



# IN THE TRENCHES

March 2012

**"Drainage Doesn't Cost - IT PAYS!"**

[www.drainage.org](http://www.drainage.org)

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## From the President's Desk

Fellow Members:

As I write this, it is March 1<sup>st</sup> and a very welcome 4 degrees outside! I should probably be tiling or at least doing some repair work. However, I just arrived home from visiting Mickey Mouse with my family and I'm not quite ready to get back to the daily grind. Our three year old daughter has informed my wife and I that she does not want to drive a tractor when she gets big. She has decided that she will return to Florida to be the next Cinderella. She is already well on her way! My hopes now rest with my son to carry on the tiling tradition.

Another convention has come and gone, and I think most would agree it was a success. It was well attended, even though the weather has allowed many contractors to work straight through the winter. It is always nice to get caught up with people after a busy season.

I would like to thank the following people for making the yearly convention an ongoing success:

Franklin Kains - for organizing another great line of speakers;

John Johnston - for his dedication, leadership, and making the executive duties that much easier!;

Don Lobb - (even though he was unable to attend) for his ongoing work on LICO's behalf;

The LICO Executive - for their dedication to the board. (Welcome Matt Williams);

My wife, Melissa - for organizing a successful ladies program;

Greg Graham- for keeping my daughter entertained throughout the banquet;

Kim Hayter and her students - for another great presentation; and

Joe Frankis - for all of the extra work he does, keeping everyone well entertained.

LICO is currently exploring a soluble phosphorus research project, comparing soluble phosphorus in surface runoff to tile runoff. Thank you to Ideal Pipe, ADS Canada, and Armtec for donating the required pipe. LICO is sponsoring the installation of the product.

The year ahead looks as though it could be as busy or even busier than last. I wish everyone the best of luck staying ahead of the game. Enjoy what promises to be a very hectic but hopefully prosperous year.

Greg Walker

## Drainage of Soil – Part I - Ross Irwin

### Hydrologic Cycle and Drainage

Remember the hydrologic cycle? It states,  $\text{Rainfall} = \text{Runoff} + \text{Evaporation} + \text{any change in Storage}$ . Seems simple enough, and on a large watershed basis is quite accurate. For example, on the Great Lakes Drainage Basin, the average rainfall is measured. Runoff is the measured stream flow and evaporation is calculated based on temperature and wind. Change in storage is a reflection of the level in water wells and the Great Lakes. It's more important that we look at what it means to and how it affects your business.

The equation says that when rainfall reaches the earth's surface some of the water is intercepted by vegetation which later evaporates or drips to the soil surface. Remember walking in a bush after a rain and how the water dripped down your neck long after the rain stopped?

Much of the rainfall infiltrates through the soil surface and increases the soil moisture content. Any surplus is added to the ground water. The infiltration capacity of a soil; that is, how fast will water soak into a soil, depends on the crop cover, the soil type and soil management.

A hard driving rain quickly caps the soil surface and infiltration is restricted. Water flows off carrying fine soil particles and creating surface erosion as it carries them to a lower elevation. Water collects in the lower areas. The rate water enters, or infiltrates, the soil surface is originally high on a dry soil but settles down to a steady state as the soil profile becomes wetter. When the surface is saturated, pools of water may form in shallow depressions (depression storage) and water moves downhill under gravity (surface flow) finding its way to a drainage ditch.

*(Continued below)*

### Drainage of Soil – Part I (Cont'd.)

Underground, the rainfall wetting front moves downward increasing the moisture content of the soil and may then contribute to a rising watertable. Once rainfall ceases evaporation and transpiration from plants increases. Water is removed from storage in the surface pools and from the surface of vegetation. Eventually the watertable falls and channel flow decreases.

What is the effect of a tile drainage system on the local hydrologic cycle? The design of a tile drainage system is important as it influences the distance water must travel through the soil before reaching an outlet. The soil profile is more quickly brought to a moisture equilibrium. The drains also reduces the volume of water that would run off the surface.



It's Spring fever. That is what the name of it is. And when you've got it, you want - oh, you don't quite know what it is you do want, but it just fairly makes your heart ache, you want it so!

*Mark Twain*

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If you have articles, events or notes of interest you wish to add to this newsletter, please send your submissions (not more than **225** words) to the following:

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## Lines from Lambton - Dean Hodgeson

We attended the annual LICO Drainage Convention at the Lamplighter Inn in London on January 18<sup>th</sup> and 19<sup>th</sup>. We really enjoyed seeing all the old faces again and spent most of our time visiting rather than listening and learning in the Chelsea Room. These bright, young drainage professionals have left some of us old-timers in a fog with all the new high-tech equipment. We started with grade stakes and tile scoops, advanced to the laser grades and trenchless plows but have been left behind by the GPS and satellite surveys. But it was nice to see all the happy faces as apparently everyone had a very successful season in 2011 and are booked solid for next year.

We have to thank John Johnston for helping us get registered at the front desk. Then Sid Vander Veen gave us the background on the interesting drainage story in the December 13<sup>th</sup> issue of the Ontario Farmer. Sid feels the MNR and Conservation Authorities are becoming more co-operative as he has explained to them that their families' food comes from our tile drained fields. Let us hope that Sid is right. We had a pleasant visit with Ralph Clayton, recalling the 1960's Drainage Courses at Ridgetown. Those were truly the "good old days".

Wray Ramsay has accepted a new position as Drainage Superintendent on Pelee Island and is looking forward to soon celebrating fifty years in the drainage industry. Ray Dobbin is still serving as Drainage Superintendent for Enniskillen Township but has also been busy expanding his private engineering practice from his new office in Petrolia. Allan Jardine and John Allison of Jardine Drainage kept me informed on events in the business meetings while I was busy visiting. Allan related his experience serving on the tile drainage panel at the S'W' Ontario Agricultural Conference in Ridgetown along with Peter Darbishire and Eric Nooyen. Allan was quite impressed with the whole conference as agricultural technology keeps advancing.

Frank Rombouts of Watford says he had one of his best tiling seasons this year and his son has joined the family business. The younger Rombouts operates the big Bron plow with all the latest high tech equipment. This gives Frank the opportunity to spend more time managing the operation as well as enjoying more time at his newly purchased cottage at Ipperwash Beach. Frank has worked hard building his successful business and it is good to see him able to ease off and let the younger generation surge ahead.

Also visited with Steve Vokes, Roy and Ken Elliott, Randy Philips and Paul Dalton. Ken and Christine Jaques reported they had recently purchased a second Speicher trencher from the estate of the late Allen Griffin of Sarnia. We had some interesting conversations with Don Laidlaw, who just does not seem to slow down. Talked with Robert Robinson, Dave Wideman among others and had a great visit with my good friend Don Reinhart from Mildmay. Don has helped us out over the years with parts and advice when we were repairing the Speicher machine. A few years ago Don sold his wheel machine and designed and built his own trenchless drainage plow. Don had some help and advice during construction but is quite proud of his home-built machine which has been licensed by the OMAFRA drain inspectors. Like most contractors Don had his best year to date in 2011. We used to travel up to Bruce County visiting Don and his family who are some of the finest people we have ever met and we are certainly glad they have been so successful.

Our Lambton County farmers have had an easy winter so far and what fall wheat that did get planted is looking good despite the strange weather. Lambton farmers are very optimistic about the future and that is good news for our drainage contractors as well. More tile drains means more food for the world's growing population.



## Harvey Ferguson of Enniskillen Township - Dean Hodgeson

Harvey Ferguson was the youngest son of John Ferguson and Ruby Lampman and was raised on the family farm at lot 24, con. 12 of Enniskillen Township. The John Ferguson family operated a mixed farm with cattle, horses, hogs and poultry. Harvey always favoured the cattle and the farm workshop. Harvey has an inquisitive mind and a real knack for improving the operation of any piece of machinery. He likes to tinker with carburetors, belts, links and chains until everything is humming perfectly. Even today, Harvey's inquisitive mind is always seeking answers to the perplexing problems concerning modern machinery and its complex workings.

Harvey moved on from the Petrolia High School when he was seventeen years old. His deep interest in all things mechanical sent him on to seek more education in his chosen field. As a result of his efforts Harvey has received diplomas from several sources. He has a diploma from the Massey Harris-Ferguson Training Centre as a certified service and maintenance mechanic - another from the Chicago Vocational Training Corporation in diesel and auto mechanics. In the early 1970's Harvey earned his Class "A" Drainage Certificate from the Drainage Contractors Course at the Ridgetown Agricultural College.

As a young man Harvey went into the trucking business, purchasing a single axle dump truck and working on municipal road construction projects. This was a real challenge for the youngster but Harvey liked competing with the other owner-operators to see who could haul the most loads in a day. This was just his first venture into the business world but Harvey actually preferred the independence of the farm.

In 1955 Harvey bought his own farm on lot 20, con. 12 of Enniskillen Township and began his farming career. Harvey started with one cow from his father's herd and eventually built up a herd of 40 cross-bred Limousine cows. Over the years Harvey continually improved his herd by always purchasing superior bulls and keeping the best heifers for breeding stock. After 55 years of careful culling and selection, Harvey Ferguson had built up a prominent herd and was always proud to show his cattle to farm visitors. Harvey truly enjoys watching the calves frolicking about the pasture. He enjoyed operating his mixed farm and over the years invested in farm improvements, building a 16'x 60' silo in 1971 and a 40' x 80' drive-shed and workshop in 1975. Harvey still kept busy trucking when work was available but he soon began planning to tile drain his farm.

In 1958 Harvey purchased a Buckeye #1 tiling machine from his good friend Bob Jardine and began installing his own tile. Harvey and Bob were among the first members of the former OFDA. Harvey picked up tips from Bob and other tilers and soon was able to install tile on his own. Over the next few years, in between his trucking and other off-farm jobs, Harvey Ferguson systematically tile drained his entire farm at forty foot spacings using that Buckeye # 1.

While Harvey worked on his own drains, neighbouring farmers kept hiring him to install tile drains on their farms as well. In 1967 Harvey visited Lowell Kraft at Pigeon, Michigan and Lowell steered Harvey to a used 1957 Speicher "600" tiling machine that was for sale. After a considerable amount of dickering, Harvey finally purchased this marvelous machine at his own price and has never looked back since. The next year Harvey built his own pull-behind back-filler and bought a used "706" International tractor to pull the back-filler. He installed a fork lift on the front of the "706" to load palletted clay tile onto his wagons and forty years later all of this equipment is still operating in tip-top condition. Harvey Ferguson has installed about ten million feet of tile drains with this machinery over those forty odd years but his mechanical ability and maintenance schedule has kept this equipment in top-notch shape.

Once he had his Speicher machine, Harvey hired on a crew of good men and they went to work, often installing 10,000 feet of clay tile per day. Harvey took on jobs anywhere and often tiled farms just because

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## **Harvey Ferguson of Enniskillen Township** - *(Cont'd. from page 4)*

everyone said it was too stony to be tiled with a wheel machine. There was no job too difficult for Harvey. He installed municipal drains; he tiled farms, school yards, athletic fields and even cemeteries. Harvey tiled in every township in Lambton County and often over into Middlesex. He once took a contract to tile a football field in Leamington and this led to jobs as far away as Milton, Ontario, for that same company. Those were busy times for Harvey during the 1970's.

Finally, by the turn of the present century, Harvey began to slow down. Harvey still tiles with the grade stakes, the surveyor's level and there are many local farmers who believe Harvey is the best in the business. Harvey Ferguson never changed to the laser, the plow and won't even talk about the satellite. But if not for old father time, he would still be out there having a laugh at his competitors who were wondering "How in the Sam Hill does he do it"? (I never could figure it out).

Harvey Ferguson loves people. He loves to laugh and talk. In July of 2000 Harvey celebrated his sixty-fifth birthday by throwing a party for everyone in Lambton County. Harvey paid for the whole shot; everybody celebrated while Harvey laughed and chuckled all night long.

Today Harvey and his partner Julie live a quiet life in the village of Wyoming. They have a nice home, grandchildren visiting and both are truly enjoying life. But Harvey still wanders out to the farm; though the cows are gone he still keeps some cattle and every so often the shed door opens, out comes the equipment and Harvey and his man Glen Hart, head down the road to another tiling job.

## **Keeping P From Washing Away** - *(Excerpts from Ontario Farmer, March 13, 2012)*

Phosphorus loading of waterways, leading to serious water quality issues and algae blooms in Lake Winnipeg, have become a hot political issue in Manitoba.

Best management practices are addressing the application rate and timing of phosphorus as well as requiring strategies like conservation tillage and buffer strips to keep P in the field and out of water courses. The problem, University of Manitoba nutrient management expert Don Flaten says, is that research documenting the benefit of these practices isn't necessarily applicable to Manitoba.

57 per cent of Manitoba soils are P deficient, compared to just 31 per cent in southern Ontario.

He warns that conservation tillage and buffer strips may work in Ontario but not in Manitoba. That's because in Ontario, phosphorus gets into waterways as particulate P, transported by wind or water erosion.

Anything that intercepts that water flow or keeps the rain from hitting bare soil will reduce P loss.

In Manitoba the climate is dry and cold. The biggest culprit here is the two week-long snowmelt.

The P that leaves these fields is in dissolved form. Buffer strips only make things worse because the dead above-ground vegetation actually releases P into the snowmelt runoff.

"A lot of that can be attributed to the fact that conservation tillage leaves more crop residue on the surface....and that releases a lot of (dissolved) P. We found 10 times more water-soluble P in residue than in the soil."

What's even worse is that dissolved phosphorus is the most bio-available to feed blue-green algae.

The only way to intercept P loss in this environment is to collect snowmelt in basins or holding ponds and later pump the water onto a forage crop.

The lesson for Manitoba politicians and researchers is to "beware of outsourcing our science."

## Why Use a Licensed Contractor

What Expertise is required to properly install tile drainage on agricultural land?

- Knowledge of soils and their ability to respond to subsurface drainage
- Knowledge of the need for filter (sock) around tile so that it doesn't fill up with sediment
- Knowledge of the design of a subsurface drainage system so it will effectively intercept soil water and accommodate this water as well as water from any surface inlets
- Knowledge of how to locate underground utilities to protect people and property and to avoid liability for "strikes"
- Knowledge of environmental regulations to avoid liability for modification to species habitat or watercourses
- Sufficient knowledge of law in order to know where subsurface drainage systems can legally be outletted; Ability to assist the property owner in acquiring legal outlet if one does not currently exist on the property
- Ability to recognize and address situations that could cause problems for a tile drainage system (e.g. tree roots, iron ochre, stony subsoil)
- Ability to produce clear maps that show where the subsurface drainage system was installed
- Ability to install subsurface drainage on grade and to very fine tolerances

Property owners can legally install tile drainage on their own property using their own equipment. What are the advantages of using a licensed professional tile drainage contractor?

- Specialized training to perform the work properly
- Specialized equipment that is designed and capable of performing the work to exacting tolerances, sometimes in very difficult conditions.
- Less wear and tear on your farm equipment – installing tile drainage with a minimum two feet (600 mm) of cover is tough work in some soils
- Liability protection
- Quality workmanship
- An asset when you decide to sell your property as a "tile drained" property. The new owner may have recourse against the contractor rather than you if an issue with the quality of the installation surfaces in the future. You have a map of the installation provided by the contractor.
- Less time required from the property owner.
- Poorly installed tile drainage is worse than no drainage at all – problems created by a poorly installed system usually cannot be fixed; usually a new system must be installed.

## The Canadian Press — Posted March 14, 2012

The federal NDP says it has obtained leaked documents showing the Conservatives are poised to strip the Fisheries Act of habitat-protection provisions — a change that would dramatically reduce Ottawa's power to oversee fresh water. The material suggests there are plans to revise the Fisheries Act so that Ottawa would be responsible for fish, but not for their surrounding habitat.

As it stands now, any project that would interfere with fish habitat — be it in waterways, marshes, gravel beds and the banks and vegetation along waterways — is subject to an environmental assessment. Industry has been pressuring the federal government for years to modernize the Fisheries Act.

The NDP say they believe the Conservatives were planning to slip the change into the budget omnibus bill later this month, much like they did with changes to environmental assessment two years ago. Major changes to environmental assessment have been in the works for months. Conservative MPs on a Commons committee presented the government with a blueprint for their changes on Tuesday, with the goal of streamlining lengthy environmental hearings.



## **Don Lobb Recognized** - Ontario Farmer, February 15, 2012

An innovative Ontario farmer credited with spearheading the no-till movement becomes the first national recipient of the L. B. Thomson Conservation Award.

Don Lobb, of Caledon received the recognition at the Ontario Soil and Crop Improvement Association (OSCIA) annual conference in London last week from Jamshed Merchant, assistant deputy minister Agriculture and Agri-Food Canada (AAFC) Agri-Environmental Services Branch (AESB).

The presentation to Lobb marked the first time a recipient for the award has been named from outside the prairie provinces, and Harold Rudy, OSCIA executive director was pleased the organization could host the first national presentation. "With Don Lobb's long-standing work with on-farm soil management and conservation tillage research, he was a logical and most deserving recipient," said Rudy.

Merchant said Lobb was "ahead of his time" when he began converting his Huron County farm from conventional tillage to no-till in the late 1970s, treating no-till "as a production system rather than simply a tillage practice." Over the years Lobb worked with and provided on-farm sites for more than 50 major university, government and agri-industry research projects. Many of the projects were post-graduate studies and much of the work focused on changes to quality and management of soil and the management of crops in a conservation setting. Lobb's farm became a model for sustainable land use for both agriculture and nature and attracted visitors from six continents.

He also played important roles in the development of the Canada/Ontario Soil and Water Environmental Enhancement Program and was prominent in the development of the Environmental Farm Plans through the National Soil Conservation Program.

"The list of accomplishments is long and impressive, but what stands out most with Don has been his ability to educate and influence others with his unwavering vision and his enduring pioneering spirit," said Merchant.

In his acceptance speech Lobb was humble and gracious, but also cautionary.

Citing predictions that within 20 years only six countries, including Canada, will be able to feed themselves, Lobb said this brings focus to food production technology.

Our interest has been dominated by iron, crop inputs and genetics. The current attention to crop culture has brought great production improvement. However, this does not matter if soil is degraded as a result of production pressure, ignorance, carelessness or greed. Our food supply is only as stable as the soil in which it is grown," he said, and he offered several "musts" for our current farm operators: we must improve soil moisture management, close the nutrient loop, and adopt landscape restoration as a normal practice. He said perennial food crops are needed to dramatically reduce soil degradation.

"Our highest research priority must be serious soil science. We cannot tolerate philosophy or emotion here. Responsible farmland managers will participate in this exercise and they will prosper by doing so," he said.

He said the leadership for this must come from farmers and that the choices will determine our legacy to the future.

*(Continued Page 8)*

## CALENDAR OF EVENTS

**January 22 & 23, 2013**  
**LICO Conference**  
**Best Western Lamplighter Inn**  
591 Wellington Rd.,  
London, Ontario N6C 4R3



## Passing

**COOK, Allister** Allister William Cook, age 86, of R.R. 1, Stratford, passed away at Cedarcroft Place, Stratford on Wednesday, February 22, 2012. Born in North Easthope Township on December 25, 1925, he was the son of the late William and Ethel (Walpole) Cook. Beloved husband of Helen Kathleen (Jutzi) Cook, whom he married at Zion Lutheran Church, Stratford on April 24, 1954. He will be sadly missed by his children Howard and Mary Anne Cook of Stratford, Jacqueline Ventress and Garry Cooper of Alliston and Stephen and Irene Cook of Wellesley. Grandpa will be fondly remembered by his grandchildren Matthew Cook and Sylvia Wong, Andrea and

Ryan Shoemaker, Dylan and Chad Cook and Anita, Luella and Norma Ventress. Loving great-grandfather of Ethan Shoemaker. Dear brother of Ivy Mohr of New Hamburg, Annie Kneisel of Kitchener, Russell and Rita Cook of Stratford and Kenneth Cook. Dear brother-in-law of Elva and Selina Jutzi, Grace Brimblecombe, Marjory and Ernie Brimblecombe, Shirley and Lowell Byall and Ivan Benneweis and friend Vera. Uncle Allister's quiet and gentle manner will always be remembered by his many nieces and nephews. Besides his parents, he was predeceased by his son Gregory, grandsons Michael Ventress and Gregory Cook, brothers Stanley Cook and wife Alice, Mervin Cook and wife Aletha, sisters Dorothy and husband Vernon Beam, Mae Morenz and Eileen and husband Walter Roth, brothers-in-law and sisters-in-law Louis Mohr, Ezra Kneisel, Colleen Cook, David and Frieda Jutzi, Stanley Jutzi, John Jutzi, Nelson Jutzi, Hazel Benneweis and Marjorie Benneweis. Allister was an avid outdoorsman who loved hunting, fishing, trapshooting, playing horseshoes, travelling, taking great pride in tending to his vegetable garden and in the spring, Allister could always be found helping in the Kollman sugar bush. He was a member of St. Peter's Lutheran Church, Gadshill and was one of the early members of the Ontario Farm Drainage Association. Allister, with his brother Russell, started Cook Brothers Drainage in 1949 and even after retiring, loved to come and help his sons whenever they needed his assistance.

## Don Lobb Recognized - (Cont'd. from page 7)

"If our children's grandchildren were sitting in front of us, could we each proudly justify the soil management practices that we use today?" he asked.

The award was created in 1987 by the Prairie Farm Rehabilitation Administration (PFRA) alumni committee and the Thomson family, and is presented annually to a person or group in recognition of long-standing commitment or contribution to on-farm innovation in the area of soil and water conservation.

The PFRA was retired as a branch of AAFC three years ago, with its work now carried on as part of the new national AESB. This new, broader focus now allows for the award to be presented nationally.

## ....And Then The Fight Started

My wife was hinting about what she wanted for our upcoming anniversary. She said, 'I want something shiny that goes from 0 to 150 in about 3 seconds.' I bought her a scale....

We were at a high school reunion when I noted my ex-girlfriend was there and she was very drunk. My wife asked if I knew her and I told her "Yes she is my exgirlfriend." My wife replied, "Who would have thought she would celebrate so long"...