

Grow Ontario Together

OGVG's Phosphorus Reduction Strategy

November 3, 2016

Ontario's greenhouse farmers are very concerned about increasing phosphorus loadings in the Great Lakes and are committed to addressing this issue through education, adaptation and mitigation.

Achievements to date

- Since 2010 over 1000 new and existing greenhouse vegetable acres have transitioned to nutrient recirculation. Greenhouse nutrient recirculation reduces fertilizer consumption by **30-50% per acre**. Currently, over **90%** of the acreage represented by OGVG recirculates. Since 2010, greenhouse farmers in the Leamington region have reduced their fertilizer losses by **58%** on a per acre basis.
- Over the past 10 years OGVG has invested heavily in research projects focused on identifying technologies to allow for closed loop production whereby all nutrients are used efficiently within the greenhouse.
- In 2012, supported by the **Canadian Agricultural Adaptation Program (CAAP)**, OGVG put in place dedicated staff resources to aid in the development of sector specific regulations, work with growers to develop plans for environmental sustainability and aid with compliance related matters.
- In the summer of 2013 the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) finalized their **'Self-Assessment and BMPs for Water and Fertilizer Use in Greenhouse Vegetable Production'** promoting responsible nutrient management. OGVG distributed this in hard copy to all of their members.
- Inclusion of **Greenhouse Nutrient Feedwater (GNF)** under the Nutrient Management Act (NMA) in January 2015 provided greenhouse farmers with an effective tool for repurposing valuable nutrients that can no longer be used in the greenhouse by allowing them to be applied to field crops.
- Over 2014-2015, expansion of the sanitary sewer in Kingsville resulted in 18% of vegetable greenhouses in the region of the Leamington tributaries having access to a reliable solution for the management of both domestic waste and excess fertilizer solution, eliminating the need for on-site septic beds and reducing the risk of phosphorus contamination.
- Over the winter of 2015/16 OGVG worked with the Ministry of Environment and Climate Change (MOECC) to develop a streamlined, low-cost, sector-specific regulatory tool for stormwater management. This compliance tool, referred to as the streamlined ECA (sECA), will put in a place a sampling regime to monitor for the presence of phosphorus in stormwater ponds.
- In late 2015 OMAFRA and OGVG formed a directed task team focused on one-on-one grower meetings to identify potential barriers to achieving zero discharge production and to offer technical support to growers. In total 30 site visits were completed in this initiative representing 465 acres. This arrangement has resulted in enormous benefit to both the individual growers and to informing the strategy.
- In 2016 alone OGVG has hosted a number of Environmental Farm Plan, land application, environmental planning and compliance workshops.
- In July 2016 OGVG hired an intern through **Agriculture and Agri-Food Canada's (AAFC) Agricultural Youth Green Jobs Initiative**. This intern will support growers one on one with their plans for sustainable production, identifying potential sources of cost share funding and navigating compliance based

documentation. To date, OGVG has delivered one-on-one support focused on stormwater compliance under the new sECA to approximately **47% of the greenhouse acreage in the Lake Erie priority watersheds**. Currently, **59 applications** are in some state of preparation and/or approval.

- In October 2016, OGVG was approved for a University of Guelph Capstone project entitled “**Optimizing the Management of Greenhouse Nutrient Feedwater**” that will explore the economics related the phosphorus reuse and recirculation as it relates to both small and large greenhouse operations. The project will be led by the Guelph Environmental and Economic Consulting (GEEC) group.

Going Forward

- **Grower Communications:** OGVG is committed to ensuring its membership is fully informed as to the importance of this issue. To this end, information on the following topics will continue to be delivered to OGVG’s membership as part of a joint MOECC/OMAFRA communications plan:
 - Meaningful and impactful information/data related to phosphorus in the Great Lakes.
 - Regulatory requirements for land application and nutrient management more generally.
 - Information related to the Environmental Farm Plan, Growing Forward 2 (GF2) and/or any additional funding streams that become available.
- **Grower Outreach:** OGVG in collaboration with OMAFRA will continue to offer one-on-one support to its membership to aid in improving environmental outcomes and ensuring regulatory compliance.
- **Stormwater Compliance:** OGVG will work with their membership to ensure all growers in the Lake Erie priority watersheds have applied for the required stormwater approvals by April 1, 2017.
- **Watershed Remediation:** Given the relatively unknown timeline associated with remediation of a watershed that has been subject to historical nutrient contamination, OGVG has started to explore low-cost options for regional phosphorus capture. This will be done in conjunction with local Conservation Authorities.
- **Good News Stories:** OGVG is working with Farm and Food Care to promote sector success stories outlining how growers have overcome obstacles to eliminate potential sources of nutrient loss from their operations.
- **Adaptation and Contingency Funds:** OGVG will continue to work with government to ensure transition funds are available to growers looking to retrofit their operations to eliminate nutrient loss.
- **Sustainable Economic Development:** OGVG, in collaboration with the municipalities of Kingsville and Leamington, is committed to pursuing a multi-phase sanitary sewer expansion project. Not only does the infrastructure expansion provide established greenhouses and homeowners with a reliable and low-risk solution for waste water management, it also has the potential to drive economic development in the region by defining an **investment corridor**. Using historic growth projections, we estimate that this investment could easily attract over 1650 new acres of greenhouse development over the next 10 years, representing a regional investment of over \$1.2 billion and creating 7,000 new jobs. In addition, it is estimated that 58% of the current acreage in this region would be serviced, effectively reducing the risk of nutrient contamination in the waterways. This investment could go a long ways towards achieving the commitment Canada has made under the Great Lakes Water Quality Agreement to reduce phosphorus entering Lake Erie.