

# 2014 British Columbia Seed Producers Survey

## *Survey Summary Report & Results*

An initiative of the BC Seeds Project, a project of FarmFolk CityFolk



Supported through funding from The Bauta Family  
Initiative on Canadian Seed Security



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## **Acknowledgments**

The *2014 BC Seed Producers Survey* was funded by *The Bauta Family Initiative on Canadian Seed Security*. An organization that is dedicated to “building a national movement to conserve and advance seed biodiversity, keep seed in the public domain, and promote ecological seed production<sup>i</sup>,” the BC Seeds Project wishes to express its’ gratitude for their support and for their vision for a seed secure Canada.

BC Seeds Project would also like to thank Chris Thoreau, who completed the 2007 *Exploring Certified Organic Seed Production in British Columbia* survey and report (here on out referred to as the 2007 survey). We are grateful for his support during the analysis of this survey and for the opportunity to learn from the previous research process. We’d also like to thank the seed producers who took the time during a busy growing season to complete this survey. We appreciate your input and hope to apply the information collected to the improvement of the BC seed sector.

## **Introduction**

The *2014 BC Seed Producers Survey* was developed and hosted by the BC Seeds Project, a project of FarmFolk CityFolk. Designed to inform the business plan of the B.C. Eco Seed Producers Co-operative, a for profit co-operative for British Columbia (BC) certified organic and ecological seed producers, the goal of the survey was to research the production and use of BC grown certified organic and ecological seeds, and to gauge producer (i.e., small-scale commercial seed producers), interest in participating in a BC seed producers co-operative.

With a budget of \$1,000, the 67-question survey was developed by Jen Cody, Vanessa Goodall, and Jesse Howardson, the first staff of the B.C. Eco Seed Producers Co-operative. The survey was designed and distributed by SurveyMonkey between September 21, 2014 and December 14, 2014.

The full list of survey questions and responses can be found in Appendix A.

## Survey Methodology

### Summary

Modeled after the BC Seed Security Project's 2007 survey entitled *Exploring Certified Organic Seed Production in British Columbia*, this research project used a survey research approach. Collecting both qualitative and quantitative data through an online survey, the survey used the 2007 questions as a guideline. The question list and question styles were modified in 2014 to meet the needs of the B.C. Eco Seed Producers Co-operative.

The survey questions can be broken down into four sections. Section 1 (questions #1-4) was designed to ensure that the target audience completed the survey. Accordingly, the first 4 questions were designed to ensure that those who completed the survey were defined as:

- seed producers (commercial) whose production/operations are located in British Columbia (BC);
- seed producers who identify their system of production as either Certified Organic, in transition to organic certification, or ecological;
- producers whose systems of production involves the purchase of food or cover crop seeds and;
- seed producers who have, within the past 5 years, grown some seed crop.

Section 2 (questions #5-17) was designed to capture general demographic information on the seed producers who completed the survey. Information was collected on acreage in production, systems of production, and whether BC seed producers retail, trade, and/or donate their seed.

Section 3 (questions #18-52) addressed the local seed market and asked seed producers to identify where they retail or purchase seeds in BC, and to identify market barriers they face in producing and retailing vegetable and field crop varieties.

Section 4 (questions #53-67) collected information on the types of seed resources (training opportunities, reference guides, funded programs, and/or market opportunities), that seed producers in BC were currently accessing, or would like to access. As well, this section sought to gauge BC seed producer interest in producing for/with the B.C Eco Seed Producers Co-operative.

Overall, the research team's goal was to have a total of 50 BC small-scale seed producers, who identified as certified organic, in transition to organic certification, or ecological producers, complete the survey during the survey period.

## **Definitions**

*Certified Organic:* In Canada, certified organic food and agricultural products are verified by a Certification Body to ensure they meet the Canadian Organic Standards, as designated by the Canadian Food Inspection Agency.<sup>ii</sup>

*Conventional Agriculture:* Systems of food and agricultural production that are not certified organic, in transition to organic certification, or ecological.

*Cover Crop:* A crop planted to primarily manage soil quality and fertility, and to increase water retention, suppress weeds, and manage pests and diseases. Cover crops are often used within agro-ecological systems. Examples include, grasses, flowers, and legumes.

*Ecological Agriculture:* As defined by the members of the B.C. Eco Seed Producers Co-operative, ecological agriculture includes certified organic, in transition to organic certification, and other farming systems that adhere to similar agro-ecological principles such as biodynamic and permaculture.<sup>iii</sup>

*In Transition to Organic Certification:* In accordance to the Canadian Organic Standards, the transition to organic certification consists of a set of steps taken by the operator of a non-organic production system to establish organic management practices.<sup>iv</sup>

*Organic Agriculture:* As defined by the Certified Organic Associations of British Columbia (COABC), organic agriculture “promotes the sustainable health and productivity of the ecosystem – soil, plants, animals, and people. Organic foods are farmed in an environmentally sustainably and socially responsible way, focusing on soil regeneration, water conservation, and animal welfare.”<sup>v</sup>

*Seed Trial:* A side-by-side comparisons of seed grown out against each other to compare vigor from the same seeds grown in multiple seasons and/or locations.

*Vegetable Crop:* All seeds/plants sown and cultivated for their edible parts. These include tubers, bulbs, root vegetables, leaf vegetables, and flowers.

## **Survey Distribution**

This survey was open to individuals who were actively producing seed. This was defined as having produced seeds within the past five years). Of those who completed the survey, which included individual seed farmers, backyard seeds savers, and community seed groups, this report only provides a summary and analysis of the responses from the active small-scale (commercial) seed producers who completed the full survey.

The survey was hosted online through SurveyMonkey and was emailed to relevant listservs and individuals identified by the BC Seeds Project. The survey was hosted on the BC Seed Project’s website, shared via social media including Facebook and Twitter, featured within the

registration materials for the 2014 BC Seeds Gathering, and promoted at the 2014 BC Seeds Gathering (November 14-16) through an outreach booth, signage, and public announcements. Printed copies of the survey were made available for the 2014 BC Seeds Gathering.

#### Distribution Breakdown:

- BC Seeds Listserv (231 subscribers)
- COABC (15 members emailed directly)
- Island Farmers' Alliance Board of Directors (7 directors)
- 2014 BC Seeds Gathering promotion (100)
- BC Seed Project's website (total unknown as Google Analytics was not activate during the survey period)
- FarmFolk CityFolk's Facebook (5,500 "likes")
- Cowichan Green Community's Facebook (1,500 "likes")

#### Response Rate

The response rate is based upon the number of individuals reached through targeted survey promotions and the number of respondents who completed the survey. For the purpose of this report, we did not include the social media audiences within the total number of individuals reached. Given that the Facebook audiences were demographically too broad, those totals were excluded from the rate of response calculation.

Accordingly, approximately 238 individuals were targeted to complete the survey, of which 88 attempted to complete the survey. Of this, 53 respondents were permitted to complete the survey in its entirety. Of the 53 respondents, 22 identified as small-scale commercial seed producers (target survey population). Accordingly, the data and results from this survey are based upon the responses of the 22 small-scale commercial seed producers in the province of BC. Accordingly, the survey's response rate is 9.24%. This number includes potential cross-postings.

Overall, this response rate is considered statistically low. For example, this rate of response is significantly lower than the 2007 survey, which identified a response population of 127 and a response rate of approximately 21%<sup>vi</sup>. However, when exploring the 2007 survey results, it appears that only 15 survey respondents were identified as commercially engaged (i.e., they sold seed on the market). Accordingly, despite the 2014 survey's low response rate, we must recognize that we targeted a very narrow segment of the population; one that possibly has increased slightly since 2007. However, it is important to state that any conclusions drawn from this survey are at best anecdotal and that a follow-up survey is recommended.

## Limitations

1.) The total survey distribution rate of 238 is expressed as an approximation as the actual distribution rate is unknown for two reasons:

- a.) The impact of social media distribution is unknown as BC Seeds Project is unable to track the extent in which the Facebook posts were shared. As well, the Google Analytics on the BC Seeds Project's website, which hosted a project page for the survey, was not activate during the survey period.
- b.) During the survey's response period, the BC Seeds Project learned that an undergraduate student from the University of British Columbia's (UBC) Land and Food Systems Department received approval to develop and distribute a survey for BC seed savers. Concerned that the two surveys would compete for the same audience and/or create confusion, members of the BC Seeds Project spoke with UBC faculty and the student to determine a compromise.

The student agreed to reach out to all of their research contacts to ensure that respondents knew the difference between the two surveys. Overall, the BC Seeds Project did not hear of any concerns about the presence of the other survey. However, quantifying the impact of the second survey and its associated outreach is impossible as the UBC survey was anonymous and as privacy guidelines prevented the BC Seeds Project from accessing the UBC student's contact list.

2.) As this survey was anonymous, and as the survey permitted multiple surveys to be completed from the same computer and/or IP address, the survey is unable to account for any multiple responses from the same respondent or for responses from multiple members of the same farm or farm business. For example, during the 2014 BC Seed Gathering, one respondent realized half way through filling-out the online survey that they had completed it the month prior. Additionally, an analysis of the qualitative survey responses indicates that for some farm/seed operations, more than one members or owner filled out the survey.

3.) Within the survey, the BC Seeds Project did not define the term 'small-scale seed producers' which could have resulted in some confusion for respondents. For example, 3 of the 22 respondents who identify as small-scale seed producers do not sell their seed.

4.) Despite being defined in the introduction of the survey, some survey respondents stated that they did not understand the term 'Ecological',

## Survey Analysis

### Respondent Profile:

22 respondents completed the survey.

- 100% of respondents are located within the Province of British Columbia (BC), have produced seed within the past five years (2009-2014), have purchased seed for their farm operation, and self-identify as small-scale (commercial) seed producers.
- 85.7% identify as having sold the seed they produce.
- 54.5% of respondents operate their own seed company.

### Farm Profiles:

Acreage: 72.7% of respondents produce on 1 acre or less and 27.3% produce on 1-5 acres of land.

Farm Operation: 59.1% of respondents identify their farm operation as *Ecological*. 31.8% of respondents identify their farm operation as *Certified Organic*. 9.1% identify their farm operation as *In Transition to Organic Certification*.

Production Systems: 86.3% of respondents' seed production is integrated into their overall system of production. 9.1% of respondents produce only for seed.

### Marketing of Seed:

Wholesale Seed: 54.5% of respondents currently sell, or have sold, their seed directly to a seed company. Of the respondents who sell or have sold seed to a seed company, the top seed companies that they have sold their seed to include:

1. Salt Spring Seeds: 54.5%
2. West Coast Seeds: 45.5%
3. Stellar Seeds: 27.3%

45.5% of respondents sell their seed to more than one seed company.

Self Marketing: 81.8% of respondents market their own seed. 18.2% of respondents do not market their own seed; of this, 9.1% sell directly to a seed company and 9.1% save their own seed for future use.

Top Seed Retail Markets: Unlike the 2007 survey, which identified 'Word of Mouth' as the most common method for marketing seed, the Farmers' Market was identified as the top seed market by the 2014 survey, followed by Seedy Saturdays and Sunday events and Word of Mouth.<sup>vii</sup>



As identified by 21 of the 22 respondents, the top seed retail markets include:

1. Farmers' Markets: 71.4%
2. Seedy Saturdays or Sunday events: 66.7%
3. Word of Mouth: 66.7%
4. Own website/ business website: 38.1%
5. Local nurseries: 28.6%
6. To seed companies: 28.6%
7. Independent grocers: 28.6%

Trading Seeds: 77.3% of respondents trade seeds with other farmers. When asked to identify what percentage of their seeds they trade, 88.2% responded. Of this group, the average percentage of seeds traded is 28.3%. The lowest percentage of seeds traded is 1.0% and the highest is 80.0%. When compared to the 2007 survey, which reported that 10% of respondents regularly trade seeds and 53% of respondents as rarely trading seeds with other farmers, the group surveyed in 2014 appears to trade seed with a higher frequency.<sup>viii</sup>

Donating Seed: 90.9% of respondents donate some seeds. When asked to identify what percentage of their seeds they donate, 77.3% responded. Of this group, the average percentage donated is 7.1%. The lowest percentage of seeds donated is 1% and the highest percentage of seeds donated is 20%.

One respondent identified that they donate 100lbs of seed per year. Another respondent donates all extra rack seed.

Sowing Seed: 27.3% of respondents sow 10-20% of their own seeds each growing season, followed by 18.2% of respondents who sow 5-10% of their own seed each growing season. Overall, these percentages are lower than anticipated given that 54.5% of respondents identified as owning a seed company. For example, no respondents identified that 100% of the seeds they sow each growing season are their own seeds and only 9.1% of respondents identified that 80-99% of the seeds they sow each growing season were their own seeds.

In comparison, the 2007 survey reported that 4% of respondents identified that all the seeds they sow each growing season are their own seed and 35% of respondents identified that 5-10% of the seeds they sow each growing season are their own.<sup>ix</sup> Given the 2007 survey results, the 2014 data appears low. However, when considering that 86.3% of the 2014 survey respondents identify as integrating their seed production into their farm production systems, it makes sense that so few identify as having sown larger quantities of their own seeds.

Barriers to sowing more on-farm saved seed: According to respondents, the largest barriers that prevent them from sowing more of their own seed include:

1. Lack of Space for Isolation: 54.6%
2. Lack of Time: 54.6%
3. Lack of Growing Space: 45.5%
4. Not Economically Viable: 40.9%
5. Varieties Not Available: 36.4%
6. Lack of Appropriate Equipment: 36.4%

**Seed Production:**

What is Being Produced: When asked to identify which seed crops they have grown in the past 10 years, 20/22 respondents answered that beans (Bush, Dry, Fava, Pole, Runner, Snap, and Soy), kale, and tomato were the most popular seeds produced by survey respondents. Meanwhile, the least produced seeds include artichoke, kohlrabi, Brussels sprouts, and cauliflower.

When compared to the 2007 survey, which asked producers to identify the top 10 crops they grew within the 3 previous years (2004-2006), it appears that some crops, such as kale, tomatoes, peas, flowers, and arugula, are still favoured and that the production of garlic (true seed) and potatoes has either gone down, or is less produced by this sample population. For this specific question, comparisons between the 2007 and 2014 data are anecdotal as the survey approach to this question was modified in 2014.

Please see the table below for the full survey results.

<b>Crop</b>	<b>Response Percent</b>	<b>Response Count</b>
Beans (Bush, Dry, Fava, Pole, Runner, Snap, and Soy)	90.9%	20
Kales	90.9%	20
Tomatoes	90.9%	20
Peas	81.8%	18
Flowers	77.3%	17
Basil	68.2%	15
Lettuces	68.2%	15
Sunflowers	68.2%	15
Arugula	63.6%	14
Cucumber	63.6%	14
Herbs, Culinary	63.6%	14
Peppers, Hot	63.6%	14
Winter Squash	59.1%	13
Asian Greens	54.5%	12
Leeks	54.5%	12
Mustards	54.5%	12

Peppers, Sweet	54.5%	12
Herbs, Medicinal	50.0%	11
Radish	50.0%	11
Pumpkin	45.5%	10
Spinach	45.5%	10
Summer Squash	45.5%	10
Swiss Chard	45.5%	10
Broccoli	40.9%	9
Corn	40.9%	9
Ground Cherry	40.9%	9
Tomatillos	40.9%	9
Beets	36.4%	8
Garlic (True Seed)	36.4%	8
Melons	36.4%	8
Onions	36.4%	8
Eggplant	31.8%	7
Carrots	27.3%	6
Celery	27.3%	6
Collards	22.7%	5
Potatoes (True Seed)	22.7%	5
Winter Broccoli	22.7%	5
Other (please specify)	22.7%	5
Parsnips	18.2%	4
Turnips	18.2%	4
Rapini	13.6%	3
Cauliflower	9.1%	2
Brussels Sprouts	4.5%	1
Kohlrabi	4.5%	1
Artichoke	0.0%	0

**Bulk Seed Production:** When asked to identify which seed crops they have produced in bulk in the past 10 years, 20/22 respondents answered that tomatoes, arugula, and beans (Bush, Dry, Fava, Pole, Runner, Snap, and Soy), were the most popular bulk seeds produced by survey respondents. Meanwhile, the least produced seeds in bulk include, artichoke, Brussels sprouts, and cauliflower. With the exception of arugula, the top and least produced seeds for bulk are relatively congruent to those seeds that are produced in general.

Please see the table below for the full survey results.

<b>Crop</b>	<b>Response Percent</b>	<b>Response Count</b>
Tomatoes	60.0%	12
Arugula	50.0%	10
Beans (Bush, Dry, Fava, Pole,	50.0%	10

Runner, Snap, and Soy)		
Kales	45.0%	9
Peas	40.0%	8
Flowers	35.0%	7
Lettuce	35.0%	7
Winter Squash	35.0%	7
Asian Greens	30.0%	6
Radish	30.0%	6
Beets	25.0%	5
Herbs, Culinary	25.0%	5
Leeks	25.0%	5
Mustards	25.0%	5
Onions	25.0%	5
Pumpkin	25.0%	5
Carrots	20.0%	4
Corn	20.0%	4
Melons	20.0%	4
Peppers, Hot	20.0%	4
Spinach	20.0%	4
Broccoli	15.0%	3
Cucumber	15.0%	3
Ground Cherry	15.0%	3
Herbs, Medicinal	15.0%	3
Parsnips	15.0%	3
Peppers, Sweet	15.0%	3
Potatoes (True Seed)	15.0%	3
Sunflowers	15.0%	3
Swiss Chard	15.0%	3
Other (please specify)	15.0%	3
Basil	10.0%	2
Eggplant	10.0%	2
Garlic (True Seed)	10.0%	2
Summer Squash	10.0%	2
Basil	10.0%	2
Celery	5.0%	1
Rapini	5.0%	1
Tomatillos	5.0%	1
Turnips	5.0%	1
Winter Broccoli	5.0%	1
Artichoke	0.0%	0
Brussels Sprouts	0.0%	0
Cauliflower	0.0%	0

Collards	0.0%	0
Kohlrabi	0.0%	0

Cover Crop Production: 23.8% of respondents produce their own cover crop seeds. Of those who produce their own cover crop seeds, buckwheat, oats, ryes (self sowing rye and winter rye), sweet clover, Red Russian kale, and white clover were identified as being produced.

### **Seed Selection Practices:**

Selection Rigor: On a scale of 1 (not rigorous) to 5 (very rigorous), 18.2% of respondents rate their crop selection process as 5/5. 40.9% of respondents identify their crop selection process as 4/5.

Barriers that limit respondents from practicing specific selections on their seeds include:

1. Lack of time: 60.0%
2. Lack of space to grow out more seed: 50.0%
3. Not wanting to go below population numbers: 50.0%
4. New to seed production: 30.0%

Plant Populations: 40.9% of respondents try to uphold minimum populations for their seed crops. As identified in the 2007 survey<sup>x</sup>, the 2014 respondents also articulated that this percentage varied between varieties.

Seed Trials: 50.0% of respondents have trialed seeds (conducted side by side comparison of their seed against another company or growers' seed, or seed from multiple seasons or locations).

### **Sourcing Seeds:**

Source Companies: 77.3% of respondents identified where they have purchased seeds. Of this group, 94.1% identified as having purchased from more than one seed company. The companies identified include:

1. West Coast Seeds: 88.2%
2. Johnny's Selected Seeds: 88.2%
3. Salt Spring Seeds: 70.6%
4. Stellar Seeds: 41.2%
5. High Mowing Seeds: 41.2%
6. William Dam Seeds: 41.2%
7. Wild Garden Seeds: 29.4%
8. Osborne Seeds: 29.4%
9. Adaptive Seeds: 23.5%
10. Veseys: 17.6%
11. Territorial Seeds: 17.6%
12. Full Circle Seeds: 17.6%

13. The Cottage Gardener Seed: 17.6%
14. Prairie Garden: 17.6%
15. Heritage Harvest Seed: 11.8%
16. Eagleridge Seeds: 11.8%
17. Sunshine Farm: 11.8%
18. Uprising: 11.8%
19. Other: 5.9%

The “other” seed companies identified include: Baker Creek, Hands on Organics, Horizon Herbs, Italian Food and Seed, Kitazawa Seed Co., Mountain Seed Co., Planting Seeds Project, Quality Seed West, Rebecca’s, Renee’s Garden Seeds, Seeds of Change, Seeds of Victoria, Seedy Saturday’s, Southern Exposure, Sustainable Seed Exchange, Syskiyou Seeds, and Two Wings Farm.

Seed Budget: Survey respondents spend the following on seeds per year:

1. \$50-\$100: 9.1%
2. \$100-\$200: 0.0%
3. \$250-\$500: 36.4%
4. \$500-\$1,000: 22.7%
5. \$1000-\$1500: 9.1%
6. \$1500-\$2000: 4.5%
7. \$2,000+: 18.2%

Comparatively, in 2007, 21.5% of survey respondents identified spending \$50-\$100 on seeds for their farms each season, while most identified spending between \$50-\$1000 each season on seeds.<sup>xi</sup>

Source Locations: 90.9% of respondents source their seeds through online seed catalogues. 86.4% of respondents source their seeds through print catalogues. 45.5% trade with other farmers and 40.9% source seed from other farmers. 27.3% of respondents source their seed from other sources not identified in the survey. These include: exchanges, local feed stores, online, seed sales, Seedy Saturdays, and, wild harvesting. Compared to 2007, where 53.9% of respondents reported sourcing seed through the internet, the role of online seed catalogues and internet purchasing appears to be increasing for this sample population.<sup>xii</sup>

Sourcing Certified Organic Seed: 81.8% of respondents attempt to source certified organic seeds before purchasing non-certified organic seed. In 2007, 92.7% of survey respondents identified that they make an attempt to source certified organic seed before purchasing from conventional seed companies.<sup>xiii</sup> This number, in 2014, could be lower as the target population of the 2007 survey was identified as certified organic seed producers.

On a scale of 1 (not important) to 5 (very important), 45.5% of respondents said that purchasing certified organic seed was ‘very important’. This statistic is congruent with the 2007 survey

response where 45.6% of respondents stated that it is 'extremely important' to source certified organic seed. However, it is important to note here that the target population of the 2007 survey was identified as certified organic seed producers.

No respondents identified that all of their seed purchases are certified organic. Compared to 2007, 10.4% of those respondents identified as having purchased 100% certified organic seeds. This change could be due to the target population of the 2007 survey being certified organic producers and might not identify an actual change in purchasing behaviour.<sup>xiv</sup>

Overall, for 2014, 36.4% of respondents identify that 60-80% of their seed purchases are certified organic. This is followed by 27.3% who identify that 20-40% of their seed purchases are certified organic. 68.2% of respondents cannot source the quantities of certified organic seeds for their farms.

The main barriers that limit respondents from purchasing certified organic seed include:

1. Varieties needed are not available: 95.5%
2. Quantities needed are unavailable: 31.8%
3. Certified organic seeds are too expensive: 22.7%

Sourcing Certified Organic Cover Crop Seed: Of the 21 respondents who answered this question, 4.8% always purchase certified organic cover crop, 42.9% sometimes purchase certified organic cover crop seeds, 18.2% rarely purchase certified organic cover crop seed, and 23.8% never purchase certified organic cover crop seeds.

The main barrier that limits respondents from purchasing certified organic cover crop seeds include:

1. Varieties are not available in certified organic: 54.5%
2. Cannot source the quantity needed: 40.9%
3. Certified organic cover crop seeds are too expensive: 36.4%

Sourcing Ecological Seeds: 68.2% of respondents attempt to source ecological seed before purchasing conventional seed. Of those respondents who gave written feedback, some expressed never seeing a distinction between organic and ecological seeds. Overall, 45.5% of respondents cannot source the quantities of ecological seeds needed for their farms.

On a scale of 1 (not important) to 5 (very important), 59.1% of respondents said that purchasing ecological seed was 'very important' (5/5).

22.7% of respondents identify that 60-80% of their seeds purchases are ecologically grown. 22.7% of respondents identify that they were not sure if their seed purchases were ecologically grown.

The main barrier that limited 21 of the 22 respondents from purchasing ecological seed include:

1. Varieties needed are not available: 76.2%
2. Cannot source the quantity needed: 38.1%
3. Poor quality: 19.1%

Sourcing Ecological Cover Crop Seed: 21 of the 22 respondents answered this question. Of this group, 4.6% of respondents state that they 'always' purchase ecological cover crop seeds, 36.6% 'sometimes' purchase ecological cover crop seeds, and 22.7% 'never' purchase ecological cover crop seeds.

The main barrier that limits the above respondents from purchasing ecological cover crop seeds include:

1. Can not source the quantity needed: 42.9%
2. Varieties needed are not available: 38.1%
3. Other: 19.1%

Sourcing Local (BC) Seeds: 21 of the 22 respondents identified the importance of local seed to their business. On a scale of 1 (not important) to 5 (very important), 33.3% of respondents report that purchasing BC seed is 'very important' (5/5). Overall, 85.7% of respondents report attempting to purchase BC grown seed. Of those who attempt to source BC seeds, 42.1% of respondents source 10-20% of their seeds from BC producers. Of those seeds, only 15.0% are certified organic or ecologically grown.

A key barrier that limits the above respondents from purchasing local (BC) seeds include:

1. Varieties needed are not available: 90.9%
2. Can not source the quantity needed: 81.8%
3. Not sure who sells local seeds: 36.4%

Quality of Local (BC) Seed: On a scale of 1 (low quality) to 5 (high quality) 36.4% of respondents rated the quality of BC certified organic grown seed as a 3/5 in comparison to the conventional seed that they have used.

On a scale of 1 (low quality) to 5 (high quality) 18.2% of respondents rated BC grown ecological seed as a 5/5 in comparison to the conventional seeds they have used. 22.7% of respondents rate the seed as 3/5, 22.7% of respondents rated the seeds as 4/5, and 22.7% were not sure of the quality.

On a scale of 1 (low quality) to 5 (high quality) 45.4% of respondents rate BC grown seeds as a 3/5 compared to out-of-province or out-of-country seeds they have used.



## **Farmer Training, Research, and Support**

Training: The top avenues in which respondents learned to save seed include:

1. Farmer-to-farmer training: 86.4%
2. Self-taught: 81.8%
3. Resource books: 81.8%

Only 9.1% of respondents identify as having been university-trained to save seeds.

Farmer Support: The most desired forms of support to help respondents grow better seed include:

1. Access to a shared seed cleaning facility: 63.6%
2. Increased networking opportunities: 63.6%
3. Workshops: 59.1%

Other forms of support identified include: extension services, funding, germination facilities, mentorship, more buyers, more land and time, and variety standards.

To help respondents make more informed seed purchases (i.e., local, certified organic, or ecological), the following supports are desired:

1. More information from seed companies about seeds: 59.1%
2. Workshops/Webinars: 54.6%
3. Reviews/interviews with regional seed companies in agricultural magazines/websites: 50.0%

Workshop Recommendations: (answers from 16 out of the 22 respondents)

1. Seed breeding: 50.0%
2. Disease resistance: 32.3%
3. Seed selection: 32.3%
4. Seed storage: 25.0%
5. Harvesting techniques: 25.0%
6. Germination tests: 18.8%
7. Seed cleaning: 12.5%
8. Population: 12.5%
9. Advanced genetics: 12.5%
10. Other recommendations: Advanced Botany, How to Incorporate Seeds into Market Garden, Invasive Plants, Isolation, Nutrition in Seed Crops, Prodigy Breeding of Brassicas, Selling, and Trial Squash for Crossing. Seed Resources Used: The most popular seed saving resources amongst 17 of the 22 survey respondents include:

1. Seed to Seed, Suzanne Ashworth: 76.5%
2. How to Grow Your own Vegetables Varieties, Carol Deppe: 35.3%
3. Organic Seeds Grower, John Navazio: 47.1%
4. Organic Seed Alliance's website: 23.5%
5. Others: Breeding Field Crops, Breeding Plants Resistant to Insects, Cornucopia, Dan Jason's book, Flower and Vegetable Plant Breeding, Kokopelli Foundation, Organic Seed Production, OSA, Parks Cards, Patrick Steiner's guide, Plant Breeding, Principles of Plant Breeding, Principles of Population Genetics, Rodale books, Seed Savers Handbook, and Seeds of Diversity books and catalogues.

Web Resources Used: 20 of the 22 respondents answered this question. Amongst this group, the following websites were identified as used:

1. Seeds of Diversity: 85.0%
2. Organic Seed Alliance: 70.0%
3. FarmFolk CityFolk: 50.0%
4. COABC's Seed Database: 40.0%
5. BC Food Systems Network's Seed Listserv: 40.0%
6. BC Seeds Project's website: 40.0%
7. Bauta Family Initiative on Canadian Seed Security: 35.0%
8. USC: 30.0%
9. Other: Attar, Daniel Brisebois' seed blog, Non-BC sites, Seed Ambassadors, Sierra Seeds Co-op, Synergy Seeds, Wildflower and Native Plant websites, Wild Garden Seeds, and Youtube.

Seed Research: 77.3% of respondents would like to participate in a Participatory Plant Breeding program. 50% of respondents would be interested in doing seed research or breeding trials. 36.4% said they are already doing seed research or breeding trials.

Areas of research interest identified by 12 of the 22 respondents include:

1. Potatoes: 25.0%
2. Cold tolerant: 16.6%
3. Other: Beans, Brassicas, Breeding 101, Broccoli, Cross Breeding, Diversity, Drought Adaptation, Farm Visits, Flowers, Harvest Window, High Altitude Coastal Crops, Onions, Overwinter Storage for Biennials, Peas, Rogueing, Selection, Shared Skills/Knowledge, Spinach, Squash Seeds, True Garlic, Work Around Fall Weather.

#### **Farmer Cooperation:**

4.6% of respondents always work with other BC seed producers to determine what seeds to grow and 86.4% of respondents said they would be interested in collaborating with other BC seed producers to grow out seed crops to meet the seed demands of BC farmers.

59.1% of respondents would be interested in retailing seed through a producers' co-operative.

14 respondents identified the varieties they would be willing to sell through a producers' co-operative. These include:

1. Flowers: 35.7%
2. Lettuce: 21.4%
3. Beans: 21.4%
4. Herbs: 21.4%
5. Kale: 21.4%
6. Squash: 21.4%
7. Salad Greens: 14.3%
8. Carrots: 14.3%
9. Cilantro: 14.3%
10. Tomato: 14.3%
11. Pepper: 14.3%
12. Peas: 14.3%
13. Other: Arugula, Asian Greens, Beets, Brassicas, Cabbage, Chard, Cucumber, Fennel, Flax, Foxglove, Garlic, Grasses, Holy Basil, Parsley, Peruvian Goldenberry, Pumpkin, Quinoa, Radish, Shallots, Spinach, and Styrian.

Of the 21/22 respondents who answered this question, 38.1% would be interested in using a shared/centralized seed cleaning facility. Barriers to using a shared seed cleaning facility include:

1. Living remotely: 61.1%
2. Risk of contamination with non organic seed: 22.2%
3. Risk of contamination with non-pure or low quality seeds: 22.2%
4. Financially prohibitive: 22.2%
5. Other: Cost, timing, and transportation/shipping costs.

## Appendix A – Survey Results

### 1.) Is your farm or operation located in the province of British Columbia?

	<u>Response Total</u>	<u>Response Percent</u>
Yes	22	100.0%
No	0	0.0%

### 2.) How do you identify your farm operation?

	<u>Response Total</u>	<u>Response Percent</u>
Certified Organic	7	31.8%
In Transition to Organic Certification	2	9.1%
Ecological	13	59.1%
Conventional	0	0.0%

### 3.) Do you purchase seed for your farm operation? If no, please explain your answer in the text box below.

	<u>Response Total</u>	<u>Response Percent</u>
Yes	22	100.0%
No	0	0.0%

### 4.) Within the past five years, have you grown any seed crops?

	<u>Response Total</u>	<u>Response Percent</u>
Yes	22	100.0%
No	0	0.0%

### 5.) How many acres of land do you have in seed production?

	<u>Response Total</u>	<u>Response Percent</u>
1 acre or less	16	72.7%
1-5 acres	6	27.3%
5-10 acres	0	0.0%
10-20 acres	0	0.0%
20-50 acres	0	0.0%
50-100 acres	0	0.0%
100+ acres	0	0.0%

### 6) What type of seed saver and/or producer do you identify yourself as?

	<u>Response Total</u>	<u>Response Percent</u>
Backyard Seed Saver (non-commercial)	0	0.0%
Community (non-commercial)	0	0.0%
Small-scale commercial	22	100.0%
Large-scale commercial	0	0.0%
Other (please specify)	0	0.0%

**7.) Are your seed crops grown solely for seed?**

	<u>Response Total</u>	<u>Response Percent</u>
Yes, I grow solely for seed	2	9.1%
No, my seed production is integrated into my production system	15	68.2%
Other (please specify)	5	22.7%

1. Mostly, but many of those 'rogued' are sold as produce.
2. Not sure I understand.
3. Mix of both. Some seed crops are solely for seeds and other are integrated.
4. Both integrated and seed crop.
5. Crop dependent, sometimes a market crop with a portion for seed; selection requires removal of what will not be for seed which may be used for personal and market use.

**8.) Do you sell any of the seed you produce?**

	<u>Response Total</u>	<u>Response Percent</u>
Yes	18	85.7%
No	3	14.3%

**9.) Do you operate your own seed company?**

	<u>Response Total</u>	<u>Response Percent</u>
Yes	12	54.5%
No	10	45.5%

**10.) Do you market your own seed? If no, please explain in the comment box below.**

	<u>Response Total</u>	<u>Response Percent</u>
Yes	18	81.8%
No	4	18.2%

**Comments:**

1. We do not sell our seed, we grow it to use the following year.
2. Sell to small seed company.

**11.) Where do you market your seeds? (Choose all that apply).**

	<u>Response Total</u>	<u>Response Percent</u>
Own website/ business website	8	38.1%
Others' website	1	4.7%
Mail-out catalogue	3	14.3%
Seedy Saturday or Sunday events	14	66.7%
Farmers' markets	15	71.4%
Word of mouth	14	66.7%
Farm stand	5	23.8%
COABC database	0	0.0%
Local nurseries	6	28.6%
Independent grocers	6	28.6%
Chain grocers	0	0.0%
Artisan/ craft markets	2	9.5%%
To seed companies	6	28.6%
To seed distributors	3	14.3%
Other (please specify)	2	9.5%
1. We grow for only one small seed company, so no marketing necessary.		
2. Via Seeds Of Diversity Canada.		

**12.) Do you currently sell, or have you sold in the past, your seed to a seed company?**

	<u>Response Total</u>	<u>Response Percent</u>
Yes	12	54.5%
No	10	45.4%

**13.) If applicable, please list below which seed companies you have sold your seed to.**

Response Total: 11

1. Salt Spring Seeds, Stellar Seeds
2. Stellar Seed, Salt Spring Seed, Edible Earth, West Coast Seeds
3. Salt Spring Seeds
4. Stellar Seeds, Salt Spring Seeds, Edible Earth Seeds
5. Westcoast Seeds
6. West Coast Seeds, Abundant Life Seed Foundation, Southern Exposure Seed Exchange
7. Stellar Seeds, Salt Spring Seeds
8. Private for competitive reasons. Please research your own source
9. Salt Spring Seeds
10. Salt Spring Seeds
11. West Coast Seeds, Seeds of Change

**14.) Do you trade seed with other farmers? If yes, please state what percentage of your seed you trade?**

	<u>Response Total</u>	<u>Response Percent</u>
Yes	17	77.3%
No	5	22.7%

Comments: Of the 17 who responded 'Yes', the average percentage of seeds traded is 28.3%

**15.) Do you donate seeds to community organizations or events? If so, please specify the percentage of your seed you donate.**

	<u>Response Total</u>	<u>Response Percent</u>
Yes	20	90.9%
No	2	9.1%

Comments: 19 of the 20 who responded 'Yes', the average percentage of seed donated is 7.1%.

**16.) Of the seeds you sow each year, what percentage is sourced from your own saved seeds?**

	<u>Response Total</u>	<u>Response Percent</u>
0%	0	0.0%
1-5%	3	13.6%
5-10%	4	18.2%
10-20%	6	27.3%
20-40%	2	9.1%
40-60%	3	13.6%
60-80%	2	9.1%
80-99%	2	9.1%
100%	0	0.0%
Not sure	0	0.0%

**17.) Please select any barriers that prevent you from using more of your own seed. (Choose all that apply).**

	<u>Response Total</u>	<u>Response Percent</u>
Lack of space to grow out more seed	10	45.5%
Lack of space for adequate isolation distance	12	54.6%
Lack of time	12	54.6%
Not economically viable	9	40.9%
Too much work	3	13.6%
Varieties I want are difficult to grow for seed	8	36.4%
I am new to seed production and am still learning	5	22.7%
No desire to grow out more seed	0	0.0%
Lack of appropriate equipment	8	36.4%

N/A	0	0.0%
Other (please specify)	4	18.2%
<ol style="list-style-type: none"> <li>1. Commercial seed is just too darned convenient and economical! We typically save only unusual exotics that we've adapted to local conditions.</li> <li>2. Lots of hybrid cultivars are used for production at our farm.</li> <li>3. Still looking for improved genetics.</li> <li>4. I choose to grow varieties that are needed for organic production with wide genetics from larger production. I'll use my own seed as part or all when I have previously grown the variety.</li> </ol>		

**18.) Please identify which seed crops you have grown in the past 10 years. Response total: 20/22.**

	<b>Response Count</b>	<b>Response Percent</b>
Artichoke	0	0.0%
Arugula	14	63.6%
Asian Greens	12	54.5%
Basil	15	68.2%
Beans (Bush, Dry, Fava, Pole, Runner, Snap, Soy)	20	90.9%
Beets	8	36.4%
Broccoli	9	40.9%
Brussels Sprouts	1	4.5%
Carrots	6	27.3%
Cauliflower	2	9.1%
Celery	6	27.3%
Collards	5	22.7%
Corn	9	40.9%
Cucumber	14	63.6%
Eggplant	7	31.8%
Flowers	17	77.3%
Garlic (True Seed)	8	36.4%
Ground Cherry	9	40.9%
Herbs, Culinary	14	63.6%
Herbs, Medicinal	11	50.0%
Kales	20	90.9%
Kohlrabi	1	4.5%
Leeks	12	54.5%
Lettuces	15	68.2%
Melons	8	36.4%
Mustards	12	54.5%
Onions	8	36.4%
Parsnips	4	18.2%



Peas	18	81.8%
Peppers, Hot	14	63.6%
Peppers, Sweet	12	54.5%
Potatoes (True Seed)	5	22.7%
Pumpkin	10	45.5%
Radish	11	50.0%
Rapini	3	13.6%
Spinach	10	45.5%
Summer Squash	10	45.5%
Sunflowers	15	68.2%
Swiss Chard	10	45.5%
Tomatillos	9	40.9%
Tomatoes	20	90.9%
Turnips	4	18.2%
Winter Broccoli	5	22.7%
Winter Squash	13	59.1%
Other (please specify): Buckwheat, Foxtail Millet, Goji, Oats, Pearl Grass, Quinoa, and Salad Greens (Claytonia and NZ Spinach)	5	22.7%

**19.) Within the past 10 years, please identify which seed crops you have experience growing in bulk (for farm scale). Response total: 20/22.**

<b>Answer Options</b>	<b>Response Count</b>	<b>Response Percent</b>
Artichoke	0	0.0%
Arugula	10	50.0%
Asian Greens	6	30.0%
Basil	2	10.0%
Beans (Bush, Dry, Fava, Pole, Runner, Snap, Soy)	10	50.0%
Beets	5	25.0%
Broccoli	3	15.0%
Brussels Sprouts	0	0.0%
Carrots	4	20.0%
Cauliflower	0	0.0%
Celery	1	5.0%
Collards	0	0.0%
Corn	4	20.0%
Cucumber	3	15.0%
Eggplant	2	10.0%
Flowers	7	35.0%
Garlic (True Seed)	2	10.0%
Ground Cherry	3	15.0%

Herbs, Culinary	5	25.0%
Herbs, Medicinal	3	15.0%
Kales	9	45.0%
Kohlrabi	0	0.0%
Leeks	5	25.0%
Lettuce	7	35.0%
Melons	4	20.0%
Mustards	5	25.0%
Onions	5	25.0%
Parsnips	3	15.0%
Peas	8	40.0%
Peppers, Hot	4	20.0%
Peppers, Sweet	3	15.0%
Potatoes (True Seed)	3	15.0%
Pumpkin	5	25.0%
Radish	6	30.0%
Rapini	1	5.0%
Spinach	4	20.0%
Summer Squash	2	10.0%
Sunflowers	3	15.0%
Swiss Chard	3	15.0%
Tomatillos	1	5.0%
Tomatoes	12	60.0%
Turnips	1	5.0%
Winter Broccoli	1	5.0%
Winter Squash	7	35.0%
Other (please specify): Foxtail Millt, Pearl Grass, Potatoes from TPS, Qunioa, and Same as Question #18.	3	15.0%

**20.) Do you grow any of your own cover crop seeds? If yes, please list the crops in the text box below.**

	<u>Response Total</u>	<u>Response Percent</u>
Yes	5	23.8%
No	16	76.2%

Comments:

6. Buckwheat (small trial this year).
7. Buckwheat, oats, and rye (some years and only a percentage of what is needed at the farm).
8. Self sowing rye, buckwheat, and sweet clover.
9. Red Russian Kale.
- Winter rye/buckwheat/oats/ongoing large white clover....ripening in field/reseeded.

**21.) On a scale of 1 (not rigorous) to 5 (very rigorous), how rigorous are you with your crop selection process?**

	<u>Response Total</u>	<u>Response Percent</u>
1	0	0.0%
2	3	13.6%
3	6	27.3%
4	9	40.9%
5	4	18.2%
Not sure	0	0.0%
N/A	0	0.0%

**22.) Please select any barriers that prevent you from practicing specific selections on your seed crops. (Choose all that apply).**

	<u>Response Total</u>	<u>Response Percent</u>
Lack of space to grow out more seed	10	50.0%
Lack of time	12	60.0%
No reason to do selection	5	25.0%
I am new to seed production and am still learning how to select for breeding	6	30.0%
I do not want to go below ideal population numbers	10	50.0%
I am unaware of selection practices	1	5.0%
Not applicable	2	10.0%
Other (please specify)		
1. Need to grow enough seed to make it economically viable.		
2. Basically, each species is handled differently.		
3. Missing timing ex: radishes.		

**23.) Do you try to uphold minimum populations for your seed crops?**

	<u>Response Total</u>	<u>Response Percent</u>
Yes, always	9	40.9%
As much as possible	10	45.5%
Sometimes	0	0.0%
No	1	4.5%
I am unaware of the minimum population sizes for the crops I grow	1	4.5%
Not applicable	0	0.0%
Other (please specify)	1	4.5%
1. Different approach for different species.		

**24.) Have you ever trialed seed (i.e., conducted side by side comparisons of your seed against another company or grower’s seed, or seed from multiple seasons or locations)? If yes, please specify in the text box below how your seed(s) compared.**

	<u>Response Total</u>	<u>Response Percent</u>
Yes	11	50.0%
No	11	50.0%

Comments:

1. Well.
2. Similar comparisons with very small differences but significant enough to make a choice between varieties.
3. We don’t trial our seed, but have supplied seed to universities for their trials.
4. I often do compare a first year seed crop with the “maternal seeds” the following year. So far only equal or better results were noted.
5. Mostly better.
6. Usually well, but not always so. Usually one source will excel in one area, while the other will excel in another. Each line has it’s own strengths and weaknesses.
7. Sometimes really well, other times not.
8. .Yes, I do this as a matter of course. Usually my own seed does better; I’m not sure why!
9. PSP seed is very adapted to difficult growing conditions. I have sometimes found that seeds grown in better conditions have a harder time in my field.

**25.) Do you network with other BC farmers or seed producers to determine which seed crops to grow?**

	<u>Response Total</u>	<u>Response Percent</u>
Always	1	4.5%
Often	6	27.3%
Sometimes	13	59.1%
Never	2	9.1%
Not applicable	0	0.0%
Other (please specify)	0	0.0%

**26.) Would you be interested in collaborating with other BC seed growers to grow out seed crops to meet the seed demands of BC farmers.**

	<u>Response Total</u>	<u>Response Percent</u>
Yes	19	86.4%
No	2	9.1%
Not sure	1	4.5%
Other (please specify)	0	0.0%

**27.) If applicable, please list the seed companies you have bought seeds from in the past 5 years? (Fill in the text box below). Response total: 17/22**

1. Johnnys, West Coast, Salt Spring, Rebecca's, Stellar, Territorial, High Mowing,
2. West Coast Seeds, Wild Garden Seeds, Heritage Harvest Seed, Cottage Gardener Seed, High Mowing Seeds. Johnny's. Salt Spring Seeds. Stellar Seeds. Eagle Ridge Seeds. Prairie Garden Seeds, Adaptive Seeds, others!
3. West Coast Seeds, Johnny's.
4. West Coast, Stellar, Saltspring, High Mowing, Osbourne, Johnny's, William Dam, Full Circle.
5. Salt Spring Seeds, West Coast Seeds, William Dam, Cottage Gardener, Full Circle, Johnny's.
6. Territorial, Horizon Herbs, West Coast, Johnny's, Vesys.
7. Johnny's, West Coast, Osborne, Territorial, Salt Spring Seeds, Stellar Seeds, High Mowing, West Coast Seeds, Johnnys, Salt Spring Seeds.
8. So many....West Coast, Salt Spring, Sunshine Farm, Planting Seeds Project, Mountain Seed Co., Two Wings, ALM Farm, Johnny's, William Dam, Prairie Garden, Wild Garden, Uprising, Italian Food and Seed.
9. Osborne Seeds, Stellar Seeds, Wild Garden Seeds, William Dam Seeds, Johnny's Selected Seeds, Veseys Seeds, Salt Spring Seeds, West Coast Seeds.
10. Baker Creek, Southern Exposure, Sustainable Seed Exchange, Wild Garden Seeds, Salt Spring Seeds, Johnnies, Osborne.
11. Johnny's, Wild Garden Seeds, Uprising, Stellar, Salt Spring Seeds, William Dam, West Coast, Sunshine, High Mowing, Syskiyou, Adaptive Seeds, and a few more I can't recall at the moment.
12. West Coast, William Dam, Quality Seeds West.
13. High Mowing, Westcoast Seeds, Adaptive Seeds, Johnny's, Vesey's.
14. Adaptive Seeds, Osbourne Seeds, William Dam Seeds, West Coast Seeds, Johnny's Selected, Seeds Kitazawa Seed Co., Heritage Harvest Seeds, The Cottage Gardener, Seeds of Victoria, Prairie Garden Seeds, Eagleridge Seeds, Stellar Seeds, Salt Spring Seeds, Renee's Garden Seeds.
15. Salt Spring Seeds.
16. Trades at Seedy Saturdays, West Coast Seeds, High Mowing, Seeds of Change, Wild Garden Seed, Hands on Organics.

**28.) Approximately, how much do you spend each year on seeds (for entire farm operation)?**

	<u>Response Total</u>	<u>Response Percent</u>
\$50-\$100	2	9.1%
\$100-\$250	0	0.0%
\$250-\$500	8	36.4%
\$500-\$1000	5	22.7%
\$1000-\$1500	2	9.1%
\$1500-\$2000	1	4.5%

\$2000+	4	18.2%
Other (please specify)	0	0.0%

**29.) How do you source your seeds?**

	<u>Response Total</u>	<u>Response Percent</u>
Print/mail seed catalogue	19	86.4%
Online seed catalogue	20	90.9%
Purchase from other farmers	9	40.9%
Trade with other farmers	5	45.5%
Word of mouth	2	13.6%
Local distributors	1	4.5%
Wholesale	1	4.5%
Local nurseries	2	9.1%
Chain nurseries	2	9.1%
Independent grocers	1	4.5%
Chain grocers	0	4.5%
Seeds bank	3	13.6%
Seed library	1	4.5%
Other (please specify)	6	27.3%
1. Seed sales		
2. Local feed store: cover crop seed		
3. Seedy Saturdays		
4. Wild harvesting		
5. Exchanges		
6. Look for sought variety on line		

**30.) Do you attempt to source Certified Organic seeds before purchasing from conventional seeds companies?**

	<u>Response Total</u>	<u>Response Percent</u>
Yes	18	81.8%
No	0	0.0%
Not applicable	0	0.0%
Other (please specify)	0	0.0%
1. Sometimes.		
2. If I cannot find a Cert Organic variety I grow out conventionally grown. Genetics is top priority, but if given choice, will take organic option.		
3. Yes.....but don't necessarily choose this over conventional depending on population and isolation basis.		

**31.) Do you make an attempt to source Ecologically produced seeds before purchasing from conventional seed companies?**

	<u>Response Total</u>	<u>Response Percent</u>
Yes	15	68.2%
No	2	9.1%
Not applicable	1	4.5%
Other (please specify)	4	18.2%
1. I've never seen it distinguished.		
2. Would like to, but have never seen it offered.		
3. Yes, but this is not easy to tell....		
4. I consider these the same, much to the concern of verification officers in the past.		

**32.) On a scale of 1 (not important) to 5 (very important), how important is it for you to purchase Certified Organic seed?**

	<u>Response Total</u>	<u>Response Percent</u>
1	0	0.0%
2	1	4.5%
3	2	9.1%
4	8	36.4%
5	10	45.5%
N/A	1	4.5%
Not sure	0	0.0%

**33.) On a scale of 1 (not important) to 5 very important), how important is it for you to purchase Ecologically produced seeds?**

	<u>Response Total</u>	<u>Response Percent</u>
1	0	0.0%
2	0	0.0%
3	2	9.1%
4	3	13.6%
5	13	50.1%
N/A	1	4.5%
Not sure	3	13.6%

**34.) What percentage of your seed purchases are Certified Organic?**

	<u>Response Total</u>	<u>Response Percent</u>
0%	0	0.0%
1-5%	0	0.0%
5-10%	0	0.0%
10-20%	2	9.1%
20-40%	13	27.3%

40-60%	4	18.2%
60-80%	8	36.4%
80-99%	1	4.5%
100%	0	0.0%
Not sure	1	4.5%

**35.) What percentage of your seed purchases are Ecologically produced?**

	<u>Response Total</u>	<u>Response Percent</u>
0%	1	4.5%
1-5%	0	0.0%
5-10%	2	9.1%
10-20%	2	9.1%
20-40%	2	9.1%
40-60%	2	9.1%
60-80%	5	22.7%
80-99%	2	9.1%
100%	1	4.5%
Not sure	15	22.7%

**36.) Please identify any barriers that limit you from purchasing more Certified Organic seed. (Choose all that apply).**

	<u>Response Total</u>	<u>Response Percent</u>
Too expensive	5	22.7%
Varieties needed are not available	21	95.5%
Poor quality	2	9.1%
Can not get the quantities I require	7	31.8%
Not applicable, all seeds purchased are Certified Organic	0	0.0%
Other (please specify)	2	9.1%
1. We are not allowed to bring in seed potatoes to our valley, as it is a certified seed potato area.		
2. Population and isolation. Poor quality is certainly turning up in commercial ex: 1) squash diversity within variety 2) stem colors variety specific: ex: purple mizuna with green stems.		

**37.) Please identify any barriers that limit you from purchasing more Ecologically produced seed. (Choose all that apply).**

	<u>Response Total</u>	<u>Response Percent</u>
Too expensive	0	0.0%
Varieties I want are not available	16	76.2%
Poor quality	4	19.1%
Can not get the quantities I require	8	38.1%
Not applicable. All seeds purchased are	0	0.0%



Ecologically produced		
Other (please specify)	4	19.1%
1. I don't trust any label except Certified Organic.		
2. Typically come from smaller seed companies that only offer packets for home gardeners.		
3. Seeds are rarely advertize as "ecologically grown."		
4. With the genetics I prefer - isolation and population.		

**38.) How often do you buy Certified Organic cover crop seed?**

	<u>Response Total</u>	<u>Response Percent</u>
Always	1	4.8%
Sometimes	9	42.9%
Rarely	4	19.1%
Never	5	23.8%
Not applicable	1	4.8%
Other (please specify)	1	4.8%
1. Not locally available at reasonable cost.		

**39.) How often do you buy Ecologically produced cover crop seed?**

	<u>Response Total</u>	<u>Response Percent</u>
Always	1	4.6%
Sometimes	8	36.4%
Rarely	4	18.2%
Never	5	22.7%
Not applicable	2	9.1%
Other (please specify)	2	9.1%
1. Not really sure what is 'ecologically produced.'		
2. Not conveniently locally available at reasonable cost.		

**40.) Are you able to source adequate quantities of Certified Organic seed for your farm?**

	<u>Response Total</u>	<u>Response Percent</u>
Yes	6	27.3%
No	15	68.2%
Not applicable	1	4.6%
Other (please specify)	0	0.0%

**41.) Are you able to source adequate quantities of Ecologically produced seed for your farm?**

	<u>Response Total</u>	<u>Response Percent</u>
Yes	7	31.8%
No	10	45.5%

Not applicable	4	18.2%
Other (please specify)	1	4.5%
1. Not sure		

**42.) Please identify any barrier(s) that limit you from purchasing more Certified Organic cover crop seeds. (Choose all that apply).**

	<u>Response Total</u>	<u>Response Percent</u>
Not available in Certified Organic	12	54.5%
Can not source the quantities required	9	40.9%
Too expensive	8	36.4%
Not required by Certification standards	0	0.0%
Not applicable. I do not use cover crop seeds	3	13.6%
Not sure	0	0.0%
Other (please specify)	3	13.6%
1. Shipping is too costly from certified organic sources.		
2. Not enough interested buyers to justify it.		
3. Not easily available. Require shipping rather than pick up.		

**43.) Please identify any barrier(s) that limit you from purchasing more Ecological cover crop seeds. (Choose all that apply).**

	<u>Response Total</u>	<u>Response Percent</u>
Desired varieties are not available	8	38.1%
Can not source the quantities required	9	42.9%
Too expensive	3	14.3%
Not applicable. I do not use cover crop seeds	3	14.3%
Not sure	1	4.8%
Other (please specify)	4	19.1%
1. Again, I've never seen this, would be wary.		
2. Not sure where they are available or what is 'ecological.'		
3. Not enough interested buyers to justify it		
4. Not sourcing local other than neighbours wheat.		

**44.) Do you make an attempt to source BC grown seed?**

	<u>Response Total</u>	<u>Response Percent</u>
Yes	18	85.7%
No	3	14.3%

**45.) If you answered yes to question #44, what percentage of your purchased seeds are grown in**

	<u>Response Total</u>	<u>Response Percent</u>
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0%	0	0.0%
1-5%	5	21.1%
5-10%	1	5.3%
10-20%	8	42.1%
20-40%	1	5.3%
40-60%	1	5.3%
60-80%	1	5.3%
80-99%	0	0.0%
100%	0	0.0%
Not sure	2	10.5%
Not applicable	1	5.3%

**46.) What percentage of the BC grown seeds, that you purchase each year, is Certified Organic or Ecological? 20/22**

	<u>Response Total</u>	<u>Response Percent</u>
0%	0	0.0%
1-5%	2	10.0%
5-10%	3	15.0%
10-20%	3	15.0%
20-40%	0	0.0%
40-60%	4	15.0%
60-80%	1	5.0%
80-99%	2	10.0%
100%	3	15.0%
Not sure	3	15.0%

**47.) On a scale of 1 (not important) to 5 (very important) how important is it for you to source BC grown seed?**

	<u>Response Total</u>	<u>Response Percent</u>
1	1	4.8%
2	2	9.5%
3	4	19.1%
4	7	33.3%
5	7	33.3%
N/A	0	0.0%
Not sure	0	0.0%

**48.) Please identify any barriers(s) that limit you from purchasing more local/regional seed. (Choose all that apply).**

	<u>Response Total</u>	<u>Response Percent</u>
Too expensive	5	22.7%
Varieties I want are not available	20	90.9%
Seed quality is not good enough	7	31.8%
Seed purity is not good enough	4	18.2%

Can not get the quantities I require	18	81.8%
Not sure who sells local seed	8	36.4%
Not applicable	0	0.0%
Others (please specify)	2	9.1%
1. If I can get the same variety in a better quality than I believe I can get the same variety from a BC company I may not by the local seed.		
2. Costs seem high for small amount of grower seed production. Perhaps larger production will bring this into better balance as it's not harder to grow or process more seeds in many cases. Good that we can learn about the seed with conversations with the grower, even if it doesn't lead to a purchase due to criteria sought. (ex., source, population size, isolation, selection, etc).		

**49.) On a scale of 1 (low quality) to 5 (high quality), how would you rate the quality of BC grown Certified Organic seed to conventional seed that you use/have used?**

	<u>Response Total</u>	<u>Response Percent</u>
1	0	0.0%
2	0	0.0%
3	8	36.4%
4	7	31.2%
5	4	18.2%
Not sure	3	13.6%

**50.) On a scale of 1 (low quality) to 5 (high quality), how would you rate the quality of BC grown Ecological seed to conventional seed that you use/have used?**

	<u>Response Total</u>	<u>Response Percent</u>
1	1	4.5%
2	2	9.1%
3	5	22.7%
4	5	22.7%
5	4	18.2%
Not sure	5	22.7%

**51.) On a scale of 1 (low quality), to 5 (high quality), how would you rate the quality of BC grown seed to that purchased out of the province or country?**

	<u>Response Total</u>	<u>Response Percent</u>
1	1	4.5%
2	0	0.0%
3	10	45.5%
4	6	27.3%
5	2	9.1%
Not sure	3	13.6%

**52.) Which companies do you currently purchase your BC grown Certified Organic or Ecological seeds from? (Please list in the text box below).**

1. Salt spring, Steller, Rebecca's.
1. Salt Spring Seeds, Eagle Ridge Seeds, Stellar Seeds.
2. Salt Spring Seeds, West Coast Seeds, Steller seeds.
3. Stellar and Saltspring Seeds.
4. Salt Spring Seeds, Full Circle Seeds, West Coast Seeds (but not sure where these are grown!)
5. Can't recall. Probably West Coast.
6. Stellar Seeds, West Coast Seeds, Salt Spring Seeds, Full Circle Seeds.
7. West Coast Seeds, Salt Spring Seeds.
8. Same list as I wrote earlier, I'm the survey.
9. Stellar seeds and Salt Spring seeds.
10. Salt Spring, Stellar, Full Circle, and several others that I can't remember the name of but know from Seedy events.
11. Stellar, Salt Spring, Sunshine Farm, Across The Creek, Full Circle, Two Wings.
12. West Coast.
13. Stellar Seeds Salt Spring Seeds Eagleridge Seeds Seeds of Victoria.
14. Salt Spring Seeds Stellar Seeds.
15. Seedy Saturday trades and purchases: try to sample from most growers.

**53.) What type of education, training, or experience do you have in the area of seed growing, breeding, and saving? (Choose all that apply).**

	<u>Response Total</u>	<u>Response Percent</u>
University Trained	2	9.1%
Self-taught	18	81.8%
Workshops	16	72.7%
Apprenticeships	4	18.2%
Farmer-to-farmer training	19	86.4%
Resource books	18	81.8%
Not applicable	0	0.0%
Other (please specify)	6	27.3%
<ol style="list-style-type: none"> <li>1. John Navazio's training.</li> <li>2. Trial &amp; error - as a society we are too hung up on the need for education.</li> <li>3. Webinars.</li> <li>4. Some school courses in horticulture/farming.</li> <li>5. Understand population/quantitative genetics.</li> <li>6. Observation, trial and error, repetition, experience, short term apprenticeships on seed grower farms and Abundant Life Seed Foundation.</li> </ol>		

**54.) What support would most help you to grow better seed? (Choose all that apply).**

	<u>Response Total</u>	<u>Response Percent</u>
Workshops	13	59.1%
Seed growing manual	6	27.3%
Access to a shared seed cleaning facility	14	63.6%
Increased networking opportunities with other farmers	14	63.6%
Not sure	1	4.5%
Not applicable	1	4.5%
Other (please specify)	7	31.8%
1. More land and time.		
2. Mentorship.		
3. More buyers.		
4. Funding sources to support our work. Perhaps grants.		
5. Extension service.		
6. Variety standards. How does one select for variety purity without having a standard to select towards?		
7. Seed cleaning and seed germination facilities. I personally travel with thresher and winnower and screens supporting community seed cleaning.		

**55.) What support would help you make more informed seed purchases? (Choose all that apply).**

	<u>Response Total</u>	<u>Response Percent</u>
Workshops/Webinars	12	54.6%
Regional seed collective meetings	9	40.9%
Review/interview with regional seed companies in agriculture magazines/website	11	50.0%
More information from seed companies about seeds	13	59.1%
Not sure	3	13.6%
N/A	3	13.6%
Other (please specify)	3	13.6%
1. Online resources of all seed growers in one place		
2. Bulk quantities of seed available at COABC conference		
3. Careful to be inclusive in the area of reviews and interviews, or those who already have great market and publicity will simply get more, and those not as well known will continue this placement.		

**56.) In order to improve your seed growing, breeding, and saving skills, please list topics you would like to see addressed at workshops or university training program?**

1. Seed born diseases, cleaning practices for specific crops, seed storage.
2. Breeding quality control harvest.

3. Isolation practices, hands on field pollination and selection, practical tips for market gardeners to incorporate seed into their production.
4. Population numbers plant selection cross-pollination
5. Not interested in biased information sources. IE. Universities are the source of GE. Remember David Suzuki has rejected (and been rejected by) the scientific community. This survey reflects much of the thinking that has led to GE and destroyed independent seed production. You really need to rethink many of your paradigms.
6. Practical ideas for saving, cleaning, storing, selling, etc...seeds of flowers and veggies.
7. Selection among small populations, basic breeding lessons with examples from the field. Seed storage practices, seed germination 201, seed harvest techniques and tools.
8. Hands-on breeding technique workshop. Seed crop pathology workshop.
9. Selection and advanced botany and genetics.
10. Crop specific breeding, selection, and seed harvesting details. Much of current information teaches how to get the seeds, but do little to help one learn how to select for elite quality seeds. I sometimes get the idea that those doing the teaching don't even know.
11. Prodigy breeding of brassicas.
12. Breeding, selection, storage.
13. Disease transfer in seeds, how to cross varieties.
14. Disease management in seed crops. Nutrition needs in seed crops. Correct small-scale harvesting methods. Successful germination testing methods. Vegetable breeding 101.
15. How to trial squash seed for crossing.
16. Seed transferred disease. Genetics and germination discussions around selection: such as how much diversity is acceptable. Participatory plant breeding in general. Invasive plants

**57.) Please list some of the seed saving and/or breeding resource books that you have used.**

1. Susan Ashworth, Patricks, Dan Jason's, Parks Seed.
2. Grow your own vegetable varieties - Carol Deppe, Seed to Seed - Susan Ashworth Organic Seed Grower - John Navazio.
3. Seed to Seed.
4. Seed to Seed (not sure, I'm at work!).
5. Seed to Seed - Ashworth Patrick Steiner's handbook John Navazio's book Brian Connolly - wisdom of plants Dan Jason's book Organic Seed Alliance resources.
6. Seed to Seed, The Kokopelli Foundation.
7. Various books on seed saving.
8. The Organic Seed Grower, Seed to Seed, The Seed Savers Handbook, Cornucopia 2, Breed Your own Vegetable Varieties, OSA handouts on specific crop seed production, others.

9. Principles of Plant Breeding, RW Allard 1st edition Breeding Plants Resistant to Insects, Ed FG Maxwell Plant Breeding, LH Bailey.
10. Seed to Seed, Suzanne Ashworth. Breed your own Vegetable Varieties, Carol Deppe. The Organic Seed Grower, John Navazio. Organic Seed production and saving, Brian Connolly. Seed Saving as if our lives depended on it, Dan Jason.
11. Breeding Field Crops, Poehlman; Principles of Plant Breeding, Allard; Principles of Population Genetics, Hartl; Flower & Vegetable Plant Breeding, Watts; The Organic Seed Grower, Navazio; Seed to Seed, Ashworth.
12. How To Breed Your Own Vegetable Varieties, Seed To Seed, The Organic Seed Grower.
13. Just in general books like Rodale.
14. Seed to Seed.
15. How to Breed you own Vegetable Varieties, Seed to Seed, The Organic Seed Grower.
16. Seed to Seed, Breed YO Veg by Carol Deppe. OSA on line guide. SOD new guidebook.
17. Seed to Seed, OSA seed saving manual, John Navazio's book above 3 are in my field or in a file drawer available all the time. Seed ambassadors, Seeds of Diversity, Saving Seeds, seed catalogues, David Theodopolus seed catalogue, Breeding for Resistance, John Navazio's first breeding for organics course and required materials. (his manual and university text plant breeding) and more.

**58.) Please identify if you have ever used the following web-based seed resources. (Choose all that apply).**

	<u>Response Total</u>	<u>Response Percent</u>
COABC seed database	8	40.0%
BC Food System Network's – BC Seeds Listserv	8	40.0%
<a href="#">Seeds of Diversity Canada</a>	17	85.0%
BC Seeds Website	8	40.0%
Farm Folk City Folk	10	50.0%
Bauta Family Initiative on Canadian Seed Security	7	35.0%
USC	6	30.0%
Organic Seed Alliance	14	70.0%
Other (please specify)	5	25.0%
1. Wildflower and native plant websites.		
2. "Going to Seed" Blog by Daniel Brisebois.		
3. Attra		
4. Youtube		
5. Seed Ambassadors, Sierra Seeds Co-op., Synergy Seeds, Wild Garden Seeds, and many other companies not in BC...and more.		

**59.) Would you be interested in participating in a farmer led Participatory Plant Breeding Program?**



	<u>Response Total</u>	<u>Response Percent</u>
Yes	17	77.3%
No	1	4.5%
Not sure	4	18.2%
Other (please specify)	0	0.0%

**60.) Would you be interested in doing seed research or plant breeding trials on your farm?**

	<u>Response Total</u>	<u>Response Percent</u>
Yes	11	50.0%
No	2	9.1%
Not sure	1	4.6%
Already doing research and trials and would do more	8	36.4%
Already doing research and trials and would not do more	0	0.0%

**61.) If there are any specific areas of seed growing or plant breeding that interest you, please list them in the text box below.**

1. Improving varieties of winter storage / cold season crops for year-round growing.
2. Club root resistant varieties of brassicas.
3. I have yet to experiment with cross breeding.
4. Potatoes, beans, peas, flowers.
5. Many, but tired now, near the end of this survey. phew! :)
6. Broccoli, spinach, onions, potatoes.
7. Brassicas, true garlic and potato seed.
8. Cold tolerant / higher altitude coastal crops.
9. Drought adaptation, cold tolerance (basically selecting varieties that can withstand climate change variables).
10. Best overwinter storage for biennial seed crops. Harvest windows, how to work around challenging fall weather. More info on effective selection and rouging. Vegetable breeding 101.
11. Squash seed growing, learning to stabilize a variety, techniques for improving seed quality.
12. How much diversity do we want in a crop? Farm visits to 1) know crops in the field of other growers that I may purchase from 2) Share skills and knowledge with other seed growers (great for me when they're skilled...great for them when they need some initiation assistance!

**62.) Would you be interested in retailing seed through a BC Seed Producers Co-operative by becoming a members of the co-operative.**

	<u>Response Total</u>	<u>Response Percent</u>
Yes	13	59.1%
No	1	4.6%
Not sure	8	36.4%

**63.) If interested in retailing seed through a producers cooperative, what types of seeds would you be interested in retailing? Please list seeds in the text box below.**

1. Parsnips, beets, carrots, cilantro, tomato, cucumber, winter squash.
2. Any.
3. Brassica, lettuce, tomatoes, peppers, beans, peas, garlic, flowers.
4. Peruvian Goldenberry (Physalis peruviana), Styrian Pumpkin, Holy Basil, Foxglove, Flax.
5. Vegetable seeds.
6. We are Certified Organic potato seed growers. Would be interested in other seeds that are hard to source that grow well in our valley.
7. Vegetables, herb, flower.
8. Wildflowers and wildflower blends.
9. Beans, peas, arugula, radish, spinach, quinoa, lettuce, flower, herbs, ornamental grasses, shallots, kale, chard, cilantro and more.
10. I would need to see the business/profit sharing structure before getting into any other specifics.
11. Cabbage, kale/Brussels, cross, beans, salad greens.
12. Kale, hot pepper, lettuce, Asian greens.
13. Red Russian kale, butternut squash, kabocha squash. Parsley, herb, fennel, Harris Model parsnip, berlicummer carrot.
14. Beans/squash/greens/flowers/herbs/any seeds produced in quantity...including what is not planned ahead. Based on successful growing, ease of deciding crops to be grown, supporting autonomy represents quality integrity that I support. Wasy to work with and not overly expensive overhead and operational cuts post membership fees.

**64.) Would you be interested in utilizing a centralized seed cleaning facility (BC-based) for processing your seeds?**

	<u>Response Total</u>	<u>Response Percent</u>
Yes	8	38.1%
No	5	23.8%
Not sure	8	38.1%

**65.) Please identify any barrier(s) that would limit your interest in using a shared seed cleaning facility. Choose all that apply).**

	<u>Response Total</u>	<u>Response Percent</u>
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Risk of contamination of organic with non-organic seed stock	4	22.2%
Risk of contamination with un-pure or Low quality seed stock	4	22.2%
Live remotely	11	61.1%
Financially prohibitive	4	22.2%
Not applicable	0	0.0%
Other (please specify)	6	33.3%
1. Timing.		
2. Transportation costs to facility.		
3. Shipping costs.		
4. Seed cleaners are available that are inexpensive and adequate by a few seed growers already. Also, I am a mechanically inclined person and do not require a central co-op. I can do it myself.		
5. Exposing my hard work to another's quality control makes me uncomfortable.		
6. I supply threshers and winnowers and am looking forward to seeing the mobile unit at the gathering. I am also looking to put together an efficient mobile system. I do travel to fall fairs, farms and farmers markets with the equipment I have - as I have for more than 15 year.		

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