



ACKNOWLEDGEMENTS

Many thanks to everyone who contributed their time, ideas and expertise to *The Growing Sector of Agri-Business in Essex County* report. This report represents the collaborative efforts of the Windsor and Essex County Agri-business community. We hope this document will better position our workforce for employment opportunities within the agri-business sector of Windsor-Essex.

Workforce WindsorEssex would also like to thank Tristan Fehrenbach for his work in developing and authoring this report.

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How did we do?

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The Growing Sector of Agri-Business in Essex County

Executive Summary

The Windsor-Essex County's agri-business sector is dynamic and has been identified as one of the region's nine most promising sectors for business and employment growth.

This report is an attempt to describe the state of this important sector and provide information about how people can prepare themselves for the careers of the future.

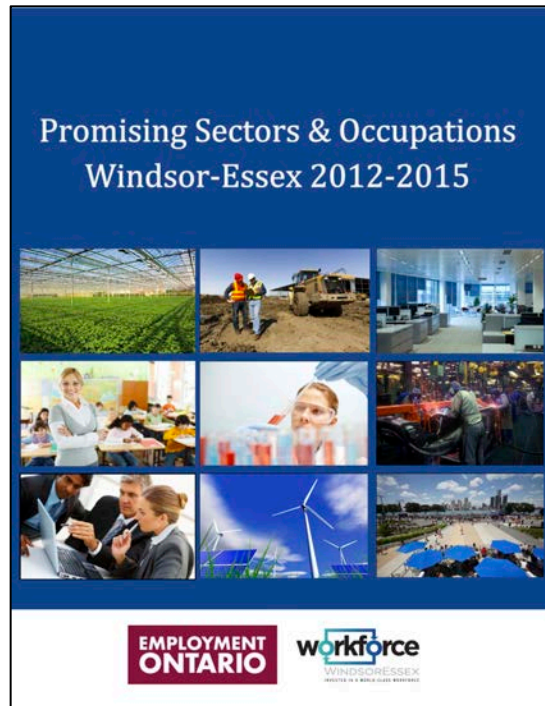
Industry leaders interviewed for the project identified some concerns, but are positive overall about the short to medium term employment prospects for the sector. They also identified a number of areas for potential growth and provided suggestions for developing the workforce and the industry. These suggestions include providing better information to students about the opportunities in the industry, continuing to upgrade educational programs that support the sector and strengthening the local food infrastructure.

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Introduction

In January 2012, Workforce WindsorEssex published *Promising Sectors & Occupations: Windsor-Essex 2012 to 2015*, a report that highlighted those sectors of the Windsor-Essex economy expected to experience a high rate of retirement or business growth in the next three to five years. The list of sectors includes:



In May 2012 the Ontario Ministry of Training, Colleges and Universities agreed to fund a research project that examines the agri-business component of the Windsor-Essex economy in greater detail. Thanks to the Ministry's support, along with contributions from community partners, Workforce WindsorEssex was able to conduct extensive quantitative and qualitative research and interview over 30 agri-business employers, educators and stakeholders in our region about the sector's future workforce needs, opportunities and challenges. *The Growing Sector of Agri-Business in Essex County* is the result of this work.

The purpose of this report is to:

- Provide up-to-date local information on the state of the sector and its workforce needs;
- Help educate students, the unemployed and those wishing to pursue a career change about opportunities and skill requirements in agri-business;
- Provide the unemployed, underemployed and those wishing to pursue a career change with relevant information about how to find employment or start a business in the agri-business sector; and,
- Provide information to education and training institutions to assist them in developing educational offerings.

What is agri-business?

While farms and greenhouses are at the centre of the agri-business sector, they are part of a broad network of firms, agencies and institutions that play important roles. Some companies contribute to farm operations by manufacturing, constructing or distributing farm equipment, providing supplies and delivering services. At the other end of the spectrum are companies that process, store and distribute the resulting farm commodities through numerous channels to domestic and foreign consumers.

Here are some examples of the types of Essex County companies that contribute to farm operations:

Seed suppliers ▪ Feed suppliers ▪ Fertilizer and pesticide suppliers ▪ Entomologists ▪ Research scientists ▪ Construction companies ▪ Farm equipment manufacturers and retailers ▪ Staffing organizations ▪ Professional services such as law, accounting and marketing ▪ Plumbers ▪ Electricians ▪ Stationary engineers ▪ Packing sheds that sort, package and distribute greenhouse produce

Here are some examples of farm operations that are found in Essex County:

Field crops ▪ Greenhouses ▪ Livestock farms ▪ Mushroom farms ▪ Orchards ▪ Vineyards ▪ Ornamental crops (sod farms, tree and shrub nurseries) ▪ Plant propagators

Examples of organizations that process and distribute agricultural commodities to the public:

Wineries ▪ Distilleries ▪ Food processors ▪ Restaurants ▪ Wholesalers ▪ Grocers ▪ Farmers' markets ▪ Farm gate stands

Agri-Business Employment Trends

At both the provincial and national level, every research publication on the agri-business employment obtained during this study highlights recent expansion in the agri-business sector and predicts continued growth:

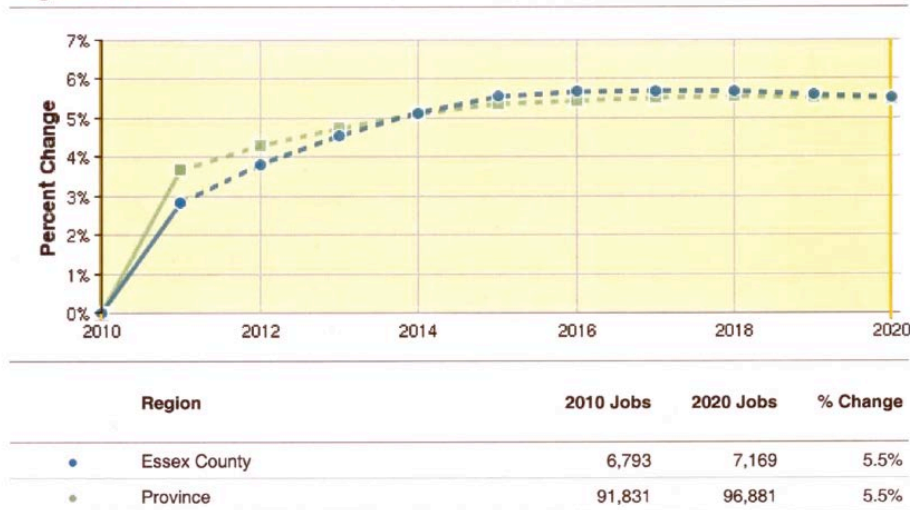
- According to an [Agriculture and Agri-Food Canada report](#), employment in the agriculture and agri-food system increased by 14% between 1997 and 2010 in Canada. Employment in the foodservice and food retail/wholesale sector grew by over 30%, while employment in food processing followed a stable trend with modest increases since 2000 (Agriculture and Agri-Food Canada, 2012, p. XIV).

- A 2012 Canadian Chamber of Commerce report, [Canada's Skills Crisis](#), predicts that the agriculture sector will require 90,000 additional workers by 2013 (The Canadian Chamber of Commerce, 2012, p.6).

- A recent [JRG Consulting Group survey](#) of over 100 agri-food employers in Ontario found that industry demands are exceeding the supply of post-secondary graduates in agri-food in Ontario, where three jobs exist for every agriculture graduate with a bachelor's degree. Survey respondents expected a 10- to 20-per-cent increase in the number of new hires directly from university in the coming years (University of Guelph, 2012).

- By the year 2020 there will be a 5.5% increase of agriculture-related jobs in Essex County, as well as the province of Ontario (OMAF, 2013). This is 376 newly created jobs for Essex County and 5,050 for Ontario.

Regional Trends



(Ontario Ministry of Agriculture and Food, 2013).

Windsor-Essex Agri-Business Employment Trends

As of 2006, Essex County had almost double the number of workers in agriculture-related occupations on a proportional basis when compared with the rest of the province. ([WindsorEssex Economic Development Corporation Publication, February 2011.](#))

As table 1 demonstrates, employment in Windsor-Essex small and medium sized crop production firms has been increasing consistently since 2008. Employment in other agri-business sub-sectors, such as animal production, decreased somewhat between 2011 and 2012, while food services and drinking places experienced a slight increase in employment during the same period.

Table 1: Change in Number of Individuals Employed by Small and Medium Essex County Businesses in the Agri-Business Sector December 2008 to June 2012							
North American Industry Classification System Codes	2008	2011	2012	Absolute Change from 2008 to 2011	Percent Change (%) 2008 to 2011	Absolute Change from 2011 to 2012	Percent Change (%) 2011 to 2012
111 - Crop Production	4,851	5,172	5,184	321	6.61	12	0.24
112 - Animal Production	602	603	541	1	0.16	-62	-10.28
115 - Support Activities for Agriculture and Forestry	151	176	N/A	25	16.60	N/A	N/A
311 - Food Manufacturing	721	677	683	-44	-6.09	6	0.87
312 - Beverage and Tobacco Product Man.	121	136	139	15	12.50	3	2.42
722- Food Services and Drinking Places	12,709	12,197	12,296	-512	-4.03	98	0.81

(Statistics Canada, Canadian Business Patterns Data, June 2012.)

Table 2 sets out the number of employers in agri-business sub-sectors. It also compares what proportion of all regional employers the sector represents and compares this to the rest of Ontario. In five out of the seven sub-sectors, Windsor-Essex has a higher distribution of companies in these sectors than the rest of the province, demonstrating their importance to the local economy.

Table 2: Windsor-Essex Agri-business Employers, June 2012				
North American Industry Classification System Codes (NAICS)	Windsor-Essex Total	Distribution %	Ontario Total	Distribution %
111 - Crop Production	794	3.91	12,251	1.38
112 - Animal Production	270	1.33	19,952	2.24
113 - Forestry and Logging	6	0.03	1,536	0.17
115 - Support Activities for Agriculture and Forestry	35	0.17	1882	0.21
311 - Food Manufacturing	58	0.29	2,513	0.28
312 - Beverage and Tobacco Product Manufacturing	23	0.11	468	0.05
722 - Food Services and Drinking Places	863	4.25	30,514	3.43

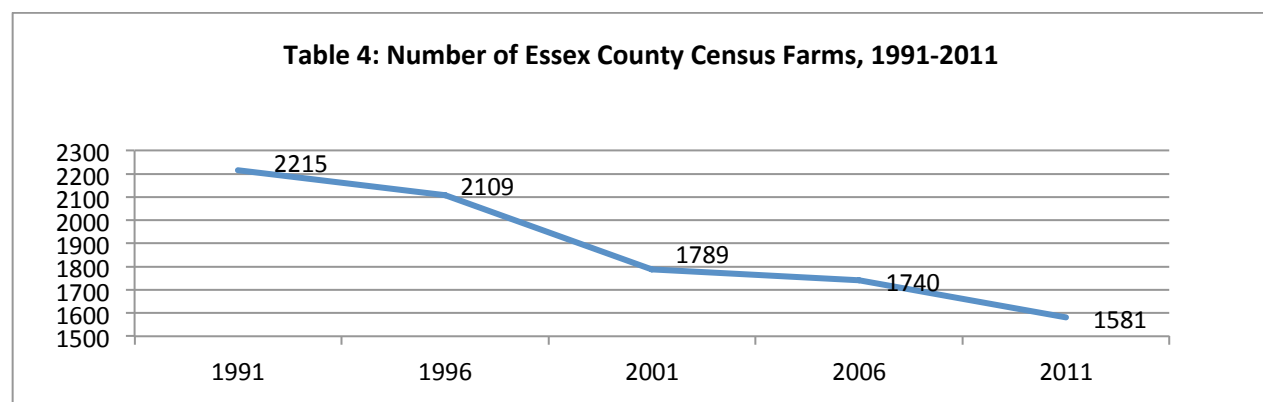
(Statistics Canada, Canadian Business Patterns Data, June 2012.)

Table 3 sets out the number of Windsor-Essex small and medium sized businesses in agri-business subsectors.

Table 3: Change in Number of Windsor-Essex Small and Medium Sized Agri-Businesses 2008-2012	2008	2010	2011	2012
NAICS				
111 - Crop Production	746	836	857	794
112 - Animal Production	282	311	309	270
115 - Support Activities for Agriculture and Forestry	27	31	40	35
311 - Food Manufacturing	65	64	62	58
312 - Beverage and Tobacco Product Manufacturing	24	25	24	23
722 - Food Services and Drinking Places	946	921	881	863

(Statistics Canada, Canadian Business Patterns Data, June 2012.)

In keeping with both provincial and national trends, the number of farms in Essex County is decreasing. As table 4 demonstrates, the total number of farms counted in the agriculture census decreased by almost 29% between 1991 and 2011.



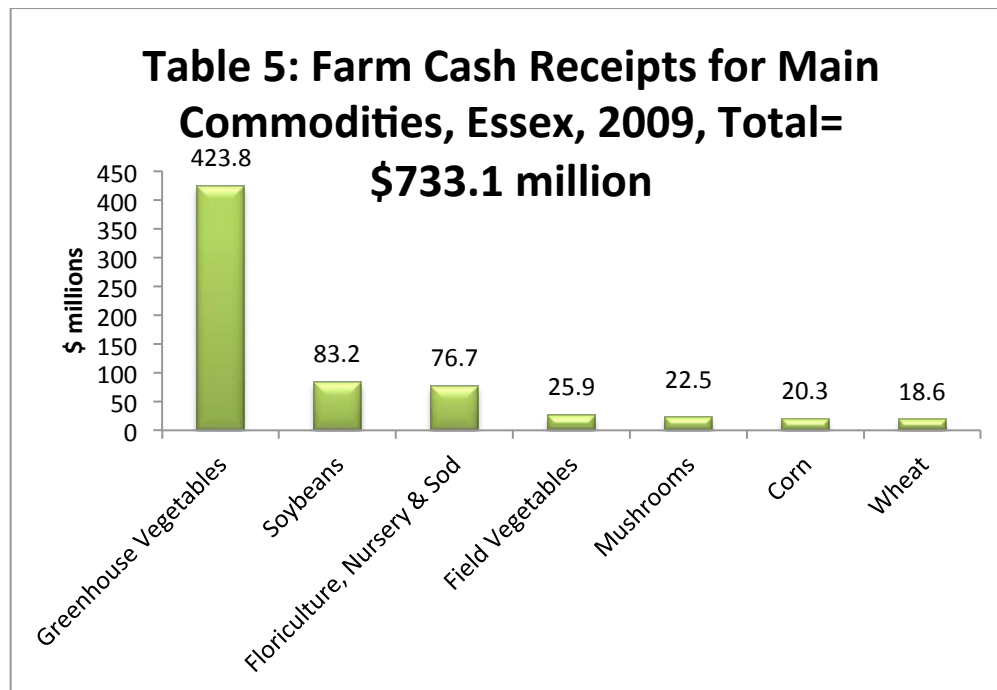
([Ontario Ministry of Agriculture and Food Website](#))

Five hundred and forty-four of the 1,581 Essex County farms reported 7,961 employees in the 2011 census. Of that total, 4,631 were employed on a year round full or part-time basis, while 3,330 were employed on a seasonal or temporary basis.

According to the census, farm operators in Essex County are aging. The average age of the region's 2,155 farm operators is 56.8, while the average age for all Canadian farm operators is 54.

It is difficult to obtain precise information about the number of temporary foreign workers employed in the Windsor-Essex agri-business sector. One estimate is that 6-8 thousand people are employed in this capacity in Essex County during the course of a typical year (Legal Assistance of Windsor, 2013). While these workers would be employed across sectors of the economy, the majority would be employed in agricultural and food processing positions.

Table 5 sets out the cash receipts for Essex County's main agricultural commodities as of 2009. The \$423.8 million in sales of greenhouse vegetables demonstrates the considerable scale of the regional greenhouse industry.



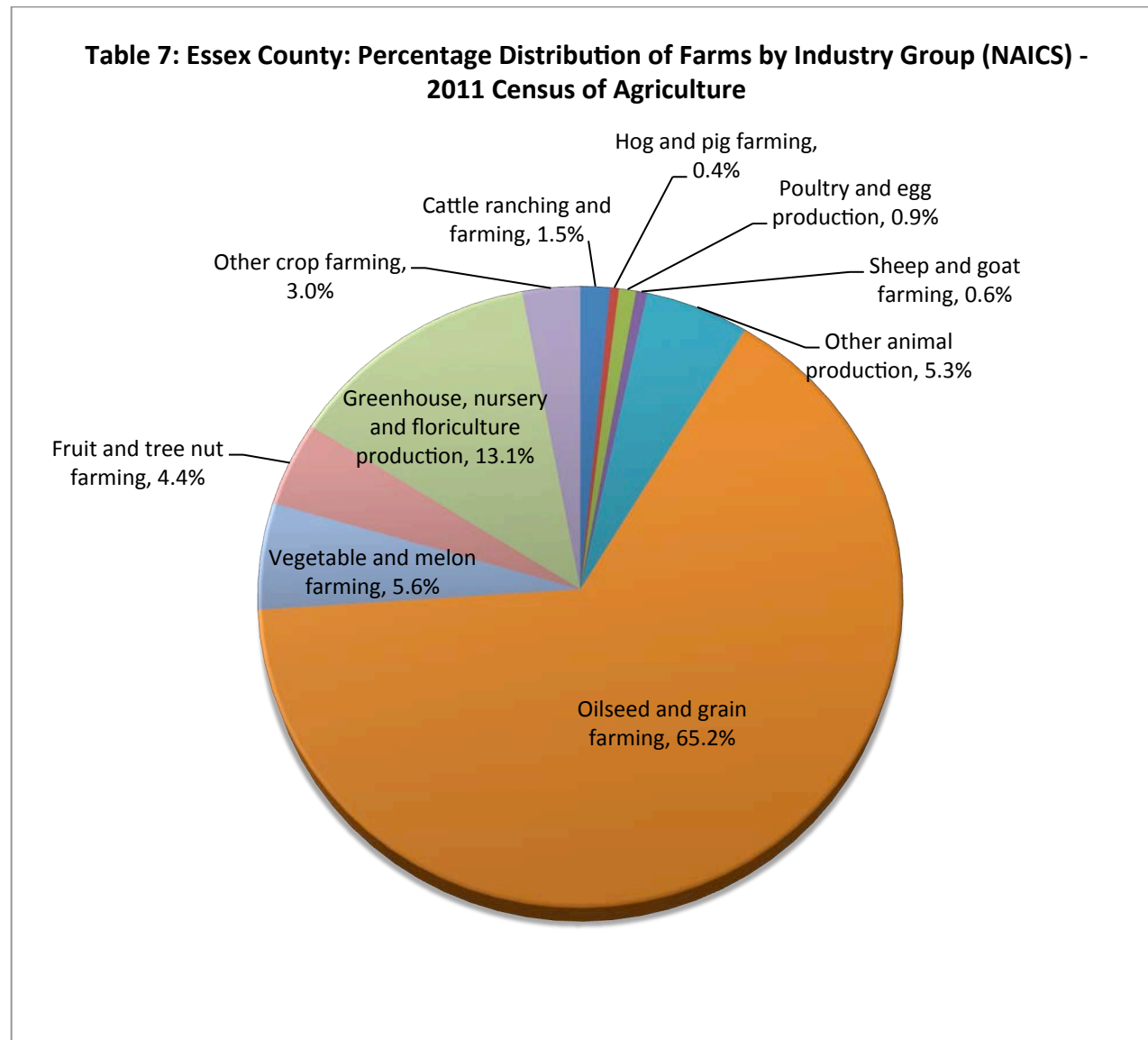
(Ridgetown Resource Centre, 2011)

Table 6 compares Essex County's farm sales with neighbouring counties in southwestern Ontario.

Table 6: Essex County Total Value of Census Farm Sales Compared With Other Southwestern Ontario Counties, 2011.		
	Total Farms	Total value of sales (\$'000s)
Essex County	1581	787,304
Chatham-Kent	2049	502,405
Lambton	2153	457,570
Middlesex	2352	631,098
Elgin	1346	341,354

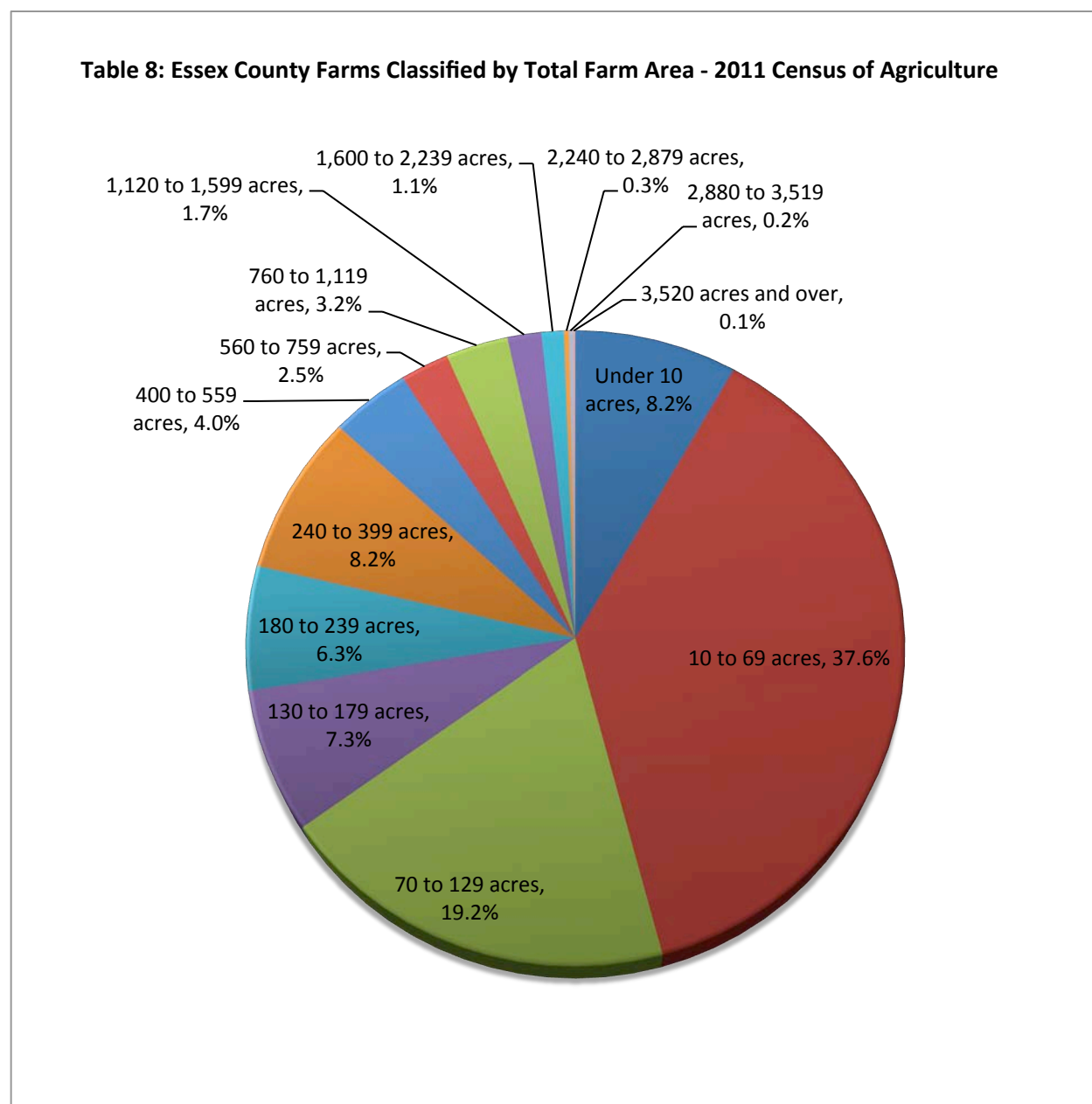
([Ontario Ministry of Agriculture and Food Website.](#))

Table 7 groups Essex County farms by industry to give a sense of the distribution of various types of farms.



(Statistics Canada, May 10, 2012)

Table 8 groups Essex County based on their area to give a sense of the physical size of farm operations in Windsor-Essex.



(Statistics Canada, May 10, 2012)

As a contribution to the 2011 regional gross domestic product in the Windsor Census Metropolitan area, which includes a large proportion of Essex County¹, primary industries, including agricultural production and mining, accounted for **\$150.69 million** in 2011. This is projected to grow to **\$155.23 million** in 2012 and **\$159.41 million** in 2013 (WindsorEssex Economic Development Corporation, [January 2012 Economic Monitor](#), p.4). This figure does not account for the portions of GDP produced by other

¹ The Windsor Census Metropolitan area does not include the towns of Kingsville and Leamington and Essex, which, if included would boost this number significantly due to the heavy concentration of agricultural production in those communities.

economic sectors in Essex County that contribute to agri-business more broadly, such as manufacturing, construction, business services and finance, insurance and real estate.

What We Heard from Essex County Agri-Business Employers, Educators and Stakeholders

Agriculture and agri-business is a calling, not a 9-5 job.



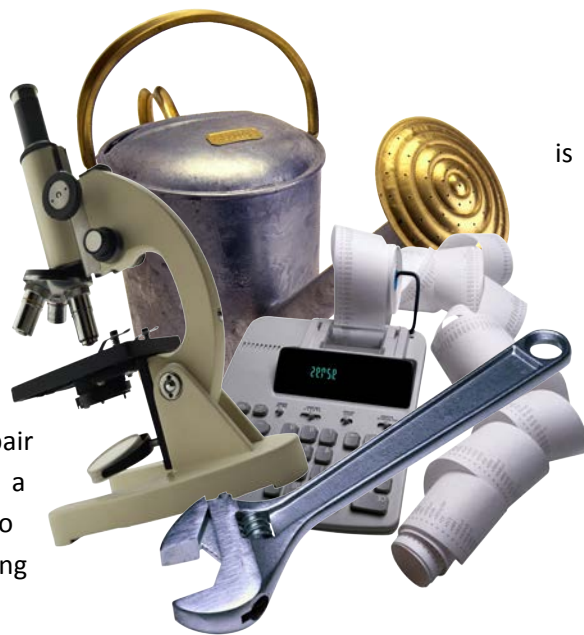
Whether we spoke with mushroom growers, dairy farmers, greenhouse operators or agri-business tourism operators, they all emphasized that the work they do is their passion, not just something that they do for eight hours a day. As one employer described it, plants don't stop growing, so it's unreasonable to expect that you can do this type of work on a 9-5 schedule. Employers consistently emphasized that people who wish to work or invest in the sector need to be prepared for hard work and irregular hours. They cite the inability to accept these working conditions as the number one factor that causes people to fail in the industry.

Growing food that sustains humans is an honour

In exchange for making a commitment to this sector, however, employers described many rewards. Many spoke of feeling pride and satisfaction from being able to produce food and other goods that enable people to survive.

A variety of technical skills is important

Knowledge about how plants grow and animals thrive at the core of agri-business, but beyond that success in agriculture or agri-business requires an incredibly wide skill set as well as an ability to keep up with changes in a rapidly changing field. As a very simple example, in order to be successful a field crop grower needs to have not just a sophisticated knowledge of plant and soil science, but also mechanical skills to be able to repair equipment, management skills to be able to employ a productive workforce, accounting and finance skills to fund and oversee the business and sales, and marketing skills to find buyers for their crops at a good price.



Increasing regulatory demands with respect to food safety and traceability will create opportunities

Consumers and governments are increasingly concerned about where their food comes from and how it was grown and processed. Retailers are also imposing stricter food safety standards on their suppliers. Consequently, many employers predict that there will be demand for health and safety professionals, science graduates with a background in food safety and people with technical abilities and IT skills to design sophisticated programs to trace food back to its source. One Ontario-based food safety training

organization is having difficult recruiting food safety audit professionals who also have a combination of scientific knowledge and an adult education background. A number of Windsor-Essex food processors are implementing the [Global Food Safety Initiative](#) and preparing for Canadian and American changes to food safety legislation.

Who is responsible for food safety in Canada?

ACHIEVING FOOD SAFETY

INDUSTRY

- » Establishes and conducts food safety programs in accordance with regulatory requirements and industry practices
- » Verifies effectiveness of food safety systems and ensures safe production and distribution of food

CONSUMER

- » Clean, Washes hands with soap
- » Handles, prepares and cooks food safely
- » Consumes foods with caution

LOCAL PUBLIC HEALTH/ REGIONAL PUBLIC HEALTH AUTHORITIES

- » Inspect food establishments
- » Educate regarding food safety practices
- » Report confirmed cases of foodborne illnesses to province/territory
- » Investigate foodborne illness outbreaks; collect food samples; send samples to labs
- » Conduct analyses of findings

PROVINCIAL / TERRITORIAL GOVERNMENTS

- » Regulate food processing within their jurisdiction
- » Implement food safety programs
- » Lead outbreak investigations within their jurisdiction
- » Communicate food safety messages to public

FEDERAL GOVERNMENT

CANADIAN FOOD INSPECTION AGENCY (CFIA)

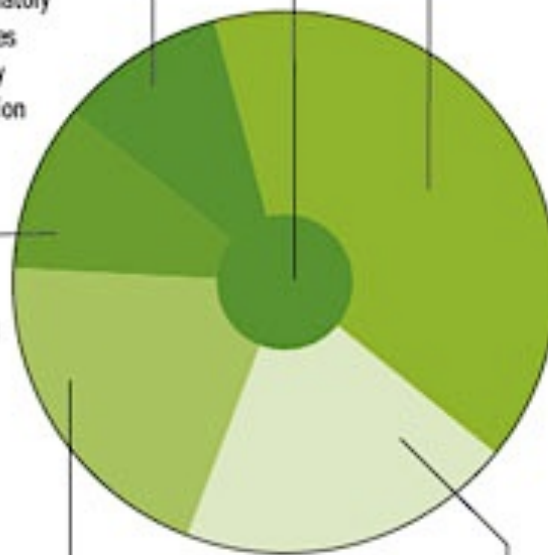
- » Enforces all federal laws and regulations dealing with food
- » Ensures industry compliance with food safety regulations through inspection/compliance verification of food producers
- » Investigates food responsible for foodborne illness outbreaks with food safety partners
- » Initiates food recalls (with industry)

HEALTH CANADA (HC)

- » Sets food safety standards/policies
- » Makes health risk assessment decisions re foods on market
- » Communicates to public on food safety issues

PUBLIC HEALTH AGENCY OF CANADA (PHAC)

- » Acts as first point of contact for federal government for human health impact of foodborne outbreaks
- » Conducts public health surveillance
- » Leads epidemiological investigations when investigation is in more than one province



(<http://www.cpha.ca/en/programs/history/achievements/09-shf/safety.aspx>)

Demand for agri-business supports will increase

Growers in Essex County are investing in an increasingly diversified set of products, including vegetables for ethno-cultural markets, bioenergy and potentially even pharmaceuticals. These innovations will require expertise in research and marketing support in order to succeed. As one interviewee put it, it is impossible to predict which crops and innovations will take hold, but what we should do is accept that we live in a changing environment and in any changing environment, there are always opportunities.



Transportation is a challenge for employees and employers

Several industry leaders we spoke with explained that employee transportation can be a challenge for their businesses. Public transportation is not currently available to many agri-businesses in the region making it difficult for many workers to access employment in the sector. One winery owner we spoke with spends an hour out of his day transporting two of his young employees to and from the workplace.

Concerns about potential federal regulatory changes to labeling rules



Many industry leaders have expressed concern about a [federal proposal to repeal standardized container size regulations for processed foods](#) (Schmidt, The Windsor Star, 2012). Their worry is that the elimination of Canadian container standards would result in a spike in imported food from the United States. It is unclear, they argue, whether Canadian processors would re-tool in order to be able to compete or simply close their Canadian operations and allow American affiliates to supply the market. Proponents of the changes argue that they would eliminate an unnecessary barrier to trade and promote innovation in the sector.

Concerns for the local horse racing industry

Many people interviewed for this projects expressed concern that the Ontario government's 2012 decision to moves slot machines from horse racing tracks to casinos will put an estimated 2,000 Windsor-Essex horse racing positions at risk. [Efforts are now under way](#) to re-establish horse racing in Leamington for the 2013 season (Wolfson, January 17,



2013).

Myths versus Reality

Industry experts we spoke with provided information during interviews that challenged some commonly held notions about the agri-business sector.

Myth: Essex County growers are limited to a few basic crops

Reality: Crops will increasingly be diversified

While Essex County was historically known for producing corn, wheat and soybeans, this has changed with the advent of the greenhouse industry, and further diversification is a strong possibility. [New Energy Farms](#), as an example, is an Essex County based start-up focused on researching new methods of propagating grasses that can be burned to produce energy or sold for other purposes as varied as wastewater treatment or bedding

for animals. There are also interesting examples of community supported agriculture being used to establish very diverse small-scale farms or partnerships between restaurants and growers to provide specific crops. One local cooperative organization has made in-roads growing vegetables specifically for immigrants from the Central African region, including okra. Annually, Canada imports over \$10 million worth of okra (Canadian Broadcasting Corporation, April 2012), a vegetable commonly used in soups and stews.



Myth: The jobs are all low-paid

Reality: Some employers are providing competitive salaries and insured benefits

There is a belief that all positions in agriculture, especially at the entry level, are low paying and come without benefits. While this is the case for many entry-level positions in the sector, we spoke with several employers who do offer insured benefits and considerable opportunities for advancement.

Myth: You have to come from a farm family in order to work in agri-business

Reality: You don't have to be born into the profession

There is sometimes an assumption that a person has to be born into an agricultural family in order to pursue a career in agriculture or agribusiness, but this was not borne out by our research. We met a



number of successful people who were the first generation to work in the agri-business sector and heard from educators that students without farming backgrounds are just as likely to succeed in agricultural education programs as those who grew up on a farm. As one agriculture graduate and educator pointed out, even if a person is raised in an agricultural family, they may only know one specific type of agriculture, and have to learn about other types of agriculture in the same way that somebody without any background would.

Myth: Agri-business is a low-tech sector

Reality: Technological advances are changing the industry at a rapid pace

Just as in other sectors of the economy, technology is rapidly changing the agri-business sector. There might not be a better symbol of this than the fact that one Essex County farm stand now allows its customers to pay electronically using a debit machine. From geospatial analysis computer programs that can map land areas with incredible precision to climate control systems in greenhouses there will be career and business opportunities for IT skilled individuals who might not have otherwise considered a career in agriculture.



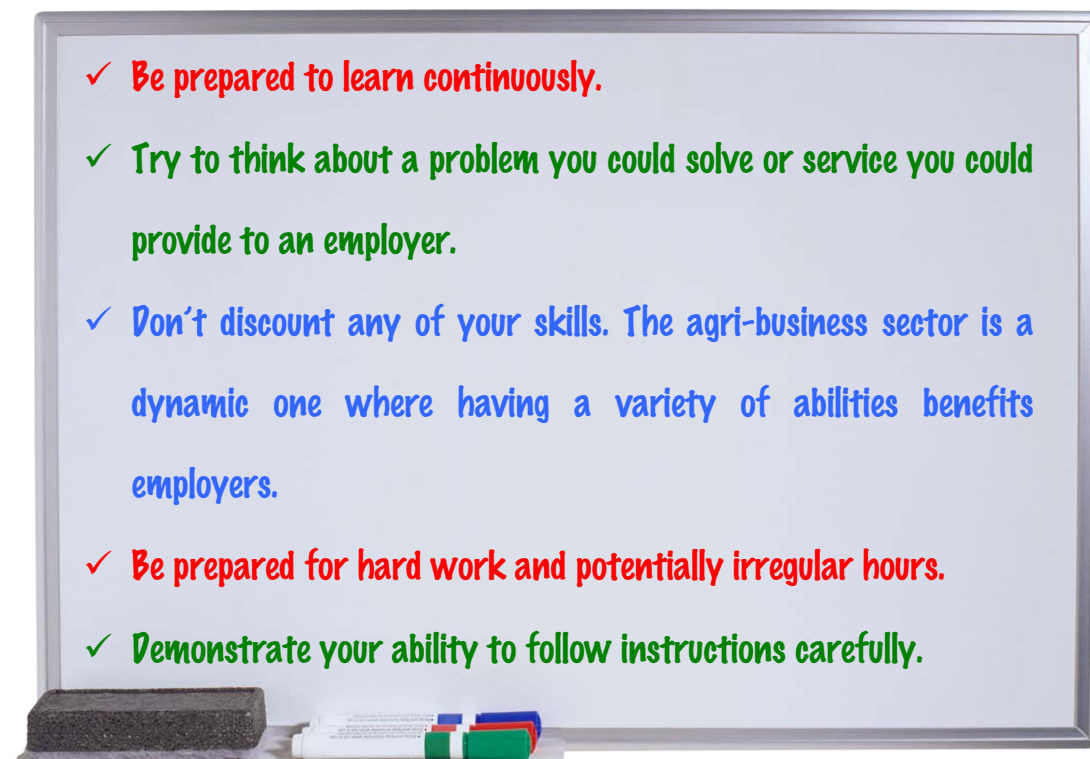
Myth: Communications and sales skills are not as important as in other industries

Reality: Soft skills are crucial!

Several of the employers we spoke with were very passionate about this subject. Their advice to people is that while mastering the technical skills for an occupation is a minimum requirement for entering positions in the industry, it is a person's "soft skills," or, in other words, the ability to communicate effectively, sell an idea, manage people effectively or sell products and ideas that really determine whether people are successful in the long term.

Tips for Getting a Job or Starting a Business in the Agri-Business Sector

The employers interviewed for this project offered a number of concrete suggestions for agri-business job seekers and entrepreneurs:



✓ **Be prepared to learn continuously.**

✓ **Try to think about a problem you could solve or service you could provide to an employer.**

✓ **Don't discount any of your skills. The agri-business sector is a dynamic one where having a variety of abilities benefits employers.**

✓ **Be prepared for hard work and potentially irregular hours.**

✓ **Demonstrate your ability to follow instructions carefully.**

A Closer Look at Windsor-Essex Agri-Business Sub-Sectors

Field and Orchard Growers/Mushroom and Livestock Producers



While the number of farms in Essex County, like elsewhere in Canada, is decreasing, the remaining operations are becoming larger and technologically more sophisticated. Growers interviewed for this project cited a number of potential risks for the future of the industry, including the possibility that Canada will abandon supply management² and the fact that many farmers they know are simply getting out of the industry. This is balanced by industry leaders and newspaper articles (D'Alesio, 2012) providing anecdotal evidence that the [younger generations are re-discovering farming](#). One *Toronto Star* [article](#) recently focused on chronicling the stories of urban, entrepreneurial women starting farming operations (Kane, 2012).

In a general sense most people agreed that there will continue to be a need for labourers and people with a variety of technical skills. The question arises, however, as to how people of limited resources can learn more about farming or start a farm, given the cost of equipment and agricultural land prices in Essex County, which are [on the rise in the region](#) (Hill, 2012).



Fortunately, there have been some interesting initiatives to engage people in farming in the area. One such program, [Coopérative Agricole de Windsor](#), is a production coop whose members are French speaking immigrants who are interested in developing their skills and launching a farm business. The group has produced crops in various community

plots, such as amaranth, which is used to make tea, African sorrel, hot peppers and African eggplant and marketed them to families and businesses. The [Naturalized Habitat Network of Essex County and Windsor](#) launched a [project](#) in 2011 dedicated to raising awareness of the region's indigenous Pawpaw tree by providing education, training and practical experiences to both prospective producers and consumers. The goal of the group is to restore this species, while establishing it as a community supported, environmentally sustainable local food resource.

One approach that is becoming more common is *community supported agriculture* (CSA). This can include many different things, but normally it involves consumers creatively supporting the growers of their food. This could involve the community supporters contributing labour to the farm or paying for some proportion of the cost of the produce prior to the start of the season so that the grower has resources to invest in the crops and a guaranteed market for the product.

² Supply management systems attempt to match the total supply of an agricultural commodity with the market demand, using quota systems to control the amount of each commodity that producers can market and applying high tariffs to imported commodities. In Canada, the broiler hatching egg, chicken, dairy, egg and turkey currently operate under national supply management systems (Ontario Ministry of Agriculture and Food, [Supply Management Fact Sheet](#)).

One dynamic pair of local, mixed crop organic growers who operate under the name [Locally Germinated](#) used a CSA approach for the first time in 2012 and found that they were able to sell the shares in their program more quickly than expected using social media and existing contacts. They then delivered food baskets to people when it was time to harvest--they grow more than fifty vegetable and herb crops--and were able to supplement the income derived from sales at their regular farmers' market stall. Providing suggestions to customers about how to use unfamiliar vegetables enhanced the experience for participants.



One of the growers noted that she benefitted from an education program organized by the [Everdale Organic Farm and Environmental Learning Centre](#). Everdale's mission is to be a teaching farm that provides hands-on, solution-based food and farming education to build and engage healthy local communities. The organization offers a [suite of farmer training programs](#), ranging from a [one week introduction to farm life](#), to a [32 week hands-on sustainable farming certificate](#).

Another possibility for aspiring growers is to simply ask a farmer to use a small section of their land. Farmers' markets offer a great venue for people who are interested in learning more about agriculture to interact with growers. Similarly, organizations such as the [4H Club](#) are a starting point to make connections in the sector.



Greenhouse Sector

According to the 2011 Statistics Canada Census of Agriculture, over half (54.2%) of Canada's total greenhouse area was located in Ontario in 2011. That greenhouse area had increased by 6.7% to 135.1 million square feet since 2006. Greenhouse vegetables accounted for 86.2 million square feet and floriculture products for 42.6 million square feet.

Essex County had 66, 858, 873 square feet (1,535 acres) under glass, plastic or other protection in 2010, a remarkable 13% increase over the 2006 total of 59,138,687 square feet (1,357 acres). Of this area, 2,695,735 square feet were dedicated to growing greenhouse flowers, while the bulk at 63,040,577 were allocated to the production of greenhouse vegetables.

The greenhouse industry in Essex County is a dynamic one where growth has been quite rapid for the past twenty years. There is always a need for labourers and packers, as well as more senior positions such as assistant growers and senior or head growers, who can earn over \$100,000 per year.



Senior or head greenhouse growers may be the owners of greenhouse operations or employees of owners. They are responsible for the overall planning of growing and plant production operations as well as the management of human resources. Extensive experience and industry-related management knowledge and skills are required for this type of position and many people in the position will have post-secondary education or extensive on the job training.

Assistant managers assist in the management of production operations and the pathway into such a career varies. Sometimes employees have the opportunity to [grow into the position](#) (Van Wageningen, 2012) after proving themselves at working effectively under direction, being reliable and understanding the production process. Employers also report that a basic knowledge of plant science is a strong attribute.

Larger operations will sometimes recruit from the Netherlands where the greenhouse industry is very well established. According to sources in the industry, an individual seeking to break into the industry could obtain an agriculture degree or diploma from for example University of Guelph or its Ridgetown Campus, but an employer would normally require them to obtain specific greenhouse experience before they can attain the assistant grower level. Language skills such as Spanish can also be an asset for managerial employees who would supervise offshore employees as part of their duties.

Growth and innovation in the Essex County greenhouse industry over recent years has created a number of opportunities for supporting industries. As an example, companies now exist to recycle the plastic used to cover greenhouses that did not exist when the industry began.



Similarly, the industry has created considerable work for IT technicians, mechanical engineers, heating and cooling experts and electricians. Some greenhouses have a full time person to monitor energy use and several have been experimenting with innovative biomass products as sources of energy. Another demonstration of the sophistication of the industry is one greenhouse grower's [promotion](#) of the fact that their workers' uniforms have a computer chip in each one to identify any uniform that has been worn more than once without being cleaned. Some growers are using Radio Frequency Identification (RFID) technology to track individual vegetables. Industry insiders have said that the considerable technology and infrastructure investments made in recent years will create a host of job opportunities in the future.



There isn't currently an apprenticeship program for greenhouse growers and several people interviewed for this project have recommended that such an approach be pursued. Interestingly, the University of Guelph Ridgetown Campus is planning to launch a post-diploma [Greenhouse Production Management Certificate](#) program in September 2013. Students in the program would be able to learn the practical skills and techniques to manage greenhouse vegetables through course work and industry work placements.

At the time of writing, Essex County greenhouse and field tomato growers were facing a challenge in terms of low wholesale tomato prices as a result of a successful North American tomato harvest and competition from Mexican growers (Battagello, 2012). Whether this is a temporary challenge in terms of the Essex County tomato industry or a longer term issue remains to be seen.

Ontario Greenhouse Vegetable Growers www.ontariogreenhouse.com

Ontario Greenhouse Marketers Association www.ontariogma.com

Ontario Greenhouse Alliance www.theontariogreenhousealliance.com

Wineries

There has been considerable growth in recent years in the number of wineries operating in Essex County. This corresponds with growth across Ontario in grape production, a crop which now represents 35% of the farm value of Ontario commercial fruit. (Windsor Essex Economic Development Corporation, 2012). There are currently sixteen wineries operating in Essex County that employ approximately 400 people. Many of the positions are seasonal, and a proportion of the seasonal workers are migrant workers.



Positions in a winery can be full or part-time and workers are employed for wine making, storage, equipment maintenance and bottling. There are also customer service positions in wineries, marketing work, culinary roles for wineries that also host weddings and other events, finance and sales positions. Pelee Island Winery in Kingsville even [employs one individual to travel the world](#) focusing on wine



exports to countries as far afield as China, Taiwan, Japan England, France and Holland.

As with other agri-business sub-sectors, a variety of suppliers and consultants support the industry, including equipment manufacturers and installers, construction contractors, grape growers, professional service providers, printers, laboratories and specialized wine consultants.

Winery owners interviewed for this report said that they tend to employ people through word-of-mouth connections rather than formal hiring processes. One owner who is willing to train people and has hired a variety of individuals finds that, in a general sense, reliability is the most important attribute.

In terms of local educational opportunities, St. Clair College is investigating the creation of a viticulture³ and oenology⁴ Program. Further afield, Niagara College has a [winery and viticulture program](#) as well as its own [teaching winery](#). Brock University conducts research into winemaking, offers degree and certificate programs, and has the [Cool Climate Oenology and Viticulture Institute](#).



Research has demonstrated that even though Essex County wines are winning awards and receiving recognition outside the community—one informant we spoke with said that 60% of his winery's customers come from outside the area—local awareness of the industry's offerings is still low, which means that there is an opportunity for Windsor-Essex winemakers to boost regional awareness and sales of their products.

Further information about the industry is available from [Essex Pelee Island Coast Wineries](#), the [Wine Council of Ontario](#) and [VQA Ontario](#).

Food Processing

Ontario, overall, has a robust [food processing sector](#) with annual revenues of \$39 billion, 120 000 direct jobs and close to \$7 billion in exports (Alliance of Ontario Food Processors, 2012, p. 4).

The region with Canada's largest cluster of food-processing firms, the Greater Toronto area, is the second largest cluster in North America after Los Angeles and employment in that sector has recently eclipsed employment in automobile manufacturing (Globe and Mail Article.) London, Ontario hosts the second biggest cluster of food processing firms in Canada which supports 6,500 direct jobs (Van Brenk, 2012).

According to Statistics Canada data, as of 2009 there were 62 food and beverage processing companies in Essex County with a total of 3120 employees (WindsorEssex Economic Development Corporation, 2013). Among these are a number of well established companies that generate an economic impact in the area both by employing workers and by contracting with area farmers for their products. On February 14, 2013 an investment group including billionaire Warren



³ Viticulture is the cultivation or study of grape growing.

⁴ Oenology is the study of wines.

Buffett announced its purchase of one of these organizations, the H.J. Heinz Company. The deal is the most expensive purchase of a food processing company in history. The company's Leamington plant, the town's largest employer, employs 800 full time workers and 300-500 seasonal staff. It also purchases 250 000 tonnes of tomatoes annually (Cross, 2013).



Entry level positions in food processing, for people without post-secondary education or apprenticeship training would be similar to those in the manufacturing sector and would include forklift driving, inspection jobs, material handling and line workers. Positions for formally educated people would include

project engineers, millwrights, electricians and stationary engineers, also known as operating engineers. There are and will continue to be opportunities for sales professionals in the sector since workers in sales account for approximately 15% of the food and beverage processing industry's workforce (Agriculture and Agri-Food Canada, 2012, p. 11). An excellent list of [example food processing job descriptions](#) is available on the Food Processing HR Council website.

Food processing companies, like greenhouse growers, are working on implementing the [Global Food Safety Initiative](#), and one HR representative from a major food processor pointed out that having formally educated individuals on the company payroll helps companies in the auditing process. This representative also predicts that a new position will be created in the food processing sector in the future called a food sanitation specialist that would focus on keeping bacteria such as listeria under control in facilities.



Additional information about the industry is available from the [Food Processing HR Council](#) and the [Excellence in Manufacturing Consortium](#).

In response to predications that the food processing sector will face significant long-term skilled workforce challenges by 2026, [Conestoga College opened the Institute for Food Processing Technology](#) in in Cambridge, Ontario in 2011 (Conestoga College, 2013) . The Institute offers certificate, diploma and apprenticeship programs in food processing that are accompanied by co-op placements or industry experience opportunities.

Nutraceuticals and Functional Foods

According to Health Canada a *nutraceutical* is a product isolated or purified from foods that is generally sold in medicinal forms not usually associated with food. A nutraceutical is demonstrated to have a physiological benefit or provide protection against chronic disease.

A *functional food* is similar in appearance to, or may be, a conventional food, is consumed as part of a usual diet, and is demonstrated to have physiological benefits and/or reduce the risk of chronic disease beyond basic nutritional functions.



Windsor-Essex is home to Jamieson Laboratories, Canada's oldest and largest manufacturer and distributor of natural vitamins, minerals, concentrated food supplements, herbs and botanical medicines, which celebrated its 90th anniversary in 2012.

Recently, a nutraceutical company called [Nutra North](#) has set up shop in Windsor. During the course of a media conference to announce the start-up, the co-owner explained that their company looked for employees with science backgrounds who would work well in quality control as well as manufacturing operators. Companies in this sector require analytical work, which means that there may be opportunities in the future for labs that provide testing services.



Supply Chain

While they are sometimes overlooked by job seekers, there are countless supply chain companies in Essex County that are integral to the food and agriculture system. Seed companies, hydroponics firms, suppliers of mechanical equipment, irrigation experts and electrical contractors all make significant contributions to the Windsor-Essex agribusiness sector and provide employment. One firm interviewed that provides biological control agents to the greenhouse industry is growing and recruits people with general biological backgrounds or plant physiology. Their focus is on scouting for pests in greenhouses and using unharmed insects to eliminate them. Supply chain companies range from seed companies to firms that install and maintain irrigation systems.

Further information about the supply chain sector is available from [Supply Chain Canada](#).

There is also interesting work proceeding with respect to ensuring food sustainability and equal access to food. [Food Matters Windsor-Essex County](#) is working on a food charter for the region and, working with partners including [Tourism Windsor Essex Pelee Island](#) has secured a food sustainability event called the [Bring Food Home Conference](#) to be held in November 2013 in Windsor.

Restaurant and Retail

There is a growing interest in selling and cooking with local ingredients, from the Executive Chef at Caesar's Windsor sourcing local products to dynamic entrepreneurs such as Rino Bortolin at [Rino's Kitchen and Ale House](#) going to extraordinary efforts to purchase products from Essex County growers. That said, the local movement is still in its infancy in the Windsor-Essex region, so there is ample room for growth and innovation.



One industry expert in this sector we spoke with pointed out that while there's a growing interest in local products, there isn't yet a sufficient infrastructure to support them. For example, one restaurateur we spoke with uses his only day off of the week to drive around Essex County picking up ingredients from farmers with whom he's established relationships. He would like to see the creation of an affordable profit-based or non-profit delivery service that could move local products from farm to restaurants more efficiently. This particular business owner has also entered into a creative arrangement with a local grower whereby he will pay her in advance of the season to grow a certain number of crops specifically for the restaurant. The restaurant owner will benefit from being able to access unique, quality products and the grower will enjoy a better price than that typically offered by wholesale buyers.



In a general sense there has been a well-established trend in the culinary world for restaurants to work more closely with agricultural and artisanal⁵ food producers, sometimes known as the *farm to fork* movement. In one very interesting Windsor proposal, a large and successful restaurant operation is proposing to develop an integrated urban farm and restaurant. Under the proposal, an attached greenhouse would supply the restaurant with leaf crops, herbs and over 1,400 pounds per week of hydroponically produced tomatoes. If the “farm to fork” trend continues to take hold in Windsor-Essex, there will be opportunities for culinary workers and entrepreneurs who can develop interesting products out of the region's agricultural products, as well as new market opportunities for growers.

For further information about the region's restaurant sector take a look at the [Culinary Guild of Windsor](#) and [WindsorEats](#).

Bioenergy

The production of energy from biomass has undergone considerable investment and innovation in Windsor-Essex in recent years. A Kingsville based company called [Remasco](#) recently won a Leamington Chamber of Commerce award for developing a technology that creates energy from pellets that are derived from municipal solid waste. A Tecumseh area dairy farm is considering the implementation of a system [to convert cow manure into electricity](#). [Seacliff Energy](#) in Leamington has a mega bio-digester that is producing electricity directly for the grid. As one business leader in this sector noted, start-ups such as his require people with a variety of business and research skills to play a role in everything from sales to greenhouse work and an ability to play multiple roles based on the constantly evolving demands of the organization.



⁵ Artisanal food producers are those who produce foods using traditional or hand-crafted methods, in small quantities and using high quality ingredients.

Further information about careers in bioenergy is available from Environmental Careers Organization Canada and [BioTalent Canada](http://www.biotalent.ca).

Agri-Tourism

Agri-tourism is a growing trend across Ontario and has built momentum in recent years in Essex County. Besides the winery industry, a number of Essex County agricultural producers are attempting to attract tourists to their farm operations. The publication of the local food map by the Essex County Federation of Agriculture in 2009 helped spur interest in visiting Essex County producers, and the Federation has now published a [2nd edition](#). One business owner interviewed for this project got the idea to start-up a bicycle touring company focused on local wineries and farms after visitors to a family function explained that they were popular in other regions.



There are numerous resources available to people who are interested in launching an agri-tourism start-up. The [WindsorEssex Small Business Centre](#) has a wide variety of supports for entrepreneurs, including advice about how to write a business plan, marketing and sales strategies, sources of potential funding and a regular schedule of free seminars. Similarly, the [Essex Community Futures Development Corporation](#), a non-profit organization whose goal is to encourage economic development and create job opportunities within Essex County, is a helpful resource for business counseling and financing.



Incorporating a tourism component to an existing agricultural operation requires a considerable amount of research and due diligence, from developing an advertising strategy to assessing potential liability risks that may arise from simply having the general public on site. There will be opportunities in the future for creative people in a variety of professional services occupations to contribute to the burgeoning agri-tourism sector in Essex County by providing a variety of business supports, such as marketing and advertising, transportation support, accounting, event planning and legal advice.

The [Southwestern Ontario Tourism Corporation](#) has an excellent inventory of agri-tourism operations across southwestern Ontario at its [Ontario's Southwest](#) marketing website.

Further information about agri-tourism and culinary tourism can be found on the websites of the [Ontario Culinary Tourism Alliance](#) and the [Ontario Tourism Education Corporation](#).

Distilleries and Breweries

The Windsor-Essex region is home to both [Pernod Ricard](#) and [Diageo](#) distilleries, which process agricultural inputs into a variety of beverage products. The [Walkerville Brewery](#) in Windsor has also recently been re-launched.

A distillery operation would employ individuals with a background in chemical engineering and food sciences to work on the liquids in the production process. They are manufacturing facilities in nature, so there are also positions for mechanical engineers and [millwrights](#) to ensure the effective functioning of all mechanical equipment. As in food processing environments, stationary engineers, also known as power or operating engineers) are employed to maintain a variety of mechanical systems and boilers.

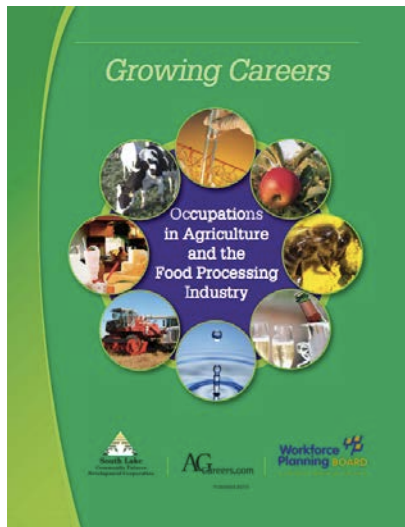


Effective supply chain management is a crucial function in this industry and these positions are typically held by business or accounting graduates. There are also finance positions for buyers who source production materials including, grain, labels and packaging materials and research trends in market prices. Certification for this type of work is available through the [Supply Chain Management Professional Designation Program](#).

Logistics

Qualitative research conducted by Workforce WindsorEssex has found that the logistics industry in Essex County involved in the warehousing and transportation of agricultural products is facing the same challenge as the rest of the transportation industry: an aging workforce and challenges recruiting people into driving positions.

Information about Careers in Agriculture and Agri-Business



If you've ever wondered about the job prospects for abattoir workers or have a question about the educational requirements to be a plant breeder, [*Growing Careers: Occupations in Agriculture and the Food Processing Industry*](#) is a great resource. This publication developed by the Workforce Planning Board of York Region & Bradford West Gwillimbury has labour market information and information about educational requirements for a wide variety of agri-business occupations.

A listing of job descriptions for agriculture workers producing various commodities, including greenhouse products, is available in a [*Canadian Agricultural Human Resource Council*](#) publication called [*Identifying On-Farm Occupations*](#).

Education Options for Agri-Business Careers in the Windsor-Essex Region

Specialist High Skills Major Program in Windsor-Essex High Schools

A [Specialist High Skills Major Program \(SHSM\)](#) is an Ontario Ministry of Education approved specialized program that allows students to focus their learning on a specific economic sector while meeting the requirements to graduate from secondary school. It is intended to assist in their transition after high school to apprenticeship training, college, university or the workplace.



Windsor and Essex County students currently have access to SHSM programs that focus specifically on the agriculture sector. One is offered at Cardinal Carter Catholic Secondary School in Leamington and the other is at Kingsville District High School.

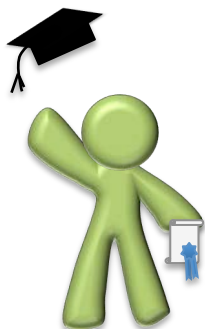
High school students who participate in these [agriculture programs](#) are given a unique opportunity to gain important skills on the job with actual agri-business employers and earn valuable industry certifications in First Aid, CPR and Workplace Hazardous Materials Information System (WHMIS). They also have the opportunity to take english, math, science and business classes with units that are specifically tailored toward agriculture.

There are a variety of SHSM programs on offer throughout Essex County, many of which could also help high school students establish themselves in the broader agri-business sector. These include programs focusing on business, hospitality and tourism, transportation, construction, energy, environment and even information and communications technology. A [website](#) is available to help students explore the various programs.



College programs

[St. Clair College](#) has a [landscape horticulture](#) program that trains students in landscape design, construction and grounds maintenance. Graduating technicians are trained to operate greenhouses and manage retail garden centres so this could be of interest to students pursuing opportunities in the greenhouse industry in Essex County. [St. Clair also has a number of diploma programs](#) that would prepare an individual for a variety of roles within the agri-business sector, including business, carpentry techniques, tourism, culinary management, civil engineering technology, computer systems, electrical engineering, heating, ventilation and air conditioning, truck and coach techniques, veterinary technician and welding techniques.



University of Guelph, [Ridgetown Campus](#), located about an hour away from the geographic centre of Essex County is the closest agriculture-focused college. It

offers an agriculture diploma, as well as programs connected to the broader agri-business industry, included horticulture, environmental management, veterinary technology and greenhouse production management.

The [Canadian Agricultural Human Resource Council](#) has an expansive online and bilingual [database](#) of agricultural programs across Canada.

University programs

The University of Windsor does not have a specific agriculture program, but does have a number of programs that would prepare people for occupations and start-ups in the broader agricultural and nutraceutical sector.

For example, the University's Biological Sciences, Chemistry and Biochemistry Departments have faculty engaged in potentially transformative research. One researcher working with Windsor Regional Hospital has [recently obtained approval for a clinical trial](#), the first ever for Windsor-Essex, of a potential cancer treatment made from dandelion root (Wright, 2012). If the extract is determined to have some efficacy, it could conceivably result in the need for a commercial dandelion crop.



Similarly, another University of Windsor researcher interviewed for this project is investigating the use of an enzyme that occurs in the coats of soybeans as a catalyst to treat toxic water from industrial processes. The treatment process has a variety of potential markets, and, since the seed coat is normally removed when soybeans are processed the process offers an entirely new addition to the soybean value chain.

One Windsor company, [Netmon](#), was recently [in the news](#) for helping a Leamington area restaurant cut costs significantly by using their monitoring software to track the temperature of the businesses' coolers and freezers (Campbell, 2012). As the agri-business and food sector increasingly incorporates technological advances, IT graduates may wish to include the agri-business sector in their job searches. Students graduating from the Odette School of Business are also positioned to offer their expertise in accounting, marketing, launching start-ups, human resource management and sales.

While it is outside of the Windsor-Essex region, the [University of Guelph](#) is the Ontario university that specializes in agriculture, agri-business and food science. A number of industry leaders interviewed for this project spoke highly about their program offerings.

Apprenticeships

An apprenticeship program is an opportunity to learn a skilled trade by combining on-the-job training with in-school education.

It is possible in Ontario to obtain certification in several specifically agricultural occupations. Certification is voluntary to work in these professions, unlike others where it is mandatory. The trades currently on

the books include [agriculture-dairy herds person](#); [agricultural equipment technician](#); [agriculture-fruit grower](#) and [swine herds person](#).

There are also skilled trades that are not specifically agricultural in nature, but could lead to opportunities in the broader agri-business sector. These include:

Arborist [trees and pruning]

Construction boilermaker

[Electrician: construction & maintenance](#)

[Facilities Mechanic](#)

[Horticultural Technician](#)

Packaging Machine Mechanic

Process operator: Food manufacturing

[Welder](#)



Tips for Getting Involved in the Agri-Business Sector

Career counsellors often advise students or potential entrepreneurs that one of the best ways for a student or potential entrepreneur to test a career before investing in education or a business plan is to try it out on a small scale. Not only does this help an individual determine whether their perception of a sector meets the reality, but it also helps them to start developing key contacts. Luckily, Essex County residents have a wealth of options for achieving this. Here are a few suggestions:

- ✓ Get your hands dirty. In 2012 the City of Windsor dedicated \$100,000 in funding to support community garden expansion projects. Across Essex County there were at least thirteen different community gardens located at schools, educational institutions, public parks or other locations. Community gardens serve a variety of different functions. Some grow food specifically for the purpose of supplying food banks, others produce for the purpose of community development, while some simply exist to provide people with access to a garden plot and the opportunity to meet new people. In one inspiring example, gardeners at Lakeshore St. Andrew Church reported having produced over 75,000 pounds of produce in 2012 for local food banks.

- ✓ Volunteer for a farmers' market. There has been considerable growth in the number of farmers' markets in the past four years in Essex County and residents now can enjoy the [Downtown Windsor Farmers' Market](#), the [Amherstburg Farmers' Market](#), the [Leamington Farmers' Market](#), the [Riverside Farmers' Market](#) and the [Lakeshore Market](#). While these operations may seem rudimentary and rustic, their economic impact should not be underestimated. According to a [study](#) commissioned by a national organization called [Farmers' Markets Canada](#), Canadian farmers' markets generate \$1.2 billion in annual sales and an overall annual economic impact of \$3.09 billion. (Farmers' Markets Canada, 2009).

- ✓ Work on a farm. There are few other areas of the economy that have as many entry level opportunities as the agri-business sector. Many farmers, for example, would consider employing somebody on a temporary basis who is willing to work hard, able to follow direction and eager to learn.

- ✓ Give corn detasseling a try for the summer. Detasseling is the act of removing the pollen-producing flowers, the tassel, from the tops of corn (maize) plants and placing them on the ground. One sophisticated local company, [Daignault Corn Crew](#), hires young people every summer and even picks them up at pre-designated locations. One seasonal employee interviewed for this project is now a biology student at the University of Windsor and considering a career in the agricultural sector.

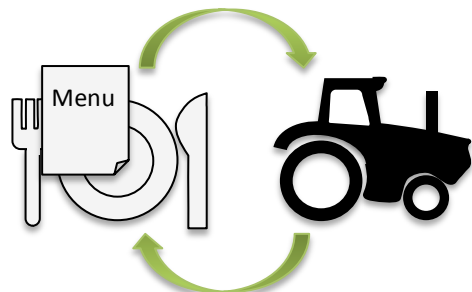
Conclusion

The agri-business sector is a well-established and important component of the Windsor-Essex economy.

For young people who wish to stay in the community or explore their options afield, employment opportunities in the sector appear, generally speaking, to be good for the near to mid-term.

Feedback gathered from industry leaders suggests that there are a number of strategies that could be employed in order to develop the agri-business workforce and sector overall:

- Inform students, and people seeking to make career changes about the opportunities in the regional agri-business sector. As one local grower contended, the more high school students we can have visit our operations, the more that they'll see the economic opportunities. This will also help generate future students for post-secondary and university programs focusing on the food sector.
- Educational institutions are beginning to take note the incredible innovation that has taken place in the local agri-business sector. Educational institutions should continue to update their course offering based on innovations in the field, food trends and sustainable agriculture approaches. They could also identify opportunities in the sector to students in fields of study that are not obviously connected to agri-business, such as advertising, marketing, skilled trades and business.
- The rudimentary elements of a local food system are in place, but there is great potential for expansion. Restaurants and retailers can assist with the expansion by promoting local products and produce and supporting start-up food businesses. Improvements to the infrastructure that allows businesses to source local



products would also help with expansion, whether the solution is provided by the private sector, public sectors or some combination.

- The establishment of several seasonal farmers' markets across Essex County since 2008 has provided new opportunities for growers to sell directly to customers. It is worth investigating the creation of a year-round public market that could host regional farmers and producers, create a favourable venue for business start-ups and could even include a food-business incubator.

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