

Farming and Farmland Network Research (2017)

Policy Area 1 - Farmland Preservation

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Goal:

Survey evidence and policy options to inform advocacy to keep Ontario farmland in agricultural production.

Evidence of Farmland Loss Problem:

Ontario has been facing a steady decline in its agricultural land base since the early 1970s. The total amount of land on farms in Ontario has decreased by 11.5% from 1986 to 2016. The amount of land actively in use for crops and pasture has decreased by 8.9% over the same period (over a million acres)¹. Only 5% of the national agricultural land base is considered prime agricultural land (classes 1-3). This trend is especially problematic in Ontario, where 51% of Canada's prime agricultural land is located². Despite this abundance, Ontario only uses about 7% of its best quality (class 1) farmland, with the remainder increasingly being converted to urban development³. In total, Ontario saw a 7.2% reduction in the available farmland between 2006 and 2016⁴, which is a yearly rate of loss equal to a quarter the size of Toronto⁵. Ontario is also seeing a decline in farmland accessibility, where socioeconomic pressures of agricultural production (i.e. farm debt, input costs, commodity prices, and farmland values) are increasingly rendering farmland inaccessible to farmers⁶. The challenge of keeping farmland in agricultural production requires addressing both the protection of farmland from conversion as well as ensuring that farming on such land remains viable.

Farmland loss and inaccessibility are problems because a sustainable local food system in Ontario requires an adequate land base and farming population for production. In addition, the stability of rural communities rely on availability of prime agricultural land, and sustainable farming practices have the promise of fulfilling ecosystem services for all Ontarians that developed areas cannot provide. Losses in the already limited supply of prime agricultural land therefore have negative consequences on food security, the stability of rural communities⁷, and ecological sustainability^{8 9}.

¹ Statistics Canada. (2017). A portrait of a 21st century agricultural operation.

² Watkins, M., Hilts, S., & Brockie, E. (2003). Protecting Southern Ontario's Farmland: Challenges and Opportunities (Farmland Preservation Research Project Discussion Paper Series 2003). A Centre For Land and Water Stewardship Publication - University of Guelph.

³ Caldwell W., Hilts S., & Wilton B. (2007). Farmland preservation in Ontario. In W. Caldwell, S. Hilts, B. Wilton (eds.) Farmland preservation: Land for future generations. Guelph: Farmland Preservation Research Project Centre for Land and Water Stewardship, pp. 88-113.

⁴ Total area loss of 389,208 acres, giving an average of 38,920 acre loss per year. From OMAFRA. (2017). Statistical Summary of Ontario Agriculture.

⁵ Total City of Toronto area was 154,603 acres in 2016. From Statistics Canada. (2017). "Census Profile, 2016 Census - Toronto, City [Census Subdivision], Ontario and Ontario [Province]."

⁶ NFU. (2012). *Farmers, the food chain and agriculture policies in Canada in relation to the right to food*. Retrieved from <http://www.nfu.ca/story/farmers-food-chain-and-agriculture-policies-canada-relation-right-food>

⁷ Caldwell, W. J., Hilts, S., Wilton, B., & University of Guelph (Eds.). (2007). *Farmland preservation: land for future generations*. Guelph, Ontario: University of Guelph.

⁸ Bunce, M. (1998). Thirty years of farmland preservation in North America: Discourses and ideologies of a movement. *Journal of Rural Studies*, 14(2), 233-247.

⁹ Caldwell, W. J., Hilts, S., Wilton, B., & University of Guelph (Eds.). (2007). *Farmland preservation: land for future generations*. Guelph, Ontario: University of Guelph.

Farmland Loss Pressures

There are five main political and economic pressures that have resulted in farmland loss in Ontario. The primary social force resulting in farmland loss is *urban expansion*, which emerged as a problem in the post-war housing boom. Increasing rates of population growth in urban centres have resulted in the expansion of housing development at the peripheries of cities, which is where most of Ontario's prime agricultural land is located¹⁰.

The second pressure is the practices of *land consolidation and severance* on agricultural properties. The consolidation of farmland is when an individual or business purchases a number of agricultural properties to combine into one larger property. Often what follows are severances—when the owner of a farm property has their land broken up into smaller properties, often done to remove surplus housing from the property. The detachment of residential structures in agricultural areas results in a gradual fragmentation of farmland that are converted to non-agricultural uses, such as non-agricultural housing and cottage properties. The land use conflicts that then arise from fragmentation tend to place prohibitive restrictions on farming practices to reduce the sights, sounds, and smells of production¹¹.

The third pressure is a process of *financialization* that is occurring throughout Canada's food system. This is where the inputs into the production and distribution of food increasingly become owned by financial entities investing for the purposes of speculative profits¹². Cases in Saskatchewan have demonstrated that financial investment firms and sovereign wealth funds are increasingly buying farmland to hold for decades, and profit off of the rents of production and increased property values¹³. In Edmonton, one company was documented buying a large area of class 1 farmland and then pressuring the municipal government to expand the urban boundary to eventually profit from its sale to real estate developers¹⁴. Companies are known to be buying farmland throughout southern and eastern Ontario for this purpose¹⁵. Financialization, as demonstrated above, has the effect of facilitating farmland conversions.

The fourth pressure is *farm viability*. Farmers are increasingly faced by mounting debt, input and equipment costs, market uncertainty, and property values. These factors make the already diminishing supply of farmland inaccessible to farmers¹⁶. Farmers facing this price-cost squeeze find themselves increasingly in competition with affluent land buyers seeking rural property for recreational purposes. This has the effect of greater farmland conversion away from agriculture and towards cottages and hobby farms.

The final pressure on farmland is *public expropriation*, which can either contribute to farmland preservation or result directly in its loss. The Federal Government and the Province of Ontario both have powers to compel owners to sell their farmland for purposes deemed to be in the public interest. This

¹⁰ Troughton, M. (2007). Canadian farmland – a fluctuating commodity. In W. Caldwell, S. Hilts, B Wilton (eds.) Farmland preservation: Land for future generations. Guelph: Farmland Preservation Research Project Centre for Land and Water Stewardship, pp. 33-54.

¹¹ Watkins et al., 2003.

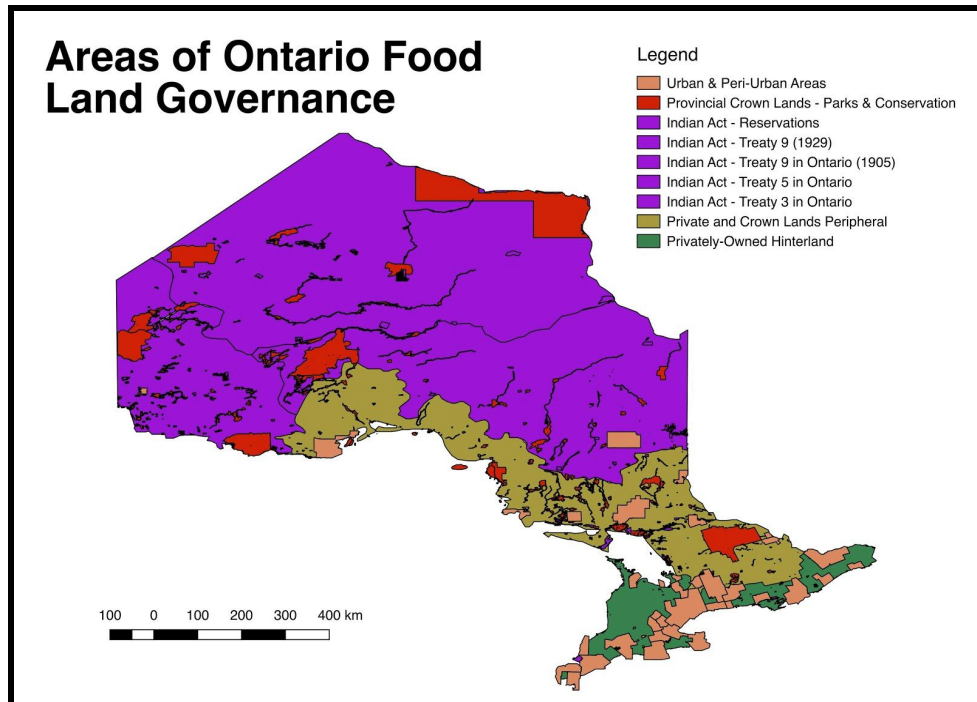
¹² Martin, Sarah J. (2015). "The State of Time in This Financial Moment: Financialization in the Food System—Synthesis Paper." *Canadian Food Studies* 2(2): 287–93.

¹³ Desmarais, A. A., Qualman, D., Magnan, A., & Wiebe, N. (2015). Land grabbing and land concentration: Mapping changing patterns of farmland ownership in three rural municipalities in Saskatchewan, Canada. *Canadian Food Studies*, 2(1), 16.

¹⁴ Smythe, E. A. (2015). Local food, farmland, and urban development: A case of land grabbing North American style. *Canadian Food Studies* 2(1), 48.

¹⁵ Brownlee, Mark. (2013) "Walton Preparing Development Plans for Massive Land Holdings in Southwest Ottawa." *Ottawa Business Journal*, March 22

¹⁶ NFU. (2012). *Farmers, the food chain and agriculture policies in Canada in relation to the right to food*. Retrieved from <http://www.nfu.ca/story/farmers-food-chain-and-agriculture-policies-canada-relation-right-food>



power has been exercised in ways that were intended to preserve farmland, such as with the National Capital Commission (NCC) in the establishment of the Ottawa Greenbelt and the Central Experimental Farm (CEF)¹⁷, or Parks Canada with the Rouge National Urban Park¹⁸. Alternatively, it can be exercised at the cost of compromising agricultural viability, through stewardship that neglects the needs of the farming communities on their lands, or encourages soil mining through short-term lease arrangements. For instance, the loss of publicly-owned agricultural facilities is apparent with the recent approval to develop a non-farmland section of the CEF containing agricultural research facilities for new medical facilities¹⁹. This has similarly been the case on the 'Airport Lands' near Pickering, expropriated over 45 years ago for a future airport and leased year-to-year until 2017.²⁰

Regional Differences

The loss of farmland in Ontario is experienced differently in different regions. Its governance also varies based on differing ecological/climatic/geological, socioeconomic, and political contexts in which farmland is located. Effective policy that protects farmland in Ontario must therefore take these geographic differences into consideration and coordinate levels of governance²¹. Biophysical and climatic regional diversity produces substantial differences in agricultural practices and challenges. Measures for farmland preservation needs to take into consideration the diversity of climates, soil-types, pest and wildlife

¹⁷ Gordon, D. (2001). Weaving a modern plan for Canada's capital: Jacques Greber and the 1950 plan for the National Capital Region. *Urban History Review; Toronto*, 29(2), 43.

¹⁸ Parks Canada. (2017). Rouge National Urban Park. Retrieved from <https://www.pc.gc.ca/en/pn-np/on/rouge>

¹⁹ CBC News. (2017). City files re-zoning application for Ottawa Hospital Civic campus. Retrieved from <http://www.cbc.ca/news/canada/ottawa/city-rezoning-application-ottawa-hospital-civic-1.4253026>

²⁰ Pickering News Advertiser. (2017). Transport Canada extends farming leases on Pickering lands designated for a potential airport. Retrieved from <https://www.durhamregion.com/news-story/7320935-transport-canada-extends-farming-leases-on-pickering-lands-designated-for-a-potential-airport/>

²¹ Conell, D. J., Bryant, C. R., Caldwell, W. J., Churchyard, A., Cameron, G., Johnston, T., ... Marois, C. (2016). Food Sovereignty and Agricultural Land Use Planning: The Need To Integrate Public Priorities Across Jurisdictions. *Journal of Agriculture, Food Systems, and Community Development*, 3(4), 117-124.

pressures, and water and precipitation in determining the types of agricultural practices and land use designation. The value of farmland most suitable for dairy production in Northern Ontario for instance cannot be measured-up against prime agriculture land in the Niagara region capable of supporting fruit production.

Socioeconomic regional differences in Ontario—as they relate to agriculture—have been categorized by Troughton into three geographic zones: the *exurban fringe* surrounding cities, the *hinterland* which constitutes Ontario's traditional rural-agricultural territory, and the *periphery* expanding into remote unincorporated areas²². A category for the recently increasing amount of urban agriculture should also be noted.

Categories of land use governance are then determined by the legal jurisdiction of Canada's various levels of government. The great majority of farmland in Ontario is already surveyed, legally enclosed, privately-owned, and located within an incorporated municipality. These lands are therefore subject to Ontario's Planning Act, which is detailed further in the next section. There are also Provincial Crown Lands, which are subject to the *Public Land Act*, which are mostly conservation areas and sanctuaries. Federal Crown Lands are subject to various Acts of Parliament and federal institutions, such as the Department of National Defence (DND), Transport Canada, or the NCC. Finally, there is farmland in Ontario that is unceded and unsurrendered (i.e. Algonquins of Ontario) or subject to Canada's treaty relationships with First Nations (i.e. reservations and the Numbered Treaties). It is important to note that the definition of some of these lands are currently in a process of treaty negotiations with the Federal and Provincial Governments, as with the Algonquins of Ontario in eastern Ontario.

The different geographic regions of farmland in Ontario and their levels of governance can be arranged in a framework represented in the map below:

Existing Policy Framework

Ontario has historically trailed behind other provinces in terms of implementing measures to preserve farmland. In fact, to this day, what exists in Ontario is a patchwork of policies governing land use, relying on municipal initiatives and interpretations in the implementation provincially-directed priorities. There isn't an explicit imperative to preserve prime agriculture land throughout the province. Ontario once attempted to legislate a relatively weaker version of B.C. and Quebec's system of farmland protection zones and councils in 1978, which would have been called the Land Use Guideline, but it was never legislated. Rather, Ontario adopted a Foodland Guidelines policy statement in 1978, which was replaced 1997 by priorities given in Provincial Policy Statements, updated periodically since²³.

Farmland preservation in Ontario is governed through the land-use planning process. The process of land use planning is established in law through The Planning Act which empowers municipal governments to implement land use priorities in a local context through Official Plans (OPs), Zoning Bylaws (ZBLs), plans of subdivision, and minor variances. Municipal land use decisions, however, are subject to appeals by an independent provincial tribunal called the Ontario Municipal Board (OMB), which has the power to approve, refuse, or modify decisions in the case of a conflict. The province establishes the land use priorities to be administered by municipalities through Provincial Policy Statements and regional legislation governing specific land use, agricultural practices, urban expansion, infrastructure, and conservation priorities. Ontario has numerous regional land use and growth policies, such as: the *Places to Grow Act*, 2005; the *Niagara Escarpment Planning and Development Act*, 2017; *Local Food Act*, 2013; the *Greenbelt Act*, 2005; and the *Oak Ridges Moraine Conservation Act*, 2001. All of these policies are accompanied with implementation plans that inform specific land use priorities in their

²²Troughton, 2007

²³ Troughton, 2007, p. 46

application. *The Local Food Act*, 2013 also provides some policy support for local food production that impacts land use decision making with recommendations outlined in the Local Food Strategy.

Ontario's existing patchwork of legislation surrounding farmland preservation is currently undergoing review and consultation. The Province recently drafted the *Places to Grow Plan*, 2017 for the Greater Golden Horseshoe. This plan is an update on the *Growth Plan*, 2006, corresponding to the *Places to Grow Act*, 2005. It situates the Plan within current growth trends, the context of the various other regional land use plans, and the most recent *Provincial Policy Statement*, 2014. Provisions included in the Plan are greater mapping and identification of prime agriculture land, stricter criteria for how development on farmland is permitted, and the requirement for agricultural impact assessments in the approval of development²⁴. Consultations have also taken place surrounding the implementation of the proposed Farms Forever Program, where the Province has detailed farmland protection as one of its policy objectives. It recognizes that the province's land use planning strategy is not adequately preventing farmland loss and calls for policy to strengthen farmland protection policies. However, this priority area remains almost entirely focused on the Greater Golden Horseshoe region, with little discussion on addressing farmland loss in southwestern, eastern, and northern Ontario²⁵.

The Provincial Government has recently tabled *Bill 139, Building Better Communities and Conserving Watersheds Act*, 2017, which is intended to amend the *Planning Act* to include significant reforms to the current appeals process. The bill, if passed, would create a Local Planning Appeal Tribunal to replace the OMB, supported by a Local Planning Appeal Support Centre. It would also weaken the board/tribunal's ability to interfere in municipal land use decisions, offering planning suggestions rather than overturning rulings (except in the case of a failed second appeal). The bill would also limit the ability to appeal "major planning decisions", such as upper-tier municipality or provincial land use plans (i.e. *PPSs* or the *Places to Grow Act*)²⁶. The reforms would strengthen Ontario's policy framework to preserve conservation and watershed areas, which includes provisions for farmland protection.

Other policy tools exist in Ontario that are less directed at province-wide farmland preservation, but are worth considering. Farmers in Ontario have ability through the *Conservation of Land Act*, 2005 to place a Conservation Easement on their agricultural property, which is an agreement made between property owners and a conservation body or land trust organization. The terms of the easement then determine permissible forms of land use, which are tied to the title of the property. This form of conservation is very effective, especially at raising public awareness around the need to preserve farmland. However, it requires the owner and conservation body to incur the cost and labour of preservation and monitoring, and relies on the voluntary submission of individual parcels rather than broader groupings of land²⁷.

There are also regulations on agricultural practices governed by the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA), such as Minimum Distance of Separation (MDS) standards, which requires an easement distance for residential areas from agricultural production facilities to prevent land use conflicts²⁸. Such policies are effective at preventing conversion around existing agricultural production facilities. However, these regulations have tended to work against farms located close to residential areas when they seek expansion. They also privilege conventional agricultural

²⁴ Ministry of Municipal Affairs. (2017). Places to Grow - Growth Plan for the Greater Golden Horseshoe. From http://www.placestogrow.ca/index.php?option=com_content&task=view&id=9&Itemid=104&lang=eng

²⁵ Ontario Ministry of Agriculture, Food and Rural Affairs. (2017). Farms Forever - Proposed Discussion Paper Outline. From <http://www.omafra.gov.on.ca/english/policy/farmsforever.htm>

²⁶ Government of Ontario. (2017). Bill 139, Building Better Communities and Conserving Watersheds Act, 2017. Retrieved from http://www.ontla.on.ca/web/bills/bills_detail.do?locale=en&BillID=4936

²⁷ OMAFRA. (2011). Conservation Easements for Agricultural Land Use. Retrieved from <http://www.omafra.gov.on.ca/english/busdev/facts/11-027.htm>

²⁸ OMAFRA. (2017). Minimum Distance Separation for Building or Renovating a Farm Structure. Retrieved from <http://www.omafra.gov.on.ca/english/nm/buildev/mds.htm>

practices and MDS standards may sometimes work against the preservation of small-scale, alternative, or specialty production farms that do not conform to their conventions²⁹. OMAFRA also has an impact in defining standard agricultural practices and secondary uses for farmland (i.e. agro-tourism operations or processing facilities) that have an effect on how agricultural zoning bylaws are determined and enforced³⁰. OMAFRA is currently in consultations for an *Agricultural System* policy that would integrate standard practices existing land use policies surrounding the Greater Golden Horseshoe area implemented to contribute to the preservation of prime agriculture land³¹. Finally, there are property and income tax incentives that impact farmland preservation. In Ontario, agricultural landowners can receive benefits from favourable land value assessments. They can also receive a property tax at 25% of rate set by their local municipality. Charitable tax receipts can also be gained by the owners of farmland if they choose to donate land or an easement to a credible conservation organization³². However, these tax-based policies only incentivize agricultural uses of any kind for farmland. They do not compel farmland owners to preserve farmland. Furthermore, such policies can act as an incentive for the investment and consolidation of farmland by financial institutions for speculative gains.

The federal government also has some impact on farmland preservation beyond their ownership of Crown Lands. The national agriculture framework—currently known as *Growing Forward 2*—is a program administered in cooperation between Agriculture and Agrifoods Canada (AAFC) with the provinces and territories. It administers risk management tools, and innovation and business development funding. The federal government has within its powers the ability to include policy instruments or funding requirements that could promote farmland preservation. Consultations for the new *Canadian Agricultural Partnership* framework is ending soon, however it is not likely to include any direct provisions contributing to the preservation of farmland³³. More recently, AAFC has announced the creation of a nation-wide Food Policy for Canada which is currently in consultation for the drafting of a bill to see legislation in the Spring of 2018. One of the four pillars defined in the discussion paper for the consultation is a theme on soil, water, and air conservation. This pillar could contribute to the articulation of farmland preservation as a matter of national interest, which would see a greater federal role in this matter.

Options for Policy Change

There are a broad varieties of possible policy change that can impact farmland preservation that range from minor amendments to major overhauls. The following section details possible policy options categorized by their correspondence to existing policy. The policy options are listed within the categories in order from least to greatest magnitude of change.

1. *Stand-Alone Municipal Policy Initiatives*

- a. Promoting greater public awareness for the need to preserve farmland³⁴.
- b. Conduct robust soil mapping studies that take into account a holistic approach to food production, such as the Land Evaluation and Area Review (LEAR) study conducted by the City of Ottawa³⁵.

²⁹ Dickerson et al., 2010.

³⁰ Dickerson et al., 2010.

³¹ OMAFRA. (2017). *Agricultural Systems in Ontario's Greater Golden Horseshoe*. Retrieved from <http://www.omafra.gov.on.ca/english/landuse/improc.pdf>

³² Watkins et al., 2003.

³³ AAFC. (2016). *Calgary Statement: Towards the next policy framework*. Retrieved from

<http://www.agr.gc.ca/eng/about-us/public-opinion-and-consultations/consulting-on-the-next-agricultural-policy-framework/calgary-statement-towards-the-next-policy-framework/?id=1468864509649>

³⁴ Caldwell et al., 2007

³⁵ City of Ottawa. (2017). *Land Evaluation and Area Review (LEAR)*. Retrieved, from

<http://ottawa.ca/en/city-hall/planning-and-development/official-plan-and-master-plans/land-evaluation-and-area-review-lear>

- c. Formation of Agricultural Advisory Committees in municipalities to consult local farmers on farmland use planning³⁶.
 - d. Urban temporary-use permits & interim control bylaws so that arable urban land that is currently not in use can be used for food production³⁷.
 - e. Review urban animal control policies to permit livestock production on urban land³⁸.
 - f. Urban neighbourhood risk-management policies to more easily facilitate the development of urban agriculture on arable urban lands.³⁹
 - g. Update ZBLs to reflect modern agriculture practices and conform to contemporary Official Plans. Greater definition is needed in ZBLs and OPs regarding "small-scale", "minor", and "farm" in order to avoid challenges for small-scale producers to attain approval for their operations⁴⁰.
2. *Changes to the Planning Act and Growth Plans*
- a. Revise exemptions to categories permitted for severance⁴¹.
 - b. Requiring provincial approval for farmland conversion, rather than just municipalities⁴².
 - c. Establish alternative system of small-scale land tenureship, such as easements, farm incubators, and lease arrangements, to transition new farmers into land ownership⁴³.
 - d. Incentivise good municipal practices with financial assistance in planning and awards⁴⁴.
 - e. Adoption of a province-wide development plan similar to Places to Grow including funding for development of necessary infrastructure⁴⁵.
 - f. Greater policy and financial support for near-urban farmers to ensure their viability, including funding for the rehabilitation of degraded land⁴⁶.
 - g. Revise policies on the development of mining for aggregates addressing where it is most appropriately located and the need for more recycling of minerals⁴⁷.
 - h. Expansion of *Permanent Agricultural Districts* (PAD) throughout Ontario: Involves planning controls, farming support, and property tax incentives similar to the Greater Golden Horseshoe Greenbelt. Combination of measures needs to be well-coordinated. Protects entire regions for agricultural production⁴⁸.
 - i. Institute local ownership capital controls on farmland: Currently used in Quebec and formerly in Saskatchewan. Places limits on the quantity of farmland that can be owned by individuals or entities located outside of Ontario⁴⁹.
 - j. Institute a system of *Agricultural Land Reserves* (ALR): Currently administered in British Columbia and Quebec. Entails the formation of a public commission or council to govern lands in the reservation with a mandate of promoting agriculture as the primary use.⁵⁰

³⁶ Deloitte. (2013). Best practices in local food: A guide for municipalities (A report by Deloitte for The Ontario Municipal Knowledge Network (OMKN)).

³⁷ Deloitte, 2013.

³⁸ Deloitte, 2013.

³⁹ Deloitte, 2013.

⁴⁰ Dickerson et al., 2010.

⁴¹ Caldwell et al., 2007.

⁴² Caldwell et al., 2007

⁴³ Deloitte, 2013.

⁴⁴ Caldwell et al., 2007.

⁴⁵ Caldwell et al., 2007.

⁴⁶ Carter-Whitney, M. (2010). Ontario's Greenbelt in an International Context. Retrieved from http://www.greenbelt.ca/ontario_s_greenbelt_in_an_international_context2010

⁴⁷ Carter-Whitney, 2010.

⁴⁸ Wilton, 2005, p.19

⁴⁹ Holtslander, C. (2015). Losing our grip: How corporate farmland buy-up, rising farm debt, and agribusiness financing of inputs threaten family farms. National Farmers Union.

⁵⁰ Yearwood-Lee, E. (2008). History of the agricultural land reserve. Legislative Library of British Columbia.

3. *Easements, Land Trusts, & Tax Incentives*

- a. Expansion of urban agriculture tax credits to municipalities throughout Ontario⁵¹.
- b. Provide financial support and raise awareness for land trusts & agricultural easements⁵².
- c. Incentivise the preservation of farmland for its public provision of ecosystem services⁵³.
- d. Develop system of *Purchase of Development Rights* (PDR): Generally used by municipalities throughout the United States. Entails public compensation to farmland owners for the placement of conservation easements⁵⁴.

4. *Agricultural Monitoring and Standards*

- a. Greater support for the monitoring and analysis of farmland in Ontario. Including studying the impacts of development in proximity to farmland.
- b. Revise MDS standards to include different approaches to smaller-scale and alternative mixed-production categories⁵⁵.
- c. Multiple agricultural land designations should have categories that use firm-scaled setback for small-scale and mixed-use agriculture as an alternative to MDS formula for large-scale livestock production⁵⁶.
- d. Municipalities could form mixed-use clusters that are exempt from MDS formula⁵⁷.
- e. Formula could be created to determine minimum farm size appropriate for a series of different categories of agricultural production. Needs to balance the need to keep parcels large enough and in agricultural production in order to prevent development⁵⁸.

5. *Federal Policy*

- a. Inclusion of the preservation of farmland as a national priority within a National Food Policy, and inclusion of farmland preservation civil society groups and farmer organizations in any food policy councils responsible for its governance.
- b. Inclusion of farmland preservation as a condition for the availability of funding and access to risk management tools in any future inter-governmental agricultural frameworks.
- c. Consultation (directed primarily at First Nations in a manner respecting the provision set out in the RCAP and UNDRIP) and accompanying order-in-council for the prioritization of agricultural use of prime agricultural Crown Lands.
- d. National capital controls for the ownership of farmland.
- e. Public expropriation of farmlands under the management of financial investment firms and sovereign wealth funds for the establishment of a national ALR.

⁵¹Deloitte, 2013

⁵² Caldwell et al., 2007.

⁵³ Ontario Federation of Agriculture. (2015). Ontario Federation of Agriculture Farmland Preservation Recommendations.

⁵⁴ City of Anne Arbor Michigan. (n.d.). Purchase of Development Rights. Retrieved from <https://www.a2gov.org:443/greenbelt/Pages/PurchaseofDevelopmentRights.aspx>

⁵⁵ Watkins et al., 2003.

⁵⁶ Dickerson et al., 2010.

⁵⁷ Dickerson et al., 2010.

⁵⁸ Dickerson et al., 2010.

