MANITOBA CLEAN ENVIRONMENT COMMISSION

HOG PRODUCTION INDUSTRY REVIEW

TRANSCRIPT OF PROCEEDINGS

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Held at the Keystone Centre

Brandon, Manitoba

WEDNESDAY, APRIL 18, 2007

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APPEARANCES:

Clean Environment Commission:

Mr. Terry Sargeant	Chairman
Mr. Edwin Yee	Member
Mr. Wayne Motheral	Member
Ms. Cathy Johnson	Commission Secretary
Mr. Doug Smith	Report Writer

INDEX OF EXHIBITS

NO EXHIBITS MARKED

WEDNESDAY, APRIL 18, 2007

UPON COMMENCING AT 1:15 P.M.

THE CHAIRMAN: Good afternoon, ladies and gentlemen. Welcome to the Clean Environment Commission hearings into our Hog Production Review.

I'm sorry about the late start, but we've had some technical computer problems.

My name is Terry Sargeant. I'm the Chair of the Manitoba Clean Environment Commission, and I'm also the chair of this panel. With me on the panel are Wayne Motheral and Edwin Yee. I have a few opening comments, and then we will proceed to presentations by a number of people this afternoon. The Clean Environment Commission has been requested by the Minister of Conservation to conduct an investigation into the environmental sustainability of hog production in this Manitoba. The Terms of Reference from the Minister direct us to review the current environmental protection measures in place to determine whether or not they are effective for the purpose of managing the industry in a sustainable manner.

Our investigation is to include a

public component to gain advice and feedback from Manitobans. This is to be done by way of public meetings in various regions of the province.

We have been asked, as well, to take into account efforts underway in other jurisdictions to manage hog production in those jurisdictions in a sustainable manner.

Further, we are to review the contents of the report prepared by Manitoba Conservation entitled: "An Examination of the Environmental Sustainability of the Hog Industry in Manitoba."

At the end of our investigation, we will consider various options and make recommendations to the Minister on amy improvements that may be necessary to provide for environmental sustainability of hog production in our Province.

To ensure that our review includes issues of importance to all Manitobans, the panel has undertaken to hold 17 days of meetings in 14 communities throughout the agricultural part of Manitoba. Today, I believe, is day 14, I think, of these hearings. We have one more day here and then two next week. We started the hearings in early March. And the final meetings is scheduled

for Winnipeg next Friday, the 27th.

At these hearings, it is open to any groups, or individuals, to make a presentation to this panel on issues related to hog production in the province. For the most part, presentations are to be limited to 15 minutes. Exceptions may be made, in cases where a presenter needs more time, provided that presenter has asked, prior to the meeting, for additional time. All presenters will be asked to take an oath promising to tell the truth.

Presentations should be relative -- pardon me, relevant to the mandate given to the Commission by the Minister, and to the issues described in the Guide to Public Participation in this Review.

Members of the panel may ask questions of any presenter during or after the presentation. There will be no opportunity for other presenters to question or cross-examine presenters. In addition to these public meetings, the CEC is engaging consultants to assist us in the review. The results of those research endeavours will be posted on our website upon receipt. For the most part, we anticipate receiving those in late June.

Parties, individuals or organizations will be invited to provide comment on any of those reports, if they so wish. A reasonable, albeit brief period of time, will be allowed for this comment.

Written submissions will also be accepted. Information as to how to submit a written submission is available on our website. The deadline for such submissions is May 7th.

As well, we realize that many people are reluctant to make presentations in public, for a variety of reasons. To address that, we have engaged a graduate student from the University of Manitoba to meet with, or talk on the phone with, people who would rather not speak at a public meeting. These conversations, whether they be meetings or on the telephone, will be kept confidential. Information as to how to contact this person is available on our website, as well as at the table by the entry door.

Some administrative matters. We actually have a full slate. So if you had wished to make a presentation, you are out of luck today. There may be a slot or two open tomorrow, but I'm not certain. You would have to check with the

table by the entrance.

Also, as is our normal practice, we are recording these sessions. Transcripts will be available in a day or so online. The links can be found at our website.

Finally, in respect of cell phones, I would ask that they be turned off or that the ring tone be turned off. If you must take a call, I would ask that you please leave the room.

As well, I would ask that you not engage in any conversations while people are making presentations. Thank you. As I noted, we have a full slate this afternoon. First up is Mr. Bruce Dalgarno. Would you please state your name for the record?

MR. DALGARNO: Bruce Dalgarno.

BRUCE DALGARNO, having been sworn, presents as follows:

THE CHAIRMAN: Go ahead, sir.

MR. DALGARNO: Thank you, Mr. Commissioner. I certainly appreciate this opportunity by the Clean Environment Commission to allow us to make this presentation. As I said, my name is Bruce Dalgarno. My wife, Carol and I, together with our son, Andrew, farm at Newdale,

Manitoba. We grow oats, barley, canola, winter wheat, spring wheat and perennial rye grass.

And just for clarification, we do not own any hogs, nor do we own any other livestock, nor do we have any investment in any livestock facilities.

I think that this moratorium that was put on to the hog industry was a bad decision by the government of the day. I think that actions like this should only be based on good science to have any credibility. And because if they aren't based on good science, then you really have nothing to substantiate your claim. And this moratorium that was put on the hog industry was not based on good science.

We farm beside a 2,500 sow farrowing barn, and I can honestly say that we have never had any problems with it. We actually farm on three of the four sides of this particular barn. Approximately two years ago, we had the opportunity to receive some of the manure from the barn as a form of fertilizer on one of our fields. The barn operators filed the appropriate Manure Management Plan with the province. And this plan was developed with my input regarding the

cropping -- the crop that was going to be grown on that field the next year. The fertilizer from this hog barn is a naturally-occurring product, which means that the farmers who use it don't have to apply chemical fertilizers to their field crops. Assuming 80 pounds of nitrogen, it could be worth approximately $40 per acre for the nitrogen, another $8 to $10 an acre for the phosphorous, as well as values of micro-nutrients added besides that. So overall, this manure applied to my crop, or anyone else's crop, could easily be worth $50 to $60 per acre of nutrients to our crop.

As well, the hog barns in the area also use feed grains. And the feed mills may be located in Winnipeg, Brandon, Souris, or any other number of spots throughout the province. But the grain, the wheat, the barley that comes to those feed mills comes from a farm somewhere. And it certainly has a value to the other farmers, the field crop farmers, in Manitoba.

Also, my experience has been that the local hog barn also enhances our municipality considerably in that they pay a considerable amount of property taxes. And they also, in our

instance, in the barn close to us, they also employ 12 local people to work in the barn.

So as I said, I think this moratorium was not based on good science. And that bothers me as a crop farmer, because I think every crop farmer should be -- could be, rather, affected. If the government decided to put a moratorium on pesticides, for example, while a similar review was done on a whim.

Good rules already exist and they are followed. Plans have to be filed every year, and they are. Any action like this, taken by the government, should only be done based on good science relative to Manitoba. I consider this decision to be not based on good science and not good for agriculture in Manitoba.

Thank you, Mr. Sargeant.

THE CHAIRMAN: Thank you very much, Mr. Dalgarno. I would hope -- and, ultimately, that's part of our task in this review, but I would hope that the government didn't implement this moratorium based simply on a whim. And, you know, part of our task is to determine the science around these issues.

Wayne, do you have questions?

MR. MOTHERAL: Yes, I do, thank you, Mr. Chairman. Mr. Dalgarno, some of my questions, a few of them may not be directed to you personally, but may be about the knowledge of this hog barn that you are talking about. How long has that barn been there?

MR. DALGARNO: Oh, I would say probably five years perhaps, six years. Five years maybe.

MR. MOTHERAL: And when the barn -- before the barn was developed, of course, there would have to be a permit or a development permit allowed from the Municipality, and I believe that's Harrison; it not?

MR. DALGARNO: Strathclair.

MR. MOTHERAL: Oh, I see. So it's close. And was there a public meeting on any conditional uses?

MR. DALGARNO: Yes.

MR. MOTHERAL: There was, okay. You say you received some of the manure fertilizer from this operation. Do you receive it at no charge?

MR. DALGARNO: That's correct.

MR. MOTHERAL: Would you be -- this is

putting a question to you that you haven't thought about yet, but would you pay for that? You know, if there was an opportunity, if there is a value to it, would you pay for it?

MR. DALGARNO: Well, I think, Mr. Motheral, that's a very good question. Because, really, I think that there is considerable value to it. And I wouldn't have a problem paying a certain percentage to it, providing, I guess, there is some caveats to that. You know, there would have to be some continuity. You would have to be able to plan a crop rotation to utilize the nutrients that are being put on there and have, I guess, some continuity year to year. So, number one, I would know that I can plan my crop rotation accordingly.

But also the hog barn operator would know what land he has available to put his manure on, on a yearly basis. And, you know, not just year by year, but into the future. So I would think that each barn would be a separate issue, as far as having someone pay or not pay, or how it's applied and all of that sort of thing. But I wouldn't put that as a no. I would certainly look at that question.

MR. MOTHERAL: Okay. And just one more question. You say:

"Good rules already exist and are followed."

Do you think the present regulations put on these operations are sufficient?

MR. DALGARNO: Relating to the Manure Management Plans?

MR. MOTHERAL: Well, relating to the whole hog industry?

MR. DALGARNO: From our experience, yes, I would believe so.

MR. MOTHERAL: Okay, that's all I've got. Thank you.

THE CHAIRMAN: Edwin?

MR. YEE: Yes, thank you, Mr. Chairman. Yes, Mr. Dalgarno, how many acres do you farm?

MR. DALGARNO: Approximately 3,000-acres of crop.

MR. YEE: And how much of the acreage do you use for manure fertilizer?

MR. DALGARNO: I believe it is about 210 acres.

MR. YEE: So for the remainder, you

have to supplement using chemical fertilizers?

MR. DALGARNO: That's correct.

MR. YEE: Thank you. That's all the questions I have.

THE CHAIRMAN: Have you had this manure fertilizer more than one year or was it just the one year?

MR. DALGARNO: No, just once.

THE CHAIRMAN: And is there any chance of getting more in the future or is that speculative?

MR. DALGARNO: Well, I would think that's probably speculative to a certain extent. The barn has changed hands in the last year or two. So we will see what the new owners have to say, or deal with them, yeah.

THE CHAIRMAN: Thank you very much, Mr. Dalgarno. Thanks for coming out this afternoon.

MR. DALGARNO: Thank you.

THE CHAIRMAN: Next is Ruth Pryzner. And I should note that Ms. Pryzner has requested an hour presentation, and that was agreed to some time ago.

Ms. Pryzner, I believe that you took

the oath to tell the truth at the Winnipeg meeting about a month and a half ago, and so we would consider that to still be in effect. Would you, just for the record, please, introduce yourself again?

MS. PRYZNER: My name is Ruth Pryzner. I'm a farmer who lives between Alexander and Rivers, Manitoba, northwest of Brandon.

I have got a lot of things to say here because this whole question of sustainability of the hog industry is relatively complex. But, by the end of the day, it will actually end up being relatively simple.

You know, as a farmer, and as a rural resident, I have carried on my own business years ago, just doing my own thing, looking after my family, looking after the farm. And one day I got a phone call that there was a proposal to change the by-laws in the R.M. of Daly to provide for a conditional use. There was a hog operation, Elite Swine Operation, that was proposing to set up in the R.M.

And at that time, you know, I really didn't know what to expect. I didn't even really know what the problem was. And so I attended to

the conditional use by-law process and was relatively satisfied with the kinds of by-laws that the R.M. of Daly put in place. They were fairly general, gave the council a lot of discretion. It seemed like it wasn't a bad idea. And then I sat in on the Elite Swine application and listened to what the proponents had to say and thought, geez, I wonder what's the problem with this? It sounds really good.

But the people who lived in the community were quite upset. And they started identifying a bunch of concerns about the whole question of having the barn move in next door. And I have heard those concerns expressed over and over and over and over again by communities since. My eyes started opening about what was actually happening with this industry.

So in 2000, we ended up -- there was another proposal in the R.M. of Daly, and I got a phone call about that. And that's when I really started to learn about what was involved with this industry.

The first thing that I really want to talk about is the whole question of the new Planning Act in the Manitoba Pork Council's

presentation. They have made some reference to it and some suggestions for changes and direction that they hoped the Commission would take.

And the reason why I think it's important to talk about the Planning Act, in some detail or length, is that the reality is that the structure of decision-making processes often informs the outcomes. And, in fact, sometimes the structure drives the outcomes.

So when we're talking about the ability of how this whole industry fits in, and how environmental protection can be achieved in the context of the process, it becomes quite important. Prior to the passage of Bill 33, the Planning Act, municipal authority to pass by-laws to protect the general welfare of persons within the municipality was available under Sections 231, 232 and 233 of the Municipal Act. In fact, the Manitoba Court of Appeal confirmed, in a decision between 4500911 Manitoba Ltd. in the R.M. of Stuartburn, that the R.M. of Stuartburn had the ability to use these regulations to limit livestock applications in the absence of a planned zoning by-law, as well as during the process of their creation.

The court found that:

"It would be astonishing if a municipality could not establish these kinds of operations with respect to intensive livestock operations in the absence of the development plan and a comprehensive zoning by-law.

It would be surprising if the municipality lacked the power to prohibit the development of an intensive livestock operation within boundaries of the four villages within the municipality",

the judgment reads.

Why would the Provincial Government respond to the principles in this decision? It enacted Bill 33, which stripped municipal governments of this authority. The Planning Act specifically removes the ability of municipalities to use these sections of the Municipal Act to address issues of safety, health protection, and well-being of people, and the protection of property in relation to Intensive Livestock Operations. It also strips their ability to regulate anything to do with manure.

The Planning Act enshrines the jurisdictional separation recommended by the Finding Common Ground report, where the province is responsible for environmental matters and municipalities are reduced to dealing with land issues.

This has set the stage for the public interest to be subsumed under the private interest. Here, the ability for members of the public to take an active and effective role in protecting the environment and water, the lifeblood of the earth, and our health, our home environments, the ability to define and shape our communities and our childrens' futures was significantly diminished.

You have heard from the Manitoba Pork Council that they are unhappy about the possibility under the Planning Act for a proposal to be rejected by council, and that there is no appeal available. Peter Mah, on behalf of the Manitoba Pork Council, complained about this at the Bill 33 Committee Hearings. He also argued that public participation in the conditional use process should be restricted to only those people who lived within a two kilometre radius of a

proposed hog operation.

Now, the Pork Council is asking you to recommend that the government revisit this issue. What they want is this: Once siting and set-back distances are established, once the zones are identified, and operation size is determined in these zones, the industry then has the right to develop hog barns without any further public input or other impediments. They want these to become free fire zones for ILO development.

What they are asking for is a system that renders public participation totally meaningless, where councils rely on the Technical Review Committee's assessment and direction, rather than the people's, for decisions. In effect, the Manitoba Pork Council is asking that the province, through the Technical Review Committees, shepherd the industry's future, expansion and regulation. There is a multitude of problems that will arise if you accept the Pork Council's direction in this regard. In essence, people will be defenceless.

I want to talk now a bit about the meaning of conditional use. The underlying principle in the concept of conditional use is

that a proposed development is not compatible with the area in which it proposes to locate. In order for a development to proceed, the developer must provide proof that the development can, indeed, be made compatible to the area. In the case of hog operations, the proponent is required to prove that the operation will not create a risk to health, safety, or the environment, or that risk can be minimized through the use of appropriate practices, measures and safeguards.

I agree with the previous speaker that decisions must be science based, but the science has to be provided by the proponent. It's the proponent that has to prove that it is safe. The way the process works now is that that's been reversed, and it's up to the public to show that it isn't.

Under the former Planning Act, municipal councils had the ability to impose whatever conditions they deem necessary to ensure that risks to the community were mitigated. But, more importantly, councils had the ability under 53(7) and 53(8) to implement the preventive principle.

This power was extinguished with Bill

33, and significant limitations have been placed on the types of conditions the council may impose on a permit approval. Any conditions must be relevant and reasonable. And if you look at the logic and the structure of the Planning Act, it is clear that the determiner of relevance and reasonableness of the conditions is the Technical Review Committee.

The requirements of Section A and C of 116(1) are determined upfront. And these conditions talk about, you know, compatibility with the general nature of the surrounding area, and consistency with development plans, zoning by-laws, and any secondary plan. This is relatively easy to establish in the decision-making process, but it is also part of the Technical Review Committee's role.

But who determines (B), which is:

> "It will not be detrimental to the health or general welfare of the people living or working in the surrounding area or negatively affect other properties or potential development of the surrounding area."

Has this been left to the sole

discretion of the Board, Council or Commission? No. The legislation assumes that it is the expertise of the members of the Technical Review Committee that will determine the level of risk and mitigative strategies to address those risks.

By the way, why exactly was the word "preventive" used instead of "minimized" when discussing risk here? Moreover, how, in this structure, is the local knowledge imparted to the decision-makers, through the public hearing process, ever to be deemed at par with the determination of the experts on the Technical Review Committee?

The province believes that the T.R.C. report and recommendations will almost always prevail in local decisions. And, indeed, that has been my experience, and the experience of others who have shared their stories with me over the years. But there is no legislative space for public participation in assessment done by Technical Review Committees. It's a closed affair.

Technical Review Committees do not verify the information they receive from proponents. They do not revisit their findings

and recommendations after reports are issued, even when the public points out fundamental errors of commission or omission in their work, as with the existence of a municipal drain omitted in the Technical Review Committee report in the Turtle Mountain case that people have talked about before.

There are countless examples of citizens bringing critical details to the attention of decision-makers that the Technical Review Committee has failed to identify and seriously consider. You've heard evidence of this already by others, having read the transcripts.

I will share one other example with you. In the R.M. of Daly, the Keystone Picket Basket Proposal, the proposal that changed my life, failed to take into consideration the likely interaction between the surface and groundwater at the proposed site and the variability of the overburden, all of which were known to local people, including a previous owner of the land.

Both Doug Small of DGH Engineering, and the Technical Review Committee, were made aware of the water dynamics on the site by local residents, including a previous owner of the land.

But at the conditional use hearing, both maintained that an earthen manure storage would be appropriate at the site.

Pip v. the R.M. of Brokenhead established that municipalities do not have to enforce their by-laws. If this is the case, then municipal governments are not required to enforce their conditional use permits.

Such is the case in the R.M. of Daly. There is a situation in the R.M. of Daly where Deerboine Colony was granted an additional use permit. I was a member of the council at that time. After having gone through the whole process, and listening to the evidence that was presented at the hearing, I had to vote against the proposal. But in any case, the proposal was granted a conditional use permit.

Now, word came through the community that the colony was building its barn. And so what I did was I asked the council to direct the CAO to do an investigation and see if that was, in fact, true. The Chief Administrative Officer came back to the council and reported that they were building the barn. Now, the law says that an operation can't proceed unless all permits and

approvals and licences required by the government are in place.

As it turns out, the Deerboine Colony had not complied with any of the conditions imposed by the R.M. of Daly, one of which was that you have to comply with the Planning Act. And there was one that they just could not comply with because it was -- dealt with monitoring test results.

So I put forward a resolution at the council, asking the council or having the council pull the permit. The council defeated that resolution and elected, instead, to ask Deerboine Colony -- they gave them until November 10th to prove that they were in compliance with the permit conditions. The Deerboine Colony presented the council with a report. And they had admittedly, within the report, not complied with anything. They were in breach of the Planning Act.

And the way the structure of the legislation works, and the fact that people can't, under the new Planning Act, take a council, an approving authority, a minister, anyone to court, for not enforcing permit conditions, or the law, nothing has happened. The Deerboine Colony has

pretty much finished building their barn. And they haven't even applied for a permit for an earthen manure storage yet. And they still haven't even applied for one, as of about three weeks ago.

So given this feature of the regulatory framework, how can the public have any confidence at all that hog production will proceed in a sustainable manner, when enforcement of the condition of a conditional use permit is at the discretion of councils?

The reality throughout rural Manitoba is that enforcement by municipal governments is not uniform. If a council does not act, enforcement requires that the public proceed with litigation, but you don't have access to the courts.

In the Planning Act, this specific removal of the public's access to the courts is -- was replaced with the ability to take the council to court under the Municipal Act, but there is a problem with this section of the Act. And when this question was raised during the Bill 33 discussions, government officials assured us that we would still -- the public would still have

access under the Municipal Act. However, the Municipal Act requires that the application to the court is an attempt to have a decision of council, either through resolution or by-law, to be declared invalid on four grounds and four grounds only. That the council either exceeded its jurisdiction in making the decision, which that doesn't apply to an enforcement question. They acted in bad faith, the by-law was discriminatory, or the council failed to comply with this Act or any other Act.

In the case of Deerboine, for example, which one of those grounds would be applicable? The council had jurisdiction to make the decision. We're assuming they acted in good faith in making the decision. There is no question of discriminatory practices with respect to the by-law. And the violation of the Act, the Planning Act, was on the part of the Deerboine Colony. And so the matter is going to stay as it is. That's a very serious problem for the public not being able to be protected from any harm that may come their way from livestock operations and hog operations, in particular.

Now, what government officials tell us

is: Well, you know, you can always throw the council out at the next election. The concerned ratepayers in my municipality came close to doing this in 2002. But the problem is that there is irreversible consequences or long-term effects that may or may not be mitigable, and this nullifies the significance of the electoral accountability.

So the changes that were made in Bill 33 weren't good enough for the Manitoba Pork Council. They wanted to then, as they want now, access to an appeal process if the council didn't approve a permit. They also want councils to be required to give reasons for denial. This would give ILO developers evidence with which to take councils to court for denying an application.

The final point here is that even, if by some miracle, a member of the public is successful in securing favourable judgment from the court, all the council is required to do is re-run the process properly. That is in accordance with the reasons for judgment, and re-issue the permit.

Given all of this, what are we to take of the claim of the Manitoba Pork Council that

they were subject to the most stringent regulations in the country? As Lisa Becktold from Grace has said:

> "You can have the best regulations in the world, but if the government is in bed with the industry, and the regulations aren't enforced, they are meaningless."

In short, the stated intent of Bill 33, that is to provide certainty for the livestock industry, has, indeed, been achieved. Once a development plan, livestock operation policy and zoning by-law have been enacted, there is little to no recourse for members of the public who are negatively affected by this duress.

I would like to say a little bit about the use of set-back separation distances and the use of conditional use planning. The land use planning focuses on separation distances. And I challenge their claim that the separation distances in the guidelines have provided a practical framework for hog operations, other than livestock operations and rural residents to live and work together in a manner that is strengthening the rural economy, yet preserving

the high quality of lives that rural residents expect and demand. My experience is quite different.

In 2002, the R.M. and Town of Shoal Lake organized a tour to the Killarney area, which was subsequently sponsored by the Pork Council, to provide citizens with a first-hand look at hog barns. The tour was in the winter. During the tour, we passed barns, and the odour immediately filled the tour bus. The spokesman, Mr. Scott Arnott, from MAFRI, quickly explained away the strong odour by stating that the odour was due to a problem with the ventilation in the barns, and all that was required was modification of this to protect the problem.

I drove passed the Dutch barn, located in Blanchard Municipality, in January, just three months after it began stocking pigs. The temperature was minus 30 degrees Celsius. The odour filled the inside of the closed vehicle, and persisted as I approached the nearest residence three-quarters of a mile to the northwest of the barn. There was another residence to the southeast about a mile and a half away.

You will not hear any testimony from

the families who live near the Dutch barn. As I understand it, one family sold their home to the operation. The other, a multi-generational farm, moved their home into the Town of Rivers. In so doing, a gag order was placed on them by the company, in exchange for the sale and compensation.

However, before the gag order was instituted, the members of these families told me that their children were ill and under the care of doctors for the most year the barn was in operation, and that their homes and yards had been invaded with the stench of hog manure. The odour was persistent. It was not just a matter of a few days each year during manure spreading. The kids were forced to wear clothes that smelled like hog manure to school.

One of the children, a friend and classmate of my daughter, spent a weekend at our home. I could smell the manure on her clothing. She wept about how she couldn't play outside at her house anymore, and was really happy to be visiting our farm, where the air was clean and odour-free.

There is only one way you can believe

the Pork Council's claims about the adequacy of guideline separation distances. You must take the position that the R.M. of Daly Council took in approving a 9,000 head cattle feedlot less than half a mile, the minimum separation distance allowed under the plot from a residence. In the words of the councillor, who explained this position:

> "Some people have to be sacrificed for the sake of progress."

My question, and the question of people in communities across the province is: What about our rights to enjoy our property? Do we not have the right to expect that our health and enjoyment of our homes and yards will not be negatively impacted by the industry? This is a particularly important principle, since we were here first.

The separation distances that work for agriculture do not work for industrial systems. The industry argues that agriculture has evolved and changed over the years and has, therefore, altered the definition of normal farm practice through this evolution. This argument is simply industry-searching. Agriculture is not just about

food production. It is about communities allowing animals to live in a manner that respects the true nature, balance and solar nutrient cycling on farm. Families working together with neighbours, being involved in each other's lives, and connected in a meaningful way. People being part of the land, not just taking from it and using it as a waste disposal site. Providing safe and nutritious food for their family, and others, in the context of stewardship and community, that's what sustainability is about.

It has been my experience that the pork industry expects others to sacrifice the public good for the sake of the corporate good. Now, in their submission to the CEC, they are insulting us. They write, on page 8(2) that:

> "There is a public good involved if there is a desire by the Provincial Government to increase the pace of change and, therefore, public investment and financial incentives to help producers adapt to the regulatory environment will be required."

This statement is ludicrous. The regulatory framework has developed as a direct result of the

problems invested in the industrial large scale of the industry. Regulations were asked for by the public to control the industry and to attempt to protect the public good. The costs of industry compliance should be paid for by the Industry, not the public.

In 2005, Minister Struthers told those attending the Brandon AMM Convention, that he was committed to the pollute or pay principle. He was speaking about water supplies that had been contaminated by abandoned gas station companies. How does the polluter pay principle apply in this instance? What are we to think of the polluter pay principle, in light of Minister Wochuck's announcement of assistance of up to $150,000 per operation to change the manure storage and handling systems?

The focus of the government, heavily lobbied by the pork industry, has been to find creative ways to socialize the costs of the industry to the public and privatize the benefits. I wonder what would happen if the industry was truly left to compete, to be free enterprisers, and bear the costs of the environmental degradation left by the industry?

The public's voice has been effectively silenced through the changes to the Planning Act and, as a result, the public interest has been forsaken. What we now have is stakeholder democracy, democracy for special interest groups like the Pork Council.

The public is even being excluded from participation in ILO policy development. Last year, for example, there was a review of the Farm Practices Guidelines that set out separation distances and other things. I have correspondence from Mrs. Wowchuk, where I asked her when the public was to be consulted? She advised me, through letters, which I will submit to you, that the public would not be involved, just stakeholders.

Now I want to talk a bit about some more on-the-ground reality about how sustainability can be achieved in communities, given how the regulatory framework and the decision-making process works.

I will be submitting an exhibit which shows the location map of the Piggy Bank boar operation and the location of a small holding just south of it. While I was a member of the R.M. of

Daly Council, we received notification by the Campbells, the residence in the small holding, that their well had been contaminated by E. coli, and that her daughter and their eight-month-old baby had been suffering from E. coli from drinking water from their well. The Campbells also brought this matter to the attention of the council at a conditional use hearing on the feedlot, Piggy Bank spread lands being owned by the proponents and that concerns that manure would add to the problem.

I was informed, as a member of council, that these well contamination concerns were taken to Manitoba Conservation and staff were unable to determine exactly the source of where the E. coli was from and, hence, no action was taken. And this is a significant problem throughout Manitoba Conservation's enforcement regimen.

Drainage from the hog operation's spread acres was facilitated through the creation of unlicensed drains that move water into the municipal ditch. A culvert carried the water from the ditch into the low-lying area where the Campbell's drinking water well is situated. The

Campbells have never had livestock.

THE CHAIRMAN: Excuse me a minute. Can we not have any conversations in the audience, please?

MS. JOHNSON: Excuse me, the news people, could you please take your interviews outside or wait until a break, please? You are disturbing the meeting here.

THE CHAIRMAN: Go ahead.

MS. PRYZNER: Thank you.

On November 9th, 2005, these pictures that are here on this screen are pictures of manure being spread from the hog operation that were taken. Oh, thank you. And as you can see, these -- the spreading is being conducted on frozen ground in the wintertime. And the really critical point about that is that this hog operation is under the 300 animal unit threshold and can spread in the winter.

But it seems to me that, you know, knowing that these people, and an eight-month-old baby, had been sick, and her mother had been sick and suffering from E. coli, that this operation might have been a little bit more careful about when and where it was spreading its manure. And

it spread it right up to the property line, right across from where these people lived.

And then later, in 2006, the R.M. of Daly Council, in its wisdom, after having granted the feed lot a conditional use permit, had the culvert removed.

And here is another example where it is a land owner taking manure from the Can Am Genetics hog operation in the R.M. of Daly and put it into cultivation pasture land adjacent to a creek. The complaint was launched in the fall of 2006 because liquid hog manure had been spread on November 11, 2006 within feet of the creek. The ground was frozen. And that creek is a major spring run-off channel for water in the area and empties into the Oak River.

I spoke with the Environment Officer, Ms. Christine Roberts, about this matter. And she informed me that she was unable to investigate in the fall because the ground was frozen. And there was too much snow that had fallen on it since the submission of the complaint on November 17, 2006. She suggested that it might be possible to conduct an investigation in the spring. She left word to her replacement that follow-up should happen in

the spring.

I was told by the new Environment Officer on April 13, 2007, that no follow-up has occurred. He was unable to attend to the location during spring run-off when samples could be taken, due to lack of familiarity with the area, and that it was unlikely sampling now would have been fruitful, given that spring melt had finished by the time we spoke.

During the spring of 2005, Deerboine Colony had experienced flooding of a sheep barn and yard, as well as a cattle wintering area. I was told by Ms. Roberts then that no enforcement action was taken because the colony had dyked the area and: "had done their best." Nevertheless, a significant amount of manure was carried by the flooding directly into the Assiniboine River.

Hangar Farms hog operation has been investigated several times over the year. The 2002-2003 MC Enforcement Summary shows several infractions. Hangar Farms also was convicted and levied a fine of $1,200 for trenching a manure storage to an irrigation water storage, and improperly storing manure in the water retention pond. Yet, Water Stewardship has not required

licensing of this water storage facility, despite the legislative requirements that exist under the Water Rights Act. Up until recently, Hangar Farms operated without a Water Rights License. It was a citizen complaint that forced the issue.

Hangar Farms still operates at this location. The spread lands were owned by a company called BG Ranch. However, Hangar has sold some of the operation to a company called Aero Farms. A company called Devonridge Farms also operates at this location now, owning all of the spreadlands. And when Devonridge Farms was created, all of BG Ranch's assets were transferred to it.

I was made aware of the complaint about winter spreading at this hog operation site and spoke with Travis Parsons, then a Conservation environmental engineer, about it. He told me that Hangar Farms per se is now under 300 animal units in size and can now winter spread. Unfortunately, Conservation cannot now determine which corporation is spreading the manure during the winter and, therefore, cannot take enforcement action.

The new Environment Officer has told

me the same thing when I spoke with him about the operation on April 13th, 2007 about a recent complaint regarding winter spreading that was made in March of this year.

Piggy Bank, the hog operation north of the Campbells, is owned by Mr. Larry Friesen's daughter. At least that's what he told me in 2002.

A major shareholder and director of Can Am Genetics is Larry Friesen's wife, Bonnie Friesen. The rumour is that Hangar Farms has bought the operation, but I don't have any confirmation of that at this time. But Bonnie is the sole owner of Devonridge Farms and was the sole owner of BG Ranch.

Hangar Farms is solely owned by Larry Friesen.

Mr. Friesen is the Weanling Export Director on the Manitoba Pork Council Board, and has been for several years.

Devonridge Farms/Aero Farms, holds a Water Rights License to supply water to the tri-corporate hog operation. And Devonridge Farms has an agreement with RGM Holdings Ltd. to provide irrigation water for potatoes sourced out of two

wells in the Assiniboine River Valley on land around the hog operation.

The president and holder of RGM Holdings is Robert Mazer. RGM Holdings is the registered owner of Sundance Enterprises. Sundance Enterprises operates with Ray Redfern, who owns a potato facility on land adjacent to the Devonridge property around the Sundance hog barns.

Sundance Enterprises also has an Environment Act regulation to irrigate out of the Assiniboine River. This License serves Sundance, Deerboine Colony and was amended to include Harold and Patricia Dyck. Harold Dyck was a councillor in the RM of Daly from 2002 to 2006.

Stated investors in the Daly Feeders proposal which was approved by Daly Council were Ray Redfern, Robert Mazer, Larry Schweitzer and Urs Baessler. Urs Baessler is the owner of the land upon which Piggy Bank spreads its manure and is situated on part of the land owned by Baessler.

Larry Schweitzer is the President of the Hamiota Feedlot, upon which the Daly Feeder operation was to be modeled, including its manure management system.

A major shareholder of the Hamiota

Feedlot is Preston Stock Farms Ltd., which is owned by Dr. Allan Preston, Assistant Deputy Minister of Agriculture, along with his wife and son. Allan Preston is also a director of the Hamiota Feedlot. I have recently learned that he is now the MAFRI FIPPA Access Coordinator.

Harold Dyck's Water Rights License is co-issued to Central Manitoba Resource Management. The Central Manitoba Resource Management is a for-profit cooperation based on a shareholder structure. Individuals are shareholders by formal agreement. Shareholders transfer their assets to CMRM and lease assets back. Essentially, there is a joint ownership of assets. Issued Water Rights Licenses are jointly in the name of CMRM and the shareholder. Project shareholders, irrigators, operate under these licences and the Environment Act licences.

The Deerboine Colony irrigation system is owned and operated by CMRM. The shareholders are the 33 and one-third Deerboine, 33 and one-third Ray Redfern and 33 and one-third Don Loewen from Sundance Enterprises.

Now, Terry Linto, a new name, applied for an Environment Act License to irrigate from

the Little Saskatchewan River. He is described in the Environment Act License application as a partner with Daly Feeders/Urs Baessler. He also applied for a Water Rights License on Daly Feeder's behalf, to supply water to the feedlot from a well on the same quarter section as the application to establish an irrigation system.

The Environment Act License for Sundance/Deerboine includes seven land owners, one of which is Belfield Farms, which is owned by Terry and Susan Linto. Daly Feeders subsequently re-applied for a Water Rights License to supply the feedlot at two locations - the Linto site and another on property owned by the wife of Daly Reeve Evan Smith. And when this matter was brought to his attention at a council meeting, the Reeve claimed he was unaware of the application being made. And at a subsequent meeting, he reported to council, when asked, by me, that Water Stewardship had advised him that an application could be made by anyone for a license without his knowledge.

I have since been advised by Water Stewardship that the land owner has to sign an agreement with the party before a water license

can be issued to that party.

Finally, Brian English, MAFRI agricultural engineer, was identified on the Daly Feeders Livestock Information Operation Information review proposal as the "Design Consultant/Advisor" for the proposal. He designed the feedlot under the stamped proposal "Manitoba Agricultural Engineer". Mr. English was a member of the Technical Review Committee reviewing the Daly Feeders proposal. I became aware that he had removed himself from the Technical Review Committee process because I had secured a memo through a FIPPA request that I had made. At an event held in February of 2005, which we both had attended, I asked him how he could be the consultant/advisor for Daly Feeders and also be on the Technical Review Committee?

The March 1, 2005 memo sent to "All Members of the Southwest Technical Review Committee", from Brian English reads:

> "Do not send me your comments about (17(2)(g) proposal..."

and the proposal is excluded under the FIPPA Act,

> "...to set up a feedlot in the R.M. of Daly. 17)2(g) listed me as his

'consultant' on his LPOI form.

Ruth Pryzner, a councillor with the R.M. of Daly, considers that this puts me into a 'conflict of interest' position. Ergo, I do hereby state that I will not be participating in any way of the review of the proposal. Please address all of your comments, or questions, to Mr. James Hood."

Mr. English chose not to participate in the September 2005 conditional use hearing, but resumed participation in the second hearing held on modifying conditions of approval held in March of 2006.

Are you confused yet? A careful examination of the documentation that I have provided you should clear up the confusion.

I ask how environmental enforcement can be achieved in this context? This is my municipality. Indeed, how can the Campbells be assured that the province will act in the public interest, their interest?

My job as municipal councillor, faced with assessing and making a decision on two livestock proposals, one a cattle feedlot and the

other a hog barn upgrade and expansion with the Deerboine Colony, was frustrated by these occurrences. How is a councillor to make a decision that is in the public interest within this context?

Further, a careful examination of the Technical Review Committee Reports, the R.M. of Daly Council minutes, and other documents that I will be providing, will show that this was the tip of the iceberg in terms of the issues that raised serious and fundamental concerns about the role the Technical Review Committee plays in the conditional use process and environmental protection.

The Technical Review Committee failed to verify spread acre suitability in both proposals. In fact, I had attempted to get proper orthophotos to complete such assessment myself as a member of council. I was told by a Technical Review Committee member James Hood that not only did the Technical Review Committee not have access to the types of photos that I was requesting, but that none existed. I provided him with a sample the following day and was never provided with proper orthos to verify and evaluate the spread

lands. It was important for me to be provided with these because James Hood had informed me, after the hearing on Daly Feeders, that it was not the job of the Technical Review Committee to verify spread acre ability. When I asked him whose job it was, he had no response.

The chair of the Technical Review Committee at that time, Mona Cornock, failed to provide me with information that I had requested in July for the Daly Feeders proposal. I put in a request, just an informal request, and they turned it into a FIPPA request. I was promised a cost estimate within a week. In November 2005, after the conditional use hearing had been completed in September, the MAFRI Access and Privacy Coordinator, Diane McCoy, phoned me asking me if I still wanted the information.

And that's not the first time that that's happened to me in my involvement as a member of the public in other conditional use processes. And so there is a really big problem in people being able to access information, and to be able to ensure that Technical Review Committees and the people that are entrusted in this whole process with ensuring that the environment is

protected are doing a proper job. What we're finding out is that they are not.

Public participation in decisions that have environmental implications and impacts requires timely access to complete and relevant information. This is a very serious problem in this province and directly impacts how and what decisions are made. And without the access to timely and proper information of the conditional use, licensing and permitting, enforcement and policy-making levels, the members of the public cannot exercise their legal right to participate as full and informed members of a democratic society. It also impacts their ability to participate in environmental protection.

And that leads me to -- I am not going to dwell on this, but because it's been in the media, and I have mentioned this to the Commission before, that there is a problem with the fact that I am going to have to wait 13 and a half years to get the information that I have requested. I mean, when I heard that this Clean Environment Commission was going to occur, I said: Like, what information is critical for understanding what's happening with the hog industry? You know,

obviously, it's important to know what's happening on the ground, in terms of nutrient loading by the industry, whether or not manure storages are safe, upon what basis Technical Review Committee reports are generated and decisions taken by councils, and what kind of job Manitoba Conservation is doing in ensuring that permits and enforcement activities are protecting our environment and water.

I also concluded that we needed to know how much water use has been licensed and how much is actually being withdrawn from our aquifers. This information would help us understand the limits that hog production and expansion will place on other kinds of economic activities in our communities. And, most importantly, it would help us understand what we can expect from changes to the hydrological cycle due to the removal of such large volumes of water from the hydrological system that the Manitoba Pork Council has so happily described in its March 5th presentation.

So, in essence, this whole question about not getting access to information is unacceptable. And it has severely impacted my ability to provide concrete evidence on the actual

impacts of the industry in this province. And so I am reduced to telling you my experience with various aspects of the industry and how it has impacted my community.

Now, how much do I have left?

THE CHAIRMAN: About 10 minutes.

MS. PRYZNER: Okay. I am going to talk a bit about phosphorous now.

Now, one of the things that's absolutely fundamental for this Commission to look at is the question of phosphorous loading by the hog industry. And because we don't have access to the actual soil tests results, we can't tell you exactly what's happening in each operation and in each area of the province.

So what I want to talk about here is to take a look at what is considered to be a high soil test P, because this is going to impact the regulatory environments in the future with the hog industry. It is dependent upon the information source. So some of the Manitoba sources that we have available are Soil Test Lab Manuals, the Technical Review Committee, as expressed in their reports, the Manitoba Phosphorous Expert Committee, Livestock Manure and Mortalities

Management Regulation, the Soil Fertility Guide, and the Farm Practices Guidelines.

There is a question of, you know, what is a high soil test P, in terms of agronomic versus environmental phosphorous levels. And then, you know, the question is: How does a municipal council determine what environmental levels are in their decisions?

Now, I am not going to read through all of these, because I am running out of time, but you can see that there is -- the Technical Review Committee tends to consider soil phosphorous concentrations in excess of 40 pounds per acre, or 20 parts per million, using the Olsen method, as being high, according to the Soil Fertility Guide. And they make all kinds of cautions in the number of reports I have cited, the several reports that I have read where, you know, consistently 40 pounds per acre, using the Olsen method, are considered to be high.

And then in the Wilf Rogers report, they do talk about:

"If the amount of phosphate exceeds the phosphorous regulations by 250 percent, or more, they should be

calculating an application rate based on phosphate instead of nitrogen." And I think that's a back way of saying: If you are going to have enough spread acres, you will need two and a half times the amount of acres, compared to what is calculated using the nitrogen standard. And that's the amount of spread acres that the Technical Review Committee bases its assessment on, at this point.

And there is just more examples from the Technical Review Committee. And in this particular operation, it shows that there are really high phosphorous levels already.

Now, what is high soil test P, from the perspective of the Agcise Soil Test Manual? It's more in the range of what the Technical Review Committee is talking about, but it's much lower. You can see that it ranges from very low, 1-3 ppm, which is 4.6 to 13.8 pounds of P2O5 per acre, to anything high which is 4-7 ppm, which is 16.5 pounds per acre.

What does Manitoba's phosphorous regulation say about what levels of phosphorous are high? Anything less than 60 parts per million, which is 276 pounds of P2O5 per acre,

there is no management response required. And we were going all the way up to 180 parts per million, which is 828 pounds of P2O5 per acre, that's the upper limit of this threshold. And when you take that into comparison with the other sources of information that we have on what's high, I have to ask the question: What is this phosphorous regulation about?

And let's put it in the context of this phosphorous triangle. And I got this from a document that is used in classrooms in AG schools in Alberta. And so, essentially, what this is saying is, if you look at the tip of this triangle, you've got about 0.1 percent of the dissolved orthophosphate or the available phosphorous that's in that tip. 9.9 percent of the labil, what they call the labil pool, is available phosphorous. And it's just that tip there that shows up in soil test results.

So when the soil -- when the Olsen soil test method is used, for the purposes of implementing the phosphorous regulations, all that is essentially going to show is 10 percent of what's in that soil. So, conceivably, if we go to the 180 pounds per million threshold, or 800

pounds plus, that's what's going to show up in the soil test. So how much phosphorous is in that soil, and how many years is it going to take, if you stopped putting manure on, for that phosphorous to be removed?

Now, what the industry will tell us, and Martin Sharpe made this argument at one of the conditional use hearings in the R.M. of Daly, was that, you know: This is money in the bank, and that Manitoba soils can benefit from some phosphorous loading. But my question is how much money in the bank do we need? And science will tell us, Dr. Sharpley, Dr. Flaten, the scientists around the world will tell us, that soils do not have the infinite capacity to absorb soil.

And, in fact, Dwight Williamson told me that you should look of it or think of it as a bucket. And if you are loading the phosphorous into the bucket, eventually it's going to overflow the top of the bucket. But there is also leaks in the bucket, and phosphorous is moving all the time. So the science also tell us that at 60 parts per million, there is no agronomic benefit beyond 60 parts per million. And that anywhere, along a phosphorous application to land, there can

be phosphorous mobilization under the right conditions.

But it is also generally accepted that phosphorous can be managed if it is applied to meet the crop needs. So why are we going to allow it to buildup to 800 plus pounds of soil test P? And that's only 10 percent of what's really there.

A concern that arises out of that is in the Red River Flood Valley, where there is a huge concentration of hog operations and other livestock operations. And when you've got those kind of concentrations, saturation of phosphorous that's bound in the soil under anaerobic conditions, like during flood events, what my dad calls Red River flush, this phosphorous is easily dissolved, and that is carried off into Lake Winnipeg and other surface water bodies. And that's a bigger problem for the lake than the sediment particulate run-off of P, because that stuff will stay bound for a while in the sediment bed of the lake; although, it does present a long-term problem for the viability of water bodies.

And so I'm just going to wrap it up here.

THE CHAIRMAN: Yes, you've got a minute.

MS. PRYZNER: And say that, in my experience, given the way in which the hog industry has expanded, and my experience with government and the decision-making process and the way in which people have been treated in communities, we're in trouble. We know that there are environmental problems associated with the hog industry. And there is very little that we can do about it under this current regulatory regime. And the regulatory regime is totally inadequate, especially this phosphorous regulation.

THE CHAIRMAN: Thank you, Ms. Pryzner. And you will be providing us with some of the -- the written presentation of today's presentation plus --

MS. PRYZNER: I will be doing that. And I will also provide you with the documentation that I have to back up everything that I have said. I have all of the documentation to prove this stuff.

THE CHAIRMAN: And when will we be getting that?

MS. PRYZNER: Well, I'm hoping within

the next week.

THE CHAIRMAN: Oh, okay, that will be fine.

MS. PRYZNER: There is a considerable amount of photocopying that I have to do. And I also want to list out the documents that I am providing.

THE CHAIRMAN: Okay, thank you. Edwin, anything?

We might have a question or two.

MS. PRYZNER: Sorry.

THE CHAIRMAN: My compatriots.

MR. YEE: Yes, Ms. Pryzner, perhaps just maybe some general comments. I was going to ask you with respect to the fact that you were a municipal councillor, and you talked a great deal about the conditional use hearings and those with the Technical Review Committee's involvement. Do you have any specific recommendations on how that process could be improved?

MS. PRYZNER: Well, I've thought a lot about that. And I have come to the conclusion that it has to be replaced with some other process. You know, the Technical Review Committee membership is playing dual roles within

government, as well.

I mean, you know, the example of Mr. English is there. And the Farm Practices Guidelines clearly states that, you know, proponents should avail themselves of the resources. And they are a lot of the same people. So how can you have those people, who are helping a proponent develop a proposal, be the ones to assess the credibility of the proposal?

You know, there is lot of other kinds of problems with the Technical Review Committee. They don't verify any information. And that's the experience of people all across the province. They only do preliminary reports based on available information. They don't go and ground truth. They don't go and search out site-specific -- the site-specifics of operations to any extent.

And those -- I mean, how can you say that their report is an environmental assessment of any kind, and that council should be confident with making a decision based on that kind of a review, because there are just huge information gaps.

MR. YEE: Thank you.

THE CHAIRMAN: Wayne?

MR. MOTHERAL: No. I am just going to mention, Ms. Pryzner, that I have written down many of your concerns in point form, and I am looking forward to getting more of your information.

MS. PRYZNER: Okay. I will be supplying it to you.

THE CHAIRMAN: Thank you very much, Ms. Pryzner.

MS. PRYZNER: Thank you.

THE CHAIRMAN: Next is Alan Baron. Would you please introduce yourself for the record, sir?

MR. BARON: Alan Baron.

ALAN BARON, having been sworn, presents as follows:

THE CHAIRMAN: Go ahead, sir.

MR. BARON: Good afternoon, panel members and ladies and gentlemen. I appreciate the opportunity to speak to you today.

And the content of my presentation will focus mainly on manure management nutrients and the surplus of applying nutrients on land. I will go through some of my personal background and

history, a brief industry of the pork or hog industry and, in particular, assess the nutrient management, and some regulations, and stick to nitrogen and phosphorous. And so it is mainly going to be an assessment of the nutrient management.

We should consider manure as a resource. My personal farming background was in mixed grain, oilseed and potato production. We were also in livestock in the early years. And we did use manure. We had excess manure from a large cattle feedlot. And our rotation practice was every third year, which I believe is the way that manure is supposed to be handled.

During my 30-year farming career, with potatoes being in the crop rotation, I played an active role in striving for a balance of nutrients in the soil. This was done to increase yield potential and obtain the most valuable fertilizer input costs. And it was environmentally responsible, as well.

And throughout the years 1988 to 1994, as a result of third party groundwater contamination on my farm, I came to realize how vulnerable our water and soil resources are when

they are abused.

THE CHAIRMAN: Sir, could you just slow down a touch?

MR. BARON: Okay.

THE CHAIRMAN: Our reporter might have trouble keeping up.

MR. BARON: In recent years, I have played an active role in environmental matters, including environmental license proposals for industrial wastewater management and conditional use hearings for Intensive Livestock Operations. To provide informed and credible information for these processes, it has been necessary to seek professional advice from government departments and university faculty members.

The waste management strategy drafted and promoted by the Manitoba Government, and the hog industry in 1994, and which was used until January 1, 2006, was not sustainable. The word "sustainable" implies forever. Yet, in just 13 years, we were already assessing the sustainability and the viability of Manitoba's hog industry.

Before I go further, I would like to acknowledge that economics, and the benefits of

economic growth, have played a major role in the expansion of Manitoba's hog industry. I understand that the Manitoba Pork Council's role is to present a positive vision on behalf of their industry, but this has to be supported by clear and credible data.

The Provincial Government's role is a conflicting one when you look at economics. The Provincial Government promotes the development of the hog industry, but also they are responsible for regulating it.

Now, manure is, when recognized, a very good natural fertilizer. It has all of your macro and micro nutrients, but it is an imbalance with what the crop requirements are. It doesn't matter, if you use manure on an annual basis for crop production, you are guaranteed that you are going to increase the phosphorous load. And manure is a good source of natural nutrients, when managed properly. The balance is best achieved with proper rotation on an adequate land base, also in combination with use of the synthetic fertilize to achieve a nutrient balance for the crops.

It is too bad that I don't have the

slides here. But that bar that you are seeing is an example of one year of wheat production. So the hog manure application was 85 pounds of N and 63 pounds of phosphorous. The wheat crop, 40-bushel, used the 85 pounds of N and only 32 of the phosphorous, and that left a residual of 31 pounds of P2O5 in one year. The ratio of N-P in manure does not match the crop nutrient requirements. There will always be a residual of P as the application rate is based on the Nitrogen composition in the manure.

The next slide is an example of a 10-year rotation of wheat/canola rotation. So the hog manure, in 10 years, you applied 985 pounds of N, 671 of phosphorous. And in those 10 years, the crop rotation used 985 pounds of nitrogen and only 450 of the phosphorous. So after 10 years there was a 220 odd pound residual of P.

In this example, manure is applied so that nitrogen in the hog manure inputs equals N removed by the crops. After 10 years, a surplus of 221 pounds of P2O5, phosphate, or 48 ppm, has built up in the soil.

In 1994, a committee comprised of various disciplines published the first guidelines

for hog producers in Manitoba. In this guideline, and other livestock guidelines, was a formula for calculating the land base required for manure application. The use of this formula is so complex that producers, municipal councillors and the public had to trust that the acreage required after all of the calculations was correct. There are still producers today that don't fully understand how to use this formula.

If you look at the formula itself, the number of livestock, that's simple. The animal unit factor, which was strange to farmers. And then you multiply the number of livestock by the factor to come up with the animal units.

MS. JOHNSON: Could you please slow down?

MR. BARON: Okay. And then you have to use the storage and application factor, more strange. And then you apply the soil and crop nitrogen utilization factor, another strange. What's going on here?

The days of feeding location. And for acres required for feeding location, you go C times B, times E, times F, divided by 365, and trust the answer you have received as what you

need.

This formula was universally accepted by government and industry for 13 years and has been used by proponents, Technical Review Committees and municipal councils to expand the intensive livestock operation industry of Manitoba. The public was assured that, by using this formula, and the environmental regulations for livestock, Manitoba's hog industry would be regulated by the most stringent rules in North America.

This formula became problematic for producers in a short period of time because they reached seeding the Nitrogen threshold of the regulations. There are some major flaws in this acre requirement formula. It promoted annual application of manure versus the rotational system. Nitrogen is the only nutrient used for application rates. P was not considered.

It is assumed that soil nutrients are at the value of zero starting every year. There is no counting for nutrient contribution from crop residue. There was no consideration for contingency plans that alter the nutrients that are actually used, such as drought or flood

events.

In spite of these flaws, there have been no amendments to this land use formula until January of 2006, when the P regulation was introduced. However, there have been amendments to the nitrogen thresholds in regulations.

And the following is a historical review of these amendments. At the start of '94, it wasn't in regulation, but the maximum application rates recommended in the guideline was for heavy soils 90 pounds per acre and on light soils 70 pounds per acre. And if we were able to stay there, we probably wouldn't be sitting here today.

The maximum application increased by 1997 to 140 pounds per acre on medium to heavy soils, 90 pounds on light soils and alfalfa. 275 pounds per acre and the required soil depth sampling was set at four feet, which I think was a good policy at the time.

And then I think that the pork industry, the hog industry, thought it was too expensive to sample that deep. So in 1998, the regulation was rewritten, used the same rates of '97, but they reduced the soil sampling depth to

two feet. So what that means, it saved them costs, but they also didn't find as much of the N, either.

And that wasn't quite good enough. In 2004, they changed the soil classes. We kept it at 140 pounds per acre for your top rate of soils, but you could apply two times that during the growing season or 280 pounds. And I was told that the reason behind that was if an audit was done during the year, that they would have exceeded the 140 pounds. And so they wanted to double that during the growing season. And from my experience, with deep soil nitrous in my industry in the early nineties, 280 is not an environmentally friendly rate for nitrogen leaching possibilities.

The lower soil classes were rated 90, or two times of that, and 180 during the growing season. And the lowest cost of soil, which is just above the non-what would you call it, well, it's actually just strictly pasture land. It can't be used for anything else. They will allow 30 pounds per acre on this, but two times as well during the growing season.

The thresholds that are being allowed

today cannot be rated as low risk for leaching, because the land base farm land that has facilitated surplus and application, the N thresholds in the regulation were gradually increased. In my opinion, these increased tolerances were made to accommodate the increased N concentrations in manure fields. This also added to the P loading of the soil.

I will move from discussing nitrogen to the confusing element of phosphorous. Phosphorous is described in different terms and units of measurement. Ppm is usually used to describe the soil test measurement. P, elemental phosphorous. And it is also called P2O5 for phosphate.

The soil test that we use in Manitoba is the Olsen method. The spelling is wrong. And what is confusing about this is that you can describe it in ppm, P and P2O5. So I did a little formula for yous. 10 ppm times 2, equals 20 pounds of P per acre. And that 20 pounds of P per acre, times 2.3, equals 46 pounds of P2O5 per acre.

When studying research documents, livestock proposals, or Manure Management Plans,

you have to be careful as you are comparing apples to apples, which formula is being used.

The different terms can be used to present the lower than actual quantity. The P2O5 form is understood by farmers. Yet, the P thresholds are expressed as ppm, or the lowest possible numerical value that they can be described in.

The hog industry usually describes phosphorous as P in pounds per acre, versus pounds to P2O5 per acre. The upper threshold of 180 ppm equals 180 pounds of P per acre or 826 or 828 pounds of P2O5 per acre.

And so this slide here was something that the previous speaker was mentioning. And it is to point out that this slide compares economic P ratings found in Manitoba Agriculture Food and Rural Initiatives, MAFRI, Soil Fertility Guide, to P risk ratings for P run-off from cropland established by regulation.

And if the agronomic soil test value of 20 plus ppm, the recommended rate of P application, is less than the crop removal rate, then why doesn't P threshold of less than 60 ppm allow unlimited P application, and the 60 to 119

ppm threshold value allow two times the crop removal rate? This is for an industry that claims they apply their manure to meet the crops nutrient requirement? We may be at the crossroads for Manitoba's hog industry.

In summary, the changes to the regulations have allowed for increasing amounts of residual N. And now we are becoming aware of the concerning levels of residual P in manured soils. This awareness has probably resulted from the acknowledged of the excess nutrients accumulating Lake Winnipeg and their negative impact on the lake. Individual producers may believe that their contribution would be insignificant, but the cumulative effect should not be ignored.

This was just a graph illustrating the Manitoba sources of phosphorous to the lake, Lake Winnipeg Stewardship Board, graph document. This graph illustrates the Manitoba source of phosphorous to Lake Winnipeg. Agricultural's contribution is significant at 35 percent. I would expect agriculture to always be a major contributor of phosphorous to Lake Winnipeg, but what can we do -- what can be done to reduce agriculture's share?

In certain scenarios, managed manure, based on nitrogen N content, they resulted in elevated levels of soil P. This is old science. As far back as 1979, as stated in the Canada Animal Manure Management Guide, it warns us that applying manure, based on nitrogen content, can result in elevated levels of soil phosphorous. Managing manure based on phosphorous, utilization of crops, is a more sustainable manure management strategy.

And this is a quote from Manitoba Pork Council's Truth Matters:

> "By strict regulation, manure can only be applied to the land as fertilizer. That implies applied manure application rates should not exceed crop removal rates."

That's their statement by publication.

And next is a slide of the phosphorous rating page, appendix table 12 under the Crop Fertility Guide. You will note that the similar values to what the previous speaker had up, with 20 being rated at high, and over 20 is very high, in this case. Medium is in the 15 range, I believe, from what I have here.

These phosphorous soil test ratings are based on agronomic needs of the crops. These are much lower test values than those used in the pre-regulation for hog manure. Consider the following fact regarding current P regulations for hog producers that soil test P levels between 60 and 119 ppm, the producer can apply two times the crop removal rate of P. This is significantly greater than agronomic requirements or recommendations. For example, when soil test P is at 20 ppm, agronomic recommendations suggest starter P rates only or zero application for seed placed P.

High soil test P values are common in fields fertilized with hog manure. As soil test P increases, the risk of phosphorous loading to surface water increases at the same rate.

Manitoba Pork Council's recent claim of being only one percent responsible for the P load to Lake Winnipeg warranted some investigation. By using current data, and in the absence of soil test information, I discovered a method of establishing the hog industry's phosphorous contribution to Lake Winnipeg. By considering all of Manitoba's cropland acres,

11,650,000, a constant factor was found that represents the amount of P in the sediment and organic matter that would move off the landscape into Manitoba's surface water and contribute the 1,200 metric tonnes of P to Lake Winnipeg, which would be Manitoba's total agricultural share. The variable factor used for these calculations is the concentration of P in the sediment and expressed as ppm P.

The next two graphs will be showing the impact that 742,000 acres of crop land used for hog manure application can have on Lake Winnipeg when soil test P values are -- high soil test P levels are achieved.

The graph here is a summary of all of the calculations that I did. And the information I used to create the graph was the Manitoba crop land acres of 11,650,000. And I averaged the soil test phosphorous for Manitoba at 15 ppm P. The acres used for the manure application in Manitoba, is 742,000. And the source of that information is from Manitoba Conservation.

This graph illustrates that as the soil test phosphorous increases, so does the risk to P lost to surface water. And it also shows

that when the soil testing P levels exceeded 60 ppm, that the P loss occurs at an accelerating rate.

This observation is supported by extensive phosphorous loss studies conducted in the Unites States, some of which can be found in the U.S. Department of Agriculture Handbook, Agriculture Phosphorous and Eutrophication, Second Edition. And I have a spare copy of that, if you would like.

This next graph was -- I was really surprised at the answers that come out of my investigation. I was really surprised. And what this graph is showing is, I did calculations as to the hog industry's share of the total load to Lake Winnipeg from all sources. Their share of the total load to Lake Winnipeg from all Manitoba sources. And their share of the P load from agricultural sources. So that's what these three graph lines are representing.

When I -- when I got the 15 ppm rate, which is the Manitoba average, the total contribution to the lake from the hog industry was 0.97. It would be right on their one percent. Their total contribution from Manitoba is 2.1.

And their percentage of the contribution is 6.4. Now, that was interesting. Actually, the 742 acres represents 6.3 percent of Manitoba's cropland. So that was the first percentage that I found real interesting. As well as matching their one percent estimation, it also matched the percentage of acres that they are using.

And then when I moved up the scale, I won't do them all, at the 120 ppm, they would be responsible for 7.7 percent of the total load to the lake. And 16.5 percent for the total load for Manitoba. And 50.9 percent for the total agricultural load. And so their 6.3 percent of acres are contributing 50.9 percent of the AG load to the lake, according to these calculations that I did.

The estimates are a simplistic best case scenario. The amounts of P accumulation and transport are, obviously, more complicated. This is particularly true when soil test P for given cropland increases in a non-uniformed way of lands, which have distinct topography, soil textures and productivity.

The estimates presented suggest that the threshold levels of the recently enacted

phosphorous regulations are excessively high, allowing the hog industry to apply manure when soil test P is 180 ppm, or 828 pounds of P2O5 per acre, constitutes nothing less than a license to pollute.

And I note that, although these rates of percentages that I have used for calculations, the same method can be applied to other agricultural land uses. So if you have the information from cattle, chickens, vegetable growers, whatever, if you had the right information, you can do the calculations for them, as well.

The next slide was very interesting, because it was information presented to this hearing. And you can find it on their website. And it is as stated by Manitoba Pork Council in a presentation and posted on their website. And they give scenarios for their N. The manure management province wide and their P. And they didn't give you the answer. So a person has to use the calculator to figure out what they were. So that's what I have done.

So that on their management of their nitrogen, they claim to use 300,000 hectares. And

then the nitrogen application rate of that would be 99.5-kilograms per hectare.

But they also presented another series of numbers describing P. And they stated it as: The proper rate for crops will be 15 kilograms per hectare and it would require 744,000 hectares. So what that's telling me is, when you do the math, the Manitoba Pork Council requires 2.4 times more land, or an initial 444,000-hectares, to sustainably manage phosphorous. And that's their numbers, not mine.

And in -- actually, their own statistics indicates that the hog industry has been applying 24 kilograms a hectare of surplus phosphorous to their 300 hectares used for the phosphorous application. At these surpluses, the phosphorous regulation thresholds can be reached in a short period of time. They will reach the 60 ppm threshold in 5.6 years. The 120 ppm threshold in 11.2. And the 180 ppm threshold at 16.8 years.

It appears that the high threshold levels allowed by regulation were necessary to accommodate the surplus phosphorous that had already accumulated in the manure fields.

THE CHAIRMAN: You have five minutes,

sir.

MR. BARON: I might make it.

The hog industry has been using unsustainable manure management practices for 10 to 15 years. The N based application rates have led to P accumulation. The P loading to Lake Winnipeg will increase under current management practices.

And we should use the land base to management N and P in a sustainable agronomic manner.

We should use economics of manure management in a study instead of using the waste bucket approach.

There should be rewards for good stewards of the land, and stiffer penalties for the ones that aren't regarding monitoring and enforcement. Saying that the Manitoba regulations are amongst the most strict in the world does not make them sustainable. More often than not, farm economics dictates producer behaviour, rather than a commitment to environmental steward shim.

The next slide is a picture of the infractions that have occurred in the hog industry for the six-year period stated: 115 prosecutions,

398 warnings, 231 orders. And I don't believe this is a good record of compliance with the regulations by the hog industry. It is contrary to what they are telling us.

The Manitoba hog industry needs to operate in an environmentally sustainable manner. Current Manure Management Regulations do not present a sustainable benchmark. For science-based Manure Management Regulations, the Manitoba's hog industry must not condone application rates that exceed the crop removal rate of N, P and other nutrients. Ineffective monitoring and enforcement of manure application regulations has contributed to current problems in Manitoba's hog industry.

Future directions, nutrient thresholds must be based on the ability of crops to use nutrients. Consider residual nutrients applied in previous years and not just the holding capacity of the soil.

Conduct field tests and publicize results on an ongoing basis.

Acquire funding to assess and monitor P transport risks throughout the province.

Ensure accountability of regulators

and producers.

The hog industry requires a minimum of 2.44 times the area currently used to stop P accumulation of Manitoba soils and prevent P loading of Manitoba water resources.

I think it would be good to point out that that 2.44 will not lower the phosphorous loadings on the soils already there. It will just maintain them at that level.

It should maintain a proactive approach. Maybe the old adage is true: When you find yourself in a hole and it keeps getting deeper, maybe it is time to quit digging.

Thank you.

THE CHAIRMAN: Sir, are you going to be providing us with more information than just these slides?

MR. BARON: What would you like?

THE CHAIRMAN: Well, your calculations are very interesting. And perhaps it is just a matter of knowing how you arrived at them, like the 2.44?

MR. BARON: Well, I could have done all of that, but you didn't want me to talk for an hour.

THE CHAIRMAN: Well, you requested a half an hour time, and we have a full slate this afternoon.

MR. BARON: Yes, I will provide them. But it is very difficult to present. You have to sit down and look at it.

THE CHAIRMAN: Well, if you could give it to us either today, or in the next little while, we will have a look at it. And then if we need more explanation, we will get in touch with you.

MR. BARON: Okay.

THE CHAIRMAN: About how you arrived with these.

MR. BARON: Do you want something with the text on it sent to you, too?

THE CHAIRMAN: Yes, that would help, sir.

MR. BARON: That might work. I just have to talk to my computer expert. Can I just pull this out?

MS. JOHNSON: Yes.

MR. YEE: Mr. Baron, just a couple of questions for clarification.

MR. BARON: Okay.

MR. YEE: And I should probably just wait until I see your calculations here. But I was just wondering, in terms of your calculations for the contributions to Lake Winnipeg, do they include the variation and existing phosphorous content of soils of the areas that you have looked at?

MR. BARON: It's a provincial-wide look, and that's all I can do.

MR. YEE: So you are not specifically looking at what's already in the soils, as far as the phosphorous content goes?

MR. BARON: Okay. There is the first calculation that I did. And that was basically the old numbers in Lake Winnipeg Stewardship Board, which was 937 versus 1,200 now, and 6,600 versus 7,900. But it was interesting that the percentages always came out the same. But what I did do in that first calculation, as I -- as the -- like after 30 ppm, as the increases went up, I took those increases and added to the totals before I did the percentage contribution, to be fair, to keep the numbers lower, but they are still very significant.

MR. YEE: Right. And does the -- do

your calculations also include the availability of phosphorous in its various forms? When you calculate what's entering into, or potentially entering into the surface water system to Lake Winnipeg, do you factor in the availability of phosphorous?

MR. BARON: It's all supposed to be soil test P.

MR. YEE: Okay. And then, I guess, one last question.

MR. BARON: Do you want the formula?

MR. YEE: No. That's okay. I am sure you are going to give it to us. That's what I'm waiting for. I am probably asking questions a little out of order here. If I saw your formulas, I would probably know where you are coming from. Just one last question. You mentioned that there should be incentives to motivate compliance. Did you have anything in mind, in particular, as far as incentives?

MR. BARON: Well, my belief, to me, there has to be some good conscientious producers out there. There has to be. But I know that there are some abusers, as well. And there is evidence to support that. They didn't care.

Just: I am going to do this and be damned. I have got to make some money.

So, to me, on the enforcement side, they should recognize and support the good fellows, maybe less frequency of soil testing. But the ones that are pushing the limit, just start pushing them a little more. You've got to do deeper tests. You've got to do it more often. If you still don't do a good job, you've got to do 12-foot soil samples. Make it a decentive to break the law.

I don't know what the fines are, but I just did a rough calculation in my head. If a producer was supposed to use 600-acres to apply his manure, and he was able to apply it on 500, and the cost of application is $10 an acre, he saved himself $1,000. And if a fine is only $500, what are you gonna do?

MR. YEE: Thank you, Mr. Baron.

MR. BARON: It's economics.

MR. MOTHERAL: I am looking forward to hearing more information on it. I mean, we are getting varying opinions on levels of phosphorous. And it's something our committee is -- we have still got lots of work to do on understanding the

whole thing.

MR. BARON: All right.

THE CHAIRMAN: Thank you very much, Mr. Baron. We will take a 15-minute break. And because we have a full schedule, I am going to hold sharp to that, so we will resume at 25 after.

(PROCEEDINGS RECESSED AT 3:10 P.M. AND RECONVENED AT 3:15 P.M.)

THE CHAIRMAN: Could we come back to order, please? Please take your seats? We don't have any room to spare this afternoon, so I would like to get going. Mr. Mike Waldner.

We have a full schedule for the rest of today, so we are going to have to be pretty strict on the time limits. Sir, could you please introduce yourself for the record?

MR. WALDNER: My name is Mike Waldner from Cool Spring Colony Farms, the hog manager. I have been in the hog business since 1967, January, and I have seen a lot of changes in the hog industry since I started working with hogs. I started with the wheelbarrow and the shovel. At time pigs had a smell. Today, we run a state of the art industry. I sometimes wonder if the smell -- you have to walk into the barn, if there

is pigs present you have got to hear a squeal. And I think we have come along way in the hog business, raising hogs, and I see the industry is in the right direction.

THE CHAIRMAN: Could you administer the oath.

MIKE WALDNER, having been sworn, presented as follows:

THE CHAIRMAN: Go ahead, sir.

MR. WALDNER: Good afternoon members of the Clean Environment Commission, panel, and ladies and gentlemen of the audience. My is Mike Waldner and I stand here today as a representative of the Cool Spring Hutterite Colony. Our colony is located 12 miles northeast of the town of Minnedosa in the Rural Municipality of Minto. Our Colony has 83 members which make up 21 families. Hog production is a core business activity which supports our Colony.

We are a 570 sow farrow to finish operation which markets approximately 14,000 hogs annually. 450 of our sows produce hogs that we sell to Maple Leaf Foods in Brandon under a contract arrangement through the Canadian Quality

Assurance Program. The remaining 125 purebred sows are used to produce female breeding stock for the Cool Spring Colony Farms and 30 family run hog farms in Manitoba.

Hog production requires skilled and trained people looking after various aspects of the operation, including animal health, welfare, nutrition, as well as health and safety. The Cool Spring hog operations is managed and operated by certified pork production technicians, approved by the Assiniboine Community College. We have members who have a trucker quality assurance certificate, and a hydrogen sulfide awareness certificate. One of our members has received training from McKay GENSTAT Consultants Incorporation in the use of real time ultrasound equipment, which is used to gather loin and back fat measurements from animals in a safe, non-invasive way. We use this technology to help us make better decisions when it comes to selecting animals for breeding stock.

I would now like to paint an economic picture about the importance of the hog industry in Manitoba. When the subsidies for the transportation of grain to the ports were

rescinded in the 1990s, farmers on the prairies, and particularly Manitoba, were most affected. When you combine this with rising input costs and flat commodity prices over the last 30 years, there is no profit to be made in selling crops. While average household incomes have grown several fold in Manitoba, the agriculture commodity prices have remained stagnant. Is it any wonder that the so-called family farm has shifted into livestock production and grown substantially in size just to survive? Our Colony has also become more aligned on our hog production to generate revenue to support our families.

Nutrient management: I believe that one of the reasons we are having these clean environment hearings is that there is a lot of concern about the potential impacts of an expanding hog industry on the health of our soil and water in terms of nitrogen and phosphorous levels. To this day, it is not clear to me why the hog industry would be singled out in this review, since all aspects of agriculture can generate nutrients. For that matter, so can other industries, humans, and nature itself, and we can see the combined effects from all of these other

sources in the quality of water bodies like Lake Winnipeg. But the point I want to make here is that the hog industry is being proactive in the way we manage our manure to reduce nutrient loading on agriculture land. For example, six years ago Cool Spring Farms consulted with J&R Livestock Feed from Winnipeg to look at ways to reduce phosphorous levels in our manure. By adding a feed additive called phytase into our rations, we have been able to reduce phosphorous levels by as much as 30 per cent. Phytase is a natural enzyme used to decrease the need for calcium phosphate supplements, which has a positive effect on the environment by reducing the volume of manure produced and phosphorous produced.

At our colony, regardless of the source, nutrients from commercial fertilizers or manure are valuable and necessary inputs for crops and forage production. We can not and do not want to misuse them, and we do not want to risk losing them unnecessarily to the environment.

Manure management: It seems odd that the province would place a moratorium on hog expansion after it has worked so hard to put

regulations in place to guide the industry in the way we store and handle our manure. I will use our colony as an example to highlight some of the positive impacts that these regulations have had on our hog production. Cool Spring Farms has two above ground manure storage tanks which can hold four million gallons of manure. This gives us enough capacity to hold the manure for one year between fall applications of manure. We have also reduced the amount of water consumption at our barns and therefore the volume of manure that we produce by converting from water nipples to water bowls. By doing this we save two litres of water per hog per day. We have a manure management plan as required by the Manitoba Livestock Mortalities and Manure Management Regulation under the Environment Act. Our Colony has been complying with these regulations and it costs approximately $2,000 each year to pay for soil testing and professional services. We have been approved to use 4,273 acres for our own land for manure application.

Liquid manure handling has changed a lot over the last ten years in the hog industry. Instead of service spreading, we are now injecting

the manure to take advantage of its nutrient value, to minimize odours and to reduce the risk of surface run-off after heavy rainfall events. We use a low disturbance shallow injection method for incorporating manure into the soil.

Mortalities: Under the Manitoba Livestock Mortalities and Manure Management Regulation, livestock operators are required to dispose of mortalities in an environmentally sound way. Here the hog industry has a few options for handling mortalities. Cool Spring Farms uses a three-stage composting site located in an area which is not prone to flooding, leaching, or surface drainage problems. The composting process breaks down the carcass quickly and cleanly with no odours and flies, and we can use the end product as a source fertilizer on the colony. Furthermore, we find that composting save us freight billing costs which are charged for mortality pickups.

Land use, planning and approval: In June 2005, Manitoba passed Bill 33, the Planning Act, which now requires that every planning district board of a municipal council prepare and adopt a development plan which must now include a

livestock operation policy. This regulatory requirement should increase public confidence in deciding on new hog operations. However, I strongly recommend that the province oversee the development these policies to ensure that they are fair, not specific to just the hog industry, and that they are based on science rather than personal biases.

Currently the Cool Spring Hog Farm is located in a sparsely populated area of our municipality. The nearest designated residential area is the community of Polonia. The western zoning boundary of the community is located approximately two and a half miles northeast of us in the RM of Rosedale. Aside from the dwellings owned by the colony, the nearest occupied dwelling is located .9 of a mile from our barns and manure storage. Our barns and manure storage and composting compound are set back more than a hundred metres from property boundaries, road allowances and surface water courses, which exceeds the requirements laid out in the regulations.

Groundwater quality: Good quality water is vital to the health of our pigs and

reduces the incidence of most health problems like scours. Groundwater is an important primary source of water for the many hog producers and colonies. Water testing, which is done by Northwest Labs, shows that we have a good quality groundwater supply at our colony. It is free from nitrates, bacteria and e. coli that, if present, could be harmful to our animals and our families. Despite its good quality, we still chlorinate it at two parts per million to ensure good health in our barns.

We are required to test the water in our well prior to manure application approvals can be given. When we apply our manure we maintain adequate setback distances from water wells and surface water courses to avoid leaching. We apply manure at proper agronomic rates and take into consideration things like residue concentrations of nitrogen and phosphorous in the soil, crop nutrient requirements, soil texture and the location of our aquifer. We regularly inspect and maintain our wells to be sure that pollutants cannot get in, and we sample and test our water for a wide variety of constituents including nitrates, bacteria and e. coli at Northwest Labs

in Winnipeg.

Surface water quality: Surface water is an important source of water for some hog and livestock producers. If not taken care of, poor surface water quality can cause serious health problems like scours and contribute to algae and bacteria problems in our lakes and rivers. To prevent this problem, Cool Spring Farms uses an accurate and highly reliable manure handling and injection system. We use a manure pumping system to pipe our manure to its final destination instead of transporting it by tanks over our roads. This eliminates potential spills and odours which may occur during tank transportation of the manure. We have found that by using this pipeline system, our neighbors aren't affected by odours and therefore don't seem to notice when we are applying manure.

We mark out our buffer zones and setbacks prior to manure application. We inject manure into the soil at appropriate rates to reduce potential surface run-off into surface water. We do not spread manure on frozen soil or during the winter period, so there is no risk of run-off in the spring. All of this is done in

accordance with the Manitoba Livestock Mortalities and Manure Management Regulations, one of the many newer regulations in place to protect the environment. How can then we, as pork producers, go wrong?

Soil quality: The land of Cool Spring Farms has been classified primarily as class two and three, with areas of class five and six, under the agricultural capability system. Class two and three soils are agricultural soils with mild to moderate limitations for annual crop production. Class five and six have major severe limitations for crop production and generally better suited for perennial crops or forages. These ratings of land use are carefully considered when we apply nutrients. In some instances, we may not be able to apply manure at all. Soil testing tells us what the residue nitrogen and phosphorous levels are in the soils, and we adjust our manure application rates so that applied nutrients helps us to achieve realistic yields in the target crop.

Groundwater supply: Water is a necessity for hog production and ground water is an important source of water for many hog production units in Manitoba. Water is required

not only for swine consumption, but is also used for barn cleaning and manure handling systems. Our groundwater supply comes from a 70-foot deep well in the Polonia Valley aquifer. We have a water rights license which allows us to withdraw 15,000 gallons per day. We use approximately 10 to 15,000 gallons per day, of which 3,000 gallons is required to clean our barn approximately four days out of the week.

We have adopted water conservation practices like the Lou drinker to minimize water losses in our feeder pigs. By monitoring our consumption, we have found that we use two litres less per water per day per pig than the conventional spring water nipple.

Odor: The biggest concern of all. Livestock odours are often viewed as a nuisance by the public and there have been complaints raised about it causing eye and throat irritation, headaches, nausea, and even anxiety and depression. According to the Ottawa Citizen newspaper, which obtained information from Agricultural Canada reports written before 2000, most health complaints come from barn workers. Under the Manitoba Work Place Safety and Health

Act, however, employers are required to provide a safe working environment for workers. So for barn owners this may include providing masks, good barn ventilation, and training to protect barn workers. Working in a barn, however, is not for everyone, since some people are more sensitive to odours than others.

Using our colony as an example, we have invested in gas detectors to check hydrogen sulfide and ammonia gas levels in our barns. There was a time when these levels were unbearably high for both animals and workers, but we started using a product called Soluzyme, and then later on a product called Maxizyme. These helped to reduce ammonia levels from 20 to 30 parts per million down to less than two parts per million. The manure has a lower volume of solids and our slurry seems to be more liquified, making it easier to pipe into our pipeline operation and to transfer it to our holding tank and ejection equipment. We also remove the manure from our barn more frequently to reduce the intensity of the odour and we have added pit ventilation to remove gas build-up. With these better management practices, we have healthier pigs and workers.

We also went to some considerable effort to plant a shelter belt perimeter around our barn and manure storage to diffuse odours emitted from our barns and manure storage and to improve the appearance of our swine operation.

Disease transmission: Disease transmission and control are important issues for the hog industry. We have seen the effects that a disease like BSE can have on the cattle industry, and Avian flu on the poultry industry. The hog industry is well aware that disease control is of paramount importance and we go to huge extremes to protect our animals and ourselves. Cool Spring Farms has been able to retain its high health status since it started in 1986 by keeping a strict biosecurity protocol for the barn. Workers must shower in and shower out of the barn, and workers who are in contact with other animals or have hauled hogs to the plants are required to stay out of the barn for at least 24 hours. Visitors are not allowed, no exceptions. Our hog transport truck is disinfected after each use and dried thoroughly before it is used again. We have a quarantine barn for incoming breeding stock and conduct odour tests and blood tests to check for

health problems. We have our own AI lab for AI collection which eliminates the need to bring in semen from outside AI sources or using outside boars for natural breeding. Mortalities are placed within the composting compound within 24 hours for fly and bird scavenging control. We keep our barn clean by washing and disinfecting it after every pen of hogs goes through.

These biosecurity rules also help to protect the public and animals by eliminating high spread contact between humans and animals which can prevent the transmission of illnesses between species.

Climate change: Climate change has recently become a hot topic of discussion, if you will pardon the pun. I don't think we understand it well enough to know what the long term impacts will be on us, nor do we fully understand the extent to which our human activities are affecting global warming patterns. Greenhouse gas levels in the atmosphere have increased over the years. Is it a natural phenomena, or is this caused by human activities like burning fossil fuels and burning rain forests or both? And how will climate change affect the way we currently manage manure? Will a

few years of drought affect our soil tests and the rate at which we will apply manure on our land? Will a heavy rainfall over a long period of time cause nutrients to leach out of the soil? Will the government do any research in these areas to answer these questions and others related to the way we manage our operation?

That concludes my presentation for this afternoon, but before I step down, I would like you to carefully consider the implications of any decision you are making regarding the hog industry in Manitoba and this moratorium. Approximately 1500 hog producers make their living and their homes here in Manitoba. A few of them are counting on an expansion or a new operation to survive. For many colonies, hog production is a core business activity which supports our families. I therefore urge you to be fair in making your recommendations. Thank you for listening.

THE CHAIRMAN: Thank you very much, Mr. Waldner. I would just point out that I was somewhat lenient with the time with you, and I may have to be a little tougher on other people this afternoon. Thank you very much for your

presentation today.

MR. WALDNER: Thank you.

THE CHAIRMAN: Patrick Prychun, would you gentlemen please introduce yourself for the record?

MR. PRYCHUN: I am Patrick Prychun.

MR. BOND: Jeff Bond.

PATRICK PRYCHUN and JEFF BOND, having first been sworn, presented as follows:.

MR. PRYCHUN: Good afternoon ladies and gentlemen and member of the Commission. My name is Patrick Prychun and I have been involved in the feed industry for over 15 years. I currently work for Standard Max Pro Nutrition of Winnipeg, working throughout Western Canada and the Dakotas.

Standard Max Pro Nutrition specializes in consulting, nutrition programs and swine management, primarily working with the Hutterite colonies across North America since 1886.

Many of us have been discussing our concerns and solutions regarding the new requirements being set out by our government. Today I would like to further discuss two products that have been highly recognized and proven

effective across Canada, Maxizyme Plus and MaxiCharge. Over the past two years we at Standard Nutrition have been working together with Nuvac Sciences de la Vie, which simply means life sciences, a leading company of biotechnology based in Quebec. Nuvac is committed to human and animal health, protection of the environment with the use of efficient biological products. They have currently invested over $500,000 in R&D, providing data for phosphorous reduction, ammonia and odour control, solid liquification and others. R&D was recorded through manure analysis, soil testing, slurry and lagoon sampling, with the combined efforts of engineers, agronomists, veterinarians and the cooperation of the Provincial Government.

Maxizyme Plus is a product that consists of digestive enzymes and specific streams of live bacilli bacteria. This concept is to use the animal stomach and intestines as a means of transformation that would control the organic matters and change them on the way. These products may be used as an alternative or an addition to phytase.

Coming from the same product line, there is a similar product called MaxiCharge that

works directly in pits and lagoons. The bacteria in both of these products have been shown to take up soluble phosphate and nitrogen from the solid and liquid phase in pits and slurries, reducing the level of soluble phosphates. The bacteria use the phosphorous from the phosphate for the growth and so change the microbial cellular material. The level of phosphate applied to the land is reduced, therefore reducing phosphate run-off into aquifers. In fact, the enzymes transform manure phosphate into orthophosphate, a component more easily absorbed and assimilated by plants.

We can now confidently say that we have three ways to reduce phosphorous for producers. Number one is the reduction in overall feed usage. Through better feed conversions, more nutrients are made available to the pig for absorption, giving us better feed conversions. Number two is a better digestibility of soluble phosphorous and grains and protein. And number three is better assimilation by plants and soil.

Odour control: Waste and odour emanating from swine operations is a growing concern throughout the world. It has created a dividing wall between producers and their

neighbors, making it more difficult for producers to manage their farms. We have helped many producers reduce the odours emanating from their barns, thus improving their relations with their neighbors. At a previous CEC hearing where a scenario between producer and neighbour were fairly tense, the neighbour not only congratulated the producer, but also made comments that things have changed, and I quote "couple of hundred per cent compared to what we had before, we don't get that smell."

On a video that was produced by a Nuvac rep in Manitoba, there was a neighbour so curious to see the equipment out and working but couldn't smell any odours, he had to go and check it out for himself. Since working with producers over the last couple of years, we have seen many additional benefits using these products, benefitting both the producer and hogs.

In conclusion, my personal thoughts on imposing a ban for future barn expansion I feel would be detrimental to both producers and many businesses associated within the swine industry. I agree there needs to be proper guidelines and regulations regarding the hog industry and

environmental concerns. I certainly hope that through all of these meetings the CEC will come up with reasonable guidelines that will help and assist, not hinder the producer. Thank you.

THE CHAIRMAN: Thank you, Mr. Prychun. How widely used are these products?

MR. PRYCHUN: In terms of --

THE CHAIRMAN: What percentage of Manitoba farmers, particularly of a reasonable size, would use these?

MR. PRYCHUN: Currently, right now we have been working mainly, primarily with the Hutterite colonies in Manitoba. To be accurate, I think we are approximately 30,000 sows to 35,000 sows farrow to finish on the colonies right now just in Manitoba. It is growing rapidly in Saskatchewan and Alberta.

THE CHAIRMAN: The use of your product is growing rapidly?

MR. PRYCHUN: Yes. It is also being widely used in Ontario, and I have introduced it for the last year to year and a half down in South Dakota, and we are getting some fantastic results and reports.

THE CHAIRMAN: The MaxiCharge in

particular, that works in pits and lagoons, what does it do? It helps reduce the phosphorous? And does it also, is it what is responsible for reducing the odour that you talked about on the second page?

MR. PRYCHUN: The MaxiCharge is, it is like a concentrated formulation of Maxizyme. Maxizyme Plus is a feed additive that is fed directly to the swine in the feed, and MaxiCharge is added directly to the pits and lagoons to increase -- if a producer has an existing solid problem, we establish and set up a program, a protocol to help the producer liquefy those solids in the lagoon, or if he has ammonia problem in the barn as well.

THE CHAIRMAN: So it is your, at least your corporate claim that by using MaxiCharge Plus, a farmer can eliminate a lot of the odour coming out of the lagoons?

MR. PRYCHUN: Yes.

THE CHAIRMAN: With or without a cover, does that make a difference?

MR. PRYCHUN: Makes no difference, no.

THE CHAIRMAN: So you still reduce the odour without even a cover?

MR. PRYCHUN: Yes. I will just add this, it is even regardless of what type of diets, we found that if it is corn, barley, wheat, soy beans, it is irrelevant, the results are consistently the same.

THE CHAIRMAN: And is it expensive?

MR. PRYCHUN: To set up a program on a feed cost per pig, it will average about $1.75 per hog marketed when you run it from a farrow to finish operation. We establish value at the producer to show that over and above the cost of the product, we try to show them between $2 to $5, depending on the market price of the hogs. And there is some things that we don't even put a value on. For example, we had a 10 million gallon lagoon, he had a second agitator. As they began to empty the lagoon out, he cancelled the second agitator. And they felt they reduced their agitation time by 35 to 45 per cent. So how do you put a price on that? I don't know. Wash time, we have shown many producers, through the use of the product, that it has helped reduce the wash time between 40 to 60 per cent, so we don't put a price on that.

THE CHAIRMAN: Thank you. Edwin?

Wayne?

MR. MOTHERAL: Just one quick one. Has the product been tested? Like has it been a standard, is there some kind of protocol through, you know, has it been tested to be safe to the animals, or is it just something like a product coming from the United States or --

MR. PRYCHUN: No. Great question, it is 100 per cent natural.

MR. MOTHERAL: Okay, I am just asking that question.

MR. PRYCHUN: It is 100 per cent natural and safe. As a matter of fact, the manufacturer, the president of the company eats it himself. That is -- it is not harmful.

THE CHAIRMAN: What does it do to his manure?

MR. PRYCHUN: It is a great bowel cleanser.

MR. MOTHERAL: I think it is the same product we heard of before, and I think it did come from another Hutterite colony where they actually took a cup full of the stuff out of the lagoon and said you could drink it if you wanted to. Now, I don't know if that is --

THE CHAIRMAN: I don't know if I would go that far. You may not want to answer this, but are there other similar products in the market, competing products, or is this relatively exclusive?

MR. PRYCHUN: There is other products in the market. I have done a lot of work into trying to separate myself from the competitors in terms of what results can we distinguish from the competitor. So we have seen things like loin increases, where the producer has been able to capitalize on loin premiums. We have got some producers that will generate loin premiums per month, an average of an extra 15 to $1,700 a month. We have done a very close calculation on overall feed usage on farm from farrow to finish. On an average herd that we have seen on a 800 sow farrow to finish, it is quite common to see somewhere between 17 to 24 tonnes of complete feed less used overall per month. And that is an average that I can provide --

THE CHAIRMAN: So there are, you know, there are a number of factors that would reduce that $1.75 per hog?

MR. PRYCHUN: Absolutely.

THE CHAIRMAN: Thank you, gentlemen, very much.

Joe Freedy?

MR. FREEDY: Good afternoon my name is Joe Freedy. I am with J&R Livestock Consultants.

JOE FREEDY, having been sworn, presented as follows:

MR. FREEDY: I'm not going to be reading right off the documents that I gave you, I'm just going to try to give you guys an understanding of a couple of products. I'm sure you guys have heard a lot about phytase. I'm not sure how it was explained, but in cereal grains, the phosphorous, some magnesium, iron, calcium, are bound by a phytic acid. And the enzyme phytase, what it does is it released that bond, therefore the inorganic phosphorous and calcium, some amino acids are released and become available.

And what Mike from Cool Spring Colony was talking about, six years ago he was one of the first guys to start using phytase, long before it became acceptable in the industry. And today we don't make any products without the use of phytase. So, on a typical hog in the past, where

it would take on average 3.5 kilos of inorganic phosphorous to put him to market, by adding phytase we have reduced that down to 2 kilos, and we are doing it consistently on thousands and thousands of animals. So on a 800 sow farrow to finish operation, just by the use of the enzyme phytase, in one year they would use 30 metric tonnes less inorganic phosphorous on those hogs. So that would be that much less phosphorous going on to the field. So the enzyme basically unbinds those inorganic phosphorouses and makes them available. This product is now used throughout the industry.

My recommendation to you people would be that it would be something that I would -- first of all, the science is indisputable. And I'm not sure exactly what percentage of the hogs in Manitoba are using it. We use it exclusively on every hog that we feed. My recommendation to you guys would be that you would make it a mandatory product that the industry would have to adapt, because by reducing the phosphorous going into the hogs by 35 to 45 per cent, and I think we can even get it lower than that yet, it would be probably a huge step in reducing the overall

amounts of phosphorous going in.

The second product that I wanted to talk about is Soluzyme. It is a similar product to what Patrick was talking about, MaxiZyme, it is actually the competition. It is made up of basically the same type of bacteria and enzymes. And what it does is it reduces the amount of solids in the feed. It is almost like, you know, Patrick used to sell Soluzyme and, you know, best description was he went to a farm where there was complete solids in the pit, he put in this product through the hogs, and a month later the pit that had crusty solids on looked like coffee. That was the result. So this liquid manure now is going into either slurry store or into the lagoon, where it is staying in a suspension, so when they are putting that manure on to the crops, injecting it into the field, you don't have a whole bunch of solids at the bottom and a whole bunch of liquid at the top. So when they are calculating out the nutrient requirements or what they are getting out of their manure, and the top half of the lagoon or slurry is basically water, so on the first hundred or two hundred or three hundred acres, they got water. On the second two hundred or three

hundred acres, they got all of the solids and nutrients coming out where they have agitated it up, so it is a complete imbalance unless the product is liquified and put into suspension. And that is what these products are doing.

And there is probably three companies that are selling products like that now. And the cost and benefit ratios are pretty well similar. It is basically similar product.

That is about all I have got to say.

THE CHAIRMAN: Thank you. Now, would you -- I think Mr. Prychun said that you could use Maxizyme, or in your case Soluzyme, in addition to or instead of phytase?

MR. FREEDY: I don't believe that.

THE CHAIRMAN: Well, I really was not trying to challenge any proprietary positions. Do you use them together or do you use one or the other?

MR. FREEDY: Phytase, the phytase that we use is a completely different enzyme than the bacteria and enzymes that are used in something like MaxiZyme and Soluzyme.

THE CHAIRMAN: So they should both be used?

MR. FREEDY: They should be both used. The use of phytase is so overwhelmingly solid that for the last three years I don't have, I can't think of a producer that has not reduced his phosphorous, inorganic phosphorous going into the feed by 40 to 45 per cent. It is huge. It is a huge, huge amount. And this is something that wasn't done ten years ago, this is only like in the last five or six years. And I can't speak for the rest of the industry. However, the stuff works hands down, there is no more argument about it, it has been solidly proven for a few years already.

Now, Cool Springs Colony, they are using 30 metric tonnes less inorganic phosphorous coming on to their farm every year that they used to put in. So that is not going on to the fields any longer. And phosphorous, I am understanding is the major concern here.

THE CHAIRMAN: Thank you. Edwin?

MR. YEE: I guess as a similar question that we asked Mr. Prychun, in terms of how wide of use is both the phytase as well as this Soluzyme?

MR. FREEDY: I would say that the

phytase, in my case it is 100 per cent phytase.

MR. YEE: No, I'm thinking in terms of the number of hog producers in Manitoba?

MR. FREEDY: That are using phytase? In my case, I don't feed one without phytase. So across Western Canada we are probably feeding 60,000 sows farrow to finish, and all of those offspring are getting phytase. There is not one of those hogs that are marketed without phytase. I can't speak for Maxi Pro or Feedrite or the other companies, whether or not they have adopted these practices, however, I think that the producers themselves are demanding it because they understand that they got to reduce the load of phosphorous going on to those lands.

MR. YEE: And in terms of the use of the Soluzyme product?

MR. FREEDY: I would say between the three companies that are selling these similar products, maybe 30 per cent are probably using it. That would be the combined. That would be just like a guess. Not everybody is using that, not everybody gets that yet. But the phytase they are really getting.

MR. YEE: Thank you.

THE CHAIRMAN: You said at the beginning but I missed it, what company are you with?

MR. FREEDY: J&R Livestock Consultants.

THE CHAIRMAN: Thank you. Wayne?

MR. MOTHERAL: Just a comment on, it is interesting to note, I put that on my notes, it is another commercial. It is something that we will certainly be contacting feed industries and other people about these products, though.

MR. FREEDY: Well, the phytase is not a commercial, it is a reality. I mean, we have reduced the amount of phosphorous going into the grower and finisher and starter hogs by 40 per cent. So that is a reality. The Soluzyme and MaxiZyme, that might be a commercial. Okay, thank you.

THE CHAIRMAN: Thank you very much. Even if it is a commercial, it is still interesting to hear these alternative processes.

Scott Dick?

MR. DICK: My name is Scott Dick.

SCOTT DICK, having been sworn, presented as follows:

MR. DICK: Thank you. My name is Scott Dick and I'm pleased to make this presentation on behalf of Elite Swine Incorporated, which is the hog production arm of Maple Leaf Foods. In 2006, Elite Swine was the largest hog management company in Canada with approximately 109,000 sows, and produced more than 1.9 million markets hogs. Of these numbers about two-thirds of its production was in Manitoba.

I'm the manager of land and nutrient resources at Elite Swine and hold a degree in Agriculture. I'm a director on the Manitoba Livestock Manure Management Initiative and I am also a professional agrologist with the Manitoba Institute of Agrologists and on the registry as a certified manure management planner. Along with my team of two other manure management planners, we manage more than 110 active plans, representing about a quarter of the plans filed annually with the Provincial Government.

Delivering the nutrient program to each of these ESI hog sites is a rigorous process involving eight components. Firstly, for each hog site, we file a manure management plan with Manitoba Conservation. For each plan we make

submissions to Conservation an average of ten times a year. These submissions include the manure management plan itself, updates confirming the name of the applicator, the type of crop on the field, when we expect to be on the field. We also submit six to ten soil tests, update some cropping intentions, and finally a confirmation of application. So there is a lot of paperwork, and you will understand when I say that nutrient acres in a manure management plan are some of the most intensively documented and managed acres in the province.

It would be difficult to prepare an environmentally sustainable manure management plans were it not for the work that we do on site characterization. Using maps such as this one with base data from the Provincial Government, we can immediately see the various classes of soil we are dealing with. We know that Ag capability classes one to five are suitable for manure application, and classes six and seven and unimproved organics are not suitable.

As you can see on this site, the class five land delineated by the yellow polygon or ribbon is removed from the spread acres. The

spread acres are highlighted by the red boundaries in the slide.

When we look at other site characterization maps that show us water bodies and drains, they assist us in determining where additional setbacks may be required, and whether we need to take slope of the land into consideration, as we do with some of the till soils found in Western Manitoba.

In addition to studying the maps, we also do soil testing. This testing is done in the fall typically, a week or two prior to manure application. We conduct tests on every piece of land on which we intend to apply manure. The soil samples are sent to an approved lab, which then reports on residual values of nitrogen and phosphorous in each field. Soil tests must be submitted into Conservation prior to any application. In 2006, we soil sampled about 700 fields which represented more than 85,000 acres. These samples are the ultimate check on sustainability, since if nutrient levels are too high, we will make adjustments in the application for the upcoming year.

By the way, Manitoba is the only

jurisdiction in Canada to require that this information be submitted to government each year. In Ontario this information is submitted only once every five years and only accounts for the phosphorous and not the nitrogen.

Based on the site characterization, target yields and lab results for our soil tests, we then issue a work order to our manure applicators. The applicator is given direction on where to put the manure and how much manure to apply. I don't know if you can read it, but it gives legal land description, the crop we intend to put on, the amount of gallons to put on, if there is any special setbacks that they need to leave in the field, and how many manure samples they need to take.

The fifth component is manure sampling and analysis. Our manure applicators follow specific protocols on how and when they should collect manure samples. They send these samples to an approved lab for analysis. In 2006 we sent more than 400 manure samples for lab analysis. You have heard the hog industry say we should rely more on science and less on emotion to determine the future of the hog industry. Well, in our

minds lab analysis is essential, since it provides proof that we can scientifically quantify the different nutrient levels.

Site visits are also an essential component of the work that my team and I carry out. These visits allow us to visually check that what we have written on the work order is accurately being carried out in the field. After the manure is applied to the soil, we then provide the grain farmer with a post application mapping report. This is an application map developed using global positioning systems, or GPS data logger. The GPS accuracy is within three feet, giving growers a precise understanding of each square foot of their field. If the applicator runs out of manure and was unable to complete the field, as you can see the northwest corner here, the grower knows precisely where he needs to come back and apply commercial fertilizer. The GPS log also shows the time of application, the exact location, the accuracy of the satellite tracking, and in most cases how many gallons were applied at each specific point in the field. We can see how custom applicators performed on the job site. Did they leave proper setbacks? Were there any misses

or overlaps? What time did the job start and finish? This type of documentation increases the grain grower's confidence in the application. Providing this report also decreases the likelihood of a farmer second guessing the application and adding extra nitrogen as a buffer.

The final step in our nutrient program is a post application agronomic and economic report. This report takes into consideration the manure analysis from the lab and the predicted losses in the nitrogen cycle. The output of this report is an agronomic summary of N, P and K that will be available to grow the next crop. This report takes into consideration the current fertilizer prices and assigns a value to the nutrients that have been applied to the land. In Western Manitoba, the vast majority of recipients of manure from Elite Swine sites pay for a portion of the nitrogen that they receive. We strongly believe that assigning value to the nutrients helps ensure the product is not treated as a waste, but rather the valuable commodity that it is.

We know that more and more grain growers are recognizing this, because as nitrogen

fertilizer prices continue to rise, our department is fielding many calls from producers wanting to have manure spread on their field.

So, as mentioned, these eight steps complement each other and together allow us to properly manage the manure produced at our hog operations.

I would like to speak now about how we are adopting best practices and new technologies to ensure environmental sustainability. Four years ago Elite Swine started adding phytase to all of our hogs diets. As said earlier, phytase increases the amount of phosphorous that the pig can digest from the feed grains, thus reducing phosphorous additions to the diet. This measure has been remarkably successful, reducing our output of phosphorous in the manure by between 20 to 40 per cent. While phytase has been very successful in reducing phosphorous output, we are a bit frustrated that present CFIA regulations prevent us from making even further reductions. Table 4 of the Feeds Act stipulates minimum total phosphorous levels that must be present in the hog's diet. Until the CFIA modifies table 4 to take into account this enzyme, our nutritionists

will not be able to maximize the potential reductions in the amount of phosphorous excreted in the manure.

In this slide you will see the typical way of injecting manure to the land. The soil is cultivated and the nutrients are injected behind each shank. Liquid is delivered to the implement by a drag hose that is laid from the storage to the field.

In this slide you will see another type of equipment that is useful in areas where minimum tillage is practiced, or where we want to inject on grassland. These round discs kind of furrow into the nutrients causing minimal soil disturbance, which reduces moisture losses while still allowing the manure to rapidly enter the soil.

This slide shows an AerWay Toolbar that directly incorporates the nutrients into the top five inches of the soil. Direct incorporation of the nutrients allows us to greatly minimize the volatilization losses compared to dribbling or flat fanning the manure on the surface. It is different from injection in that the manure is worked into the soil immediately rather than being

delivered below the soil surface. Direct incorporation also helps us to maximize the nitrogen to phosphorous ratio due to more nitrogen being retained in the soil. This equipment has been also proved to be very effective in working manure on fairly steep slopes. About 85 per cent of our manure is injected or directly incorporated into the soil. About 15 per cent of our manure is dribbled on to the surface in the southeast corner of the province where odour is not a constraint, or where land conditions such as stoniness do not allow for these above technologies.

We are also storing manure more wisely. This is a schematic of a two-cell earthen manure storage. This type of storage has a primary cell of 25 to 30 per cent of the entire storage, which acts to settle out the solids. The more liquidy portion of the manure is then allowed to flow over into the secondary cell. This simple storage design has proven to be one of the most effective ways to concentrate the phosphorous into the small portion of the storage volume. That is significant because the producer can then more economically transport the concentrated phosphorous rich manure farther from the barn site

and apply the nitrogen rich manure closer to the barns and lands that tend to be utilized more often.

Elite Swine has been a leader in testing and using different types of covers on our earthen manure storages. We currently have more than 20 sites with straw covers. This technology was pioneered by the Prairie Agriculture Machinery Institute in Portage la Prairie and uses a straw blower to apply barley straw on to the storage.

We are also a rapid adopter of negative air pressure technology. This is a synthetic plastic cover pulled over the entire storage that is removed only to agitate or empty the storage. We currently have 13 sites with this type of cover and are finding it very effective in controlling odours. However, based on operating difficulties and expense, we recommend that this type of cover be used only on the secondary cell of a two-cell system.

Elite Swine recognizes that technology is only as good as the people using it. For that reason we put a lot of effort into training our applicators that apply manure to the land. For the past seven years, we have held annual manure

applicator meetings to talk about topics such as how to do proper manure sampling, how to keep proper records, what to do in case of a potential spill, and health and safety protocols. In the absence of training and certification courses for manure applicators in Manitoba, we are doing our best to raise the bar for applicators.

We also encourage our producers and partners to continually raise the bar regarding their environmental practices. One of the ways we encourage sound environmental practices is through the Elite Swine Environmental Stewardship Awards. Since 1999 we have annually recognized producers with outstanding practices in the areas of dead stock management, yardsite maintenance, animal husbandry, including humane treatment and handling, insect and rodent control, and of course nutrient management. The producers who win these awards are committed to operating their businesses in a way that ensures a healthy environment for their children and their grandchildren.

Lastly, I would like to make five recommendations for your consideration. In 2004, Manitoba Conservation added mandatory applicator certification into the Livestock Manure and

Mortalities Management Regulation. This certification has not yet occurred due to an amendment which was required in the Pesticides and Fertility Act. This amendment needs to be completed so that certification can occur.

Number two, injection or direct incorporation makes sense for minimizing nutrient losses and thus increases the nitrogen to phosphorous ratio and reduces odours during application significantly. The CEC should encourage all producers to adopt this practice on their annual land.

Thirdly, soil testing is one of the most influential pieces of information that a producer has to manage their fertility program, and yet it is estimated that less than 25 per cent of Manitoba acres are soil tested annually. Currently only livestock operations greater than 300 animal units are required by law to test annually. Encouraging all producers to implement this practice will go a long way in educating and changing practices on the landscape.

Fourth, phytase is a proven technology for reducing phosphorous excretion. It is also financially advantageous to adopt this technology.

All producers should be encouraged to use phytase and the Provincial Government should join in the lobby of CFIA on table four of the Feeds Act.

Lastly, the province should look to provide financial assistance of up to 90 per cent through the Environmental Farm Plan Program to assist producers who require larger storages to stop winter spreading. Ontario had a similar program called the Healthy Futures Program.

It is important that these funds are handled through a program such as the Environmental Farm Program, as the industry does not want to disrupt trade arrangements and trigger duties to be applied to our exported hogs.

That concludes my remarks. I would be happy to answer any questions that you may have.

THE CHAIRMAN: Thank you very much, Mr. Dick. This is the first time I have heard about the CFIA regulation. Why is that? What is their reasoning?

MR. DICK: The table was built I believe about 20 years ago, and it was put forth by industry, and the feeds industry, I believe about four or five years ago to change that table. At that point there was one, only one maker of the

enzyme phytase I believe, by BASF, and it was determined that it would give a competitive disadvantage or an advantage to only one company. At that point they decided not to change it. Since then there have been numerous amounts of lobbying and it still hasn't been changed. I know that the Provincial Government made a statement at the Manitoba Swine seminar earlier this year that they will take up the cause as well and lobby the Feds on this one.

THE CHAIRMAN: So there is no real reason for maintaining what CFIA has as a minimum phosphorous level in the hog? The hog can do well with less phosphorous?

MR. DICK: What they are regulating, and I'm not a nutritionist, but what they are regulating is total phosphorous in the diet, not the available phosphorous that the pig can have. With phytase we can increase that available amount and therefore we can lower the total amount without affecting the hog at all.

THE CHAIRMAN: This is just my own ignorance, I guess. At slide 20 when you talked about some of the -- that you can use the concentrated phosphorous rich manure further away,

so is that the stuff that is in the first cell?

MR. DICK: Yeah, the bottom of the primary cell has the most concentrated phosphorous product. Therefore, typically when we start emptying the storage, we will take that primary cell and try to haul it the furthest distance from the site.

THE CHAIRMAN: And the liquid has more nitrogen and less phosphorous?

MR. DICK: The liquid is consistent with a good amount of ammonia in it. It is just that the second cell contains a very small amount of phosphorous.

THE CHAIRMAN: Okay. And I actually meant to ask this of Mr. Waldner earlier. The cost of putting in these piping systems to take the manure wherever, the slurry, is that expensive? Is that costly?

MR. DICK: We currently don't have any underground pipe, I don't think, at any one of our sites. What most of our applicators use is a soft hose that they can roll up, and some of them can stretch up to three to four miles.

THE CHAIRMAN: The soft hoses can go that far?

MR. DICK: Yes, yes.

THE CHAIRMAN: We have heard similar presentations from others in the last few weeks, you know, the big companies, like your company and others, HyTek and Puratone and a number of the larger colonies are able to do all of these things, but when does it become cost effective, or how big an operation do you have to be to take all of the steps that you are taking? I mean, can a small operator do all of these things and still be cost effective?

MR. DICK: As an agronomist by trade, I think some of the fundamentals of soil sampling and manure sampling are extremely beneficial practice that I would say save producers money, because you can more effectively manage and spread those nutrients over more acres. Those two simple tests dictate pretty much the way the whole program is run. An individual producer may not need to go to all of this type of documentation that we do, but certainly having a soil test, I think it costs a little over $100 to take a soil test, it costs about $60 or $70 to do a manure test. For the amount of nutrients that they are spreading on their field, the benefit is huge.

THE CHAIRMAN: Thank you. Wayne.

MR. MOTHERAL: Yes, thank you. Just a couple of questions, getting back to soil testing. You do several, lots of soil testing obviously, as you said in your presentation. Do you use GPS, do you soil test in the same particular area when you are wanting to find out what your phosphorous levels and your residual phosphorous levels are? I know in some areas that they do, they use a GPS system so you get a true reading of what that one spot is doing, rather than take a chance on variable within the field.

MR. DICK: Almost all of our soil tests are taken using GPS, more from a validating standpoint to we make sure we are in the right field, that we didn't hit any spots that may be inconsequent. We don't use the practice of benchmarking, which is what you are talking, we currently use a composite style, which is typically choosing about 16 random points on a quarter, and then the next year choosing random points again. In setting up what you are talking about benchmarking is something that we are looking at and probably eventually will go to. It takes quite a bit of work to set up where that

benchmark is going to be chosen, and you have to have someone very, very skilled and understanding those soils to do that type of a job.

MR. MOTHERAL: Another question on phosphorous, in all of the soil testing that you do, do you find any excess residual phosphorous? And the reason why I ask that is because we had many producers at our hearings yesterday who said that phosphorous is not a problem at all. In fact, the phytase is actually causing them some problems because they want more phosphorous.

MR. DICK: I would agree, we had a fight with some our producers in Western Manitoba when we built some of our barns because we wanted to add phytase, and they said we need more phosphorous, all of our soils are deficient. You asked whether we have any fields that are higher? Yes, I remember, you know, we have some fields that back in the '90s or '80s had a big gun type of an applicator used on them. And with a big gun or an irrigation gun, you end up having a lot of nitrogen that is gassed off and, therefore, quite a bit higher rates were put on at that period. So, yes, some of those fields are high.

MR. MOTHERAL: Just one more question,

I know that my time is running out. Does your company do any research on manure separation?

MR. DICK: We have done quite a bit. We have looked at some separation technology in Ontario. We've tested here in Manitoba as well. Separation, from what I have seen in a lot of the cases, does a very good job at pulling the solids out. As the manure is coming out of the barn, typically the phosphorous is dissolved in that liquid. It is not in the solids yet until it has been in the storage for an accumulated amount of time. So the separators that I have seen and that we have studied, you are right, pulled out a lot of solids coming out of the barn but very little amount of the phosphorous. Until you start adding floculating agents and some other polymers, they haven't proven to be that effective. Although we continue to look and we find that there is some there that may be more promising such as a centrifuge.

MR. MOTHERAL: But your answer is yes?

MR. DICK: We are looking at quite a few, yes.

THE CHAIRMAN: Edwin.

MR. YEE: Yes, Mr. Dick, we noted

from an earlier presentation by Mr. Baron an issue of what depth soil samples are taken. I was just going to ask, in terms of, given that you made a recommendation that we should look at soil testing for even less than 300 animal units, what depths are you sampling at now and is there a significance in terms of the depths at which the samples are taken?

MR. DICK: We sample today at two different profiles, a zero row to six inch profile and a six to 25 inch profile. There are some soils possibly that do benefit and we do have some sites where we go deeper. But if a nutrient manager is working with that land on an annual basis and looking at it annually, they should be able to balance that nitrogen that they are putting down. If they are finding leaching below that soil, below that two foot, then they are probably applying too much and need to start scaling back.

MR. YEE: In terms of your recommendation about the soil testing, should it be done in various levels and based on the results go deeper if required?

MR. DICK: If required, yes.

MR. YEE: Thank you.

THE CHAIRMAN: Thank you very much, Mr. Dick.

Melvin Hofer, would you please introduce yourselves for the record?

MR. HOFER: My name is Melvin Hofer from Deerboine Colony Farms.

MR. HOMBACH: And I'm Peter Hombach for Osorno Enterprises in Winnipeg.

MELVIN HOFER and PETER HOMBACH, first being sworn, presented as follows:

THE CHAIRMAN: Go ahead.

MR. HOFER: Good afternoon everybody, my name is Melvin Hofer and I speak on behalf of Deerboine Hutterite Colony. Our colony which is located seven miles north from the town of Alexander in the RM of Daly has a population of 97 people made up of 16 families. We farm 6,500 acres and practice the concept of minimum to zero till. This is done for economical reasons. Business operations within the colony include, hogs, dairy and beef cows, bison and poultry.

The core business activity which supports us is hog production. The hog business which we currently operate is a 800 farrow to

nursery, but because of inflations and production costs such as feed, machinery, cost of living extra, it has been necessary to upgrade and expand the operation from 800 farrow to finish in order to continue with our farming lifestyle.

As you have probably heard repeatedly, one of the key concerns with the hog industry now is manure management, how to safely and effectively treat and dispose of hog manure produced within the industry. Presently, the number of animal units on our farm is not considered a large animal unit, so it does not fall under the large animal unit guidelines of Manitoba Livestock Mortality and Manure Management Regulations. We are still considered a small farm enterprise.

After the hog expansion is completed our farm operation will be considered a large animal unit. We will then be required to have an effective manure management plan in place.

It has always been our goal to leave as little negative impact on the creation as we possibly can. It is our goal and duty to preserve the air that we breathe and the water that we drink. For this reason, we have embraced a green

concept of manure treatment as opposed to manure disposal. This concept leaves only two product streams that I'm reluctant to call waste streams, because they are not. One stream is that of treated waste water with the goal to have it cleaned up better than required for waste water treatment plants in Manitoba. The other product stream is called class A compost, a product that is called Nutriplenish and proven to rejuvenate top soil. This concept will now be described in greater details by Peter Hombach.

MR. HOMBACH: Thank you for the opportunity to present this concept here, and thank you to Deerboine Colony. This is the first attempt of which I am aware that a hog producer in Manitoba tries to leave as little and small an environmental footprint as possible.

Please allow me to introduce myself a little bit more, and also the company that I represent. I'm the president of Osorno Enterprises and of the Osorno Group. The Osorno group encompasses other companies. We are headquartered in Winnipeg. And very instrumental in the development of this concept has been one of our companies, EAS Engineering GMBH, which is a

German company, and we have been fortunate enough that the general manager of this German company happens to be someone with extensive manure treatment experience in Europe.

I for myself am by training a chemist. I have been a professor of engineering in the United States for 15 years prior to my immigration to Canada, which was in 1999. We have tried to convince our producers in Manitoba to use a green concept since. And it is part of the philosophy of our company to promote the concept of clean air, clear water and fertile soil.

As it applies to manure treatment, we, at least at this stage, are in no position to change barn practices. Meaning that the manure coming out of a barn will be, microbiologically speaking, under anaerobic conditions. Anaerobic conditions means that it is emitting hydrogen sulfide, it is emitting smelly mercaptanes, it is emitting ammonia, it is emitting amines, carbon dioxide and methane. It is simply a microbiological fact.

The concept that we have allows the pits to be discharged in more rapid sequence than commonly done, into a lift station which we keep

intensely aerated because we want to break immediately this anaerobic situation and convert it into an aerobic system, where we have a sufficient amount of oxygen present in the manure to continue or to start iaerobic microbiological processes.

We have heard here just a while ago that in fresh manure phosphate is in the soluble form. I totally agree with that. That is in agreement with our observations. However, this is a consequence of the anaerobic conditions under which the manure is. Under iaerobic conditions, you begin to bind phosphate. So the cycle already begins there. One of the big problems with manure is the soluble BOD, to stay away a little from the Chinese of a scientist, BOD stands for biological oxygen demand, and it is the goal of the treatment to reduce it as much as it possibly can. This can be done iaerobically, so there is a good reason to start that step right there. We have in this initial step calculated hydraulic retention time, meaning the average time that the manure stays there, for roughly two or three days, which is about five or six times the residence time which sewage in an municipal wastewater treatment plant

would undergo. So this is more than sufficient time to get the process started that has to take place. The capacity that we have calculated here for the Deerboine Colony is way beyond their needs. It is for 72.3 cubic metres per day, definitely oversized. So that there is, as I said, plenty of capacity.

The gases about which we are largely concerned here is, as I said before, greenhouse gases. Carbon dioxide and methane immediately come to mind. What I really haven't heard much talk about is the cost of land application. Because as you land apply the stored manure, which is still the common practice, you convert the top soil into an anaerobic situation, the anaerobic situation of the manure that you applied, which in turn means that the organic carbon of the top soil serves as a carbon reservoir for additional greenhouse gases. This is an aspect that is hardly ever discussed. Deerboine Colony has decided to stop this vicious cycle by going into full treatment right away.

And also what I hardly heard discussed is the release of nitrogen oxide, which is a greenhouse gas with much less greenhouse gas

potential than others, with an average atmospheric life time of 120 years, and warming potential of 296 compared to carbon dioxide with a greenhouse gas potential of just one. The material so pre-treated goes into the flocculation, coagulation step. We have just heard in the previous presentation that this is, speaking generally, a known process. We have gone at length with laboratory testing to find ideal material to do this. Can we possibly show a couple of slides here?

This is our concept of clean air, clear water, and fertile soil that we are following here. And as I just explained with the first step, we have here literally an aerated lift station, mainly to prevent the greenhouse gas release and get the material done right.

In step two, the flocculation coagulation step, the main accomplishment that we have here is that 75 per cent of the BOD load that we have in the raw manure, we can compress into 25 per cent of the volume, meaning we have a major separation affect. The material then so separated follows then into two passways. The supernatant liquid goes for biological nutrient removal into

the type of wastewater treatment. We have significant experience with that. And the other stream, the 25 per cent of the volume containing 75 per cent of the BOD load go into composting of this sludge material.

What I'm showing you here is the jar test done in the lab with coagulation material. I assume that you can very clearly see that we get a very dark sludge, low volume; a very high volume of material that is rather lightly coloured, and the separation takes place in an amazingly short time period. We are talking here five or ten minutes.

We have designed the system for the Deerboine Colony in a way that we allow here for 30 to 35 minutes of separation time. So in case something goes wrong, we have plenty of time cushion. For the high-tech composting that we get out -- this was a pilot test that we did in the State of North Dakota ten years ago. You can see here two piles of compost. The NutriPlenish compost, meaning the composting technology that we use, you see on this darker pile without weed, and the City of Grand Forks told us that they are doing composting anyway and they didn't see a need

for this high-tech composting, so on the right you see for comparison their compost. Our compost is pathogen free. We know we went into the composting process with a relatively high bacteria count. Windrow composting is never pathogen free, and the clear evidence is germination of weed seeds. NutriPlenish compost, simply because the compost at a temperature of 70 degrees C, within 12 days the temperature is so high that all pathogens are cleared and all weed seeds. It is the material in which just beneficial microorganisms grow.

This an inside look into a composting facility. In this demonstration project, we have composted 20 tonnes of material in one shot. The oxygen, the atmosphere used in the composting process is partially oxygen depleted for safety of operation. The agricultural benefit was tested at North Dakota State University. Everybody in the agricultural business knows the famous rule of NPK fertilizer, nitrogen, phosphate and potassium. You see here with Durum in a greenhouse test, the standard NPK fertilizer and then here various rates of our compost with no additional fertilizer. I would like to say that

Dr. Chaihislic initially kind of almost refused to do the test because he said, you don't have enough phosphate in there, no nitrogen to speak of. The amazing fact is that when the microbiological mixture is right, you don't need those concentrations, the composting process does it all.

And those are all of the steps that need to be taken. I did not want to go into too much scientific detail in my presentation. The Commission has 13 pages of material containing more details than I was giving here. And other than that, I thank you for listening, and if you have questions, which actually I hope you have, then I'm glad to answer them.

THE CHAIRMAN: Thank you. I may defer to my colleague, Mr. Yee, who is a scientist unlike me, and I may come back with other questions later on.

MR. YEE: I guess essentially what you are proposing here is a wastewater treatment plant, separation of the solids from the liquid portion of the manure and transforming the solids into a compost, using flocculence as a separator?

MR. HOMBACH: It largely is, however

it is a modified concept because manure, as it comes out of currently operating barns, is worse than normal municipal waste water and consequently requires special treatments, hence the modifications that I showed you.

MR. YEE: What would the capital costs of the system as well as the operating costs of the system be?

MR. HOMBACH: In terms of capital cost for a system of the size that we here just presented, the fair market value would probably exceed $1 million. It wouldn't exceed that very much, but this is a ballpark number. In terms of operating costs, we traditionally design systems to be as automatic as possible, so there isn't really much manpower attendance, but on the other hand you move here a lot of material which requires labour. And so this would be one cost component that we can not and have not really figured that out yet. In terms of electrical energy requirement, the largest compressors and pumps that we use are four to five kilowatt, so the energy cost is relatively moderate, plus there is a substantial gain in heat that is quite often overlooked in using this kind of composting

process. As I said, we typically operate composting close to 70 degrees C. This heat is biologically generated, it is not externally introduced heat.

MR. YEE: In terms of the cost of the flocculents, I gather that you are using polymers as the flocculent?

MR. HOMBACH: This is a combination of inorganic and organic material, and those are easily available commercial products.

MR. YEE: Thank you.

THE CHAIRMAN: Wayne?

MR. MOTHERAL: So where is this technology at right now, Mr. Hombach?

MR. HOMBACH: This technology is right now at the stage where the composting component has been shown to work perfectly on a relatively large scale, meaning in 20-ton batches in a two year demonstration project that we did in North Dakota ten years ago. You can see here in this jar that I brought with me a remnant of those times. What you see there is compost that was done with 70 per cent manure content, actually Manitoba manure content. And the wastewater treatment component, that is a business in which

we have been in for a very long time, but it has never been applied to the hog industry yet. And I would like to express my gratitude to the Deerboine Colony for taking the step to produce no secondary waste.

THE CHAIRMAN: So when do you expect to have this up and running at Deerboine?

MR. HOMBACH: As soon as possible.

THE CHAIRMAN: Is that six months, or a year or two years or --

MR. HOMBACH: The target completion date is before winter sets in.

THE CHAIRMAN: Before winter, this coming winter, '07?

MR. HOMBACH: Yes.

THE CHAIRMAN: And the compost, is this strictly a compost or is it a fertilizer?

MR. HOMBACH: I always am reluctant to call compost a fertilizer.

THE CHAIRMAN: How would you use it, or how will Deerboine use it?

MR. HOMBACH: I cannot speak for the colony, of course, but my sense is that the Deerboine Colony intends to sell this compost possibly back on the market, or otherwise use it

on their own fields. I think I already alluded to the fact that the compost is very different in composition and in impact with the top soil as compared with the manure application.

THE CHAIRMAN: Yes. Thank you, I have no further questions. That was an interesting presentation. Thank you for coming out today.

MR. HOMBACH: Thank you.

MR. HOFER: Thank you very much.

THE CHAIRMAN: And our last presenter in the afternoon is Jake Hofer.

MR. HOFER: My name is Jake Hofer from Treesbank Colony, and I'm here today to represent our colony.

THE CHAIRMAN: Sir, the other gentleman?

DR BAILEY: Dr. Loren Bailey. I don't think that I'm going to say anything except to answer your questions.

JAKE HOFER and LOREN BAILEY, having been sworn, presented as follows:

THE CHAIRMAN: Go ahead, sir.

MR. HOFER: Good afternoon, members of the Clean Environment Commission panel and ladies and gentlemen of the audience. My name is Jake

Hofer, and I stand here today as a representative of the Treesbank Hutterite Colony. Our colony is located one and a quarter miles from the Village of Treesbank, in the Rural Municipality of South Cypress. Our colony is comprised of 58 members, which is 11 families. Hog production is a core business activity which supports our colony. In addition to our 500 sow farrow to finish operation, we have 7,200 layer hens and 3,500 broilers. We own approximately 4,000 acres of land and rent an additional 400 acres to grow feed we need for our animals.

Raising hogs is a full-time job for producers. This is because hog farms must consider the needs of the animals and the environment, as well as the farm's financial needs. Our farm is located -- our farms are more sustainable today because they are operated with better care and values than the generation that farmed before us. Farmers take this responsibility seriously and treat the environment with respect. Farmers rely on the land and water for their livelihoods and their lives, and it is in their best interests to protect their resources for the benefit of future generations.

Like many other businesses, today's farms are bigger than in the past. You might ask why? There are numerous reasons, which include removal of grain transportation subsidies, rising input costs, stagnant commodity prices -- at least have been, they are going up -- and high consumer demand for low cost food. The end result is that farmers need to expand in size, diversify, or specialize in order to generate the same income that most people in this room have come to enjoy.

Hog production is just one of the options that farmers consider when deciding what to do. Today hog production contributes about 1 billion to Manitoba's economy, while providing a source of income for approximately 1,500 farm families, but economics isn't everything and is only one part of sustainable hog production. For example, hog producers work hard to produce safe, high quality pork, stay current with new farming practices, employ local people and businesses, protect the environment, follow a code of practices for the care of animals and workers, implement best management practices for many aspects of the farming operations, and lastly, to listen and understand the concerns of our

neighbors and the public. So let's talk about some of the concerns that you will hear in these hearings.

Manure: One of the byproducts of hog production is manure. Manure is environment's original fertilizer. Think about this for a moment, many years ago the buffalo herds roamed across the prairies dropping manure as they grazed the landscape. This manure added organic matter to the soil and provided nutrients for the plants and the microorganisms to grow. Today hog manure contributes the same valuable nutrients, namely nitrogen, phosphorous and potassium, needed by plants for growth, healthy roots, and disease resistance. The main difference now is that Manitoba's regulations require that we have better control on its application on the land to ensure that plants can fully benefit from it. We do this using technology, science, to understand the nutrient content of our manure and matching it to the needs of the crops, forages and grasses that we grow.

New manure storage facilities are required to comply with engineering standards and must be large enough to store the manure

throughout the winter months, until such time that the manure can be used and applied on the land. Some producers use earthen manure storage facilities, some use pits, and some use silo type bins. But whatever is used must meet industry and environmental standards. And if an existing storage facility is expanded or upgraded, it too must comply with current provincial standards for manure containment.

As an example, when our colony decided to upgrade our earthen manure storage in the mid 1990s, we were required to completely overhaul our lagoon by adding an additional compacted clay liner to the lagoon, which we did.

Our colony files an annual manure management plan with the Province of Manitoba. Our plan is prepared by AgriTrend Technologies. When it comes to disposal, all large operations are required to file a manure management plan in accordance with recent provincial acts and regulations. The plan must show where the manure is going to be applied, how and when it will be applied, the rate at which it is expected to be applied, the current nutrient level of the receiving fields, and the crops or plants which

will be grown on that field. This practice will reduce the risk of overapplying manure and reduce the risk of run-off or leaching. Depending on the nutrient content, manure may be spread at rates of around 4,000 gallons per acre, which is roughly equivalent to four millimeters of rainfall, or less than one quarter inch for those of you who still use the Imperial system of measurement. This is approximate application rates which we have been using at our colony.

Soil testing is an important component of manure and nutrient management planning. The soil testing is done by third parties. In our case, it is AgriTrend who then determines the rate at which manure may be applied to meet our crop needs. Now, when it comes to applying the manure on the field, we try to do it in a way which maximizes the benefits to the plants, which also keeping the odour to a minimum. Many producers use injectors or higher certified manure applicators to apply the manure at a proper rate and incorporating it into the soil within 12 hours to eliminate odours. Some applicators even use GPS technology to ensure that the manure is not applied twice in the same area.

Currently our colony uses spread bar manure applicator, or the last year we have used spread bar because we couldn't get the applicator, as most of the other years we did incorporate it right into the soil. The goal of applying manure is to make sure it stays where it is applied. Farmers try very hard to ensure that accidents don't happen, and many have gone to great expenses to implement practices and technologies to remove the environmental risk.

All of our practices are subject to a wide variety of federal, provincial and municipal regulations and bylaws. If we don't comply, the financial consequences of a fine can be enough to force change in our practices, or enough to force us out of business. If the public believes that the regulations are not enforced or that fines are never used, I have got news for them. Let me assure you that this is not the case. Speaking from firsthand experience, our colony was fined about four years ago for an unfortunate oversight related to manure application. This fine was enough for us to put the necessary safeguards in place to make sure that history would not repeat itself, and there we began with AgriTrend, or

shortly after.

Environmental liability and risk management: The hog industry is expecting additional changes in Manitoba nutrient manure management regulations. So in preparation, hog producers have been incorporating several beneficial management practices or BMPs into their operations. An example of some of these practices at our Colony include regular soil and manure testing by independent third parties, namely AgriTrend; planting crops with high phosphate uptake; rotating manure applications on fields over several years rather than spreading on the same field year after year. Here AgriTrend keeps track of the fields. They have every field on their computer, same as our field man, and he correlates with them throughout the season with manure applied, and helps us to select the fields for our annual application.

And finally, our colony has prepared an environmental farm plan. By completing the plan and getting a statement of completion certificate, we became eligible for some funding for making environmental improvements on our product.

This is just a very short list of some of the BMPs that our colony has been implementing in our operation. For some hog producers, these BMPs can place a huge financial burden on farms so I expect the rate of expansion of the hog industry will slow down over the next few years because of this.

Water quality and disease: Good water quality is essential to the health of the families of our colony and our animals. Hogs, particularly young pigs, are sensitive to poor water quality and can experience health problems if they don't have clean water. When we talk about water related health problems, we tend to think of bacteria like e. coli, and think of Walkerton. All mammals, including people, household pets and wildlife regularly excrete e. coli in their feces, not just agricultural livestock. The strain of bacteria which appeared in Walkerton is not common to pigs. This statement is not intended to diminish the importance of proper management of hog manure. It should however raise awareness in the public that we can come into contact with bacteria from a lot of sources, not just those that might be linked to agriculture.

Some of the current beneficial management practices which our colony and the hog industry in general use to prevent bacteria from affecting our water quality include, soil testing to determine appropriate rates of manure application to prevent leaching and run-off, injecting or incorporating manure into the soil to reduce potential surface run-off, applying manure away from water bodies in accordance with regulatory setbacks, applying manure on fields at rates which match crop intake needs, siting livestock operations and manure storage facilities away from water bodies in accordance with regulatory and municipal requirements, no surface spreading of manure on frozen soils, increasing manure storage to permit holding the manure through a winter season.

I guess I will be running out of time so I will skip the water supply.

Odour: If you had to survey the public and ask them what they thought they disliked most about the hog industry, you would probably hear the aroma. Odours are a part of every livestock industry and the hog industry is not immune to it. Odours may come from barns,

lagoons, or the handling manure during disposal, but are usually most noticeable during the collection, stirring, transportation and disposal process.

If you live in the rural community or want to, you must come to expect some of the smells from the barn. But we as hog producers know that reducing odours is also a good thing. Under the Manitoba Livestock and Manure Management Initiative, as well as other Canadian -- as other Canadian initiatives, a lot of time and money has been invested in research to understand how and why manure smells, and how we can reduce odours.

I will just skip through the slide show.

In closing, I would like to say that our colony has become more responsible and concerned for our environmental needs as well as those of our neighbors. We cannot stress enough the importance of good public relations, so that the public can understand why we do things the way we do, but to also show that we want to hear their concerns. Our colony tries to host a hog barbecue every fall for our neighbors so that we can help improve relationships and to hear their issues.

We believe this to be very important.

I would like to thank the panel for allowing me to speak at this hearing and shed some light about the hog industry. I hope the audience will better understand the contributions that the hog sector is already making to protect our environment and that livestock expansion in Manitoba can take place in a sustainable fashion. Thank you.

THE CHAIRMAN: Thank you very much, Mr. Hofer. Edwin.

MR. HOFER: If there is questions regarding soil tests, Dr. Bailey is with AgriTrend and he is with us.

MR. YEE: No, just Mr. Hofer, just for clarification, you mentioned that you have 4,000 acres of land and rent an additional 400 acres. Is that sufficient for your spread fields for your manure from your hog operation?

MR. HOFER: More so, yes.

MR. YEE: The only other question that I have, again for clarification, is do you apply the land with injection and do you do it yourselves or --

MR. HOFER: This past season we were

practically forced, we were sort of forced, the timing was a little out with the applicator, so we had to do it with tankers, which we had to buy, and we used the flood bar system. And on some we did use GPS and monitoring with a portable unit, plus the fact we incorporated as rapid as possible after. But generally we have done the injection system.

MR. YEE: Thank you, Mr. Hofer.

MR. HOFER: I would like to make one more comment, that 80 per cent of our land is phosphate deficient, so it is not a real concern for us.

THE CHAIRMAN: Did you say deficient?

MR. HOFER: Deficient.

MR. MOTHERAL: Thank you, Mr. Chairman. My one question I think has already been answered. When Mr. Bailey was showing the slides, I saw an above ground storage tank, and I was going to ask you, is that -- you use that?

MR. HOFER: It is ours.

MR. MOTHERAL: So you have both then?

MR. HOFER: We have the two. There is three million in that storage tank, and then we have two smaller lagoons, so we have got

sufficient storage to just every fall apply manure.

MR. MOTHERAL: Was the above ground tank, was that a request from the municipality?

MR. HOFER: Our surrounding neighbors put the pressure on they don't want another earthen lagoon, and we decided to go with them.

MR. MOTHERAL: Thank you for telling me that.

AgriTrend has been mentioned several times. Is that a very common association with most Hutterite colonies?

MR. HOFER: There is quite a few in the surrounding area, Neepawa -- do you want Dr. Bailey to answer this?

MR. MOTHERAL: Hello. I haven't seen him for years, I don't know if he knows who I am, but he graduated a year after I did.

MR. HOFER: South of us, north of us, west of us, and I must say all directions of us, AgriTrend is around.

MR. MOTHERAL: We heard it several times. I don't mean that you are trying another commercial here or anything like that.

THE CHAIRMAN: Do you use phytase?

MR. HOFER: No, not as yet, but if the pressure will come, we certainly would think of using it, yes.

THE CHAIRMAN: Or any other enzyme?

MR. HOFER: We have used these enzymes they were talking about, I think one name rings a bell. But at that time it was, and I'm talking ten years ago, we decided we can do without it. It was about $2.50 a hog. It did work, I totally believe that the stuff works, but in those years it was sort of price prohibitive. We are thinking of trying it again.

THE CHAIRMAN: Thank you very much. Thank you, gentlemen. That brings us to the end of the afternoon proceedings. We will reconvene at 7:00 o'clock.

(PROCEEDINGS RECESSED AT 5:20 P.M.
AND RECONVENED AT 7:00 P.M.)

THE CHAIRMAN: Good evening, ladies and gentlemen. I would like to come back to order. We have a full slate for this evening, as well.

I would just like to remind those of you who were not here this afternoon, I would ask that you turn off cell phones, please, or at least

turn off the ring tone. If you must take a call, I would ask that you leave the room.

And I would also ask that there be no conversations in the audience while people are making their presentations. And the first person to make a presentation on the agenda for this evening is Robert McKay.

MR. McKAY: Good evening.

ROBERT McKAY, having been sworn, presents as follows:

THE CHAIRMAN: Go ahead, sir.

MR. McKAY: Good evening. Thank you for giving me the opportunity to speak at this hearing. As you know, I am Robert McKay. I am part owner and the principal scientific researcher for McKay GENSTAT Consultants, Inc., a small firm which provides carcass --

THE CHAIRMAN: Excuse me, Mr. McKay, could you please slow down for our reporter. She's having trouble keeping up.

MR. McKAY: Sorry, it's the adrenaline.

We provide carcass evaluation, ultrasound probing and consulting services to the swine industry.

I have a Ph.D. in Animal Science from the University of Minnesota, with over 25 years of science and research with hogs, 15 with Agriculture and Agri-Food Canada, as a scientist, and ten years as a private consultant and researcher in my own company. I am also a registered member of the Manitoba Institute of Agronomists.

Over the course of my career, I have handled well over 100,000 hogs through the research I have conducted and the on-site services we provide to our clients. Over this same time, I have seen first-hand the vast improvements and changes in technology and education behind pork -- the pork production scene, and the level of innovation and adaptability of the hog sector to produce safe, high quality pork in an environmently sustainable fashion.

Pork is the primary meat which is consumed in the world. The primary consumer of pork, such as Japan, are also primary importers of our pork. Manitoba produces some of the finest pork quality or finest quality pork in the world. And we export about 80 percent of our production, much of which goes to the Unites States and Japan.

I now intend to describe some of the research, science and innovations which have taken place and help to support sustainable hog production in the context of some of the issues you have outlined for these hearings.

Manure management. One of the inescapable by-products of hog production is manure. It is one of those aspects of hog production which has received a great deal of attention in terms of regulation, research, technology and innovation.

The Manitoba Livestock Mortalities and Manure Management Regulation under the Environment Act is clear on how all livestock producers manage manure. Large operations are required to file a Manure Management Plan and test their soils and manure in order to determine proper application rates to balance crop needs with nutrient availability in manure.

Producers and custom applicators are now using portable nutrient measurement equipment to estimate plant-available nitrogen content in their liquid manure and to make better on-farm decisions about manure application rates. This technology is becoming more readily available and

reduce the wait time to get results back from the laboratory.

Currently, hog manure may be stored in concrete pits, above-ground tanks or earthen manure storage structures. Regulations and engineering standards for all new structures have become more stringent than before, thereby raising the bar for environmental protection.

On-going research is finding better ways of storing and managing hog manure. For example, the government is encouraging research of various technologies, like electromagnetic spectrometry, or EMS, for applications like locating areas of high clay content for constructing earthen manure storage. This technology can quickly assess subsurface conditions for site suitability.

Liquid manure handling has also changed over the past ten years. Surface application of manure is increasingly being replaced with injection to take advantage of its nutrient value, to minimize odour, and to reduce the risk of surface runoff.

Programs like the Manitoba Livestock Manure Management Initiative were set up in

response to public concerns over odour and manure management. The purpose of the initiative was to investigate:

> "solutions that are scientifically sound, environmentally sustainable and economically feasible."

Since its inception, this initiative has funded studies and research on biofilters and innovative manure treatment and management practices. Some of the technologies and practices have shown merit and are being used in operations; for example, solid/liquid separators, covers for lagoons and computer controlled application of liquid manure.

As for the greenhouse gases, according to a discussion paper prepared by the Canadian Pork Council in 2002, "Greenhouse Gas Mitigation Strategy for the Canadian Hog Industry", Canada's average annual greenhouse gas emissions are approximately 694 megatonnes of carbon dioxide equivalent. Most of these emissions are tied to the burning of fossil fuels, like coal, gas, fuel oil, and natural gas. Agriculture, as a whole, is estimated to contribute 12 percent to Canada's total. Of this amount, the animal sector is

estimated to contribute five percent of Canada's total with manure from all livestock species estimated to contribute 1.4 percent of Canada's total.

Beneficial management practices, which are being used to help reduce these levels even further include:

Better manure application and storage management;

Better soil management;

Manure treatment;

Feeding strategies to reduce the production of nitrogen and phosphorous in manure; and,

Incorporation of shelterbelts and grasslands into the farming landscape.

There has been some work done in the use of nitrification inhibitors which, when added to manure, can inhibit the formation of nitrate from ammonium.

Changes in feeding strategies have also been found to reduce nitrogen excretion levels. When protein in the hog diet is more closely matched to the requirements of the animal during the various phases of growth, the amount of

excess amino acids excreted is reduced, thereby reducing the amount of nitrogen excreted. This can decrease the amount of total nitrogen excreted by as much as 50 percent, although 20 to 30 percent seems to be quite typical if dietary protein is reduced by 20 percent. Protein reduction, however, is a balancing act, since it can also impact growth rates and development which can have negative economic and animal welfare repercussions.

Feed additives, such as phytase, have been getting some recognition for their ability to reduce phosphorous and sometimes nitrogen in manure. Phytase is an enzyme which breaks down phytate, a compound found in many feed ingredients, that decreases phosphorous availability in animal diets. By adding phytase to feed, it can increase availability of phosphoros, and consequently reduce the amount of phosphorous which is excreted in the manure. Phytase has also been found to increase protein, amino acid and carbohydrate availability. Further research is warranted to study its impact on dietary interactions and formulations and carcass and meat quality.

In view of some of the points I have raised for manure management, I would like to make the following recommendations for provincial consideration:

1. That the Province develop a program for the benefit of the hog industry, similar to the Irrigation Development Program, to provide support for sustainable hog production to meet market demands for high quality pork and to improve management of hog operations to further reduce the risk of impacts on soil and water resources.

2. Provide financial support for portable nutrient measuring equipment for producers or offset the cost of soils testing.

3. Provide financial assistance for engineering costs associated with designing earthen manure structures or storage systems or other engineered manure containment systems and waste treatment systems; and...

4. Provide financial support and incentives for research into the benefits of feed additives on nutrient output and the potential impacts on growth rates and pork quality.

Nutrient management. And the Province

of Manitoba has responded to public requests for changes in the nutrient criteria for manure management and disposal. And it has also been proposed that the nutrient management be on the basis of phosphorous limits, rather than nitrogen limits.

According to a 2006 University of Manitoba study, the "Economic Assessment for Manure Phosphorous Regulations for Manitoba's Hog Industry, Part 2, overall Impact at the Provincial Scale, " the estimated cost to the hog industry will be between $17 million and $23 million based on suggested phosphorous rates. These numbers represent 18 to 28 percent of the NET income for hog producers, with most of the impacts likely to be felt in eastern Manitoba. However, recognizing public pressures, I would like to make the following recommendations to allow adequate time for the hog industry to adopt strategies for making the transition into this new regulatory framework:

1: The Province should fully compensate hog producers who will be immediately affected by these new regulations. Reimburse them for costs associated with transporting manure

greater distances for disposal; installation of treatment systems which will reduce nitrogen and phosphorous; feed additives or pit additives to reduce nitrogen and phosphorous in the manure; and any training and education costs associated with these practices.

2. The Province should undertake soil and water quality monitoring in those areas where these regulations will most likely affect producers and determine the impact these changes may have during the transitory phase.

3. The Province should make education and training available for professionals, manure applicators and producers so that they can fully understand the implications of these changes on their operations.

4. The Province should undertake and financially support research initiatives which can provide cost-effective manure treatment or nutrient reduction alternatives; and...

5. Given the potential reduction in net income that the proposed phosphorous threshold regulations could produce, the Province should commission a study to determine the number of operations which will cease to exist and how this

might affect the economic sustainability of the entire hog industry and related spin-off industries.

Odour is a common complaint that you will hear about the animal industry. According to a study done jointly by the Universities of Manitoba and Alberta, under the Manitoba Manure Management Initiative, over 168 compounds have been identified in odours from various livestock sectors. A few of the main compounds that pose odour concerns include ammonia, hydrogen sulfide, and volatile fatty acid.

One area of research into odour reduction includes the use of pit additives to decrease odour from manures. Generally, these compounds can be classified as masking, blocking, or odour absorption. A study conducted by the USDA, in cooperation with Purdue University, "Laboratory Testing of Commercial Manure Additivies for Swine Odour Control", evaluated the effectiveness of 35 manure pit additives in controlling odours. Some of these additives were found to reduce hydrogen sulfide levels by as much as 47 percent and ammonia levels by as much as 15 percent. Generally, these tend to be

short-lived effects, are cost prohibitive, and are not suitable for our northern climate. But the good news is that there is still ongoing research in the area.

Another area for potential odour abatement is the use of feed additives. Recent research shows promising results for some feed additives in either improving feed digestibility by swine, and/or changing the odour of fresh feces and urine. The economics of these additives and their potential impacts on meat quality are still not well understood, but work is ongoing.

General recommendations and concluding remarks. Two additional recommendations for consideration are:

1. Manitoba has gone to great lengths to bring in new acts and regulations in recent years to improve the environmental performance of the livestock industry. I recommend that the Province ensure that these acts and regulations are applied equally to all livestock sectors, and that an economic assessment be made along with any environmental assessments. We must recognize the value of farming in the production of the food that we eat. It is imperative that we guard

against throwing out the proverbial baby, in this case farming, with the bath water.

2. Cutbacks in the 1980s and 1990s to Federal and Provincial Government monitoring programs have left us incapable of adequately assessing the impacts of livestock operations, or any human activity, for that matter, on water quality. The current level of monitoring and the system for coordinating and reporting results are insufficient to pinpoint sources of pollution to target remedial action. This deficiency must be created -- corrected, sorry.

In conclusion, I encourage the panel to consider the decisions you make in terms of the economic impacts to hog producers and the rest of society. In a report entitled "Food deprivation: Trends and targets" released by the FAO in 2006, it was reported that the developing countries have made good progress in decreasing world hunger since the 1990s. However, the trends are seen to be reversing in the last five years in at least 14 countries. Many business analysts and ag-economists feel that this trend is at least partly linked to the pressures to reduce fossil fuel use by promoting ethanol production.

Diverting wheat and corn to ethanol production has increased their value as a commodity, but has also decreased their availability and affordable as food. This points out the need for society to look beyond its environmental windows to ensure that the decisions made regarding the environmental sustainability of an agricultural industry are reasonable and do not inadvertently ignore social responsibility and economic issues. This can contribute to social crisis in our community and elsewhere in the world.

Thank you.

THE CHAIRMAN: Thank you, Mr. McKay. Wayne?

MR. MOTHERAL: I don't think I have any questions.

THE CHAIRMAN: Well, we may have a question.

MR. MOTHERAL: One was on the electromagnetic spectrometry.

MR. McKAY: That's hard to say. It's EMS.

MR. MOTHERAL: EMS. How long has that been available to site good spots for earthen pits?

MR. McKAY: I'm not sure. Can you --
DR. BAILEY: Brand new.
MR. MOTHERAL: Well, this is the first time that I have heard of it, anyways. And does it consider the depths of clay and the types of soil?
DR. BAILEY: I don't understand the principles, but that's what it's purported to do, and take away from digging and finding and then porting.
MR. MOTHERAL: I would imagine it would still be dug, anyway.
DR. BAILEY: You have to.
MR. MOTHERAL: And, I mean, samples, several samples, probably, too. It would give you an area to start with probably.
DR. BAILEY: Yes.
MR. YEE: Just one question. It's just like the resonance magnetic spectrometry that is used in the mining industry.
DR. BAILEY: Yes.
MR. YEE: And so it is not new technology, but it is new to this application. And the one question that I have for you, Dr. McKay, is you mentioned that -- I will see if

I can find it here after I have lost my spot. Well, you were talking about the effects of -- okay, here we go. The economics of these additives, meaning the feed additives, and their potential impacts on meat quality are still not well understood, but work is going on. Who is doing this type of work?

MR. McKAY: It would probably be U.S. universities. I have not seen any results that indicate if they have had a beneficial or a negative impact, so it is a concern. We have a lot of agricultural universities that promote growth promotants, but they rarely test to see what the end product is like.

MR. YEE: Thank you.

THE CHAIRMAN: Sir, just in your very last couple of sentences, you seem to be indicating that economic factors should trump environmental factors.

MR. McKAY: Well, I think that they should be balanced. I didn't mean to imply that they trump. But I think we have to do a balancing act. And when we, you know, weigh the various pros and cons, we have to take into account the economics, as well, and not just say: Well,

environmentally we have to do this. But we have to be doing a balancing act all the way down the line.

THE CHAIRMAN: Yes, I agree with that. It is interesting that in a couple of places you talked about the environmental effects in this respect and that we should take this into consideration. We have had some people suggest that we should be doing a full economic sustainability review of hog production in Manitoba. We have, so far, resisted that. But you seem to be indicating that considering the economics of the industry should be part of our review.

MR. McKAY: Well, I think that it would be responsible to do an entire economic assessment of all sectors of the agricultural industry. Don't just single out one. Let's check them all out.

THE CHAIRMAN: Okay. Thank you. Wayne?

MR. MOTHERAL: Yes. Just on the -- you spoke of the need for a -- to develop a program for the benefit of the hog industry similar to the irrigation development program.

And without knowing exactly what that is, I didn't really know what you meant by that.

MR. McKAY: Well, my wife actually wrote this up. And she is an engineer with PFRA, so she knows a lot more about this than I do. But there was a program established, as I understand it, to facilitate irrigation. And the number of producers is not very large, but an entire strategy was developed in Manitoba for a small group. So the hog industry is a rather large group, and maybe they warrant a similar type of program.

MR. MOTHERAL: Okay. Thank you.

THE CHAIRMAN: Thank you very much, Mr. McKay. Next up is Martin Sharpe. Sir, would you introduce yourself for the record?

MR. SHARPE: My name is Martin Sharpe.

MARTIN SHARPE, having been sworn, presents as follows:

MR. SHARPE: All right. Good evening, ladies and gentlemen, members of the panel. Welcome to western Manitoba. My name is Martin Sharpe. I am a cattle and hog producer from Minnedosa.

I live southeast of 29-14-17 in the

R.M. of Odanah. I am a District 3 delegate for the Manitoba Pork Council, and I'm a voting delegate of District 7 of the Manitoba Cattle Producer's Association, and a voting member of the Keystone Agriculture Producers.

My name, or our farm, I guess, when my brother and my mother and myself sit down at the table, according to CASE, we are five farms. We fill out five different CASE forms.

My lineage in agriculture is long. On my mother's side, I am a fourth generation Manitoba farmer. On my father's side, I am a fifth generation Manitoba farmer.

My home quarter, the southeast of 29, was homesteaded by a Swedish settler named Johnson in the mid-1880s. Mr. Johnson came from Sweden. He brought with him horses, cattle, hogs and poultry. Through three generations of Johnsons, until the mid-1940s, when the Johnsons sold it to the Terleckis, and until the 1940s and 1950s, until Bill Terlecki sold it to my father in 1958, they had livestock. And every year since, the Sharpes have been there since 1958 until the present day, we have had livestock. We are one of the few quarter sections in my district where,

since the day of settlement, there has been livestock on the southeast of 29.

I have told by members of Hog Watch, therefore, that my farm should be totally unproductive because it has had manure every year for over 100 years. At which point I tell them that right now my farm is the most productive that it has ever been, thanks to the manure that it has received, and thanks to the advances in animal and crop production that we have seen since, in essence, 1970.

Prior to 1970, from the date of settlement until the mid-sixties, 1970, my country south of Minnedosa was half summer fallow, half crop. And it was black summer fallow, not chemical fallow, black. You can see the drifted soil. The drifted soil in the fence lines. And you can see, as I will go into it, in the soil tests.

My present thing, I should have said this, will be from my own farm, a series of soil tests that I received from my soil -- fertilizer dealer in town. And then my comments on three family farm barns that ran into trouble in our municipalities.

If you go to page 1, because of the access to information problems, when I went to the fertilizer dealer to get some soil test results, he said: Well, I can't give you anybody else's, but I can give you mine. So I have the Lewis farm soil tests. They farm six miles southwest of my farm, near the Rapid City corner of number 10.

And we're dealing with phosphate here today. These are soil tests from Enviro-Test that Redfern uses. They are strictly a Canadian company. Ms. Pryzner, during her presentation, dealt with a lot of American soil test companies. And they do very little work in Canada.

I will just go with page 1. We are interested in phosphate. This is after -- this page 1 is an 80 acre field of canola stubble. Canola, we have 25 bushels per acre last year. The soil test was taken on the 10th of October. It showed residual P of 15. If you follow along that line, that leaves a P in that field somewhere between deficit and marginal. And the soil test recommendations for oats range anywhere from 15 to 35 pounds of P2O5 that they suggest to add.

I'll do number 2. Number 2 was a 90-acre field, too, of canola. And we had 25 last

year. The residual P in that field is 11 pounds.

If you go to page 3, 9 pounds of residual P.

Page 4, 14 pounds of residual P.

Page 5, 12 pounds of residual P.

Page 6, 11 pounds of residual P.

And I will draw your attention to page 7, the last page. If you'll notice, higher up on the second line, organic matter content of this field, this is a 150 acre field of hard red spring wheat with 25-bushels an acre last year. They gave you an 11.4 organic matter. This is a newer breaking field. This has been broken for approximately 10 years. You can see that on the manure breaking at 24 pounds of P, residual -- this is page 7. Residual P is 24 pounds. Even though at 24 pounds that barely touches the marginal line.

And for flax the next year, they are calling anywhere from 10 to 30 pounds of P2O5. As Mr. Scott Dick, from Elite Swine, said: In this part of the province ou prosphate problem is that we don't have enough of it. We have been -- like I said, for the 75 years that this country was farmed, half summer fallow, half crop, no

fertilizer. It was an organic growing situation that did not work.

And now we, as the next generation on the land, have got to start dealing with shortages. And we can either use it -- we can either add it chemically or we can use manure to do it, okay? So when we are feeding pigs now, we don't -- we are too small. We don't use phytase because we want the phosphate at the end. We want to be able to fertilize our crops with manure and get the results of the P.

The next phase. After your first conditional use hearing in Winnipeg, I read in the Winnipeg Free Press that the way the writer phrased it was that the individual environmentalists testified against a powerful pork lobby. And I -- having experienced just what happens out in western Manitoba, I kind of got a chuckle out of that. I will use the example of three family farms, three family farms in three different municipalities and their states and what happened to them. For one, I have the family's permission to use their name. Well, two of them I have that for.

The third one, in the R.M. of

Rosedale, I don't have their name, so I will simply refer to it as the Rosedale barn. The Rosedale barn was proposed by a farmer, and his two sons, in the R.M. of Rosedale -- this is on page 8 -- in the R.M. of Rosedale in 2003. The family wanted to put up a 2,300 animal unit finishing barn, 2,100 head of hog.

I have been told that the conditional use hearing on the barn was held Neepawa. I would say the presentations for were about half and half, half for the barn, half against. And the council in the R.M. of Rosedale, that council took it under advisement and closed the conditional use hearing. And nobody heard anything about it for several weeks.

I gave the gentleman a call to see -- the proponent a call to see just where the application was at. And he said: Well, we received our approval. We are approved to build the barn, but we will not be building it. And so when I asked the farmer: Why?, he said: There are 49 conditions that they put on the construction of the barn. At least half of them, if they follow them through to their logical conclusion, will bankrupt me.

Now, I will read you -- I have got three of the particular conditions here on the page -- on page 8. I will read through them so that the rest of the people hear them.

"Manure application areas.

All manure generated by the livestock production operation shall be injected on cultivated fields or forage crops, excluding summer fallow."

Now, remember that we saw the picture today of a -- of a rotary disk injecter for '40. Those didn't exist in 2003. And they wanted it:

"...injected in forage crops, excluding summer fallow, as indicated in the Manure Management Plan provided annually to council."

These gentlemen had most of their land sold to forage. And so what they were being told is: You have got to inject your liquid manure into your forage using something that doesn't exist, okay?

"6. Manure applications shall be undertaken in such a fashion that the manure does not provide more than 50 percent of the estimated nutrient

requirement for a particular crop in a particular growing season. That is to say, the applications of nutrient onto spreading areas shall be undertaken at a staged rate, to minimize impacts of leaching."

That, in essence, says, that even though you have to inject with an unknown machine, you can only inject half of your requirement. You must pay in full for that, but only for half, and put the other half on with regular fertilizer, using application equipment. And that condition 6 says that you have to pay double application to provide one shot of fertilizer.

And the final one, and this is the one that the farmer said was really prohibitive:

"If unacceptable levels of any of these substances are detected in any particular water sample, or if repeated sampling from a particular well discloses a persistent problem, or if local soil monitoring reveals excessive accumulations of any of these substances within two feet of the water table, Council may direct

that the frequency of groundwater sampling be increased, that a more comprehensive system of groundwater monitoring wells be installed to further assess the problem, or may seek expert opinion to further assess the problem or determine a remedy to be implemented by the applicant, at the expense of the applicant."

And that particular one is simply "substances". There is no list of what those particular substances are. We can assume that it might be phosphate or nitrate or E. coli or coliform. But, like he said, that particular one is a recipe for bankruptcy.

They still -- the gentleman has two sons or had two sons -- well, he has two sons. Whether they are still in Manitoba, I don't know. The farmer is. He still farms in the R.M. of Rosedale. But whether his sons have stayed with him, or whether the Alberta building boom has got them, I don't know.

My second family farm, and I have their permission to use the farm, is in Saskatchewan, directly north of Brandon here up

number 9. Rosedale, for your information, is a fairly large municipality north of Neepawa, Manitoba.

The R.M. of Saskatchewan is directly up number 10 here, north of Brandon, the Garbutts. In early 2001, their family farm proposed again to put up a 300 animal unit barn in the R.M. of Saskatchewan. According to where they wanted to site it, and the technical review was good under the zoning by-law as it existed at that time, it would have been a go.

The Council in the R.M. of Saskatchewan, at that time, had begun work on a new zoning by-law, so they gently told the Garbutts: Don't push this. Let us get our new zoning by-law made. And I'm sure -- and this is a quote from Mr. Gurbutts, he has told me: We are sure you will be pleased with it.

And as I have come to know, when you have a municipal council saying: Well, let us do something and you will be pleased with it, pleasure is not what you end up with. When the new zoning by-law came in, it was -- it was given first reading and went to a public hearing. It was one of the most restrictive, at that point, in

the province. And so I was asked by other area delegates, and by the office in Winnipeg, to write a letter and to appear at the public hearing to object to the zoning by-law. On page 9 and 10 is the written letter of objections by myself to the R.M. of Saskatchewan. And on page 11 -- how am I doing for time? Should I read this for the audience?

THE CHAIRMAN: Well, you have a little bit over ten minutes.

MR. SHARPE: Okay. So if I could just read it.

THE CHAIRMAN: Certainly.

MR. SHARPE: This is September 26, 2001, to Mid-West Planning Board.

"Dear Board Members,

RE: Saskatchewan's Zoning By-law number 1144.

The R.M.'s by-law begins well.

Section 4.2(a)(b), page 7, states:

(a) Support and strengthen the agricultural industry in the Rural Municipality of Saskatchewan and to provide flexibility and opportunity for farmers operators to engage in a

variety and range of farming practices; and

(b) Protect the agricultural industry and its land resources in recognition of the contribution of agriculture to the economy, lifestyle and character of the Rural Municipality of Saskatchewan."

After such a promising start, I was disappointed and saddened, as a farmer, to have my opportunities and flexibilities prohibited, prohibited, prohibited. As a -- page 17. As a farmer, therefore, I must object to anything that prohibits agriculture's flexibilities and opportunities.

And if you'll turn to page 11 from your secretary -- page 12, I'm sorry, this is the R.M. of Saskatchewan's Zoning By-law for the size of -- they call them APO's, Animal Production Operations. And you will notice that on the first line:

"For APOs producing liquid manure using earthen manure storage facilities:

251 animal units and up - prohibited."

Now, the Gurbitts got ahold of this. And their barn was going to be 300 animal units. They were, in fact, prohibited from that.

> "For APOs producing liquid manure using tank storage facilities: 801 animal units and up - prohibited."

And then:

> "For APOs producing non-liquid manure: 2501 and up - prohibited."

And an example of that would be feedlots. Now, even back then, and this was 2001, and this is back to page 9:

> "I, Martin Sharpe, representing District 3 of the Manitoba Pork Council hereby object to the following:
>
> 1. The PROHIBITING of family farms with over 250 animal units using earthen manure storage of liquid manure. According to the latest provincial statistics, the economic size of a family-owned, stand alone, farrow to finish operation using liquid manure in an earthen storage is 300-325 sows."

And that was in 2001, so that was six years ago now. It is far higher now.

> "300-325 sows in a farrow to finish operation equals 375-406 animal units, which would be PROHIBITED in the R.M. of Saskatchewan. Flexibility and opportunity?"

And at that point, and I won't -- and then I say:

> "The EXTREME minimum separation distances are, in fact, primarily double, and in some cases triple those of other municipalities in the Mid-West Planning District.

Compared to the provincial separation distances, they are up to three times those in the R.M. of Saskatchewan.

> And when I asked them:
>
> "When I questioned the R.M. of Saskatchewan Councillors at their PUBLIC HEARING, I was told that they had not done the GIS -- the GPS before they passed the by-law. A quick look at the municipal map shows there are not areas available for a large A.P.O."

There is no place for an Intensive Livestock Operation in the R.M. of Saskatchewan.

And, sadly, the Gurbitts were, therefore, turned down on their barn.

And since 2001, there has not been an application to the R.M. of Saskatchewan for any livestock operation. No hog barns, no dairies, no feedlots, nothing. Now, the cattle operations are all grown, but they are not bothering with them. They have a few of them, but they are not bothering with them. What they are scared of, and what they don't want, and what this extremely restrictive by-law has given them is no barns for livestock growth at all.

The third one, and it was objected to, Manitoba Agriculture objected to it, the Pork Council objected to it. But on December 17, 2001, I received the following letter, this is page 15, from the Mid-West Planning District:

> "In accordance with Section 45(5) of the Planning Act, I am writing to inform you that the Rural Municipality of Saskatchewan has, on December 11, 2001, given third reading to its Zoning By-law. The Zoning By-law is

now in full force and effect and is numbered By-law Number 1144.

If you have any questions, please called the undersigned.

Yours truly, Wayne Poppel,

Development Officer."

As I said, there has been no development in the R.M. of Saskatchewan. Mr. Poppel still works there, and he has not been a very busy man.

The final one is the Can Am barn in the R.M. of Daly. Ms. Pryzner, who was a Daly Councillor, spoke on it a little earlier today, so I will just go kind of quickly through it. But first I will get you to look at page 10. In 2004, the government changed the Manitoba Livestock Manure and Mortalities Management Regulation Number 42/98. It has become 52/04 now.

One of the first changes that they made was the first one in the definitions here for "manure":

"Manure" - newly defined as includes animal feces or urine, contaminated water (runoff) and wasted feed, livestock bedding, soil, hair, feathers and other debris"

that might flow out of your yard. With the changes to the regulations, if Conservation comes to your yard and sees that stuff flowing out, they will give you a warning. And they will also say that you have to collect that from leaving your property. If it is an earthen manure storage, for a short-term it was called a "collection basin". It's in-ground and the water flows into it and is caught.

When Can Am came to the R.M. of Daly, there was an instant -- well, it took them a while to get it going. A group was formed called the Concerned Daly Ratepayers. It was headed by Ms. Pryzner and Mr. Dolecki. And they wanted to stop the hog barns from coming into Daly at all costs.

They went to the R.M. of Daly Council and persuaded them that their zoning by-law that they had in effect was not strong enough. So the Council, under extreme pressure, said: Well, you people come up with one, and so I have included it. It starts on page 18 and is the "Rural Municipality of Daly By-law Number 2002-02". And this is what the Concerned Daly Ratepayers came up with for a new Zoning By-law in the R.M. of Daly

to stop the hog barn.

I will draw your attention to certain portions starting on page 22 of your secretary's marking with a circle. This is Zoning By-law Number 2002-02 (f):

> "Applications for a conditional use pertaining to a new livestock production operation or the expansion of an existing livestock production operation shall be denied if the proposal contravenes any of the following, and these requirements shall not be subject to any application for variance or modification:"

Now, even intergovernmental affairs, when they heard that, said: Well, that's what variances and modifications to zoning by-laws are for, is for the council to have some discretion. But this zoning by-law said: Nothing, nothing at all. And I objected to this at their public hearing. I objected to page 23, number 7. And I objected, as a cattle producer, knowing that "manure" had been changed.

> "Where liquid manure storage by means

of any below ground storage, including earthen manure lagoons, is proposed, it is to be denied."

So the government, on one hand, had changed the rules and said that as a cattle producer you have to collect your runoff. This zoning by-law says: You can't collect it underground. In other words, any cattle producer in the R.M. of Daly who was told -- who was warned or given an order to put in a collection basin, under this zoning by-law, couldn't do it. It went on and on. It is a very restrictive, extremely bad zoning by-law. The council, in their wisdom, turned it down, and went back to the original zoning by-law.

The barn is now in Daly and working well. I have not heard -- except for Ruthy's one complaint that she had here today, I haven't heard about any problems of it.

And to conclude, I guess, I'm a farmer of both livestock and the earth. As part of -- as Mel's presentation said, we went to leave the air clean, the water fresh. And the continuation of that creed is that we want to leave the land better than we got it. And in my -- and that, in my mind, means less weed seeds in the soil and

more fertile. And if we can use manure to make our land more fertile, we have done a good job.

The second thing is Bill 40. It hasn't been mentioned here yet today, but it was a bill to make it easier to get livestock operations going in the province. Three ministers of Intergovernmental Affairs, Mr. Friesen, Mr. Hychuck and Mrs. Wochuck pushed it forward, and then it was all of a sudden just killed. And we have now been left with the planning districts putting together livestock areas in a development plan. And those meetings are beginning to get ugly again.

And so I'm suggesting that you think over that Bill 40, with its requirements of the municipalities to do a little work, and the province to do the rest, that may be the way to go. Because in this area of the province, especially, from Brandon north, it is becoming a have -- or it is becoming more of a have-not part of the province. We could be a flourishing industry, but we are not.

THE CHAIRMAN: So, Mr. Sharpe, you're suggesting that a lot of the authority to approve livestock operations should be taken away from the

municipalities and done by the province?

MR. SHARPE: I'm saying that in this area of the province, municipal councillors and councils that are, in essence, going rogue that have been -- that have taken suggestions from the province to do something a certain way, and have gone from point A to point B in one second.

And they have gone from some municipalities, the Hamiotas, the Glenwoods, that are allowing the livestock in and that are prospering, compared to the livestock of Saskatchewan and Elmwood and Archie. Archie in the last sentence -- or the last census or the census, was now a third of the population. And I blame that simply, or totally, on the Archie Council. They had a chance for some development and they said: "No".

THE CHAIRMAN: But shouldn't the people have that right to make that decision? And, I mean, they are elected by the general population.

MR. SHARPE: As a democrat, I would like to tell you, yeah, that's the way it should be. But with today's media, and the internet, there are so many -- there are just so many

misleading stories going around that it becomes so easy to frighten people so that they make bad decisions.

THE CHAIRMAN: Well, I don't want to get into -- we could get into a lengthy discussion on democracy and how it is impacting us on all levels, but tonight is not the night for that. Edwin?

MR. YEE: Mr. Sharpe, how do you feel about the changes to the Planning Act requiring municipalities to establish development plans? Do you see that as being something positive, in terms of looking at the agricultural industry and setting aside areas for development?

MR. SHARPE: In this part of the province, pretty well every area of every municipality is agricultural. But the first one that did it in this area was the Neepawa and Area Planning District. And they brought forward, even in their development plans, extremely restrictive -- for a wide open agricultural area, extremely restrictive agricultural animal rules.

And so it is all bound up in appeals. And they are supposedly going to the Municipal Board to get themselves straightened out. Now,

they are the ones that have first tried that. And so I was hoping, you know, that that would be a way to kind of get it going. But if the Neepawa area is any indication, we are going to be squandering for another three or four years. It's not -- it's not going to be the answer to the problems.

THE CHAIRMAN: Wayne?

MR. MOTHERAL: Well, I don't think I can do any justice to this without debate, and it's not allowed. I would only recommend, or attack what you are recommending here, which is probably more regional cooperation. Many areas in the province do have larger planning districts. And they have rough times at the start to try and come up with development plans. But in the long run, sometimes they are for the best. Don't give up fighting.

MR. SHARPE: Oh, no, no. And in your area of the province, there is a lot of -- it seems to be that the councils act a lot more mature.

MR. MOTHERAL: I am not going to get into that.

THE CHAIRMAN: Thank you very much.

Thank you very much for that, Mr. Sharpe.

MR. SHARPE: All right. Thank you. Again, welcome to West Bank.

THE CHAIRMAN: Please state your name for the record.

MR. ROLFE: David Rolfe, President of Keystone Agricultural Producers.

DAVID ROLFE, having been sworn, presented as follows:

THE CHAIRMAN: Go ahead, sir.

MR. ROLFE: I am David Rolfe, president of Keystone Agricultural Producers, and on behalf of Manitoba's farm families, I am pleased to have the opportunity to present to the Clean Environment Commission on an issue that will have an impact on how we farm in this province in the future.

As I mentioned, I am the president of Keystone Agricultural Producers, which is the largest general farm policy organization in Manitoba. Our membership includes thousands of individual farmers and we have representation around our board table from at least 20 provincial commodity groups. Our role is to represent and promote the interests of farm families, and it is

with this perspective in mind that I'm here today.

As the CEC continues its review of the hog industry's environmental sustainability process, it is critical that we understand the impacts that this process can have on all farms in the province and move forward. Agricultural sustainability is like a three-legged stool, representing economic, social and environmental considerations. One cannot exist without the others. So from our perspective it is critical that the Clean Environment Commission has an understanding of what impacts its recommendations may have.

As farmers we are also concerned about the future of our industry and recommend that the Clean Environment Commission give due consideration to the impact that its decisions may have on the ability of young farmers to build their operations and diverse and expand into the hog sector.

Linkages within agricultural in our communities: The Clean Environment Commission must recognize that agriculture is a very interconnected industry. While your decisions on the environmental sustainability of the hog

industry may appear to isolate and affect the 1,400 hog farmers in the province, the reality is that all of Manitoba's farmers will be impacted in some way, from the grain farmer who grows the feed for the hogs, to the company worker that mixes it and the truck driver that delivers it. This issue will have a wide reach into Manitoba's rural communities, urban centres, and many homes throughout Manitoba.

As a result of the current uncertainty in the hog sector, losses are being felt in the construction, equipment and the feed industries across the province. The economic reality is that hog production is good for Manitoba, and to ensure that these benefits stay in our province we must be willing to provide them with the tools that they need to continue to improve environmental sustainability, instead of simply dictating that they continue to do more.

We must also be mindful of other industries that are looking to agriculture as a valued partner. In Manitoba we continue to focus on opportunities in alternate energy and bio fuels. To achieve the environmental rewards of this industry, the economic reality is that a

strong livestock sector will be needed to use their co-products.

I farm near Elgin, Manitoba, which is southwest of Brandon, about 45 minutes southwest of here. I have seen the economic advantage of a sustainable and growing hog sector first hand. Jobs have been created in our communities and our area is home to a new feed mill. An ethanol plant is also in development in the southwest. Part of their business plan includes the sale of high protein feed which is created as a byproduct.

As a pause in the hog industry continues and uncertainty remains in the industry, there is almost no growth. This decreases the opportunity for this bio fuel facility and may develop into a situation where these valuable byproducts have to be exported out of Manitoba.

Another proposal planned to link biotech hog production with alternate energy, and these plans are halted as well. Instead of developing our own value-added and alternative energy industries, all we will be doing is providing the raw materials for these opportunities to grow in other jurisdictions.

The temporary pause has caused nothing

but harm to the economic growth in the province. It is also causing a domino effect from the effects that I just highlighted previously. It is not just the sustainability of the hog industry that is under review, but the sustainability of the rural economy.

Some of the current initiatives in agriculture: In agriculture we are fortunate to have farmers that move ahead with voluntary initiatives that protect and improve our environment, and hog producers are among the leaders. Farmers continue to lead the way in adopting new technologies and management techniques, aided by the information provided as part of some important voluntary programs. These include the environment farm planning process, which helps farmers identify environmental risks on the farm, develop a mitigation plan, and implement it with some government cost sharing. The Riparian Health Council and the Riparian Tax Credit have also had success in changing farmer's management practices near these important environmental areas.

Most recently we have seen exceptional response from farmers in the Rural Municipality of

Blanshard, who are participating in an alternative land use services pilot project. Over 70 per of land owners in this area have evaluated the environmental benefits on their land and have voluntarily enrolled in an ALUS program for a relatively small acre incentive.

The point of these examples is to show that farmers want to do the right thing and will continue to do more if there is an incentive structure that provides the flexibility we need to run our businesses. Most often new environmental initiatives come at the cost of the farmer, and to a point we have been willing to absorb these costs. The problem now is that farmers have done everything that they can and can absorb no more, simply because we have no way to pass along these costs to our customers. We strongly believe that if environmental benefits are enjoyed by all, then we should all share in the costs of providing them.

The Manitoba Pork Council lists all of the acts and regulations that govern their industry on their website, and certainly it is quite extensive. Over the last ten years the hog sector has been under increasing scrutiny as it

relates to environmental practices and this has lead to a much broader understanding in the farming community about our collective responsibility towards the environment. As a result, hog farmers have been one of the most progressive sectors in conducting research, developing new technologies, and implementing beneficial management practices. Unfortunately, government regulations have not always kept up to the pace and this must also be considered.

For example, a low phytase barley variety has been developed and could provide another opportunity for farmers to lower the amount of phosphorous that has to be managed on their farm. The slow and complex nature of our variety of registration system means that the Federal Government has seriously delayed its introduction. There is also a Federal regulation in place that sets out guidelines for the minimum phosphorous requirements for feed rations, and this was developed decades ago. It is very possible this is set too high and could be revised to further decrease the amount of phosphorous managed on hog farms.

On the provincial side, government has

delayed granting permits to producers who wish to modernize or expand their manure storage facilities, or in some cases have set standards so high that they are impractical to implement. As a result they are actually restricting the environmental improvements that livestock industry wishes to make.

The point of these examples is to illustrate that it is not only the farmer who has a role to play. All levels of government have to put a priority on developing a practical and reasonable approach that works with agriculture.

We live in a world of unintended consequences, and I would urge the panel to bear that in mind when they are making their recommendations in light of some of the situations that I have just highlighted.

As a proactive measure, since the mid 1990s, hog producers have had a peer review system in place to deal with environmental issues. Producers are also required to complete manure management plans which are designed to ensure that the nutrients are applied in an environmentally sustainable manner. Just as importantly, these are being enforced across the province.

There are other structures currently in place that address environmental sustainability. If there are complaints about a hog farm, or any other farm for that matter, these can be taken to the Farm Practices Protection Board and thorough investigations are undertaken. If a farmer is found to be at fault, remedial action is required and this too is enforced. Regulations about location and environmental sustainability of hog barns are also part of the municipal planning process, as local councils must identify areas where hog barns and other livestock ventures can and cannot be located.

All of these processes are designed to ensure the overall sustainability of the hog industry. However, regulation alone simply can not provide the widespread environmental impacts that Manitobans are looking for, which is why Keystone Agricultural Producers continues to support voluntary incentive based initiatives. We recognize that there is certainly need for regulation and enforcement, but as I mentioned, many of the issues identified by the Clean Environment Commission for consideration under this review, like land use planning, water

quality, odour, and disease transmission are already addressed by existing regulation. Others, like nutrient management, will soon be enforced by regulation.

In short, a balanced mix of incentives and regulations are needed to ensure the ongoing environmental sustainability of the hog sector, and as for agriculture as a whole. We encourage the Clean Environment Commission to focus its recommendations on this area.

In closing remarks, on behalf of Keystone Agricultural Producers and the farm families that we represent, I wish to thank you for the opportunity to present during this review of the hog sectors' environmental sustainability. We take our role as land mangers seriously, and in addition to the voluntary initiatives that we undertake, there are also a wide range of programs and regulations that compel hog farmers and all farmers to protect and improve our environment. Farmers and their families strive to ensure that future generations will grow in a sustainable Manitoba. Thank you.

THE CHAIRMAN: Thank you, Mr. Rolfe. On the top of page 2, and then I think you, sort

of in your almost closing comment, the last sentence in the paragraph at the top of page 2, you talk, we must be willing to provide them with the tools they need to continue to improve environmental sustainability. And then at the end you talk about a balanced mix of incentives and regulations. Those two are related?

MR. ROLFE: Very much so.

THE CHAIRMAN: And just what do you have in mind? Could you expand a little on that?

MR. ROLFE: We see regulations being proposed that, again, are going to impose additional restrictions on our industry, whether it is the livestock or whether it is the agricultural industry as a whole. We would certainly like to see some cost sharing of those, of the costs involved in complying with those regulations, and we had made recommendations to government on what the incentive package should look like. It has been estimated in some quarters, for the hog industry, it would cost approximately $100 million to comply with the requirements that are currently being reviewed and currently being proposed as regulation. So we see that there is an opportunity here for the public,

through their government, to cost share in those improvements.

THE CHAIRMAN: You talked about, you commented on the Federal Government and the problem with the CFIA feed ration restrictions and the grain or the barley problem, but you also said on the Provincial side, government has delayed granting permits to producers or it has set standards so high. Can you expand a little on that, please?

MR. ROLFE: In probably over the last two and a half years, there has been examples of producers out there who have wanted to expand their manure storage facilities, or build barns, or modernize their facilities, and delays and delays and delays in obtaining the necessary permits from different government departments to proceed with those changes. That is an unintended consequence, that is an industry that has been restricted from, in some cases, existing livestock operations from modernizing their operations, from making environmental improvements simply because the permits were not being granted in a timely fashion.

THE CHAIRMAN: Thank you. Edwin?

MR. YEE: Yes, Mr. Rolfe, you mentioned if there were complaints about the hog farm, they can be taken to the Farm Practices Board and thorough investigations undertaken. Can you elaborate a bit more? Who undertakes the investigations, and do you have any statistics, say from last year, about the number of complaints and how they were resolved?

MR. ROLFE: I don't have statistics on the number of complaints, but we have in the Province of Manitoba a Farm Practices Protection Act, and under that Act there is a Farm Practices Protection Board that was set up. That legislation was put in place, oh, probably a good number of years ago, it has been in place for a long time. It acts as a referee in the situations where a complaint is brought forward from the public, whether it is an environmental complaint, whether it is a complaint over dust, odour, hours of work, or those types of issues. It primarily was a board that was set up to deal with mainly agricultural issues related to crop production. Since then it has had to deal with, in some instances, livestock production and complaints directed against livestock operations. I don't

have statistics. The board itself I understand does the work, they seek advice where necessary on complaints, and will make decisions based on the advice that they receive from others who are qualified to investigate the situation.

MR. YEE: Thank you.

MR. MOTHERAL: Yes, thanks Mr. Chairman.

Mr. Rolfe, first I would like to congratulate you and your association for all of the work that you do on behalf of farmers. I know that you have a lot on your plate and you work on a wide range of issues, I know that for a fact. I have to admit that I'm a farmer myself and I haven't always agreed with everything, but that is my prerogative.

The alternate land use, when you were mentioning the RM of Blanshard, is that a very common thing throughout other areas of the province? Are there any other areas that are taking advantage of this? I know it is a very small incentive as far as dollars.

MR. ROLFE: The alternate land use concept has been in development probably for the last five to six years. We at Keystone have been

working away at trying to promote the ALUS concept. The project I mentioned in the RM of Blanshard is a pilot project to prove the concept and how it can work. It is funded by the Provincial Government, it is funded by the Federal Government, and it is funded from non-governmental organizations. The project is the first in Canada. There are other provinces that are embracing the concept and there is pilot projects proposed for most of the other provinces in Canada, especially the western provinces. It is a move to begin to change government policy and to embrace the concept of ecological goods and services, and preserving natural capital. And it is a concept that has been developed by farmers, driven by farmers, and hopefully managed by farmers themselves through advisory boards and those types of concepts.

MR. MOTHERAL: Thank you. Can you visualize a program like this seeing the struggles that all farmers, livestock and grain, are having today? Can you see this as being an increasing incentive and getting close to where our fellow farmers in the United States have enjoyed the CRP program, which is very, you know, its conservation

reserve programs, where it is very financially inducing, can you see it ever going further than what we have right now?

MR. ROLFE: We certainly hope so. We certainly hope it gets embraced nationally. There is certainly potential for it to become an environmentally sustainable program, to make substantial gains on environmental protection right across Canada. And I think there is huge opportunities there. And we get into the politics of trade deals, we get into the politics of environmental conservation, but I think there is huge opportunities there. We have wetlands that we need to preserve, we have habitat that we need to preserve, we have species that we need to preserve, and we also have cleaner water, cleaner air, and all of those other goals in mind when we begin to talk about ALUS. It is a very broad concept, it is a concept that can be adapted and adopted by all of agriculture, and it is a concept that deals with preservation rather than remediation.

MR. MOTHERAL: Thank you.

THE CHAIRMAN: Thank you very much, Mr. Rolfe, thank you for coming out. I have one

parting question, when do you find time to farm?

MR. ROLFE: That is probably the best question of all.

THE CHAIRMAN: Next, Mike Sheridan.

(Short pause)

THE CHAIRMAN: We are back. Please introduce yourself for the record?

DR. SHERIDAN: My name is Michael Sheridan.

MICHAEL SHERIDAN, having being sworn, presented as follows:

DR. SHERIDAN: Thank you very much. I would like to thank everybody for the opportunity to speak tonight. My apologies for leaving it so late, and I appreciate the fact that I was given the opportunity to have a few minutes with you tonight.

My name is Mike Sheridan. I'm a veterinarian out of Steinbach, Manitoba. I came to Manitoba back in '77, and practiced in Selkirk for three years. It is feeling like calving season, by the time we get home tonight it will be a different thing than swine practice being up this late.

I moved to Steinbach in 1980 and

worked in general practice focusing mainly on food animals and swine, and in '88 joined forces with Dr. Walter Heuser, and since then we have developed a swine practice with nine veterinarians, six full-time, three part-time, five of us are partners.

Our client base range is a wide range of farms. We work with small family farms, large corporate farms, we have many colony herds, various combinations of different types of production systems ranging from boar studs to farrow to finish unit, to nurseries, to feeder barns. A large part of our business is exporting swine to the U.S. And animals that we see every week, or farms that we see every week.

There is a number of things in swine practice that we need to deal with. And the reason I wanted to speak here tonight is to focus on a component of that, and that is part of our biosecurity protocol, and I will explain that in a minute. But just recognize that as swine practitioners, we are dealing with food safety, animal health, we deal with production situations, health management situations. So we really do cover a wide range of production systems in a

large range of farm settings. And at all times one needs to remember that our goal really is health management. I will be talking about biosecurity, but really health management is our main goal.

And biosecurity, when we get to that, is really the prevention of new diseases coming into the farm. And the reason I'm here tonight is I have received some comments from some fellow practitioners, as well as from some clients, that through some of the discussions, that perhaps some of our biosecurity protocols that are in place have been maybe misinterpreted as being means of keeping people out of barns and keeping prying eyes away from our industry.

I really just wanted the opportunity to let you know that they are very real, and what we do build into disease prevention programs are based on, not always science, but the majority of it, as you will see, is based on science. Some of it is based on the unknown, and building in barriers and sort of buffers, if you will, in our procedures to ensure that diseases won't get into the barn, diseases that will affect production of the farm, or animal welfare, things like that.

And none of us want to see the ravages of disease in a pig barn from a number of different perspectives.

And always remember, as we are going through here today, that food safety is really our ultimate goal. We don't want sick animals, we don't want diseased animals, and we don't want animals that are receiving various adulterations that will affect them as food products in our food chain.

So really when we looking at, as I said, we are looking at farms, we have two components. One is the biosecurity component, keeping disease out, and the other one is the control of the bugs that we already do have. We won't spend any time on that aspect, that gets into health management, I really just want to talk to you about how we prevent diseases from getting into farms.

And as you can well imagine, our industry has, we have a very high health industry, swine industry in Manitoba. And I would say when you look across the west, Manitoba, Saskatchewan, Alberta, we have very high levels of health, and that is based on a lot of the health prevention

protocols that have been in place. And I really think that we are the envy of many of the other swine production areas.

Over the last 10 to 15 years, we have seen a real change in the demographics of the herds, both in the production style and the size, et cetera. But one of the things that we have seen in that period of time has been an upgrading of the health status through depopulation and repopulation of animals, or in the construction of new barns, some of which we have heard referenced here tonight, which were populated with high health animals, which gives us a very good start to preserving the health and the welfare of the animals inside.

The other nice thing, and it didn't dawn on me until I was talking to one of my colleagues, that we have a small sourcing of animals, there is only a set number of seed stock producers that are active here in the west. And all of those, if not all, have extremely high health statuses. So as a result we have populations of pigs that do not have a lot of disease entities in them that you will find elsewhere, such that is their immunity to those

diseases is very low, and as a result of that they are very susceptible and, therefore, we build in our protocols to prevent the addition of new diseases.

As you can see from the list, biosecurity goes into a whole host of areas. Certainly breeding stock, I will touch on briefly; location is important. Some of the west, we envy the space that you have in Western Canada for locating pig farms. Semen, we will touch briefly on, very, very high end business now with a lot of monitoring. Transportation, I suspect you will have heard other presentations on that, and I will touch on some of what they are doing. The people aspect, not having visitors on the farm. And then supplies, when we talk about supplies, we are looking at how we can prevent diseases coming in. And then we go right down to rodents, flies and mosquitoes and, in this day and age, of Avian influenza, birds as well.

Buying and breeding stock certainly is our biggest challenges and there is just some indications, there is different strategies that we employ for bringing in breeding stock. We try to buy from high health sources, we try to buy from

sources that don't have the diseases that are absent from our farms, and we build in other buffers around that, but the bottom line is, it is a disciplined approach to bringing in animals, and we find that the companies are very good in providing health data and data records so that we are always in tune with what is going on as quickly as they are.

But we still build in buffers, and more and more farms are building in buffers against the introduction of diseases that may not be noted in the farm at the time of dispatch of those animals, so we have systems called quarantine barns where animals will be placed away from the main farm, 30 days, 60 days, 90 days. It will really depend on the program, and the importance of health and the maintenance of health to the system, whether it is a commercial farm in a high density area, or whether it is a very high health breeding seed stock farm in a more remote area. So we do build quarantines in to try to protect ourselves, waiting for the phone call 60 days out and saying, where are those gilts that we sent you? We want to know they are located somewhere in a safe location away from the main

farm so that they can then be sent to slaughter or whatever, if there is any risk that they are potential risk to other animals.

THE CHAIRMAN: Dr. Sheridan, what is a gilt?

DR. SHERIDAN: Gilt is a young female breeding animal. Sorry, I apologize, I hope there won't be too much of that here for you, sorry.

Again, just to show you the seriousness of it, we locate these quarantine barns away from the farm. They are high cost units that need to be manned by different personnel, they need to be handled in a separate way, and they are not emptied, in other words, the breeding animals inside are not removed and brought into the main farm until those animals have been tested or have gone through an appropriate down time.

So again, just to show you that there are buffers and barriers even in bringing in the animals. Probably one of the areas, you know, we have been challenged on keeping people out of barns because of, you know, various reasons. But, in fact, what we do with the quarantine barns, we build in the same biosecurity protocols for them

as we do for our main farms. So we extend the same procedures throughout the whole process to try and ensure that there is no inadvertent introduction of diseases. And there is tremendous amounts of testing, blood testing in some systems with numerous different diseases tested for. So, again, these are real processes that are going on every month, every two months, on many of these farms. And more and more farms are wanting to put the quarantine facilities in to protect their livelihoods.

Location is a very important aspect for us. We site barns, we check where barns are, we want to know where the neighbors are. We have heard reference to GPS earlier on various aspects of production, and one of those is on location of the farm, so that we know that they are protected. And having them in more remote areas is actually a benefit, and certainly having the opportunity to place barns in some of the municipalities where there is low animal density is actually an advantage to us and to our industry.

Artificial insemination is the way that most of the genetic material is moved in and out of farms now, and even that is becoming a very

high end business, where animals are actually tested, or collections are actually tested, collections of semen are actually tested with PCR testing on a routine basis. Some studs test all ejaculates or all collections from the boars. In our area, each week our boar studs are actually collecting blood samples and sending them to the Winnipeg Vet Lab to have them tested with PCR tests. So, again, very real concerns there for not wanting to move diseases around through semen, and semen is a vector of diseases, or for some of our diseases that we do.

This is one, you know, we are an industry on wheels, and a lot of our pigs move many times before they go to slaughter or even to a breeding farm. And our transportation industry, I'm not sure if you have representation from them, but I just wanted to say the intensity of transport protocol and transport sanitation, trying to ensure that trucks are not vectors of disease has really intensified. Some of the major haulers do a tremendous amount of work monitoring, they have washing programs, they have verification programs, they have auditing programs, and then there are independent third-party auditors that

will come in and actually double check the trucks. So, again, a very real component to farm biosecurity.

And we look at things, you can see seals on the middle truck, the gentleman on my right, I think it is your left, I don't know, they always reverse these things, but is actually doing plating to check for bacteria which the trucking companies do on a monitoring basis. And just, again, some of the technology, the bacteriology that they employ on the other side of the screen to show you differences in the light coloured ones or infected ones, and the dark coloured plates are the ones that have special treatments done to the trucks to show that they actually do mitigate the bacterial contamination and, therefore, by design, the viral contamination of trucks.

The one that I'm here to really reflect on is people movements, which is the one where we have been challenged. And if we are working with trucks and semen and pigs and quarantine barns, we feel as well that people as vectors, more so mechanical vectors rather than biological vectors. A biological would be, if I picked up influenza and went to a barn and

transferred it to the pigs, I would be a biological vector. But if I come in with gunk on my boots or on my equipment, et cetera, dirty fingernails, things like that, dirty clothes, then I become a mechanical vector.

And many of the biosecurity protocols respond out of the 1970s when the first real high health herds were coming, they spawned out of Foot and Mouth Disease, so we since then we have tried to whittle them down to more practical lengths of time.

But every farm has its comfort zone, and every farm ends up putting up a protocol of down time or a no pig contact rule, and they really try to restrict visitors. And they do for two points. One is very real, to reduce the contamination of the barns, but the other is to ensure that the people that are employed there understand the rules. If you had a three-day no contact rule and somebody makes an error and inadvertently gets in at two and a half days, we do have a buffer there.

But we do try to restrict people. There is scientific data to show people, without coming in and showering, can actually transfer

some of the fecal borne diseases. And so we do a lot of procedures to keep people and their movements in check, so that we do not have them as an inadvertent contaminant of the barn. And we have all kinds of different rules in place. The main thing that we are looking at is trying to protect the farm site from inadvertent contamination, people, vehicles, et cetera. So very real, we do put barriers and signs up, and those have a purpose for maintaining traffic control, people control, and some are even fenced to prevent wild animal control and escaping pig control.

We have had pigs in Saskatchewan, where there is only one pig barn known, where a boar was out scratching on the guy's wall one day and was summarily dispatched because of the biosecurity risk that it presented, and a fence was hastily built.

So there are some realities to all of this, and we just look at trying to keep people and the things they bring in out of there. And there are a whole host of in-barn protocols in place to protect us, shoe drops, boot transfers, showers. Some days I will have more showers than

I care to admit. And so, you know, barns, we go into barns now. I never wear clothing in the barn that came from my house or my vehicle, I'm always wearing clothing provided by barns, so again, a very real protocol.

Supplies are another one, and this kind of gets into one other area that has probably been mentioned a few times, especially since we are looking at some changes now over the next 10 years or so with some of our sow housing procedures. We are very, very careful with how we bring supplies into a barn because we have seen disease outbreaks with contaminated boxes off of truck floors, et cetera. So many farms now actually fumigate products coming in. They take the outer boxes off, they fumigate with various disinfectants before they will bring them into the barn. This kind of goes to some of the issues that you may have heard on straw. If we go to this kind of extent on worrying about bringing in a bottle of disinfectant, you may start to understand some of the resistance that you hear from some of the producers on going back to straw based systems, et cetera. Apart from the fact that straw and pigs and whatnot, you know, pigs

like straw, straw ends up being contaminated with bird droppings.

Recently -- actually right now we are working on a leptospirosis program eradication project on a farm that got contaminated by racoons that got into his attic and then into some of his feed stuffs and urinated and that.

So we look at straw as a fairly major threat to overall housing of some of the very high health units. Other farms will get away with it that are farther down on the health protocols and the health pyramids, but again, we look at these things very much.

We are even into fly and mosquito control, and I will finish off with this, because we are now finding that mosquitoes and flies carry certain viral diseases and so, you know, looking at yard cleanup and making sure that feed spills, et cetera, are under control are very important to us.

And the last one, I think in light of some of what we are dealing with the media right now with Avian influenza, is really a high, high awareness on farms, trying to enhance the awareness of not getting bird droppings into the

barn. What happens when there is Mallard Ducks on the yard because there is a pond there, what happens when there is geese running around the feed mill picking up stuff, what happens when someone has to haul something out the back door, go out and tap on a bin, and steps back into the barn? So we are looking at bird control, Avian influenza being a concern, so again, to show you that we look at all aspects of the industry and our production systems to ensure that we don't get diseases in there, and finally, our furry friends.

I would like to finish just by saying that we have, about ten years ago when the Prairie Swine Centre in Saskatoon was planning for their Elstow unit, at two of their public meetings there was recommendations that they might want to look at putting a public viewing gallery in. One came from myself and the other came from Dennis Hodgkinson at two different meetings. We had sort of planned that as saying, we don't mind people seeing our barns, it is just we don't want them in our barns. But how could we do that?

The Prairie Swine Centre at their Elstow unit has a public viewing gallery that the public goes to. And it is really cool to be

there, because when you are there you see different production systems, you see what I see on a daily basis with the style of barns, we see behavioral differences, and sometimes you even luck out and you get to see the barns through the eyes of somebody that is visiting and sees the barn for the first time. So I think we encourage that the public see our industry, you know, we are such a small fraction of, you know, animal agriculture, such a small fraction of the population now, and I heard 1,400 farms or even smaller. There are opportunities for the public to see the pigs. There are people that have gone out of their way to bring pigs out. Arnie from Summerfeld Colony with Touch the Farm and, in fact, with Touch the Farm, and some of the farm shows are there.

It is just that, you know, in trying to maintain our business, trying to maintain the health, and trying to set the precedents and the high bars that we need, which hopefully you have seen with some of the other protocols that we do, we just wanted to let the Commission know that there really aren't nefarious reasons for keeping people out of barns. We believe they are real,

very practical, and we feel that they are for the betterment of the pig at the end of the day.

I thank you for the opportunity and I hope I did not go over my time.

THE CHAIRMAN: Thank you very much, Dr. Sheridan. Is this need for biosecurity, is it in place for the pig's entire life?

DR. SHERIDAN: It is to different degrees -- good question. If it is a farrow to finish unit, absolutely, it is going to be with us until it goes to Maple Leaf or wherever it ends up. Different systems run differently. You will tend to find that finishing barns run, many times will run at a lower level. Nurseries tend to run at a very high level. Farrow sows tend to run at a very high level. In transport, when you are moving pigs to slaughter, let's say, the purpose of washing a truck is to protect the farm that the truck goes to, not to protect the pigs as much that are on the truck, they have little to gain from that. But animals moving from a nursery to a finishing barn, the level ticks up much, much higher. So they are exposed to various degrees of biosecurity through different parts of their life. I hope I answered the question.

THE CHAIRMAN: What kind of concerns are there then with hoop barns, which are somewhat open and --

DR. SHERIDAN: I will -- because I have promised to be honest -- I will tell you that I'm not a fan of hoop barns. But, mind you, I will also tell you that I hate winter and that. So I have never been a fan of them, but then again I'm also not a fan of working finishing barns, I prefer the sow side. But that said, I do have some concerns. It is much more difficult to control skunks and racoons, things that will carry diseases like say leptospirosis, which could be a human health food borne disease. It is another birds, I guess, I don't know whether, I think we are all on a little on hyper-edge because of Avian influenza, but that said, we do worry about birds, tuberculosis, salmonella and perhaps influenza. And that said, and again, I don't like winter and I don't think they like winter, and again that is a personal bias. So I haven't really answered your question other than give you some of my personal biases I think.

THE CHAIRMAN: All right. Wayne.

MR. MOTHERAL: I have just enjoyed the

presentation. I hear so much about the biosecurity and the reason why the general public can't go in the barns and that, and you have given us a good perspective of that.

DR. SHERIDAN: The Glenlea Research Station has, I noticed some funny construction when I was there a few months ago and asked what that was for, and that is for when they do get their funding to actually put viewing galleries, I'm not sure if it is on both barns, but I believe it is on both barns, so the public will have access to more hog production style right at Glenlea, which excites me quite a bit.

MR. YEE: Yes, Dr. Sheridan, I might have missed this, but I notice when you do address the issue of transportation, and this may not be appropriate, but feeds are brought into the barns. So are biosecurity taken on delivery of feeds or anything special done in regards to the feed products?

DR. SHERIDAN: There is two types of feed production, one is purchased and the other is on the farm. If we go to the process feed -- actually this afternoon I was at a meeting and a fellow from the feed mill was saying, what are we

going to do about all the geese that are around our feed mill. There are biosecurity protocols, procurement protocols, and most of those feeds are cooked, so there has also been a pasteurization process. Then they travel in, in large trucks, sealed trucks, they are augered into sealed bins. As long the trucker doesn't forget to drop the bin lid, they are pretty secure in that regard.

On farms more and more of the systems are, you know, the grain goes from the field to maybe drying facilities or whatever, into large bins, and the bins are secured against that. Periodically you will see piles of grain, when there is a bumper crop you will see piles of grain, and that gets worrisome, especially if some of our clients might be buying that grain. There is also, most producers when they are buying grain will talk to the brokers and ask where it is from, is it from a pig farm, is it from a beef farm, or is it from just a grain farm? And they try to ask those questions. So it is still a risk site, but I think it is a minimum risk site.

MR. YEE: And maybe one last comment I would make, you might not have been aware of it, I think it was earlier on, it was suggested as far

as the general public and the misconception or the perception they are getting of this biosecurity, not being able to see what goes on behind the closed doors, it was suggested that maybe it be videotaped or a video camera so that, you know, they could see what is going on in that way, without actually being there and bypassing the biosecurity protocols.

DR. SHERIDAN: I just purchased a $700 camera and I am going to purchase a $250 underwater glass case so that we can go in and start do videotaping for training sessions, et cetera. Yes, that is a good point. I do encourage anyone, though, that's ever in Elstow, Saskatchewan, for whatever reason, that if you have a day to kill, Prairie Swine Centre viewing gallery is pretty awesome.

MR. YEE: Thank you, Dr. Sheridan.

MR. MOTHERAL: Just one more question. You mentioned the feed bins, as long as they are closed up, is there any protocol at all of those bins having to be cleaned out every once in a while or --

DR. SHERIDAN: Most farms -- again good question -- the majority of times that we

would be looking at cleaning the bins, certainly in storage bins, would be prior to a new crop, which seems just to be more tradition than anything. And the other would be, especially where people are purchasing feed from feed mills, on occasion it will come in a bit warm or humid and you start getting bridging or you get some consolidation and perhaps even molding. So I would say that the majority of our cleaning of bins will be sort of an annual inspection, get in and rinse them out if they need it. But as far as a routine monitoring program, no.

A few years ago, John Gad from the U.K. was over, and he was really promoting manholes for the bins so that you could actually get in, because a lot of people have vertigo and don't want to go up them, but actually having a side manhole that you could look in and check, you know, it would be a very good idea.

THE CHAIRMAN: Thank you very much, Dr. Sheridan. Your presentation tonight was one that we really haven't heard before, so it was really very interesting. Thank you.

Next is Sam Hofer. Mr. Hofer, would you state your name for the record, please?

SAM HOFER, having been sworn, presented as follows:

MR. S. HOFER: Good evening ladies and gentlemen. I have with me Dr. Loren Bailey. If there is any questions to be asked about nutrients and soil sampling, he would prefer answering the questions.

Good evening ladies and gentlemen of the Clean Environment Commission. My name is Sam Hofer, and I stand here today as a representative of the Spring Valley Hutterite Colony. Our colony is located 15 miles southeast of the City of Brandon in the Rural Municipality of Cornwallis. Our colony consists of 18 families.

Before I get into the main part of my presentation, allow me to paint a small economy picture of agriculture for you. When the subsidies for transportation of grain to the ports were removed in the 1990s, farmers on the prairies, particularly in Manitoba, were most affected. All of a sudden producers found that they could no longer grow and ship crops and make enough money to support their farm families. Transportation costs ate up one-third of the gross receipts and most of the profits from our crops,

which forced forcing farmers to do one of three things for survival. One, get out of farming altogether; would that be the answer? It is a question mark. Number two, expanding farm operations; number three, or expand and get into livestock production to survive. That is what was our choice and a decision made with our members.

With rising crop input costs and commodity prices which have essentially flatlined over the last 30 years, many producers have looked to livestock production, and more specifically hog production to survive. In the early '90s, Spring Valley Colony had to make a difficult decision. With low grain prices, the Crow rate gone, and several families to support, we had to make a decision to expand our farrow to finish operation from 550 sows to 1,050 sows for survival of our 18 families.

We are proud to be a part of Manitoba's pork industry, which is recognized as producing some of the finest quality pork in Canada, as well as the world over. Manitoba exports approximately 80 per cent of the pork to other countries like United States and Japan, where consumers demand a pork quality that we are

able to produce.

We are also responsible to our environment, because the survival of our industry is depending on the health of the environment and its resources. And you can rest assured that we are more tightly regulated now than ever before. There are more regulatory safeguards in place to protect our environment now than even the last ten years.

For example, the New Water Protection Act, which was passed just last year, clearly states that no person shall discharge, release or apply a substance containing nitrogen or phosphorous directly to a water body or into the groundwater feature, except under the authority of Environmental Act.

In some towns, communities are still allowed to discharge wastewater effluence within the prescribed limits of the Environmental Act License. However, discharges from agriculture is not allowed. Hog producers know that the consequences of non-compliance can be severe to our environment, to our livelihood, so we have to adjust to our environmental management practices to comply. For example, winter spreading of

manure is no longer allowed, so many producers had to build additional storage to contain manure through the winter months before spreading into the spring, summer, or fall.

Furthermore, agriculture will soon be required to adhere to the proposed nutrient management and water quality management zones regulations, as well as the proposed phosphorous threshold limits. Under the proposed phosphorous threshold limits, Manitoba agricultural producers will be required to have access to a large enough land base to balance nutrients on the basis of phosphorous limits, not just nitrogen limits, as has been done in the past. This requirement makes these regulations more restrictive than even other jurisdicitons in Canada, such as those in Ontario.

Nutrient management: Nutrients, regardless of the source, whether it be commercial fertilizer or from manure, are very valuable and necessary inputs to crop, grass and forage production. We don't want to misuse it, nor do we want to lose it unnecessarily to the environment. We have used manure as nutrients for years on the colony to offset the cost of commercial fertilizer.

We hire a consulting firm of certified agronomists to test our soils and manure in order to develop a scientifically sound nutrient management plan. The firm is AgriTrend Agrology Ltd., which is headquartered in Red Deer, Alberta, but has offices and skilled professionals across the prairies, including Manitoba. Ron Curtis, he is on the sick list today; Larry Penner is one of our gentleman here; Dr. Loren Bailey is one of our guys for consulting us on the farm. AgriTrend works with our field manager to oversee the soil testing on every field and to develop nutrient plans which balance the nutrients needed for our crops with soil nutrients availability, and manure applications.

We inject our manure in fields that need higher NPK levels to grow crops like canola, corn, alfalfa. We also rotate manure applications in fields every three to four years to allow nutrients level to be depleted. The high cost of energy and commercial fertilizer can be offset by the use of manure, making it a very valuable source to Spring Valley Colony Farms.

To better illustrate this benefit for you, our 1,050 sow farrow to finish operation

produces approximately 6,500,000 gallons of manure each year. Every 1,000 gallons of manure contains approximately 21 pounds of nitrogen. On average we inject 3,500 gallons of manure per acre of land for a total of 73.5 pounds of nitrogen per acre, which is available for plant nutrients out of the 3,500 gallons. The current price of nitrogen is 53 cents a pound, which we could put is priced higher right now. If we inject our manure on 1,857 acres of land at this rate, the nitrogen alone is worth $72,339, without the phosphate, without the micronutrients in the manure, a very natural, good source of nutrients. We wouldn't -- why would anybody misuse or waste a valuable and natural source of nitrogen?

Manure management: With regards to manure, let's face it, one of the acceptable byproducts of the livestock industry is manure. This includes all livestock sectors, not just the hog sector. Yet we hear many uninformed people say that the hog industry is entirely to blame for our water quality problems, which is wrong. You only need to read the report recently written by Manitoba Conservation called "Examination of the Environmental Sustainability of the Hog Industry

in Manitoba" to know this. In this report agriculture, as a whole, was estimated to contain only 6 per cent of the nitrogen load and 15 per cent of the phosphorous load to Lake Winnipeg. These numbers include contributions from the other livestock sectors like beef, dairy, poultry, as well as grain and oilseeds and vegetables. But the hog industry was singled out.

You might ask, can agriculture's potential impacts on water be further reduced? All I can say is that producers are already going to a great extreme and expense to meet these requirements of new stricter regulations.

For example, under the new Manitoba Livestock Mortality and Manure Management Regulations under the Environment Act, the management and the disposal of manure is more tightly regulated now than ten years ago. The regulations require larger livestock operations to file a manure management plan which describes how we manage and dispose of our manure. AgriTrend Agrologist Limited submits the manure management plan on behalf of the hog operation of Spring Valley Colony Farms. And we hire Red Hand from Boissevain, Souris, Boissevain, a certified manure

applicator to dispose of our manure in accordance with the manure management plan. We are doing it totally out of our hands. We are giving it over to AgriTrend Ltd., Red Hand out of Boissevain, to apply the manure so we are totally free to the environment and that we have got a friendly neighborly approach all the way around our colony, without a complaint in many, many years. And we have got neighbors within a half mile to a mile, to two miles, to five miles.

Water quality: Good water quality is vital to the health of the family and hog operation. Spring Valley moved to Brandon, Manitoba in 1951. We test our water every year to monitor trends or changes in water quality. As of today, we are pleased to report that we still have top quality water with no nitrates, no coliform, no bacteria, it is still fit for consumption by our infants over 51 years of use. Can we criticize the hog industry? After 51 years we moved out of Elie, Manitoba, and as of today checking it, the school board usually comes out before the new year starts up and they want water samples, and they always ask for our water out of Brandon, Manitoba here, where can you still find a

quality water like that? So where is the problem? If all hog operations cause water quality problems, could we make such a claim about our own water? We feel that the hog industry is often falsely blamed for many of the water quality problems you will probably hear about over the course of these hearings.

Environmental management: Responsible environmental management is a part of the overall operation of our hog barns. We have worked closely with Manitoba Conservation, the Rural Municipality of Cornwallis, and our ward Councillor, Emil Egert, in obtaining a permit for manure storage facilities.

Emil, he was supposed to be here today, but I had a talk with him, he moved in 14 years ago, one mile east of our yard. And he said I have still got to see the first time to smell any hog or lagoon smell in 14 years. He moved in from Stonewall, Manitoba, and bought a farm one mile east of our yard. And he is a councillor and he worked with us.

We hired Glen Newton, a registered professional engineer from Brandon, to design our earth manure storage facilities and the monitoring

well network around our lagoon, monitored every year. Who is monitoring? Not Spring Valley Colony -- AgriTrend, Larry Penner. We are putting it out of our hands, we are putting the risk into professional services. It is costly, but it is done properly. Mac's Rental Construction from MacGregor, Manitoba, which has a lot of experience in building, engineering earth storage facilities, was hired to construct our manure storage in accordance with regulations and engineering standards. Our colony has been complying with Manitoba new regulations and it costs our colony additionally $55,000 each year for independent soil testing, manure management plans for each field, and manure application services. You may hear similar cost figures from other operations as well.

In our opinion, these requirements serve to improve public confidence in the sustainability of our industry, however, in view of the high cost of environmental management, we recommend that the government consider providing financial support to offset the cost of these services for a cleaner environment. That is what we need. David wrote out, the farmers need more

opportunity for a cleaner environment so we can survive. It is no use, every year there is more small family farms disappearing around our yard, not on account they don't want to farm. The poor children, the boys, they can't see no more future in the farm with the high cost of input, harsher restrictions, requirements, and they are taken off the farm, which we don't like ourselves. We have a close relation with our neighbors, we enjoy them, we work together, we thrash together, and we seed together and everything. Very close, they come in there with our machines, and we drive in their fields with their machines, very cooperative.

In closing, I would like to thank you for giving me this opportunity to speak at this hearing and to shed some light about the hog industry and our own operation. I hope the audience will better understand the contributions agriculture and the hog sector are already making to protect our environment. Furthermore, I hope the audience is now more aware of some of the regulations which are placed to ensure that livestock expansion in Manitoba can take place in a sustained fashion.

THE CHAIRMAN: Thank you very much, Mr. Hofer. Edwin?

MR. MOTHERAL: No, thank you.

THE CHAIRMAN: Thank you very much, Mr. Hofer, for coming out here this evening. Thank you.

The final presentation of the evening, Gordon White. Would you state your name for the record, please?

MR. WHITE: Gordon White.

GORDON WHITE, having been sworn, presented as follows:

THE CHAIRMAN: Go ahead, sir.

MR. WHITE: I would like to thank the members of the CEC for the opportunity to address this hearing. I would also like to thank all of the people involved in agriculture, with actual hands-on experience, for taking the time to make presentations.

I sympathize with the Commission on having to listen to scores of concerned citizens making presentations based on poor information, no experience with viable farming practices or the real facts. I could have spent hours searching the internet for loads of articles and pictures to

flood you with data that may or may not be true, for I can post an article on the internet, and most people who read something in print, whomever wrote it, believe it must be true. Even pictures can be easily altered to make them appear to be totally different to make a point.

I decided to make a presentation on farm practices that I'm willing for you to come out and verify on my own farm that has been in my family for over 100 years. If you want to know where you are going, you have got to know where you have been.

A little history on my farm. My great grandfather broke most of my farm in the early 1900s. It has been mostly grain farmed ever since. Small amounts of fertilizer were first used in the '50s, so some of this land was depleted of nutrients and organic matter by removal of crops, hay, and beef for over 50 years. Summer fallow was used to give the land time to break down organic matter into nutrients to grow a good crop. With this practice came soil erosion by wind and water. There are fence lines over eight feet high in my area from wind erosion and lots of gullies washed out from the water.

In the '70s, my father and grandfather were using more chemical fertilizers to grow a better crop, but only replacing what each crop used. For example, if you grow a good crop, you add a little more fertilizer, if you grow a poor crop, you add a little less, which worked well because after a good crop you could afford a little more inputs.

In the late '70s, when I started farming, we went zero till or minimum till, which means leaving the stubble in place to eliminate wind and water erosion, thus limiting evaporation of water so the crops had more to use. This stage in the farm's history also saw the elimination of summer fallow and the beginning of continuous cropping. This also meant more chemical fertilizers and weed chemicals, but only maintained the farm and slowly started to improve the soils.

In 1999 my farm started using hog manure as a nutrient. This meant quite a few changes. Manure management plans had to be done, soil tests had to be done each year, which were only done every five or six years before. With each passing year or so, the rules would be

increased to where they are today, the most stringent on the continent. This is fine as long as they stay science based and logical.

Personally, the biggest -- or sorry, yes, I helped bring these hogs barns to my area for multiple reasons. The barns in my municipality create 26 full-time jobs, plus some summer student jobs, with a payroll close to $1 million, and they pay 80,000 in taxes that not only helps the municipality but also the school division.

Personally, the biggest advantage to my farm has been the manure. Without it I probably wouldn't be here today making this presentation, as I would likely not be farming. I pay for the manure based on applied nitrogen. I pay 60 per cent of an NH3 price, which is anhydrous ammonia, a deadly chemical form of nitrogen that is safe if handled properly.

I have supplied you, which are the last three pages of the document, with three field histories from my farm. And I also summarized them, I just transferred all of the figures so that you could see all nine years on one page. So you can see actual applied nutrients, manure and

chemical, over the past nine years and the corresponding soil tests. After you go over these, you may wonder why the soil tests fluctuate up and down sometimes, regardless of what was applied for inputs. Well, anyone in agriculture knows that mother nature is not only inconsistent, but sometimes downright mean to farmers. So if you grow a great crop, the nutrients afterwards tend to go down. And if you have a wreck, they tend to be up. And sometimes the soil test just does not make any sense, but it is the best science available to make our decisions on.

As you can see, there is no problem using hog manure as a fertilizer. There are some years that the results get high because of a poor crop, but with adjusting the following year, the problem disappears.

The field northwest 14/6/23 you may notice has an increase in P, or phosphate. This is due to the fact that I didn't concern myself with the amount of P applied until the regulations changed. It is still not high, but I will be rotating the higher P manure to other fields and apply lower P manure to this one to alleviate this before it gets to be a concern. So you see, the

rules do work and farmers do pay attention. The higher P is mostly located in the solids, so you can manage which fields these are applied to.

My soil tests are also GPS benchmarked. This allows me to get the most consistent results possible from a sometimes variable science. With the advantage of manure, I am hoping to try and get my farm back to similar health that it was when my great grandfather first broke it. I figure it should take me close to 50 years of applying manure and zero row till to get even close to resemble the nice rich prairie soil it was at the turn of the century.

The so-called science the province is using to say that nutrient levels in the lakes and rivers has gone up since the '70s could be right, and if it is, they need to start pointing the finger somewhere else other than agriculture, at least in this part of the province, because all the land around my area is far more environmentally friendly now than it has ever been. As you likely know, cattle were fed on the rivers all winter and cropland blew and eroded, depositing nutrients in the air and water up to the late '70s. Now you rarely see a dirt plume

from a blowing field or huge deltas of soil washed downstream by water erosion letting their nutrients continue to the lakes. So if the levels have increased that much, they need to look at different areas and causes, not the easy ones to pick on.

On the topic of smell, harmful emissions and poor work place, I also have a few comments. By living less than one kilometre from 6,000 finisher hogs, yes, they smell like pigs, the odour is strong, especially when the lagoons are agitated while application is done, but not a big problem for most of the year. I have rarely been bothered when the lagoons are straw covered, and the smell only lasts as long as the wind stays in perfect alignment with the yard. It is impossible for anyone to say, even if they lived beside the worst operation in world, that they always smell them. This is rural life with different smells, noises, dust, and traffic than in town or cities, so get used to it or move to the city for your perceived lifestyle.

As for the work environment, I could tell you some big stories, good and bad, but will only tell you one of my family's own. My youngest

daughter worked a 3,000 sow barn for two summers for a summer job, as a farrowing technician. She has had asthma since a young child. And the environment in the barns did not bother her nearly as much as going to university in downtown Toronto at the U of T; smog caused by people I suppose. She learned work in a team environment and gained some job skills that she will use the rest of her life. No, she did not want to make a career out of it, but she also does not want to be a doctor. But her ability to work with others and handle animals has gotten her a summer job as an usher for the Toronto Blue Jays this year. Handling drunk and disorderly humans she says is worse.

Manure application is an ever changing thing. On my farm we have gone from drag hose with small cultivator, to large tankers with a cultivator, to tankers with an AerWay applicator, to drag hose with an AerWay injector applicator, and I don't expect it to be the last change, but it is working well. As better methods of application come along, I imagine there will be changes. Nobody wants to waste nutrients they are applying, for the alternative is very expensive. Commercial fertilizer is hitting an all time

record.

The rules and regulations are extreme in this industry and the ag producers have been complying to the best of their ability. But if they are increased further before science catches up, farmers will not be able to continue to farm. If this happens, then you will only have corporate farms, everyone's worst fear. Too many say that these corporate, or large, or mega barns or farms have driven out the family farms. Not true. I have never seen a farmer driven out by anyone other than the companies that gouge us on our inputs, farm machinery costs, fuel, et cetera. Also consumers drive most farmers off the farm by only wanting to spend a very small part of their income on food, especially on locally produced food. By this the only ones that can make a living are the large, least cost producers. These large producers are also the only ones that can manage the extra costs associated with more rules and regulations. Most farms, small farms sell, and the only ones bidding are the larger expanding ones. So it won't be long before there aren't any memories of gramma's farm left to go see, other than the hobby farms that people pensioned off

from the city, that want rural life.

In conclusion, I hope the Commission recommends to the government that the hog industry, along with all livestock and agriculture in general, is environmentally viable and sustainable. That if they increase the regulations, they had better be prepared for major costs of updating soil test technology application methods, and enforcement. Some of these have not even been discovered yet. Another reduction in the number of the farms, especially small farms, and you better find them jobs or increase your welfare budget, because they will come to the city. Just remember, a farmer is a steward of the land, and if he is not, he will not farm for long. So you better start looking for the real cause of the problem, because you haven't found it yet.

I am a fourth generation Canadian farmer. I don't own any hogs anymore, I used to, and I only wish to use manure responsibly on my less than 2,000-acre family farm, so that I don't have to expand to 5,000 acres to be able to feed, clothe, and educate my family. I have also been a municipal councillor for 14 years. I have sat on the West Souris River Conservation District for

nine years. I have been a member of the Manitoba North Dakota zero till association for 30 years. I have been a Keystone Ag Producer member for as long as I can remember, and I have sat on their board for the last four years. Thank you.

THE CHAIRMAN: Thank you, Mr. White. Where is your farm?

MR. WHITE: I don't own a barn.

THE CHAIRMAN: No, where is your farm?

MR. WHITE: My farm is just east of Hartney, Manitoba.

THE CHAIRMAN: Thank you. Wayne.

MR. MOTHERAL: No, I don't think I have any questions. I thank you for your thoughtfulness in this, and showing the struggles that the farmers are having today. Thank you.

THE CHAIRMAN: Thank you very much, Mr. White.

That brings the evening proceedings to a close. We will reconvene here tomorrow morning at 9:00 o'clock.

(Adjourned at 9:22 p.m.)

CERTIFICATE

CECELIA REID and LISA REID, Court Reporters, in the Province of Manitoba, do hereby certify the foregoing pages are a true and correct transcript of my Stenotype notes as taken by me at the time and place hereinbefore stated.

Cecelia Reid

Lisa Reid