



vineland
RESEARCH & INNOVATION CENTRE

Meeting Summary: Workshop on Edible Plants for Residential Cultivation

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1 Background

Gardening magazines and blogs are buzzing about the “grow your own food” movement and the growing trend for indoor and outdoor edible plants (Ashoka, 2013; Better Homes and Gardens, 2013; Garden Media Group, 2013). In 2013, The Garden Writers Association reported that after lawn and grass care, consumers expressed that fruit and vegetable plants were the next highest spending priority, out-competing flowers, trees and shrubs (Garden Writers Association, 2013).

There is clearly a large interest in edible plants for residential gardening among consumers. Vineland is pursuing research to help Canadian growers tap into this market by developing new varieties of edible plants that respond to consumer needs. However the realm of edible plants includes an extremely wide range of plant possibilities, making consumer research difficult at this early stage. To narrow down the scope of the research, Vineland and CNLA co-organized an “edibles workshop” in September 2014 that included various players from the nursery sector from across Canada (see Appendix for further details). The workshop consisted of 3 activities:

- 1) Selected growers and retailers presented their perspective on consumer trends in the nursery sector and which crops they perceived as being the largest or most attractive opportunities within the edibles market.
- 2) Brainstorming session on edible plants and specific traits/features that should be pursued within a Vineland breeding program focusing on edible plants for residential cultivation.
- 3) Participant voting on the top 3 edible plants they would like to see developed to satisfy a market need.

The ensuing document summarizes the outcomes of the workshop.

2 Summary of nursery trends and opportunities

This section summarizes the consumer trends that participants observed in the nursery sector as well as participants' suggestions on opportunities to respond to these trends. These trends and opportunities are represented graphically in Figure 1.

2.1. Decorating, not gardening

Several participants commented that the fast pace of modern living is resulting in a decrease in the number of consumers that are highly involved in gardening with fewer consumers taking the time to acquire gardening skills and to learn about plants. The sentiment was that consumers are looking for easy plant solutions as "the majority of plant purchasers these days are actually decorators, not gardeners". The nursery industry can respond to this need by providing plants that are low maintenance and easy to grow while also being appealing.

A number of strategies can be used to offer low maintenance, easy garden products such as selling **gardening kits** (e.g. tomato plants sold along with a soil bag, a blueberry success kit), **companion planting** or **self-pollinating plants** (esp. lingonberry), as well as plants that are **more affordable, temperature tolerant** (cold hardy plants such as lemongrass, pomegranate, figs, persimmons, green tea plants and nut trees; herbs that don't bolt in heat), **disease resistant** (esp. mildew resistant cucumber), **shade tolerant** (esp. tomatoes, lettuce, strawberries and blueberries) and can grow in a **wider range of pHs** (esp. blueberries).

In addition to being practical, plants also have to be appealing and suitable for decorating. Edible plants must have **vibrant colours or good foliage**. Edibles could also be grown with a habit suitable for use as **privacy crops**. Longer ornamental display is important for decorators and could be achieved by plants that exhibit multi-season interest via **colourful leaves and/or stems** (e.g. variegated and more colourful wintergreen, sweet potato with purple foliage, Saskatoon berries with more fall colours), **extended bloom/fruiting duration**, combining a **mix of annuals and perennials in one container** or **multi-grafted trees with different developmental times**. Finally, consumer appeal can be generated by plants that **have a "hook"** such as being Canadian-bred, heirloom, edible flowers, hops for home-brewing, ethnic plants or in some way unique and exotic.

2.2. Smaller living spaces

With increasing urbanization and limited land, consumers are living in smaller spaces such as apartments and condos with smaller patios and areas to grow their favorite ornamentals. In response to smaller living spaces, consumers are in need of more compact plants. This need can be satisfied with **4-in-1 fruit trees, compact plant varieties** (e.g. elderberry, goji berry, strawberry, nut trees,

Saskatoon berries, zucchini), **container gardening**, plants that grow vertically on a **trellis** or combining **a mixture of plants in a single container**.

2.3 Grow your own

Whether it's due to health concerns, a desire to get back to our "roots" or just a general increased interest in fine home-cooking, there is a notable growth in consumer involvement with food, or colloquially referred to as "foodie-ism". This has led to growth in the grow-your-own trend creating demand for edibles that are more **productive** (esp. Blueberries), **tastier** (e.g. sweeter rhubarb, tastier kale, tastier lingonberry, tastier and larger goji berries, sweeter gooseberry), **ever-bearing** (esp. strawberries) and **convenient** (e.g. elderberry with stems that come off easily during picking, non-staining mulberry, thornless gooseberry, seedless Thompson-style grapes).

2.4 Environmental awareness

In response to a consumer push, many sectors are increasingly becoming more sensitive and aware of environmental and health impacts of their production processes. Growers should use this trend to evaluate their farming practices to choose crops that do not require the use of pesticides or large amounts of water. Additionally, breeders should focus their future research on designing edibles that are **successful in the absence of pesticides** and **drought-tolerant** (e.g. alpine strawberries) allowing for reduce water consumption.

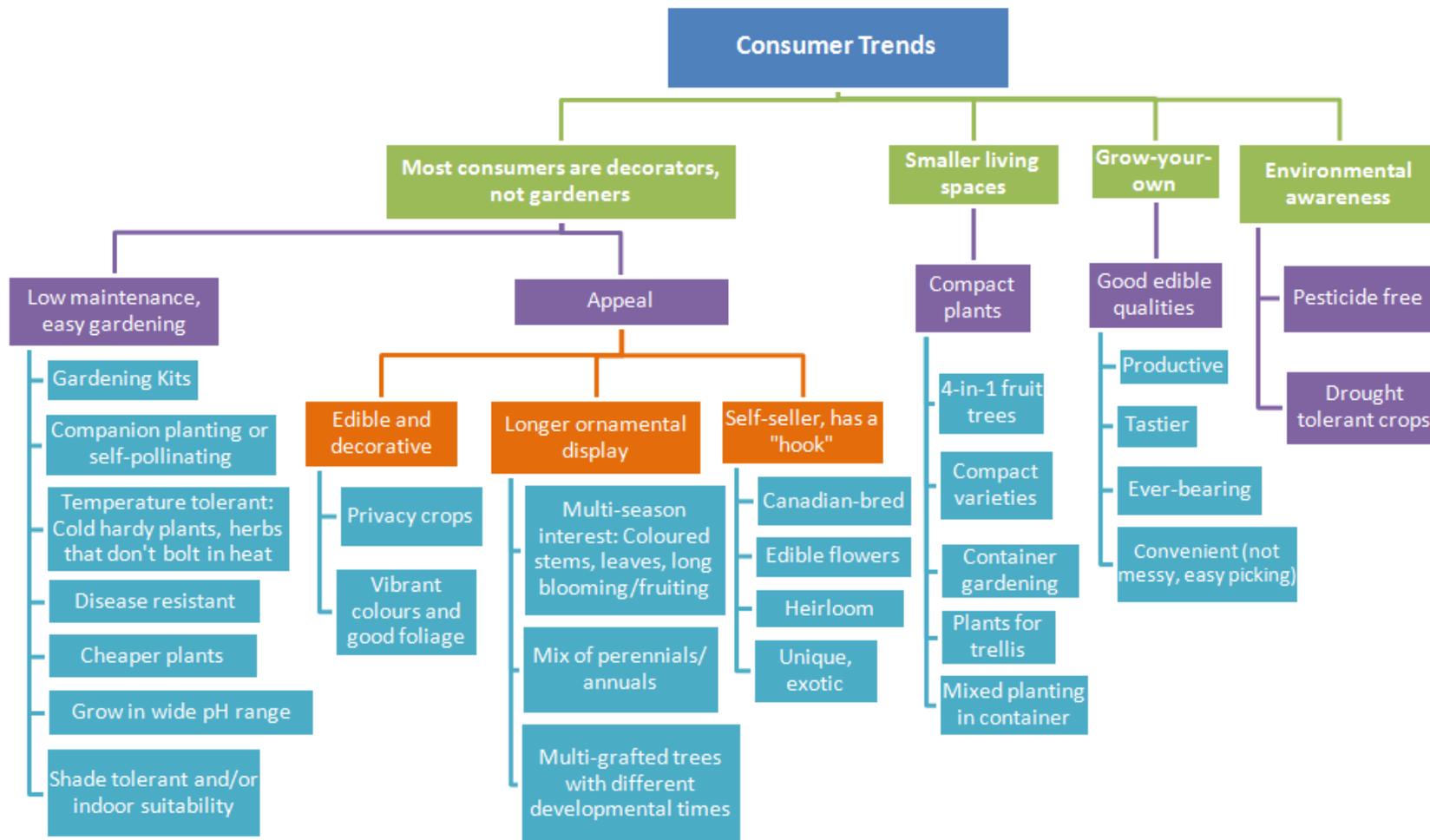


Figure 1. Trends and opportunities for new edible plants for residential cultivation

3 Summary of participant vote on top 3 plants for development

Participants were asked to vote on what they considered to be the top 3 edibles to pursue. The following is a tally of the votes:

1. "Top 3" Nursery Crops	# Votes	Desired traits	# Votes
Blueberry	15	Ever bearing/High yield/Consistent	7
		Adapt to high pH/Wide adaptability	4
		Self pollinating	1
		Dwarf	1
		Flavourful	1
		Ornamental	1
		Hardy	1
		Larger fruit	1
		Quick to produce (short juvenility)	1
Strawberry	14	Ornamental (fruit, foliage, flower colours)	5
		Ever bearing/High production in pot	4
		Dwarf	2
		Long blooming	1
		Flavourful	1
		Good production in low light	1
Saskatoon Berry	10	Dwarf/Compact	4
		Easier to grow	1
		Columnar	1
2. Other Nursery Plants	# Votes	Desired traits (if any)	# Votes
Raspberry	2	Dwarf and continuous	2
Haskap	2	-	-
Small fruits	2	Hardy, from Asia/Europe	1
Fruit trees	2	For container	2
Fig	1	Hardy	1
Lingonberry	1	-	-
Grapes	1	Seedless (pit-free)	1
Hops	1	-	-
"Something ethnic"	1	-	-
3. Vegetables/Herbs	# Votes	Desired traits	# Votes
Vegetables	8	Don't bolt and stay dwarf	2
		Ornamental	1
		Vines (Cucumbers, Zucchini)	1
		Improved flavour (Kale)	1
		Perpetual harvest	1
		Patio friendly	1
Herbs	1	-	-

"Shade tolerance", not associated with any crop, was submitted as a top priority by 4 participants

4 The next steps

The workshop on opportunities for new edible plants for residential cultivation engaged various players from the nursery sector to collect expert insights on opportunities for growth in this area (Figure 1). The opportunities highlighted in this report will provide direction and help maximize the success of a Vineland edible ornamental plant program in meeting the needs of both consumers and growers. As the next steps, Vineland researchers are working on developing projects based on the ideas contained in this report.

We invite industry members that would like to pursue a specific project with Vineland to contact Dr. Rumen Conev at:

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Figure 1A. Description of participants

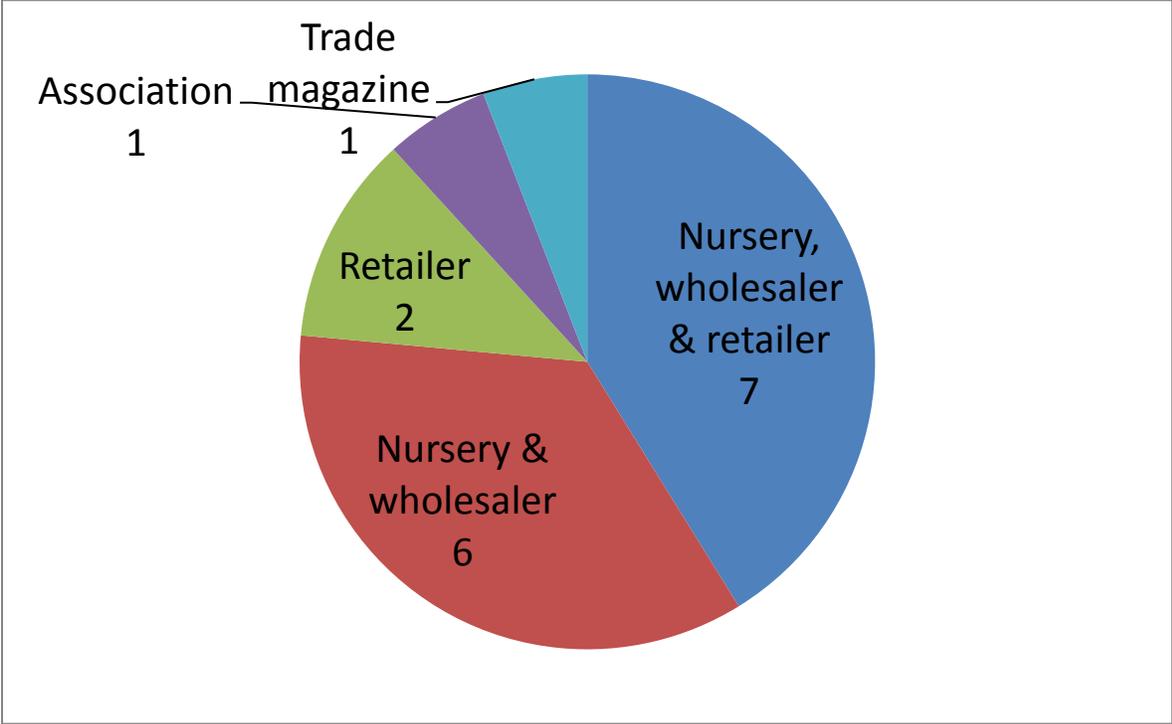
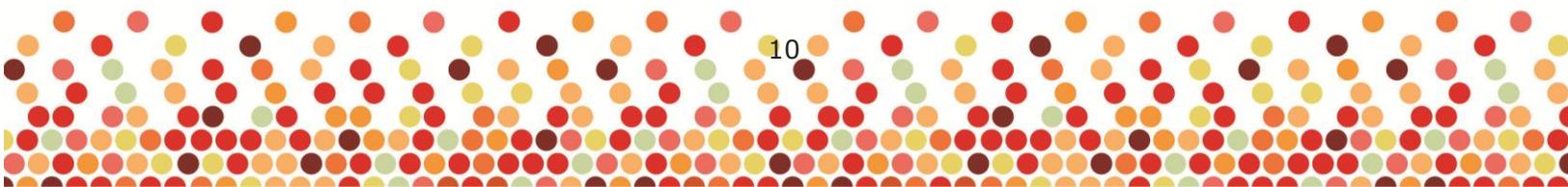
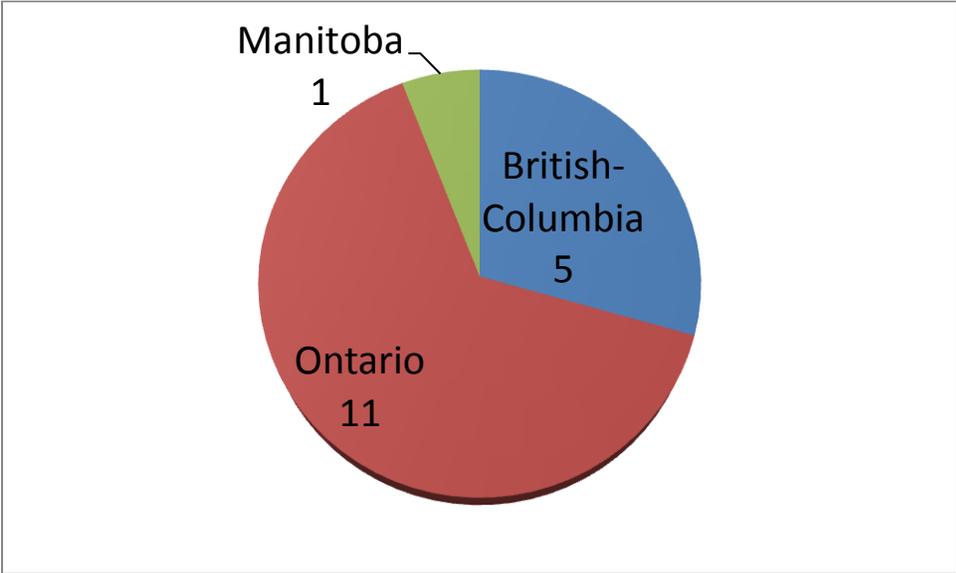


Figure 1B. Workshop participants' location of business operations



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