

IN THE TRENCHES

June 2005

"Drainage Doesn't Cost - IT PAYS!"

www.drainage.org

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From the President's Desk

Hello Fellow members. Hard to believe it's June already. Mid April gave us quite an excellent start with 27 weather, then soon took it back, and gave us not so great weather to make it a trying spring.

I don't know about you, but I am feeling a little down turn in work load this year. There doesn't seem to be the municipals out there as there were last year. Farm work is not as strong as last year as well. Hope you are having better luck than I. Therefore I really hope that with fuel costs higher, insurance rates higher and labour rates rising, we toe the line on tile and installation rates. We should not be cutting prices to create work because the work will either be there or not. The industry cannot afford to have both, a work load decrease and price decrease, especially when our costs are rising.

I ask all of the members not to panic, and keep our prices stable and at the rates we should be at, in this time of increased costs. Over the years we have always been a market that has not kept up with cost of production, and we need it to change. Volume alone, in a declining market, does not mean you will recover your costs. Just think, of what you were charging in 1980 and your costs at that time, and what you are charging now and your cost today. If you really look at it, it doesn't make a lot of sense to remain below 1980 prices. Who do you know that services us that is still charging 1980 prices, there is no-one.

I am sure everything will come out in the wash, and all will have a successful year. Just remember, it will be easier if we charge what we need to charge to cover our costs, and volume then will not have to be as important as it is today.

Frank Kains is working on the 2006 convention. If you have any subjects that you would like to be included in the program, don't hesitate to contact Frank or any of your executive members. Our next executive meeting is July 13, 2005 at the Lamplighter Inn in London @ 7:30.

In closing, I hope you all have an enjoyable summer and again if you have any concerns, do not hesitate to contact either myself or any other executive member.

Your President,
Steve Cronsberry

Today I wish you a day of ordinary miracles. A fresh pot of coffee you didn't make yourself. An unexpected phone call from an old friend. Green stoplights on your way to work. The fastest line at the grocery store. A good sing-along song on the radio. A minute to find a special person, an hour to appreciate them, a day to love them, an entire life to forget them.

Septics, Farms and Sewage Plants Sources of Lake Bacteria (Excerpts Ontario Farmer May 17, 2005)

A DNA study has confirmed what many people living near Lake Huron and concerned about water quality have suspected. A study in which samples were taken from creeks and ravines in the St. Josephs area which feed into the lake, showed high bacteria counts in the lake.

Farmers have pointed to the cottagers and their septic systems, while farmers have been accused of polluting the water.

The study, conducted in 2004, showed that about half of the time, the lake is above safe levels of pollution to allow swimming. The sources of pollution in the creeks were the Zurich sewage lagoon, built in the 1970s, septic systems and agriculture operations. There is also a theory that the lake bottom is now polluted, so when it is stirred up during adverse weather the lake bacteria levels top recommended safety levels.

Huron County Federation of Agriculture said it is not surprised by the findings and had accepted all along that the problem is related to septics, municipal systems and farms.

In order to correct the factors which have contributed to the lake's pollution, the following steps are being taken. The Municipality of Bluewater has applied for infrastructure funding to modernize the polluting Zurich lagoon. Huron County is working on a pilot project to inspect septic systems to identify and correct septic problems. The Nutrient Management Act will help control farm-based bacteria level problems. However, the agriculture hot-spots shown by the DNA testing are smaller farms and won't be covered but the Nutrient Management Act until 2008 at least.

Points to Ponder - Paul Meldrum, President of PeakForm Consulting and Training

Don't accept a task you can't completely finish by the deadline.

If you don't respect your time, neither will others. If you don't decide the best use of your time, others will be happy to decide for you.

Every time you say "yes" to something, you are denying or delaying something else you could do. Be stingy with the word "yes.. Think about what you are, in effect, saying "no" to.

Think about your current goals when you choose one task over another. Activities that contribute to those goals have higher priority than others.

Feedback is a powerful motivator. Spend five "minutes before you leave work reviewing the day and previewing the next.

Live in the moment. Get more done. Be more relaxed.

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:

Sharon Bond Phone: (519) 837-0169
42-302 College Avenue West Fax: (519) 837-5759

I was at a yard sale one day and saw a box marked "Electronic cat and dog caller. --- guaranteed to work".

I looked inside and was amused to see.....an electric can opener!!

Life is not measured by the breaths we take, but by the moments that take our breath.

Plan for tomorrow but LIVE for today.

Life is like drawing without an eraser.

Application of the Environmental Assessment Act to Drainage Project -

Sid Vander Veen, Drainage Coordinator

It has recently come to my attention that the MOE is undertaking a review of the Environmental Assessment Act. The recommendations are listed on the Environmental Bill of Rights registry (www.ene.gov.on.ca/envregistry/023747ex.htm). Although I have not read the documents in detail, there is a recommendation on page 30 of Volume 2 of the reports (see bottom of above website) that states "Section 5(2c) should be amended to limit its operation to those drainage works which will not affect a significant wetland area". Section 5(2c) of Regulation 334 under the Environmental Assessment Act is the section that exempts Drainage Act projects from the Environmental Assessment Act.

In addition, the Municipal Engineers Association is compiling recommendations for their submission as comments. One of their comments relates to the exemption from the Environmental Assessment Act for "urban" drainage project performed under the Drainage Act. Here is the link to the MEA discussion document: www.municipalengineers.on.ca/newsinfo/db2file.asp?fileid=10368 They feel that "urban" drainage projects authorized under the Drainage Act should not be exempt from the Environmental Assessment Act.

About 10 years ago, MOE took issue with the fact that the Drainage Act was being used in some municipalities to construct "urban" drainage systems, including storm sewer systems. At that time, Drainage Act activities were exempt from requirement for a Certificate of Approval (C of A) under the Ontario Water Resources Act (OWRA) as well as environmental assessments under the Environmental Assessment Act. MOE felt that the municipalities were doing this to bypass these requirements for normal urban drainage projects. A committee was formed with involvement from the DSAO (Kevin Grace) and the Land Drainage Committee (Rob Walton) and the group eventually reached a compromise. The solution was that municipalities could continue to build "urban" drainage systems using the Drainage Act, but would now be required to also get a C of A under the OWRA. An amendment was made to the OWRA to accomplish this. The group also discussed the Drainage Act exemption from the Environmental Assessment Act, but it was decided to leave this alone. This is because the Land Drainage Committee representative was adamant that the consultation process under the Drainage Act was more onerous than that under the Environmental Assessment Act. He felt that to make these Drainage Act projects subject to the EA was unnecessary and costly duplication of effort, and this was eventually supported.

If these suggested changes are an issue to you, I recommend that you view the EBR website listed above and make your comments. According to the EBR posting, "Submissions related to this report are welcomed before July 4, 2005."

I also encourage you to share this message with engineers, drainage superintendents, contractors and suppliers who may have an interest in this.

Meeting to Iron Out Drainage Concerns (Excerpts Ontario Farmer, April 19, 2005)

Agricultural drainage stakeholders went into this Monday's meeting here hoping they could smooth out infrastructure grant program details. Matthew Stephenson, representing the Drainage Superintendents' Association of Ontario, says there are areas of concern.

At the top of the list is the proposal not to fund replacement of open-ditch drainage with underground drainage. There are reasons that farmers might wish to close an open drainage ditch. Ginseng growers need to close a ditch in order to develop the north-to-south, ginseng planting configuration that's necessary for the crop. There are also concerns with open-ditch policy related to nutrient management.

Two other concerns are the proposals not to fund any projects less than \$500 and not to fund drainage projects for wetland areas.

Lines from Lambton - Dean Hodgson

Great spring weather got all the Lambton County contractors off to an early start in April of 2005. Although a few late snow storms and some wet cool days caused some interruptions, generally everyone is off to the best start in many years. Despite all the talk of hard times and high tile prices Lambton farmers are taking advantage of the good soil conditions to bury more tile. Most Lambton farmers are splitting existing drains and it is easier to locate these old tiles in the spring. Also there are always a lot of tile repairs in the spring as farmers spot these wet areas, often an old tile has been cut off from its outlet and not noticed until now. But so far everyone is busy and a lot of new tile drains are being installed under excellent soil conditions.

Good to see Sombra Township's Wayne Wilbur back in full production once again. Every contractor should discuss the problems he encountered when attacked by a vindictive farmer not interested in solving a problem but avenging past disagreements. We all try our best but sometimes even perfect is not good enough.

Lambton County farmers also got off to a fast start seeding in early April. First all the sugar beets were planted and about half the corn acreage before the big snowstorm in late April. This storm threw a big scare into everyone. Some cool weather followed and fears grew there would be a lot of reseeded. But eventually everyone was smiling as dry sunny weather returned and crops burst through the ground. Early May brought few warm days and a lot of cool nights which slowed soybean seeding but by the end of May all the crops are in and progressing rapidly. Most of the fall wheat crop came through the winter well although some of the later planted fields have been sprayed and were seeded to soybeans. About half the winter canola, not a large crop in Lambton, has been replaced as it did not winter well. However, generally it appears Lambton County farmers are off to a good start in 2005 and this all bodes well for the tile drain contractors.

On March 16th / 05 the ORCGA (Ontario Regional Common Ground Alliance) hosted a free breakfast meeting at the Euro-Can Inn in Sarnia. Over 50 earth excavating contractors attended but only Rick Wellington of Pro Drainage and I were from LICO. The emphasis of the meeting was on the One Call Service. None of the contractors and few of the speakers were impressed by the One Call service to date but everyone agrees it is a necessary service which MUST be improved.

Jim Douglas of ORCGA chaired the meeting (one of several held across the province) and he along with other speakers stressed the importance of learning to work together. Jim Douglas spent 30 years working on pipeline r-o-w 's for Enbridge before tackling this job. The ORCGA group has completed a booklet on a Code of Best Practices for excavating contractors which they hope will become LAW in the near future. Even though the One Call service has not met expectations to date we all know the underground services are already here and probably more coming. We must have a system where contractors can rely on locates. That is the goal of ORCGA. Hopefully they will succeed. Several speakers warned that contractors can be held liable if doing unauthorized work without first obtaining locates.

Speaking with Rick Wellington at the meeting we learned that Pro Drainage is more than pleased with the GPS system they use to operate their two drainage plows. Although there are glitches Rick feels with more updates almost daily, it is the way of the future. As part of the huge Van Bree enterprises located in Warwick Township, Pro Drainage works all over the province. Rick finds that underground locates are extremely important especially when working in strange territory away from home.

Have been watching the farm papers for any news on the Agricultural Drainage Program. After reading the Harold Rudy study on the provincial drainage problems last January, I was pleased to think we were finally heading in the right direction. Harold made many recommendations to improve our MOD'S and spread the cost of drainage projects throughout our changing society. However, when I finally worked my way through the complex March / 05 draft of the OMAF proposed Agricultural Drainage Infrastructure Program I was deeply disappointed. It was obvious the authors of this draft had completely ignored ALL of Harold Rudy's recommendations. The whole summary was just a continuation of the provincial government's scheme to download all the costs and responsibilities onto municipalities and property owners. Obviously the authors had not listened to any comments from the grassroots but just continued on the same bureaucratic path of the past several years. Disappointment and anger prevented me from writing anymore on the subject but hopefully no news means good news.

Remembering Lou....Article reprinted from October 1980 Journal (Mr. Forrest passed away May 15, 1996)

Ancient Machine Still Chugging

As anyone in the county and they will tell you that Lou Forrest has a way with machinery. Forrest, who lives on Essex County Road #8, has had his share of experience working with ancient equipment.

His pride and joy, however, is an old tiling machine that is still operating after half a century and thousands of acres of tiling. In over sixty years in the farm drainage business, he thought he had seen everything, but last week he knew that the wheel had revolved full cycle. For he was back on the same farm, in the same field, and with the same tiling machine that he had serviced in 1922.

Lou seldom gets excited about anything but felt a twinge of nostalgia as he drove is survey stakes in the field, and the farm owner, Tom Imeson, agreed with him. For it was on the Imeson farm, at the corner of the 11th Concession, Mersea and the Creighton Sideroad (Road 37) that the tiling machine first scratched the soil of Essex County.

Lou's father, William, had just purchased the machine used from somewhere "down east", and after a quick checkup, set in to tile the Imeson field. The year was 1922, and Lou, who was 22 at the time, recalls the incident clearly.

As was the custom, the clay tile was laid at four rod (66 feet) intervals, and the new machine performed like a champion. Father William operated the machine, and Lou and a friend, Henry Dunmore, laid the tile. Dunmore, who now resides on Erie Street North, Wheatley, and Lou Forrest were paid the princely sum of \$1.00 a day for their work on the machine.

How did the 1922 tiling job stand up under the test of time? Lou claims that the clay tiles are still working, but the four rod interval is not sufficient, so they are merely "splitting the field", that is installing a new row of plastic tile between the existing runs.

The tiles laid in 1922 are still working, albeit slowly.

The tilling machine was once sold in order to purchase a newer model but it did not stay out of the family for long. It was sold in 1956 but when it became available in 1975, Lou grabbed it eagerly, and immediately proceeded to overhaul it. A few refinements that included an attachment that refills the trench after the tiles were laid, and the machine was back in service.

Forrest's weatherworn face brightens and his eyes sparkle when he explained that the Imeson tiling job had certain fringe benefits. For it was there that he met his future wife, Ethel Imeson, and two years later , they were married.

A man is being tailgated by a stressed-out woman on a busy city street. Suddenly the light turns yellow just in front of him. He does the right thing and stops at the crosswalk, even though he could have beaten the red light. The woman hits the roof, and the horn, screaming in frustration as she misses her chance to get through the intersection with him.

She is still in mid-rant when she hears a tap on her window and looks up into the face of a very serious police officer. The officer orders her to exit her car, takes her to the police station where she is searched, fingerprinted, photographed and placed in a cell.

After a couple of hours, a policeman approaches the cell and opens the door. She is escorted back to the booking desk where the arresting officer is waiting with her personal effects. He says, "I'm very sorry for this mistake. You see, I pulled up behind your car while you were blowing your horn and cussing a blue streak at him. I noticed the "What Would Jesus Do" bumper sticker, the "Follow Me to Sunday School" sticker and the chrome-plated Christian emblem on the trunk. Naturally I assumed you had stolen the car."

OMAF News

Sid Vander Veen, Drainage Coordinator

Tile Loan Program: By letter dated May 12, 2005, the 2005/06 Tile Loan Program was announced to municipalities, the day after the provincial budget was announced. The loan interest rate remains at 6% and the loan limit continues to be \$50,000 per farmer per year. With the earlier announcement and the more attractive loan features, we hope that there will be more farmers participating in the Program.

We continue to receive calls from municipalities indicating that a farmer has applied for a loan after the installation of the tile drainage work. In those situations, municipalities have the right to deny the tile loan and there is a good chance that this may occur more frequently in the future. So, please remind your farmer clients to apply for the loan well in advance of the work and to contact the municipal tile inspector a few days prior to the actual work to arrange an inspection.

Agricultural Tile Drainage Installation Act: As of June 1, 2005, in the province of Ontario there are 90 licensed tile drainage businesses using 171 tile drainage machines. Of the 171 machines, 106 are ploughs, 55 are wheels and 10 are chains. A total of 399 individuals have a valid machine operator's licence. We will be posting a list of licensed tile drainage contractors on our website in the very near future (www.gov.on.ca/OMAF/english/landuse/drainage.htm)

Working as a tile drainage contractor without a business license contravenes the *Agricultural Tile Drainage Installation Act*. If you find someone operating illegally in your area, please let us know. We will investigate, and if we can catch them in the act, we will take action against them.

Drainage Act Grants: Draft policies for the new \$6 million Agricultural Drainage Infrastructure Program have been developed and are now in the comment stage. We expect to make announcements to stakeholder groups (such as LICO), municipalities and engineers in early July.

Drainage Guide Review: For the past year, the completion of the Drainage Guide update was put on hold because of all the extra activity around the *Drainage Act* grants. We will be pushing to have this project completed this year.

Biology of Drains: Your executive is working with Fisheries and Oceans Canada to conduct a workshop on June 25, 2005 on the "biology of drains". More knowledge and information is always a useful thing, so I encourage you to broaden your minds and plan to attend.

Sid Vander Veen
Drainage Coordinator

Addition to LICO Contractor List 2004 - John Johnston

In compiling the list of contractors that was sent out this spring, I made a grievous error. I inadvertently left out the listing of Honorary Life Members; Peter Darbishire, Gerry Clarke, Dave Inglis, Doris Inglis. Please add these individuals to your copy of the LICO Members April 4, 2005.

Email Addresses - John Johnston

I am compiling email addresses for members so I have a method of rapid communication when needed. Please send me an email at jjohnston@go.net with your company name and email address so I can compile as complete a list as possible. I find that some addresses from the membership renewal form no longer work.

Study Finds Liquid Hog Manure Applications Good For the Soil (Ontario Farmer, April 26/05)

Repeated applications of liquid swine manure do not lead to a nutrient overload in the soil as long as the manure is applied at agronomically accepted rates.

That's the conclusion for a study done by Dr. Jeff Shoenau of the Department of Soil Science at the University of Saskatchewan. The study, reported on the Saskatchewan agriculture ministry web site, says that as long as farmers apply manure in balance with long-term crop removal there should be no environmental concerns about the practice.

Shoenau and his team measured soil properties like nutrient content, organic matter, soil structure, crop yield and quality. They worked mostly with hog manure, but also with cattle manure.

"We found that, when manure is applied at agronomic recommended rates – which may be accomplished by manure testing and soil testing to determine the appropriate rate and balance of manure and fertilizer nutrients to meet the crop demand – we see no evidence of nutrient loading or any negative effect on the quality of the soil," Shoenau says.

But, they did find a nutrient build-up, including increased losses by leaching or denitrification when too much was applied.

"Respecting agronomic rates is also key to good yield responses to the nutrients contained in the manure over sustained periods. When manure is over-applied, we do see negative effects like lodging and injury to germinating seeds and seedlings due to excessive salts and ammonium," he says.

Shoenau's team also found better crop yields with injected liquid manure than with surface broadcast applications. "This liquid injection of manure into the soil as bands was achieved during our trials with the help of a low disturbance coulter injector system," he says.

Thought For The Day

1. Save the whales. Collect the whole set.
2. A day without sunshine is like, night.
3. On the other hand, you have different fingers.
4. I just got lost in thought. It wasn't familiar territory.
5. 42.7 percent of all statistics are made up on the spot.
6. 99 percent of lawyers give the rest a bad name.
7. I feel like I'm diagonally parked in a parallel universe.
8. Honk if you love peace and quiet.
9. Remember, half the people you know are below average.
10. He who laughs last, thinks slowest.
12. The early bird may get the worm, but the second mouse gets the cheese.
13. I drive way too fast to worry about cholesterol.
14. Support bacteria. They're the only culture some people have.
15. Monday is an awful way to spend 1/7 of your week.
16. A clear conscience is usually the sign of a bad memory.
17. Change is inevitable, except from vending machines.
18. Get a new car for your spouse. It'll be a great trade!
19. Plan to be spontaneous tomorrow.
20. Always try to be modest, and be proud of it!

Drainage of the Soil – Part 12 – Ross W. Irwin

Depth of Drains

The Drainage Guide (Sec. 2.15) makes recommendations on the depth of lateral drains. It defines the depth as the distance from the ground surface to the bottom of the drain or tile trench. Drain cover is the distance from the ground surface to the top of the drain pipe. The Guide gives a number of factors which influence these dimensions.

The field design should include lateral drains laid at a depth which is parallel to the ground surface. This is so the plant roots have the same volume of soil from which they can harvest their nutrients. However, there is also a need to lay the drain greater than the minimum grade for free flow of water. Minimum grade is defined (Sec. 2.16) as about 0.1% or one foot of fall per 1000 ft. of lateral length.

Also, the lateral drain should have a free discharge if possible, that is the main drain or receiving ditch must be deep enough that the lateral drain outlet is not submerged and discharge is not restricted.

Tile drainage is to assist and promote plant growth. It provides a space for plant roots to develop. These are the physical geometrical considerations.

Plant Feeder Root Depths

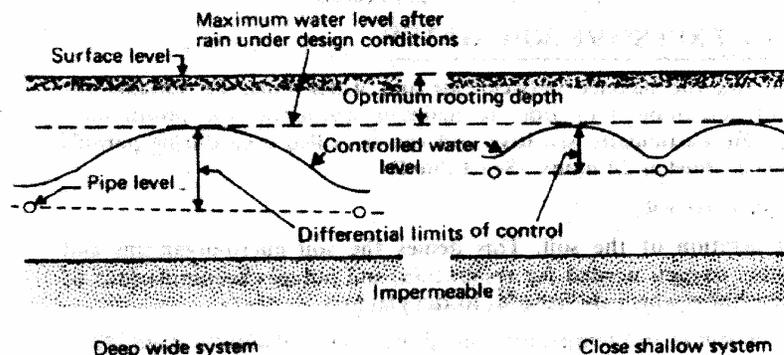
Crop	Root Depth, ft.
Corn	2.5
Soybeans	2
Grain	2 – 2.5
Alfalfa	3 – 6
Vegetables	1 – 2
Orchards	3 – 5

The physical and chemical properties of soil affect root growth. Many soils have decreasing hydraulic conductivity with depth. Long-time experience in Western Ontario is not to place the drains too deep in order to get quick drainage from the surface and soil profile.

The distribution of feeder roots for a plant is 40% of the upper 25% of depth, 30% in the next quarter and then 20% and 20%. So about 70% of the plant roots are in the top half of the depths shown in the Table below. Water should be drained from this zone as quickly as possible.

The drains must be deep enough, that is with the enough cover, to be safe from farm equipment damage through deep plowing/cultivation or extreme surface loads.

The illustration shows that shallow drains need to be closer spaced to drain the rooting depth profile. Deeper drains drain more of the soil profile and are more efficient but may take longer to remove water from the root zone.



CALENDAR OF EVENTS

January 25-26, 2006

LICO Conference

Best Western Lamplighter Inn

**591 Wellington Rd., London, Ontario
N6C 4R3**

Phone: (519) 681-7151

Fax: (519) 681-3172

Toll Free (800) 528-1234



February 7-9, 2006

Canadian International Farm Equipment Show

International Centre, Toronto

NOTE: 2005 Municipal Directories are still available.

You Pay for Drainage, Whether You Have It or Not (Excerpts of article by Keith Reid, OMAF, Huron Soil and Crop, Spring 2003)

The reason for tile drainage is to make more water available to the roots of the crop. As the soil dries, the water is held in smaller and smaller holes and more and more tightly. Water won't flow from a small hole into a large one, unless there is pressure from more water pushing it.

A tile drain is like an extra large hole in the soil. When the ground is saturated, the pressure of the water in the soil pushes it into the tile, where it can be carried away.

Eventually, the water is held tightly enough to stay against the pull of gravity, so that no more will flow into the tiles.

This point is called field capacity and represents the maximum amount of available water in the soil. The tile doesn't remove any available water, only the excess.

Roots need both moisture and oxygen to grow, so roots won't even grow in a saturated zone.

When the rooting zone is enlarged, the ability of the crop to take up fertilizer is also increased. Along with that, the soil will warm up faster in the spring, so the crop can be planted earlier and the risk of soil compaction is reduced. It's no wonder tile drainage pays!

Ministry Drawing Up New Criteria For Drainage Grants (Excerpts from Ontario Farmer, April 12, 2005)

The new Agricultural Drainage Infrastructure Program (ADIP), will look a lot like the old Municipal Outlet Drain program but ADIP will be more carefully targeted to agricultural purposes.

One proposal is that, where a land severance creates the need for a new crossing for municipal drain, the crossing would not be eligible.

Another suggested policy is that if projects are not in compliance with federal and provincial laws, then they are not going to provide a grant.

It is proposed that this program will more closely adhere to the letter and spirit of the Drainage Act. For example, the program won't pay a grant for special lawn piping to cover an open ditch across a yard for aesthetic purpose. It has nothing to do with agriculture.

Other examples of special benefits that won't be covered include the construction of farm ponds built as part of municipal projects, or upgrades to tiles to exceed the minimum two-year storm standard.

The program will continue to cover half the cost of the work by drainage superintendents, but it will "better define" their duties.