



The next big thing in edible ornamentals

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Summary Recommendations

Top mass-market opportunities

Tier 1: Ever-bearing, high-yielding container strawberries & container raspberries

Tier 2: Ever-bearing, high-yielding wild strawberries & All types of blueberries

• Opportunity: Landscape blueberries capable of growing in a wide range of soil conditions

Top niche-market opportunities

Tier 1: Edible flowers

Tier 2: Saskatoon berry trees

• Opportunity: Compact variety

Tier 3: Lingonberries

• Opportunity: Improved flavour

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Background

- Edible garden plants for residential use (referred to henceforth as "edible ornamentals") have been identified as a growing trend by Canadian nursery industry experts.
- A focus group was held in September 2014 with CNLA members representing 17
 organizations in the nursery sector value chain including growers, wholesalers and
 retailers. The group brainstormed a list of new edible ornamentals that may have
 potential for success in the market to narrow down the scope of the ensuing consumer
 study.
- Based on the results of the focus group, Vineland researchers compiled a list of 20 edible ornamental plants to test with consumers. A decision was made to omit garden vegetables and herbs as these are typically produced in greenhouses.

Objective

To identify the top opportunities for new edible ornamentals using a consumerdriven approach.

Methodology

• Online study engaging 492 consumers from across Canada.

Region	Number of respondents
Atlantic	79
British Columbia	81
Ontario	155
Prairies	85
Quebec	92
Total	492

- Study participants were recruited by a professional panelist recruitment company. The company specializes in recruitment of consumer samples that are representative of the Canadian population.
- In order to qualify, participants had to:
 - o Be at least 18 years of age
 - o Have a patio, balcony or landscape garden
 - Have purchased at least one outdoor plant in the 2015 gardening season
- 20 edible ornamentals were tested for consumer appeal. See <u>Appendix</u> Figure 1 for listing of products that were tested with consumers.
- Max-Diff methodology: Consumers were presented with a series of 15 screens, each displaying a different combination of 5 products. On each screen, consumers were then asked to indicate which one of the 5 products they would be most likely to purchase and which one they would be least likely to purchase. See <u>Appendix</u> Figure 2 for a sample screenshot of the survey participants' view. Data was analysed using hierarchical bayes estimation.
- All consumers then completed a questionnaire on demographics and gardening habits.

Results

Overall Canada-wide results

An analysis of the overall Canada-wide results revealed that there were 4 segments of consumers with different preferences for the 20 edible ornamentals examined within this study. The largest segment, nicknamed the "traditionals", provides insight into mass-market opportunities, while the 3 smaller segments provide insight into niche-market opportunities.

Segment Name	Traditionals	Edible flower lovers	Saskatoon berry lovers	Experimenters
% of Population	52%	25%	13%	10%
Segment Description	These consumers like strawberries (1) & raspberries (17). They also respond quite well to wild strawberries and all types of blueberries.	These consumers are most interested in edible flowers (16) and strawberries (1). They also respond fairly well to raspberries (17) and wild strawberries (2).	These consumers are highly drawn to Saskatoon berry trees. Although most would prefer a compact variety (product 11 in Appendix), many are also willing to accept the standard large-sized tree. Outside of Saskatoon berries, these consumers also respond fairly well to traditional garden plants such as strawberries (1), raspberries (17) and highbush blueberries (19, 20).	These consumers are highly attracted to unconventional garden plants. They are most strongly interested in lingonberries (particularly those with superior flavour). Their second greatest interest is edible flowers (16) followed by strawberries (1) and pomegranate (15).
Segment Profile	More likely to live in detached homes Less likely to live in Quebec	More likely to: • live in apartments • live in Quebec • grow edible garden plants on a balcony or patio Less likely to live in the Prairies	 More likely to: live in townhouse or detached house live in the Prairies grow edible garden plants in a landscape or on a patio Less likely to live in Quebec 	

Note: The number given in brackets after each edible ornamental coincides with the product number listed in Appendix Figure 1

Note: Although 492 consumers responded to the survey, the Canada-wide results are based on the results of 400 consumers. The data of 92 consumers was removed prior to analysis to ensure that the sample included consumers from the different regions of Canada in proportions equal to those found in the 2011 census.

Regional differences

- Overall in each region of Canada, the largest segment of consumers, nicknamed the "traditionals", consisted of
 consumers who liked container strawberries and container raspberries and blueberries the most out of the 20 products
 examined within this study.
- However some regional differences did emerge:
 - Consumers who liked edible flowers made up an important secondary segment of the public in Atlantic Canada, British Columbia, Ontario and Quebec.
 - The Prairies had a secondary segment that most liked Saskatoon berry trees.
- Ontario and Quebec also had a third important segment of consumers, nicknamed the "experimenters" who liked unconventional products such as lingonberries and edible flowers.
- Significant differences in demographics across segments were only detected in the Ontario sample, possibly due to the larger sample size.

Segment Name	Traditionals	Edible flower lovers 32%	
% of Population	68%		
Segment Description	These consumers like strawberries (1), raspberries(17) and all types of blueberries (18, 19, 20) the most.They are uninterested in unconventional products.	These consumers are most interested in regular and wild strawberries (1, 2), edible flowers (16), raspberries (17) and pomegranate (15).	

Atlantic (n=79)

Segment Name	Traditionals	Edible flower lovers 38%	
% of Population	62%		
Segment Description	These consumers like strawberries (1) and raspberries (17) the most. They also respond fairly well to wild strawberries (2) and all types of blueberries .	These consumers are most interested in strawberries (1) and edible flowers (16).	

Ontario (n=155)

Segment Name	Traditionals	Edible flower lovers	Experimenters
% of Population	50%	31%	19%
Segment Description	These consumers like strawberries (1) and raspberries (17) the most. They also respond quite well to wild strawberries (2) and all types of blueberries .	Like the first segment, these consumers are most interested in strawberries (1) and raspberries (17), however also respond quite well to edible flowers (16) and wild strawberries (2).	These consumers are highly attracted to unconventional garden plants. They are most strongly interested in lingonberries (particularly those with superior flavour), edible flowers (16) as well as strawberries (1).
Segment Profile	More likely to be a Millennial Less likely to be generation X	More likely to grow edible garden plants on a balcony Less likely to grow edible garden plants in a landscape garden	More likely to grow edible garden plants in a landscape or on a patio Less likely to be a Millennial

Segment Name	Traditionals	Saskatoon berry lovers 29%	
% of Population	71%		
Segment Description	These consumers like strawberries (1) and raspberries (17) the most.	These consumers are most interested in Saskatoon berry trees (13, 14), strawberries (1) and raspberries (17).	

Quebec (*n=92*)

Segment Name	Traditionals	Edible flower lovers	Experimenters
% of Population	39%	32%	29%
Segment Description	These consumers like strawberries (1) and raspberries (17) the most.	These consumers are most interested in edible flowers (16) and strawberries (1). They also respond quite well to raspberries (17) and wild strawberries (2).	Although, like the previous consumer segment, these consumers are highly attracted to edible flowers (16), they also like lingonberries (3, 4), strawberries (1, 2) and compact Saskatoon berry trees (13).

Recommendations

Mass Market opportunities

The Canadian nursery sector is advised to increase availability of **container strawberries**, **container raspberries as well as blueberries and container wild strawberries** in order to capitalize from the growing demand for edible ornamentals.

- Emphasis should be placed on obtaining strawberry, raspberry and blueberry varieties that are **high-yielding** and **produce fruit all season-long**
- High yielding landscape blueberries that can grow in a wide range of soil conditions also present a promising opportunity

Niche Market opportunities

- Edible flowers were identified as another promising opportunity. However, further consumer research would be required to determine which flowers would be preferred and how they should be positioned in the market prior to pursuing this opportunity.
- Saskatoon berry trees represent a good niche opportunity with a particularly strong demand among consumers residing in the Canadian Prairies. A compact variety would suit the needs of a larger range of consumers than the currently-available full-size variety.
- Niche market opportunities also exist for **lingonberries** (e.g. those with **improved flavor**) particularly in Quebec and Ontario.

Next steps

While CNLA growers consider which of the recommended plants may fit into their portfolio, Vineland will investigate the feasibility of obtaining suitable cultivars to bring to market. The goal is to identify which plants present the best opportunity (based on consumer feedback and gaps in market availability) and can be brought to market at low cost and in a relatively short timeline.

A list of these edible ornamentals opportunities along with what it would take from Vineland and from CNLA to bring these to the market will be presented at an upcoming teleconference with CNLA's new varieties committee. It is expected that this meeting will result in a decision on which edible ornamental opportunity(ies) to pursue.

Appendix

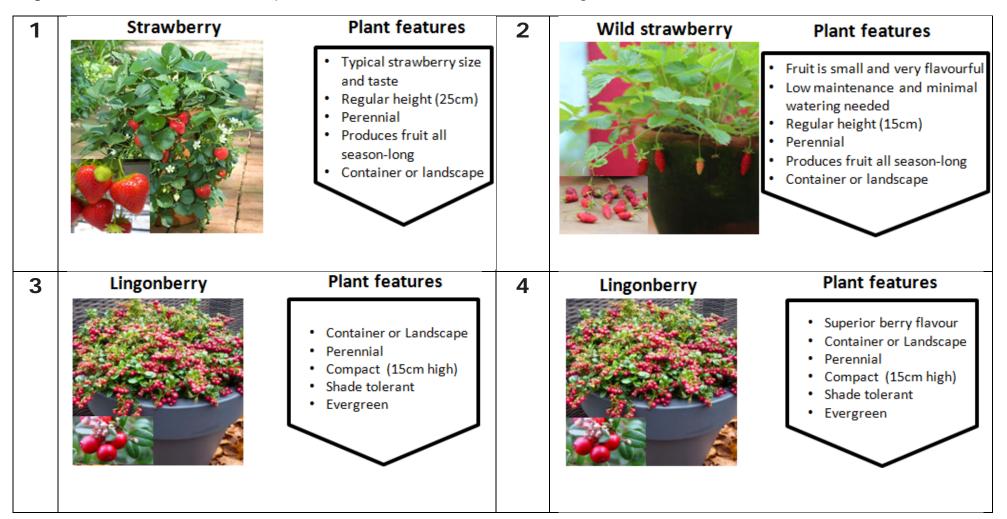
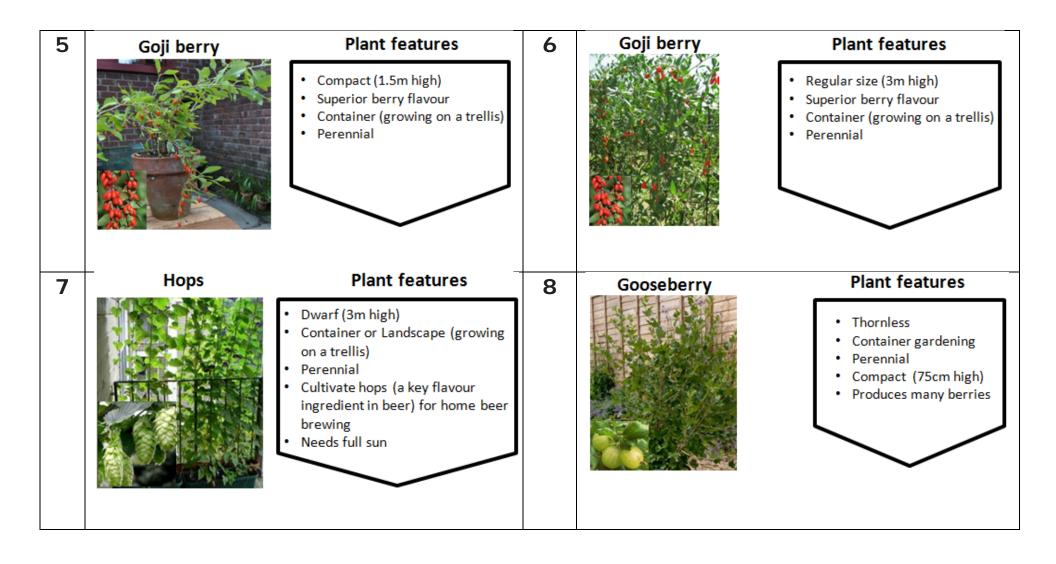
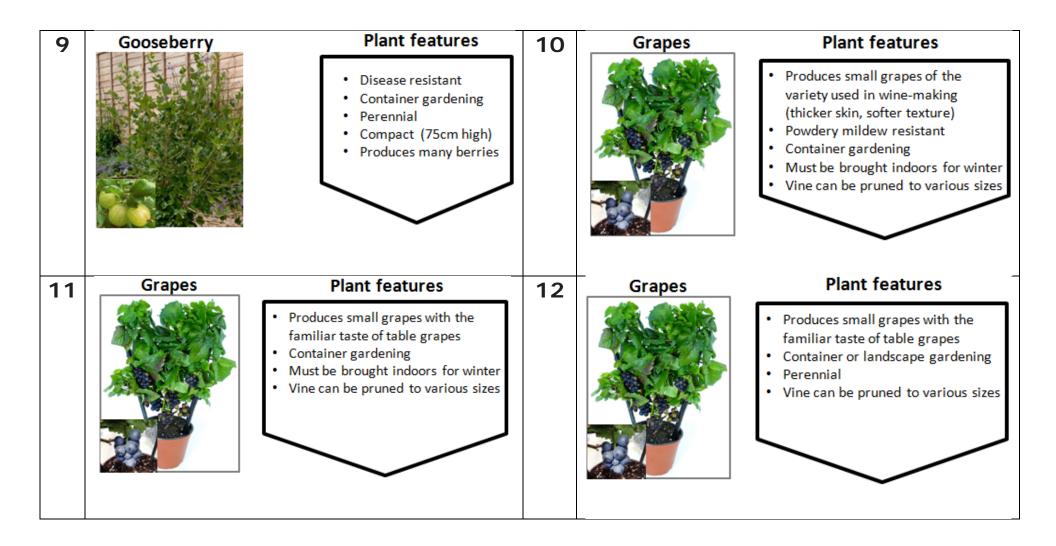
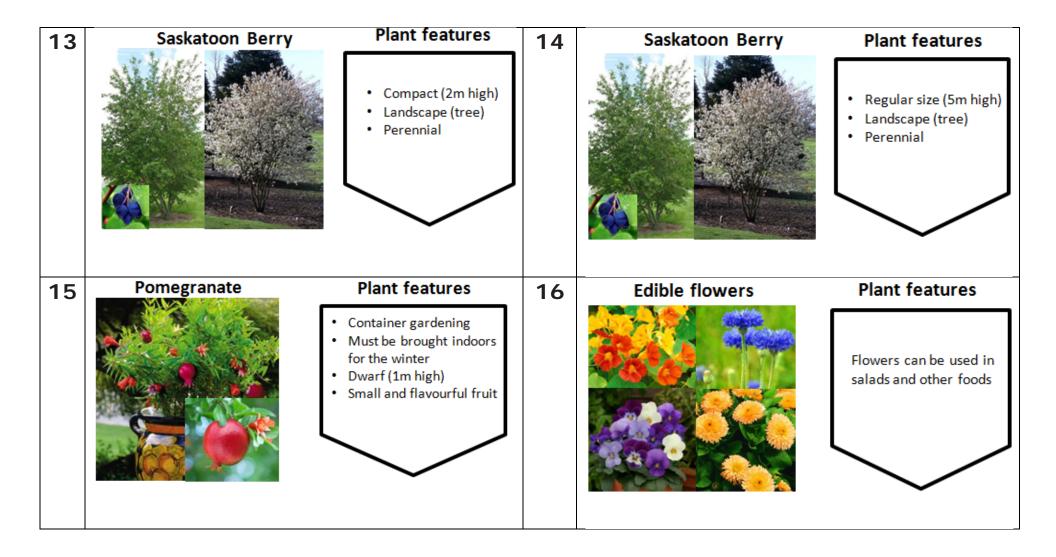


Figure 1. The 20 edible ornamentals presented to consumers included the following:







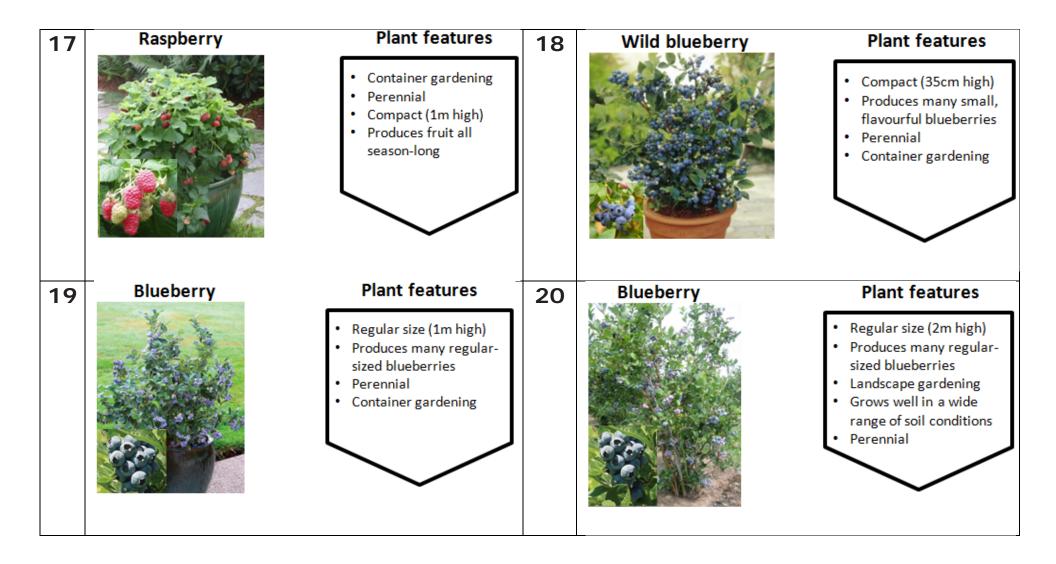
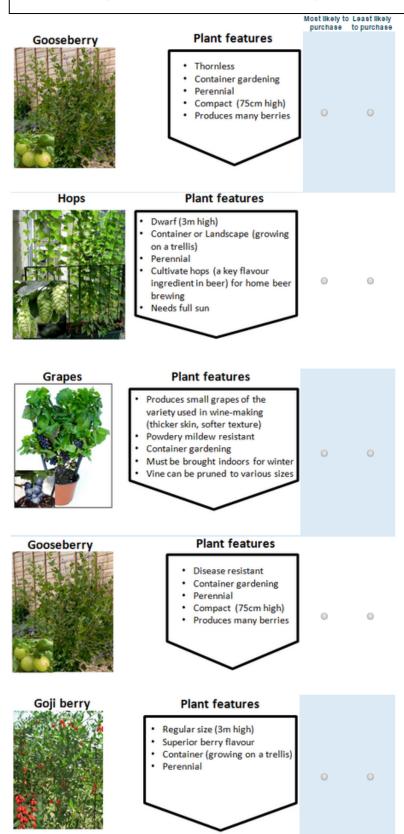


Figure 2. Sample screenshot of survey format presented to consumers.

Instructions

On each screen, consider the five products below and choose <u>one</u> product that you would be most likely to purchase and <u>one</u> product you would be least likely to purchase.



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