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SEA's – Environment Message of the Month:

Fall Farming Activities & PEI Water

We usually think it's the Spring when farmers do their most important field work, but when it comes to preventing soil erosion and lowering nitrate loads into ground and surface water, the Fall is even more important.

Fields are at the highest risk of erosion when they are bare – and that's just what happens after root crops like potatoes, carrots and turnips are harvested. Depending on the timing, farmers will plant what are called fall cover crops, like rye, to keep the soil in place. That is what you are seeing when you drive by fields now that are green and full of new growth.

Just as important is what happens with nitrates left over from unused fertilizer during the growing season. These nitrates leach into the underground aquifers we use for drinking water, or end up in streams and bays fertilizing next summer's growth of unwanted algae. Fall cover crops again, can come to the rescue. These growing plants take up the excess nitrates and prevents them from causing any environmental damage.

There has been very important research conducted on this very topic in eastern PEI by Agriculture Canada and regional university scientists; they were looking at how Fall plowing practices added to nitrate loads in nearby waterways and groundwater sources. The

researchers measured the nitrate load in the groundwater after fall plowing and it was considerably high. So, they have been working to convince farmers that plowing in the Spring instead will release the plant nitrates for use by the new crop that has just been planted. It's a delicate issue for farmers who worry that a cold wet Spring won't allow the time to both plow and plant a new crop. If cover crops aren't possible many farmers spread straw to try to control run-off – anything that can slow down the movement of water across fields, and hopefully slowing down the loss of valuable top soil, as well. For more info on the research, go to: http://www.gov.pe.ca/photos/original/cle_WA30.pdf (source: *Effects of Fall vs. Spring Plowing Forages on Nitrate Leaching Losses to Groundwater* by Y. Jiang et al.)

SEA is interested in working with local farmers to make sure practices around waterways protect rivers and streams, while giving the farmer the best chance at maintaining healthy soils and productive crops. Please contact us if you would like to work with us and learn more about what programs you may be able to access for support.

SEA is a non-profit, charitable organization working to improve the environment and community around us. If you would like to support our work, please consider becoming a member, or make a donation at <http://seapei.org/make-a-donation/>. Your support is greatly appreciated.

Thank-you for reading our column and many thanks to Island Press Limited for generously supporting us through great stories about our projects and activities, getting word out to the public about what we do, and for dedicating to us this column space. We very much appreciate it!!