

# Growing Non-traditional Crops in Ontario

M. Filotas, J. Todd, S. Westerveld, H. Prinold

## Factsheet

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### INTRODUCTION

Non-traditional crops are commonly thought of as low acreage, niche crops such as ethnic fruits and vegetables, culinary and medicinal herbs, and plants for industrial uses (e.g. fibre hemp). A non-traditional crop may be new to a region or simply new to the grower. For many producers non-traditional crops are a means of adapting to changing trends in agriculture and demographics. Ontario is home to one of the most ethnically diverse populations in North America and this diversity offers great market opportunities for locally-grown, non-traditional crops.

The first step in deciding whether to grow a non-traditional crop is to build a comprehensive business case. This increases the probability of success by providing a realistic assessment of the potential risks and gains. It provides growers with the opportunity to consider all aspects of non-traditional crop production, including the agronomics of growing the crop, potential food safety and regulatory issues, and marketing.

Experience gained producing conventional crops may not necessarily translate directly to producing non-traditional crops. The importance of detailed research, prior to planting any new crop, cannot be overstressed. This Factsheet summarizes some of the important points to consider when deciding whether to grow a non-traditional crop.

### THE CROP

#### Planting Material

First, make certain the crop is legal to import, export and grow. There are regulations covering such things as endangered species, noxious weeds or invasive plants that may prohibit the import and/or cultivation of certain crops. For example, under the Endangered Species Act, it may be illegal to produce a species listed as endangered or threatened. Ginseng, butternut and goldenseal are some of the species listed under the act, and these have specific restrictions on their production. Other crops like hemp and tobacco

require permits or licenses to be legally grown. As a starting point, a list of several regulatory agencies is provided at the end of this factsheet. It is the grower's responsibility to be aware of *all* the laws governing production of any non-traditional crop.

Consider how the crop is established (seeds, transplants, etc.), and the availability of planting material. Some warm climate crops (e.g. specialty melons), may need to be started as transplants in order to reach maturity within Ontario's growing season, while other crops (e.g. Chinese flowering cabbage) may not develop properly if grown from transplants. Continuous availability of seeds or transplants is another important consideration, as is the source of the material. If seeds or transplants come from outside Canada, an import permit and inspection by the Canadian Food Inspection Agency (CFIA) may be required. A trustworthy and reputable supplier will provide planting material that is the desired variety; free of diseases, insects and viruses; and, if applicable, properly certified (e.g. organic, virus-free etc.).

#### Growing Environment

With non-traditional crops, many of which originate in southern climates, it is important to consider whether field or greenhouse cultivation is most appropriate. Greenhouse production may be required for crops that do not mature within Ontario's growing season, or to increase crop quality and potentially decrease pest pressure. However the profit margin of some non-traditional crops may be too small to justify the added expense of greenhouse production, making field cultivation the only economical production choice. For these crops, ensure the production area has the necessary soil type and growing conditions to produce a marketable crop.

#### Agronomic Requirements

Research the agronomic requirements – soil type, fertility and irrigation – of any non-traditional crop. For some non-traditional crops these requirements

are well established in other geographic areas and can be obtained from publications, growers or extension personnel in these areas. For some non-traditional crops, agronomic requirements from other locations may be easily adapted to existing operations used for conventional crops in Ontario, particularly if the growing environment is similar. It may also be possible to adapt the agronomic requirements of a related crop currently grown in Ontario. In some cases, on-farm experimentation will be needed to determine these requirements. This could affect crop yield and quality for the first few years while production practices are perfected.

Individual non-traditional crops may require the development of novel crop rotation strategies to reduce pest populations and improve overall soil health. In addition, planting and harvesting schedules, and labour requirements should be considered to ensure the non-traditional crop fits into on-going farming practices. Multiple plantings per season may be possible for such crops as herbs and leafy vegetables. This provides greater flexibility, particularly if scheduling a continuous harvest. Harvest scheduling can be complicated and requires familiarity with crop growth and market demands. Many non-traditional crops require specialized planting, tillage and harvesting equipment, which need to be factored into the cost of production analysis.

### **Pest Control**

For many non-traditional crops there are few registered chemicals and biological controls. The lack of registered products makes the adoption of cultural practices to minimize or overcome these production challenges very important. Often plant pests are not found in the initial years of new crop production, but emerge later as the acreage increases. However, if considering a non-traditional crop that is closely related to a crop currently grown in Ontario (e.g. in the same family of plants) research the existing pest complex, as these may also attack the new crop. For example, Indian tinda is a member of the cucurbit family, and may be susceptible to many of the insects and diseases that attack cucumbers and melons in Ontario.

One of the biggest production challenges is likely to be weed control. Non-chemical weed management options (e.g. hand weeding) are important, since there may be few, if any, registered herbicides available.

With most non-traditional crops, preventative tactics to minimize/avoid pest problems is critical, since there may be few options once damaging populations appear. These tactics include:

- appropriate crop rotations
- use of pest-resistant varieties
- vigilant field sanitation and management of crop residues
- use of high quality, certified disease-free seed (where available)
- Intercropping, varying planting dates and densities, tillage and use of trap strips/plots can sometimes be used to reduce pest populations.

Careful monitoring and record-keeping helps detect pests before they reach damaging levels and provide valuable information on which pests may pose problems in future production years.

### **Post-harvest requirements**

The extent of post-harvest handling depends on the demands of the market. Some crops are sold fresh while others require various levels of processing. There may be additional regulatory considerations for food processing, such as facility requirements to meet food safety laws and labelling. In some cases, additional value-added processing (e.g. peeling or chopping), may increase profit to the grower.

Another consideration is crop storage. Determine whether specialized storage facilities are required and how long the crop can be stored. A relatively short shelf life may provide a competitive advantage if the crop cannot be imported at high quality. In contrast, a crop that can be stored provides an opportunity to spread out market delivery and minimize grower risk due to fluctuating market prices.

### **MARKETING**

#### **Sell Before You Sow**

Selling any crop is always a challenge, so it is critical to develop a well-defined marketing strategy that clearly describes all steps leading to final sales. Marketing is the process of planning and implementing pricing, and promoting and distributing product in a way that satisfies individual organizational and customer needs.

Marketing is more than just selling a product or service. Marketing consists of strategic decisions made

“behind the scenes” that affect customer perceptions. Marketing decisions need to include the major “P’s”:

- product (including labelling and packaging to ensure safety and quality)
- place/distribution
- promotion
- pricing

### **Key areas to research**

- Features and benefits of the product.
- Target market – Who is most likely to buy the product?
- Market demand – How many possible buyers exist?
- What volume of product is needed?
- Is the market seasonal or year round?
- Distribution options –What is the best way to reach the target buyers?
- Competition – What are the competing products and companies?
- Trends – How stable is consumer demand for the product?
- Expected Price – What price range can be expected? Is the lowest price still profitable?
- Expected Sales – How will potential changes in market conditions impact quantity of product sold?

### **Marketing Opportunities**

The marketing opportunities for Ontario growers have traditionally been broken down into two broad categories, food retailing and foodservice.

#### **Retailing**

Ontario is home to over 12,000 food retailers including convenience stores, farm markets, roadside stands, grocery stores, warehouse clubs, drugstores, and internet websites selling food items. For information on selling non-traditional crops directly from the farm through a road side stand, farm store or “pick your own”, contact the Ontario Farm Fresh Marketing Association ([www.ontariofarmfresh.com](http://www.ontariofarmfresh.com)). For information on selling at farmers’ markets, contact

local market operators or visit the Farmers’ Markets Ontario website ([www.farmersmarketsontario.com](http://www.farmersmarketsontario.com)).

#### **Foodservice**

There are more than 30,000 foodservice outlets in Ontario, including bakeries, caterers, cafés, vending trucks, chip trucks, home delivery services, hospitals, schools, prisons, and establishments run by contract caterers (including employee cafeterias). These outlets may be seasonal or year round. One way to reach some of these outlets is through the Ontario Food Terminal in Toronto .

#### **Choosing a Target**

Identify and talk to potential buyers prior to planting as this could lead to sales contracts. If the plan is to target large numbers of Ontario consumers, contact Ontario’s three major chain grocers (who sell more than 75 per cent of Ontario’s groceries). Each chain has a produce buyer who will provide specific information on insurance, labelling, farm practices/audits and packaging requirements. It is prudent to identify these in advance.

It is possible to sell directly to a distributor that specializes in reselling to food retail and foodservice. Organizations such as the Ontario Food Terminal (OFT) and companies specializing in foodservice can reach a significant number of outlets.

An internet search for “foodservice distributors Ontario” will generate a list of suppliers. If a retail or foodservice outlet already sells to the target consumer, it will be helpful to identify the distributor for that outlet. Having the non-traditional product available to the distributor can help to increase sales.

Targeting multiple markets helps reduce risk when trying to sell the crop. If only a single market exists, consider its stability and develop a contingency plan in the event this market changes over time or disappears altogether.

#### **Labelling Requirements**

Be aware of any labelling requirements and the additional expense this may entail. Labels need to follow all applicable acts and regulations (provincial and federal).

#### **Targeting Specific Consumers**

Clearly understand how to increase target consumer awareness, as this can help sales. Research shows

simple strategies such as advertising in magazines read by the target grocery shoppers, or painting a market stand in colours recognizable to that consumer group (e.g. the colours of their national flag), boosts sales.

Ensure the crop variety chosen meets the demands of the desired market. For example, there are numerous varieties of eggplant, each with different characteristics. Many varieties are unique and preferred by specific ethnic groups.

For non-traditional crops, understanding the target market and making certain there is sufficient consumer demand is critical to success. Due to their low production acreage, there is often a fine balance between supply and demand for many non-traditional crops. It is particularly important to determine the minimum acreage needed to break into the market due to the need to gain experience with the crop prior to investing in substantial acreage. Additional production of any new crop may result in an oversupply that would negatively affect the sale price, particularly if the market is small.

Consider how changes in market supply affect the price of the crop, and ensure the business plan reflects a range of crop prices. Competitiveness can be affected by factors such as product freshness, quality and proximity to market.

## **RISK MANAGEMENT**

Understand what options are available in the event of crop failure. Crop insurance may not be available for low acreage, non-traditional crops. Consider diversifying. Growing a number of different crops to serve intended markets can reduce the negative impact of losing one specific crop. The financial risk of crop failure also increases the longer a crop takes to mature. For example, losing one of four plantings of a culinary herb would have less impact than losing a plantation of tree nuts that takes 15 years to reach full production.

## **CONCLUSION**

Non-traditional crops are one way Ontario growers can adapt to changing trends in agriculture and markets. However, the cultivation and marketing of these crops can be very different from the conventionally-grown commodities most growers are familiar with. Detailed research into agronomic requirements, production and marketing concerns will help in considering the opportunities and challenges

associated with producing a non-traditional crop, and will greatly increase the chance of success.

## **RESOURCES**

### **OMAFRA Staff**

Technical information and advice is available from:

OMAFRA staff  
Simcoe Resource Centre  
1283 Blueline Road  
Simcoe, Ontario, N3Y 4N5

See [www.ontario.ca/crops](http://www.ontario.ca/crops) for a list of Agriculture Development Branch staff.

### **OMAFRA Website**

The OMAFRA website contains information on topics related to agriculture in Ontario  
[www.ontario.ca/omafra](http://www.ontario.ca/omafra)

Agricultural Business Management

[www.ontario.ca/agbusiness](http://www.ontario.ca/agbusiness) for information on such topics as:

- Programs
  - Growing Your Farm Profits
  - Growing Forward
  - Quest for New Farm Value-Value Plus™ workshops
- Business arrangements
- Financial analysis and cost of production
- Financing and taxation
- Human resources
- Marketing and value-added
- Succession planning
- Farm business decision calculators
- Events and newsletters
- Resources and services

### **Developing a Business Plan**

OMAFRA Factsheet *Examining the Feasibility of Business Opportunities*, Order No. 03-051

OMAFRA Factsheet *Consumers First – Leading Edge Principles and Trends*, Order No. 99-013

OMAFRA Factsheet *Programs and Services for Ontario Farmer*, Order No. 08-037

Canadian Farm Business Management Council

[www.farmcentre.com](http://www.farmcentre.com)

*Starting an Ag-Business? A Pre-Planning Guide*, developed by NY FarmNet ([www.agviability.cornell.edu/pdf/Pre-businessPlanWorkbook.pdf](http://www.agviability.cornell.edu/pdf/Pre-businessPlanWorkbook.pdf)) to help decide which crop/enterprise might be of interest before going forward with a full-fledged business plan.

### Locating Land

FarmLINK Ontario, [www.farmlinkontario.ca](http://www.farmlinkontario.ca) matches growers looking for land or advice with existing landowners with land or expertise

### Regulations

The following list can be used as a starting point when determining which regulations govern the production of a non-traditional crop in Ontario. This is not a complete list and not all acts apply to all crops.

### Federal Acts

Department of Justice, [www.laws.justice.gc.ca](http://www.laws.justice.gc.ca)

Canadian Food Inspection Agency,  
[www.inspection.gc.ca](http://www.inspection.gc.ca)

- *Agricultural Products Act*
- *Fertilizers Act*
- *Food and Drug Act*
- *Plant Protection Act*
- *Seeds Act*

Environment Canada, [www.ec.gc.ca](http://www.ec.gc.ca)

- *Environmental Protection Act*
- *Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act (WAPPRIITA)*

Health Canada (Pest Management Regulatory Agency),  
[www.pmr-arla.gc.ca](http://www.pmr-arla.gc.ca)

- *Pest Control Products Act*
- *Natural Health Product Regulations*

### Import

Automated Import Reference System, [www.inspection.gc.ca/english/imp/airse.shtml](http://www.inspection.gc.ca/english/imp/airse.shtml) is a database maintained by the Canadian Food Inspection Agency of commodities/products outlining import requirements

### Provincial Acts

Service Ontario e-Law, [www.e-laws.gov.on.ca](http://www.e-laws.gov.on.ca)

- *Ontario Weed Control Act* (Ontario Ministry of Agriculture, Food and Rural Affairs)
- *Endangered Species Act* (Ontario Ministry of Natural Resources)
- *Pesticides Act* (Ontario Ministry of the Environment)

### Marketing

Ontario Farm Products Marketing Commission,  
[www.omafra.gov.on.ca/english/farmproducts/](http://www.omafra.gov.on.ca/english/farmproducts/)

Ontario Food Terminal, [www.oftb.com/](http://www.oftb.com/)  
165 The Queensway, Toronto, ON, M8Y 1H8  
Tel: 416-259-5479  
Fax: 416-259-4303  
E-mail: [oftboard@interlog.com](mailto:oftboard@interlog.com)

### Trade Associations

The following associations maintain extensive information about the grocery industry and membership lists, generally for use by members or associate members only. Joining an association as an associate member provides access to membership lists and networking events.

Canadian Council of Grocery Distributors,  
[www.ccgd.ca/](http://www.ccgd.ca/)  
1 Concorde Gate, Suite 604  
Toronto, ON M3C 3N6  
Tel: 416-922-6228  
Fax: 416-922-5909

Canadian Federation of Independent Grocers,  
[www.cfig.ca/](http://www.cfig.ca/)  
2235 Sheppard Avenue East, Suite 902  
Toronto, ON M2J 5B5  
Tel: 416-492-2311  
Fax: 416-492-2347

Canadian Health Food Association, [www.chfa.ca/](http://www.chfa.ca/)  
550 Alden Road, Suite 205  
Markham, ON L3R 6A8  
Tel: 905-479-6939  
Fax: 905-479-1516

Buyers for Ontario's major chain grocers can be reached through their switchboards. See the Canadian Council of Grocery Distributors. When calling, describe the product being sold and ask for the buyer who deals with it.

### **Food Safety and Food Processing**

The OMAFRA website contains information on a variety of topics related to food safety in Ontario, [www.omafra.gov.on.ca/english/food](http://www.omafra.gov.on.ca/english/food)

### **Other Useful Websites**

#### **National and provincial sites**

- Agriculture and Agri-Food Canada, [www.agr.gc.ca](http://www.agr.gc.ca)
- Alberta Ministry of Agriculture and Rural Development, [www.agric.gov.ab.ca](http://www.agric.gov.ab.ca)
- Saskatchewan Ministry of Agriculture, [www.agriculture.gov.sk.ca](http://www.agriculture.gov.sk.ca)
- British Columbia Ministry of Agriculture and Lands, [www.infobasket.gov.bc.ca/portal/server.pt](http://www.infobasket.gov.bc.ca/portal/server.pt)

### **International Sites**

- Alternative Farming Systems Information Center, [www.nal.usda.gov/afsic/pubs/findinfo.shtml](http://www.nal.usda.gov/afsic/pubs/findinfo.shtml)
- The New Crop Opportunities Center at the University of Kentucky, [www.uky.edu/Ag/NewCrops/intro.html](http://www.uky.edu/Ag/NewCrops/intro.html)
- The Maryland Ethnic Vegetable site of the Small Farm Institute, sponsored by the Maryland Department of Agriculture, [www.marylandethnicvegetable.com/index.html](http://www.marylandethnicvegetable.com/index.html)
- Center for New Crops & Plant Products, [www.hort.purdue.edu/newcrop](http://www.hort.purdue.edu/newcrop) at Purdue University provides windows to non-traditional and specialty crop profiles.

This factsheet was written by **Melanie Filotas**, IPM Specialist – Specialty Crops, OMAFRA, Simcoe; **Jim Todd**, Transition Crops Specialist, OMAFRA, Simcoe; **Sean Westerveld**, Ginseng and Medicinal Herbs Specialist, OMAFRA, Simcoe, and **Helen Prinold**, Business Resource Specialist, OMAFRA, Guelph.

**Agricultural Information Contact Centre:**  
**1-877-424-1300**  
**E-mail: [ag.info.omafra@ontario.ca](mailto:ag.info.omafra@ontario.ca)**  
**Northern Ontario Regional Office:**  
**1-800-461-6132**

[www.ontario.ca/omafra](http://www.ontario.ca/omafra)



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