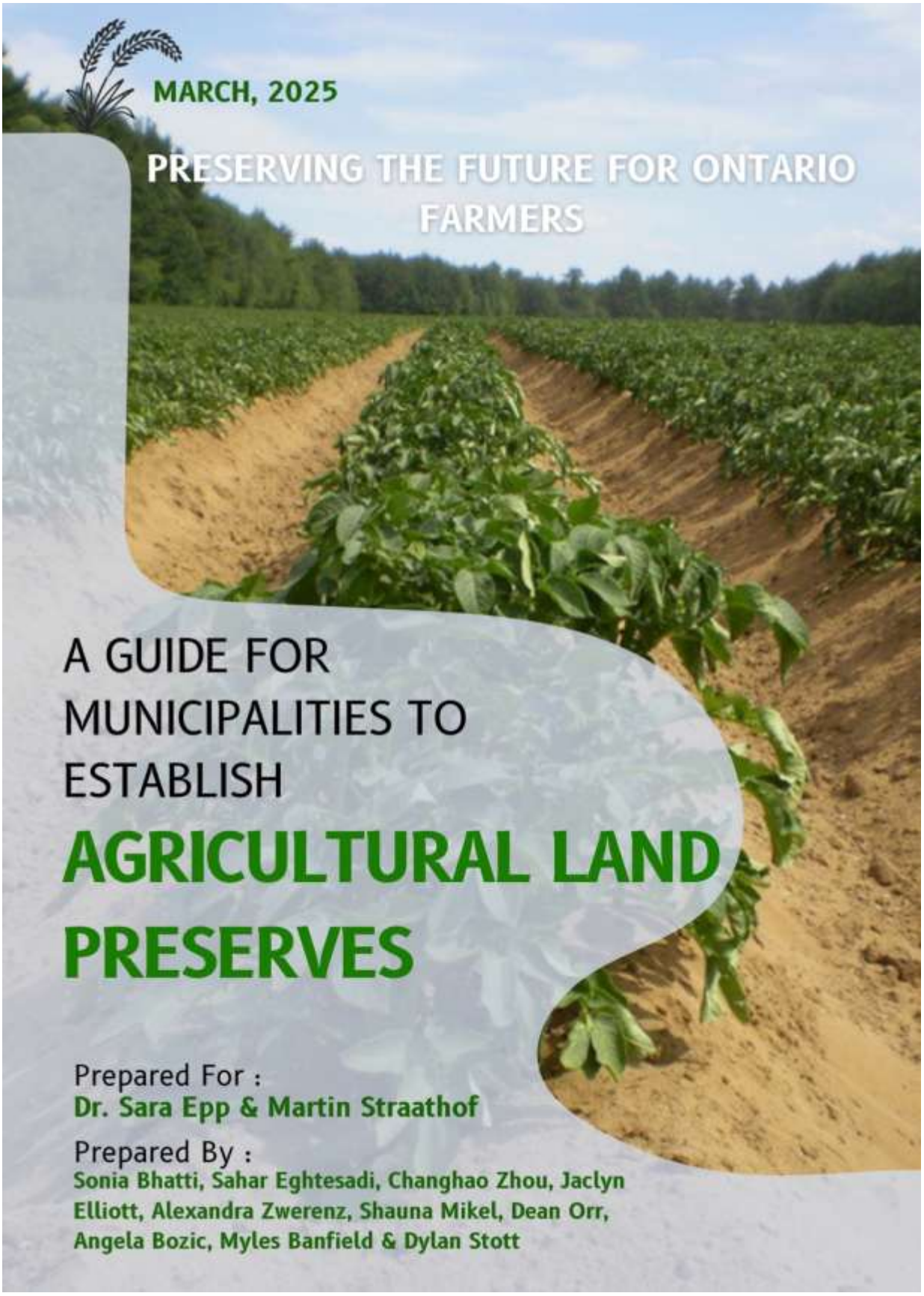
This guide was developed as a final student assignment for the Planning for Agricultural Conservation *course, co-delivered by the University of Guelph and the Ontario Farmland Trust. While it is informed by academic research and case studies, it does not represent the official views or recommendations of OFT.*



For

Opportunities for Municipalities to Establish Agricultural Land Preserves

RPD*6290 Section 01: Planning for Farmland Conservation

Winter 2025

Sonia Bhatti - 1358134

Sahar Eghtesadi - 1298551

Changhao Zhou-1298044

Jaclyn Elliott - 1355672

Alexandra Zwerenz - 1208553

Shauna Mikel - 1332595

Dean Orr -0730897

Angela Bozic - 1005112

Myles Banfield - 1350310

Dylan Stott - 1306938

Information Guide for Municipalities

Submitted to: Instructor Sara Epp

March 14, 2025

Introduction:

Ontario's Farmland is some of the best farmland in the world, having excellent soils, good daylight length, a reasonably long growing season, temperature moderated by the Great Lakes, and consistent rainfall. This unique combination of attributes in itself makes for highly capable agricultural production. Moreover, Ontario has the additional benefits of microclimates and specialty crop areas, such as the Niagara escarpment, Holland marsh, among others within the province; that allow for specialty crops to be grown. Ultimately, Ontario has the conditions to able to grow over 200 different commodities (Ontario Government 2024a) reliably in the province, something that is just not possible in many other areas of the world.

Within the Canadian context, Ontario is home to over 50% of our Class 1 soils (Epp & Caldwell 2018), the best soils in Canada, which are described as having "No significant limitations in use for crops". As mentioned above, it is one of the few places in Canada that has a near-perfect combination of a desirable volume and consistency of rainfall, great number of growing degree days, good season length (Government of Canada 1957), and along with this combination of excellent capability soils makes agricultural production some of, if not the best, in the country. It is expected that Ontario is one of the regions in the country to be least impacted by severe floods, droughts and yield reductions due to climate change (Government of Canada, 2020). It would, therefore, seem to be incredibly important to protect these resources from a food security and a food sovereignty perspective now, and going forward.

Outside of the most basic tenants of food security and food sovereignty, the majority of Southern Ontario's rural communities rely heavily on agriculture for their social and economic wellbeing. Ontario's farming communities are full of a rich cultural history that is incredibly important within and outside these communities. The agrifood sector also contributes nearly $51 Billion dollars to the Provincial economy (Government of Ontario 2024b), while employing 11% of population of the province (Government of Ontario 2024c).

We are sitting on an incredible resource that, understandably, has attracted incredible population growth to these communities in Southern Ontario. Somewhat ironically however, this has brought tremendous development pressure on to our agricultural systems to accommodate this growth, especially under the low density, car-dependent 'sprawl' type development that has become so commonplace since the 1950's. Since 1971, Ontario has lost 4,163,056 acres from agricultural production, 26% of the agricultural land base. Since 1941, this loss has been approximately 10,587,981 or 47% (Noble, 1974; Statistics Canada, 2021), which are stark numbers. Interestingly, and indicative of our sprawling, poor land-use efficiency, between 1971 and 2001, Ontario's urbanized population grew by 45%, while the urbanized area increased at more than double the rate, by 96% (Malenfant, 2007; Statistics Canada, 2005). While advocates push for housing and development reform that would see a return to more traditional, compact,

development patterns, municipalities may want to look at additional measures to preserve agricultural land.

Presented within this guide will be information on major causes of farmland loss, discussion on agricultural preserve models, case studies of agricultural preserves, societal and ecological benefits to agricultural land preservation, and key takeaways for municipal decision makers. While an incredibly important topic, efforts to preserve agricultural land within Canada have not come without their shortfalls. It is important to discuss these earnestly so we may learn from them, and put together agricultural planning solutions that are equitable, long lasting and see a greater amount of farmland protected for the future.

What is causing the majority of farmland loss

Farmland loss is a critical issue caused by a combination of poor planning mechanisms, development pressures, and financial incentives that often favour urban expansion over preserving natural spaces. It is important to identify this ongoing trend and create and adjust strategies to enhance farmland preservation to ensure long-term food security, a thriving ecosystem, biodiversity, and habitats for endangered species.

Main Factors of Farmland Loss:

- ✓ **Urban Expansion and Zoning Decisions**: In Ontario, municipal zoning decisions, Minister's Zoning Orders (MZOs), and land speculation continue to diminish agricultural land. Resource extraction significantly contributes to the conversion of farmland for non-agricultural purposes. Stricter enforcement of farmland protection policies and more proactive land-use planning are necessary to address this trend (Straathof, 2025).
- ✓ **Policy and Legislative Vulnerabilities**: Although protective measures like easements and legislative acts exist, the potential to lift these easements through provincial legislation allows for lobbying and external pressures (Tomalty, 2015). This situation makes farmland preservation especially susceptible to political and urban development interests (Tomalty, 2015).
- ✓ **Global Development Pressures**: Urbanization and large infrastructure projects worldwide are causing significant loss of cropland, especially in rapidly growing regions. By 2030, as much as 3.3 million hectares of farmland will be lost due to expanding megacities (globally) (IPES, 2024). Special Economic Zones (SEZs) often override existing land rights in favour of vaguely defined "public interest," leading to land disputes and inadequate community compensation (IPES, 2024).
- ✓ **Industrial and Resource Extraction**: Mining activities, fueled by the growing demand for materials like sand, gravel, and phosphates, have significant adverse effects on local communities, mainly small-scale farmers. Mining sites often encroach on agricultural land,

displacing food producers and disrupting traditional farming practices (IPES, 2024). Such displacement reduces the availability of arable land and contributes to pollution, contaminating soil and water sources (IPES, 2024).

- ✓ **Speculation and Land Banking**: For instance, in Ontario's Greater Golden Horseshoe (GGH), speculation-driven land banking raises land prices and disrupts agricultural systems. Speculators buy farmland anticipating future urban development, complicating farmers or new entrants' ability to expand their operations or enter the market (Tomalty, 2015).
- ✓ **Infrastructure Projects**: Infrastructure projects such as highways often take over farmland and create barriers between agricultural lands. The environmental assessment process for these projects often neglects the agricultural system and its accessibility, resulting in more significant negative impacts on farmland and its surrounding environment (Tomalty, 2015).
- ✓ **Inadequate Agricultural Protection Policies**: Agricultural land protection tools are not as developed as tools for natural heritage, leading to increasing deficient support for agricultural systems. Additionally, provincial agencies and municipal planners' limited understanding of agricultural systems leads to decisions that undermine agricultural interests (Tomalty, 2015). Nevertheless, those decisions can have lasting impacts on adequate and accessible farming practices. Thus, making knowledge more easily available to decision-makers at all levels is crucial to protecting our agricultural landscapes (IPES, 2024).
- ✓ **Inefficient Protection Tools**: Easement and other legislative measure that prevents development in certain agriculture land are the most common tool used in farmland conservation. However, such measures lead to a loss of land value, which can create financial pressure for farmers. At the same time, development bans can further increase the potential profit once restrictions are lifted, making the land more attractive for urban sprawl (Skog & Bjørkhaug, 2020; Lynch & Duke, 2007).

While politics, development, agriculture, and other building projects sometimes seem to have little in common, it is crucial to remember that these activities are interconnected and can have real hidden effects, threatening each other's availability to operate and be resilient. Therefore, to protect valuable farmland and limited natural resources, it is essential to address all factors equally.

Timeline of the Duffins Rouge Agricultural Preserve: Case Study

Lessons Learned and External Tools

As mentioned above, establishing agricultural preserves or land trusts can have shortfalls. One dominating theme is the confusing and less than intuitive process which eventually leads to one becoming established. Multiple levels of government may become involved, depending on the ownership type of the land and its intended use within that landscape.

Planning as a general practice as well as the action undertaken by governing bodies or other is required when approaching the intent to preserve land for agriculture. There are foundational steps required to successfully achieve this goal.

Having resources at the ready can be difficult to come across. For the purposes of creating and maintaining a land trust, below is a compilation of the tools one may find useful. Along with benefits, challenges and risks, you may use this without having to do all the searching.

For these tools to be utilized to their best advantage to maintain or start a municipal land trust, we can use these tools to weigh the benefits with the challenges and risks, so that those looking to start a land trust procedure can be well informed. Each tool serves a unique purpose to help support the establishment of agricultural preserves and can be used individually or with other tools.

Starting a land trust is a powerful way to protect and preserve natural landscapes and cultural heritage (Ontario Land Trust Alliance, 2025). A land trust or agricultural preserve is truly a community effort, as they stem from a need identified by local groups or citizens and then get brought to fruition as a result. (Ontario Land Trust Alliance, 2025). If you know of any area or know of someone interested in starting the process for a land trust, navigating through this chart will help you find out where to start.

Step One – before you start, you can start thinking about what goals your land trust has and what activities you want your land trust to do (Ontario Land Trust Alliance, 2025). Once you have decided on this, you can begin to look at the legalities, technical side, and incorporation aspect. Below, you can find various links that will help you identify what kind of land trust is right for you or your community, and which laws can help to protect your land trust. Finally, once you have done your research with the help of this chart, you can join the Ontario Land Trust Alliance and create an application!

Table 1: Compilated tools for starting and maintaining a municipal land trust.

Example – Summary of Tools within the toolkit			
Tool	Benefit	Challenges/Risks	Citation
2017 Farmland Value and Rental Value Survey: Summary of Findings	Data from 2367 Ontario respondents compiled into	The data in this survey is from 2018 and may no longer be	(Deaton Jr., 2018)

	comparable metrics across 32 municipalities.	able to provide adequate advice for rent valuations.	
Agri-Food Initiatives Ontario Directory	A logically organized document which has embedded hyperlinks to specific items including Studies, Strategies, Project/Program, Guidance, and Other. There is also a contact at the bottom of this document in case there are resources missing.	This disclaimer is appended to the document, "*The Ontario Federation of Agriculture (OFA) makes no warrantee, express or implied, as to the accuracy, completeness, quality or reliability of the Directory or the information contained therein, nor of the products, nor of the results to be obtained from the use of Directory contents. The inclusion of content does not constitute OFA endorsement. Please use this resource at your own discretion."*	(Ontario Federation of Agriculture, 2021)
Canadian Land Trust Standards and Practices, 2019	Provides 12 standards for a new Land Trust to abide by as they are "ethical and technical guidelines for the responsible operation of a land trust"	These are standards are built for incorporated Land Trusts.	(Barnett, et al., 2019)
Canada Land Inventory	This tool allows the user to download area-specific data for soil capability.	If a specific region one is working in is not included, or there are limited electronic resources to interpret the data this could be limiting.	(Government of Canada, 2025)
Ecosystem Services of Farmland	This tool shows information on ecosystem of farmland. Concisely lays out ecological benefits from agricultural land preserves such as water preservation.	Tool language and terminology is not up to planning standard.	(Ontario Farmland Trust, 2022)
Checklist to Support Agricultural Growth in Your Municipality	Concisely lays out information and resources needed to establish a support network for farming in each municipality. Can also help form a conversation from the perspective of a farmer when looking into their Official Plan policies in these regards.	In underfunded municipalities where farming is not the dominant industry, these conversations may not be feasible at the scale this checklist attempts to reach.	(Ontario Federation of Agriculture, 2024)
e-laws.ca	Assists the quick retrieval of Ontario laws.	If one does not know the precise instrument, there could be confusion as to what law to look-up.	(Province of Ontario, 2025)
Farmland at risk: How better land use planning could help ensure a healthy future for agriculture in the Greater Golden Horseshoe (GGH)	This report is an in-depth look to how planning at the land use level can aid in the long-term preservation of significant farmland in Ontario. This goes over important recommendations that	The further away from the Greater Golden Horseshoe, the less there is information and supporting information for other municipalities.	(Tomalty, Ph.D., 2015)

	could, arguably, be used more broadly than is scoped within this report. The layout is very use-friendly as it provides a sequential list of topics discussed in greater detail, dividing the topics into key logical categories.		
Land Trust Starter Guide, 2024	This starter guide provides examples from all over Canada which provides alternate language which may differ from place to place. There are hyperlinks built-in to this document to lead to more scoped resources.	The level of information available in this starter guide is high. It may be too high for some applications.	(Alliance of Canadian Land Trusts, 2024)
Make a Map: Natural Heritage Areas	This mapping application is a great resource for authoritative, and up-to-date information which could be useful when building a case for conservation. Has excellent, high-resolution aerial imagery of most of the province.	The tool is not very user-friendly. Unless one has a beginners' knowledge of geographic information systems and their layering properties/organisation they may not understand the tool's capabilities.	(Ministry of Natural Resources, 2025)
Make a Map: Topographic	This mapping application is a great resource for authoritative, and up-to-date information which could be useful when building a case for conservation.	The tool is not very user-friendly. Unless one has a beginners' knowledge of geographic information systems and their layering properties/organisation they may not understand the tool's capabilities.	(Ministry of Natural Resources, 2025)
Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005 – Second edition	This Reference Manual is highly in-depth with assessments and its suggested buffers and set-backs for specific situations. There is a section specific (12) to "municipal planning techniques and other tools (e.g. zoning by-laws, conservation easements) that planning authorities should consider […]"	This document is almost 20 years out-of-date and the application to the PPS should have grown with the editions of the PPS over the years. The risk to using this information is that some recommendations may not transfer adequately to their original intent.	(Ontario Ministry of Natural Resources, 2010)
OFA fact sheet: OFA Consolidated Agricultural Land Use Policy Statement, 2020	Provides an OFA-perspective on specific legislation which may or may not aid in the implementation of an easement.	There is bias for their scope of interest.	(Ontario Federation of Agriculture, 2020)

Olta.ca	Provides rationale on the importance of easements		(Ontario Land Trust Alliance, 2025)
Ontario.ca/MFTIP	If there are applicable lands which have >4ha of forest one could have a 'tax-break' from the provincial government	This is independent of the land easement process but could be built-in to bolster the preservation aspect of the farmland easement.	(Ministry of Natural Resources, 2025)
OntarioFarmlandTrust.ca	Coordinates targeted information and other resources for this type of land agreement – preservation	Each scenario is slightly different and there may not be sufficient information regarding each issue.	(Ontario Farmland Trust, 2025)
Provincial Planning Statement, 2024	This is the most up-to-date, minimum standard which incorporated municipalities are bound by when writing their own Official Plans.	It does not explicitly reference conservation easements and their applicability; however, it does state, "Growth and development will be prioritized within urban and rural settlements that will, in turn, support and protect the long-term viability of rural areas, local food production […]" (Ministry of Municipal Affairs and Housing, 2024)	(Ministry of Municipal Affairs and Housing, 2024)
Planning Template for Preparing a Stewardship Plan for Natural Areas	Application form for the Managed Forest Tax Incentive Program. Maybe useful for farmland which has mixed natural heritage values (>4ha of forested area for consideration). This program could bolster the preservation of ecological factors by reducing habitat fragmentation.	Only applicable for forests >4ha to remain in their current state (at time of approval).	(Ministry of Natural Resources, 2022)

Additional Ecological Benefits

Agricultural land preservation has notable ecological benefits, benefiting rural economies. It protects and maintains water and oxygen quality, fighting climate change. This section of the report examines ecological advantages, such as the role of carbon sequestration and water conservation.

Carbon Sequestration

Farmlands have enormous potential for sequestering carbon, which might significantly impact the future. Carbon can aid in the battle against climate change when it is taken from the atmosphere and stored (or sequestered) in soil (Ecosystem Services of Farmland, 2022). When plant matter absorbs carbon and is subsequently managed to retain the carbon in the soil, carbon

is sequestered in the soil (Ecosystem Services of Farmland, 2022). Farmland might have a significant impact with the correct management techniques, and the more farmland that is permanently conserved, the more farmland we can use for environmental purposes (Ecosystem Services of Farmland, 2022).

Water Filtration

Water filtration serves as an ecological benefit from agricultural land preserves. Water filters as soil aids by eliminating pollutants from water during its passage (Ecosystem Services of Farmland, 2022). In addition to keeping drinking water and neighbouring lakes and rivers safe for human consumption, this helps keep these contaminants from rising to the water table (Ecosystem Services of Farmland, 2022). In order to provide the ecosystem function, farming systems that include consistent vegetation, such as pastures and cover-cropped fields, are better equipped to absorb water and reduce runoff (Ecosystem Services of Farmland, 2022). Additionally, this can slow down water flow and promote soil absorption, reducing the likelihood of flooding and averting property damage and safety issues (Ecosystem Services of Farmland, 2022). Urban growth, on the other hand, has the potential to produce impermeable surfaces that prevent water from passing through, which can raise the danger of floods since the water will not pass through the soil before reaching the water table (Ecosystem Services of Farmland, 2022).

Approaches to Agricultural Preservation & Preserve models

Municipal planning decisions play a substantial role in agricultural land preservation. Planning can directly affect agricultural land loss, such as settlement area boundary expansions, and site-specific development. It can also indirectly affect agricultural land loss through low population density targets, poor intensification rates, excessive parking requirements, etc. all of which contribute to requiring more land for development. It is important to address these issues to reduce pressure on existing agricultural land. Communities may be interested in taking additional planning steps for the more explicit protection of agricultural lands within their municipalities. When interested in creating better protection for agricultural land, municipalities can take several approaches, including through the creation of agricultural preserves, some of which will be discussed below. These approaches are by no means exclusive and may be used together to increase protections on agricultural lands.

Municipal Advocacy for Provincial Planning Changes

While it would be ideal to protect all farmland through more stringent development restrictions, implementing this planning policy aimed at better farmland protection isn't always

easy. Provincial policy largely, but not solely, dictates what may occur on agricultural land. Working with the Province to change and update provincial planning policy to offer better farmland protection, through the PPS or other legislation, is a lengthy process that may be mired in politics but is still very much worth advocating for. Along the same idea may be advocacy for large-scale protection devices, such as the Greenbelt in Ontario, or the model used by the B.C. Provincial government in the Agricultural Land Reserve, discussed below, which may be able to be municipally managed.

Municipal Planning Policy and Bylaw Changes

Municipalities may introduce policy and zoning bylaws that go above and beyond current provincial policy, concerning development on agricultural land. The scope of these may be somewhat limited however, as zoning bylaws cannot conflict with provincial policy. If a municipality has lots of rural land for example, it states within the PPS that one of the permitted uses on rural lands is residential development, (including lot creation), and so no such bylaw could be put in place that would conflict with residential development on such land (MMAH 2024).

Perhaps of greatest consequence are the municipal policies that indirectly affect pressure on farmland. Much of these indirect policies ultimately lead to the "need" for settlement area boundary expansions, which directly impacts agricultural land through Official Plan Amendments (OPA). OPAs were responsible for 76% of prime agricultural land conversion in Southern Ontario between 2000 and 2017 (Caldwell et al. 2022), a very significant amount. Zoning bylaws that allow for greater intensification (by allowing more missing middle density housing, for example), and setting higher densification targets are two examples of relatively simple changes in housing policy that would reduce the consumption of agricultural land. Promoting transit-oriented development, increasing walkability and active transport, and reducing or eliminating parking minimums, are examples of transportation related examples of municipal by-laws and policy that also act to decrease the amount of farmland lost to urban sprawl. It should be noted that many of the agriculture-positive policy changes can also be beneficial for increasing the municipal tax base, reducing infrastructure expenditure, help to increase personal health, and help to reduce environmental degradation and greenhouse gas emissions.

Redesignation of lands

An approach that is within municipal control, that would be relatively easy to implement and would have a high degree of effectiveness would be to simply designate more land as prime agricultural. By changing the zoning on rural lands to prime agricultural, when appropriate, this automatically gives more protection from non-agricultural uses through the PPS. This also has the effect of increasing or creating Prime Agriculture Areas, that are further protected agricultural areas within the PPS.

Agricultural Easements and Preserve Models

Arguably the most protective tool to use for agricultural land preservation is through an agricultural easement. An easement placed on an agricultural property permanently protects it for agricultural use in perpetuity. A property with an easement alone is a great win for the agricultural community, but in combination with other properties with agricultural easements, we start to see the protection and proliferation of agricultural systems and communities, not just farms. It is important to think about this larger context of agricultural production to see our agri-food systems flourish. It is also important to consider who holds the easements- it should be a party that has a long-term commitment to the protection of that agricultural land. A municipality may help to coordinate where the preserve is to be located. They may also help to place the easements on the land, or may purchase the land outright, to place easements on it. Below are two different models for the creation of agricultural preserve through easements.

A first, and perhaps more traditional route is to preserve a contiguous block of farmland. This farmland may be agriculturally significant, offer excellent soil quality or just be in the general interest for protection. The placing easements on individual properties on a contiguous block of land would create a very distinct and defined agricultural preserve. This is highly desirable from agricultural community perspective, as this allows for continuous blocks of farmland and farm communities, and long-term investments in farm infrastructure. An example of this within is the DRAP in Pickering Ontario (see Figure 1).

Figure 1: Example of an agricultural preserve under contiguous agricultural easement. Source: Mulligan et.al 2023

A second, less pronounced, but perhaps more effective strategy would be a 'shotgun' or non-contiguous easement approach to farmland protection. By placing easements on some land within an area, but not all, this creates a more permanent prime agricultural area, making development expansion towards this area a less viable option (please see figure 2). This semi-preserve area would make it harder for municipalities to justify having settlement area boundary expansions towards these properties. In addition, it would make any possible individual development less economically desirable as servicing would reach fewer developments. This would effectively see a block of agricultural land, although having non-contiguous agricultural easements, protected from development. This block of land may or may not be set out in a defined "policy area" and may or may not see municipal involvement to define these boundaries. If the policy area is set up, only to be removed later, this area will still off greater protection from development than it would otherwise (figure 3).

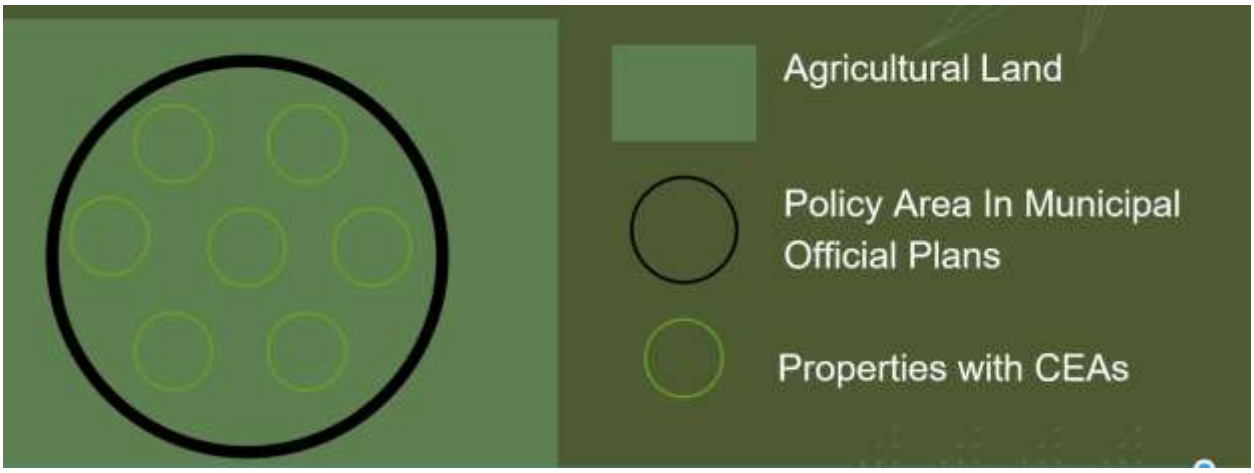


Figure 2: Example of a non-contiguous agricultural preserve, as defined by an organized policy area (that may or may not be municipally defined), with some farms being protected with the aid of conservation easement agreements (CEAs) Source: Planning for Farmland Conservation RPD 6290, University of Guelph

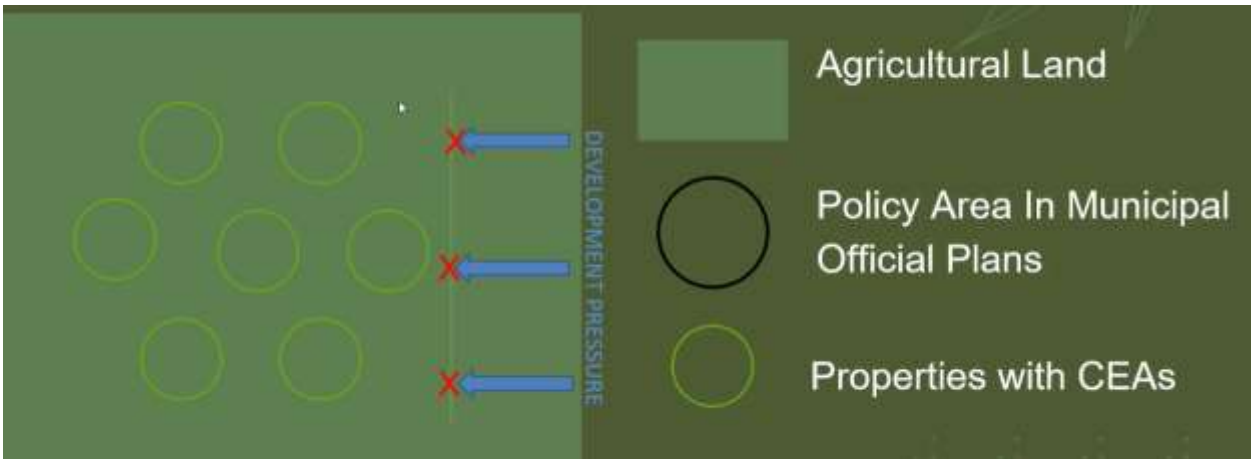


Figure 3: Example of a non-contiguous agricultural preserve, with policy area removed (due to political change, development lobbying etc.). With some farms being protected with the aid of CEAs, this still makes the area less viable for development. Source: Planning for Farmland Conservation RPD 6290, University of Guelph

Agricultural Land Reserve

The British Columbia Agricultural Land Preserve (ALR) is quite unique amongst other Canadian Provinces in the way that they protect farmland within the province. The reason for this is because the Agricultural Land Commission (ALC), who oversee the ALR, is a provincial entity that has control of all agricultural land in the province. This land, and the permitted uses, are heavily regulated by the ALC. The ALR encompasses nearly all farmland within the province at a total of 4.9%, or 4,612,526 hectares, of the total land in the province (Agricultural Land Commission, 2023). Only 5% of the land in British Columbia is capable of being farmland (Agricultural Land Commission, 2023). The reason that the ALR and the ALC have been so successful in protecting the farmland is because of the processes that the province has put into place since the inception of the ALC and ALR in 1973.

This process involves a province-wide zone that prohibits most non-farm uses on every single hectare of protected land. Only a certain number of non-farm uses are permitted within the ALR, these include; home-based businesses, temporary sawmills, pet kennels, breeding facilities, production and storage of Class A compost, production and storage of biological products used in pest management, aggregate extraction smaller than 500 cubic metres, conservation, passive recreation, public parks, education and research, and force mains, trunk sewers, gas and water pipelines on existing rights of way (Agricultural Land Commission, 2025a). However, there is a long and difficult process to exclude land from the ALR for development purposes. To begin this process, the landowner or developer must make an application to the municipality that the land is in to exclude the land from the ALR. This application is then brought to the Agricultural Land Commission by the municipality as only local governments, the provincial

government, and First Nations are allowed to bring applications to the ALC (Agricultural Land Commission, 2020). As the ALC is mandated to preserve agricultural land in British Columbia, they are highly unlikely to remove land from the ALR. However, there are certain things that the ALC looks for regarding potential exclusion from the ALR. One example of a consideration is how long the applicant has owned the land, the shorter the period that someone has owned the land makes it more likely that the land may be excluded (Agricultural Land Commission, 2025b). Another example is whether the land has been, or is currently being, used for agricultural purposes (Agricultural Land Commission, 2025b). The ALC states that if the land is currently being used for agricultural purposes, then it is significantly less likely to exclude the land from the ALR.

The reason that the ALC is so successful in protecting nearly all agricultural land in British Columbia is because it is not governed by a municipality and instead by the province. This makes it less susceptible to common issues that municipalities experience such as urban sprawl and the need for constant growth. In this way, the ALC is able to judge exclusion applications without influence from outside factors. This is a method that municipalities can employ. Either creating their own version of the ALC to administer farmland in their municipality, or they could petition their province to create their own ALC. These options would give other provinces or municipalities an independent third party to protect their agricultural land.

International Models: China

China uses a quota system that mandate the “1.8 billion [ha] policy” set a baseline line that at least 1.2 billion hectares of land is designated for agriculture use. As a result, the loss of farmland slowed from 1 million hectares a year in 2003-2005 to 0.12 hectares a year in 2006-2008. And China has a net increase of farmland of 0.4 million hectares a year in 2011-2012 (Chien, 2015).

The Chinese government has a very centralized approach that only provincial government and above can approve turning a farmland into non-agricultural use. Besides the national quota, each province also set their own goals (Zhong et. al, 2017).

When theoretically applied to the Ontario landscape, there are several issues with this system:

1. Low quality land is used to substitute high quality land (Zhong et. al, 2017)
2. Land fragmentation (Qie et. al, 2023)
3. Grow on unsuitable land that may cause further damage. “Shaanxi provincial government proposed covering sand dunes with soil in an attempt to improve unproductive land” (Chien,2015)

4. Researchers believe incentives on farming plays a larger role in farmland conservation. For example, the elimination of agricultural tax (Chien,2015).

The developer is responsible for finding replacing farmland or pay for restoration fees for the loss of farmland, one more reason that Ontario may not be suitable for using this system. As Ontario is facing a housing crisis, and therefore it may not be wise to add another cost to developers. Unlike in China, where they may have a surplus in house supply especially in farming countries, they are able to shift these costs back to the developers (CNN, 2023; Liu et. al, 2019).

Key Skills for Farmland Preservation: Strategies for Municipal Success

Municipalities are under increasing pressure to provide housing for today's growing population. As urban areas expand, prime agricultural land is increasingly seen as the most viable option for development. This puts municipalities in a difficult position, balancing the need for housing with the long-term sustainability of Ontario's agricultural sector. Strengthening protections for farmland is more urgent than ever, ensuring that municipalities have the tools to resist conversion pressures and safeguard these lands for future generations to be able to farm on.

This guide highlights the key skills that municipal staff need to enhance farmland preservation efforts, focusing on public engagement, financial incentives and strategic land-use tools within Ontario's regulatory framework.

The Municipal Role in Farmland Preservation

While municipalities follow the *Provincial Planning Statement* (2024), which guides municipalities to protect prime agricultural land by permitting only agricultural uses, agriculture-related uses and on-farm diversified uses (MMAH, 2024), these protections are sometimes not enough.

Key challenges municipalities face include:

- Development pressures in rapidly growing urban areas
- Balancing economic growth with the need to protect agricultural protection
- Public misconceptions about the long-term value of preserving farmland
- Landowner concerns over financial viability and development opportunities

To address these challenges, municipalities must take a proactive approach to protecting agricultural lands within their boundaries. This requires a combination of policy, financial

incentives, and community engagement to ensure that farmland remains viable for future generations.

One very effective strategy is establishing Agricultural Land Preserves (ALPs), which are designated areas where farmland is protected from urban expansion. However, to successfully implement ALPs requires municipalities to develop key skills and strategies to strengthen their farmland preservation efforts.

Key Skills & Strategies

1. Public Engagement

Building public and stakeholder support is essential in ensuring the long-term success of ALPs. The key to success is early and transparent engagement with landowners, developers and the broader community to ensure that farmland protection efforts align with local needs and priorities.

Essential Skills:

- ✓ Clear Communication: Explaining the value of farmland protection in a way that connects with different stakeholders (e.g., emphasizing economic benefits for local farmers, and food security for residents).
- ✓ Stakeholder Collaboration: Engaging farmers, developers, conservation groups, and the public in discussions about ALP benefits and long-term land use planning.
- ✓ Facilitation & Mediation: Navigating any conflicts that arise between landowners and developers, ensuring that farmland preservation strategies consider all perspectives.

Strategies:

- Host public meetings & workshops to educate the public on the economic and environmental importance of protecting farmland.
- Establish advisory committees that include farmers, conservationists, and planners to provide input on ALP initiatives.
- Use digital engagement tools (social media, online surveys, interactive websites) to reach a broader audience and gather feedback.

2. Financial Incentives & Tax Reductions

Municipalities can make ALPs financially viable for landowners by leveraging tax incentives, and help finding grants and funding programs. When a landowner donates land for an ALP or places a conservation easement on their property, municipalities have several tools to help offset costs and provide financial support (Greenaway, 2017).

Essential Skills:

- ✓ Understanding Tax Reductions: Knowledge of how municipal tax structures impact farmland viability and how tax incentives can encourage preservation (OFA, 2024).
- ✓ Grant Writing & Funding Access: Helping to secure any provincial and federal funding that is available for farmland preservation initiatives.
- ✓ Financial Negotiations: Structuring agreements that make conservation financially appealing to landowners while balancing municipal budgets.

Strategies:

- Implement tax reductions for landowners who commit to farmland conservation easements, ensuring financial feasibility for long-term preservation (Greenaway, 2017).
- Leverage provincial or federal grants, such as Ontario's Greenbelt Foundation funding, to support municipal farmland protection initiatives (Greenbelt Foundation, 2025).
- Educate landowners about the financial tools available to help cover the costs of best management practices that improve and protect groundwater and surface water quality (Grand River Conservation Authority, 2025).

3. Polices & Planning

Ontario municipalities are already mandated under the PPS to protect prime agricultural lands from non-agricultural development. However, effective farmland preservation goes beyond compliance, it requires proactive policies and zoning strategies that provide municipalities with the flexibility to implement tools like conservation easements and other long-term protections.

Essential Skills:

- ✓ Policy Development & Interpretation: Understanding how municipal official plans and zoning by-laws can be structured to strengthen farmland protection.
- ✓ Zoning & Land-Use Planning: Identifying and designating areas for agricultural preservation, such as Agricultural Overlay Zones or Agricultural Reserve Areas that offer additional protection beyond standard zoning (Greenaway, 2017).
- ✓ Economic Development & Agribusiness Support: Understanding how municipalities can create policies and programs that strengthen the agricultural sector, attract farm-related business and support local food production by fostering connections between farmers, processors, and markets (Wallace, 2024).

Strategies:

- Embedding Agricultural Land Preserves: A tool that is supported in the Official Plan, providing municipalities with the flexibility to encourage farmland conservation.

- Integrate Farmland Impact Assessments: Require new developments near agricultural lands to undergo an impact assessment before approval.
- Encourage Agricultural Economic Development: Support on-farm diversified uses such as farm tourism, consumer sales and agri-business hubs to sustain farm viability.

Conclusion & Next Steps

Agricultural land provides essential benefits to communities, including economic opportunities, food security, climate resilience, and improved water quality. Establishing additional protected agricultural preserves, like the DRAP, would help ensure these benefits are secured on a larger scale across Ontario.

The history and challenges associated with the DRAP provides key insights into the challenges associated with establishing and maintaining agricultural land preserves. Pressure from urban expansion, public perceptions, economic development, and financial viability of farming are important considerations for establishing and maintaining agricultural preserves.

These issues create competing priorities that can lead to conflicts. For example, the Province of Ontario plans to build 1.5 million homes by 2031 (Government of Ontario, 2023) and provides municipalities with up to $400 million for meeting new housing targets (Ontario Newsroom, 2023). This creates a strong incentive to use available land in municipalities for development, rather than the establishment of agricultural preserves. Addressing these issues requires proactive municipal involvement in policy development and enforcement. Despite being among the most highly protected lands in Ontario, the attempts to remove protections from the DRAP further illustrate the ongoing external pressure on farmland and the need for resilient safeguards for additional agricultural preserves.

Municipalities play a vital role in farmland preservation and will need to take concrete steps toward strengthening protections for agricultural land. As discussed, strategies such as public engagement, financial incentives, and robust policy frameworks can create a balanced approach that benefits both landowners and local communities. Establishing more protected agricultural land in large continuous farmland blocks or strategically distributed farms (shotgun approach), supported by agricultural easements to permanently restrict non-agricultural development, are examples of how additional preserves can be established throughout Ontario.

What Municipalities Can Do Next

- ✓ Review existing farmland protection policies and identify gaps.
- ✓ Municipalities can evaluate their official plans, zoning by-laws, and farmland protection policies to identify potential areas that may need stronger safeguards. The Central Pickering Development Plan (CPDP) and Minister's Zoning Order protections on the DRAP, have not been reinstated since their removal in 2022 (O'Meara, J. 2023). Reinstating these

protections would further protect the agricultural preserve. Integrating conservation easements can make protections even stronger.

- ✓ Engage with farmers, developers, and stakeholders to create balanced solutions.
- ✓ Clear communication and dialogue with key stakeholders, such as farmers, conservationists, developers and the public, is essential for education and developing agricultural policies that address environmental and economic concerns. Hosting public meetings, advisory committees, and online consultations can build support for farmland preservation efforts. The public outcry that reversed the removal of DRAP protections, exemplifies the importance of educating the public on the value of these lands and the impact of the public has on policy.
- ✓ Apply for federal or provincial funding to support local preservation initiatives.
- ✓ Securing financial support through programs such as Ontario's Greenbelt Foundation Funding or federal agricultural grants can relieve financial pressure and reduce up-front costs of new farmland. Additionally, municipalities can explore tax reductions or financial incentives for sustainable farming practices. Like the provincial funding of new housing, these financial incentives can be used to encourage municipalities to maintain and establish new agricultural land.
- ✓ Explore any innovative zoning or incentive programs that other municipalities have successfully implemented.

The case of the DRAP demonstrates the many benefits and challenges associated with protecting farmland in the face of growing external pressure. As discussed, municipalities are instrumental in these efforts. The implementation of stronger policies, financial incentives for farmers, and public engagement strategies that build community support for farmland preservation will all require municipal prioritization and support for implementation.

By identifying policy gaps, collaborating with stakeholders, and leveraging funding opportunities, municipalities can create more resilient farmland protections and establish new agricultural preserves throughout Ontario. The DRAP illustrates the importance of proactive municipal involvement to prevent the loss of farmland while balancing other important priorities. The development of other agricultural preserves modeled after the DRAP, would be a significant step in ensuring that Ontario's agricultural land remains viable for the benefit of future generations.

[i]Bibliography

Agricultural Land Commission. (March 11, 2025a). Permitted Uses in the Agricultural Land Reserve. https://www.alc.gov.bc.ca/permitted-uses-in-the-alr/

Agricultural Land Commission. (April 18, 2023). 50 Years of the Agricultural Land Commission. https://www.alc.gov.bc.ca/50-years-of-the-provincial-agricultural-land-commission/

Agricultural Land Commission. (September 30, 2020). Exclusion Application Guide. https://www.alc.gov.bc.ca/assets/alc/assets/applications-and-decisions/exclusion_application_guide.pdf

Agricultural Land Commission. (March 12, 2025b). What the Commission Considers. https://www.alc.gov.bc.ca/application-and-notice-process/applications/what-the-commission-considers/

Alliance of Canadian Land Trusts. (2024, March). *land trust starter guide.* Retrieved from Aclt-Acoc.ca: https://aclt-acoc.ca/land-trust-starter-guide/

Barnett, I., Cooper, K., Goodwin, G., Gordon, G., Kucey, L., Rousseau-Clair, M.-M., . . . Woodward, R. (2019). *Canadian Land Trust Standards and Practices, 2019.* Canadian Land Trust Alliance.

Caldwell, W., Epp, S., Wan, X., Singer, R., Drake, E., & Sousa, E. C. (2022). Farmland Preservation and urban expansion: Case study of southern ontario, Canada. *Frontiers in Sustainable Food Systems*, *6*. https://doi.org/10.3389/fsufs.2022.777816

Chien, S.-S. (2015). Local farmland loss and preservation in China—A perspective of quota territorialization. Land Use Policy, 49, 65–74. https://doi.org/10.1016/j.landusepol.2015.07.010

CNN. (2023).Even 1.4 billion people can't fill all of China's vacant homes, ex-official admits. https://www.cnn.com/2023/09/23/business/china-too-many-homes-for-1-4-billion-people-intl-hnk/index.html

Coulter, S. A. (2022). In Defence of Soil an Ontario Greenbelt Regeneration Strategy (pp. 1–89) [MSc Thesis]. https://uwspace.uwaterloo.ca/items/0a47aee0-126d-4a84-887d-43787fad92e1

Deaton Jr., B. (2018). Farmland *Value and Rental Value Survey: Summary of Findings.* Guelph: University of Guelph.

Epp, S., & Caldwell, W. (2018). Measuring farmland loss: Lessons from Ontario, Canada. *WIT Transactions on Ecology and the Environment*, *215*, 165–175. https://doi.org/10.2495/eid180151

Government of Canada. (1957). Growing Seasons. Atlas of Canada, 3rd Edition. map, Department of Transport. Retrieved 2025, from https://open.canada.ca/data/en/dataset/b1859ca6-96e4-58c0-a78b-82326d9053b8.

Government of Canada. (2025). Canada Land Inventory (CLI). Retrieved from sis.agr.gc.ca: https://sis.agr.gc.ca/cansis/nsdb/cli/index.html

Government of Canada. (2020). Climate Change Impacts on Agriculture. Retrieved from:

Climate change impacts on agriculture - agriculture.canada.ca

Government of Ontario. (2023, October 26). Tracking housing supply progress. https://www.ontario.ca/page/tracking-housing-supply-progress

Government of Ontario. (2024a). 2024 Local Food Report. ontario.ca. https://www.ontario.ca/page/2024-local-food-report

Government of Ontario. (2024b). *Governments Announce Available Funding to Enhance Ontario's Agri-Food Sector*. Ontario newsroom. https://news.ontario.ca/en/release/1005401/governments-announce-available-funding-to-enhance-ontarios-agri-food-sector

Government of Ontario. (2024c). *Ontario employment in Agri-Food Industry - Ontario employment in Agri-Food Industry*. Open Government Portal. https://open.canada.ca/data/en/dataset/ca3ba13b-01b9-48ce-a097-2a78f78ed9bd/resource/3139954e-f1ca-4215-a4c7-5a831ec2aa2f

Grand River Conservation Authority (GRCA). (2025). *Rural Water Quality Program - Grand River Conservation Authority. Rural Water Quality Program.* Retrieved from grandriver.a: https://www.grandriver.ca/en/our-watershed/Rural-Water-Quality-Program.aspx

Greenaway, G. (2017). *Conservation Easement Guide for Municipalities. A Conservation Easement Guide for Municipalities.* Calgary, AB: Miistakis Institute. Retrieved from https://www.communityconserve.ca/ceguide/

Greenbelt Foundation. (2025). *Apply for a Grant.* Retrieved from greenbelt.ca: https://www.greenbelt.ca/apply_for_a_grant

Harris, B. (2023, April 24). New Report Reveals the Species and Ecosystems at Risk from Development in the Greenbelt's Duffins Rouge Agricultural Preserve. Protecting Ontario's Environment, Yours to Protect.

IPES-Food. (2024). Land Squeeze: What is driving unprecedented pressures on global farmland and what can be done to achieve equitable access to land? InternationalPanel of Experts on Sustainable Food Systems. Retrieved from https://www.ipes-food.org

Liu, Z., Liu, Y., Chiu, R. L. H., & Renaud, B. (2019). Urban housing challenges in mainland China. In International Housing Market Experience and Implications for China (1st ed., Vol. 1, pp. 288–306). Routledge. https://doi.org/10.1201/9780429438141-13

Littley, B. (2023, March 20). What the Heck's a DRAP?: A Brief Recent History of the Duffins Rouge Agricultural Preserve, from The Rouge Duffins Greenspace Coalition (RDGC). Protecting Ontario's Environment, Yours to Protect.

Lynch, L., & Duke, J. M. (2007). Economic benefits of farmland preservation: Evidence from the United States. Working Paper, University of Maryland.

Malenfant, E.C., Caron, A.M., Charron, M., Belanger, A. (2007) *Demographic Changes in Canada from 1971 to 2001 across and Urban-to-Rural Gradient.* Statistics Canada. ISBN : 978-0-662-45191-4

Matsumoto, Hiroshi. 1986. "Japan." In International Handbook on Land Use Planning, edited by Nicholas N. Patricios, pp. 39–60. New York: Greenwood Press.

Ministry of Municipal Affairs and Housing. (2024). Provincial Policy Statement. King's Printer for Ontario.

Ministry of Natural Resources. (2022). *Planning Template for Preparing a Stewardship Plan for Natural Areas.* King's Printer for Ontario.

Ministry of Natural Resources. (2025). *Managed Forest Tax Incentive Program*. Retrieved from Ontario.ca: https://www.ontario.ca/page/managed-forest-tax-incentive-program

Ministry of Natural Resources. (2025). *Ontario Make a Map: Make a Topographic Map*. Retrieved from lioapplication.lrc.gov.on.ca: https://www.lioapplications.lrc.gov.on.ca/MakeATopographicMap/index.html?viewer=Make_A_Topographic_Map.MATM

Ministry of Natural Resources. (2025). *Ontario Make a Map: Natural Heritage Areas*. Retrieved from lioapplications.lrc.gov.on.ca:

https://www.lioapplications.lrc.gov.on.ca/Natural_Heritage/index.html?viewer=Natural_Heritage.Natural_Heritage&locale=en-CA

Mulligan, C., Bond, M., & Bruno, J. (2023, April 26). *Original architect of the Ontario Greenbelt shares the impact of development*. CityNews Toronto. https://toronto.citynews.ca/2023/04/25/original-architect-ontario-greenbelt-impact-development/

National Farmers Union Ontario (NFUO). (2024, September 11). Land Over Landings: A 52-Year Fight to Save Pickering Farmland. Farmland Protection. https://nfuontario.ca/farmland-protection/land-over-landings-a-52-year-fight-to-save-pickering-farmland/

Noble, H. F., Changes in Acreage of Census Farms in Ontario 1941 to 1971 by Census Subdivisions (1974). Toronto, Ontario; Ontario Ministry of Agriculture and Food.

O'Meara, J. (2023, October 18). Province says it won't reinstate 2 outstanding Duffins Rouge Agricultural Preserve protections in Pickering. Durham Region News. Retrieved from: https://www.durhamregion.com/news/province-says-it-wont-reinstate-2-outstanding-duffins-rouge-agricultural-preserve-protections-in-pickering/article_22d4c2e8-bf5f-5328-b814-90a33cf71311.html

Ontario Farmland Trust. (2022, November 4). *Ecosystem Services of Farmland*. Retrieved from ontariofarmlandtrust.ca: https://ontariofarmlandtrust.ca/2022/11/04/ecosystem-services-of-farmland/

Ontario Farmland Trust. (2025). *Working together to protect Ontario farmland*. Retrieved from OntarioFarmlandTrust.ca: https://ontariofarmlandtrust.ca

Ontario Federation of Agriculture. (2020, December). *OFA Fact Sheets.* Retrieved from OFA.on.ca: https://ofa.on.ca/resources/ofa-consolidated-land-use-policy/

Ontario Federation of Agriculture. (2021, 05). *Municipal Resources.* Retrieved from OFA.on.ca: https://ofa.on.ca/wp-content/uploads/2021/05/Agri-Food-Initiatives-Ontario-Directory.pdf

Ontario Federation of Agriculture. (2024, August 19). *Guide for Municipal Councillors and Staff.* Retrieved from OFA.on.ca: https://ofa.on.ca/newsroom/building-stronger-ties-between-municipalities-and-farmers/

Ontario Federation of Agriculture. (2024). *OFA*. Retrieved March 2025, from Growing Agriculture in your Community – Municipal Resources: https://ofa.on.ca/growag/

Ontario Land Trust Alliance. (2025). *Resource Centre*. Retrieved from Olta.ca: https://olta.ca/resource-centre/

Ontario Legislative Assembly. (2005). Bill 16, Duffins Rouge Agricultural Preserve Act, 2005. Retrieved from: https://www.ola.org/en/legislative-business/bills/parliament-38/session-2/bill-16

Ontario Ministry of Natural Resources. (2010). *Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005.* Toronto: Queen's Printer for Ontario.

Ontario Newsroom. (2023, August 21). To build more homes, Ontario launching Building Faster Fund and expanding strong mayor powers. Ontario Newsroom. Retrieved from: https://news.ontario.ca/en/release/1003397/to-build-more-homes-ontario-launching-building-faster-fund-and-expanding-strong-mayor-powers

Province of Ontario. (2025). Ontario.ca. Retrieved from E-Laws: https://www.ontario.ca/laws

Qie, L., Pu, L., Tang, P., Liu, R., Huang, S., Xu, F., & Zhong, T. (2023). Gains and losses of farmland associated with farmland protection policy and urbanization in China: An integrated perspective based on goal orientation. Land Use Policy, 129, 106643-. https://doi.org/10.1016/j.landusepol.2023.106643

Skog, K. L., & Bjørkhaug, H. (2020). Farmland under urbanization pressure: Conversion motivation among Norwegian landowners. International Journal of Agricultural Sustainability, 18(2), 113–130. https://doi.org/10.1080/14735903.2020.1719774

Statistics Canada. (2007) The Loss of Dependable Agricultural Land in Canada. *Rural and Small Town Canada Analysis Bulletin* 6

Statistics Canada, Census of Agriculture (2021). Retrieved January 30, 2025, from https://www.statcan.gc.ca/en/census-agriculture.

Straathof, M. (2025). Amidst Threats of Tariffs, Ontario Must Make Farmland Protection a Key Issue in the 2025 Election. Ontario Farmland Trust. Retrieved March 7, 2025, from https://ontariofarmlandtrust.ca/2025/02/20/amidst-threats-of-tariffs-ontario-must-make-farmland-protection-a-key-issue-in-the-2025-election/#:~:text=Municipal%20zoning%20decisions%2C%20Minister's%20Zoning,essential%20to%20curb%20this%20trend

Stop Sprawl Durham. (n.d.). *Duffins Rouge Agricultural Preserve (DRAP)*. Retrieved March 2, 2025, from https://www.stopsprawldurham.com/drap

Tomalty, Ph.D., R. (2015). *Farmland at risk: How better land use planning could help ensure a healthy future for agriculture in the Greater Golden Horseshoe.* Ontario Federation of Agriculture and Environmental Defence.

University of Saskatchewan. (2022, October 9). Agricultural Capability - Soils of Saskatchewan. Soilsofsask.ca; University of Saskatchewan. https://soilsofsask.ca/soil-survey-soil-characteristics/agricultural-capability.php

Zhong, T., Mitchell, B., Scott, S., Huang, X., Li, Y., & Lu, X. (2017). Growing centralization in China's farmland protection policy in response to policy failure and related upward-extending unwillingness to protect farmland since 1978. Environment and Planning. C, Politics and Space, 35(6), 1075–1097. https://doi.org/10.1177/0263774X16682958