

March 2018



Background Report: Agriculture



Background Report 4 of 9
**Prepared by West Hants Planning
and Development Department**

Executive Summary

Agriculture – including both the land and the economic opportunity it provides – is important in Nova Scotia, especially in the Municipality of the District of West Hants (West Hants).

Provincial requirements for protection of agricultural land were created after the last review of the West Hants planning documents. As a result, regulations in West Hants do not meet the Provincial requirements and are in need of adjustment.

Regulations in West Hants appear to have reduced the amount of subdivision in agriculturally zoned areas; a positive impact which will help preserve farms. Within West Hants, agricultural development appears to be focused in the areas of Scotch Village, Upper Burlington, Windsor Forks, Falmouth and Upper Falmouth.

The ability for farmers to take advantage of new trends could help keep local, and particularly small farms alive.

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1. Current Zoning of Agricultural Land in West Hants

Agricultural land in West Hants is divided into three classes based on the Canadian Land Inventory (CLI) classification, which is based on characteristics of the soil. There is no CLI Class 1 land, which is the best category, anywhere in Nova Scotia. CLI Class 2 and 3, the next best categories, occur throughout West Hants, and in the West Hants Land Use By-law have been zoned Prime Agricultural (P/Ag) and Agricultural Priority Two (AR-2). In order to preserve agricultural land restrictions have been placed on what the land can be used for and how it can be divided.

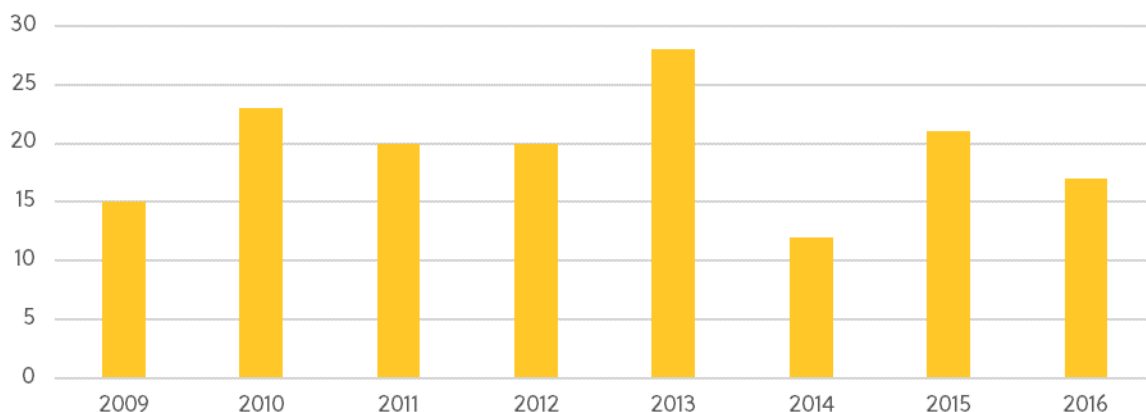
At the time the Hantsport planning documents were written, an agricultural zone was not included.

2. Agricultural Development in West Hants

In the 2016/2017 tax season, assessment records, provided by the West Hants Director of Finance, showed that 27,527 acres of West Hants was considered active farm land. This excludes land associated with a residential use, even if the residential use is part of a farm. In comparison, approximately 65,250 acres of land in West Hants is within an agricultural zone. This means less than one-half of the land zoned agricultural is considered active farm land.

Permits issued for agricultural development (Figure 1) have fluctuated in West Hants, reaching a peak of 28 permits in 2013. On average, West Hants issues 18 permits for agricultural uses each year.

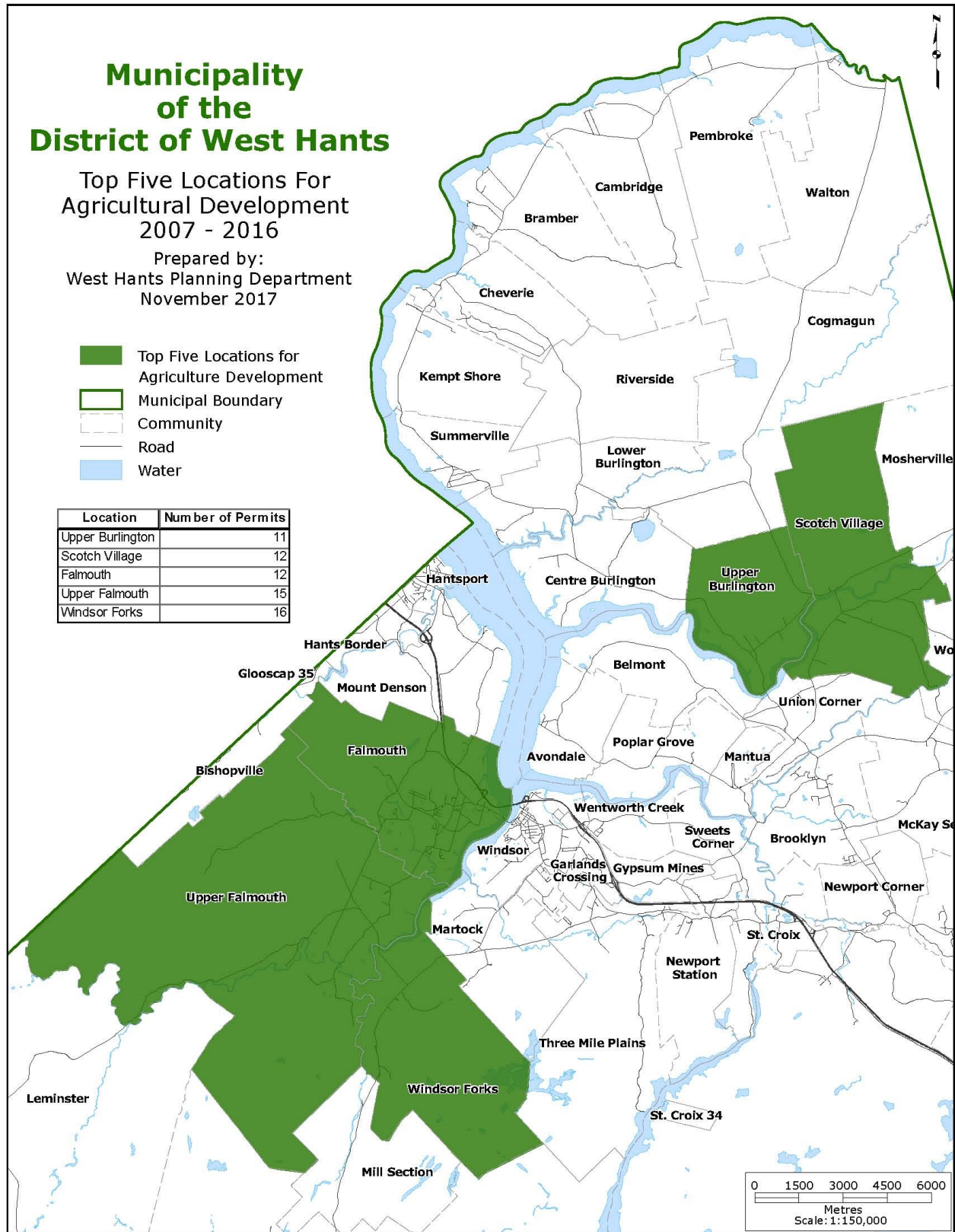
Figure 1: Total Number of Agricultural Building/Development Permits, 2009-2016



Source: Municipality of the District of West Hants

Over the last ten years there has been an average of five (5) permits for agricultural uses issued within each community, defined by the Nova Scotia Civic Address File (NSCAF). However, five communities far exceed the average (Figure 2).

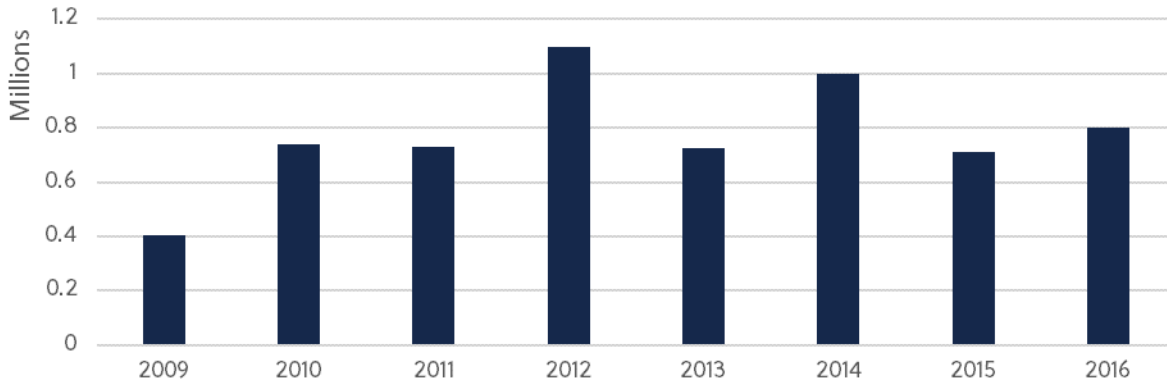
Figure 2: Top Five Locations for Agricultural Development in West Hants



Source: Municipality of the District of West Hants

The value of construction for agricultural development (Figure 3) has stayed below \$1 million in most years except 2012 and 2014.

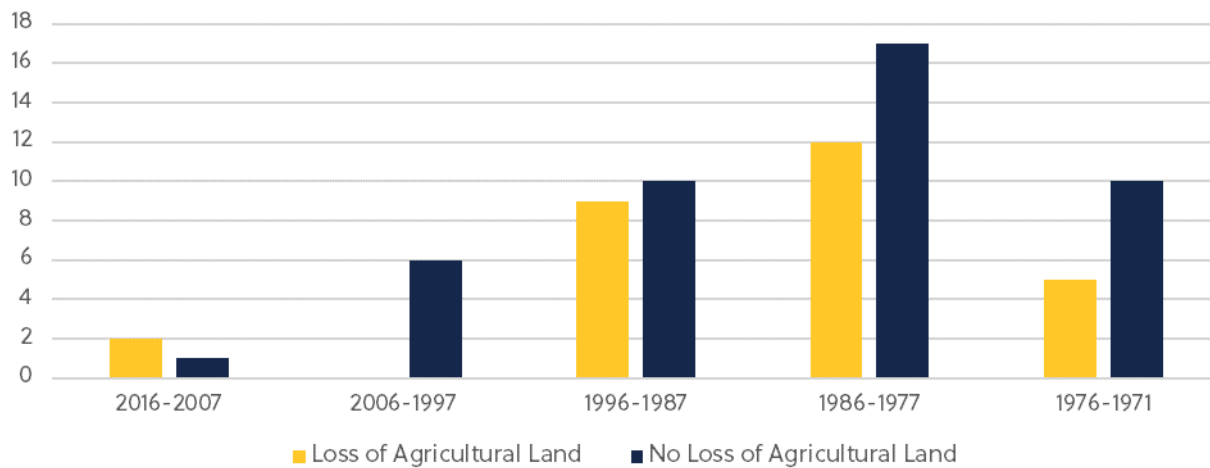
Figure 3: Value of Agricultural Construction, 2009-2016



Source: Municipality of the District of West Hants

The amount of agricultural land lost (Figure 4) was determined based on the size of a lot after subdivision and the current zoning for the property. The Land Use By-law now requires a lot in either the Agricultural Priority Two (AR-2) Zone or Agricultural Priority Three (AR-3) Zone to be at least 3 acres for a permit to be issued for an agricultural use. Although the lot sizes for other uses within the agricultural zones are not as restrictive, it seems likely that the intent to reduce the number of small lots being created has had a positive result. The number of subdivisions within the areas zoned for agricultural use has significantly decreased since the early 90s. The rate at which agricultural land has been lost has fluctuated from decade to decade.

Figure 4: Number of Subdivisions in Agricultural Areas



Source: Municipality of the District of West Hants

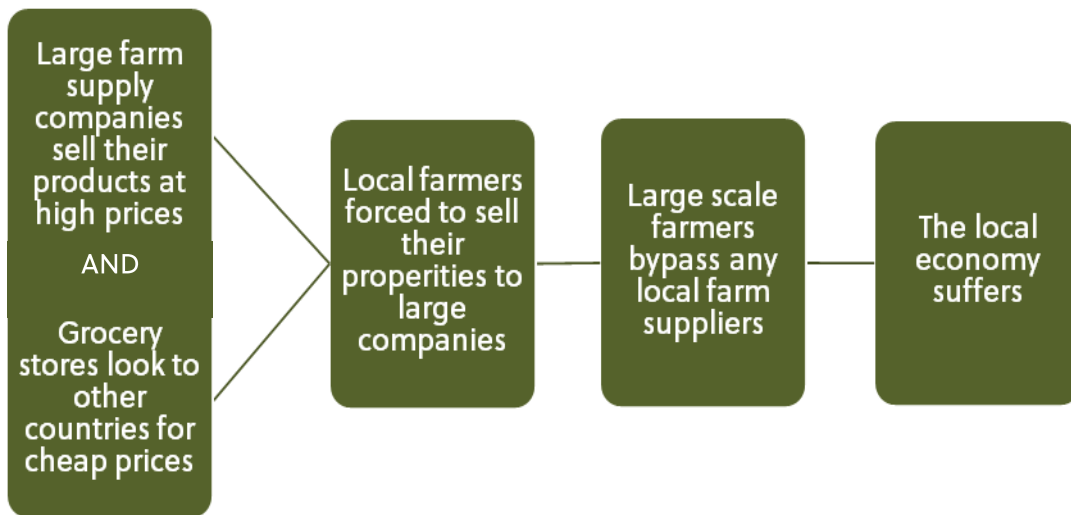
3. Agriculture in Nova Scotia

The *Provincial Statement of Interest Regarding Agricultural Land* requires all active agricultural land and land with agricultural potential (defined as CLI Class 2, 3 and 4) be protected. The current agricultural policies in West Hants do not meet the requirements of the *Provincial Statement of Interest* because CLI Class 4 land is not protected.

4. Trends in Agricultural Development

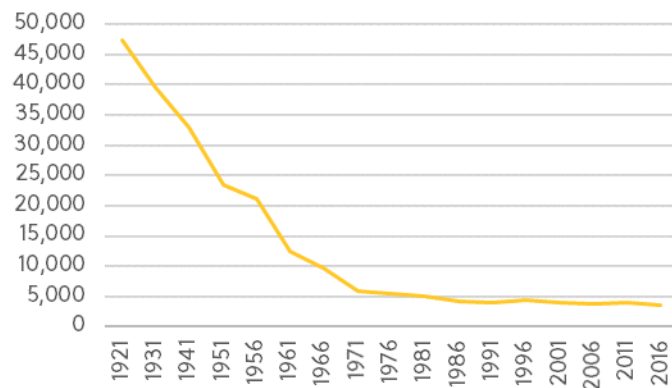
Debt has become a major concern for farmers within Atlantic Canada. According to Rob English, former president of the Agricultural Alliance, most farmers require off-farm jobs to support themselves. There are many financial challenges that influence farming on an individual and industrial level (Figure 5). Protection of not just farms, but local small-scale farms, is vital to the economy of Nova Scotia.

Figure 5: Financial Challenges of Farming in Nova Scotia



Due to financial difficulties and changes in technology that have made farming practices more efficient, the number of farms in Nova Scotia (Figure 6) has been steadily decreasing since 1921. However, this decrease leveled off in the 2000's, and in 2016 the total number of farms in the Province was 3,478. Food security is at risk with a decrease in the number of farms. If oil prices increase over a short period of time, importing fruits and vegetables from other countries becomes more

Figure 6: Number of Farms in Nova Scotia

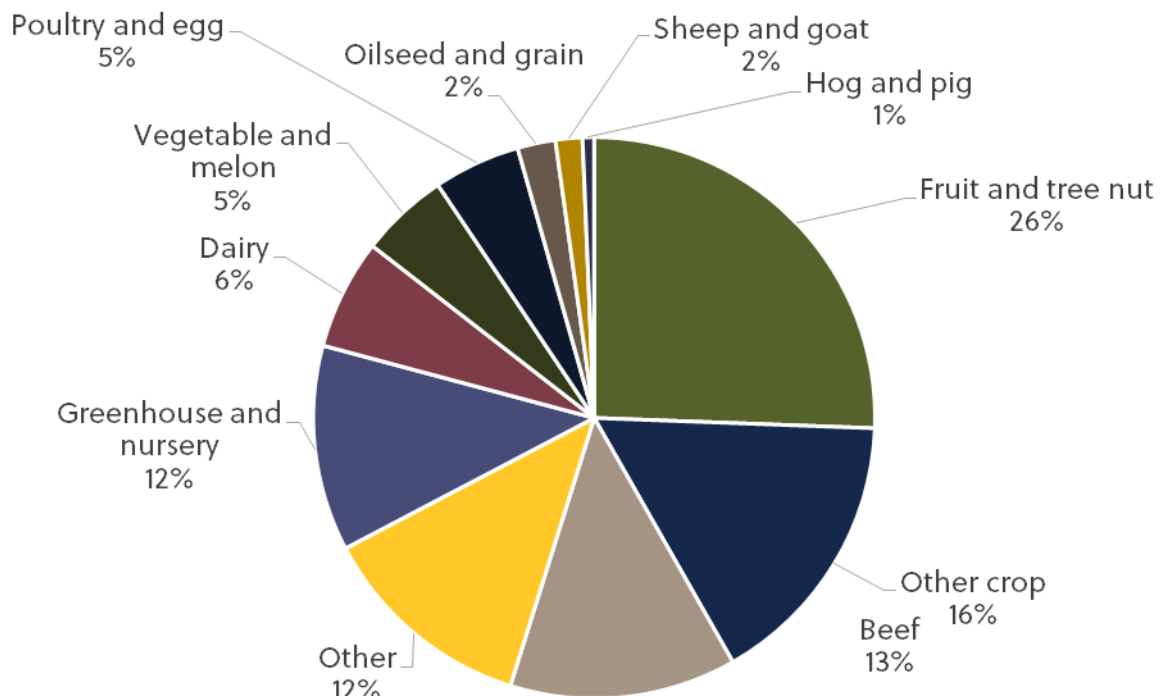


Source: Statistics Canada

expensive and with the decrease in the number of farms there may not be enough locally-grown food to meet demand.

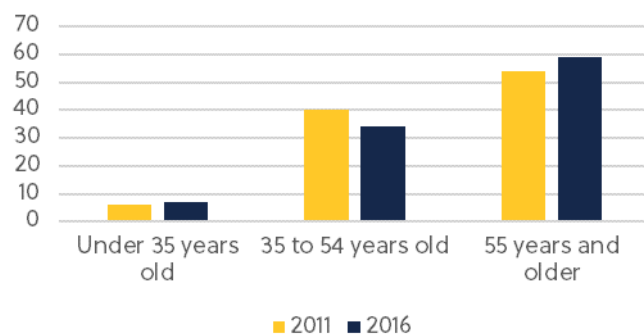
Nova Scotia farm products are diverse (Figure 7). Much of what is consumed in Nova Scotia is imported from other countries: for example, almost 90% of the beef is imported. Local pork production has been severely hit by the import trend. In 1978 the province had 225 pork producers; this dropped to 16 by 2010. Pork Nova Scotia stated several reasons for the decline in pork production in the Province, including rising feed costs, fewer grocery stores, increasing transportation and production costs, the Canadian dollar, and aging processing facilities.

Figure 7: Type of Farm Goods Produced in Nova Scotia, 2016



Canada's aging population also has impacted the farming industry (Figure 8), as farming is an extremely physically demanding job which can become difficult with age. There is also a loss of valuable local farming knowledge which is a concern as farmers age and retire without passing the knowledge on. The protection of farm land becomes harder for municipalities as older farmers retire and wish to sell their land for retirement income.

Figure 8: Percent of Farm Operators by Age Group in Nova Scotia



Source: Statistics Canada

5. New Opportunities in the Agricultural Sector

Although certain trends in the agricultural industry in Nova Scotia may create a grim outlook, there are several advantages and opportunities:

Organic

Nova Scotia has a lot of farmland that has never been subjected to chemical pesticides and fertilizers. This land could be used to produce organic agricultural products for a premium market both locally and globally. In 2016, only 1.7% of farms in Nova Scotia were certified organic or were in the process of becoming certified.

Another great opportunity to reach the premium customer market is the production of grass-fed and heritage breeds of livestock, including cattle, sheep, hogs, and goats.

Environmental Marketing

The agricultural sector produces an estimated 26% of the global greenhouse gas emissions. With an increased global awareness of climate change, consumers are actively seeking products that align with their principles. A farmer's ability to exceed environmental standards could be used to market food products to environmentally-conscious consumers.

Energy Production

Governments and energy producers are working with agricultural land owners in Nova Scotia to explore opportunities for producing energy from wind, sun and biomass. Although the economic advantages of on-farm energy production are known (Figure 9), in 2015 in Nova Scotia only 4.3% of farms reported having renewable energy producing systems, compared with 5.3% nationally.

Figure 9: Economic Advantages to Energy Production

the money saved by the farmer by generating their own energy

the income that can be generated for the farmer by selling the energy they produce

the ability for the farmer to market their products to the environmentally - conscience consumer

Since the early 1900's, privately-owned wind turbines have been used on farms to generate electricity and heat in Nova Scotia. As of March 2015, there were over 200 wind turbines in the Province. More than half are independently-owned; the remainder are owned by Nova Scotia Power. Small wind turbines (50 kW or less) are used by farmers today to offset some of their operation costs. However, on land that is zoned agricultural and that lacks agricultural capability, larger scale wind turbines (Figure 10) may be a viable option.

Figure 10: Ellershouse Wind Farm



Solar energy can be used for many aspects of agricultural operations. Waxwing Farm is an organic vegetable farm in Windermere, Kings County (Figure 11). The farm is off-grid and has solar panels, a solar water heating system and a solar dehydrator system. At Cornwallis Farms Ltd. in Port Williams an energy audit was conducted on one broiler barn and recommendations included the installation of a solar air-heating system and upgrades to the lighting, heating, and ventilation systems. These upgrades were completed, saving the farm \$7000/year.

Figure 11: Waxwing Farm, Windermere



Biomass energy sources such as grass or hay are easy choices in Nova Scotia due to the potential availability of thousands of acres of under-utilized land where they could be grown. Local entrepreneurs are developing grass pellet furnaces and pelleting technology. Despite the costs associated with grass or hay energy, including pelleting, transportation and storage, these can be viable options for on-farm heating. Tim Ansems, a poultry farmer from Kings County, cut his heating costs in half by importing a straw bale furnace for use with his turkey barn.

Figure 12: Grand Pre Wines' Crème Liqueur



Source: Perennia

New Value-Added Food Products

Research institutions suggest opportunities for farmers to develop valuable new products and techniques. The Dalhousie University Faculty of Agriculture is a national leader in applied research and industrial partnerships with the agricultural sector. THINKFARM is an initiative that attracts entrepreneurs to agriculture – and food – related ventures.

Perennia is a not-for-profit corporation available for consultation by farmers, fishermen and food processors to help them be more profitable. Grand Pre Wines worked with Perennia to create an apple-cream liqueur made with heritage apples from the Annapolis Valley (Figure 12). Since the launch of this product in 2015 sales have been successful, and the product was recently added to the NSLC product list. When farmers add value to their products it cuts out the middle man which increases the farm's profits.

Figure 13: The Flying Apron



Source: The Flying Apron

Farmers' Markets and the "Buy Local" Movement

Farmers' Markets provide an opportunity for farmers to sell directly to the customer. In Nova Scotia there are approximately 15 farmers' markets which contribute \$62 million in business to the economy each year. The Windsor Farmers' Market runs every Saturday from June to December. The Hantsport pop-up farmers market also runs every Saturday during the summer months.

Consumers in Nova Scotia are becoming aware of food security issues and this has led to a "Buy Local" movement. The Flying Apron, a combination of inn, restaurant and cookery school, is one great example of the local food movement in West Hants (Figure 13). The Province supports the "Buy Local" movement with programs such as *Select Nova Scotia* which encourages Nova Scotians to shop and buy locally. Taste Nova Scotia is a membership-based marketing program created to advertise and highlight the best of local food producers and restaurants.

Supply Management and Co-operatives

Supply management has worked well for poultry and dairy producers in Nova Scotia, who are assured a fair and predictable price. Attempts to use supply management techniques in other agricultural sectors have failed because farmers decided that it was better to be part of an integrated North American livestock economy.

Co-operatives allow farmers to work together by sharing information, equipment, and marketing costs.

Aquaponics: Farming Without the Soil

In the aquaponics industry, fish waste is used by plants and the plants improve water quality for the fish. Aquaponics enables agriculture in locations without good soil and allows year-round production. In 2017, an amendment to the West Hants Land Use By-law was approved to permit aquaponics in the Hamlet Industrial (M-2) Zone and allow a commercial-scale aquaponics operation in the former Newport Station School.

6. Agricultural Land Protections

The job of our generation, says Dr. Ralph Martin of the Dalhousie University Faculty of Agriculture, is “to keep the farms in operation until the rising price of oil makes them profitable once again.” When the value of land is determined purely by profit, the highest short-term value is often residential, industrial, or commercial development instead of agricultural. As a result, a variety of methods need to be used to protect agricultural land (Figure 14).



Figure 14: Ways to Protect Agricultural Land

Foodshed	<ul style="list-style-type: none">•A foodshed is a small area with a complete network of food producers, processors, transporters, retailers and consumers that can be used as a form of agricultural planning.
Conservation and Agricultural Easement	<ul style="list-style-type: none">•A farmer can still sell the land to another young farmer, but not at the real estate market rate, only at the much lower farmland rate
Transfer of Development Credits	<ul style="list-style-type: none">•Development credits can be removed from one parcel of land with high agricultural capability and applied to another piece of land.
Mitigation Regulation	<ul style="list-style-type: none">•A developer purchases agricultural land, but two acres of additional agricultural land must be protected for every one acre used for non-agricultural development

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