Session 2 - Roberta Rampton, Associate Producer, CBC News: CountryWide ..............................................................19
Curtis Rempel, Business Strategy & Commercial Development, Monsanto .....................19
Dr. Bill Wilson, Professor, NDSU .........................................................................................28
Gary Pike, Crop Verifeye Canada ........................................................................................34

SESSION 3 - REGULATIONS AND SUPPLY CHAINS
Chairperson - Session 3 - Brent Vankoughnet, Agriskills Inc.& Port of Vancouver ..........42
Gordon Miles, Chief Operating Officer, Canadian Grain Commission ............................42
Rob Booker, Manager of Operations, Vancouver Wharves .............................................49
Dave Kushnier, President, BC Terminal Elevator Operators Association .......................53

SESSION 4 - RESTRUCTURING SUPPLY CHAINS
Chairperson - Session 4 - Harry Siemens, Editor, South East Agri Post ..........................60
Bill Drew, Director, Canadian Wheat Board .......................................................................60
Brant Randles, CEO, Louis Dreyfus ..................................................................................62

RAPPORTEUR
Sandi Mielitz .........................................................................................................................70
List of Speakers and Participants.................................................................................................................................74

Conference Sponsors

Canadian National Railway, Canadian Pacific Railway, Aikins, MacAulay & Thorvaldson, OmniTRAX Canada Ltd., Thunder Bay Terminals Ltd., Railway Association of Canada, The Canadian Wheat Board, Vancouver Port Authority, Elizabeth Robertson - RBC Investments, Canadian Wheat Board, Vancouver Port Authority ........................................................................................................................................78
Good morning everyone, and welcome to the 6th Annual Fields on Wheels Conference. We are holding this conference at the University so that a videoconference link can be made with North Dakota. In the future, we hope that our conference might be able to move north and south along the entire mid-continent corridor as part of a Transportation Knowledge Network.

Before we begin, I am going to present a brief introduction to Supply Chain Management. Part of what caused me to prepare this introduction is the lead article in the current *Journal of Business Logistics* that is titled “Defining Supply Chain Management”. If a leading journal of logistics has taken 22 years to develop a consistent definition for supply chain management, maybe it would be worthwhile for us to begin by examining what we mean by supply chain management.

The figure below presents a comparison of the traditional supply chain and the integrated supply chains. The traditional supply chain is comprised of sources, suppliers, converters, distributors, retailers, and consumers. The vision of supply chain integration tries to put those links together, instead of everyone acting as if they are the only party that they have to care about. We should care about not just our customer, but about customer’s customer. Many things do we might impose costs on our customer’s customer and similarly other things we do that might impose costs not only on our suppliers but on our supplier’s suppliers. The philosophy of an integrated supply chain is to work towards cooperative solutions that minimize total costs from producer to consumer.

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Many pressures are working to force greater cooperation: demands to partner, shorter product life cycles, capacity utilization issues, shrinking distributor roles, international competition, diminishing value of brand franchises, and more powerful, well-informed consumers. Trying to have total integration of the supply chain is the goal, but there is quite a large however—and the however deals with these questions.

What does it take to actually obtain supply chain integration? Integrated behavior is the first requirement. The supply chain members have to act as if they are a supply chain. They have to coordinate their behavior towards achieving a common goal. Mutual sharing of information is important, which in some cases is a problem as well. Supply chain members can remain suspicious of what information to give to suppliers and what to pass on to their supplier’s suppliers.

An integrated supply chain must include a mutual sharing of risks and rewards. It is one thing to take on more risk—but are you going to get paid for it? Similarly, who is taking on risk, what risk, what are the rewards and how do they get shared?

Cooperation must replace competition. These days, firms are not competing against other members of their supply chain; it is their supply chain versus alternative supply chains. This is the true competition, especially for global markets. The true competition for the Canadian grain supply chain is the Australian, American and Argentinean supply chains. Whether Canadian farmers are getting a good deal from elevators or elevators are getting a good rates from railways attracts a lot of attention, but is a lot less important than whether the efficiency of the entire supply chain matches foreign suppliers.

Do supply chain members share the same goal and focus on serving customers? Consistent goal integration requires building partnerships for long-term relationships and for long-term benefits. Key words are trust and the sharing of risks and rewards.

One way to define a supply chain is to look at how the traditional versus integrated supply chain approaches consider the following points:

- **Inventory management.** Traditional supply chains consider independent efforts to control inventory. In reality, everyone tries to get somebody else to bear the cost of holding inventories. A goal of integrated supply chain management is a joint reduction of inventories across the supply chain.
- **A total cost approach.** Traditionally, firms aim to minimize their own costs; in a supply chain, the purpose is to try and get channel-wide efficiencies and minimize channel-wide costs.
- **Corporate philosophies.** Compatible corporate philosophies are not relevant in traditional supply chains—nobody cares what somebody else’s corporate philosophy is—you just do what you do. An integrated supply chain requires a common philosophy across all members of the supply chain. At least for key relationships.
Leadership. Channel leadership is irrelevant in traditional systems, while it is a very important issue in an integrated supply chain. Who is going to lead and coordinate? Who is going to cause various individual parties to work together?

Information sharing. Information systems are independent and idiosyncratic in traditional systems. Compatibility is the key in terms of sharing information and what information to share, for an integrated supply chain management approach.

The benefits of supply chain management are economic, managerial and strategic. Both buyers and sellers share the benefits. Usually the gains are obtained by lowering costs, being more competitive and enjoying more volume. In order to enjoy the benefits of integration, supply chains often need a major overhaul.

Re-engineering supply chains—how do you get from here to there? Shifting functions between different firms is part of the philosophy. Information can replace inventories. Instead of moving inventories around, better information systems can reduce the need for as much inventory. Changing patterns from stop and start with batch systems to continuous flows, like just-in-time, can increase resource utilization. Transferring point of sale information back from customers to suppliers can improve forecasting and reduce stock-out sales losses. The impetus for re-engineering comes from new innovations that enable businesses to shift functions and streamline their supply chains, but too often the greatest barrier is the lack of imagination.

A short story may help to illustrate the need for creativity. The Romans’ horses, it was found, could only pull one-quarter of what a horse could pull in the middle ages. It was not that the horses were weaker in Roman times; it was how they were attached to the equipment that limited their performance. The first draft animals to be domesticated were oxen. Oxen had handy horns where a yoke could be strapped and lines attached to pull a plough or some other equipment. This is illustrated below.

When horses were domesticated—what did they do? The ancients wanted to use the same harness system as they had used with the oxen. This created a bit of a problem, because the horses had no horns, but they took the same straps and attached them as if the horses did have horns. The picture below illustrates how the horses were attached the chariots.
Those of you who know the physiology of horses will recognize that these straps go across one of the main arteries of the horse and their windpipe. It was okay when they were pulling a light chariot, but when they started pulling heavy loads, the harness started to suffocate the horses. During the middle Ages, the Europeans invented the rigid horse collar, which translated the load to the horse’s shoulders. By re-engineering the harness, the horses were much more productive and replaced the slower oxen.

The moral of this story can be related to how we view changing our supply chains. Sometimes you have to examine the existing marketing channel and think about it very differently. You cannot simply pretend that new systems can be employed using the pattern of present systems. It may be necessary to re-design relationships throughout the supply chain in order to gain the new level of productivity.

The theme of today’s conference is “Getting Supply Chains Right”. A key problem is finding champions to lead the change—this is always a difficult task in any industry. But, without strong leadership, what is going to cause any change to come about? In some cases, several members of the supply chain may want to be leaders; alternatively, no firm wants to lead for fear of losing some advantage. While doing nothing is always an option, it may not be a wise one. The ballpoint pen was not championed by the manufacturers of fountain pens, but look today at the market share of the fountain pen producers.

The grain transportation and handling industry is coping with a new dynamic that is not so different than the fountain pen makers. Subsidies have been eliminated, regulations have been re-written, former competitors have merged, new products are being introduced, and consumers are becoming more demanding. These developments create a number of challenges for the grain industry supply chain.

Fungibility versus traceability of crops is important issue that we are going to hear about today. The bulk handling system is based on co-mingling crops and moving them in mass quantities. It seems that what customers are looking for are guarantees of exact quality. How can we keep grain shipments separate and maintain the value of individual products, while enjoying the economies of size and attendant costs of the bulk system?
A second challenge is regulatory and institutional inertia. I am not necessarily pointing any fingers, or saying what we have is not right, but it is hard to get change in a regulated system when the regulations serve *inter alia* to prevent activities outside the status quo.

A third impediment to change is what I term “the tyranny of infrastructure”. No place more epitomizes this problem than Thunder Bay, where massive infrastructure investments are in place. The large grain terminals sit like castles guarding the waterfront against any challengers. As long that infrastructure exists and it is paid for, why would industry seek a change? A major problem in re-engineering any supply chain is to overcome such sunk costs.

Developing a common supply chain orientation might be the most difficult task of all. I know our speakers today are going to touch on these topics. Again, my effort was just to give a brief introduction and overview.

Our Chairperson for the first session is Glenn Cheater, Editor of the Canadian Farm Manager. He has been a journalist for over 15 years in various roles, including a national agriculture writer for the Canadian Press.
Good morning everyone. Our first presenter today is Ray Lottie, manager of Cereal and Eastern Grain Operations for General Mills. Ray has worked for 29 years with General Mills, the past 20 in the grain department. In his role as Manager of Cereal and Eastern Grain Operations, Ray oversees the wheat supply to the Buffalo flour mill, as well as wheat and oats to the big G cereal division. He also has trading and operating responsibility for 8 terminal elevators—44 million total bushels in capacity. These are located in Duluth, Superior WI, Minneapolis and Chicago. He is a Director and First Vice President of the Minneapolis Grain Exchange and Marketing Committee Chairman for the National Grain and Feed Association.

Ray Lottie, Manager, Cereal and Eastern Grain Operations

General Mills

Thank you Glenn. I am here to talk about identity preservation. The question I am putting forward is “A Revolution or an Evolution?”

The first thing I did was go to the dictionary. I have an office dictionary that is a few years old—perhaps if we had a newer one, it might have a definition—but I found no definition for identity preservation. I looked up the words individually at that point. Identity was “identified as a set of characteristics by which a thing is known”. Preservation was “to keep or maintain intact”. So I kind of combined those and came up with a working definition for grain identity preservation: “to maintain the essential characteristics of a lot of grain from field to end-use”.

Identity preservation is a hot topic in the industry right now. There is a lot of talk, a little action, and there are even some firms out there that are willing to setup your own IP program and help you run it at a price.

What is identity preservation, as it exists today in the industry? I think the lack of precision in the definition I just gave you reflects the broad spectrum of IP programs. They range from functionality maintenance programs that have a percentage tolerance for other grains or other materials, to very strict variety-specific zero tolerance programs. As you can imagine, the price of poker goes up significantly when you move from the broader program to the more specific. An example of the broader program is the way General Mills sources oats from Canada for our production facilities. We tend to bin by quality parameters, but we also bin by province and by crop year to better ensure downstream production consistency; it has worked quite well for us. So that is a broad identity preservation program. A more specific one might be what they do for organic grains, and of course we all know about Star Link.
At this point, I would like to look at General Mills’ supply chain as a vehicle to further explore identity preservation. General Mills is much more vertically integrated than a lot of food companies. We have country grain elevators in Montana and Idaho, we have terminal elevators in Minnesota, Wisconsin and Illinois, and we have obviously a strong connection with the consumer. So our supply chain literally stretches from field to table. While this adds to our operation complexity, it also gives us some opportunities to do certain things.

Our management expects a lot from our supply chain. They expect us to add value at every step in the process. We are expected to add nutrition, better taste, more convenience, and do all this at a lower cost than we did last year. We lower the cost by increasing volume but we can also increase efficiency by doing things better than we have done in the past. An example might be the computerization of our bin inventory system at one of our elevators. Or we can eliminate steps: for example, for a big customer we might ship directly from a production plant to a customer rather than going to a distribution centre.

In discussing value, I mentioned nutrition first for a reason. Health is a cornerstone of our marketing efforts—it is extremely important. We also know that you need taste and convenience in order to get that nutrition to the consumer. We found that out, sometimes the hard way. Back in the heady days of the oat-bran craze in the late 1980s, lowering cholesterol was the rage and we actually found a grain that would offer more cholesterol reducing capabilities than oats. We created a psyllium-based cereal that we called Benefit. It had great cholesterol reduction capabilities, provided a real consumer benefit but it had all the taste, flavour and texture of wet cardboard. It did not go very far.

Getting nutrition all the way to the consumer requires some pretty complicated interactions. We refer to nutrition as the science within the body. We have to marry it with technology, the science outside the body, and then we can use the grain as a delivery vehicle through food manufacturing and marketing to get it to our consumers. The intellectual property at each end of the chain differs considerably. Technology is the realm of molecular biologists, geneticists, plant developers and engineers who can improve seed and processes and allow us to get that nutrition moving forward. On the other end is the consumer insight people. A small army of interviewers who daily try to delve into the minds of consumers to find out what they really want and what they really need. It takes effective communication to get this whole thing working right.

Dr. Prentice referred to effective communication several times and it is absolutely critical. It would be really nice if we could come up with a great new seed variety today and have it ready for the market tomorrow. But in the real world, and I am sure many of you know this better than I, it can take ten years or more to go from first crosses of a new variety to commercial seed production. So, it takes a long time and traditionally the food companies have been involved way down there, at the end of the funnel, when the seeds are coming out. But we really need to become involved earlier. Otherwise, most of the improvements that we see will continue to be in the agronomic area. Don’t get me wrong, agronomics is critical to having good seed and we want to see that continue. But
we also want to see the ability to improve products through better seed and to do that, we need to get involved earlier in the process.

General Mills has been exploring this for some time and we have learned some stuff along the way. We have learned that quality starts in the seed lab—better seed can lead to better products. Varieties impact quality, sometimes more than we earlier believed. Sometimes it is an issue of not identifying the very best varieties; sometimes it is a question of excluding some of the ones that do not perform well.

The supply chain must be connected. It must be connected up and down, from farmer all the way to consumer in order to provide the right communication. Value must be shared. If we do not share value up and down the chain, we do not provide incentives for people in the chain to do things right.

IP practices must provide a return. Remember what I said about lower supply chain costs every year. If you are going to institute an IP program you better have a good reason to do it. Zero tolerance is costly and nearly impossible to maintain. Star Link provided a good example of how difficult that is.

The good news is that many of the IP skills are already in place. Farmers are pretty good about being able to restrict varieties to certain fields and to bin according to variety, if they have an incentive to do so. Elevators, especially terminal elevators, have been segregating grain for a long time. We segregate by quality already; it is not that big of a step to segregate by other factors. Transportation is a little bit tricky. I think the shippers and the carriers can do better jobs at cleaning out conveyances. We frequently get a lot of grain in the bottom of railcars for example. Mill segregation is something that is practiced daily by our mill operators. IP skills are really just a little stricter use of these skills that are already in place and some record keeping.

So what is General Mills doing? We are connecting grain to the products. We are learning more about how differences in grains can translate to differences in products. We are expanding communication with breeders. We are telling breeders what we know about our consumers and about how differences in products affect the attitudes of our consumers. In turn, they are allowing us to have input on some of their varieties earlier, back when they are first starting to cross for new varieties. We are contracting some acres, in a measured way, to learn about the cost capabilities and responsibilities up and down the chain. We are testing the chain and we are seeing where there are tolerances for imperfection; we are also seeing where the tensions are in finding mutual solutions.

What are we not doing? This might be just as important as what we are doing. We are not blindly racing to the finish line. We are not madly putting in place IP programs where there is no return. We are also not ignoring the potential of IP; we are learning more about it and we will be ready when the time is right.

What is the answer to the question “Identity Preservation-revolution or evolution?” In my mind, for my company, it is clearly an evolution tied to the pace of technology and the
ability to earn a return on the required investment, the rewards are commensurate with the costs. Thank you very much.

Glenn Cheater, Editor

Canadian Farm Business Manager

Chairperson, Session 1

Our next speaker is Gerry Carter, Executive Vice President and Chief Operating Officer of Canadian Steamship Lines. Gerry was appointed to the position of Executive Vice President and Chief Operation Officer in January of this year, and thereby assumed overall responsibility for all aspects of the operation at CSL Inc. and its domestic fleet. He brings to his current position vast experience in the fields of computer systems, labour, finance, risk insurance and administration that he acquired as Vice President, Finance and Administration for the CSL Group Inc. and as Director of Management Information Systems for CSL Inc.

Gerry Carter, Vice-President and Operating Officer

CSL

My presentation is going to focus on three areas. First, for those among you who are not familiar with CSL, I will give you a brief overview of the company; who we are, what we do. Second, I will talk about different projects. Some of which relate to the grain industry, which typify our partnerships philosophy, whereby we always attempt to offer innovative solutions to our customers who have, or will ultimately want to streamline their costs. Lastly, I will talk about the logistics problems that we sometimes encounter, most particularly related to grain movements and changes that could be implemented in order to achieve a much smoother supply chain.

CSL has been actively involved in the marine transportation sector in the Great Lakes for over 155 years, linking cities on both sides of the border. Our vessels carry bulk products through the Great Lakes St. Lawrence Seaway System serving Canada’s power, steel, agriculture, and construction industries. For example, our vessels carry coal from American towns like Conneaut or Ashtabula across Lake Erie to Ontario power plants, or from Sept-Iles in Quebec up the Seaway to steel mills in Hamilton and Detroit. Grain and other agricultural commodities make their way from Duluth, Toledo or Thunder Bay across to elevators located in Ontario, Quebec and the Maritimes. In some cases they will be reloaded into salties that will sail to other destinations across the ocean.

We have been actively involved in the Great Lakes since 1945. Our domestic fleet is comprised of 11 self-unloaders and 3 bulkers, which transport approximately 18-20 million tonnes of bulk cargo every year. Of that 18-20 million tonnes, approximately 2 million is grain. In addition to the major traditional bulk commodities such as coal, grain and iron ore, our vessels also carry a wide range of other materials including gypsum,
cement clinker and aggregates. The CSL Great Lakes fleet has been renewed through our Seaway Max program, which is a series of self-unloading vessels, the largest and most advanced self-unloaders the Seaway has ever seen.

Taking advantage of the Seaway’s new size allowances, three new vessels were built by CSL in that category, the Niagara, the Rt. Honourable Paul J. Martin, and the CSL Laurentian. All three vessels are 740 feet long, 78 feet wide, 48 feet in depth and are able to transport approximately 29,000 metric tonnes through the Seaway system. Apart from greater dimensions, these vessels boast the latest in shipboard technology and cargo handling systems. Our marketing and transportation services team orchestrates our vessels movements together to ensure each shipment is loaded and unloaded according to our customer’s needs.

Adding value to the customer is what we aim to do and that is what we have to do if we want to stay in business. When we buy or build a ship we operate it until we scrap it. We are not in the commodity business of buying and selling ships on an ongoing basis to turn a profit. We use the ship for as many years as we possibly can. Basically, we use and employ vessels in the long-term industrial shipping market. To keep them fully employed, we have to continually find ways to add value to the types of services we offer to our customers. The only way we can do this is by helping them cut costs from their transportation systems over the long-term. Otherwise, we fail to get their business or we are not able to keep their business.

As Ray brought up in his presentation, it is all based on that we have to do everything tomorrow, better than we did today, and that we have to be able to do it in a less expensive fashion. Our “Partnerships” philosophy is something that we have really spent a lot of time and energy in developing, both with our customers, with our suppliers and with our labour unions. The philosophy best describes the way, we at CSL, do business. We focus on building very close relationships with our customers in order to achieve the most appropriate solutions to their logistical problems, which result in helping them develop improvements in facilities, procedures, or regulations.

The one thing that is sure in life is that life will change and it will keep on changing. You cannot be afraid of change, you have to embrace it, you have to look forward to it and you have to adapt to it. We have been successful in achieving this through our expertise in the use of self-unloading technology that has revolutionized the transportation of bulk-cargo everywhere. For instance, during a period of severe congestion in the U.S. east coast ports in the early 1980s, CSL began a unique vessel-to-vessel mid-stream coal top-off service in Seven-Islands and in Canso. A transfer refers to a ship-to-ship transshipment of cargo taking place in a deep-draft harbour. Up to six of our ships unload into a deep-water vessel of Collier, Panamax or Handi size. This eliminates the congestion in the ports and allows us to serve customers better.

People try their best to think outside the box and look for the best solution for the circumstance. It is a successful way to reduce costs commonly associated with shore labour, pilotage, port fees and vessel time because a transfer is completely independent of
shore-side loading facilities. Instead, shore and vessel personnel loaded to salt-water vessel specifications handle the cargo on-board. As an example, we recently put together a proposal to the Canadian Wheat Board outlining the benefits of such an operation; savings worked out to be approximately $8 per metric tonne for a 29,000 metric tonne load of wheat. It is an example of the various types of savings that we could accomplish by doing this type of an operation rather than transporting to a port facility, which would then get retransferred into an ocean-type vessel. Those are the type of savings that we could obtain, that is the way we can provide value to our customers.

Another example involves St. Mary’s cement, one of our long-time customers, who had to solve a major environmental problem created by dust when cement clinkers are unloaded at their plant located in downtown Detroit. Grain also has some similar problems as we are finding out in Halifax and some other locations. CSL worked closely with St. Mary’s plant personnel to modify their receiving facilities. Our engineers proceeded to design a fully integrated dust suppression system, and a fully enclosed boom for vessels dedicated to the clinker trade to ensure that all discharges be dust-free thus eliminating costly cleanup charges. For the first 6 months after we put that vessel into operation, the environmental stakeholders were at that port for every unload taking air samples and ensuring there was no dust. It was very important. The customer had a problem and we had to help them find the solution if we wanted to keep his business.

Our self-unloading expertise also helped Cargill design a new hopper in its facility located in Baie Comeau. Cargill approached our Director of Transportation Services with questions about certain specifications such as the maximum level of boom that can be raised and the rate of discharge, as well as other technical matters. With the participation of our engineers and vessel managers, today Cargill finds itself with a hopper that allows self-unloaders to discharge grain at a rate of approximately 2000 tonnes per hour, which is double the rate a straight bulker can currently discharge cargo. It also helped increase the elevator’s turnover time in crucial fall months when the grain movements are at their maximum. It now uses a four-man crew instead of a 15-man crew and there are no more clean-up costs for shore and vessel operations.

We operate our vehicles with our customer’s needs in mind in order to load and unload their products in a timely fashion; a series of procedures have to be respected and implemented because to all parties involved, time is money. Keeping this in mind, you can imagine how frustrating it can be when something goes wrong such as sending a vessel to a port for loading and that the berth is clear but the cargo is not there, or the rail cars have not delivered the cargo containing the product, or they have run into problems, or when there is heavy port congestion and our vessel has to wait its turn, or when there are operational problems ashore. The repercussions from these incidents are costly, not only to a particular cargo customer, but also for the vessel’s future loads. Everything is a domino effect. We like to schedule them like buses, but regretfully, due to weather and environmental issues, we cannot. Everything is dependant on the schedule of a ship. Delays in one port cause enormous problems for the next customers that are going to use that ship for their delivery requirements. You are probably thinking “but sometimes things happen that are unforeseen or unexpected”. Yes, we take that into consideration
and we factor it into our plans. But what if, in certain cases, some of these hang-ups could be prevented if a step in the supply chain was better organized or coordinated?

To illustrate the point, I would like to talk about the performance of a vessel when they carry grain as opposed to other types of bulk commodities. When all goes well, our vessels take 10-12 hours to load anywhere between 25-30,000 metric tonnes of coal or iron ore. The same operation takes 30-48 hours when the commodity is grain. Why? There are a lot of reasons. We believe most of them are related to labour issues. First, the failure of elevators operators and unions to negotiate contracts, which would allow work to be performed around the clock as it is done in other trades. Second, the current pooling system in Thunder Bay which causes vessels to shift between 3 or 4 elevators to load the same grade of grain. Much time in labour related costs would be saved if one grade of grain were to be allocated to one storage facility.

We have a ship up in Thunder Bay that I believe arrived yesterday and it has to go to five different elevators to load 25,000 tonnes of grain. This is a lot of movement and shifting that is not optimizing the supply chain. Over the years, it has been noticed that labour stoppages have been occurring more frequently, causing more delays than necessary. There are too many redundancies in certain tasks within the movements of grain, which cause confusion. An example would be the weighing of a load being performed by different parties from shipping point to transfer point to final destination. As a result, you end up with tonnage variances and it ultimately gets you into arguments with various marine surveyors; it is an exercise in futility and a waste of time. Another problem area in Thunder Bay, is the railcar unloading performance. There has got to be something wrong when the round-trip time for a railcar from Winnipeg is lower to Quebec City than it is to Thunder Bay.

I have come up with a lot of problems. I have talked about a lot of things. What are the solutions? The solution, we think, is partnership. We have said that a lot of the problems are labour problems. I have been through a lot with Canada Steamship Lines and one of the areas I was heavily involved with was labour relations. The shipping unions had to be some of the most rigid, inflexible and ballistic-type unions you had to deal with if you go back 15-20 years ago. Ships were over-crewed, there were premiums for everything, and work rules were ridiculous. We had an environment on ships that was very hard to work with. Over the last ten years, we embarked on our Partnerships Program. One of our partners became our unions. We worked with them to make them part of the solution and to take them away from being part of the problem. Over those 10 years, we have cut unlicensed crew numbers from 22 to 16 and we are still getting performance on the ships. We have added all sorts of flexibility by adding general purpose workers, mobile utility crews—people that can cross boundaries—not one person has one job and that is the only job he can do. We now have people that can work on deck, in the engine and the tunnels. This gives you a more optimal operation. Rates of pay for certain years have been frozen; the unions have allowed us to eliminate all premiums. It has made us much more competitive. We think, as far as logistics and the supply chain go, these changes have to happen more at the front-end of the system and the back-end of the system if we are going to make all of this work. Other than that,
it is not going to be viable to transport grain through the Great Lakes. I think that would be a tremendous loss because it is the key mechanism for transportation.

From a shipping perspective it means dramatic changes in labour relations. We are living and working in a competitive society where everything has to be done yesterday, which means performance expectations are very high. We wheel and deal in the business environment; we look at the bottom line before anything else, which also means that cost-saving measures are expected.

Therefore, to be more efficient and cost-effective, a number of steps should be focused on amongst all parties involved in the grain supply chain. We have to open communication lines—start talking to each other, start learning from each other, start growing with each other. We have to commence 24-hour operations in Thunder Bay. Recently one of our bulkers, the Maple Glen, was able to take part of a grain load at the Mission terminal because labour was available between 1:20 AM and 7:50 AM. In total, the vessel loaded in less than 24 hours, arriving in Thunder Bay at 18:00 on the 15th of November, departing at 14:00 on the 16th. That allows it to leave quicker, that allows it to deliver its cargo quicker, that allows it to do it with less cost and that allows it to get back up and get another load of grain—making the system more efficient.

The grain terminals in Thunder Bay should be more grain specific to reduce shifting of vessels and improve railcar turnaround performance. More commercial terms such as demurrage and dispatch should be introduced to maximize efficiency. If you make us wait, there should be a penalty for that. If you can do it faster than we have anticipated, you should get a bonus for that. It is sort of a win-win situation. The grain industry should be more innovative with creative solutions like grain top-offs, as I mentioned with the Canadian Wheat Board’s proposal to stimulate additional grain movements via the lake system and the seaway system. Today, CSL is a leader in marine transportation both in the Great Lakes and in international waters. We recently spent over $200 million to improve our domestic fleet. We are ready to take on the challenges, particularly in the grain trade. In turn, I ask you, are you ready to accept the challenges?

Glenn Cheater, Editor

Canadian Farm Business Manager

Chairperson, Session 1

We will go back to Ray’s presentation to begin the questions. Would you address the issue of GMO preservation and how well the chain can and must perform in that regard? You had mentioned Star Link, but can you give us a little more detail on that, please?

Ray Lottie: GMOs are a sensitive issue in some parts of the world. I personally do not have a lot of fear about GMOs, but what I fear/do not fear does not really matter because it is our customers that determine how sensitive we need to be on this issue. I think the supply
chain can do a good job segregating GMO’s and we will do what is required. Zero
tolerance, as I mentioned before, is extremely expensive and very hard to maintain. Star
Link was a perfect example of that. There were some lots of corn that tested positive for
Star Link even though there was no possibility that Star Link kernels could have been
blended in. How did that happen? There are other things that happen out in the field such
as pollen drift that can move GMO genetics from one variety of corn to another. It is a
complicated issue but the short answer is that the supply chain can and will do what is
required by the customer.

Glenn Cheater, Chairperson, Session 1:
Just to follow-up on that, to put you into one of the hottest issues up here in Canada is the
debate that is going on as to genetically modified wheat. The Canadian Wheat Board has
expressed concerns and relayed the concerns of their customers. I do not know how the
issue is playing south of the border, but what are your thoughts on that aspect of it?

Ray Lottie:
Star Link has made the whole industry more sensitive to the potential problems of a new
GMO. It is my belief that it is the responsibility of the company marketing the new
variety with the GMO material to ensure that the acceptance is there on the part of our
domestic and international customers, before it is introduced. As I mentioned before, we
have seen evidence that it is extremely difficult to operate in a zero tolerance
environment and we are seeing a lot of caution in its introduction. Part of that is a result
of some of the alarms going off in the industry and the political pressure that attaches
there, too. Some of it is a recognition on the part of the company that is bringing it out
that there could be some severe cost penalties if it is not done right.

Glenn Cheater, Chairperson, Session 1:
How do you determine your tolerance level and does it vary by product? How does cost
factor in?

Ray Lottie:
Our tolerance level, for the most part, is determined by our customer’s requirements and
cost does play a role. Going back to the zero tolerance regime—that is very expensive.
We are going to continue to react to our customer’s demands and act accordingly.

Glenn Cheater, Chairperson, Session 1:
Ray, you mentioned that you are experimenting in terms of IP and looking at some of the
costs and difficulties within your own system, can you give us some more information on
how that has been going? Are there things that you have identified that work better than
others?

Ray Lottie:
Our main focus has not been how to isolate different grain streams completely, but rather
how to maintain the benefit of a specific variety or a specific lot of grain through the
system. One of the fascinating things that we have determined is that you can have a
variety of white wheat that really does a good job in your cereal processing one year and
then, something happens in the environment and the variety acts much different the next
year. It is a pretty complicated issue. Every year we are developing a better database on
how different varieties perform for us and we are learning more about it, but there is that
old saying about Mother Nature, she is really in charge in the end. Varieties can provide
consistency and can provide end-use benefits, but they are impacted every year by the
environment in which they grow.

Glenn Cheater, Chairperson, Session 1:
Is self-unloader technology compatible with IP needs?

Gerry Carter:
On the surface I would have to answer yes. There is no reason why self-unloaders cannot
be compatible.

Questioner:
I asked the question simply because I understand IP needs and the whole differentiation
requirements. Where self-unloaders are great on a homogenous commodity, with its fast
speeds, IP means a lot of package type work, preserving identities—it is a different
market altogether. CSL has put a lot of money in self-unloader technology. Is it
inconsistent with what the needs are going to be for a growing percentage of the grain
shipments to go out?

Gerry Carter:
It is possibly slightly inconsistent today, but as we have shown over the years, we are
willing to adapt our technology to any changes that would be required in order to be able
to handle needs going forward; providing the demand is there.

Glenn Cheater, Chairperson, Session 1:
Gerry, is the reason why you have to move to five different sites explained by the fact
that the company cannot supply the commodity or because the CWB tries to equalize
with all the companies?

Gerry Carter:
It is difficult for me to say. Probably there is somebody in the room who can answer that
question because he is dealing with them on a day-to-day basis. I get the feedback that
we have to go to five elevators to load 25,000 tonnes. The reason for it is probably a
combination of both.

Glenn Cheater, Chairperson, Session 1:
I guess many people came to this conference today thinking about Identity Preservation
in terms of maybe smaller quantities are moving isolated through the system to get to the
customer. But you introduced a new aspect of looking at grade specificity for terminals.
Should we expand our thinking on identity preservation to not only specific variety with
very specific characteristics but to look at grades?
**Gerry Carter:**
I think we should. The way we are going to find solutions to the problem is thinking out of the box. How do we move grain in the most efficient manner possible, both for the grain company and the shipping company, in order to satisfy everybody’s needs? There are a lot of changes that can be made. Somebody made references to the structures in Thunder Bay. I do not think those structures have changed in 20 years. I would say everything else has changed, it is probably time that changed, too. It is time to rethink about how we utilize those facilities.

**Glenn Cheater, Chairperson, Session 1:**
Ray, in your opinion, what role should governments play in IP systems, if any?

**Ray Lottie:**
Well, that is a minefield. I tend to look at the government’s role as possible assisting the industry in setting some standards. I would hate to see a large regulatory bureaucracy become involved in the whole process because I think it would add a lot of cost. Again, I think this whole thing is going to be customer driven. Barry did a great job of talking about how we need to be concerned not only with our own customers, but also with our customer’s customers and with our supplier’s suppliers. This is really what that supply chain is all about and if we can accurately communicate the needs of the ultimate consumer down that supply chain. It goes further than that. It may be a process need by one of our plants. Somebody asked how we determine the tolerance for other varieties or other types of grain. It might be determined by the ability of the plant to handle the other types of grain or the other material in the grain.

I do not see a huge role for the government to play. At times they are going to play a role such as what the U.S. Government recently that came out with in regards to standards for organic grain and I think it is perfectly appropriate that they brought some kind of standard for the industry, so that there is some order and not the chaos we have seen in the past. I would see their role as advisory and standard setting, primarily.

**Glenn Cheater, Chairperson, Session 1:**
Please comment on the state of the testing of technology to achieve the desired tolerances. For example, what types of testing technology are used, or are needed to meet the desired tolerance levels? Are they cost effective?

**Ray Lottie:**
I am amazed at the ability to test for small amounts of genetic materials. There is very good capabilities to test for chemical residues or genetic materials. When we are talking about GMO wheat, there absolutely has to be a reliable and quick test, that will enable people taking in this wheat, that supposedly does not have the genetic material, to test and verify that it is either there or not there. I would say tests need to be reliable and repeatable. They need to be quick and they need to be field durable where we can take them out to a country elevator, for example, and have a good test that the industry can rely upon.
Glenn Cheater, Chairperson, Session 1:
Just to follow-up on that for Gerry. Have GMO concerns affected your business in terms of the cleaning of ships and the tolerance levels that you have to adhere to?

Gerry Carter:
There was, in fact, before we got into our new building program. Our ships, as well as many of the ships in the Great Lakes, are getting older. When steel gets old, it tends to create rust and all sorts of scaling. With the program that we have done over the last three years, we probably have the cleanest ships that can transport at this point in time. They are fully coated with plastic in the cargo holds. It is becoming less and less a problem for us. I would not necessarily say the same for other companies that have not faced the reality of aging ships. They are still having the problems of getting ships rejected when they were sent up because of either scaling or rust. The majority of that has now gone away for us because of our building program.

Glenn Cheater, Chairperson, Session 1:
How do you deal with the higher levels of segregation right down to small amounts of very tight spec loads? How small a load and how strict a spec moves from bulk to container?

Gerry Carter:
Well, it is all going to come down to economics. We can move as small a load as you want as long as you are willing to pay for the ship. If you want us to put 1000 tonnes in a cargo hold and leave the rest of it empty, we can do that. We have multiple cargo holds and we can have segregation—we can carry small loads. I do not think that would necessarily be economically feasible for very specialized types of grain. You would probably be looking at another method of transportation, other than a large self-unloader. Possibly containerization, but I do not see that being a very common method to transport grain.

Glenn Cheater, Chairperson, Session 1:
Another question on GMOs. Who should be involved in the education of the customers?

Ray Lottie:
Customers do a pretty good job of determining to whom they are going to pay attention. A lot of the education is going to come from the press and a lot of different folks are going to have input. Academia will have input, industry will have input, but ultimately customers will form their opinions in a wide variety of ways.

Customers from General Mill’s point of view, are the consumers that are eating Cheerios at the table each day. If you look at the Canadian Wheat Board, their customers are international firms or countries. If the European Union, for example, decides that they have an absolute zero tolerance for GMO wheat, you can imagine the disaster that could happen if that wheat were allowed to be out on the market place before it was time to bring it out. General Mills obviously does a lot of advertising to customers. We do not try to lecture them on what they should like and dislike about GMOs. For example, we
are involved in some trade groups that can do a better job than we can of educating the public on the benefits of GMOs. There is a lot of negative press about them, but there are a lot of positive things that can happen through genetic manipulation. We are involved in some industry trade organizations that provide that message.

**Glenn Cheater, Chairperson, Session 1:**
Do you get concerns from consumers, or are you getting higher readings on this from consumers about traceability? Would they like for you to be able to somehow point your finger to the field that grew the grain that is in that box of Cheerios?

**Ray Lottie:**
No. We are not seeing that. I do not see all the letters and messages that come into the consumer response line for General Mills, but I am sure, if there was a cry for us to trace something from the field to the table, that I would be hearing about it in short order. We do have questions and concerns expressed about GMO crops and whether they are contained in our products and, generally, we have peaks and valleys depending on the amount of press that is out there. There have been several studies done on consumer awareness and most consumers are aware of the GMO controversy; it is relatively small percentages that are concerned about it to the point that they worry about it. Most consumers in the United States—I do not really want to speak for Canada—are slightly weary about the whole thing, but they are not really worried about it and they are not making a big issue about it at the moment.

**Glenn Cheater, Chairperson, Session 1:**
You mentioned that supply chains must be connected. How do you manage competition within the chain? There is only so much profit in the commodity. So how do you manage the competition? This goes back to Barry’s comments that traditionally it has been a matter of keeping your inventory costs low and letting the other guy worry about his costs. How do you achieve cooperation?

**Ray Lottie:**
It has to be connected and value has to be shared up and down the chain. Exactly how that value is shared and who gets what proportion of the total pie is always a difficult issue. The marketplace will largely settle it. There is no question that, if we have a proprietary variety that we have exclusive rights to at General Mills and it provides a huge customer benefit that we can translate in dollars to the bottom line, we are going to be willing to pay a lot of money for that particular variety and that benefit. Some of it will go to the producer, some of it will go to the seed company and some of it will go to the people handling the grain, and so forth. I do not think General Mills is necessarily going to dictate who gets what, but the marketplace will likely have a lot to say about it. If it is a variety that provides a benefit but not necessarily something we can tie-up or want to tie-up, then the marketplace will have even more to say about it. Farmers take risks every year and one of the risks they take is “What variety of oats do I plant? Do I plant Derby or some other variety?” and they are betting on both the agronomic performance and the desire of the marketplace to attract those oats. If they guess right, they get a little more money, if they guess wrong, they lose some money.
Dr. Barry Prentice, Director

Transport Institute

The Moderator for the second session of the day is Roberta Rampton. Roberta is an associate producer of CBC News: Country Wide. In September Roberta helped launch these two rural news programs on a new digital specialty channel, Country Canada. Roberta grew up on a dairy and grain farm in Dauphin. She honed her Agriculture reporting skills for 6 years as the Winnipeg correspondent for The Western Producer. Roberta holds a journalism degree from Carleton University.

Roberta Rampton, Associate Producer

CBC News: Countrywide

Chairperson, Session 2

Thanks for inviting our young channel to participate in this event today. I would like to welcome our first speaker Curtis Rempel. He is a Molecular biologist, who also has an MBA. He works for Monsanto Canada and he is in charge of the Round Up Ready Wheat project.

Curtis Rempel, Business Strategy and Commercial Development

Monsanto

The title of my presentation is The Challenge of Preserving Value in Supply Chains. I have a few comments before my presentation. First, I am not the most qualified person at Monsanto to speak on this issue and I would consider myself a student of supply chains.

As a student of supply chains, over the last 5 years I have noticed a couple of trends that have happened with respect to the customers: either customer’s preferences are changing, customer’s decision power is changing or the distribution system is changing. One of them is related to GMOs. Who would have thought that GMOs that have covered greater than 50% of the acreage in one continent are rejected in another? It is an interesting development and has enormous implications to the supply chains. Who would have thought that Brazil would increase soybean production 54% from 1995 to 2000; arguably as a result of this, oil seed prices are in crisis. This production increase comes as an anomaly in that they maintain themselves as being GMO free but at the same time, some industry pundits would say that there is up to 30% GMO acreage that are not approved for sale, use, or production in that country. Who would have thought that the bottled water market in North America is now bigger than the Cola market? And that lifetime brand of Coke is being eroded by a lifestyle drink war. Who would have thought that the in-store bakery component of grocery stores has become their largest profit centre in many stores in North America and indeed globally? The biggest concerns for companies downstream, at least in the wheat value chain, have become quality and consistency.
am being a little bit sarcastic with my remarks here. But we were always told that quality and consistency is what the bulk commodity chain is best at providing, and because of that, there would not be a lot of room for change in the supply chain at least with respect to wheat.

Supply chains are becoming critical to Monsanto. At one point in time we would not have thought about it but I will touch on it in a little bit. If you take away the debate around GMOs and just put together some other aspects like genomic capabilities, the intellectual property around different functionality of grains (or oil seeds, etc.), proteonomics (modifying proteins in a production system by using agronomic practices and perhaps more molecular manipulation), and a seed platform you have spent $8 billion purchasing in the last 5 years. When you find you still have gaps, you decide to partner with other suppliers to deliver to the farm marketplace, but you still have your own chemistry formulation group. You start realizing that if you are going to integrate all of these things as a profitable company you must become your own mini supply chain within a company. They all have their own unique sets of competencies and intellectual requirements. You have to integrate partners into the process because, even if you have all of these competences, you still do not necessarily have a direct pathway into a farmer’s gate or to the supermarket floor.

I am going to talk about wheat for a bit and look at what some of the genomic work promises to hold for the consumer, and why supply chain changes may be imminent or important in bringing this to market. All of these traits can be created using recombinant DNA technology or using conventional breeding technology—some of these things are not unique to biotechnology. There is two end results: first, you still need to get them to the customer in a preserved fashion because some of these traits are important to some bakers and actually a detriment to other baking operations. No baker is completely the same in what they require from their supplier. Second, you couple end-user requirements with some consumers’ reaction to genetically modified foods. Some people say, “if you bring forward low gluten weight that appeals to a person suffering from Celiac disease using recombinant DNA technology (because that may be the only way you can do it), you will have solved your genetically modified organism acceptance crisis.” I do not necessarily believe that because people have different perceptions, and perhaps even religious backgrounds, that a transgene technology will be inconsumable for some groups.

Traits like anti-staling, which is probably three years away, and high dose strength and absorbance, which we are working on currently, can be found by doing variety-specific origination. You do not necessarily need to change a whole lot or pay attention to what varieties you are pulling forward and what varieties you are excluding. Some of the other product traits are indeed 5-8 years away. Weight Watchers flour is an example of a resistant starch that is not digested well, so you consume fewer calories but pass through more products. This is fine for North America and Europe, but it is not necessarily what the developing world wants or needs.
As we were integrating ourselves in this “lifestyle model”, we were thinking of food as production in a farmer’s field. I think anybody who is involved in the hard chemistry, seed, and trait business is moving towards thinking of food as production. I would like to think that as a company we are as competitive in getting there as anybody. If you look at the list of traits that I have just shown you with respect to wheat and at all the other work we do in oil seeds, corn and other crops, which we are working with now, you can clearly see that our thought process of food as production in the farmer’s field is not going to be good enough.

The challenge came from somebody new to the grain industry here in Canada, Dr. Bill Skocroff, and the Director of the Grain Research Foundation. In a conversation, he challenged us to start thinking about these things in the way a food company would think about, that is, food as a preparation. This is quite a different way for a company like Monsanto to start thinking about some of these traits. I would be the first to say that we do not have a great core competency in thinking like a food company. The great trade-off is between the industrialized world where we want convenience and specialty versus the developing world where sufficient calories and food security are most important. Food as preparation, I would submit, is equally important to both of those groups whether you are industrialized or developing, but it is just how you are thinking about it in your day-to-day lifestyle that is very important. We need to be cognisant of that.

I have to give credit where credit is due: I have stolen this slide from Linett Geomatics and they were clearly thinking about this before us. The slides fit well to where Monsanto operated. It is probably hard to read, but anything above the line is traditionally where we have operated and where we have thought our supply chain existed with the seed retailers, ag-chem retailers, the farm customer and anybody that has been distributing it within that group of customers. This was our supply chain: pretty linear, and pretty focused. Once the crop came off the farmer’s field, Monsanto did not really have anything else to do with the supply chain.
It was up to the grain handlers, processors, etc. to now take over the supply chain. The question was “How far outside the farm gate does Monsanto go?” I would submit, and we debate it a lot as a company, that we are probably now going all the way out to consumer. How does that vet with people who are in the supply chain? Do we work with all of those people within the supply chain to start bringing products to market? Or, do we start to focus all of our attention on the consumer. Build up end-use for the particular traits that we have, and only then try to let the marketplace figure out the most efficient way you can get the product to market?

At any rate, some of the answers come just because the supply chain is no longer linear and is changing fairly rapidly. It is becoming linked and interlaced with different people taking on different roles: some roles they have traditionally performed and some roles that are outside their core competencies and that they are now embracing in order to make new supply chains work. Basically, different things have happened: consolidation of food and processor marketplaces, biotechnology, electronic commerce, environmental issues and precision agriculture. There is probably a whole host of other things that either have emerged, or are going to be emerging that are going to impact the supply chain.

I think that the biggest trend that you have to catch onto as a company is that the grower wants to be closer to the consuming customer. Look at what is happening in the animal industry (beef, hogs, etc.) - especially in the beef industry over the last four or five years in carcass tagging. Another example is what the honey producing Clefelt group is looking at doing with some Japanese customers. They want to be visible and they want to be part of the consumer reaction and of the consumer choice to know that they are getting safe food.
It is fine for supply chains to change and for things to be reorganized, but if, at the centre of it, you do not have a farm producer who makes money, things really will not work. The farmer, at the start of it all, has to make money with the particular commodities or crops in which you are interested. Otherwise they will just start substituting away. What happens to wheat acreage overall, if you are trying to bring traits out in wheat, and your wheat market starts disappearing by 30% every five years because farmers cannot grow wheat profitably? It has to impact the supply chain.

If you are a student of supply chains, one place you can go to learn about these things is the Harvard Business Review. They do a miraculous job of making some very complicated things appear very simple on paper. One of them is a nice four-box model that works well at Monsanto because we are also the kings of the four-box model. You can simply say that bulk products will move through what they are calling “the efficient supply chain”—the current bulk-commodity chain will not disappear and will probably play an integral role in moving agricultural products globally—and you will have what they call the development of a responsive supply chain which will move innovative products around the world to markets. Of course it is probably the innovative product supply stream that Monsanto needs to participate in. I guess that is a very simplistic way of looking at things and I will submit that I do not necessarily have all of the characteristics of what differentiates a responsive supply chain from an efficient supply chain but I think they have a lot of similarities.

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Matching Supply Chains With Products

If you look at our modelling and start thinking about how you are going to bring a product like Roundup Ready Wheat to the marketplace, you identify that there are probably about 30 different permutations and combinations of things you can do—either with the existing supply chain, or with things that do not exist to get a product to market. One of the things that come up very quickly is that you will have hybrid models between what the Harvard Business School would call the efficient versus the responsive. Whether you call it efficient or responsive, there are quite a number of players in Canada who are going to be involved in a particular transaction or the movement of this particular product, either from a regulatory standpoint or from simply a good movement standpoint.
It occurred to us that we could map all of these things out until the cows came home. But without some sort of input and information and partnership with all of the different companies that could plug themselves into the various roles or slots in this process map, we would not be doing a whole lot for bringing the product to market. For a number of reasons: number one, is a lack of core competency and number two, which speaks to number one, is not understanding the system ourselves because of the complexity of regulatory procedures, oversight, etc. This becomes the first challenge in preserving value in a supply chain.

In the move from efficient to responsive supply chains, some basic economic equations do not disappear. Consumer value perception equals benefits divided by price. You could argue that consumer benefits are different, that they are evolving and they differ with respect to regions in Canada, the United States and globally. But, some of the things we find coming forward are: environmentally compatible, socially responsible, food safety (always the number one concern, especially concerning pesticide residue, etc.) nutrition, freshness, convenience, quality and trust. You bring all of these attributes forward and the bottom line is what the consumer has to pay for the product. If this price matches the set of benefits, the consumer buys, and if not, they do not. I do not think that equation changes, no matter what you call your supply chain, or how you envision it working.

The supply chain also has to cater to itself. You have a consumer at the end purchasing the product, but if you cannot bring your benefits and price pieces to the supply chain, people are not going to go out of their way to do things just for health reasons. They have to employ people, they have to keep their shareholders happy, they have to make a profit, from the farm gate down to the consumer. So retailer and consumer acceptance, adherence to spec or tolerance, R & D assistance, terms of trade, and even the continuity and tradition of relationships all become important. They are all benefits that are weighed off against price. The supply chain will make their decision as to how they are going to participate bringing products to market.

Shifting towards specialized grain markets and segregating crops or preserving their value is going to create a lot of changes. This, of course, should make the economists at either academia, banks or different institutions quite happy because there will be no shortage of work for the next five years. But clearly, things like risk management, hedging practices, warehousing laws and inspection, grain grading procedures, arbitrage, and indeed physical grain operations are going to start vetting out in that benefit/price equation.

The quote: “To capture full benefit of future trait-specific crops, the Canadian agriculture industry must be prepared to ensure quality while retaining economies of scale and efficiencies for all operations” is an interesting one. The first thing that hits me is: Is that mutually exclusive? Can that be done? I do not doubt that production and distribution networks will have increased in complexity compared to high efficiency, non-differentiated commodity markets. People who have been managing the high-efficiency
non-differentiated commodity market have all kinds of expertise with dealing with those changes. I would also submit that at one point in time, we have evolved as a high-efficiency, non-differentiated commodity market as well. If you look at the prairies, as farmers, we have evolved and worked through inclement weather and transportation issues over the last 50 years and these have all started as a problem or challenge to overcome. Industry has always managed to solve them. It is an interesting statement to make—I do not disagree with it. This is not doing anything different than how we have done it for the last 50 years.

“Additional resources required for specialty markets generally increases with the difference in value between product and its alternative commodity.” I am not sure how to interpret that statement. If you want to charge a premium for your trait, vis-à-vis low pentacin wheat or resistant starch or something, if you want to make it flow through a supply chain in a preserved fashion, you had better have a consumer willing to put up, pay for it, and pull it through. Otherwise, there is really no reason why anybody in the supply chain should do any more work than they would otherwise with a bulk commodity.

Now to get into some of the specifics of preserving value. If you are a good student of business, you look at any enterprise and you look at your cost components: materials, operations, testing costs, hidden costs, and your costs of risk management. If you take it out to exactly where we live right now—not even thinking about any of our products ending up in the commodity stream or specialized traits—if you just look at seed and how the cost components and drivers affect genetically modified seed, you start realizing that there are going to be many issues. There are going to be seed purity issues, lot-size and storage capacity issues, and sampling issues (they are going to be different than sampling we have done to date to maintain certified seed grades). There are going to be infrastructure capacity shortages both at the farm gate—forget the seed retailer and the seed grower—and in some cases shortages at some retailers, suppliers, farm organizations.

In other cases they are managing surplus, in terms of seed production capacity because of changes in weather from year-to-year their crop size for seed changes. When you are moving seed commodities around, shipment size is a factor that has to be addressed. The other area is regulatory changes. The bio safety protocol will probably have a huge impact on how we, as a company, move seed around the world, let alone a crop for food use. At the bottom line, a tolerance or threshold is going to be a major cost driver throughout the supply chain. If you look at it from a seed standpoint—forget commodity standpoint—zero is undoable. If you cannot do it at a seed level, I do not know how you can do a zero level in a commodity or in a food production system. You can spend a lot of time and energy complaining about it, but the reality is that, as one industry pundit or scientist said, zero is a very small number.

We have started to say that zero cannot be done. We are going to rely on tolerances and thresholds that are going to have to be set by regulatory bodies or agencies that issue certificates of trade, globally. My first specific issue is about traceability, because it is a
precursor to testing. “Are you are going to start thinking through supply chains and start finding out that, if you have a problem, you have to recall a problem and not just for genetically modified food?” Starlink was one example, but there are issues of pesticide residue, E. coli and all kinds of other contaminants, the esters in Coke bottles in Belgium, etc. A whole host of food safety issues come forward in any given year. The industry has always learned to respond and has always responded to all kinds of food safety issues.

Starlink was basically a non-safety issue: you had something for feed approval, but it did not have food approval. You became pretty certain as a scientist that if somebody did ingest it in the low amounts that it was present it would not kill anybody, it was not likely to trigger an allergic reaction either. But even having said all of that and apply some type of rationality to that, it was still an illegal product to bring to market. The supply chain starts scrambling to figure out how they are going to deal with the entity.

Companies, including Monsanto, can do a lot of data exchanges very quickly because we all have very elaborate computer systems to track and trace, but none of our computer systems talked to anybody else’s in the supply chain. You can have the best laboratory information management system and the best enterprise data collection software and tracking software, but if you cannot interface with any of your peers in the supply chain, it becomes very difficult to start working rapidly through a traceability issue. Before some of these specialty traits come to market, we are going to have to pay attention to how we exchange data as companies. We cannot abandon the systems we have, but we will need to find ways to integrate them and that goes to invoicing, inventory and other functions. We have always dealt with those sorts of issues, but you add in a whole new layer when you add in regulatory requirements to biosafety protocol or regulatory requirements around traceability, etc. We are going to have gaps and data islands and we are going to have to start working through those issues.

Standardized testing and sampling will be required at both ends of the supply chain and probably in between. If you are using two different tests, one at a port in Japan and one at the exit port in Vancouver, you are bound to have problems. We know from just the PCR work that DNA is a very precise and accurate way of testing. But even things like DNA extraction protocols will give you different results. Environmental factors will give you different results. You move it to protein-based testing and you use something like a strip-test in an elevator. At 20 degrees Celsius, you probably get one result. If you have not really taken the time to really look at the robustness of the test, I will guarantee you that if you use it at –5 or –15, you are going to get a different result. Standardized testing procedures and robustness of tests is going to be critical in order to make supply chains work.

I could go on and on about this, but I am going to pass. Standard operating procedures (SOPs) are needed at the producer level. Monsanto spends most of its time thinking about what purity risks look like. In some cases the risks are not a reality yet, in other cases they are. What does it look like with respect to maintaining isolation, with respect to say pollen flow—for example of wheat versus canola? What do equipment cleanup
practices look like? Purity of seed? With these we have some expertise and we are starting to spend a good deal of time working with seed suppliers, etc. working through these issues. If you look at the SOPs that would be critical for handlers, grocery distributors, manufacturers, etc., we do not have a lot of expertise and we are looking for a lot of guidance. It helps having people identify and then help us operationalize our systems. I submit that it is going to be more than just Monsanto requesting guidance from the supply chain. The bottom line is detect to tolerance, segregate to preserve value and document to substantiate. This is going to be the way for going forward with specialty commodities.

We are currently in a bit of a conundrum. From doing a lot of work with farm organizations, we clearly realize that farmers do not want to be penalized for growing GM crops, especially crops that have significant benefits to the environment in terms of pesticide reduction, etc. For all intents and purposes they should and could be handled as bulk commodities. You match that off with a farmer’s feelings and with a European consumer that wants to have choices as to what type of input was used to prepare that particular food product in respect to the raw ingredient, and you start having this loggerhead.

As a scientist, I sometimes think consumers make strange and uninformed choices. However, they are making the choice to the best of their ability and with the best information they have. Those choices are real and their concerns may not be based on fact but are still real concerns. The other point we hear from farmers is that they should not necessarily be penalized for becoming least-cost producers. Some of these technologies allow them to become least cost producers and also to do it in a more sustainable way. This benefits all of society. They also find it particularly frustrating and quite frankly, we, at Monsanto, also find it frustrating that you have government regulators or policy makers that interfere with market prices, which transmit benefits of technical change back to consumers. We have this artificial situation or artificial trade barrier that exists and right now, farmers and consumers, at both ends of the supply chain, feel they are caught. I am sure everybody in the middle of that supply chain feels they are caught as well. So, to some extent, we are looking to the supply chain to help us resolve some of these short-term needs. We have GMO commodities out there, in the marketplace already but consumers want choice—how do we manage this? How do we do this in a framework as we bring other products to market? I guess part of the submission is: if we do this properly in the short term and look at some of these short term hurdles, it sets us up well for what happens in three, five, or seven years from now. I am going to conclude right there. Thank you.
Thanks very much Curtis. Now, joining us virtually from North Dakota State University we have Dr. Bill Wilson, who requires very little introduction to this audience. He is a well-known speaker and teacher on Marketing and Transportation.

Dr. Bill Wilson, Professor
North Dakota State University, Department of Agricultural Economics

Today, I have been asked to speak on identity preservation (IP) and some of the supply chain costs. I interpret identity preservation as a form of procurement. IP is currently envisioned in most cases to be relatively costly due to three main factors: administrative costs, being removed from competitive pressures, and due to a lack of the economy’s size and scale of IP operations. I suspect the extent that IP type practices will be adaptable will be fairly limited, because IP is a practice that does not do a great job in minimizing costs or risks. Instead, alternative forms will end up competing with it. An example of some alternatives would be the wheat procurement regimes we have been studying and that I will summarize with a few challenges that will be important later.

The best way to explain identity preservation is to use the analogy of a father of young boys. Think of the child being identified at birth as a good physicist. I suppose identifying the child at birth and saying that this child will become a good physicist is the purest form of identity preservation. Maybe at the extreme, we could identify him or her through artificial insemination or other types of innovations but ultimately it is preserving that child’s identity until he or she becomes a physicist. In practice, that does not happen because you cannot control the environment very well and there is a lack of certainty that occurs, ultimately affecting the end use performance of that child. We have found that if we replaced that type of identity preservation with schemes like testing, separations and putting them in special programs, ultimately we know, when he hire a physicist, that he/she will be a good one.

This is the best analogy I can think of in defining identity preservation. Why is it relevant? There is no doubt in every one of the major exporting countries in the world today that there has been an escalation of segregations. Those segregations are imposing additional costs on all systems. This is notably true in Australia. Last time I was there, they told me they were marketing 42 different segregations. Similar problems are being experienced in Canada, and are probably escalating because all the major players seem to be taking positions on genetically modified wheat. This is a great idea but it requires a system of identity preservation and testing to minimize those risks.
Today we have between 26 and 30 segregations of identity preserved grains. We have more grain grades than we know what to do with. Wheat categories range from highly interchangeable bulk commodities to lesser interchangeable bulk commodities. Examples of interchangeable bulk commodities would be grain grade and subclass, made with specific attributes like protein, falling number and dockage. As buyers come to specify more specific characteristics such as location, variety and production practices, there is less interchangeability amongst suppliers, which has fairly significant strategic implications. Commodity interchangeability implies more flexibility towards suppliers and lower cost for suppliers. Less interchangeability means less flexibility and higher cost to suppliers.

Dan Dye at Cargill defined identity preservation about a year ago as a “traceable chain of custody that begins with the farmer’s choice of seed and continues through the shipping and handling system”. This would imply a fairly onerous definition of identity preservation. A Canadian study defines it as “the separate storage, handling, and documentation of those segregations.” A recent study for the USDA defines it as “coordinated transportation and identification system to transfer product and information that makes the product more valuable.” You are all familiar in Canada with the Warburton’s example and we have many others in the United States.

I have the results of some previous studies on identity preservation and the approximate segregation costs. They are listed in approximately chronological order. Observe that over time the estimates of costs have greater variability and have increased.

We have a number of studies that have attempted to estimate the costs of segregation. Some of these studies and their estimated costs are outlined in the following table.

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<tr>
<th>Researcher</th>
<th>Est. Cost of Segregation</th>
<th>Methodology/Scope</th>
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<tr>
<td></td>
<td>1 to 5 c/bu premiums for IP</td>
<td>Survey of Processors</td>
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<td>Wilson et al. 2000</td>
<td>25 to 50 c/bu</td>
<td>Survey</td>
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<td>Wilson and Dahl 2001</td>
<td>15 c/bu</td>
<td>Survey of Elevator Mgrs. For Wheat</td>
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<td>Smyth and Philips 1999</td>
<td>21-27 c/bu</td>
<td>Analysis of GM IP system for Canola in Canada, 95-96</td>
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<tr>
<td>Sparks Companies 2001</td>
<td>Non-GM Canola 38-45 c/bu</td>
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<td>Non-GM Soybeans 63-72 c/bu</td>
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We have conducted a number of studies on logistical aspects of identity preservation. We did a study on vomitoxin and found out that the flows of grains vary substantially partly due to uncertainty associated with vomitoxicity.

We did a study a couple years ago of the Canadian logistical system at a time when they were experiencing demurrage costs in the area of $20 million per year. A big problem
was that the tough and damp range that required excessive drying and storage and resulted in the backing up of the vessels had a radical impact on increasing demurrage costs. A doubling of tough and damp resulted in the tripling of demurrage costs. Another common problem that was emerging in Canada is misgrades. This is defined, as grain delivered not being the same as that what was ordered. It had a large impact on demurrage and storage costs.

I would like to put into perspective the concept of identity preservation. The objective is to purchase ingredients that conform to expectations about performance with minimum risks and a minimum cost, all relative to competing procurement strategies and to avoid market power of suppliers. This is a tall order for a procurement strategy.

This would be my interpretation of how IP fits into the big scheme of things. On the one side we have spot market transactions, which is what we are accustomed to for most grain grades in North America, where one specifies grades, protein, falling number and test weight. At the other extreme would be vertical integration. The most extreme case would be that of processors integrating with grain production. We have not experienced that yet in North America but what we do have this system integration in asset ownership. Intermediate solutions to the procurement problem range from testing and segregation, to targeting, contract production, and identity preservation. At the moment for the vast majority of the grain procured in the United States and Canada, buyers seem to target origins first, followed by varieties and distantly in third, production practices including definitions of genetic modification and purity.

Testing and segregations are escalating in importance. We have buyers in the U.S. that are conducting harvest time sampling and testing by location.

Contract production is very pervasive in the livestock sector, but is substantially less common in the grain sector for a multitude of reasons. Typically, contracts would be let for acres in production or specifying productions practices or quality requirements. This is less common than grades for a number of reasons, mostly due to the importance of location. The inability to pre-judge the locations at which the best quality will be produced, ultimately leads to the inability of controlling end-use performance through
contracted practices. Identity preservation is slightly to the right of that where one is now trying to preserve the identity of the product as it goes through the marketplace system. We did a study recently on wheat procurement using origins of varieties. Traditionally, origin targeting is the conventional strategy but we are finding out that variety is now going to be the best proxy for end-use performance. This is probably the lower cost for testing the performance. Statistically, our findings indicated that one of the most important factors affecting quality was weather (which you cannot control), varieties (which you can control), location (which you can target), and the interaction of varieties and locations.

Production practices have a limited impact on end-use variability, at least in the U.S. What I am referring to are production practices that include fertilizers, planting time, chemical treatments, etc. The results in our case in the study of frozen dough indicated that if one simply uses grade factors, test weight and protein, 30-40% of your shipments would not conform to your end-use requirements. The risks can be reduced substantially by targeting locations, followed by varieties. Ultimately, the last important point is best locations. Unfortunately there is substantial risk through time. What could be the best location this year probably will not be the best location in the following year.

I would like to speak just briefly at some of the logistics and the implications for genetically modified wheats through another study we conducted about a year ago. We envisioned a system where grain entered the marketplace and farmers declared whether it was genetically modified or if it was not genetically modified. This is the current practice in this country in the case of soybeans and corn and I suspect it will become the adopted process in the case of wheats. Ultimately that grain moves through the marketplace and is tested and segregated throughout the marketplace.

We have two big sources of uncertainty. Are farmers representing the quality of the grain accurately as it represents the marketplace? Secondly, as it moves through the marketplace, are there various places where adventitious commingling may occur? In the case of genetically modified wheat, a variety of types of tests exist that we could spend lots of time on. Compared to other quality characteristics, these tests are low cost and relatively accurate. The major costs or impacts affecting logistics are ultimately trying to get the right product at right place at the right time. Anyone who models this should be trying to include a number of sources of uncertainty with respect to the timing of when grain went into the system, the timing of car placement, transit time, and the time export vessels arrive at the port. All of this poses immense challenges in the current logistical system; of course there will be more challenges in a more complicated supply chain. In our analyses, costs included testing costs as well as penalties for being out of contract.

When I teach logistics, we talk about SKUs, which are stock keeping units. There is a total of 19 different SKUs, or segregations of wheat, that enter the marketplace in a typical marketing year in North Dakota. The largest SKU is around 16% of the business, the next is 15% and most of the rest are in the area of 5 – 10%. They are segregated by grade factors, protein levels, package levels, falling number and test weights. So 19 different qualities enter the marketplace. When we export grain, 70% of the grain
exported out of PNW is #1 medium protein (13.5-14.5) and low dockage. We have very few numbers of SKUs being exported, but a large number of SKUs are coming into the system.

So we have developed a logistical model that includes all of the costs associated with handling grains in a refined supply chain. I will give you a few of the summaries. This is in the case of wheat for a typical complete supply chain of shipping grain out of North Dakota. Tariff charges are one of the biggest elements of cost at around $19 million, followed by interest costs at $1.2 million, and by foregone premiums at $0.6 million. Foregone premiums are really selling higher quality grain to meet the specification of a lower quality contract. So if you have the wrong quality grain in the wrong place at the wrong time, when an order arrives you may have to run around to find another quality specification. Demurrage costs are relatively minimal in this country. We did an experiment to see what would happen to costs as the number of incoming segregation streams rises. The lowest cost is received with incoming segregations of around four; once those segregations escalate in the area of twelve, the additional costs escalate by about a penny per point. The minimum costs are achieved in the case where around seven or eight of segregations coming into the system are being coordinated with around eight or nine segregations going out of the system. This is fairly important information for the coordination of supply chains.

Genetically modified wheats have very important implications for costs. We made various assumptions to assess the impact and two are of noteworthy importance. Additional segregations are costly for the entire marketplace. The other important assumption is only 10% error in farmer’s representation of the quality of grain coming into the system. The costs will only increase by less than $1 million of the total supply chain. One of the biggest sources of cost increases is testing cost at the country elevator level and at the export elevator level. The other source of major cost increase is foregone premiums, which is country elevators selling higher quality grains to markets where the customer does not need them or will not be willing to pay a premium for them.

We did an experiment to see which variables have the biggest impact on these costs. Our base case is 10%. So long as we are within around 5% to 20%, there is very minimal impact on the system. But if this increases to around 40%, all of a sudden, these costs go up substantially. I mention this because this is what brings the motivation for a lot of the efforts towards contracts and agreements between suppliers, biotechnology companies and the farmers to try to control that element of uncertainty.

So let me draw a few conclusions with respect to genetically modified wheats. In order of the items that have the greatest impact on costs are:

- Growers actively declaring GM versus non GM and/or production practices at the point of delivery,
- Concurrent levels of buyer acceptance and producer adoption,
- Testing intensity,
- Tolerance levels and sample sizes,
- The number of different segregations that are demanded, and
• The structure of the elevators (those with more bins are less impacted than those with fewer bins).

A lot of firms have entered this industry to conduct IP types of analysis. There are numerous examples in Canada: the case of canola, the case of Warburton’s, BARI in Canada and also shipments of oats to the U.S. In the U.S. we have incumbent firms that have entered and expanded, including one from Cargill called Innovasure, Identity Preservation.com, which is ConAgra, DuPont who started Specialty Grains, and Farmland’s Dedicated Grains. We have many U.S. companies now entering this segment to conduct IP types of marketing, and most of these are farmer owned, initiated and controlled. Very specific grades are handled. I would not say they are universally successful. The common problems in our studies are that of demand, competition and the high costs of being a non-incumbent. We have many U.S. companies who are expanding to be facilitators of functions important to IP types of strategies.

In preparing for this I just read in the Sloan Management Review—the competing East Coast publication to Dr. Curtis’ Harvard Business Review—a recent article entitled “Mass Customization Versus Production”. When I think about alternatives to identity preservation, I think we are really talking about mass customization, where we want to take advantage of recent advances in technology to customize products. There exist certain examples of blue jeans, where they envision a world where I can go to a blue jean store, they will take a picture of me and determine exactly the size I would need, ship it through virtual reality and someplace in East Asia will manufacture jeans that will fit me exactly. Of course this carries with it some important implications for identity preservation. The article points out three major challenges to this concept of mass customization. One of those is called elicitation. This would be a mechanism for interacting with buyers about their specific demands. In my experience in grain and oilseed markets, this is probably the biggest challenge. Trying to get information from end users on what they truly want and whether they are willing to pay premiums for it. The second is process flexibility. In grains, the greatest challenge is due to the lags in variety development, whether in production practices or all major challenges they are not insurmountable. And third is logistics, which is defined as getting the right product to the right place at the right time.

In closing, I identify five challenges for the audience to ponder. The first one is: “Irrespective of the prevailing alternative procurement mode, growers will increasingly have to be less random regarding production practices and delivery conditions, including timing and place. Certainly, buyers will have to be less random regarding their purchasing practices and greater quality specificity. So, how can the incumbent buyers define what they want?”

The second one is: “The demand for IP and the willingness and ability to pay for IP is ultimately dependant on the competitive conditions of the product market—it is said that IP enhances productivity, typically in the form of greater extraction rates, and/or processing efficiency due to improved consistency, and the General Mills story is
probably the best story to support that claim—and to get the demand for IP you must have mechanisms to elicit that demand.” That is a huge challenge.

Number three: “Trying to find some way to exploit economies of scale in IP is a challenge, because ultimately it will have to compete with non-IP systems, which have lower production and marketing costs and greater advantages of supplier competition.”

Item number four is testing and segregation. In many cases it may end up being lower cost and almost for sure lower risk.

Finally, I am very concerned that in the grain marketing industry, individual firms and organizations will ultimately be at risk by imposing greater costs in their systems without intentionally compensating themselves in terms of enhanced revenues.

**Roberta Rampton, Associate Producer**

**CBC News: Countrywide**

**Chairperson, Session 2**

Thank you Bill. Now I am pleased to introduce Gary Pike, well known to farmers for the years of sought after advise he has given through the firm Market Maximizer, a firm which he later sold to Sparks Companies. He is going to tell us about his latest venture, Crop Verifeye Canada.

**Gary Pike, P.Ag.**

**Crop Verifeye Canada**

I would like to thank Barry for inviting me to come out and speak to the group today. Pike Management Group has been involved with agricultural consulting at the producer level for the last 20 years on the prairies. My focus is going to vary a little bit to the producer side. I want to explain why we see, as producers, a great value in this system and an opportunity for all of us to put a few more dollars in our pockets.

We are probably all aware of the increased complexity of the whole system and that has been talked about a lot today. Global scale and globalization are drivers for a lot of what we are discussing. We are going to need more specialized products to address the needs of a new emerging market. The new emerging market is demanding different things just as we have seen the different styles of commodities change here in the Canadian market. For those of you who shop at a Costco, where were all those products in those freezers five years ago? And about the comments that Curtis brought up with regards to the profits in the local retailers moving into the bakery goods—Why is that happening? Where is the drive for this? As a producer or anyone else in the food chain, we have got to recognize a need for real-time information and for product segregation.
In Canada, we are probably better prepared for this than any other country, with possibly the exception of Australia. It will cost us less, as Canadian producers, to get in to an IP system because we are already doing a big part of it.

There has been a lot discussion this morning about the present system. I would like to make a couple of comments about that. First, we have a zero sum mentality with regard to transactions. At every stage, once you get rid of it, it is gone, the product is gone—you are done with it. We have very vague standards. Our grading system, particularly using wheat as an example, is not the system that grades it when it goes into the mill. As a producer, or speaking from that end of the food chain, we do not really know what we grow. We have no way of providing or even doing the segregation in a better manner to get it to the processor, or to streamline the logistics. We are failing badly because we do not know what to do. A lot of regulatory agencies stand in the way. Equity cannot happen until it rains the same everywhere and the soils are the same everywhere. It is not going to be equitable. There are some challenges in our system that are going to have to be overcome.

I would just like to take you on a trip to the state of Mato Grosso, Brazil—some of you may have been there. I would like to show you what that area looks like compared to the Midwest. Just the state of Mato Grosso is as big as Iowa, Illinois, Indiana and Ohio. We are talking about a fairly sizeable chunk of dirt. It is larger than Western Europe; there is about 220 million acres available for crops. Only 10-15% is farmed now, this was mistaken as wasteland. This is our competition. Some of the referrals this morning have been around us being the lowest cost producer. I am sorry but we have got some stiff, unsubsidized competition. All of us in this room are going to be faced with change that may be a little bit unusual. We are really going to have to pay attention because this situation is unfolding at an incredible rate. We are looking at doing some investing down there right now. They like to sell it in 25,000-acre blocks—that is kind of the minimum investment. There are huge opportunities and we have got a global community in there doing this.

Now, the future system. We have talked about this a lot this morning. I think all of the speakers have addressed this very well, I have enjoyed a lot of the comments on how we tie these things together. How do we get the information between sectors and keep it real time. We think in the future, as opposed to assets pulling the most value and stake in this system, it is going to be the value of the information and will have to begin at the producer level. Now, there are some key success factors for any traceability system or auditing. You have got to have pretty much unrestricted access to that information, and yet, you do not want to use that information to turn that identity preserved product into a commodity. So this will be restricted information to those who have a vested interest only—an unbiased traceability system. In other words you cannot have the fox guarding the chicken house; it has to be an outside third party who looks at it.

Crop Verifeye provides verification, validation and traceability. Crop Verifeye has been around for a while. The website was active in 1999. The database functionality started in 2000. John Deere invested in us in January of 2001. John Deere sees a position in the
traceability system, which I recognize is quite different from their traditional equipment structure of the past. One of the things that came to light out of all of this is the complexity of being able to trace anything. This was one of the reasons we have Deere in as a partner—a 30% owner in the company—to be able to move forward with a great deal of confidence and also with the backing necessary to develop a traceability system that we think will provide the information needed to the individuals.

We are ISO 9000 compliant, which may answer some of the questions from earlier about standardization. We think the industry is moving this way. A number of the farms that we are working with are also becoming ISO 9000 compliant. We have a number in the U.S., and four underway in Canada. We use auditors for validation and it is web enabled. In other words, contracted companies subscribe for a password to look at individual real time data. It transcends boundaries. The issue of having an export buyer looking at what is going on can happen very easily.

The process flow is where product specifications are established. This is where our challenge came. It seemed like everyone wanted to track different things. We had to make a huge investment in our database: we have a web-based product that is programmable. You give us the protocols and we could design them in four hours, have them programmed and ready for use. It is quite different. So you can sign on to the Crop Verifeye database, the specifications are entered into it and then the producer enters the data for verification. You can have an auditor go out there and audit the system anywhere throughout the whole process—to audit the seed, the chemicals, fertilizer or whatever you want and that is a separate portion of the database. The user of Crop Verifeye has the opportunity to see what the auditor said about what he saw while he was on that actual farm. The buyer can review the data that gives you traceability off the farm. We think this is essential.

There are a number of critical data points. We have talked a lot about this: seed purchase, planting, crop growth, harvest and looking forward to the on-farm storage or local elevator, whichever route it goes, through to the processor to the food company. All these data points can be collected through our system and managed in such a manner that it is relatively easy to get the data into it. We have a number of levels of auditing. In many cases, the producers will qualify themselves. In other words, as they build a resume of what they have been doing on the farm, this will qualify them to grow some of these IP products.

We recognize that IP is not going to be every acre on every farm—these are specialty items. But you, as contractors, will only want to deal with the top-end, economically verified guys who are doing things right. Crop Verifeye provides increased confidence in contract compliance and end-product integrity.

Data entry at the farm-level has always been one of the challenges: “How do you get that data from the farmer if he is going to take the information off the bag of seed and the information off the chemical?” We have gone to a system where you can use a Palm Pilot: the producer can pick it up and transfer it into his own PC which serves as a field
tracking mechanism and then that data from the PC can be uploaded into the Crop Verifeye system automatically. The producer will not be required to do entries on the web. If there are additional protocols beyond this, which cannot be programmed into the Palm, then that would become an issue and we would have to move and adjust that accordingly. Until now, we have been able to cover-off on the handheld the majority of protocols we have seen. If the auditor goes out to visit, what we are using for that process is a more powerful wireless handheld. We can put that in online so that it provides real-time data.

The way we see this thing unfolding is that you, as a processor, are looking to keep an input identity preserved. This may be an existing product, such as wheat or durum. In this perspective, we think it is very important that you talk to your producer, find out if he qualifies, if the particular field on his farm fits the needs of that protocol, set up the contract with him at a distance, know what he has done and then watch him do it as time goes on.

John Deere is going to be bringing out a lot of automated data capture equipment on their machinery. John Deere was no different in that their various computers were unable to talk to each other in the supply chain. We were involved in a meeting with them about three months ago. They had 11 different arms of their technology group in, and none of them could communicate, even within Deere. This has changed. Deere has gone on a strict profile of getting into the position where they do not really care if the implement is red, green, or yellow; they want to be able to talk to it. This is quite a shift in their thinking.

Vantage Point network based out of Fort Collins, Colorado is now 100% owned by Deere. This is the database we are using. It is a very large database that was put together jointly by Farmland, Deere, Growmark and has now been purchased entirely by Deere for the purpose of traceability. They are working not only with us, from Crop Verifeye, but also with E-Farm. E-Farm has been doing a number of pilot projects taking it beyond the farm. We recognize the farm level. Crop Verifeye has primarily looked after the traceability at the farm level and we can cover that off. Now, the next step is to start linking the entire chain.

Some of the comments this morning were discussing only doing partial pieces of what I described to you. In other words, saying traceability is only from the terminal forward or traceability is from the bakery out or whatever the case may be. We are saying that we want to hook it all together. E-Farm has done a lot of work on the elevator side. At this level we are finding more blending, more mixing going on. Again these are because of a lot of the generic standards: we are losing a lot of value in our products within this system through the mixing. They are indeed delivering what they said they were, but it is blended down to the lowest common denominator and we have lost the value of what would have been the higher-end products. This is one area that we are finding a lot of interest. They do a pretty good job of traceability already for food safety reasons within the mills and right through to the bakery.
There does not seem to be information that transcends through the entire network. We have consumers at the far side of the bakery, demanding different things. This is obvious from the changes that are taking place at the retail level. The bakery wants the higher-end products from the mill because they can demand a higher value. The mills would like them from the elevator, but the generic standards do not necessarily provide that kind of product. At the same time at the farm level, we do not know what the farmer wants and we are not being given a good feeling for that. When you start into this system, one of the challenges will be to share that information all the way up and down the line. This will be the key to all-around success.

We have a pilot project going on in France, which is the traceability of buns to McDonald’s. Simply by reorganizing how the existing grains came into the bakery and the mill and not changing varieties or doing anything else, but only identifying what was out there and rearranging the way it came in, the value was about $1.87 a bushel, at the low end. We have also been involved in traceability into two other mills in the U.S. and with similar numbers.

We do not know what we are getting at a country level. If we knew before we asked for it, and we just reorganized the way it came into the plants, there is enhanced value. This does not take any money out of anybody else’s pocket in the entire chain, it was being hauled there already. We are not saying that we want to start at a level where we are being asked to trace GMOs. We are dropping a lot of value in the products that we currently have. We are missing out on it. There are some real opportunities to replace that value. Everybody in the industry needs to recognize that we are not the low-cost producer, and that we have greater values in that grain today than what we are being paid for. We need to know what values you want. Curtis did an excellent job of laying out a lot of the parameters that we need to look at in wheat. None of the grading standards we have today address those. I recognize Dr. Wilson’s comments about the cost of going to additional segregations. Well, we are already trying to do 48. Maybe we would even have less if we went back to attribute testing instead of looking at and visually assessing those attributes.

Roberta Rampton, Associate Producer

CBC News: Countrywide

Chairperson, Session 2

We have had three great presentations and I am sure that has sparked a lot of great questions. The first question is for Curtis, but I would like to get Gary and Bill to answer as well if they can. The questioner asks, “Given that consumers are going to continue to make strange decisions, as you put it, and given that your detect/segregate test plan would add substantial costs to the supply chain and given that GMO wheat has no incremental value, how can these costs be recaptured?”
Curtis Rempel:  
I would submit that GMO wheat does have incremental value to society. If you look at reduced pesticide use, reduced cost to farmers, etc. So first you have to quantify that and there are a lot of studies being done with respect to other crops in different crop production systems. But let us make the premise that it does not do anything for the farmer. You start adding traceability, detectability charges to it, and it increases the cost of the supply chain. The first thing that starts happening is that farmers realize there is not much demand from a baker or end-user for the particular product and they do not get any type of signal to start growing the variety. Now, if they start finding that there is a massive cost or benefit/advantage to them, either for the sustainability of their farm or reduced input costs, they start thinking about some of the things you were talking about: “Does the customer, the end-user, really know what they want and do I still need to continue finding ways of making my operation profitable?” At some point in time you will have reconciliation. If you do not have any benefit for a producer, at the end of the day, you have this complexity of costs and you do not have a product that flies.

Gary Pike:  
I would agree. Anytime we are asked to make any changes, you always want to ask, “What is the reward?” At the same time, we should be very careful, as an industry, to look a little closer at what Curtis said. To date we have talked about GMO wheat being primarily Roundup Ready wheat that would conflict with Roundup Ready canola and add a lot more complexity to every farm. At the same time, if you can show me a Roundup Ready wheat that has attributes that are well above any of the other wheats that I can grow, and that there is a reward at the end. Then we will move very quickly towards accepting it and it will cover-off those additional costs of keeping it segregated.

Roberta Rampton, Chairperson, Session 2:  
For the study in France you mentioned there was $1.87 premium or benefit at the low-end. Who received this or how is it split between the farm, elevator, the mill, the bakery, etc?

Gary Pike:  
At that point in time, the split took place by percentage of value that was added. It is just a model that they are looking at. I would not say it is going to hold forever but the producer received a more than sufficient share. It was interesting that the bakery was actually paying for the majority of the costs on traceability, because he had control of the largest part of revenue generation in the chain. He was more than prepared to share down the line to ensure that was what he got because it was a win-win throughout the process.

Roberta Rampton, Chairperson, Session 2:  
Bill, a question for you. Are you really saying that today there are decreasing returns in handling any more than four to eight segregations in North Dakota wheat? Please elaborate on implications and the meaning of this.
Bill Wilson:
Let me clarify the interpretation. The important point is that the number of segregations that come into the system is approximately equal to the number of segregations going out of the system. When you have that type of balance, you end up with lower cost situations. In our wheat export market system, we export around eight different segregations out at the PMW: 70% is one particular segregation; the rest is spread across those. The lowest cost solution is in the area of around six to eight segregations; anytime these get out of whack with each other, then there is a tendency for costs to go up. For example, if you have ten segregations coming in and you are selling 50 segregations, costs will be going up. What we are trying to do is find out how much those costs would go up. One of my concluding points was that they were put under pressure to add those segregations to make sure they captured enough value to make it a profitable enterprise.

Roberta Rampton, Chairperson, Session 2:
Now another question for Gary. Why do you say that Canada has a competitive advantage in traceability and IP?

Gary Pike:
The amount of farm storage that we currently have is probably one of the highest of anywhere in the world. The level of our producer education is also relatively high in their awareness of IP. Also, the lack of subsidies up here has caused rapid farm consolidation and a willingness to allocate resources to whatever will give the best returns. This is shown by the dramatic increase in pulse crops in western Canada. We have an extremely adaptable producer who will respond to economics almost instantly. He is not in a situation as some of the fellows are in the U.S.: if they contract for an IP product and have a contractual arrangement with a company that establishes a price, they are ineligible for LDPs. We have run into this in the U.S. corn and bean belt. These guys would not grow IP products because even though there was a premium, it made them ineligible for one of the subsidies. We think Canada is very well positioned, as is Australia.

Roberta Rampton, Chairperson, Session 2:
Bill, I am just curious what you make of that?

Bill Wilson:
I do not want to, in any way, apologize for the mechanisms that the government appropriates in this country. To be honest, I always sort of thought in my own mind that it would be easier and lower cost to adapt IP types of systems in Canada. Apart from the reasons suggested by Gary, your system of grades, classes, and subclasses are pretty important prerequisites to making some of these things work. Secondly, because of your wheat and barley varieties you have lower costs making some of these operations work. The fact that you have a single buyer allows one tongue to be speaking when they are transmitting signals. One of the problems we have with a lot of these systems in the United States is we do not have a grading system that is necessarily responsive to end-user requirements. We do not have distinguishability in any way and replacing that is
costly. Thirdly, and most important, is that we have many buyers. Those buyers do not get the same signals and that makes IP a very problematic enterprise in this country.

Roberta Rampton, Associate Producer

CBC News: Countrywide

Chairperson, Session 2

Thanks very much. I would like to thank all of you for your questions. I would also like to thank the three fantastic presenters.
Barry Prentice, Director
Transport Institute
If I could also just say a few words and thank North Dakota State University for the connection today and Bill for being here virtually with us. This is part of our efforts to develop this knowledge network between Canada, the U.S. and ultimately Mexico to extend our conversation more north and south. We share a lot of problems across the borders and can see it was evident today.

Brent Vankoughnet
Agriskills and Port of Vancouver
Chairperson, Session 3
Although when I think about regulations in this business it is an understatement to say that the industry has changed an awful lot over the last number of years; we would be awfully naive to say it is not going to change a whole bunch in the future. So wandering through both the need for regulation and how we manage regulation through all the variations that may show up here, from IP to segregated commodity, to bulk, to direct-hit, to containerized, it is easy for us to pose the questions about how is that all going to work? But, we have a presenter here and a reaction panel that have to live and breathe that daily. It is our pleasure to have them here to speak to us today. Our first speaker is Gordon Miles, the Chief Operating Officer for the Canadian Grain Commission. Gordon started his career in the grain industry with Cargill in 1978. Over the years, he has held senior positions with various organizations including the GTA, Manitoba Pool, Agricore and the Canadian Wheat Board. He sits on the Board of Directors of the Canadian International Grains Institute and is a member of the external advisory committee of the University of Manitoba Transport Institute.

Gordon Miles, Chief Operating Officer
Canadian Grain Commission
Thank you Brent, and thank you Barry for the opportunity to be here and to address the conference. I have been asked to come and talk about some of the challenges around coordinating a regulatory system that is designed to support grain exports. As Brent indicated, direct hit is what I am going to talk about. But there could have been any one of a number of issues that are a challenge to try and establish the right kind of regulation that will encourage the industry to work competitively and cost-effectively. Ultimately what we are all trying to do is to return as high returns as possible to the producers. One of the things right off the top that Barry talked about was some of the challenges that we have in supply chain management. One of those was regulatory inertia.
We make rules but we do not apply them mindlessly. This is what I am going to talk about in terms of the direct hit. Following a lengthy consultation period with concerned industry stakeholders, the CGC decided to amend the direct hit policy. This is a policy that has been in effect since 1993. We are doing that in order to improve the framework for industry to work efficiently and effectively in the direct hit area. The new direct hits program is scheduled to come into effect on August 1st, 2002. It addresses the concerns and problems that have been raised about the previous policy. Modifications have been made in a number of areas, including; inspection, weighing, storage, monitoring, certification and notification elements of the program, and to the fee schedule. I will go into each of those elements in more detail. This direct hit program relates to shipments of grain originating from multiple sources.

So just a little background, first, on the Canadian Grain Commission and its regulatory roles. The CGC is a federal government department that operates under the authority of the Canada Grain Act. We are responsible for the administration of the Canada Grain Act. In the Act, it is indicated that the CGC is in place to regulate the grain industry in the interests of all producers, to establish and maintain standards of quality for Canadian Grain, to regulate grain handling in Canada to ensure a dependable commodity for domestic and export markets. What we are looking to do is maintain the integrity of grain as it moves through the various marketing channels.

We recognize that, in today’s changing agricultural climate, you cannot have one-size fits all regulation. On the other hand, you cannot have a system that tries to adapt to every conceivable need to the point that regulation becomes meaningless or even counterproductive. As regulators we are faced with the challenge of finding that balance and to try to create, an effective framework for the system to work to the good of producers.

Direct hit shipments are defined as those shipments where Canadian grain—and that is cereals, oilseeds or pulse crops—is transferred from railcars or trucks or both directly to a vessel and without storage or with limited identity preserved unregistered storage. Direct hits provides an opportunity to lower costs by requiring only one official inspection and weighing, as opposed to an inward inspection and an outward inspection that would normally be required. I want to run through some of the elements in the policy that are currently in place.

Direct hits have actually been an issue since the early to mid 1980s. Over time, the CGC established a draft policy in 1990 that was revised in 1991 and finally put in place in 1993. The original rationale around the direct hit policy was to accommodate the quick transfer of large parcels of grain, on the assumption that direct hits would be put together in the country and moved through the ports as unit trains or unit-type trains. Ensuring a level playing field for terminals and bulk-handlers was a big issue at the beginning and remains a big issue today. We were looking to limit regulatory restrictions and fees, to increase the handling and throughput capacity and thereby the efficiency at the ports, for
opportunities to maximize the use of bulk-handling facilities\(^2\), to reduce quality problems by reducing the handling requirements of grains that are subject to breakage like cracks in corn and splits in peas and finally, to take competitive advantage of shipper-owned facilities.

Now, what is the rationale for the new policy? We reviewed the direct hit policy in 1997 because of several operational changes that were taking place in the industry at the time. But no formal policy changes were made. We have continued since then to allow greater flexibility in the ways direct hits could be handled, in response to industry demand. However, at the same time, shipping conditions and the whole grain handling transportation system structure have continued to change. So in the spring of 2000, we recognized that the direct hit policy and process was confusing not just to the industry, but even to our own staff. In order to continue to offer the direct hit option to shippers, we needed to clarify the policy and we identified the following rationale for doing that.

Number one was to simplify it. Second, to streamline procedures to minimize the number of contacts and parties involved. Third, to establish consistency across regions. Fourth, to provide the type of certification required by industry that we were prepared to stand behind as the Grain Commission. Fifth, to improve communication between all of the stakeholders. Sixth, to reduce CGC’s liability risk that is in relation to product going onto a vessel. If we are certifying it, then we need to be able to stand behind that and be comfortable with the process established for moving the product out of the country through the terminals, whether it is bulk handling or other facilities. Seventh, to reduce monitoring problems related to storage and to reduce the CGC tracking and administrative workload. The CGC is a cost recovery department. It is in everybody’s interest that we try to control our costs and improve the alignment that links our revenue stream and our costs.

There are six elements that I want to address within the direct hit policy: official inspection, official weighing, storage, notification, monitoring and certification.

In terms of official inspection, there are several ways that the new policy differs from what is currently in place. Under the current policy, at least one official inspection was required on all direct-hit shipments prior to the vessel loading for off-shore exports, for loading into railcars for shipments to the continental U.S., and for shipments destined to Canadian domestic markets. This inspection can occur outward on the loading to the vessel, on the inward at the terminal or on the prairies. The change in the 2002 policy is that official inspection to the vessel will be mandatory for all direct hit shipments, not only the ones I just mentioned. This does not preclude a shipper from requesting additional CGC inspection services on the inward or in prairie position.

As far as official weighing, the current policy for offshore export is at least one official weighing to export grade is required prior to the vessel loading; official weighing is not

\(^2\) when facilities came into place, the industry went up and down because there were times when there were constraints in terms of throughput at port positions. So, the bulk handling facilities were built to try and alleviate some of those constrains that were perceived at the time
required for exports to the continental U.S. or Canadian domestic markets. Under the new policy, official weighing is mandatory for all direct hit shipments. Additional services can be requested if that is desired on behalf of the shipper. Until August 2004, bulk handing facilities that do not have CGC approved weighing equipment will be allowed to issue weight certificates based on unofficial weights. However, facilities must continue to obtain an order issued by the Grain Commission permitting exemption from that aspect of the licensing requirements that are listed under the Canada Grain Act and its regulations. Bulk handling facilities that do not have official weighing equipment at present must install CGC approved equipment by August 1, 2004. Facility operators must provide the local Canadian Grain Commission office a record of the unofficial weights of grain shipped by direct hit to ensure that accurate statistics can be maintained.

For both the inspection and weighing aspects, rationales exist for making changes. Having a mandatory official inspection and mandatory official weighing to the vessel for all direct hits will standardize the policy requirements. The current confusion that can surround direct hits will be reduced; this will result in an increased understanding and improved policy application by CGC staff and the industry. The sample collection procedure for direct hits will be streamlined. This will protect the integrity of the CGC certification services and ensure that Canada’s reputation for supplying high-quality grain is not jeopardized. Finally, the practice will be consistent with the requirements under the Canada Grain Act, that all grain exported from Canada should be subject to official inspection and weighing at the time of export.

One of the factors that can become an issue is what we call double jeopardy. That is where we have mandatory inspection and weighing to the vessel. If there has been inward inspection and if there has been inspection on the prairies, there is the possibility that there could be a difference between the inward inspection and the outward inspection. This is something we have taken steps to try and eliminate. There is training, we have regional specialists, we have our head office specialist, the chief inspector for Canada and we are working very hard to ensure that does not happen, but it does exist and it can happen. The number of events that have actually taken place is minimal. For the most part, in fact, in a very, very high percentage, there is consistency between prairie and port or inward and outward. But, we recognize that it is a concern.

The third area is storage. Current policy allows facilities unregistered storage for up to 20 days if they are using sealed bins, if a sale is confirmed and if a vessel is nominated. Extensions to the 20 days limit can be granted in extenuating circumstances, but any unregistered stocks after 20 days must be physically transferred into general storage, they must be registered and officially inspected and weighed. Now the change, which will come into effect under the 2002 policy, is that grain destined for direct hit shipments cannot be stored in licensed terminals or bulk handling facilities; if it goes into storage, it must be inspected and weighed on the inward and registered into general storage. This does not preclude grain that is in storage from being included as part of a direct hit shipment. In the case of extenuating circumstances, storage may be considered for up to a maximum of three days, but that would be on a case-by-case basis.
What are the reasons for these changes? The elimination of the 20 days storage provision is consistent with the intent of the original direct hit policy and it will result in more consistency. The current provision for direct hit shipments complicates and increases costs to the system that must eventually be covered in CGCs services. Another point is that trucking grain that is designated as a direct hit, as opposed to a regular shipment, will substantially improve while at the same time reducing our monitoring requirements. With no storage allowed, all grain that enters a terminal will have to be registered into general storage, weighed and inspected on the inward and ultimately cancelled. Another area of concern is that there is a potential problem of direct hit grain being commingled with non-direct hit stocks and these changes will eliminate that.

Finally, the CGC will not have the issue of partial bins and the accurate weighing of partial bins. Currently monitoring storage is difficult, if not impossible in some cases, if not all the stored direct hit grain gets loaded to a vessel. When there is residual grain left in a bin after a shipment, then the whole issue of the 20 days storage period becomes confused.

Currently under the area of notification, the policy says that facility operators must provide 48 hours advanced notice of direct hit shipments and a list of the car lot numbers to the regional director. When applicable, the shipping point of previously inspected cars is also to be provided. Under the revised policy, facility operators or shippers will be required to provide 48 hours advance notice of direct hits to the regional director in the local CGC office. If a licensed terminal fails to provide advance notice, no direct hit services will be provided and the grain must be registered into common storage. If a bulk handler fails to provide advance notice, the weighing and inspection fees will be doubled. In the case of weather being a factor, then these requirements will be waived, but those will be the new regulations. A car lot list is not required in advance; operators will provide a list of car lots and respective commodities upon the time of the direct hit unload. If problems arise due to inaccurate car lot documentation, the party responsible for sending the direct hit notice of intent will be charged the CGC resolution fee at the applicable rate. This resolution fee may include both a flat per car charge as well as hourly charges, depending on the type of CGC service required to render a solution.

These changes will help reduce the administrative workload and cost. The financial consequences for not meeting these requirements will help alleviate some of the unnecessary administration undertaken by CGC staff. There is a lot of unproductive time, almost daily, resolving complaints and fixing situations stemming from erroneous car lists or poor documentation. The current process for car list procedures and notification is problematic and is marked by poor communication both internally and externally. Frequently, parties involved in direct hits are not informed of all the relevant details and this results in increased transaction complexity.

CGC has to deal with after-the-fact car list mix-ups. A single documentation error can take up to an hour for CGC staff to address. These things are: a car not identified as a direct hit car, incorrect car numbers, car ownership changed without advising the Grain Commission or a car left behind in a bin and not shipped. Those are just some of the
examples. In these cases, the CGC has to render services and has to create a solution. Having a resolution fee, we hope, will provide an incentive for shippers to supply accurate information. Failing that, at least, we will recoup some of the costs in addressing the problems related to car list errors.

The fifth area is monitoring. Currently monitoring lockout procedures during the vessel loading process is required when the direct hit grain is not stored. If storage is used, the CGC monitors lockout procedures, which grain is being received into sealed bins and again, when the grain is released for loading into vessel, that includes the locking of spouts trips and other equipment used in the transfer of grain. In the case of cars previously inspected or weighed at other locations, then monitoring includes the recording of car numbers at unload to ensure that only previously inspected cars are included in the shipment. As of August 2002, licensed elevators loading grain will have to lockout the grain-flow path during the vessel loading process. Again, lockout refers to the securing of the spouting, the trips and other equipment that control grain flow patterns. This is to ensure that the grain travels directly to the vessel and is not subject to the possibility of being mixed with other registered stocks. All lockout procedures will be supervised or monitored by the Canadian Grain Commission. If no inward weight and grade have been requested the appropriate monitoring fee will be assessed. However, and this would be an extra service that had been requested, if an inward weight and grade have been requested there is no extra monitoring charge.

The CGC is experiencing numerous monitoring problems related to the storage of direct hit grain and the procedures required to transfer it. Certification required sample collection and fees. Monitoring storage is also difficult if all direct storage grain does not load onto the vessel; that results in residual grain after the shipment. Some facilities at present are resistant to provide lockouts and safeguards that are required to monitor with confidence. Again, this is the confidence that the CGC is certifying with the grain shipment. In the case that an identity preserved shipment would become contaminated while under CGC supervision, the CGC would be identified as a liable party. Another part of the rationale is that our monitoring costs are not adequate to recover the price of services rendered. If we go back to the original intention of direct hits, there should be less monitoring because grain flow routes and commodities will only need to be tracked once. This will reduce CGC liability and costs because it limits the number of situations that could arise because of lack of compliance from the grain handlers.

In terms of certification, there are two types of certificates that we issue. One is a direct hit certificate that is issued on the completion of loading when official services are rendered on the outward. The other is an individual certificate for cars when official services are rendered on the inward. In that case there is no cargo certificate. Under the new policy, one certificate will be issued for all direct hit shipments. The certificate will allow for comments to be made on the weighing and inspection service, but will state that the certificate “does not guarantee uniformity” (refers to uniformity when grain is commingled, and in large bins to the way that the sampling is done as we are loading). This statement is not a change from the 1993 policy. In this case, we can do that
sampling and inspection with more confidence, as well as with individual cars where there may be variations within the grades between cars.

Again, the rationale for making these changes is that the confusion certifying direct hits is putting the Canadian quality assurance system in a vulnerable position. We believe the Grain Commission needs to move in this direction in order to protect the integrity of the grain quality system for Canada. Streamlining the current certification process by having only one certificate that clearly states that it does not guarantee uniformity is something that the Grain Commission is prepared to stand behind.

For the future, the Grain Commission realizes that given mandatory inspection and weighing to the vessel and the practice of incremental sampling, issuing a direct-hit certificate could be discontinued when loading direct hit grain and general storage grain in unison. Or, we may also look at a certificate being used if the quality of both those streams proves to be consistent.

Finally, just some aspects of the fee schedule. Most of the fee schedule remains unchanged. There is an addition of a resolution fee and a no-notice fee.

In terms of the main policy changes, all direct hit shipments must be officially inspected and weighed at the time of either railcar or vessel loading. Grain destined for direct hit shipments cannot be stored in licensed terminals or bulk handling facilities. Shipments of grain will be monitored by the CGC while the grain is being unloaded from rail cars or trucks to vessels. The shipper will be charged the CGC monitoring fee at the applicable rate and if inward inspection and weighing have occurred, then there is no extra monitoring charge.

Marketplace and supply chain demands are changing. The Grain Commission recognizes this and remains committed to developing and maintaining a regulatory system that is relevant to the evolving grain industry. We recognize that there are a lot of interests around the direct hit policy as there are on any policies that we are involved in establishing. We feel that this new policy will simplify, streamline and provide consistency across all regions while providing a balance between the various needs of industry players. On a final note, we recognize there may well be a need for a complementary policy to the proposed direct hit policy. During our consultation period, it became evident that we may need to establish procedures dealing with direct hit shipments from one source: these are true unit trains coming out of one facility rather than from multiple sources. We are in the process of working on that policy. Mr. Chairman, with that, I conclude my remarks.
Brent Vankoughnet,
Agriskills and Port of Vancouver
Chairperson, Session 3

Thank you. We also have the pleasure from a policy end to have two gentlemen who are here as a reaction panel. I would like to begin with Rob Booker. Rob is the Manager of Operations, Dry Bulk Services, at Vancouver Wharves. Rob has been involved in the bulk handling of materials for the last 20 years. He joined Vancouver Wharves in 1995 as the first longshore foreman in operations hired from outside the industry in 20 years. Since then he has been involved in operations as berth manager, for Dry Bulk Products and he was also involved in the design of the soft handle facility for special crops at Vancouver Wharves.

Rob Booker, Manager of Operations Dry Bulk
Vancouver Wharves

Before I react and for you to understand our corporate reaction as well as my personal reaction, let me describe BCR MARINE, Vancouver Wharves (VW). VW brings a unique perspective to the proposed direct hit policy changes. In some ways, VW is easier to define by who we are not. You have this handout in your package from the Port of Vancouver that describes terminal elevator services as; “conditions, clean, dry, and processes grain, as well as, palletize grain screenings”—at VW we do not do this. “Coordinator with exporter regarding order specification”, this we do.

Vancouver Wharves, (VW) is a specialty agriproducts facility that is specifically designed to handle market ready, peas, chickpeas, lentils, and other special crops. VW saw special crops growth on the prairies and anticipated a demand for IP. These developments would require unique handling services on the coast to load vessels. VW invested $55 million in an agrifacility that handles, stores, and loads special crops without damage, loss or contamination to meet the demands of today and anticipated growth in special crops and bulk IP products. VW has 111 acres on the north shore of Vancouver.

The terminal started in 1959. VW has a great location for deep water, rail service and truck access. BC Rail, which is a crown corporation of the province of British Columbia, purchased VW in 1993. BC Rail has a unique mandate for a crown corporation: to be profitable. VW does not do business if it cannot make a profit at it. When VW was bought in 1993, it was a very run down facility. VW had been doing direct hit grain since the mid-1980s through an existing facility. The facility was originally designed for fertilizers and potash.

VW has been involved in direct hit grain for over twenty years. You can spend a lot of money on a lot of expensive long-shore labour and be very slow if the terminal handles
multiple types/grades of product. Of course the identity preservation of each product is critical to almost all customers.

Special crop producers told VW that a terminal providing the following would be ideal: soft handling, self cleaning, independent, fast railcar unloading, fast vessel loading, certified samples and weights, and most important some direct hit surge capacity was required. VW was told to soft handle because the quality of special crops is going to make Canada the premier producer of the highest grades.

Due to some inevitable truths, or the Murphy’s Law’s of direct hit shipping, when a customer’s direct hit railcars arrive, the vessel is not there. Inevitably, because when dealing with multiple parcels of commodities onto a ship, what came first from the shipper and railway was often the last thing the vessel wanted. Everybody pays for the inefficiency, the railcar demurrage, the vessel demurrage, the plugged pipeline and the damaged reputation of all concerned including our national image. When 200 or 300 railcars are parked in North Vancouver with no home, everybody trying to use the transportation system has a great deal of difficulty.

VW needed certified weighing and sampling. VW and our customers wanted to be able to stand up and say what came in, went out and that the Grain Commission, or anybody else, could certify it. VW wanted a dedicated system that was only going to handle agricultural products: fast railcar and ship turnarounds, so customers can get in and out quickly. VW had to be independent—no conflict of interest— for our customers.

The VW facility had to be self-cleaning to allow IP shipments and multiple products handling in the same shift. VW had to do it with as few longshoremen as possible because they are expensive. The system cleans itself effectively; so if it is a car of peas or a car of lentils or a car of oats VW does not have to shut down to clean between products. VW, the customer and the CGC do not worry about contamination from product to product. VW meets the zero standard that was talked about today. If you put a car of pellets into the system and then you drop a car of peas behind it you will find no pellets in the peas.

VW has direct north shore service from BC Rail and is served by the CN fed by the CP and BN. When the players all know you can move the cars, it is a very effective pipeline. VW has a 52-agricar spot. VW can hold up to 150 agricars. The associated sulphur track has about 200 car spots, which are used twice a week for sulphur.

The agri-facility uses a pretty standard dumper. Some of the things we have done to reduce our longshore labour include remote car door opening. A single man in a control room two blocks away opens the doors. From the dumper it is conveyed, no bucket elevators anywhere in the system, into storage or direct to vessel. From storage there is a single route to vessel. The process has allowed us to make a very simple world for the CGC; more about this later.
VW specialty storage is leased directly to customers. VW has ten bins capable of holding 30,000 tonnes. Currently seven bins are under long term-lease to three customers. The remaining bins are used by VW for short-term leases. This allows our customers to remove some of those inevitable problems.

VW is running on a unique conveyor system. It is a totally sealed system and it is air supported. VW operates on a zero-loss philosophy. If you give VW a tonne, you should get a tonne back. The exception is a little bit of dust that VW has to collect because of the air system. On 700,000 tonnes we have collected about 120 tonnes of dust, a very small loss. No product loss is our goal. It is achievable because it is a sealed system; it cannot spill.

VW is directly across from Stanley Park; VW has to be dust free. VW has a cascade chute that has a series of angled funnel cups, which allows the product to flow down the chute without falling more than a foot. The VW facility was successfully designed to prevent the entrainment of air. The short drops, or soft handle not only prevents dust it prevents product damage. The splits on human consumption in peas at VW is showing about a quarter of one percent increase from what comes out on the rail car onto the vessel.

VW has developed software to allow all aspects of the system to be monitored from a central control room. The Canadian Grain Commission has an office on site with access to the same software. VW gave the CGC access to the software and a programmer. The CGC has independent electronic lock-out for the bin tops and bottoms, full control of the automatic samplers, direct electronic connection and printing of all weights inward and outward, and the ability to monitor the product flow to any area.

The CGC has talked about terminals not being able to separate direct, indirect and general storage, possible liabilities and product staying in storage over 20 days. VW's perspective is that the proposed policy change is rewarding this non-compliance. VW and other terminals have demonstrated that the existing policy is achievable. VW has provided sealed storage, independent receiving and shipping systems with no potential for product cross over. The CGC is suggesting a policy change because other service providers cannot, or will not meet these standards. This is unacceptable to VW, our customers and should be to all users that pay for the transportation system. Move the system forward, set the standard higher, do not write a policy that is stepping back in time and making us less competitive.

The Grain Commission has tried to sit down with individual terminals and address the issue. As the perspective of a terminal with late 20th century technology, which does not have the problem, VW does not think the balance is right in the policy.

How well does the VW system using the current direct hit policy work? The best shift has been 60 cars received and 7,500 tonnes ship loaded in a shift. It is easy to audit and manage the grain flow. VW has done 25,000 tonnes in four shifts with only 7,500 tonnes in the house when the vessel started, so it is making the best of the direct hit policy.
Typically, customers are putting into storage about 30% of a direct hit vessel. If 10,000 tonnes is put into storage, filling up three bins, VW can handle another 20,000 tonnes in direct hit cars effectively onto the ship. When there is much less than 30%, VW sees some railcar demurrage and delay.

How about the IP comments we have heard today, and the guys who want small lots? One of the questions was how small would you go in bulk before going to a container? VW has done 500 tonne lots of bulk material because we can do it efficiently, and we can do it for less.

VW did a vessel in October that was a total of 11,404 tonnes, composed of eight different parcels of grain. Two grades of lentils, yellow peas, green peas, oats, feed outs, canary seeds, and chick peas. The vessel requirement was to load into three different hatches. The customer had 8 parcels, four separations and 141 cars supplied on three different railways from 12 different sources. Sounds like a lot demurrage cost and a nearly impossible direct hit. VW put that all on the ship in two days.

The reason we were able to do that was an ability to put three parcels into storage up to three weeks in advance of the vessel. VW was able to manage three hatches on the vessel with the ship loader at one time, so with three loading points, and the three bins, VW could handle six commodities. The rail delivery from all those different source points was not a problem.

If the proposed CGC policy change, to no storage, for direct hit was in place this vessel would have plugged the north shore with 141 cars. The vessel would have incurred several days of delay because railways would have had to sort those cars out on the rail system rather than sort them through storage. Once the pipeline stops it’s a big impact to the rest of the system. Since VW has come on board, CN advises us that specialty agricars shipped to North Vancouver have gone from 24 days of turnaround time to 14. Wheat cars going to the north shore are averaging 11 days.

Change the policy and the rail system is back to 24 days on specialty agricars. This will result in, big costs to everybody in the system. No storage equals a plugged pipeline in our view.

I have a few general comments regarding some of the things we have heard today about IP, how big is it going to get and what effect it is going to have. VW has experience in handling sulphur, coal, fertilizers and other products. Our experience is that IP, and specialty crops of all kinds, will dominate the export market eventually. Sulphur is a classic example in western Canada. The product is 99.9% sulphur—it is a pure product. VW has up to 170,000 tonnes stockpiled. To the casual observer, it looks like a homogenous lot and that it would be shipped as such.

There are five grades in there! How can there be five grades of a product that is 99.9% pure? Well, the oldest plant in the system produces something called slate that has a larger amount fines associated with it. The newest plant in the system produces a product
called rotoform that is of uniform size and has almost no dust. They have differentiated their product through technological change five times. Guess what? The marketplace demands the highest quality product. The customers all prefer the sulphur that is least dusty, easy to handle, all that good stuff. However, the customers are not going to pay any more than world price for it—there is no premium for the premium product. Why is that? The competition has built new plants producing premium product at the lowest possible price. They are playing with five grades and the benchmark is the premium grade. It is discount from thereon in.

My sincerest belief is the specialty agricultural market and the IP market will become the standard and products that do not meet the standard will be discounted. When a better grade of product is produced with benefits to the user it will normally be made use of, in particular of there is no price change. If you do not produce it, your competition will. Our competition globally will produce those specialty agricultural and IP products/crops.

Whether it is the Australians, the Americans or the unfarmed acreage we heard about, somebody is going to set that up and produce it because they can take a slice of market share. Our market has started to fragment with the growth of specialty agri crops. As that fragmentation increases, we will be forced to treat the standard crops more and more like an IP or specialty crop.

Thank you for the opportunity to respond to the proposed changes and for your time today.

Brent Vankoughnet,
Agriskills and Port of Vancouver
Chairperson, Session 3

I think that completely qualifies as a reaction. Thank you. We also have a presentation here by Dave Kushnier, President of BC Terminal Elevators Association. Dave’s 26 years of experience in the grain industry includes 22 years with Saskatchewan Wheat Pool and the past four with Cascadia Terminal as General Manager. He is a member of the Canadian Port’s clearance association and the Vancouver Port Authority Advisory Committee.

Dave Kushnier, President
BC Terminal Elevator Operators Association

Thank you for the invitation to speak today. I am going to echo many of the things Rob said as we go through the process. The terminal elevators both in Thunder Bay and Vancouver, have been involved in the direct hit process, starting back in the 1980s. This process was brought into place because there were customers that deemed they did not require the two inspections and two weighings (going in and going out) and could save
money. The terminal elevators have been serving customers through this direct hit process for the benefit of the customers and lower costs.

At that time the Grain Commission was very interested in working with us and trying to set the rules to protect the integrity of the product, so that there was no opportunity for failure and for mixing grains and not giving the customer what he deemed to have purchased. By combining the identity preserved process with the direct hit system, we have been able to provide, both the added value of direct hit with the opportunity for the storage.

As Rob said, the storage issue is very, very important to us in that our customers are delivering products that are not always in big lots. I know Gordon touched on the 100 car-lots that could come out and go direct hit. This is the easy answer. 100 cars from a station that can load 100 cars of homogenous type grain; we see it all the time. Some of it is cleaned for us as it arrives, some of it is not cleaned, but that is the easy product now. As companies we have invested in these loaders, 100 car stations, etc., it is a lot easier. The railroads can handle that better; they can latch onto those cars and haul them through to Vancouver. Our terminal at Cascadia has a rail system where we can spot a full train. A train can be loaded in Edmonton, for example, be pulled to the port and unloaded and returned back to Edmonton on a shuttle service in less than four days. Those kinds of turnarounds are available—that is not really the issue.

The issue comes down to the small lot commodities. You may get a processed product where the processor—it may be a byproduct possibly or even a processed product—is only capable of doing two or three cars a day, or two or three cars per week. They are not interested in marshalling the cars because the additional cost is now borne on the industry. Because, as an industry we are trying to turn the railcar system quicker, not lease cars as we did so much in the past and keep the system going. They are compelled to, get that product to the port, to get it into storage and to bring it forward. It will be matched to some other vessel. We talked about some small lots of vessels but typically, when this happens, you have got two or three products—as Rob illustrated, in his case they had seven—and it has to be married to the vessel and everything else. It really is important for people to get involved in this: the shipper of the grain, the railway, the terminal and the vessel. You have got to coordinate all of this.

I really sense, as I read through the policy and watched Gordon Miles’ presentation, there is a sense of frustration on the CGC’s part and that is what has brought this forward. I do not think we should all get tarred with the same brush. If one terminal or maybe the whole BC Terminal Elevator Association is not complying or not following the rules, there should be penalties imposed. I do not disagree with that for a second. I think that in order to make this work, we have got to work closely with the Grain Commission because, at the end of the day, you need something certified. Rob mentioned that an improper connotation to the certification will not be satisfactory to the customer. We need to do it right. Customers appreciate the service and you need to match everything—the car arrival to the dock and to the vessel; if you can do that and keep the integrity of the grain product intact you are going to satisfy everybody’s needs.
From our point of view in Vancouver, we are very much willing to discuss this further, and talk about how we can work more closely with the Grain Commission, rather than argue over the system. I think non-compliance possibly was part of the problem. Maybe taking advantage of the situation from time to time was the problem. Rules can be put in place to standardize and to say you are going to get rewarded for good performance and for doing the logistics properly. You will get rewarded for good performance and they will get penalized for poor performance. Bringing in things like totally outlawing storage is not a good idea. We have the IP system; combine the two systems and it will definitely work.

Gordon and Rob both mentioned that more modern plants can make sure all the IP grain is emptied. We have the same situation with a U.S. product that has to be identity preserved and is considered direct hit. Our process is simply to make sure, as we are loading the vessel, that that grain goes on first, it is certified as on, it is certified that the bin is empty, the Grain Commission has to take the seal off before we go ahead and the process does work. If you put your heads together as a group—at the terminal or wherever you are working and work right from the source to loading the vessel—we can make it work without having such a revolutionary thing as outlawing storage.

All customers see the true advantage of storage. Vancouver Wharves would not have built storage if they had not seen the advantage. It is not cheap to build storage.

The terminals are all ready to work closely with the Grain Commission on this and sit down with them and say, “What do we have to do?” The terminals have all been built at different times in Vancouver and Thunder Bay. There are different nuances to each one and there are different methodologies. Some need to have trippers locked out, some do not. Some have galleries. In Thunder Bay, many of the terminals do not; they just have shipping bins or high spouts that you just lock onto. At the various terminals, it is a more simple operation than it is at some of the others.

They already have software developed for Vancouver Wharves; most terminals could design a similar plan. I would not like to speak for everybody investing money, but I know in our case, we could and they have our software. It could very much be matched to the needs of the Grain Commission to follow the flow, and to make sure you can prevent any commingling or any problems from happening. That really, in our view, is the answer for this. It is not to abandon the concept that we have now but to improve upon it. We are talking about streamlining and how much it costs. The biggest thing is the human resources cost. I know they do not have people standing by to do this extra work because it is not a major part of our business, but it is a growing part and they do need some forewarning. If companies participate and cooperate it can be done.

In a quick conclusion, I would like to think that we could discuss this further, sit down with the Grain Commission and work on it. We would welcome input from our customers, we will be requesting that as to what they will need in the future. We know what is going on with the Canadian grain industry process. The requirements for
certification are not totally similar to Canada Wheat Board wheats. To save the cost to the industry of extra inspections and weighing would be a benefit to everybody. This should prove to be less work if we do things properly at the terminals to match the needs of the Grain Commission to the customers, and those savings could be passed on. In our case, for example, some of the things we have done, although we have not done a lot of it, are really what the customer is looking for. Why do I have to pay two-way weights, two inspections when I really only need an outward weight? This is what we would like to provide. We should really consider what the policy is. It is not etched in stone yet, but we would certainly welcome some input from the users; we will be pushing forth to try to continue with what we are doing and provide the service of storage and the certification as it exists. This is what the country elevator association needs as well as the Terminal Elevator Association and the WGA as a whole.

Brent Vankoughnet,

Agriskills and Port of Vancouver

Chairperson, Session 3

Is the new policy a fait accompli? Or will there be opportunity for input before finalization?

Gordon Miles:
We undertook extensive consultation previously, but I am certainly prepared to work with the industry to try and resolve the problems. I think Dave did a good job of outlining some of the frustrations that we have had and Rob certainly identified some of the issues. It is not yet August 1, 2002. We are certainly prepared to take a look at whether or not we can get commitment—the kind of commitment that Dave indicated—to try and address some of our issues. We are prepared to take a look at whether or not we can make the policy do what we want it to do—protect the integrity of the grain moving through the system.

Brent Vankoughnet, Chairperson, Session 3:
What size of lots does the final customer want to receive, for example, the processing plant in India or Pakistan? We are talking about breaking things in different sizes and from a seven-hold ship. What are all the variations that we may see from a customer driven point of view?

Dave Kushnier:
In our particular situation we have seen lots as small as 700 tonnes of specialty product up to about 3,500 tonnes. The biggest one we did this year was about 6,000. Specific elevators that put in the soft-loader have done full ships where they have had three or four different products including peas and differently processed pellets—whether it is beat-pulp pellets or wheat-bran pellets or various things like that. It depends on the needs of the customer. At the other end, we are not really sure how it gets delivered out. The agent or the seller would have a much better idea than we would have.
Rob Booker:
Our experience has been very similar. I think the smallest parcel we have done is about 400 tonnes into Japan of a specific product. The buyer from Japan actually showed up on the prairies at the loading plant, watched the railcar hook on in Saskatchewan and traveled out with it. This is the way it is going to be. When somebody wants something specific for their plant, and they can make a buck at it, they are going to watch it like a hawk. He is obviously making enough to be able to pay somebody to fly all the way out and do all that auditing. There is big value for them. The biggest parcels that we had were around 35,000 or 36,000 tonnes of straight peas. We have done that with 12,000 tonnes up-front in storage and the rest direct out of railcars as the vessel was on berth.

Brent Vankoughnet, Chairperson, Session 3:
Gordon, in that environment, from the smallest to the largest, are the regulation requirements the same?

Gordon Miles:
No, on bulk shipments of large vessels, we will look at drafts of 1,500 tonnes. We take samples and eventually have a composite for the entire cargo and that is what we will provide as certificate on for the big shipments.

Brent Vankoughnet, Chairperson, Session 3:
One of the things I heard was some difficulty with the term “not-uniform”. As a marketing guy, I am going “What is another way to say that more positively?” I guess I am curious about exploring that a little bit from all three of you. I hear what you are saying from a technical point of view. Maybe you could share with us the gyrations you have explored, and come up with suggestions where we can go.

Gordon Miles:
Just to be clear what the issue is. When we do a certificate, what it is indicating to the end-user is that they are buying a specific product that has end-use quality characteristics that are consistent from shipment to shipment. The concern is that in certain situations we will not get that kind of uniformity. On bulk shipments of large vessels there may be places where the grade is lower just because of the way it is put onto a vessel. Our concern is being able to indicate that an entire vessel, or even a parcel, is uniform. It is from the end-user’s standpoint that there is a quality concern.

Brent Vankoughnet, Chairperson, Session 3:
Is there another way of describing that to a customer? Technically we understand what you have just explained. Is there a preferred way of describing that to a customer rather than that being the exact term?
Rob Booker:
One of our problems with that process is using an automatic sampling system for cars going to storage and an automatic sampling on the outward, which is the current world in our facility. The reality is that we have had cars come in that are five and six percent foreign material and cars that are way less than one. Using foreign material, as the example, the product is not uniform. But out of 20,000 tonnes going on the vessel, is the overall product spec met and is it uniform? Yes. Is it all number two yellows, and meets the standard. To say to a customer, a buyer, that we have taken the same number of cuts out of a car but we have not done the shipping side of that analysis, and that this is now not uniform. I am sorry, but to me it looks like the Grain Commission is trying to apply zero risk to its certification process. Part of the payment is acceptance of some risk. I do not know what the right balance is and I do not profess to be an expert on sampling. The language now suggests that the Grain Commission wants no risk on IP and direct hit. If the numbers are out, maybe IP and direct hit need a bigger charge to take off the risk that the Grain Commission is under. If that is the problem—that the risk is wrong and the risk value is wrong, then let us fix that.

Dave Kushnier:
From the get-go, I want to echo what Rob said. Anything like that is a change on the certification. It will really raise the eyebrows of the customer. If it meets the contract specs, if it satisfies the needs of the customer—that is what we are trying to do—that is what should be on the certification. That there is a bit of a risk in, but that explains the original question on the size of the lots. You have a 5,000 tonne hold going to 4 different people. One customer may get a better lot than the other one. This is part of the problem and we are a little bit worried about it. One guy could say I am happy, the other guy is not. I do not think that is a very common occurrence, better terminology that might help somewhat.

Brent Vankoughnet, Chairperson, Session 3:
Has the Canadian Grain Commission done any sensitivity analysis on that car-day cost of having no storage in the system? If you have, what is that cost to the rail or to the vessel and if you have not, when will you be doing that and sharing the results?

Representative from CGC:
It is not technically a no storage policy. The Vancouver Board has storage, but they can call it general storage. It is 30,000 tonnes. So it is registered in and registered out as general storage. They are not taking storage out of the system.

Rob Booker:
Two costs are associated with doing that. There is a physical cost that we are going to get charged to do it. In our particular case, as a facility that operates totally on direct hit, it means I have to institute the process of doing that, which in an electronic age should be relatively simple. I weigh it in, I weigh it out, I have an electronic record, I should be able to put that into the e-mail system over to the Canadian Grain Commission and it is registered in; and when it goes out, it registers out. But, it is not that. There is a paper
process that is more complex and more costly. It is just a burden for no value that I can see.

**Dave Kushnier:**
The margins that we enjoyed years ago just are not there anymore. All the customers are looking at the very few ways left to take some costs out of the system and to jack-up the profitability of this business. It is very competitive. There are a lot people vying for the same work and just looking for a better way to do it more efficiently and at lower costs. This is the challenge now.

**Brent Vankoughnet,**
*Agriskills and Port of Vancouver*

**Chairperson, Session 3**

I get the impression that these gentlemen have had several conversations over the last several months. I need to compliment their professionalism; airing some of their challenges back and forth that we know they have had over the years, and probably, but still being articulate about their positions and interests, and sharing that with us today. Please help me thank our presenters.
It is a real pleasure for me to be here this afternoon. Our first presenter is Mr. Bill Drew. He is the Director of Grain Operations Western for the Canadian Wheat Board. He is responsible for ensuring the efficient movement of Canadian Wheat Board grain from country origins to export destinations. He has been with the Board for four years and was employed with a class one railway. Over his 21-year career, he has held various management positions including the position of Director of Grain Operations. He has a Bachelor of Commerce degree from Lakehead University in Thunder Bay.

Bill Drew, Director, Grain Operations Western
Canadian Wheat Board

I would like to thank you for inviting the Canadian Wheat Board to speak today. I would like to talk to you about the new arrangements that we are using to move our grain, primarily in tendering and car awards.

As you know, markets are changing. The international market to which we sell grain is becoming more diversified. Ten years ago, we had fifty percent of product being sold to two countries—Russia and China. Now we have over 200 customers and the top five countries take less than ten percent each. What do our customers want? They want a quality product, quality service, strong business relationships, reliability, and sometimes just-in-time delivery.

What is our logistics role? We try to take a long-term sales plan, match it to the production and decide what we have to sell, when we have to sell it, and how it is best to move it. Within my department—Grain Operations Western—we sit down with the planning and coordination departments, seaboard, the marketing side and the sales side are also involved, and we set out a game plan. We ask ourselves: How are we going to go about doing this for the next year? We try to be flexible to adjust our sales and logistics program when it is required. As you know, to move this much product through a fairly tight logistics chain—a supply chain that sometimes has physical constraints and certainly has some weather restraints—we have to be able to adapt to the possibility that our customers change their minds, to spot sales and to new opportunities. We have to be able to source supplies from specific geographic locations and to meet sales while facilitating farmer contract deliveries. We need to provide farmers with a stronger voice in grain handling and transportation. We have to try to enhance efficiencies and to enforce accountability for performance—our performance and our suppliers’ performance. We have to try to return the maximum value from the supply chain to Western Canadian producers.
You have probably heard that we have been doing some negotiations with the Western Grain Elevators Association and Inland Terminal Association. We are working on a three-year agreement with these principals. We are trying to lay out a game plan and establish clear lines of accountability for performance between our service providers and us. We would also like to increase competition in all segments of the grain handling and transportation system and try to ultimately lower the cost of the system for Canadian farmers. We would like to improve system efficiencies and the ability to meet our customer’s needs. We would like to ensure the CWB’s ability to operate in a dynamic marketplace and fulfill its mandate of price pooling and maximizing returns to farmers.

I also want to talk about our tendering agreements. We have two main methods with which we can source product. We have a tendering method and a car awards method. In May-June of 2000, we had an MOU (Memorandum Of Understanding) with the government that said we are going to source specific amounts of our product: 25% in the first year, and 50% in the second year from the tendering method. So what do we do with our tenders? We want to specify the volume of grain, the grade, the quality that is required at the port destination, we want to specify the delivery time and outline the performance criteria. The company that is successful in winning the tender is responsible for tendering that quantity of wheat or barley, to get it to the designated unload terminal—they can pick the railway they want to use to do it with—and get it within the terms of the contract and the specs of the commodity. Typically, our tendering agreements are for delivery in-store. All of our tenders are selected primarily on a price basis.

We also use car awards to source a portion of our business. Presently 75% of our business is done for export. Car awards are really about, “How do you divvy up Canadian Wheat Board business in a very transparent way, that is very commercial and your service provider will want to handle your product?” When we do our car awards, we specify the grain, the grade and the destination for each order. We establish the performance criteria and these awards are based in this way: 50% percent of the previous 18 weeks of receipts, and 50% on the outstanding contract balance. It is awarded to companies based on zone, and we supply the railcars for those awards. The goal of the car awards program is to put some leverage in the hands of the producers where they are delivering their grain. If they deliver to a certain elevator, that elevator knows that the balance of the contract will be coming to them if the farmer chooses, or the producers can take their contract and move their business elsewhere.

What are some of the implications for the grain handling and transportation system? Hopefully we are introducing greater competition at the farm gate. We would also like to have higher system throughput. Obviously, we would like to lower demurrage costs, make sure the right grain is loaded at the port at the right time and increase accountability of each party involved.

Our export targets for 2001-2002 are about 16 million tonnes. So far, about 25% of that has been completed. As far as the tenders go, we have offered 2.13 million tonnes through the tendering process. We have accepted 1.32 million tonnes of that product.
This is basically the range of accepted bids. You see that CWRS is about $12.06 and downward CPSR is $8.50. Now, as we are moving forward, we have to enter into terminal contracts. These negotiations are on-going at this time. We would like to enter into a little bit more detailed railway contracts.

Harry Siemens, Editor
South East Agri Post
Chairperson, Session 4

Brant Randles graduated from the University of Manitoba in 1981 with a degree in Agricultural Economics. He started his career with Louis Dreyfus upon graduation. He has spent three years outside of the employ of Louis Dreyfus from 1983-1986. He returned to the company in 1987 and spent 8 years overseas in Singapore and Johannesburg with a firm responsible for various grain, oilseed and feedstuff merchandising operations from Asia and Africa to Russia. He returned to Canada in 1998 and has since been appointed as President and Chief Executive Officer. Louis Dreyfus Canada has just completed construction of ten new high-throughput grain elevators in western Canada and owns a transfer elevator in Port Cartier, Quebec.

Brant Randles, Chief Executive Officer
Louis Dreyfus

It is a pleasure to be here, and thanks for the invitation. When Barry asked me to make a presentation, he said, “Your topic is restructuring supply chains”. In going through it, I think it really is misnamed. I do not really have a lot of experience in restructuring supply chains—we have just built a new one. But we have given a lot of thought to what makes up an effective supply chain. Really, you can consider this to be rethinking supply chains.

At the risk of being repetitive, I would also like to define a supply chain: “the management of supply of goods from origin to destination, or from the producer to the customer”.

Before we move from this very broad definition of supply chains, we should identify some critical elements. A supply chain must be efficient, reliable, and coordinated. A lot of people think about the physical assets of supply chains: the trucks, ships, elevators, rail equipment and all those hard assets that are used to convey product and material from producer to consumer. While we should not diminish the importance of these hard assets, more than anything, an effective supply chain is a partnership of interests. From the farmer through to the trucker, elevator, railroad terminal, vessel elevator and consumer, it is a partnership. An effective supply chain meets all the interests of all the partners in the chain. I say partner, because that is the way we approach business with all our
counterparts. As an example, if you do not partner with a railway, and consider their interests, you will not have a very prosperous relationship. If you decide to plunk $10 to $20 million down on a rail line, be it CP, CN or BC Rail you better make sure you want to be a partner with them. It is like marriage. You are not always satisfied, but you know it is in your long-term interest to keep your partner happy. Of course, we should always include the CWB as a partner in Canada. It is always good business to keep the Wheat Board happy.

I would like to highlight some of the interests that we consider with all of our partners in the supply chain, starting with the farmer. We have identified that a farmer has an interest in attentive service. It is not surprising, who does not like attentive service? The farmer is starving for management tools. We strive to provide our farmers with effective marketing tools, which are delivered from our offices or over the web. These include accounting, contracting, and innovative ways of enhancing cash flow. Farmers can track the value of their inventory online in real-time, they can review all their cash settlements, they can produce income statements and do GST reconciliation, all with our website. Those are some of the things we look at on the procurement side of the supply chain. The farmers are interested as distances get ever greater when they are hauling and, when they have to make the visit to the elevator, it is important to have this kind of information technology at their disposal.

Sometimes it is hard to consider any business entity you deal with and to whom you pay money as a partner. We, at Louis Dreyfus, have embraced truckers as strategic partners and do everything we can to help them manage their business. We have an automatic, web-based invoicing system that creates a payment voucher in our payable system and leaves an invoice residing on the trucker’s own secure extranet. The trucker does not have to invoice us. He is paid automatically on a weekly basis. He can produce an income statement, he can do GST reconciliation, and he can also use the database to look at the origination of loads by time, geography, grain type or by farmer. It also enhances cash flow, which is very important to anyone that is operating a small fleet of 5-6 tractor-trailers. You can imagine somebody that is driving all day, maybe has 3 or 4 drivers on the road as well. At the end of the day, he, or maybe his wife, is doing the invoicing—they do not have to do that anymore. In fact, we insist that anybody who hauls for us—and about 70% of our inbound receipts come in by commercial carrier—has to use this system. They really resisted this system at first; they love it now. Sask Pool can take up to 45 days to pay their freight bills. We pay them within the same week. Where do you think that guy is going to take that grain if he has a choice? This really addresses the needs of the trucker. He gets greater cash flow and assistance in the management of his enterprise and we get greater access to receipts. Both our interests are served.

We all know railways have their interests, too. However, no one should be ashamed of profit, even if other players in the industry are not profitable. Not surprisingly, railways strive for market share, better equipment utilization and labour productivity to lower their operating ratio. A lot of policy wonks are fixated on continually lowering rates. This is extremely shortsighted if we want to maintain an efficient transportation system that can respond to market opportunities. We look for areas where we, as a partner, can lower
rates through productivity gains. These are laudable objectives and everyone should share in a partner-like approach. There are still a lot of opportunities to improve system productivity. Those who identify and have the means to exploit them will rule. We believe, as most farmers do, that the industry needs to be sufficiently capitalized in order to take advantage of good prices and get our products to market. We should not be red-faced about profit, even in agriculture.

Anyone that has been following the United-Agricore merger should not be surprised that terminals, like any other business, like market share. It is largely a fixed cost business where the marginal costs are very close to zero. Market share can drive down unit costs such as labour. Too much market share to the point where it impeded competition is a bad thing, particularly for farmers. The concentration of terminal ownership in Vancouver should be a concern to every farmer in western Canada and to the Canadian Wheat Board. United-Agricore’s near monopoly on the south-shore would seriously undermine the competitive posture of any non-aligned originator. This could spell trouble for companies with limited working capital and diminish choice at the farm gate. As a company that owns and operates an ocean fleet of close to one million dead weight tonnes, other than the daily hire rates, we think that better utilization through quick load and discharge are critical to profitable operations.

Ultimately, the consumer requires an uninterrupted supply of material. Whether practicing just-in-time inventory practices or warehousing goods, timely, predictable delivery is critical. The other critical element is quality assurance, especially as we continue to introduce newer, specialized products and that segregation requirements become more rigid.

The hallmarks of an effective supply chain are efficiency, reliability and coordination. Let us talk a bit about efficiency. Efficiency is what everyone focuses on. Saskatchewan Wheat Pool is well on its way to being an efficient player but must contend with their inordinate debt. United-Agricore hopes to wring out $50 million in annual operating and administrative savings through consolidation. These are necessary steps in the natural evolution of commerce. The CWB can further contribute to efficiency by re-evaluating some of their car distribution policies.

I can speak of three areas where logistics companies need to explore efficiencies and economies: operations, administration and transportation.

Operations and administration costs are largely fixed. In our company in Canada, like most elevator companies, variable expenses are minute. It would make me blush to tell you how low they are. Some communication expenses, some portion of utilities, consumables and casual labour comprise our variable expense base. It follows that elevating grain, either in the country or at a terminal point, has a very low marginal cost and is volume driven; unit costs collapse as volumes increase.

The elevator network has seen remarkable restructuring over the last ten years, but especially over the last five. Enormous amounts of capital have been invested in large
facilities designed to exploit operating and transportation economies. These capital expenditures have also added to the liability side of company’s balance sheets—a tenuous position in times of restricted cash flow. One thing for certain is that size matters. Elevators unable to exploit at least 50 car incentives have little hope in remaining viable. Shippers able to ship larger blocks have greater access to equipment and enjoy a lower rate structure. Large blocks of homogenous products also contribute greatly to terminal and port efficiency.

The Canadian grain handling system has some unique features. We are well along our way to having an IP system. We produce wheat, feed grains, oil seeds, pulses and a myriad of specialty products. In wheat and durum alone, there are literally hundreds of different types of varieties, qualities and proteins and each year the diversity increases. In fact, I just asked our controller how many inventory codes we have for wheat and durum. Excluding tough and damps, we have 240 for wheat and durum.

Waning wheat production because of low prices and poor cash flow have encouraged diversification. This trend will continue as the U.S. expands farm program expenditures. They were just talking in the Senate about another $150 billion over ten years in increases to farm programs. Emerging agricultural powerhouses such as Argentina and Brazil expand their area and devalue their currencies. The reemergence of Eastern Europe as a major exporter will also continue to depress prices. Elevator companies cannot ignore the burgeoning specialty markets and must adapt their operations to accommodate these products.

We should recognize that we forfeit supply chain efficiency in order to handle this diverse product mix. Facility capital costs increase almost exponentially as demand for segregation increases. We should keep this in mind as we examine the benefits of increasing diversification.

A necessary element of an effective supply chain is reliability. A reliable chain must have resource commitments from every chain partner. If you are going to secure resource commitments, the chain manager must have demonstrated competence, confidence in his partners and sufficient capitalization. Indeed, the consumer insists upon reliability of supply—supply has to be uninterrupted and predictable.

There is a story that Bill Clinton had a sign on the oval office wall, which was a daily reminder of what he should continue to focus on. The sign read “It is the economy, stupid.” When coordinating a supply chain there is one sign an effective manager should have on his or her office wall: “It is communication, stupid.” I cannot stress this enough. Like the management of any other business, communication is what holds an effective supply chain together. Communication is the glue.

Through communication, effective supply chains integrate operations such as receipts, processing of grain and shipping, administration such as marketing and accounting, and information, hopefully using information technology like I have shown you. The objective is to ensure that corporate goals are clearly communicated to everyone in the
organization. If you cannot manage internal communications, you cannot have an effective supply chain.

Finally, an effective supply chain manager, through effective communication, can articulate partner objectives or interests. If you can understand your partner’s business interests you should be able to articulate your partner’s objectives. If you understand their objectives, you should help them achieve their objectives. It creates a win-win environment. The historical Canadian we-they approach to grain handling policy is ineffective and regressive. It is perfectly okay to have major disagreements. Think of disagreements as forceful communication. Everyone gets the satisfaction from achieving their own objectives. Whether it is losing ten pounds or making budget forecasts, achieving goals is important and defines an individual and an organization. If the supply chain assists the partners in achieving their objectives, everyone will work to ensure the success, efficiency and reliability of the chain.

Some people still harbour resentment over success, and indeed, profit. It is particularly true in Canadian agriculture. I am proud to work for a profitable company with profitable partners from farmers to truckers to railways. Our collective success is good for the industry. It is the grease for the engine of investment, innovation and productivity that keeps us revving into the future.

Harry Siemens, Editor

South East Agri Post

Chairperson, Session 4

We have a question for Bill Drew. Some farmers are finding that the effects of the new policy are precisely the opposite of what was intended. For example, competition has disappeared. There are fewer trucking premiums, fewer grade promotions and fewer good deals. There is less competition at the farm gate. How do you explain this?

Bill Drew:
Actually, I could not begin to explain that. The numbers you saw from tendering indicated that we are extracting a pretty good premium out of the marketplace for the winning bidders and that money all goes directly back to farmers. With the latest rationalization of the system, there are certainly larger unit trains being operated and if you are telling me that it is not following its way back to producers, I would like to speak to the person who asked the question to know why not.

Harry Siemens, Chairperson, Session 4:
Brant, you say you keep the Canadian Wheat Board happy but on the other hand you said the farmer is starving for marketing tools. Could you explain that?
Brant Randles:
In times where returns on farming do not really contribute greatly to fixed costs, it is important to enhance cash flow as much as possible. I think the Board has taken some measures to try to address that, through their early cashing out of the pools—they discount the estimated pool return. Those are the kinds of tools that farmers need today. They need cash in their pocket now. We had a situation three years ago where domestic feed barley was trading at a $40 discount to the export market. We could not convince farmers to put it in the pool because farmers needed the cash today. This is unconscionable. If we are going to have a healthy industry, we have to address those issues.

Question from Audience:
Brant, you have suggested that diversification and segregation is costing us money. Are there other options, with either dedicated facilities in the field or maybe dedicating terminals or other ideas to get the volume and still deal with segregation?

Brant Randles:
It is evolving. We have focused our business more on the bulk commodities. The demands to go into increasing specialization are huge and there is also more risk in undertaking those endeavors. I am not really a specialist in that area. As you know we are sort of ‘bulk guys’ and we try to do it well.

Question from Audience:
This is for Brant. Do you perceive a lot of change in the last five years in terms of rationalization in the industry? Where do you think we will be five years from today?

Brant Randles:
Obviously this year has wreaked havoc on the revenue side of an income statement with the drought. It concerns me that we are so dry. It is November 20th and it is 11 degrees in Winnipeg. When is the last time that happened? I am worried about that. Given normal weather, we will have continual contraction and consolidation and we are going to be gathering grain from a lot fewer stations. Probably under 300.

Question from Audience:
What about the number of firms that are still involved in the industry?

Brant Randles:
There are some pretty amazingly innovative companies out there that do very well on lower volumes. Patterson’s has created a very good niche and does an excellent job in execution and they are very focused. I think we fit into that category, being a small to mid-sized player. There is room for all of us, depending on how attentively you serve your customers.
**Question from Audience:**
Can we expand on the lack of trucking premiums under the new tendering system? Brant, could you comment on that; are you still able to pay trucking premiums?

**Brant Randles:**
In my mind, there is a revenue stream that comes from moving grain through the pipeline. Now the benefits accrue to the pool, rather than to the farmer directly, I think that is the biggest distinction. The Wheat Board is buying grain at up to $10, I do not know what the average is, probably under $7. Those benefits all accrue directly to the pool. It comes back in the form of a final payment, rather than being something the farmer sees in his cheque up front. There are still people that pay the premiums, and are doing this business. If they continue to do that, you really compress margins and they will not be in business very long. There is a downside to this system as well.

**Comment from Audience (farmer):**
I am very pleased with the way the grain handling transportation system is working. It is working exactly like it should. It is competitive, companies are able to provide the most cost-effective, efficient way of moving and handling grain. Who is getting the money from this efficiency? The farmers are sharing it through the pooling accounts. They are sharing it in trucking premiums. I am still getting a trucking premium, why wouldn’t others? If they are not getting one they should go to another company and ask if they can get it from them. The bottom line is, the Canadian Wheat Board is there to defend farmers. They are going to defend their economic rights. This is exactly what we have done. I am pleased to hear that we have very few glitches in the tendering system, we are moving grain effectively and efficiently. Like I said, efficient companies are weighing the tenders and are providing certainty. This is what I like to see at the farm.

**Comment from Audience:**
I was the person that asked the question about trucking premiums disappearing. I think the key part of my question was that the system is doing precisely the opposite of what was intended. If you have a truly commercial system and a truly efficient grain marketing system, then the effective and efficient marketer gains market share by passing his savings both ways: some to the farmer, some to the buyer. This is the way a commercial system works.

What seems to have been happening in this system is that the Wheat Board has become the primary customer of the grain companies. All the savings, as both Bill and Brant have pointed out, are flowing into the pool. The intention of flowing into the pool accounts and being passed back and nicely shared is not my idea of a truly commercial system—a commercial system is dynamic where savings get passed around. But the intent of the system, if you go back to what the government said at the time it was announced, was that farmers would benefit. Now if you think the only way to make farmers benefit is to pool everything in sight and pass every saving back to farmers, then I suppose you could say the system is a success. But if you think the intent of a successful system being a dynamic commercial one, where the farmer becomes the primary customer of the grain company, or at least one of the primary customers (it is a
little hard in a monopoly system to have anybody other than the Wheat Board being the customer on the buying side), if you think of the farmers as being one of the people who should be sharing in that in a dynamic way, then, I would suggest the system is a failure.

**Bill Drew:**
It is a very commercial system. The car awards policy is designed to instil commercial discipline to where the farmer wants to deliver his grain and to where people compete. You see some companies that have become lean and mean —Brant’s company is one of them—and they are aggressively pursuing the business. This is what is supposed to happen in this system. If you remember the Board’s position on tender originally, it was that tender would make more commercial sense. I still think that would have been a better method to have gone with, personally.

We have a method where we tender a specific amount, so far 25%, and it is working well within the other ways we do our business. As it increases we might have to be careful with some aspects of it, because it does move grain a little differently out of the country than what used to happen. There will be some problems with that. Some areas will benefit more than other areas. But, as a whole, we have been working with the system for a couple of months and we have not had any major problems. The grain companies are learning to work within the system quite well. We are learning how we go about doing our business and the companies that are smart and aggressive are doing quite well in this system. I think that is what is supposed to happen.

**Brant Randles:**
I heard two things, one issue being the redistribution. Now it is being redistributed through the pool because obviously it is a zero-sum game that has to come from somewhere—the $8-$12 in discounts. You might take issue with that philosophically, the redistribution of that incentive, and I am not going to debate that. But, one thing that the tendering system has done—and actually we have participated very little in the tendering system—is that it allows companies to dramatically move market share. If they have the economies to exploit in order to do that, it will do that. Before you had a fairly static system. Now, it is another thing about the redistribution. I am more of a free-marketer, and that is fine. It is fine to be a free-marketer.

**Question from Audience:**
I was wondering, given that this year the crop is being a short crop—a 40% smaller crop—is it a prudent year to test this tendering system?

**Bill Drew:**
With a small crop, the logistics system should not get strained no matter what method is used to procure your product. We will have to find out whether we have got some false beliefs that things are working better than they would if we were in a very congested, large-crop system. I have some concerns with the rationalization that is happening in the industry that we are starting to make the funnel smaller and smaller and it will be tougher to move everything when it is required. But, we will have to wait and see when we get a good crop, and hopefully we get a good one next year.
Question from Audience:
This morning we heard a lot about identity preservation and some of the opportunities that may be forthcoming for different markets catering to desires of consumers. I want to know if you can look into the future and tell us what will happen.

Brant Randles:
I am a bulk guy. If you are a Somali or you are Zimbabwean or you are an Iranian—what you really want is starch in your belly; you want to be full. If you are a Thai, if you are Chinese or you are Malaysian, you want to increase the protein component in your diet (more meats). This is where the bulk of the demand is—outside of Canada, the U.S., Europe and Japan. When I look at IP systems, what is going to drive that in Canada is the farm bill in the U.S. We cannot compete with the U.S. Treasury. The U.S. farmer, irrespective of whether November soybeans are at $4 or at $2, he is getting $5.28 a bushel for his soybeans. Likewise in wheat, he is getting over $3 per bushel. We cannot compete with that. This is going to drive diversity, which is going to drive specialization. I do not think the farmers in the U.S. care. They have Uncle Sam’s treasury to take care of them, as they do in Europe. I think that is going to be the driver of increasingly sophisticated and tailored products to specific consumer needs. But world trade is going to be driven by starch and protein demand for a long time to come. I will probably be buried and there will be little protein left on my bones by the time the world moves to a fully IP system.

Bill Drew:
I agree with most of what Brant said. If Canada has a niche market for IP products, if that is what customers want… Sure, logistics providers, marketers, and everybody would like to sell a homogenous product. It makes all of our jobs a bit easier. We may not be afforded that luxury. We certainly have to be able to adapt and do what is necessary.

Dr. Barry Prentice, Director
Transport Institute

This has been a very interesting day and we certainly have covered a lot of territory. I am going to ask Sandi Mielitz to come forward as our Rapporteur. Sandi has a long and very interesting career with the railways and I am happy to say her new title is “Free Citizen”.

Sandi Mielitz
Free Citizen

I have been blown away by the quality of the sessions today. I want to start by mentioning two or three things that surprised me, then go on to draw what I believe to be a base conclusion and, finally, talk about three critical issues for the future of Western agriculture.
First of all, a simple surprise. This has been a really positive day. When I left the industry last spring, the tone was not positive at all. But, especially this morning, most of the discussion centred on opportunities and what we need to do to capitalize on them. It is wonderful to hear such positive entrepreneurism in this industry.

Next, I was surprised and impressed with the sophistication of the discussion on supply chains. I have been at endless conferences talking about supply chains. Most of the time, nobody really knew what they were talking about. It was a dreadful buzzword. Barry and I were talking about this beforehand and Barry offered to lay out definitions on supply chains to put some solidity to the day. You know, Barry, it was useful but was almost unneeded. The speakers today understood the concepts, they are working with them and they are thinking about how to use them more effectively. I think that was just terrific.

The third item is not really a surprise, but just something I want to point out. We have an incredibly wide-range of perspectives represented in this room. We had people like Curtis Rempel and Gary Pike talking about “leading edge” and “into the future”. Curtis was listing off new products, such as Weight Watchers flour, high oil flour, or easy-to-digest flour. I have to say he opened my eyes to the possibilities of what could be produced here. Products that require field-seed control—the whole supply chain must be controlled to generate the value—but the value multiplier effect for the producer could be staggering. Contrasted against this vision, we had some solid doses of reality like the intractable problem of making changes and improvements in Thunder Bay or the practical problems of implementing testing and certification. I really enjoyed that CGC dialogue: it took the morning’s futuristic discussion and brought us back down to the realities of an agency trying to put testing and certification into place and the commercial implications for the players. It was very important to have that kind of dialogue during the day.

Finally, despite the exciting pictures painted about the future, we could not hold ourselves back from some debate on how well the handling and transportation system is working and how well it should work. I guess even when it is not on the agenda it is going to poke up its head.

Let me move on to my one base conclusion: there is no doubt that there will be a very significant increase in global raw product differentiation. Whether you want to call it GMO or IP or increased segmentation, this is going to become an increasingly powerful force. To go further, if the biotech health controversy calms down, the change will be exponential. I really would not have stated the conclusion this categorically if I had not heard some of the morning discussions. The trend line and the degree of change are clear. The only question is timing. If this is true, then supply chain strategy and management become perhaps the most critical success factors to unlocking the huge potential value that we can now see is there for the taking.

In terms of critical issues, I could mention things like improving processes and information but everyone is well aware of these. Instead, I want to highlight three issues
that I heard today that I think may be more insightful to the challenge of increased segmentation and increased differentiation.

The first is the debate over the value/cost trade-off. Ray Lottie and Bill Wilson said we should not offer identity preservation or increased differentiation if we cannot increase revenues enough to offset our higher costs. Near the end of the day, we heard Rob Booker saying, “Watch out guys, the higher revenues are not going to be there. People are going to start offering IP product and, once they do, we all will have to follow suit. Those who do not meet the new standards will have their products discounted.” I was left with the feeling that it might be dangerous to sit there saying, “I am only going to differentiate if there is value in it”. Frankly, I think this attitude will lead to another competing supply chain in another country or another competitor getting the jump on us.

The next critical issue is the adaptability of the bulk system to handling increased segmentation. Again, many of you referred to it in different ways and talked about the efficient system versus the responsive system and that the bulk system has to change or be set aside for a new logistics system. Frankly, I was really surprised that there was not more discussion around containerization. In the transportation world, that is certainly one of the core options for higher value segregated products.

My own view is that we now have a state of the art bulk handling system, at least in terms of facilities. We are also already handling a large number of segregations – 100-300 on a regular basis. The questions I would pose to the audience are: Why do we need to reject the bulk handling system? Why can we not manage both small IP lots and large shipments through the same facilities? But let us not polarize the issue. Let us see if we can find common solutions using our new infrastructure and some of the information technology and quality control systems already in place.

The last and perhaps most critical issue is leadership in the supply chain. This is something I have thought quite a bit about and have witnessed in different industries. How do you get all the supply chain players to function with the same priorities? It is fine to hold conferences and show flow charts with models of cooperation, but how do you get the next sod down the road to do what you think—or share your vision of what you think needs to be done?

Gerry Carter talking about Thunder Bay has given us a great example of a case where nobody has yet had the ability to break through, to mobilize the players to create a supply chain for the seaway route that is competitive for the longer term. Curtis Rempel from Monsanto also has a great example. His company has been developing new products for the front end of the chain using seed and input technology. Now, they have discovered the hard way that if the very end of the chain, the user, is not comfortable with what they have done at the front, their brilliant concept is in trouble. How can Monsanto work with all of these elements in between—the pieces of the supply chain they have never dealt with before where they do not have expertise—how do they influence their customer’s customers to realize the value they are creating?
You could also say that a lot of the debate in grain transportation has been about, “Who is going to control the supply chain?” I watched General Motors play using the brute force of bigness and to compel the entire supply chain to conform to what they want. I think that is a very interesting issue. Where does the leadership come from? Can it really come cooperatively from a whole bunch of bright people in different places in the supply chain? Or do you need to have dominant forces? Or does it need to be a country-wide or Western Canadian strategy? I guess I would not advocate the last, but certainly you can look to cases like Singapore as a model of success in government planning. I am going to leave the issue of leadership as a question, because I do not have a solution.

This leads me to a concluding thought. I really enjoyed Gary Pike’s comment that Canada has a competitive advantage in IP or significant segmentation or market differentiation in agriculture. I was the one who wrote the question “Explain why you think we have an advantage”. I loved his answer. He said that we have a much higher capacity for on-farm storage than other countries. This means we have a relatively low cost way of holding product until it is ready to be marketed. We also have a well educated, adaptable, hungry, and aggressive producer group. I think that is one of our strengths. I was interested in Bill Wilson’s comments, chiming in, that we already have many grades and sub-grades of grains in our system and pretty high quality tolerances. We have an advantage over other countries, which have not had to deal with the same degree of complexity and the requirements in infrastructure and in processes that go with it. Finally, Bill pointed out that we have fewer players than many other countries, especially the States. This is a potential advantage in terms of showing leadership and aligning the system. I believe Gary Pike and Bill Wilson are correct. We do have some powerful, latent competitive advantages. Our issue is attitude. Are we going to be positive, entrepreneurial and competitive, trying to make the pie larger? Or, are we going to remain negative and risk averse, squabbling over how the pie is divided? I am pleased to report that today’s remarks give me renewed optimism that we may be on the right track.
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(in order of appearance)

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Glenn Cheater  Canadian Farm Business Manager
Ray Lottie  General Mills
Gerry Carter  CSL
Roberta Rampton  CBC News: CountryWide
Dr. Will Wilson  North Dakota State University
Curtis Rempel  Monsanto
Gary Pike  Crop Verifeye Canada
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Gordon Miles  Canadian Grain Commission
Rob Booker  Vancouver Wharves
Dave Kushnier  BC Terminal Elevator Operations Association
Harry Siemens  South East Agri Post
Bill Drew  Canadian Wheat Board
Brant Randles  Louis Dreyfus
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Karen Tucker     Canadian Transportation Agency
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