



IN THE TRENCHES

December 2007

"Drainage Doesn't Cost - IT PAYS!"

www.drainage.org

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From the President's Desk

Hello to fellow LICO members.

2007 is quickly coming to an end. A month from now we will be celebrating the holiday season with family and friends, then shortly after we will begin another new year - 2008, LICO's 50th anniversary.

As I write my letter today we have a mixed bag of tricks going on in the weather department, +7 today -10 two days ago. Sleet and slush one day and ice and snow the next. I have the pleasure of working indoors unlike many of you who are subject to these conditions every day. You have my respect!

I know when I was young I loved winter and the cold - snowmobiling, tobogganing, building forts in the snow and freezing your fingers and toes. As I have aged, this love of winter has worn off over the years to the point where I really do not like winter at all. It could also be the fact that our winters now do not resemble the winters of old.

We have had quite a change over the years. Change is an interesting word and if there is one thing that is consistent in life it is change. We go through changes every day of our lives. Look at how the world has changed over the last 30, 40, 50 years. We can go anywhere in the world we want, some places we do not want to go! We can talk and communicate with people 24 hours, seven days a week, we can shop seven days a week (not I), we have access to money seven days a week, news from all over the world is broadcast to us everyday.

I think change is important to our lives and our businesses. We learn from it, it makes us stronger, we need to change to adapt, to make us better, to react, to follow laws and regulations. I also agree that a day off a week is important. Turn off the blackberries, the phones, the computers, relax and take it easy for a day, enjoy the day.

You also have to wonder about the media. Have we gone too far here, reporting everything that happens in the world? They put their spin on it and report it to everyone in the world. Do we really need to know everything that is going on all of the time in the world?

Your LICO membership is continuing to put together events for this year's convention. It will be a rewarding couple of days, so please plan to attend. See you there.

Your President
Chris J. Groot

Lines from Lambton - Dean Hodgson

September brought wonderful fall weather to Lambton County farmers, harvesting crops that generally yielded much better than expected. The summer-like weather ripened both corn and soybeans more quickly than usual. Combines were rolling through the soybeans early in the month and although there were some below average yields many Lambton County farmers harvested crops up to 50/bu/ac. However, average yields were about 25-30/bu/ac. or about 70% of normal.

October also brought some generally welcomed rainy days but the harvest continued full speed ahead as the rains were intermittent and seldom slowed progress. Generally it seems the fall of 2007 was the opposite of the terrible weather suffered in 2006. Acres and acres of winter wheat were seeded into near perfect conditions as the soybeans were harvested. With the timely showers, continuing warm weather, it seems the whole of Lambton County is green with wheat.

The corn harvest also enjoyed near perfect conditions as the crop dried down in the field and many were again surprised with better than expected yields. Many area farmers reported yields well over 100/bu/ac. and everyone was amazed by these figures after the terrible drought conditions the crops had suffered all summer.

By November 90% of the crops were harvested, wheat fields were growing rapidly and many farmers had ploughed and cultivated their remaining acres. What a fall it was.

The sugar beet harvest had to be temporarily suspended because of all the beautiful weather. With perfect conditions, no mud to slow progress, the harvesters were removing the acres of sugar beets at a record pace. This was too fast for the processing plant over in Michigan, so the sugar beets were temporarily stored in piles. However, the exceptionally warm weather causes these huge piles of sugar beets to create too much heat, thus spoilage. So the sugar beet farmers slowed their harvest speed to avoid large piles of stored beets in the warm weather. Now, well into November, they are still harvesting sugar beets but the weather is still cooperating.

However, all this perfect fall weather has caused other problems. Lake levels along our Lambton County shoreline have fallen dramatically during the extended drought this summer. With most of the creeks and ponds dried up, any rains that did come quickly disappeared into the thirsty soil. The water level is down about two feet where Lake Huron flows into the St. Clair River and now the bureaucrats feel it is time to start a study. With all the excessive rainfall we had last fall, combined with the heavy snow blanket to the north of us last winter, one would wonder where all that excess water has gone so quickly.

But if we look around we would see we now have water lines running up and down every concession road in southwestern Ontario. Consumption has risen dramatically over the past 30 years. A Free Press article states the City of London is now using 50 million cu/mt. annually from Lake Huron. Lake levels are being lowered much quicker than they can be replenished. There is little doubt that we, the people, us, with all our modern facilities, are wasting a tremendous amount more water than in the past. If we continue to lower our lake levels faster than they can be replenished, water conservation will be forced upon us.

The cause of the problem could be drought, it could be global warming, but I fear we should perhaps look at ourselves for wasting too much water. Higher cost for water may be the only answer to push us into more conservation.

As drainage contractors, perhaps we should begin to wonder how we can help to preserve some of this water, which seems to be here today but gone tomorrow. Water conservation should become a larger part of our drainage planning.

(Continued Page 4)

Lines from Lambton *(Cont'd. from Page 3)*

Even with the dry weather, escalating expenses and the rising dollar, all causing insecurity on area farms, the tile drainage business has held steady in Lambton County this year. Contractors have been busy serving their regular customers but most have had time to take on new jobs when they became available. It has not been an extremely busy year but Lambton County contractors have been working steadily. General feeling is that most of the contractors have had some good sized jobs, but mostly it's been steady work and all are enjoying the near perfect working conditions this year.

Talking with Larry Mansfield, he feels they have had steady deliveries all year and that all our contractors have done quite well again. Perhaps it hasn't been a great year but with the fall weather it's a great improvement over 2006.

We see where some of our veteran tilers are still keeping in practice. Roy Elliot has been working with his Buckeye '302' while Allen Griffin, now 85, had his Speicher out digging in a few runs again this summer. Harvey Ferguson, recovering from his health problems of last year, had his Speicher Trencher back on the job again this fall.

We read a story on Brian Jaques, with his rebuilt Massey-Harris '44', in the October 30/07 issue of the Ontario Farmer. Brian Jaques is a son of Ken and Christine Jaques, of Enniskillen Township. His family has a long history of over 60 years in the tile drainage business in Lambton County.

I noticed in the last issue of "In the Trenches", our president, Chris Groot, reminded us of the importance of our history. Apparently Chris has been reading H.M. Weaver's History of Tile Drainage in the USA. An excellent account of how John Johnston of Geneva, NY, USA, had introduced the benefits of tile drainage to agriculture back in the 1830's. However, we have a great history of tile drainage right here in Ontario. Ross Irwin has documented that tile drainage started in Ontario as far back as the early 1840's. Ross has written of the first clay tile yards and the first tile machines here in Ontario. It is a story that should be told before all our history is swallowed up somewhere on the inter-net. I would like to suggest that LICO endorse a book on the history of tile drainage in Ontario by Ross Irwin. Ross has the knowledge, time and material while the rest of us have the need of his expertise to retain all this information for the future. It would be almost an autobiography as Ross Irwin has been involved in every step of progress since the agricultural drainage industry exploded in the 1960's. But there was a long history even before that.

Hopefully, as a part of our 50th anniversary in 2008, our association could finance the recording of our own drainage history here in Ontario.

Correction to September, 2007 Lines from Lambton!!

There was an error with respect to the Dalton Family of Dawn Township celebrating a family history by erecting a family history **plaque**. We apologize for the typo!



*"Remember, if Christmas isn't found in your heart,
you won't find it under a tree." ~ Charlotte Carpenter.*



Crabby Old Man

When an old man died in the geriatric ward of a small hospital near Tampa, Florida, it was believed that he had nothing left of any value. Later, when the nurses were going through his meager possessions, they found this poem. Its quality and content so impressed the staff that copies were made and distributed to every nurse in the hospital. One nurse took her copy to Missouri. The old man's sole bequest to posterity has since appeared in the Christmas edition of the News Magazine of the St. Louis Association for Mental Health. A slide presentation has also been made based on his simple, but eloquent, poem. And this little old man, with nothing left to give to the world, is now the author of this "anonymous" poem winging across the planet.

CRABBY OLD MAN

What do you see nurses? What do you see?
 What are you thinking when you're looking at me?
 A crabby old man, not very wise,
 Uncertain of habit with faraway eyes?
 Who dribbles his food and makes no reply.
 When you say in a loud voice "I do wish you'd try!"
 Who seems not to notice the things that you do.
 And forever is losing a sock or shoe?
 Who, resisting or not lets you do as you will,
 With bathing and feeding, the long day to fill?
 Is that what you're thinking? Is that what you see?
 Then open your eyes, nurse you're not looking at me.
 I'll tell you who I am, as I sit here so still,
 As I do at your bidding, as I eat at your will.
 I'm a small child of ten with a father and mother,
 Brothers and sisters who love one another

A young boy of sixteen with wings on his feet
 Dreaming that soon now a lover he'll meet.
 A groom soon at twenty my heart gives a leap.
 Remembering, the vows that I promised to keep.
 At twenty-five, now I have young of my own.
 Who need me to guide and a secure happy home.

A man of thirty, my young now grown fast,
 Bound to each other with ties that should last.
 At forty, my young sons have grown and are gone,
 But my woman's beside me to see I don't mourn.
 At fifty, once more, babies play 'round my knee,
 Again, we know children, my loved one and me.
 Dark days are upon me. My wife is now dead.
 I look at the future I shudder with dread.
 For my young are all rearing young of their own.
 And I think of the years and the love that I've known.
 I'm now an old man and nature is cruel.
 Tis jest to make old age look like a fool.
 The body, it crumbles grace and vigour, depart.
 There is now a stone where I once had a heart.
 But inside this old carcass, a young guy still dwells,
 And now and again my battered heart swells

I remember the joys. I remember the pain.
 And I'm loving and living life over again.
 I think of the years all too few.....gone too fast.
 And accept the stark fact that nothing can last.
 So open your eyes, people open and see
 Not a crabby old man. Look closer see.....ME!!

Remember this poem when you next meet an older person who you might brush aside without looking at the young soul within we will all, one day, be there, too!

The best and most beautiful things of this world can't be seen or touched, they must be felt by the heart.

OMAFRA Drainage Coordinator's Report - Sid Vander Veen, Drainage Coordinator

On November 29, Andy Kester and I will be giving a presentation on the duties and responsibilities of the Tile Inspector in the Tile Loan Program. We are giving this presentation at a meeting of Chapter III of the Drainage Superintendents Association (covering the Counties of Huron, Perth, Waterloo, Wellington, Oxford, Bruce, Grey). We gave this same presentation in the City of Ottawa on June 14 and at a location just north of Tilbury on September 14. I was pleased to see some tile drainage contractors at these meetings. Tile drainage contractors and drainage superintendents share many common goals and I encourage you work together for the good of agriculture.

Drainage Licensing: Renewal application forms for tile drainage business licences for 2008 have been sent out on November 30, 2007. If you haven't received your renewal form by the end of December, please call Valerie Anderson at 519-826-3324. **All business licences expire on December 31, so if you expect to be working in January, please make sure that you submit your completed business licence renewal form and the \$250 licence renewal fee (with or without the Tile Record Forms) to us before December 31, 2007.** If this is done before the December 31, 2007 date, your business licence is considered renewed and you have until March 31, 2008 to complete and submit your tile record forms. If your tile record forms are not received by March 31, your business licence could be lapsed. If you need additional Tile Record Forms, contact Valerie Anderson at number indicated above. A supply of these forms will also be taken to the LICO Convention in January.

Drainage Guide: As indicated in the last newsletter, the Drainage Guide has been updated and published and a copy will be sent to each contractor with their business license renewal. If you want additional copies, call 1-877-424-1300 and order Publication 29, "Drainage Guide for Ontario". The new Drainage Guide sells for \$20 per copy.

Contractor Courses: OMAFRA now offers the Primary Drainage Course and the Advanced Drainage Course on alternating years. This year, the Advanced Drainage Course is being offered in the Marden Library Boardroom (just north of Guelph) from February 4-14, 2008. Details about this course have been included with the Business Licences renewals. If you don't have access to this, please call Valerie Anderson in Guelph at 519-826-3324.

I want to wish all of you and your families a "Merry Christmas" and hope that you have a joyful and safe New Year's celebration. See you at the convention in January.

Soil Macropores Can Be A Blessing Or A Curse To Fields - (Excerpts from Ontario Farmer, September 4, 2007)

University of Guelph's Ridgetown campus demonstrated the impact of macropores on soil structure and crop yields during the Farm Smart sessions the Elora Research Station.

Doug Young demonstrated where corn roots went down three feet to find water. He said alfalfa has been known to go down 30 feet.

And going down is easier if there's a worm hole or a soil crack to follow. That's also a good channel for water which is great if drainage is what you want, but not so great if it's manure or pesticides flowing down the groundwater aquifer.

Soil cracks tend to occur at the same location year after year, even after soil is tilled even to the deepest levels.

Study Reveals That Nitrogen Fertilizers Deplete Soil Organic Carbon - Aces News, University of Illinois at Urbana-Champaign 11/4/2007

URBANA -- The common practice of adding nitrogen fertilizer is believed to benefit the soil by building organic carbon, but four University of Illinois soil scientists dispute this view based on analyses of soil samples from the Morrow Plots that date back to before the current practice began.

"It is truly fortunate that researchers over the past 100 years have been diligent in collecting and storing samples from the U of I Morrow Plots in order to check how management practices have affected soil properties," said Khan. The Morrow Plots are America's oldest experimental field. "We were intrigued that corn growth and yields had been about 20 percent lower during the past 50 years for the north (continuous corn) than for the south (corn-oats-hay) end of the Morrow Plots, despite considerably greater inputs of fertilizer nitrogen and residues."

To understand why yields were lower for plots that received the most nitrogen, Khan and his colleagues analyzed samples for organic carbon in the soil to identify changes that have occurred since the onset of synthetic nitrogen fertilization in 1955. "What we learned is that after five decades of massive inputs of residue carbon ranging from 90 to 124 tons per acre, all of the residue carbon had disappeared, and there had been a net decrease in soil organic carbon that averaged 4.9 tons per acre. Regardless of the crop rotation, the decline became much greater with the higher nitrogen rate," said Khan.

Their findings for the Morrow Plots are confirmed in published literature from field studies that included initial soil organic carbon data. "In numerous publications spanning more than 100 years and a wide variety of cropping and tillage practices," said Boast, "we found consistent evidence of an organic carbon decline for fertilized soils throughout the world and including much of the Corn Belt besides Illinois."

The loss of soil carbon has many adverse consequences for productivity, one of which is to decrease water storage. There are also adverse implications for air and water quality, since carbon dioxide will be released into the air, while excessive nitrogen contributes to the nitrate pollution problem."

Because soils differ in their capacities to supply nitrogen, Khan and his colleagues stress the need for soil testing, ideally on a site-specific basis, as a prerequisite to soil-based nitrogen management that optimizes fertilizer rates.

Water Act Selection Process Underway - (Excerpts from Ontario Farmer, October 16, 2007)

The proclamation of the Clean Water Act marks the beginning – not the end – of a process.

The decisions made over the next number of months at the local Source Protection Committee level will influence the ground rules and regulatory framework for all farmers for years to come. The source protection committee will develop three important documents that will complete the source protection planning process: (1) a terms of reference, (2) an assess report, and (3) a source protection plan. The Source Protection Committee members have an opportunity to influence the final Source Protection Report and the public policy recommendations that could ultimately impact farmers.

Based on the Regulations, the Source Protection Authority (Conservation Authority) and the appointed, non-elected Source Protection Chair has the mandate to determine the composition of the source protection committee and select members

Cropland Water Management – Don Lobb

Background: Following is a response to a Gravel Watch Ontario Agenda item, “Water Issues – drainage & tiling”, for their October 28, 2007 meeting regarding concerns about drainage and wetlands. The resultant agenda item was preceded by several emails that included statements such as this:

“Aggregate extraction does harm wetlands but this is miniscule compared to the harm caused by the "drainage industry". This may not be directly an issue for Gravel Watch Ontario but it is an issue for any organization concerned about the preservation of our little remaining wetlands for the protection of ground water and our natural heritage on which we ultimately depend on for our well being. This letter needs to be passed on to all environmental groups to counter act the aims of the DRAINAGE SUPERINTENDENTS ASSOCIATION OF ONTARIO to curtail the power of Conservation Authorities via rural municipal governments.

Possibly in an effort to counteract the reinstatement of drainage grants, the McGuinty government did give the Conservation Authorities the power to retard the draining and straightening of significant wetland water courses. This has upset the DRAINAGE SUPERINTENDENTS ASSOCIATION OF ONTARIO and they are petitioning the Ontario Government to reduce the authority of the CA's.

Response: We are fortunate that some soils in some parts of the world can produce crops without water management intervention. In arid regions, irrigation is usually required and in humid regions, i.e. eastern North America, much of our cropland requires drainage. Cropland drainage has been practiced since the Middle Ages. In Ontario more than half of our cropland has sub-surface drainage. Irrigation and drainage are a huge cost to farmers. Soil moisture (too much or too little) is the first limiting factor in crop production. Too much soil moisture particularly limits opportunities for conservation tillage and organic farming.

Cropland is only tile drained if it does not have adequate natural drainage. We must strike a delicate balance in maintaining adequate moisture for crop production while meeting the following objectives:

To lengthen the time when fieldwork can be done without doing damage to the soil, i.e. compaction.

To reduce surface runoff of water (i.e. during the spring and storm events) as commonly occurs when cropland is wet and cannot absorb additional moisture. Sub-surface drainage removes surplus moisture from the crop root zone, thus the soil can hold more short-term moisture. Unlike in wet or saturated soil where runoff occurs immediately the moisture can enter the soil and eventually exit through drains over a much longer period of time. The benefit is reduced flooding, extended and improved stream flow through dry seasons and reduced runoff that carries valuable sediment, nutrient, weed and pest control products, etc. Functionally, the effect is similar to a wetland.

To improve the growth environment for crops. Often excess water must be removed from the soil through drainage to allow the necessary balance of oxygen and water. They are equally important. This allows a larger deeper root system that can retrieve more natural nutrients from the soil as well as applied nutrients. This is particularly important in the capture of nitrogen—to minimize its migration to surface or groundwater. Nutrients are expensive to purchase. Drains help farmers maximize their use efficiency. Nutrient discharge from drains suggests either soil mismanagement or drain misuse.

(Continued Page 9)

Cropland Water Management *(Cont'd. from Page 7)*

To reduce the risk of air contamination. Agriculture is responsible for about 10% of Canada's greenhouse gas emissions. Cropland soil that has inadequate drainage contributes to this problem. Methane (CH₄) amounts to almost one-third of the agricultural contribution. While much of it comes from livestock and manure, a portion is produced where organic matter cannot be broken down efficiently in oxygen deprived (wet) tilled soil. Nitrous oxide (N₂O) amounts to almost two-thirds of agriculture's greenhouse gas impact. On cropland, N₂O is produced from nitrogen when there is an oxygen shortage, i.e. wet soil. As crop is removed from the land to supply protein for the human diet, we deplete the supply of nitrogen, a basic component of protein. Nitrogen must therefore be applied to maintain the productivity of the soil. Drainage is required to insure an oxygen supply so that the applied nitrogen is used most efficiently.

The drainage of wetlands (lands that are seasonally too wet for cropping) in or near fields under cultivation has occurred for several reasons. In some cases it may be that the wetland harbours birds and wildlife that cause predation to crops and livestock and disease to humans and livestock (for example rabies, West Nile virus and Lyme disease). Generally on farmland, a wetland exists because groundwater recharge occurs slowly at best. Sub-surface drains are installed to remove seasonally excess water from the crop root zone. These soils are our most reliable producers because water below the drains percolates up to the crop roots during dry weather. They have contributed significantly to the reduction in land needed for food crop production – and therefore, to the land available for wetland, woodland and recreation in Ontario.

During the past 50 years, farmland has been reduced by 30% while food production tripled. Cropland drainage is a key factor in our food production infrastructure.

Landowner Seeks Compensation For Protecting Sensitive Areas - Kitchener

Waterloo Record, Nov 28, 2007

Last summer, Cyril Zister fired up his tractor to destroy a protected wetland on his farm. The frustrated farmer hoped to press his longstanding complaint that farmers deserve greater public compensation for sensitive lands they are directed to preserve. Critics howled as Zister pulled out willows, plowing up a half-hectare of damp soil that he now hopes to plant with hay if the land dries up enough. Acting on complaints, the Grand River Conservation Authority ordered Zister to stop, on suspicion of interfering with a wetland. It now turns out he did nothing wrong. Officials have concluded Zister is within his rights to damage the wetland on his Bisch Street farm, even though the same land is protected by law from development. That's because he plans to farm the land, not develop it. "He hadn't placed any fill, he hadn't changed any of the grades," Shari Musca of the Grand River Conservation Authority said. "He's a farmer and he wants to farm his land. He can plow, he can seed, he can cultivate, he can crop."

Zister, facing no charges, continues to lobby Waterloo regional council to provide greater compensation to farmers for not using their wetlands. Farmers can get property taxes waived on wetlands, under a provincial policy that Zister says is not good enough. If preserving a wetland helps everybody, "why am I paying for it with loss of production?" Zister asked. "Why isn't everybody paying for it?" Regional Chair Ken Seiling said many landowners face property restrictions for which they are not compensated. He contends it's up to the province to weigh environmental compensation for farmers.

LICO Convention 2008

50th Anniversary Video Presentation

We are gathering materials for two videos we are putting together for presentation at the convention in January in celebration of 50th anniversary of LICO. We are looking for your submissions.

The first video will be of single shots of each of the contractors and their crew(s) presently working in Ontario. An example is photo of the Russtaal Drainage crew from Russell.



1909 Buckeye, Martin Drainage



Russtaal Drainage, Russell

The second video will show highlights of drainage in Ontario over the last 50 years. The picture of 1909 Buckeye of John Martin is an example.

We would like pictures of ditching machines – old or new, ploughs, wheels, chains; tile manufacturing – clay, concrete or plastic; drainage surveying, etc. The pictures can be recent or historical. We will put them together in an order which will show where we were and how far we have come.

We will also provide space at the convention for table top displays of historical materials if you wish to show them – old drainage maps, old clay tile, etc. Let the coordinator know how much room you will need.

Deadline: December 31,

Please send your pictures – snaps or digital – to the conference coordinator below. (Pictures already sent to Chris Groot will be forwarded to me).

Franklin Kains
LICO Convention Coordinator
46 Old Cottage Place, Kitchener, ON N2K 4K2
(519) 742-4591 kains@golden.net

N Levels Remain A Moving Target - (Excerpts from *Ontario Farmer*, October 9, 2007)

Understanding the fate of nitrogen from fertilizer, manure, crop residues and from the soil is challenging, says Michigan State University crop scientist Sieg Snapp.

Nitrogen is a moving target, he says. Nitrogen credits need to be adjusted over time, depending on proven yields, on management objectives, and on the history of organic matter amendments such as cover crops, manure and crop residues.

Leaching happens when excess rainfall or irrigation causes rapid movement of water below the rooting zone. Nitrate is the main inorganic form of nitrogen that moves with water and is leached. The ammonium ion is quite different from the negative ion nitrate. It is a positively charged form of nitrogen that is held tightly in soil by negatively charged organic matter and clay particles. This tightly held nitrogen, in the form of ammonium, is much less likely to be leached than nitrate. It is important to bear in mind that nitrogen is readily transformed from ammonium to nitrate by soil microorganisms through the nitrification process.

Denitrification is the process by which nitrate ions are transformed into gaseous forms of nitrogen by anaerobic microorganism. This occurs generally under waterlogged soil conditions, and the gaseous forms of nitrogen produced are subsequently lost to the atmosphere.

Matching soil supply and plant demand for nitrogen, by using the proven yield for a given field to evaluate the amount of nitrogen to apply, is the foundation to reducing losses from denitrification and leaching.

Volatilization of ammonia is another pathway of gaseous loss of nitrogen from the soil, often when manure or urea-containing fertilizers are left on the surface and not incorporated. To minimize volatilization and loss of nitrogen from this pathway, fertilizer applied as urea or as manure should be incorporated into the soil.

A slow release source of nitrogen is an ideal way to improve both yields and limit losses.

New Territory - Peter Darbishire, November 20, 2007

Friends and colleagues:

After more than 30 years in the business, I will retire from my career in magazine publishing next April.

It has been an exciting and interesting journey and I would like to express my gratitude for the part you have played. It has been a pleasure and privilege to work with you.

I have no specific plans, though there are many parts of the world that have intrigued me for ages, so in due course I shall be traveling to places far and wide. In the immediate future: mostly relaxation of the 'active kind' and, for the first time in recent memory, life without deadlines!

Best personal regards: I hope our paths will continue to cross along the way!



CALENDAR OF EVENTS

January 23 & 24, 2008

LICO Conference

Best Western Lamplighter Inn
591 Wellington Rd., London, Ontario
N6C 4R3

This is the fiftieth anniversary meeting of the Association. Book your rooms early so you do not miss out on any of the planned events.



February 5—7, 2008 Canadian International Farm Equipment Show, International Centre, Toronto

The LICO Booth is number 5010 in Hall 5.

March 5—7, 2008

Western Fair Farm Show

Western Fair Grounds, London, Ontario

www.westernfair.com



LICO would like to take this opportunity to wish you and your family all the best for the holiday season and the year to come.

Nitrate Traps in Clark Creek Aimed Reducing Beach Pollution - (Excerpts from Ontario Farmer, October 16, 2007)

Point Clark – Four nitrate-trapping cages have been installed in municipal drains and Clark Creek in another attempt to address pollution concerns along the Lake Huron shoreline here.

The newest initiative, funded by the federal government's environmental department, is a pilot project using a design developed by Will Robertson of the Department of Earth Sciences at the University of Waterloo.

Two-metre-deep (six feet) trenches have been dug in each of the three municipal drains and beside Clark Creek. The trenches are three to five metres (10 to 15 feet) wide, depending on the width of the municipal drain.

A 1.5-metre layer of wood chips goes in the bottom of the trench which has a 10-cm (four-inch) sewer pipe along each side. Plastic sheeting separates the wood chips in these trenches so that half or two-thirds of the area can be shut of during the lowest water-flowing periods of the summer.

The wood chips are covered with landscape cloth, then 15 to 30 cm of 2-cm (three-quarter-inch) gravel is spread on top, then another 15 to 30 cm of river rock over that. Each of these costs about \$4,000.

The cages convert nitrates to nitrogen which can't be used by algae. The intent is to starve the algae of nutrients.

It is hoped that the nitrate traps will work as well as Robertson has indicated from his research, which has been underway for more than six years. If they work well, he guesses that they might be installed every 300 to 500 metres along municipal drains.