Native Plant Society of Saskatchewan

Assessment of the Native Plant Materials Industry in Western Canada and the Northern United States – Results from the Providers and Users of Native Plant Materials

Final Report

Table of Contents

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Executive Summary

The Native Plant Society of Saskatchewan has produced this market assessment of the native plant materials industry in Western Canada and the Northern United States in response to a lack of current information regarding the industry. Results from the surveys show both positive and negative results.

Positive

- There has been a recent influx in the number of people who deal with native plant materials.
- Currently, there is a demand for native plant materials, and an indication that demand will rise.
- Compared to previous survey results, the industry is generally growing and improving.

Negative

- There is a disconnect between users and providers of native plant materials.
- Users are not satisfied with the selection of native species available to them.
- Research on various aspects of native plant materials is still lacking.
- Most providers of native plant materials only operate on a part-time basis.

If the industry can build upon the positive aspects and overcome the obstacles, it will result in continued growth. The road ahead is not any easy one, but if both users and providers of native plant materials understand the implications of the results in this report and implement the recommendations, there is a chance that a level of growth never before attained could be achieved by the industry. If the obstacles cannot be overcome or, worse, if they are ignored, then the rate of growth for the industry will be much slower and risk becoming stagnant.

Raw data resulting from this market assessment may be available upon request, but will not contain any information that identifies any survey participants. Also, past market assessment reports may be available by contacting the Native Plant Society of Saskatchewan.

Introduction

The purpose of this project was to determine the current state of affairs regarding the native plant materials industry in western Canada and the northern United States. This assessment was undertaken to address the need for accurate, current and useful information to help both users and providers of native plant materials and thus drive the growth of the industry. As of the initiation of this project, no current information existed regarding the native plant industry market, and there was very little historical information. What did exist was badly outdated. Problems for both users and providers of native plant materials were known to exist, but the information regarding these issues was mostly anecdotal and difficult to quantify. What was needed was a formal assessment that asked pertinent questions and collected relevant data that could be synthesized to give a clear picture of the native plant industry so that stakeholders have current, reliable information to base their decisions on.

Methods

Two surveys were created: one for users of native plant materials and one for providers of native plant materials. Before the current surveys were composed, previous surveys and their results were studied to determine what the issues were in the past and to compare them to perceived issues facing the industry today. After this was completed, certain questions were borrowed from previous surveys in

order to identify trends, while other new questions were composed to identify current issues. Also, in some cases the same questions were used in both the provider and user surveys in order to see if the groups agreed with one another. A compromise had to be reached between collecting sufficient information to synthesize an adequate analysis and risking having survey participants abandon the survey because it was too onerous.

Once the surveys were created, they were released in two versions: an online version and a printed copy that had a postage-paid envelope with the return address. To ensure a good rate of return, the survey period lasted over seven months (with multiple reminders throughout this time) and two $200 prizes, one for the user survey and one for the provider survey, to provide incentive. The surveys were advertised on the NPSS website and in the Native Plant News. An announcement of the surveys was also sent to partner organizations and the media. Printed copies of the surveys were sent to known users and providers of native plant materials without an e-mail address and a link to the online survey (www.surveymonkey.com) was sent out to known users and providers of native plant materials who had an e-mail address. Everyone who received the surveys was encouraged to pass it on to other interested parties. The survey was open to input starting on May 14, 2010 and ending on December 30, 2010. In November, a draft report of the results from both surveys was released for review. Toward the end of the survey period, there were two public forums in order to discuss the draft results of both surveys: one on December 4, 2010 in Saskatoon and one on December 11, 2010 in Regina. The participants in the public forums commented on the results and discussed possible solutions to the problems identified. These were incorporated into the results and recommendations of the final report.

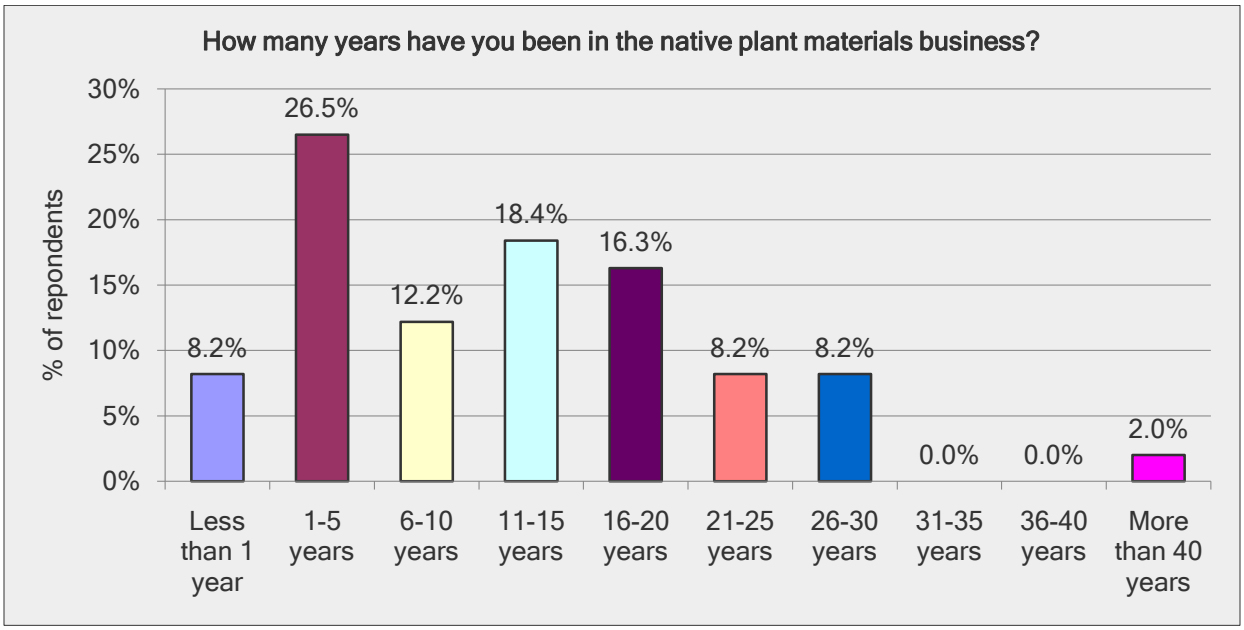
To date, these surveys are the most comprehensive ever done and have the highest number of participants. The survey done in 1997 sent a total of 128 surveys and had 47 come back. The survey completed in 2000 sent out 243 surveys and had 109 returned. Another survey sent out in 2005 sent out an unknown number of surveys and had 12 responses. Our survey had 133 returns out of a total of 262 surveys sent out. However, some who completed the survey were not originally sent a survey but instead found it on our website, so it is impossible to determine exactly how many people were exposed to our survey in total.

Where possible, our results were compared to previous results where the same question was posed in order to identify any trends. Due to slight differences in the categorization of answer choices in previous surveys, direct comparisons could not always be easily made. Also, some of the questions in the current surveys are new and so no trend information can be obtained. However, if these questions are posed in future surveys then trend analysis will be possible. Sample size, both in the current study and in all of the previous studies, was too small to perform complex statistical analyses.

Results from the Providers of Native Plant Materials

The following document summarizes the results of the survey completed by providers of native plant materials and services. In some circumstances, survey participants skipped certain questions. This could either be due to the fact that the question didn't apply to them, or that they didn't know the answer. There is also a level of secrecy that exists in the industry in that providers want to retain a competitive advantage and don't feel comfortable in divulging certain information even if it does remain anonymous. The survey was directly sent to 62 providers of native plant materials in Western Canada and the Northern United States and a total of 50 participants completed the survey. Here are the results:

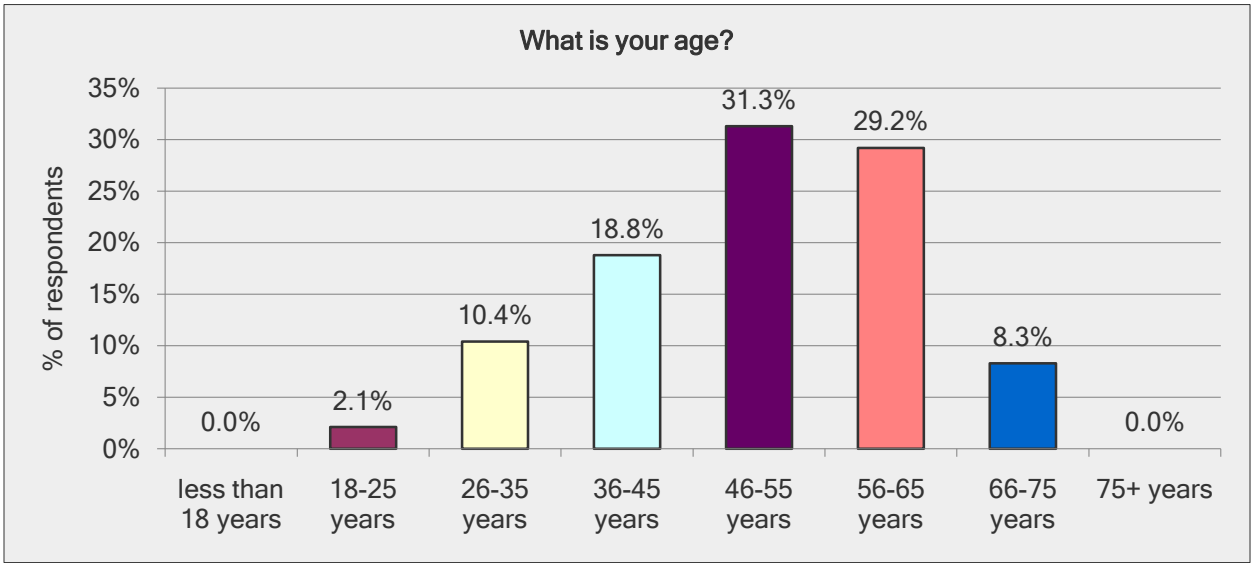
1. How many years have you been in the native plant materials business?		
Answer Options	**Response Percent**	**Response Count**
Less than 1 year	8.2%	4
1-5 years	26.5%	13
6-10 years	12.2%	6
11-15 years	18.4%	9
16-20 years	16.3%	8
21-25 years	8.2%	4
26-30 years	8.2%	4
31-35 years	0.0%	0
36-40 years	0.0%	0
More than 40 years	2.0%	1
answered question		**49**
skipped question		**1**



It is interesting to note that, except for the "1-5 years" category, the distribution follows a normal curve. 65.3% of the respondents comprised the "experienced group", having 6 or more years of experience in the native plant materials business, while 34.7% of the respondents had 5 years or less experience in the business, representing the "beginner group". 34.7% is a good level of recruitment for the native plant materials industry, and shows recent growth and a resurgence of interest in the native plant materials industry. Previous results from surveys completed in 2000 and 2005 showed beginner groups comprising 28.6% and 9% of the total respondents, respectively. Indeed, the "1-5 years" category represents the single highest group of respondents, showing that there are significantly more providers now than 5 years ago. However, this optimism should be tempered with caution as 10 of the 17 (59%) of those with 5 years or less experience are at least 46 years of age or older. This means that their business venture may have a shorter lifespan as their retirement is closer than younger age classes. This means that unless their business is taken over upon their retirement, a supply gap could be created. Refer to the discussion in question 2 for more on this.

The second highest category, “11-15 years” corresponds with the incorporation of the Native Plant Society of Saskatchewan (NPSS). Whether the NPSS had any direct impact on this number is not known, but it is worth mentioning.

2. What is your age?		
Answer Options	**Response Percent**	**Response Count**
less than 18 years	0.0%	0
18-25 years	2.1%	1
26-35 years	10.4%	5
36-45 years	18.8%	9
46-55 years	31.3%	15
56-65 years	29.2%	14
66-75 years	8.3%	4
75+ years	0.0%	0
answered question		**48**
skipped question		**2**



This question was not asked in previous surveys, so a trend cannot be established. The results of this question show a somewhat worrying trend, in that 68.8% of the respondents were at least 46 years old. The people in this age group are nearing retirement and some may already be semi-retired. With only 31.2% of the respondents below the age of 46, the gap left by those retiring may be too much for the younger generation to fill unless there is increasing recruitment in the younger age classes, which our results show isn’t really the case. To support this, there are substantially more people 66-75 years old (8.3%) involved in the industry than people 18-25 years old (2.1%), and almost more than people 26-35 years old (10.4%). Another worry is that there could also be a knowledge and experience gap left when the older age classes retire unless various forms of mentoring occur. On a positive note, the gap left by the retiring classes could present a market opportunity for upstart businesses, or give the existing businesses room to expand. Also, forum participants felt through their experiences that youth 25 years old and younger are showing initiative and involvement regarding the native plant materials industry despite our findings. For its part, the NPSS is trying to create mentoring opportunities such as the native

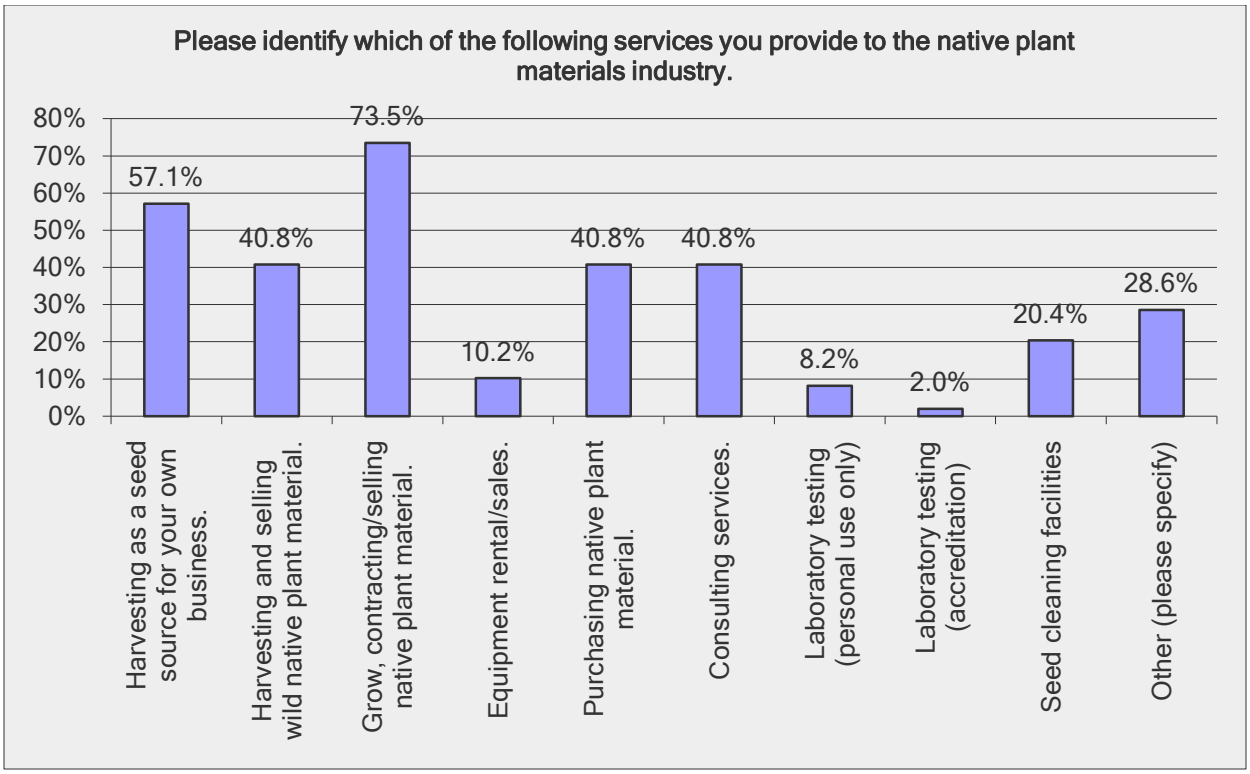
seed collection workshop that took place in the fall of 2010, the development and promotion of various resources on native seed collecting and growing, and arranging speaking engagements on the subject. These have been met with good response.

3. Please identify which of the following services you provide to the native plant materials industry. Check all that apply.

Answer Options	Response Percent	Response Count
Harvesting as a seed source for your own business.	57.1%	28
Harvesting and selling wild native plant material.	40.8%	20
Grow, contracting/selling native plant material.	73.5%	36
Equipment rental/sales.	10.2%	5
Purchasing native plant material.	40.8%	20
Consulting services.	40.8%	20
Laboratory testing (personal use only)	8.2%	4
Laboratory testing (accreditation)	2.0%	1
Seed cleaning facilities	20.4%	10
Other (please specify)	28.6%	14
answered question		49
skipped question		1

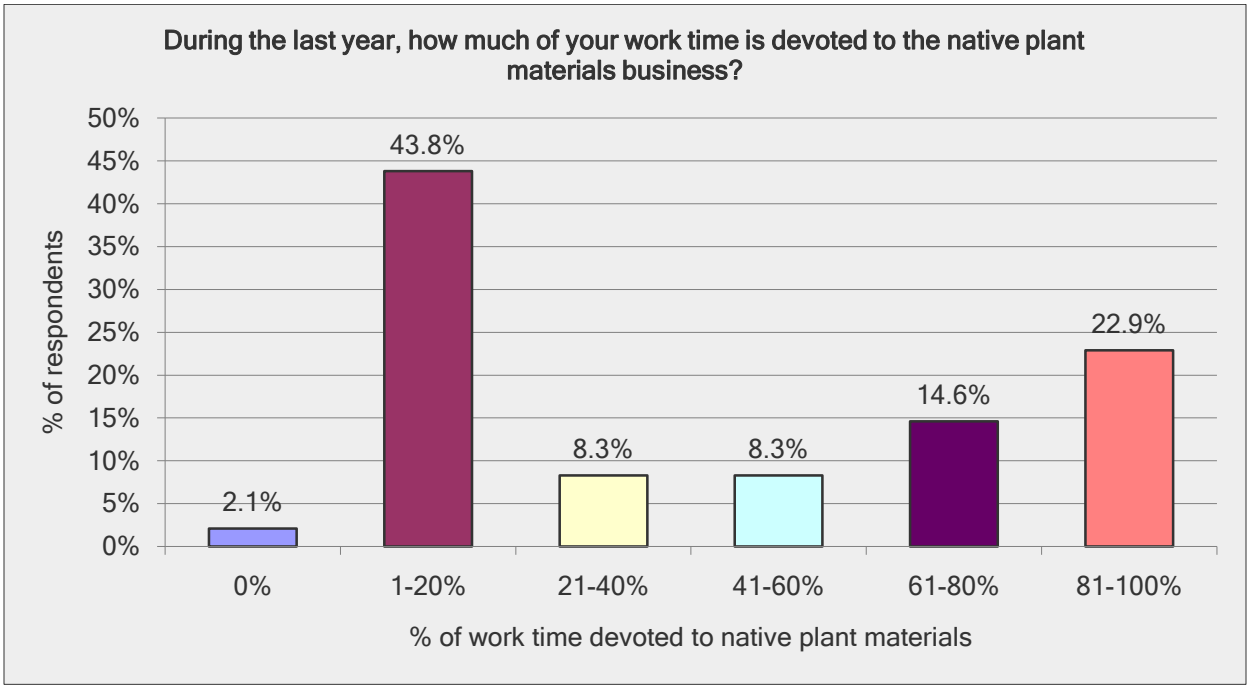
Other (please specify)

- Donating native plants and seeds
- Greenhouse grown plants
- Selling, native mixes etc.
- Growing native plant material free of charge for customers
- Custom seeding, prescribed burns, educational courses
- Specialize in native aquatic plants
- Exploring potential
- Harvest native hay for our beef production
- Native plant garden design
- We no longer contract native seed production starting 2009
- Seed increase for Rocky Mountain xeric forbs
- Habitat reclamation
- Outreach/extension
- Selling native plant material from a retail garden center



The results show that there is a diversity of services that are being provided in the native plant materials industry, but that the core services of harvesting and selling native plant material still comprise the majority of the activity, with purchasing and consulting services also comprising a large part of the industry. This hasn't changed significantly since the same question was asked 5 years ago, but the numbers have increased in every category since 1997. This is a promising trend, as it shows there are an increasing number of native plant material providers offering these services, and that they may also be adapting to market demands and creating and/or filling niches. This can be evidenced by the fact that some of the services mentioned, particularly in the "other" category, did not even appear in previous market assessment results. This will benefit the users of native plant materials and the industry as a whole. Some of the forum participants stressed the importance of certain services to the success of their businesses, particularly providing consulting services.

4. During the last year, how much of your work time is devoted to the native plant materials business?		
Answer Options	**Response Percent**	**Response Count**
0%	2.1%	1
1-20%	43.8%	21
21-40%	8.3%	4
41-60%	8.3%	4
61-80%	14.6%	7
81-100%	22.9%	11
answered question		48
skipped question		2



The results of this question show that the majority of native plant materials providers conduct business on a part-time basis, perhaps as a side business to supplement their income or as a hobby business. This may have implications for native revegetation efforts. 43.8% of respondents spent 20% or less of their work time to providing native plant materials. This is consistent with results from 2000, where 48% of respondents spent 20% or less of their work time to providing native plant materials. The percentage of people spending 21-40% of their work time is down from 16% in 2000, while the percentage of people devoting 41-60% remains virtually unchanged from 8% in 2000. There is a promising trend, however, when the 61-80% category is compared to the results from 2000. Our results show that 14.6% of respondents devote 61-80% of their work time devoted to native plant materials, up from 8% in 2000. The lower percentage of people in the 21-40% category and the higher percentage in the 61-80% category when compared to the results from 2000 may be due to those people devoting more of their time to the native plant materials business in response to an increased demand, thus creating a shift. The loss from the lower category and the gain in the upper category are roughly the same, and our survey had many of the same respondents as in 2000, so it is a possibility. The percentage of people devoting 81-100% of their work time to native plant materials has risen very slightly, from 20% in 2000

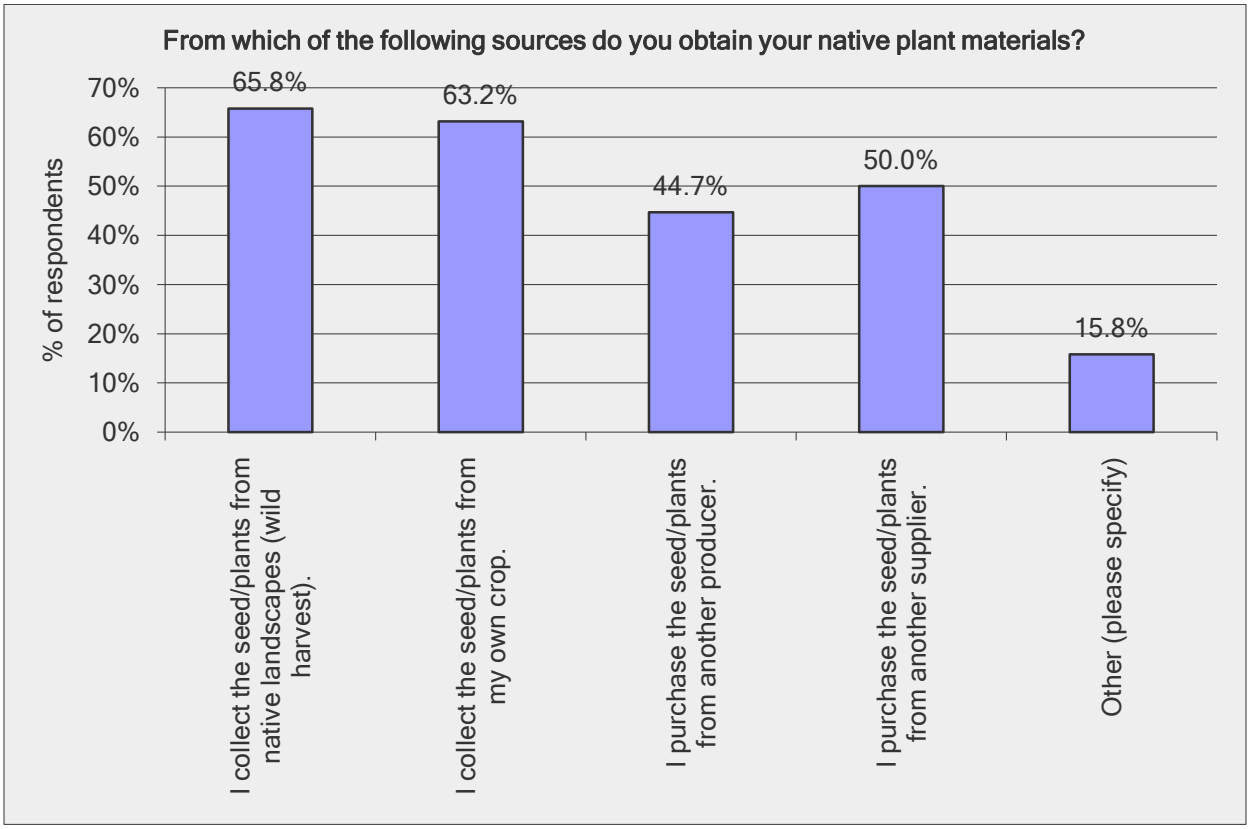
to almost 23%. These results were compared with the results from question 8 to see if there was a correlation to the amount of income earned from native plant materials but, oddly, there was little apparent correlation. In fact, some of the highest earners spent only 1-40% of their time devoted to native plant materials, and the highest earner only devoted 41-60%.

5. From which of the following sources do you obtain your native plant materials? Check all that apply.

Answer Options	Response Percent	Response Count
I collect the seed/plants from native landscapes (wild harvest).	65.8%	25
I collect the seed/plants from my own crop.	63.2%	24
I purchase the seed/plants from another producer.	44.7%	17
I purchase the seed/plants from another supplier.	50.0%	19
Other (please specify)	15.8%	6
answered question		38
skipped question		12

Other (please specify)

- Only seed or cuttings / no plants collected
- From development areas
- We collect root stock from the wild and learn to propagate them for sale
- Collect from disturbed sites
- Collect seed from Edmonton Naturalization Group's native plant nursery
- For contract growing of native forbs/grasses the seed is often supplied by the group we're growing for



Our results how that the percentage of all methods of obtaining native plant materials has increased since 2000. The percentage of people wild harvesting has increased 12.8 % (65.8% vs. 53%), while the percentage of people obtaining native plant materials from their own crop increased by 18.2% (63.2 vs. 45). The percentage of native plant materials purchased from other producers has risen by 4.7% (44.7% vs. 40%), while a similar increase (5%) is shown in the percentage of native plant materials bought from other suppliers (50% vs. 45%). Other sources of obtaining native plant materials classified as "other" has also increased since 2000; 15.8% vs. 9%, representing an increase of 6.8%. The increase in all categories may represent a diversification in the sources that providers use to obtain native plant materials.

6. In 2009, how many acres/# of plants did you have in production? Greenhouse/nursery operators: if plants are propagated, please use number of plants.

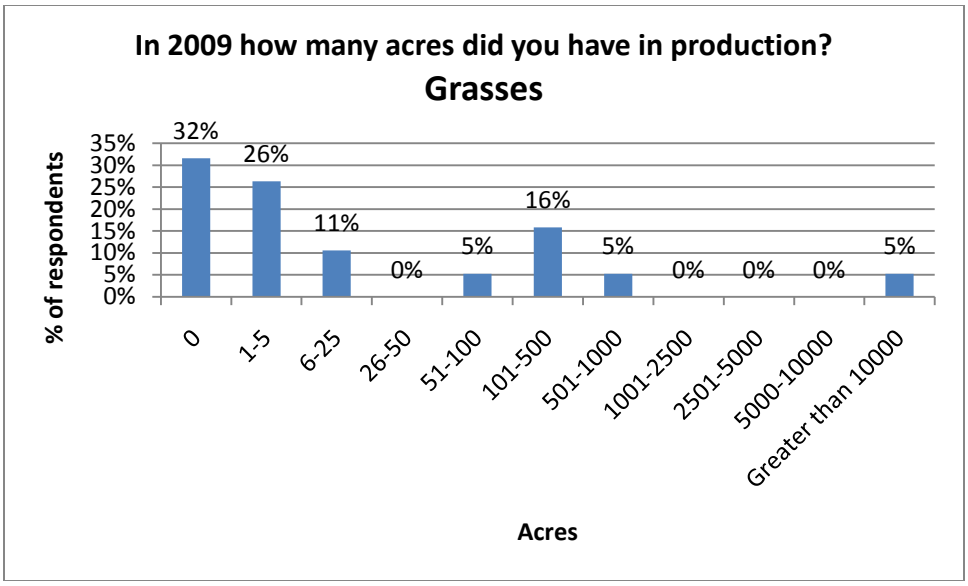
Acres

Answer Options	0	1-5	6-25	26-50	51-100	101-500	501-1000	1001-2500	2501-5000	5000-10000	Greater than 10000	Response Count
Grasses	6	5	2	0	1	3	1	0	0	0	1	19
Forbs	2	5	1	1	0	1	0	0	0	0	1	11
Shrubs	5	2	1	0	0	0	0	0	0	0	0	8
Trees	5	1	1	0	0	0	0	0	0	0	0	7
Wetland species	7	1	0	0	1	1	0	0	0	0	0	10

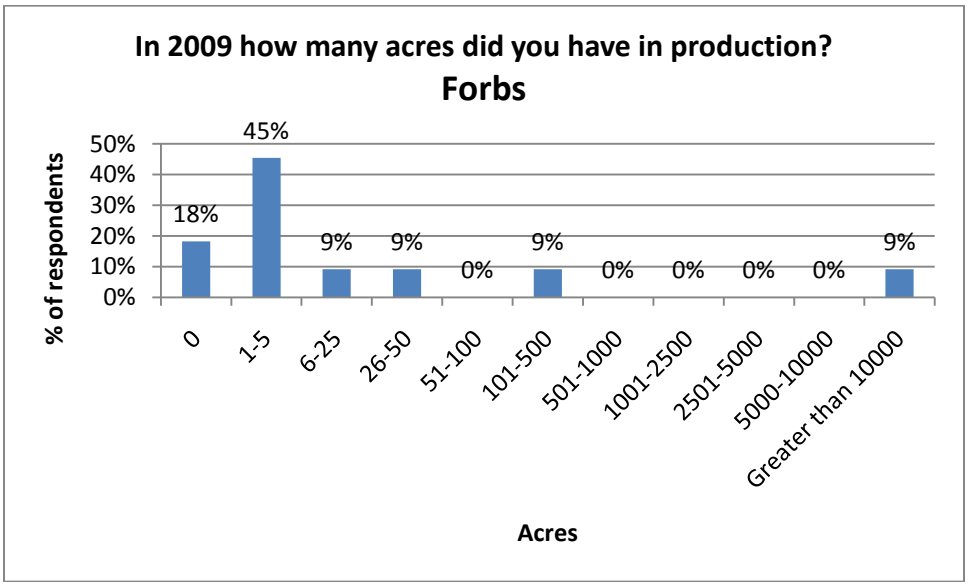
Plants

Answer Options	0	1-10	11-50	51-100	101-500	501-1000	1001-2500	2501-5000	5000-10000	Greater than 10000	Response Count
Grasses	2	1	0	1	5	2	2	2	1	0	16
Forbs	2	0	1	1	2	2	4	0	1	4	17
Shrubs	5	0	1	2	1	2	4	0	0	2	17
Trees	4	0	2	1	1	2	2	0	1	1	14
Wetland species	7	0	0	1	1	2	1	0	0	2	14

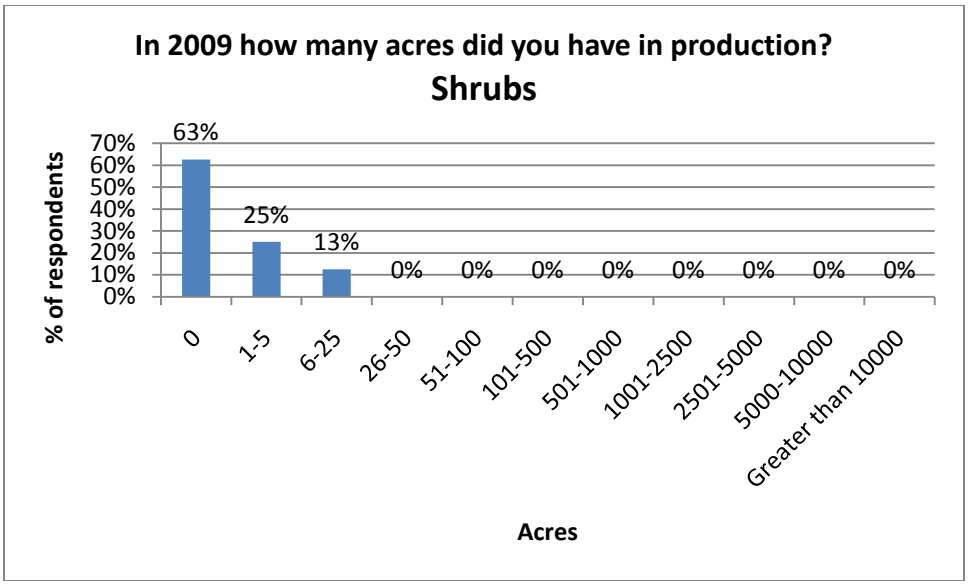
	Question Totals
answered question	31
skipped question	19



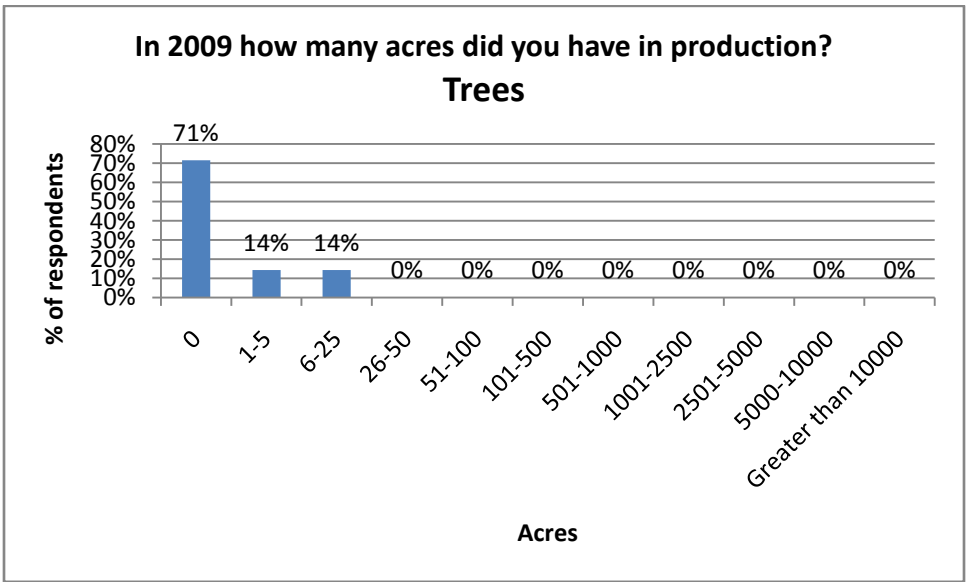
Providers of native plant materials with native grass acreage comprised the largest number of respondents for this question. Our results show that there are generally 3 classes of native grass provider: small, medium and large. The small providers account for 37% of the total, the medium-sized providers account for roughly one quarter of the total, while the large providers account for only 5% of the total. In 2000, survey respondents had a total of 2,300 acres of native grass in production.



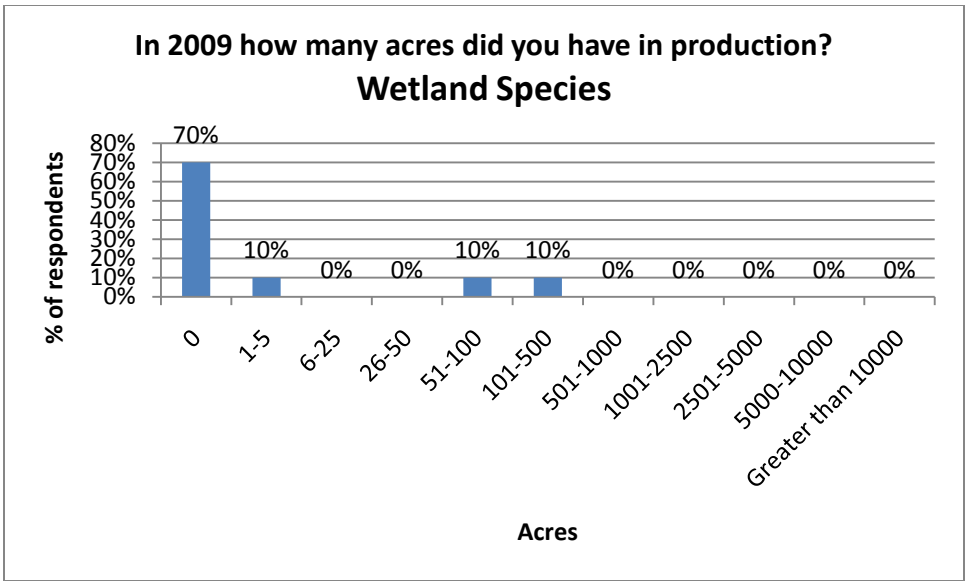
Again, results indicate that there are three distinct classes: small, medium and large forb providers. Small providers constitute approximately two thirds of the total number of forb providers, while medium and large providers comprise just 9% each. In 2000, survey respondents had a total of 47 acres of native forbs in production.



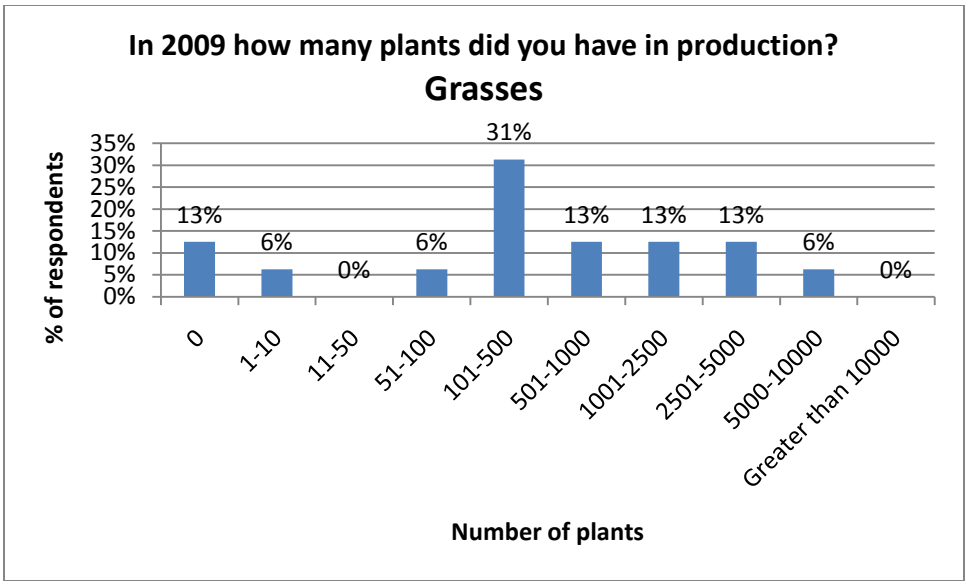
The results show that just under two thirds of all survey participants are not involved in providing shrubs, while just over one third of participants are involved. Those that are involved could be classified as relatively small operations, since there are no larger holdings than 25 acres. In 2000, survey respondents had a total of 160 acres of native shrubs in production.



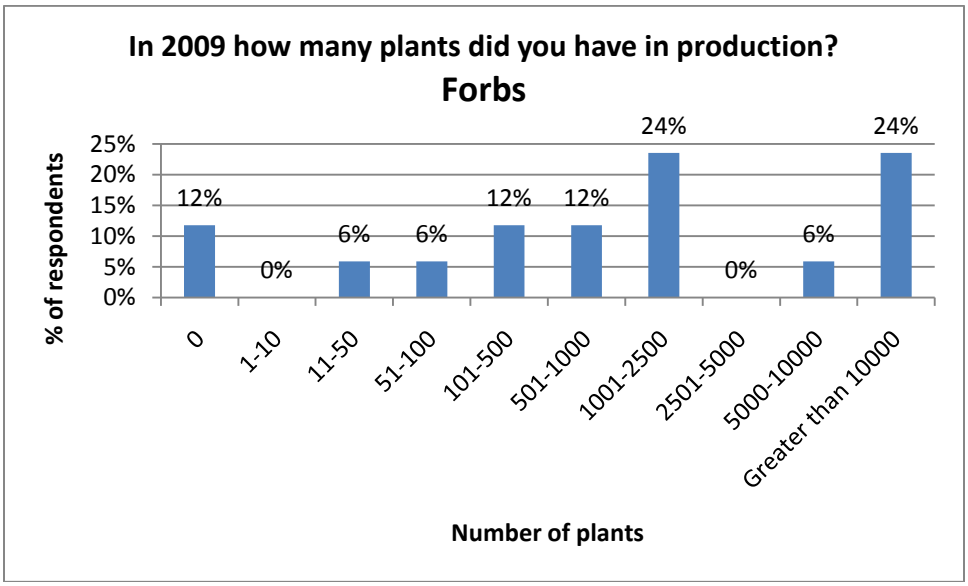
The results regarding tree production are similar to shrub production. Here, slightly less than three quarters of survey participants were not involved in producing trees, and slightly more than one quarter of participants produced trees in small quantities. Again, no operation had holdings larger than 25 acres.



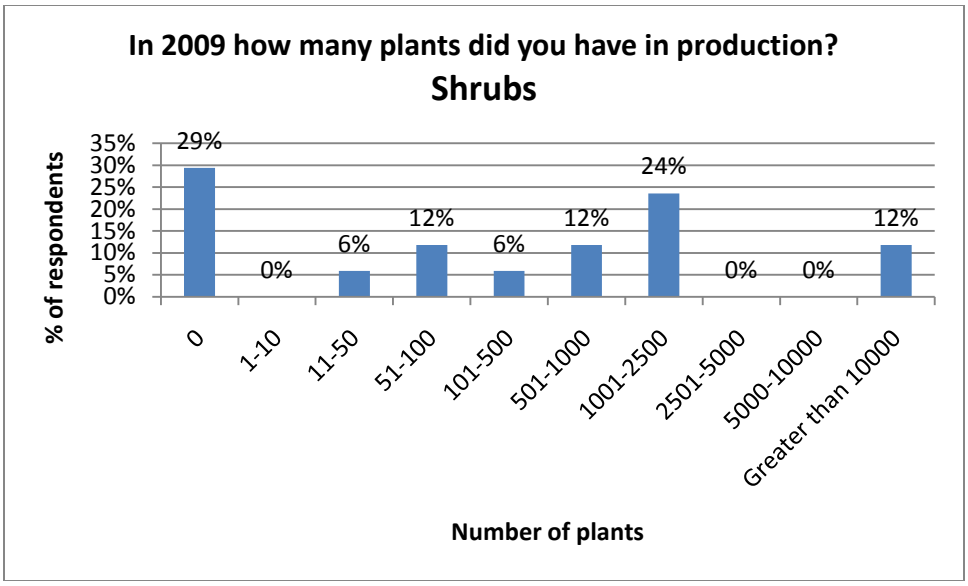
Our results show that 70% of survey participants were not involved in producing wetland species, while 30% had some wetland native plant material acreage in production. Of those 30%, two distinct classes emerged: small producers (10%) and medium-sized producers (20%). In 2000, survey respondents had a total of 61 acres of wetland species in production.



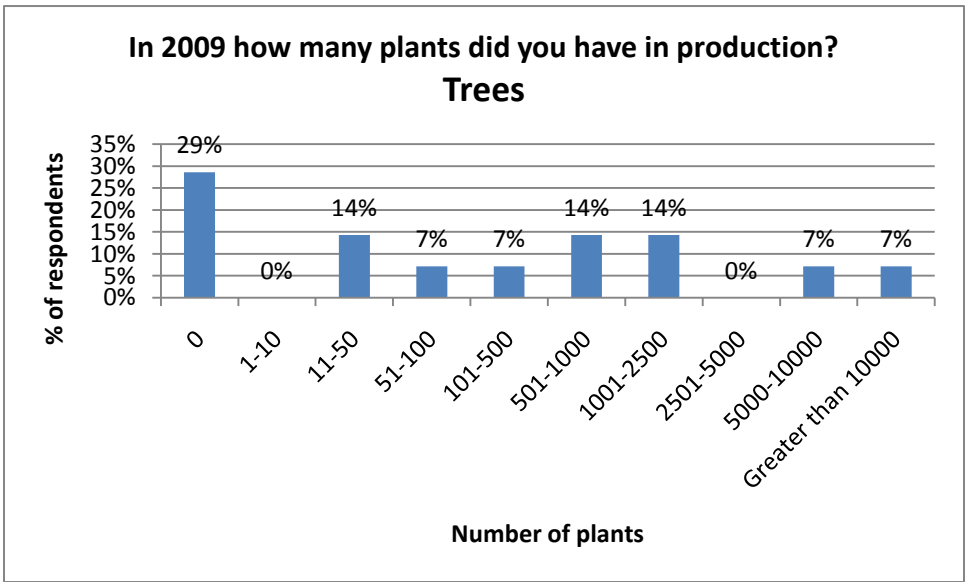
Our results show a fairly even spread of classes, with a reasonably similar percentage of plants per class. The exception is the 101-500 plant class, with almost two thirds more than the next highest classes. One other thing worth noting is that the majority of plants in production occur in the higher classes. In 2000, survey respondents had a total of 73,050 native grass plants in production.



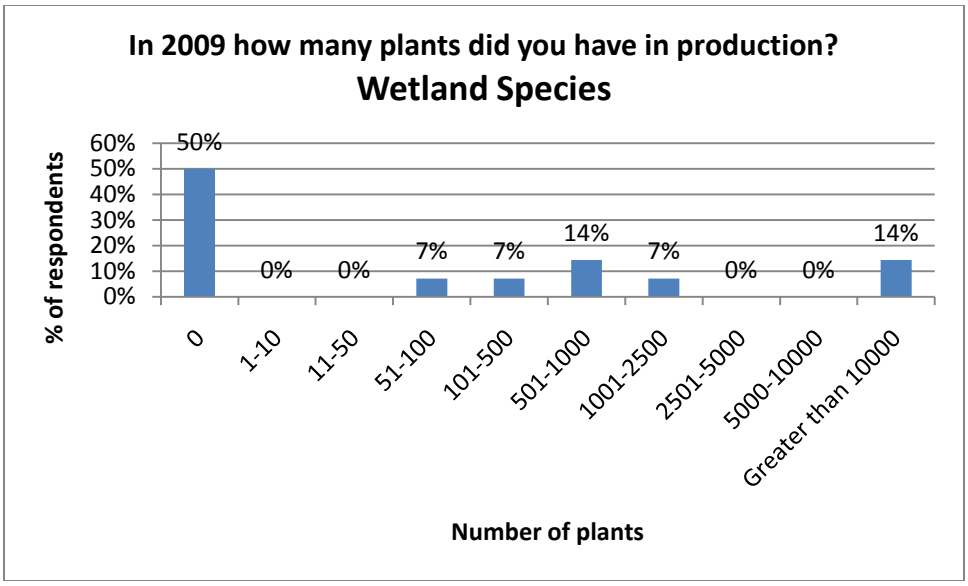
These results show that there is fairly good capacity to provide native forbs, with over 50% of providers growing over 1000 plants, and 24% growing more than 10,000 plants. In 2000, survey respondents had a total of 213,300 native forb plants in production.



According to our respondents, most providers of native shrubs are in the small to medium capacity categories, with a small percentage able to provide a significant number of plants. In 2000, survey respondents had a total of 1,571,900 native shrubs in production.

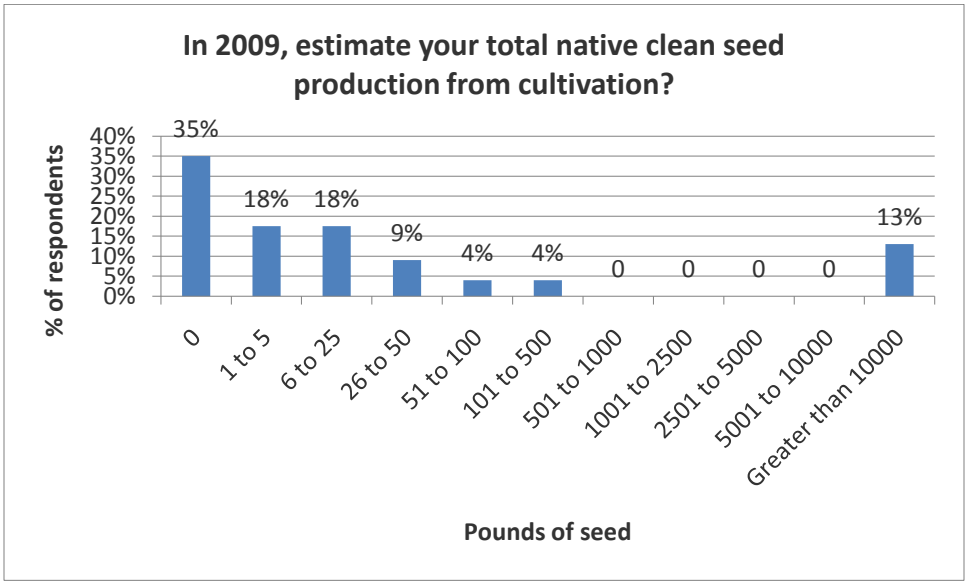


Similar to the previous graph, most providers of native trees are in the small to medium capacity categories, with a small percentage that have larger operations. The similarity between shrub and tree provider results may be due to the fact that the same survey participants provide both shrubs and trees.

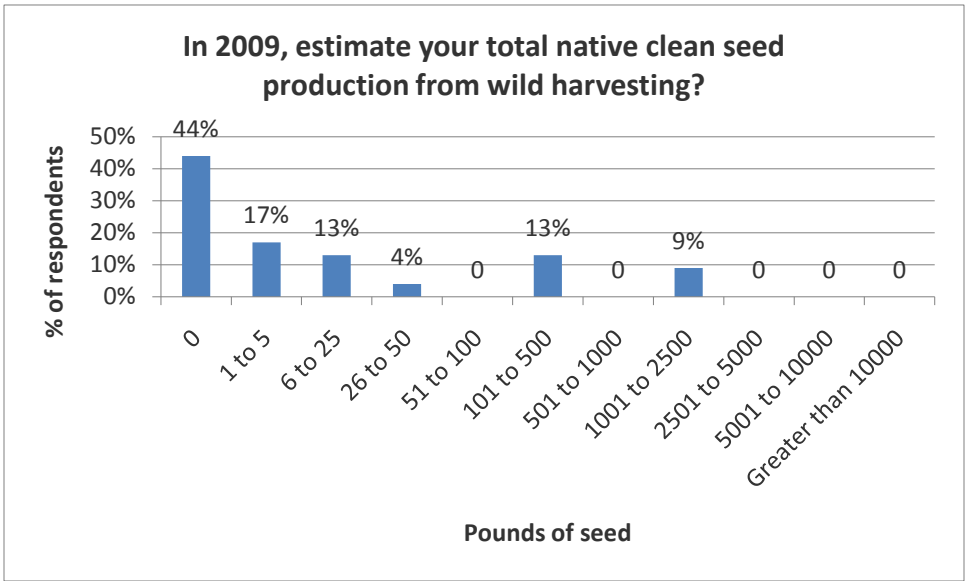


These results show two distinct classes; the majority of wetland species providers can supply small to medium-sized demands, while a small percentage are able to fill large orders. In 2000, survey respondents had a total of 61,150 native wetland plants in production.

7. In 2009, estimate your total native clean seed production?			
Answer Options	Response Average	Response Total	Response Count
lbs from cultivation	12,031.10	240,622	20
lbs from wild harvesting	232.68	4,421	19
answered question			23
skipped question			27



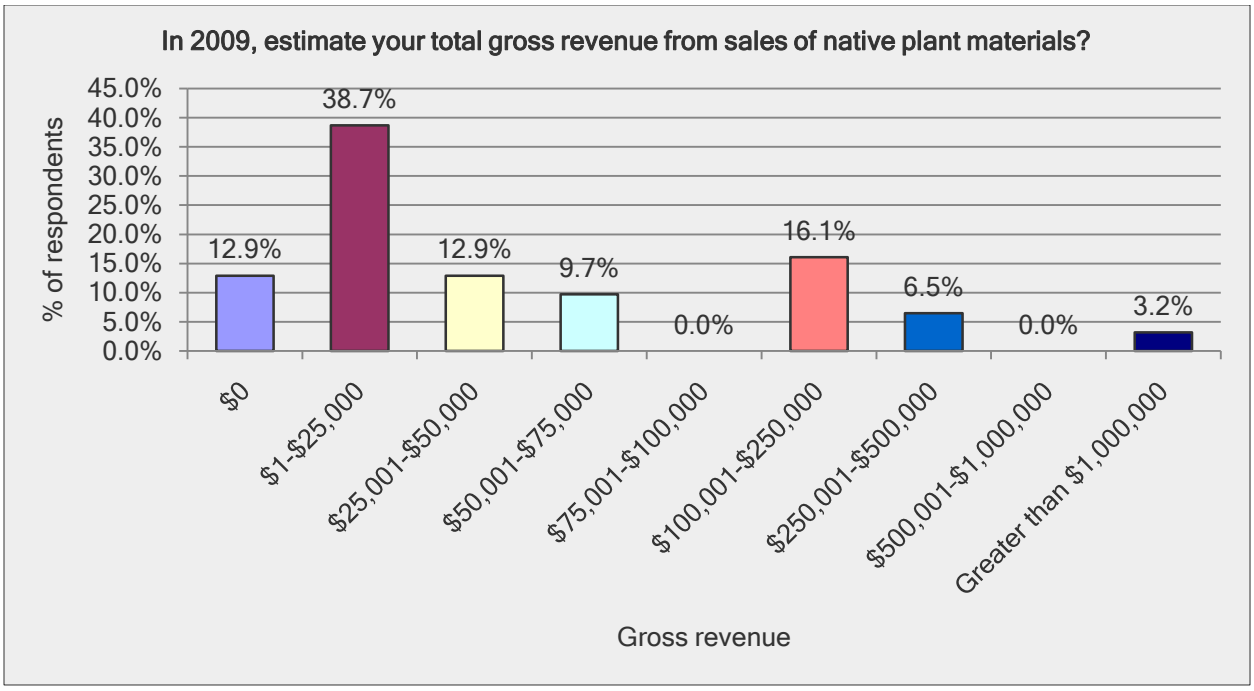
These results indicate that most native seed providers fall into the small to medium-sized categories, while a small percentage are large operations. In 2009, survey participants reported a total of 240,622 pounds of native seed in cultivation with an average of 12,031 pounds per provider. Results from the 2000 survey showed a total of 399,474 pounds of native seed in cultivation (with an average of 23,498 pounds per provider). This difference shows a decrease of 158,852 pounds of seed in cultivation.



Two somewhat distinct categories emerge in the above graph: small and medium. According to survey respondents, the majority of those who did collect native seed from the wild did it on a small scale. In 2009, survey participants reported a total of 4,421 pounds of native seed from wild harvesting with an average of roughly 233 pounds per provider. Results from the 2000 survey showed a total of 1,597 pounds of native seed from wild harvesting (with an average of roughly 56 pounds per provider). This difference shows an increase of 2,824 pounds of seed from wild harvesting.

8. In 2009, estimate your total gross revenue from sales of native plant materials?

Answer Options	Response Percent	Response Count
$0	12.9%	4
$1-$25,000	38.7%	12
$25,001-$50,000	12.9%	4
$50,001-$75,000	9.7%	3
$75,001-$100,000	0.0%	0
$100,001-$250,000	16.1%	5
$250,001-$500,000	6.5%	2
$500,001-$1,000,000	0.0%	0
Greater than $1,000,000	3.2%	1
answered question		31
skipped question		19

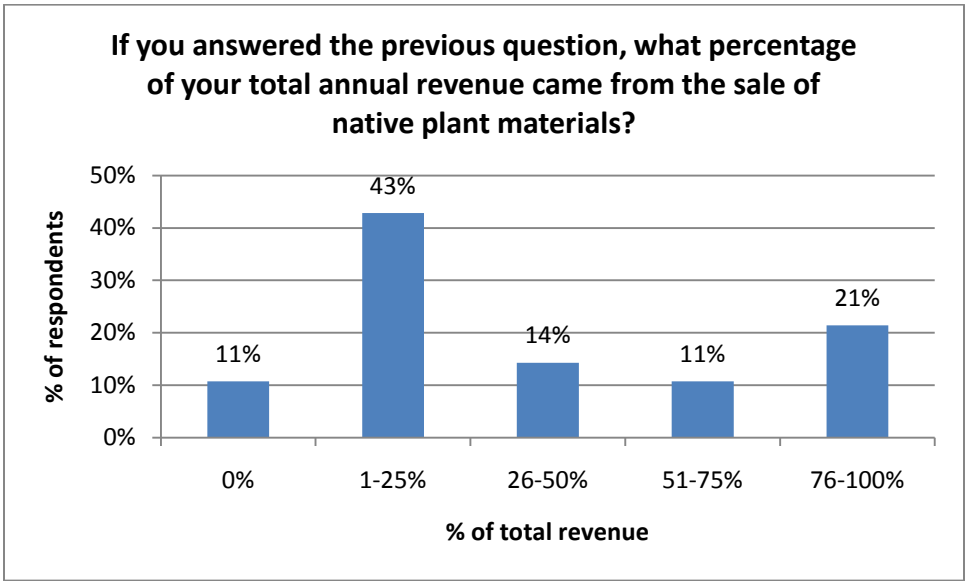


Three somewhat distinct categories appear in our results. The majority of native plant material providers earn $75,000 per year or less while just over 20% of respondents earn between $100,000 to $500,000 per year and a very small percentage earn over $1,000,000 per year. According to our results, providers of native plant materials most commonly earned $25,000 a year or less. Forum participants also agreed with these results, noting that most providers they know of are unable to earn more income

from the native plant materials business for one reason or another. Some forum participants also indicated that demand created by policy/legislation changes may help to increase the total gross revenue for native plant materials providers. One such example was that local native plant materials providers have increased their revenues since the City of Edmonton recently adopted standards for new "green" housing developments, such as restricting the percentage of lawn in a yard and having a list of approved plant species to be used, both of which favour native plant species. In 2000, the mode and median of native plant materials providers total gross revenue was $25,000 or less (the average was $184,868 per provider). The total worth of the industry in 2000 based on the results was $7,300,000.

9. If you answered the previous question, what percentage of your total annual revenue came from the sale of native plant materials?

Answer Options	Response Average	Response Total	Response Count
% of total revenue	37.57	1,052	28
answered question			28
skipped question			22



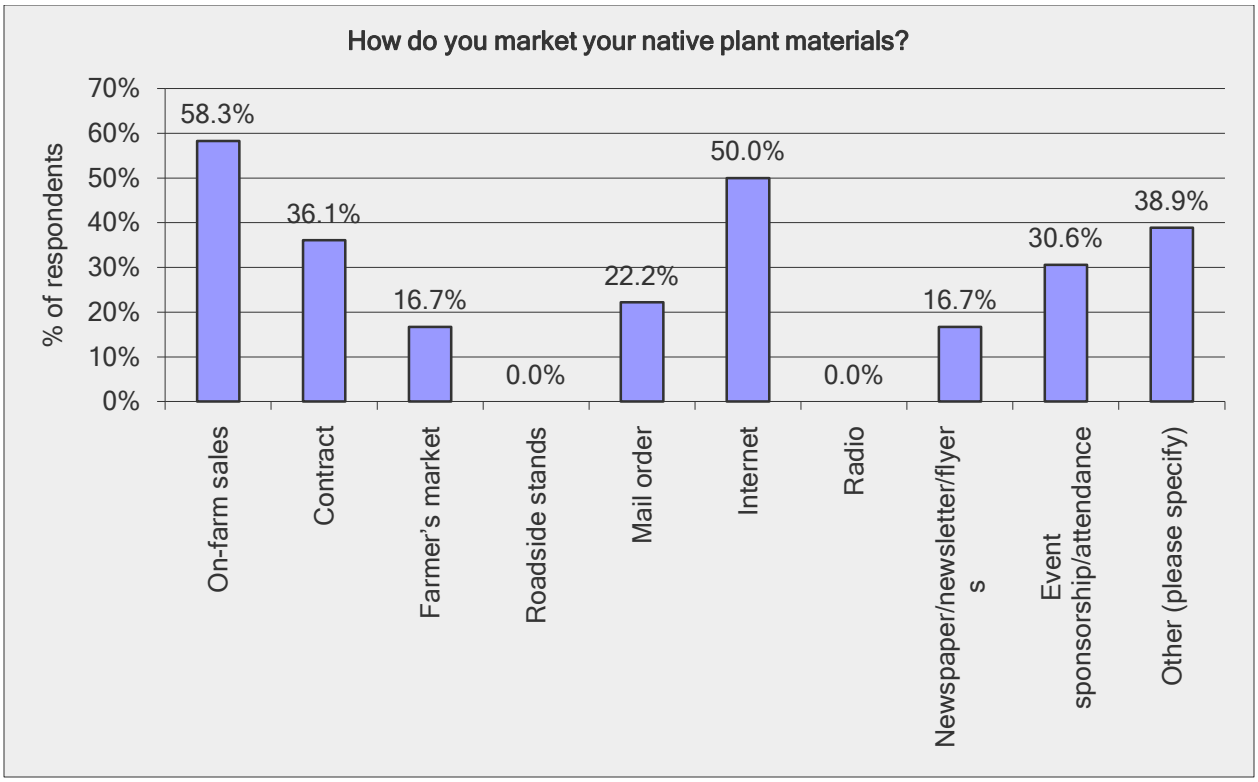
Survey respondents most commonly indicated that they derive a quarter or less of their annual income from the sale of native plant materials, suggesting that it is a side business and that there are other sources of income to augment their yearly income. This seems to correlate with question 8, where roughly 40% of respondents made $25,000 or less from the sale of native plant materials in 2009. This may have some effect on the availability of native plant materials available. There is, however, a fairly strong component (25%) of providers with an increased proportion of their annual income (26-75%) from the sale of native plant materials, which may help to boost availability. These are also the most likely categories to be able to scale-up to full-time production if the market demand rises. 21% of providers responded that they earn 100% of their annual income from the sale of native plant materials, suggesting that these are full-time operations. The 11% that derived no income from the sale of native plant materials may have received a portion of their annual income from something other than selling native plant materials, but still related to the native plant materials industry.

10. How do you market your native plant materials? Check all that apply.

Answer Options	Response Percent	Response Count
On-farm sales	58.3%	21
Contract	36.1%	13
Farmer's market	16.7%	6
Roadside stands	0.0%	0
Mail order	22.2%	8
Internet	50.0%	18
Radio	0.0%	0
Newspaper/newsletter/flyers	16.7%	6
Event sponsorship/attendance	30.6%	11
Other (please specify)	38.9%	14
answered question		36
skipped question		14

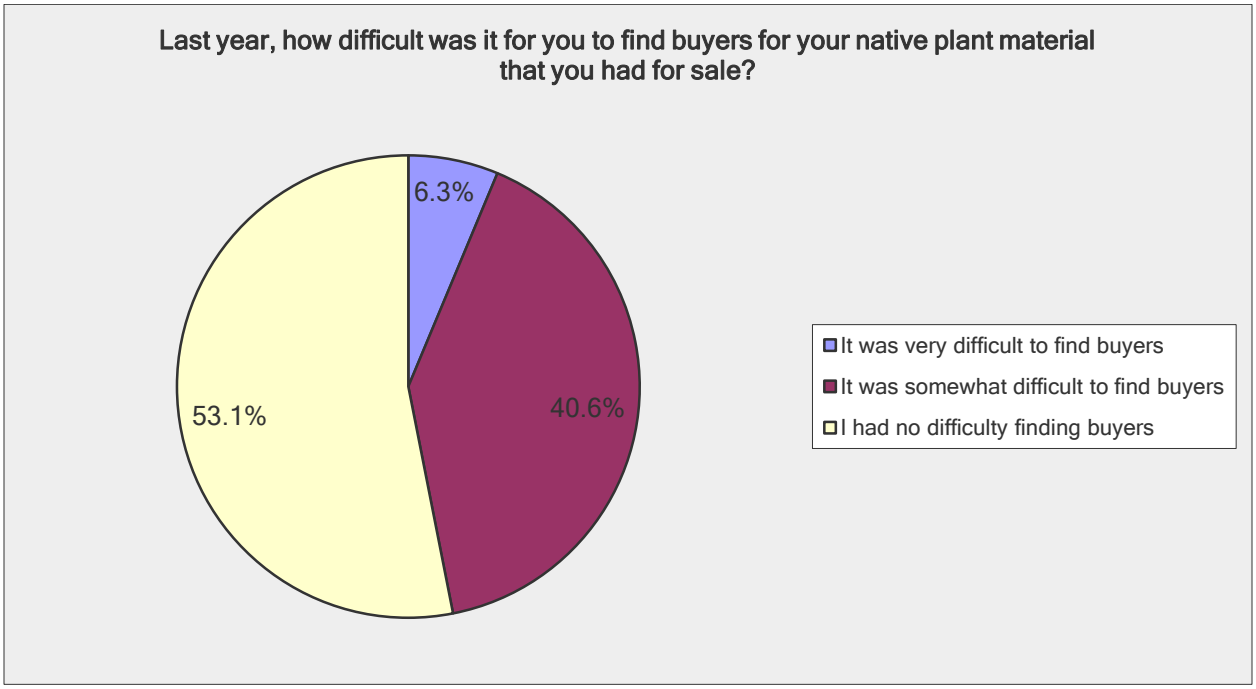
Other (please specify)

- Seedy Saturdays and Seedy Sundays
- Local aquatic nursery and Farmer's Market
- Wholesale trade, dealers, distributors
- We are a seed company
- I have been in the business long enough that people phone me.
- Trade shows, meetings
- NPSS, word-of-mouth
- Garden Centres
- Lectures to interested groups
- Greenhouse
- Developing market strategy
- Our own beef production
- Host educational events (seed collecting, native landscaping, etc.)
- Trees and shrubs as listed, forbs and grasses very small part of what we do and more of a growing service than a supplier - not advertised widely beyond website and word of mouth, small advert in specialty newsletters some times



On-farms sales were most commonly used by native plant materials providers to sell their product, followed by internet marketing, a variety of other methods listed in the "other" category and contract growing. Forum participant's comments on these results were that internet marketing is a very effective and relatively inexpensive tool, and that all providers of native plant materials should endeavour to market their products on the internet. Forum participants also speculated that the reason why no one marketed their product on the radio was due to the prohibitive cost of doing so. Results from the 2000 survey revealed the following: on-farm sales were 34%, contract sales were 41%, farmer's market sales were 12%, roadside stand were 0%, mail order sales comprised 25%, internet sales were 19% and "Other" sales were 35%. While most categories had similar results between 2000 and 2009, internet sales shot up 31%, from 19% to 50%. This trend will likely continue.

11. Last year, how difficult was it for you to find buyers for your native plant material that you had for sale? Check one only.		
Answer Options	**Response Percent**	**Response Count**
It was very difficult to find buyers	6.3%	2
It was somewhat difficult to find buyers	40.6%	13
I had no difficulty finding buyers	53.1%	17
answered question		**32**
skipped question		**18**



Roughly 47% of native plant material providers had some difficulty finding buyers for their product. This is down from 2000 and 2005 when 57% and 92% of survey participants indicated some degree of difficulty finding buyers. This trend suggests that it is getting easier, but there is still a lot of room for improvement, as 47% is still far too high and poses a significant impediment for the expansion of the native plant materials industry. It may also have implications for the stability of the industry, and may explain why many providers receive less than $25,000 annually from the sale of native plant materials (question 8).

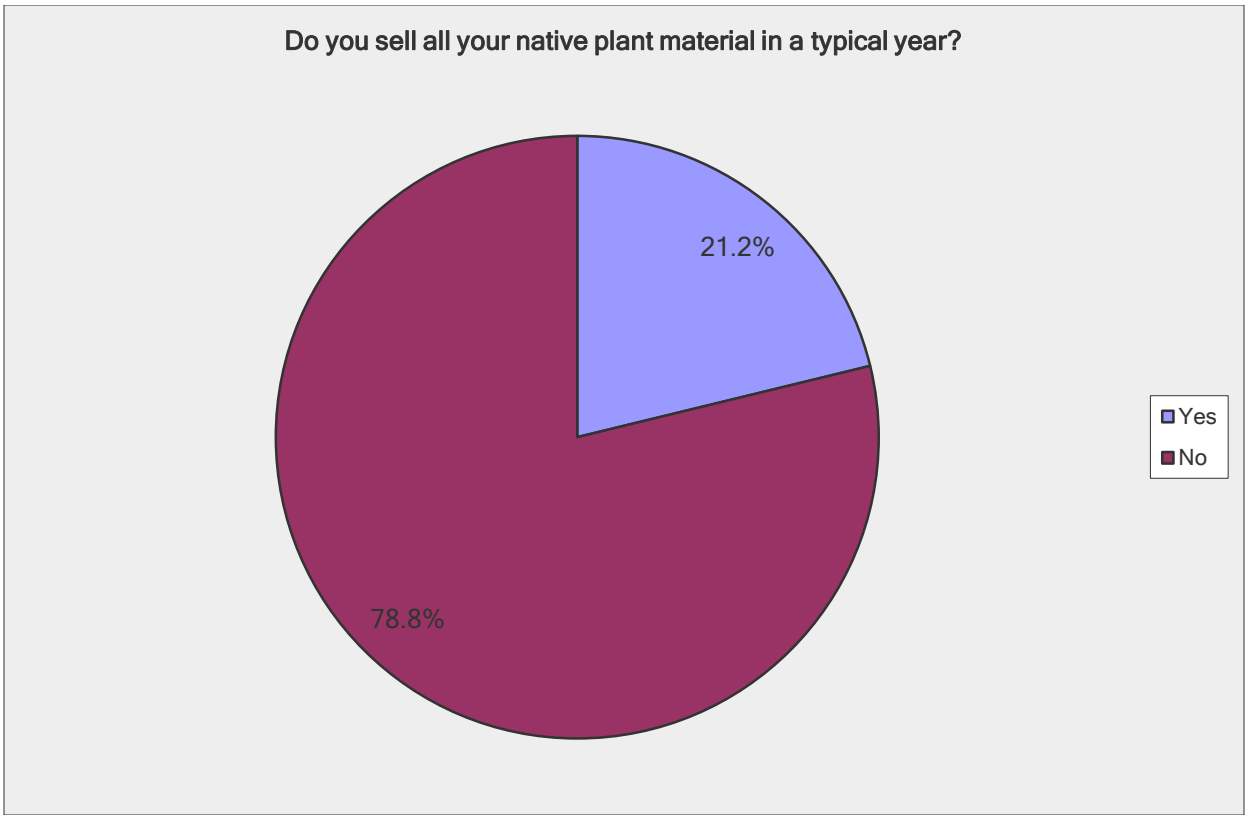
12. Do you sell all your native plant material in a typical year?

Answer Options	Response Percent	Response Count
Yes	21.2%	7
No	78.8%	26
If no, estimate the percentage of carry-over.		23
answered question		33
skipped question		17

If no, estimate the percentage of carry-over.

15%
75%
40%
50%
35%
33%
15%
15%
50 %
99%
25%
25%
75%
50%
10%
0%
5%
33%
15 %
40%
1%
10-20%
10%

Average = 32%



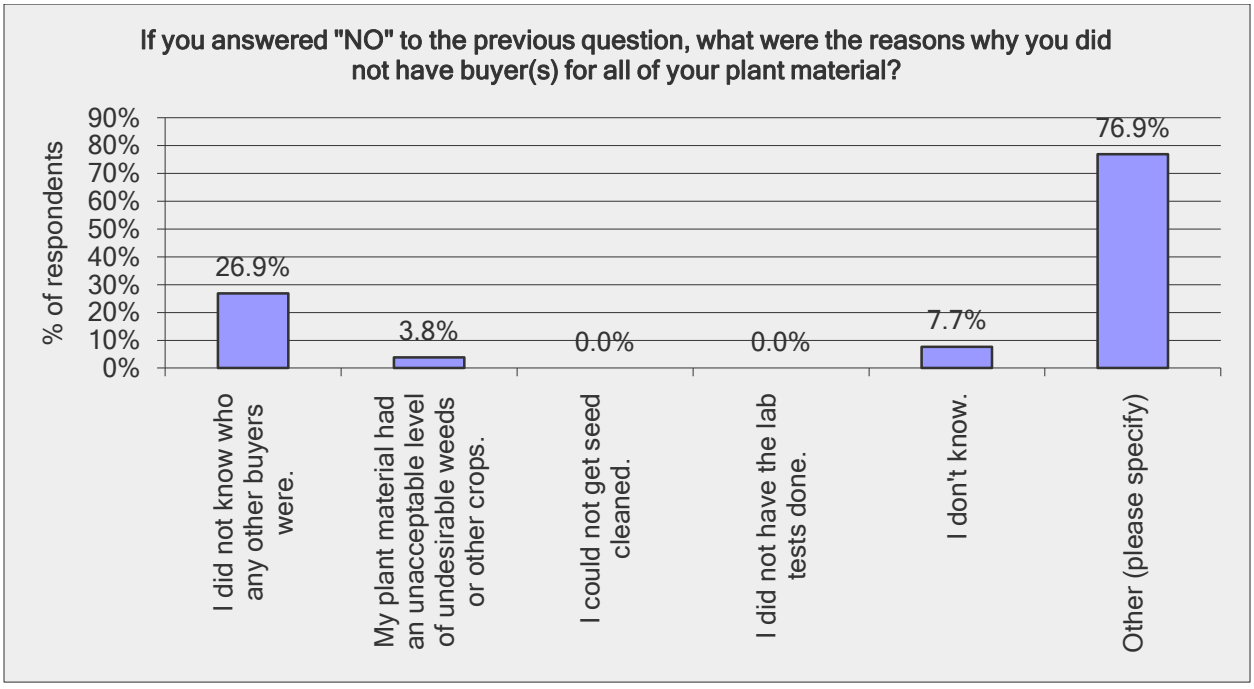
Nearly 80% of survey participants did not sell all of their native plant materials in a typical year. While this is down from 92% in 2005, it is still an unacceptably high proportion of providers who have carry-over. The reasons for this carry-over are discussed in question 13. At the forums, some users commented that they had trouble contacting providers of native plant materials, or that the providers would not return their messages. Results from the 2000 survey are quite similar; in that survey, 85% of providers have native plant materials carried over, while 15% sold all of their native plant materials in a year. On average, there was a 38% carry-over of native plant material according to the results from 2000. Results from 2005 showed that 25% had carry-over of 10-50 kg, 25% had 100-500 kg, 12.5% had more than 3000 kg and 37.5% were unsure of how much carry-over they had. In the same survey, 40% had 1-5 species in their carry-over, 20% had 5-10 species, 20% had 30-40 species and 20% had more than 40 species. The current survey didn't measure the amount or number of species of carry-over, only the reason why.

13. If you answered "NO" to the previous question, what were the reasons why you did not have buyer(s) for all of your plant material? Check all that apply.

Answer Options	Response Percent	Response Count
I did not know who any other buyers were.	26.9%	7
My plant material had an unacceptable level of undesirable weeds or other crops.	3.8%	1
I could not get seed cleaned.	0.0%	0
I did not have the lab tests done.	0.0%	0
I don't know.	7.7%	2
Other (please specify)	76.9%	20
answered question		26
skipped question		24

Other (please specify)

- Took a position on inventory
- Prices too low
- My main work is growing and selling garden seeds.
- Confusion as to what is a weed or a problem--lack of understanding
- Low prices (did not release all seed (need more buyers)
- It takes time to build a new business
- Unfavourable reclamation market (BLM, CRP)
- We like to keep small amounts for small orders.
- Not a big market for locally harvested seed in MB
- We keep and use our own seeds, mostly.
- Crop is being built up each season for future sales
- Some plants are grown one year and sold the next as more mature plants
- Only so many gardeners interested in natives! Numbers of customers are growing each year though.
- New to market
- Own use
- Total dependent on usage and economy.
- Need more labour/help for marketing and greenhouse care
- Not all is mature or ready for sale
- Poor growth in one year
- Lack of consumer awareness



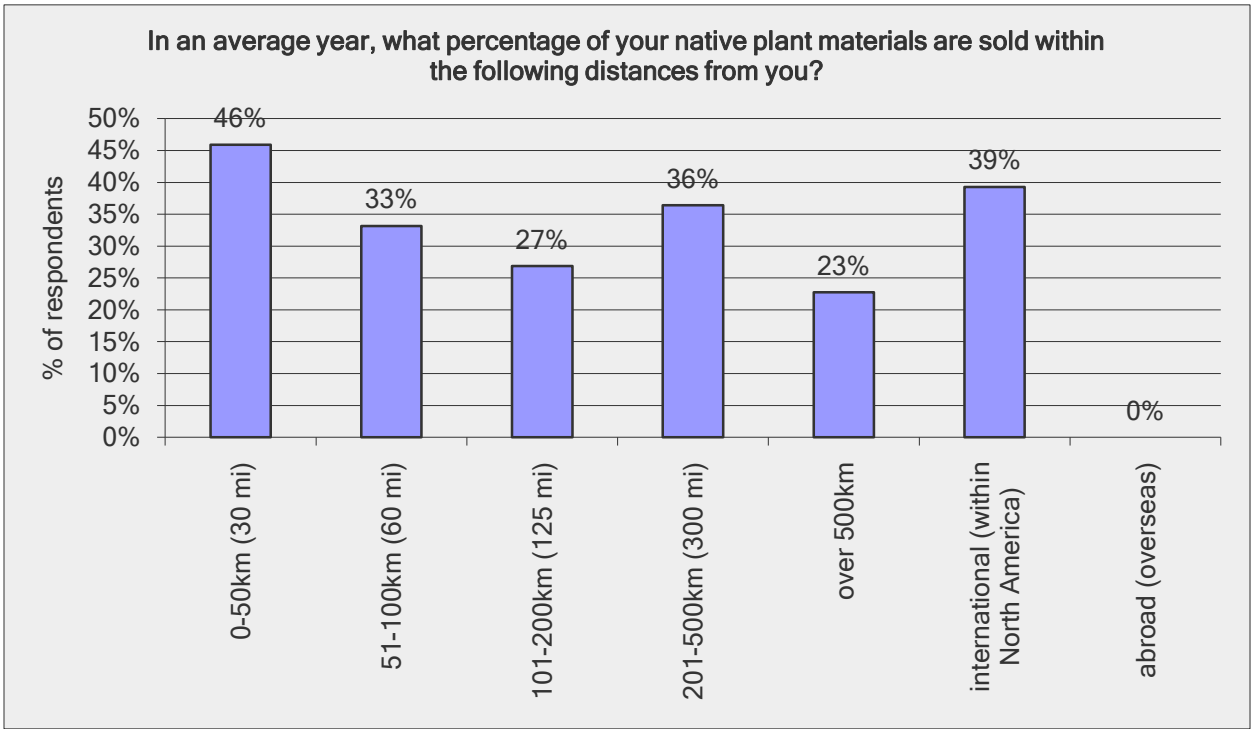
Of the roughly 80% of survey participants who responded that they don't sell all of their native plant material in an average year, the largest single reason was because the providers couldn't identify

enough buyers. Further evidence to this are the results of question 11, where roughly 47% had difficulty finding buyers for their native plant material. The "Other" category is technically the largest category, but there are multiple reasons that are combined to form this category. However, many of the reasons in the "Other" category point toward a lack of demand for native plant materials. Another common response in the "Other" category was that some carry-over is the nature of the business. The 2005 study results indicate that the majority of the reasons for carry-over boiled down to three overall reasons: cost, a lack of demand and a lack of awareness/education.

Of note in the graph above is that almost 8% of providers couldn't identify a reason why they didn't sell all of their native plant material in a typical year. While this is a small percentage, those providers may be trapped in this cycle until they can identify the reason(s) why they don't sell all of their native plant material in an average year.

14. In an average year, what percentage of your native plant materials are sold within the following distances from you? Please fill in all that apply and make your total add up to 100%.

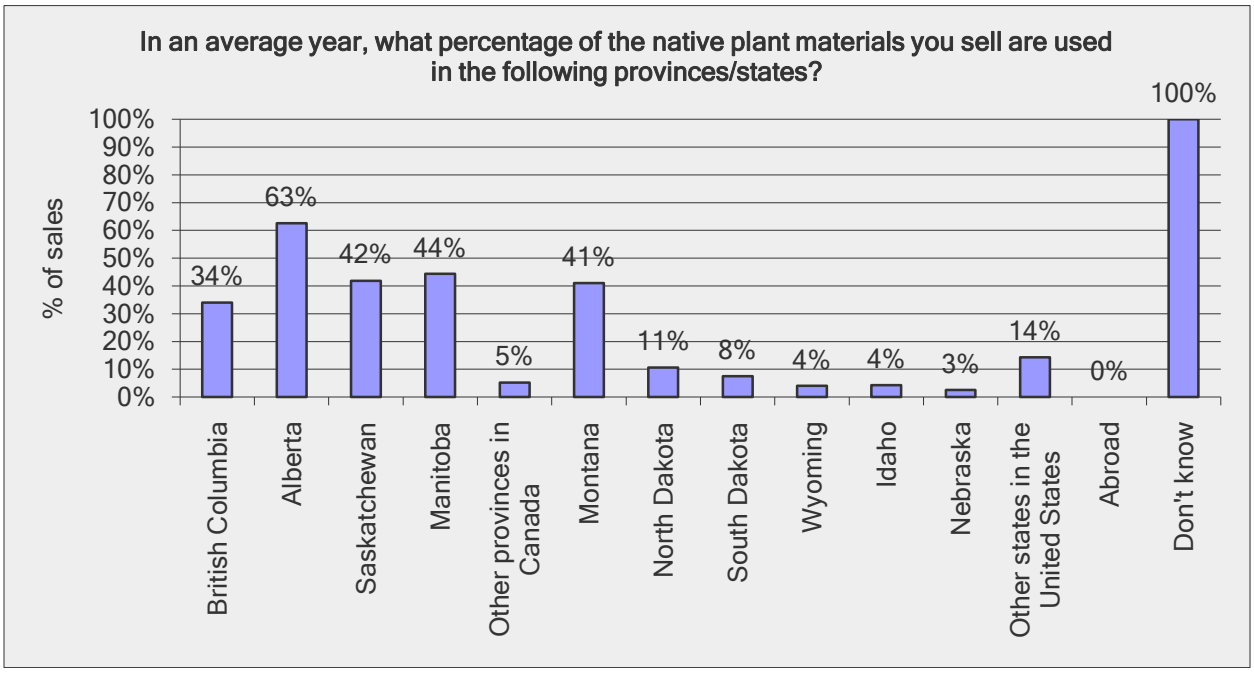
Answer Options	Response Average	Response Count
0-50km (30 mi)	46%	22
51-100km (60 mi)	33%	18
101-200km (125 mi)	27%	16
201-500km (300 mi)	36%	19
over 500km	23%	13
international (within North America)	39%	7
abroad (overseas)	0%	1
answered question		33
skipped question		17



Our survey results indicate a relatively even distribution of distances that native plant materials were shipped, ranging from 23% for the "Over 500 km" category to 46% for the "0-50km" category. The second highest category is "International (within North America)", indicating that distance is not necessarily a factor when marketing, selling and shipping native plant materials. In the 2000 survey, 29% of native plant materials were sold within 50 km, 17% were sold from 51-100 km, 23% were sold from 101-200 km, 18% were sold 200 km and further, 10% were sold abroad and 4% were classified into a category labelled "Other". The results from 2000 tend to indicate that most native plant materials were sold relatively closer than our current results indicate.

15. In an average year, what percentage of the native plant materials you sell are used in the following provinces/states? Please fill in all that apply and make your total add up to 100%.

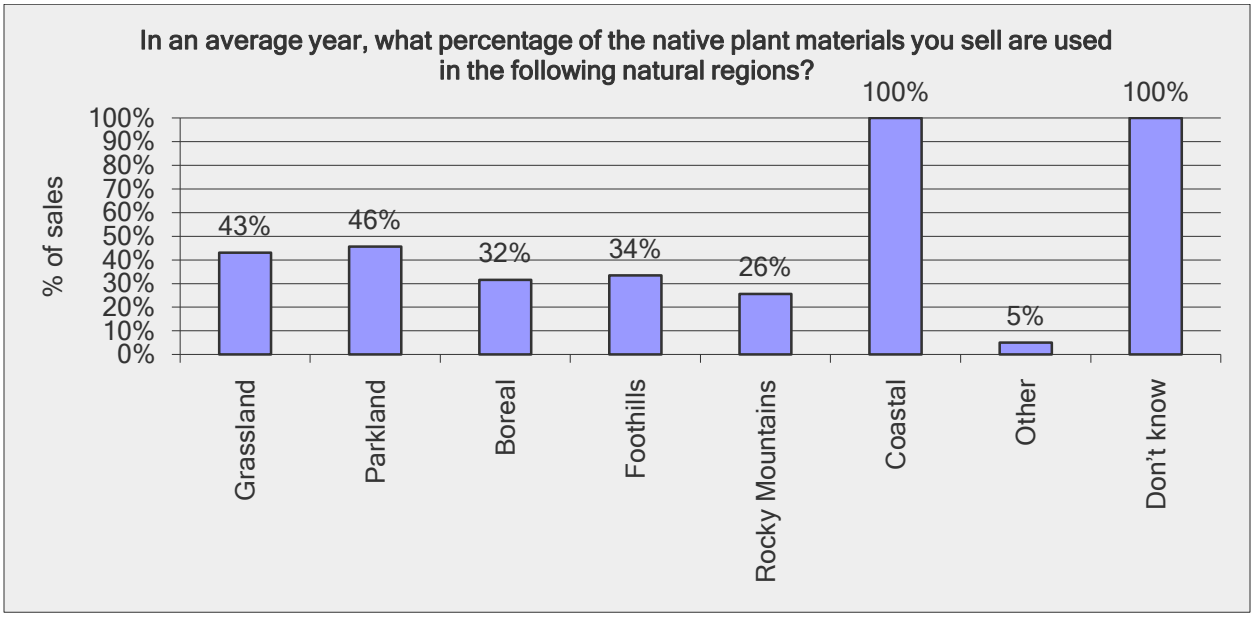
Answer Options	Response Average	Response Count
British Columbia	34%	12
Alberta	63%	18
Saskatchewan	42%	18
Manitoba	44%	9
Other provinces in Canada	5%	6
Montana	41%	5
North Dakota	11%	3
South Dakota	8%	2
Wyoming	4%	3
Idaho	4%	3
Nebraska	3%	2
Other states in the United States	14%	7
Abroad	0%	0
Don't know	100%	1
answered question		32
skipped question		18



The province and state with the largest demand are Alberta and Montana, with 64% and 41% of the provider's native plant materials flowing to them. The oil and gas industry in Alberta may be the reason why it was the single highest category, and may also explain why the other Prairie Provinces also were the destination for a lot of native plant materials. Forum participants were surprised at the number of states that native plant materials (presumably mostly from Canada) were shipped to, as well as the total percentage that they comprise. The "Don't know" category is falsely high, as while other survey participants spread their total percentage over several provinces and states, those that chose "Don't know" dedicated 100% of their answer to this. In reality, it equates to 1 person as is shown in the table above the graph. Comparing these results to past surveys, Alberta has generally increased as a destination for native plant materials since 1997, 2000 and 2005 (14%, 27% and 20% respectively), as has Manitoba (10%, 6% and 14% respectively). Saskatchewan has showed more variation in demand, with 51% in 1997, 13% in 2000 and 33% in 2005. Compared to 2000 and 2005, Saskatchewan has made gains, but is still below 1997 levels. British Columbia has made steady gains, with 29% in 2000 and 34% in 2009. The United States also seems to be increasing its demand for native plant materials, as surveys in 1997, 2000 and 2005 showed 7%, 9% and 27% respectively.

16. In an average year, what percentage of the native plant materials you sell are used in the following natural regions? Please fill in all that apply and make your total add up to 100%.

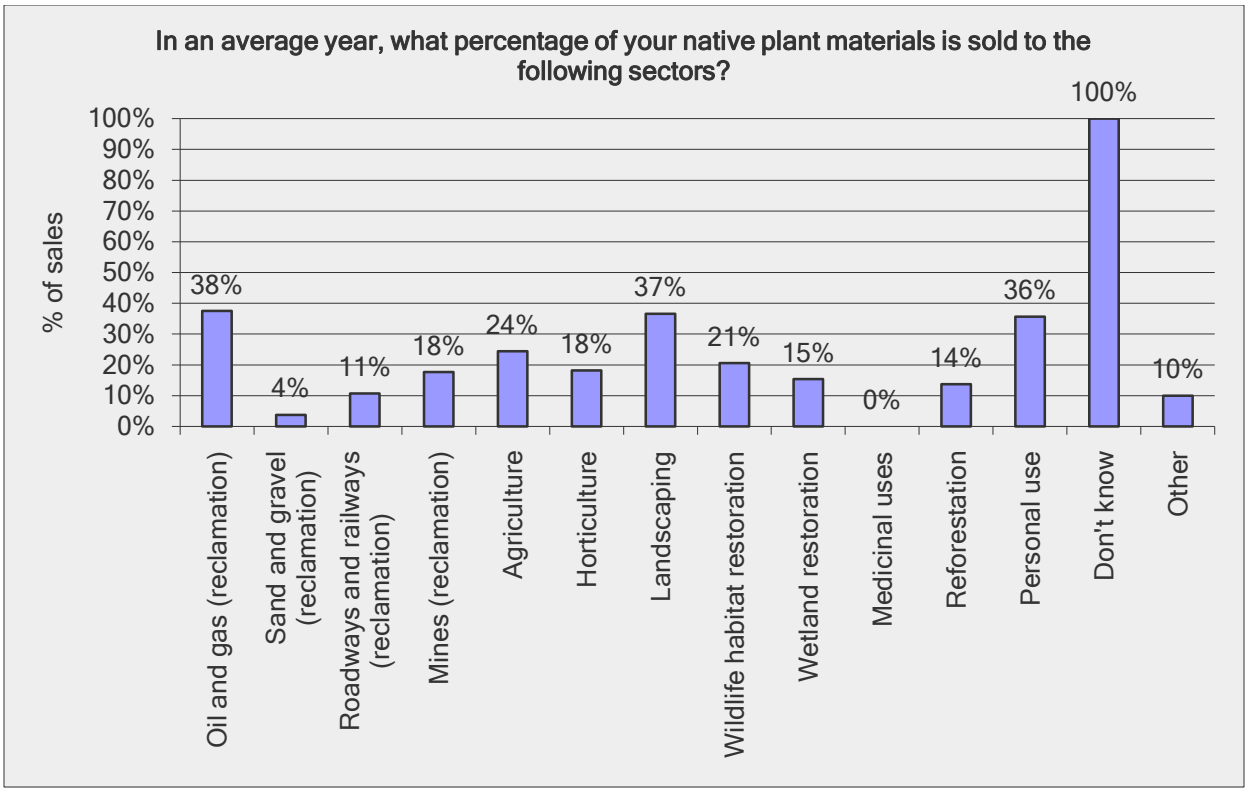
Answer Options	Response Average	Response Count
Grassland	43%	20
Parkland	46%	15
Boreal	32%	13
Foothills	34%	10
Rocky Mountains	26%	8
Coastal	100%	1
Other	5%	1
Don't know	100%	5
answered question		31
skipped question		19



Survey results show a fairly even spread of the percentage of native plant materials destined for each natural region. Native plant material providers may benefit from using the results of this question to modify their inventory based on the native plants commonly used in these areas. The “Don’t know” and “Coastal” categories are falsely high, as while other survey participants spread their total percentage over several provinces and states, those that chose “Don’t know” or “Coastal” dedicated 100% of their answer to this. In reality, it equates to 1 person for “Don’t know” and 5 people for “Coastal” as is shown in the table above the graph. Results from the survey done in 2000 were summarized as average percent of sales and show the following: grasslands were the destination for 26% of the native plant material, parkland was 12%, boreal was 6%, foothills were 8% and Rocky Mountains were 8%. 24% was classified as unknown and 16% was classified as “Other”, which was clarified as being from coastal regions in British Columbia.

17. In an average year, what percentage of your native plant materials is sold to the following sectors? Please fill in all that apply and make your total add up to 100%.

Answer Options	Response Average	Response Count
Oil and gas (reclamation)	38%	12
Sand and gravel (reclamation)	4%	4
Roadways and railways (reclamation)	11%	9
Mines (reclamation)	18%	8
Agriculture	24%	10
Horticulture	18%	13
Landscaping	37%	20
Wildlife habitat restoration	21%	12
Wetland restoration	15%	9
Medicinal uses	0%	1
Reforestation	14%	7
Personal use	36%	8
Don't know	100%	4
Other	10%	2
answered question		31
skipped question		19



Native plant materials providers indicated that reclamation was the sector with the highest demand, both for a single category (oil and gas reclamation at 38%) and overall (all reclamation sectors combined for a total of 71%). This could also explain why the Prairie Provinces comprised the destination for the majority of native plant materials in 2009 in question 15. Landscaping, personal use and agriculture rounded out the other top categories. Some trends can be drawn from previous results. In 1997, 2000 and 2005, reclamation comprised 20%, 29% and 22% respectively of the total demand, so this has obviously increased. The breakdown for reclamation in 2000 was 11% for oil and gas, 5% for sand and gravel, 7% for railways and roadways and 6% for mines. Restoration figures from 2000 indicated that wildlife habitat restoration comprised 15% of the usage while wetland habitat restoration was 9%. Restoration in the other survey years is more difficult to measure the trend, but if we assume that 20% for "Wildlife" in the 1997 survey meant wildlife habitat restoration and that 23% for "Conservation" in the 2005 survey meant restoration by conservation agencies, and if you combine wildlife habitat restoration and wetland restoration in this survey (36%), then a positive trend can be established. Demand from the agriculture has also increased, with 0% in 1997, 9% in 2000 and 16% in 2005. Other sectors that have increased their demand are the horticulture and landscaping sectors. These two categories were lumped in the 1997 and 2005 surveys, and both years showed a proportion of 13%. In the 2000 survey, horticulture comprised 19% and landscaping was 18%. Medicinal uses comprised only 1% of the total in 2000.

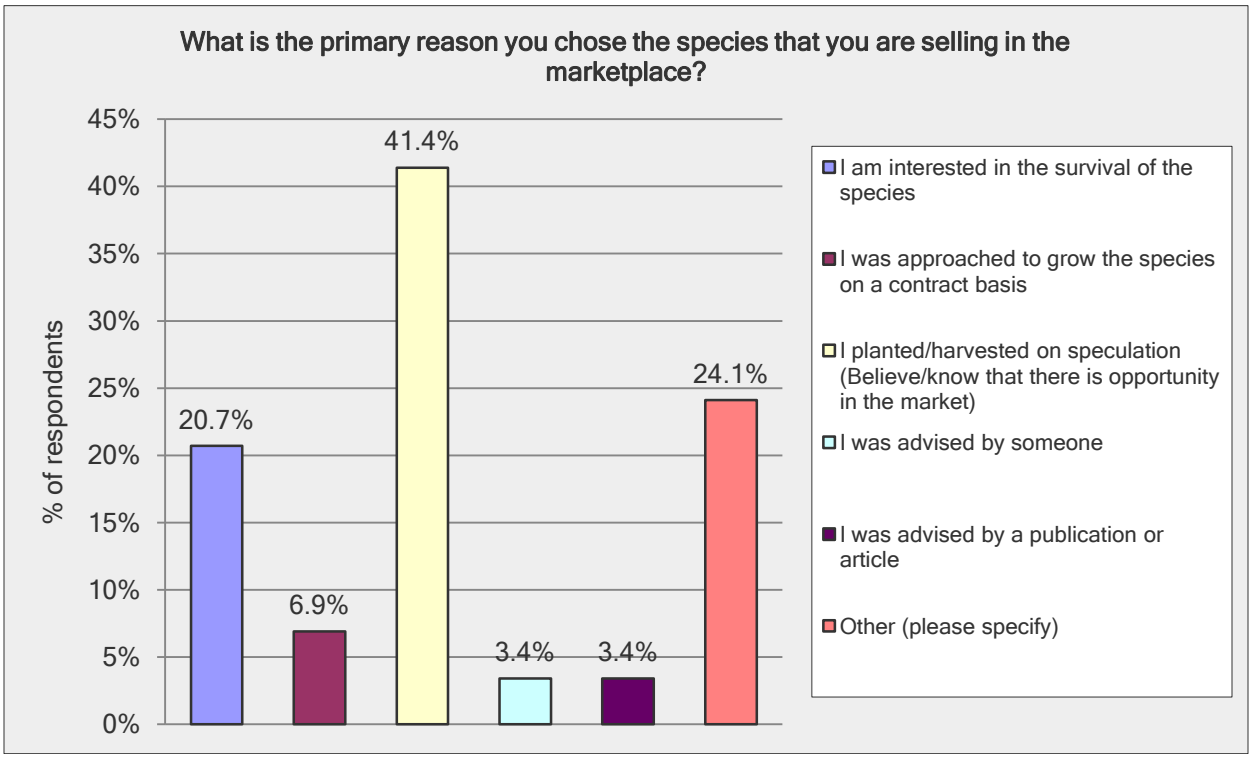
The "Don't know" category in the current results is falsely high, as while other survey participants spread their total percentage over several provinces and states, those that chose "Don't know" dedicated 100% of their answer to this. In reality, it equates to 4 people as is shown in the descriptive table of the graph.

18. What is the primary reason you chose the species that you are selling in the marketplace? Check one only.

Answer Options	Response Percent	Response Count
I am interested in the survival of the species	20.7%	6
I was approached to grow the species on a contract basis	6.9%	2
I planted/harvested on speculation (Believe/know that there is opportunity in the market)	41.4%	12
I was advised by someone	3.4%	1
I was advised by a publication or article	3.4%	1
Other (please specify)	24.1%	7
answered question		29
skipped question		21

Other (please specify)

- I grow what I like and what will grow in Sask.
- Adapted to our farm and location
- No one else was selling native aquatic plants
- Availability and monetary.
- New to market - r & d phase
- This area has been mostly left as native hay land
- Selected upon start-up based on need for native tree and shrub material in early 90's and have continued with this mix. Forbs and grasses are grown on contract



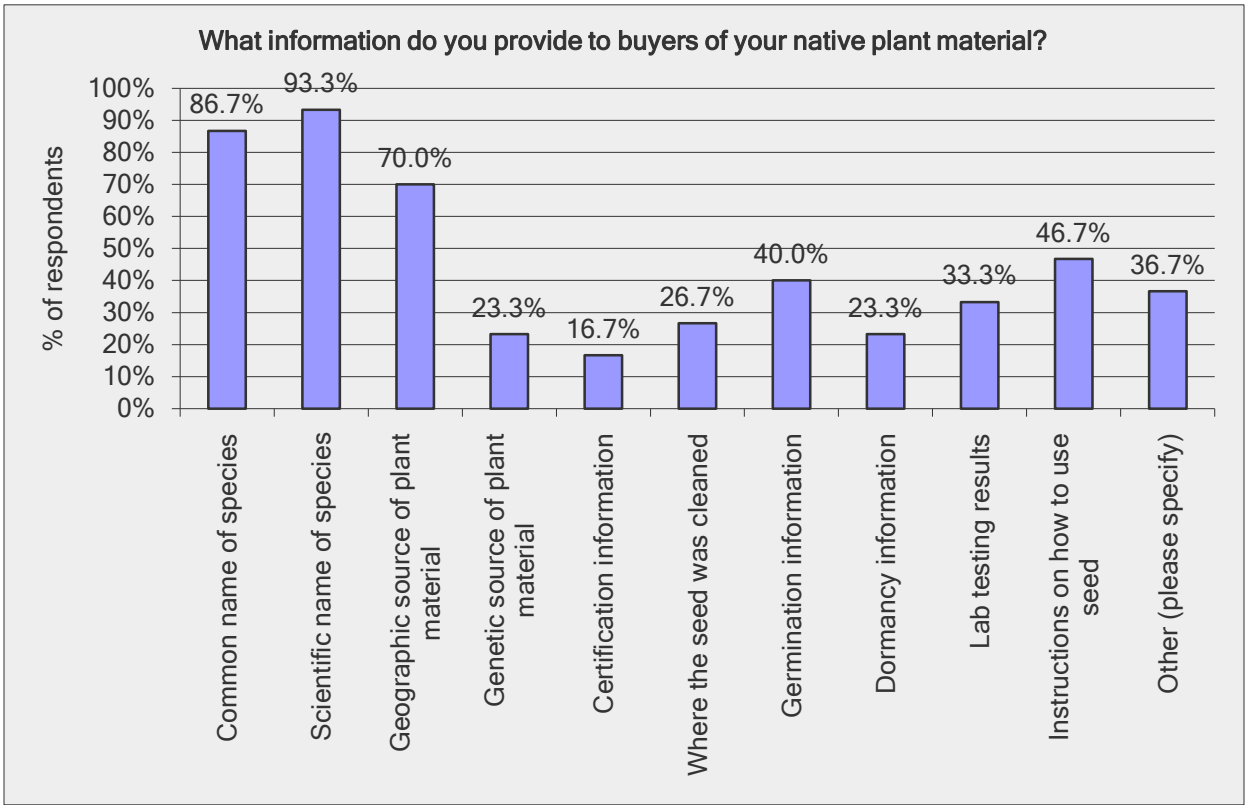
These results show that the majority of native plant materials providers choose plant species on some form of speculation. This might be a risky choice to make. First of all, there is a lack of tools to help a provider speculate on what to sell. Even these survey results may not answer all of the questions a provider has about the best species to sell. If they speculate incorrectly, they will not sell much of their native plant material which may contribute to the proportion of individuals who answered "no" with regard to being able to sell all of their native plant materials in a typical year (question 12). Forward contracting (ordering native plant materials well ahead of time and paying a deposit) may help solve the issue of poor speculation. According to the results, contract growing only happens roughly 7% of the time. Another somewhat worrying survey result is that the second largest single reason for choosing the plant species was because they were interested in the survival of the species. While this is a noble cause, it may not always make the most business sense. Further to that point, just over 7% of survey participants indicated that they acted on the advice of a person or publication. While the "Other" category was technically the second largest category, the reasons listed were quite varied and so no single reason could be extracted from the responses (see the table above the graph). Results from the 1997 survey indicated 56% of respondents planted on speculation, 19% chose the plant species because of a personal interest, 13% were approached to grow the species while 13% had other various reasons. This shows a trend of more providers speculating and fewer people contracting the production/harvest of native plant materials.

19. What information do you provide to buyers of your native plant material? Check all that apply.

Answer Options	Response Percent	Response Count
Common name of species	86.7%	26
Scientific name of species	93.3%	28
Geographic source of plant material	70.0%	21
Genetic source of plant material	23.3%	7
Certification information	16.7%	5
Where the seed was cleaned	26.7%	8
Germination information	40.0%	12
Dormancy information	23.3%	7
Lab testing results	33.3%	10
Instructions on how to use seed	46.7%	14
Other (please specify)	36.7%	11
answered question		30
skipped question		20

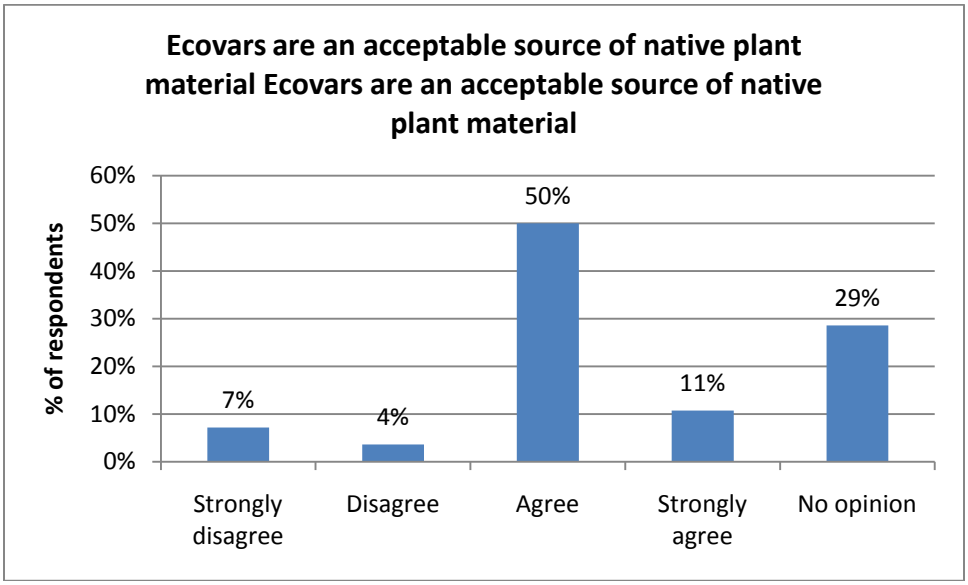
Other (please specify)

- Site specific requirements of plants
- Compatibility with others and site
- Plant uses and natural history - for some
- I am a professional Agrologist and provide comprehensive information on reclamation practices
- Growing conditions, bloom time & color, size etc.
- Planting & growing information
- Hardiness, culture information
- Growing conditions, bloom time, height
- Development phase
- Own use
- Basic information on species avail on website or if requested (book)

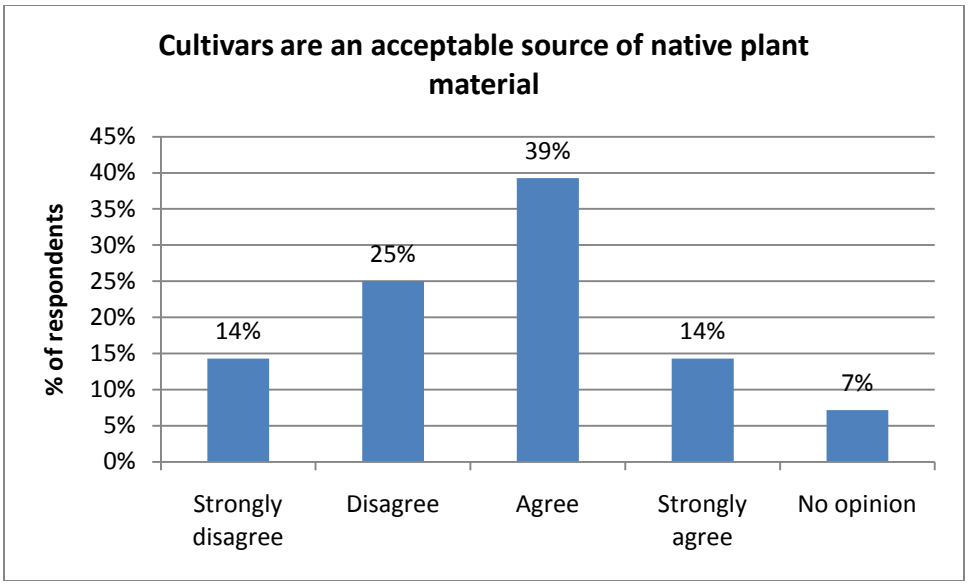


By far the most common information provided to users of native plant materials was the scientific name of the species (roughly 93% of the time), the common name of the species (roughly 87% of the time) and the geographic origin of the plant material (70% of the time). Other information provided was less prevalent and occurred in similar proportions to each other, ranging from nearly 17% to almost 47%. It is surprising that neither the common nor the scientific name is provided 100% of the time, as how else would the user know what they're getting? Results from the surveys completed in 1997 and 2000 show that 16% and 25% included information on the geographic source. Compared to the current results, this represents a significant increase in the use of this information. Another significant increase from the 1997 survey included a tripling of the usage of the scientific name of the species (30% in 1997 versus over 93% in 2009) and a near doubling of listing cleaning information (14% in 1997 compared to roughly 27% in 2009). Listing dormancy information increased almost six-fold (4% in 1997 compared to over 23% in 2009). Inclusion of germination information more than doubled (16% in 1997 versus 40% in 2009) and including lab test results more than tripled (9% in 1997 versus over 33% in 2009). Listing seed certificate information was more variable, with 9% in 1997, 25% in 2000 and 17% in 2009. Genetic source information has dropped from 56% in 2000 to just over 23% in 2009.

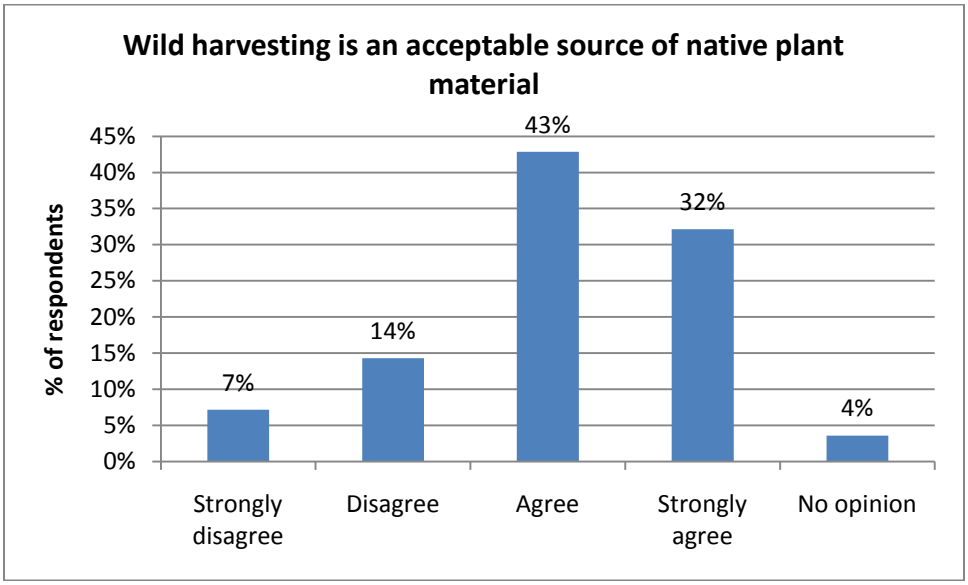
20. For each statement below, please rate your level of agreement of each statement.						
Answer Options	**Strongly disagree**	**Disagree**	**Agree**	**Strongly agree**	**No opinion**	**Response Count**
Ecovars are an acceptable source of native plant material	7%	4%	50%	11%	29%	28
Cultivars are an acceptable source of native plant material	14%	25%	39%	14%	7%	28
Wild harvesting is an acceptable source of native plant material	7%	14%	43%	32%	4%	28
answered question						28
skipped question						22



Most survey respondents agreed to some degree that ecological varieties of native seed (Ecovars) are an acceptable source of native plant material. Only 11% disagreed to any extent. The 29% of people who had no opinion might either genuinely have no opinion, or may not know what an Ecovar is. The results are very similar to the results from the 1997 survey (56% agreed to some degree, 10% disagreed and 33% had no opinion) and the results from the 2000 survey (62% agreed to some degree, 9% disagreed, 15% neither agreed nor disagreed and 15% had no opinion). Some forum participants were surprised that the proportion of people who thought that Ecovars were acceptable was high given that they have a narrower genetic diversity than wild-type native plant material.



Most survey respondents agreed to some degree that cultivars are an acceptable source of native plant material, although there was a higher proportion of people who disagreed compared to Ecovars. 53% of people surveyed agreed to some degree that cultivars were an acceptable source of native plant material, while 39% disagreed to some extent. 7% of people had no opinion. Results from the 1997 survey show that 26% of people agreed to some degree that cultivars were an acceptable source of native plant material, while 42% disagreed and 32% had no opinion. These results show that people are becoming more polarized over the usage of cultivars. Results from the 2000 survey show that 37% of the respondents felt that cultivars were acceptable, 42% disagreed, 15% neither agreed nor disagreed and 6% had no opinion. Some forum participants were surprised that the proportion of people who thought that cultivars were acceptable was high given that they have a narrower genetic diversity than wild-type native plant material.



Most survey participants were in agreement that wild harvesting is an acceptable source of native plant materials, with 75% finding it acceptable. 21% who disagreed with the statement and 4% who had no

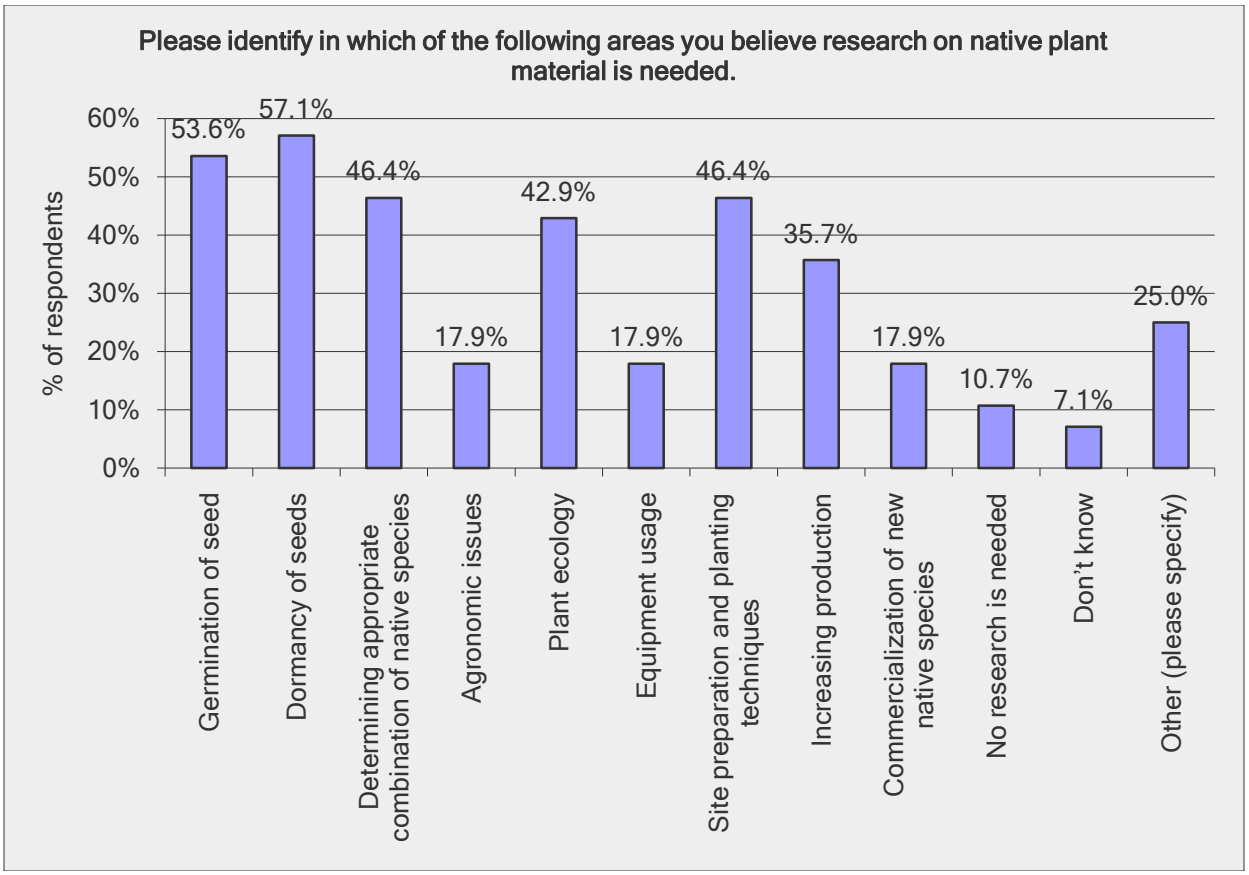
opinion. Here again, most people were polarized over the question, although the vast majority agreed with the statement. Comparing these results with the ones from 1997, there is some similarity. In that survey, 70% of the people agreed with the statement, while 4% disagreed and 25% had no opinion. It also seems as though there has been a shift from those that had previously had no opinion to those that now disagree that wild harvesting is an acceptable source of native plant material. Results from the 2000 survey show that 41% agreed that wild harvesting is an acceptable source of native plant material, while 35% disagreed, 11% neither agreed nor disagreed and 13% had no opinion. There was a comment from one forum participant that the wording of the statement is somewhat ambiguous and it wasn't clear as to whether this statement included wild-type seed that was increased in a nursery setting.

21. Please identify in which of the following areas you believe research on native plant material is needed. Check all that apply.

Answer Options	Response Percent	Response Count
Germination of seed	53.6%	15
Dormancy of seeds	57.1%	16
Determining appropriate combination of native species	46.4%	13
Agronomic issues	17.9%	5
Plant ecology	42.9%	12
Equipment usage	17.9%	5
Site preparation and planting techniques	46.4%	13
Increasing production	35.7%	10
Commercialization of new native species	17.9%	5
No research is needed	10.7%	3
Don't know	7.1%	2
Other (please specify)	25.0%	7
answered question		28
skipped question		22

Other (please specify)

- Areas of development lists for people to salvage species that would otherwise be lost. Connections between EA's, Industry and government to salvage as much plant materials as possible.
- None
- Competitiveness with cheat grass / control procedures
- Small scale seed cleaning equipment
- Isolation, characterization and preservation of medicinal compounds from native plants
- Particularly harvesting equipment for a field setting
- Given my business, plant production (in greenhouse) is very important and as a grower using this method, very little information exists and we often Google ourselves when searching for information



The survey results show that dormancy of seeds and germination of seeds were the top priority for research, followed by determining the appropriate combination of native species, site preparation and planting techniques, and plant ecology. Nearly 11% of respondents stated that no research needed to be done, which was the second lowest category. When this question was posed in 1997, the top 5 answers were site preparation and planting techniques (72%), germination of seed (57%), dormancy of seeds (55%), determining appropriate combination of native species (51%) and plant ecology (47%). These results match very closely with the results from the current survey, with the top 5 priority research areas being identical and the percentages also very similar. Forum participants also seemed to agree with the results of the current survey.

22. Please identify and discuss what you believe to be obstacles in the expansion of your native plant materials business.

Answer Options	Response Count
	23
answered question	23
skipped question	27

Response Text

- Supply is a limiting factor - demand outstrips the supply. We are able to produce woody plants to fill a very limited market. We could supply more if we were to expand or find others able and willing to grow
- Native plant materials are only incidental to what I do.

- education and reality
- Unpredictable market patterns, unreliable seed sources, operating costs, equipment costs, labour intensive
- Time and money. Marketing. Pricing.
- Competition with government agencies and non-profit groups who develop species and release it to the general public have undermined the stability of our seed business. We have had 25 years developing native species, but have found that there is no market stability and current seed suppliers demand low prices from growers and retail for high prices. The best help the industry could have is developing new markets (highways roads and other activities may actually bring up demand and allow more people to be in the business).
  Seed cleaning is also suffering and unless we clean our own seed we cannot make a living selling it. We are moving into live plant contract growing as government (ARC in Alberta) is not as highly involved in this area.
- Market size
- Emerging reclamation markets need to know, where to find material, timelines involved and how to plan and plant for success.
- Surveys that ask very specific questions about quantities and market and give away information that I have worked 25 years to achieve
- Downy/Japanese brome - its growing in every county in the Pacific/Mountain states, and is a major factor in establishment issues.
- Ecovars, because they are a sub-par substitute. Weather, weed control and invasive species in true native stands.
- Lack of appreciation of the value of local native species in both habitat and other plantings. Government & business do not focus on using local native species.
- Not selling plants when they are ready; consequence is larger sizes and no market, and increased maintenance. Plants requested in large numbers without adequate time to produce. Clients not willing to pay prices required.
- None
- Some plantings have not been successful in survival (conditions not always adequate for plants). Landscapers are requested to plant plugs, but plugs have a limited shelf life and large numbers of plants are difficult to maintain on speculation. Bare root material is easier to cultivate at a nursery and provide in large quantities on short notice.
- Time and appropriate equipment
- Lack of awareness by the general population of gardeners of the benefits of growing native plants and a need to overcome their desire to see native plants as "weeds"!!
- I think that people are reluctant to purchase products if they believe that the environment has been depleted by the harvest. Lack of awareness of native plant material products that are available. Lack of understanding and knowledge. Lack of a forum to engage young people/children in learning. You can not appreciate something you do not understand.
- Need to do our own research on viability of marketing North American Swampgrass that grows naturally here.
  Costs of starting business.
- The only obstacle is that native plant production is difficult. We need companies who require the native seed to support this production.
- Timelines - customers using traditional horticultural species are accustomed to purchasing on spec at the local nursery - native plant production is still a very small industry and in order to properly supply the material needed, sufficient time is needed to grow out the species. There is a large disconnect at this level that education can help to overcome. A lead time for production on live plants is critical.
- Our biggest obstacle is the ability to harvest our species on a large scale. We are currently increasing over 40 species of native xeric forbs. We are in our 3rd year of establishment and now have the seed to increase as fast we want, the seeding techniques to increase the size of our beds exactly how we want, but are unable to harvest at the rates we want without an unsustainable amount of labour.
- We are looking at maintaining our current status given our mandate is to grow native tree and

shrub species. In the native forb and grass area of our business we are growers rather than suppliers. Our contract growing is oriented more towards a place to grow out a specific (supplied seed) source and not as a general supplier of native plant material. As such are very careful to select those projects which seem to be unavailable in the current market and will not be competing with a private grower doing this as a business

Forum participants echoed some of the same comments that were made in question 22, adding that some agencies are actually interfering with the native plant materials industry through projects and programs that are counterproductive to the industry. Some made the comment that even within a single government department, there are programs that help the native plant industry and programs that hurt the industry. Another comment from forum participants was that some companies are harming the reputation of the native plant industry by misleading consumers; claiming, for example, that the plants they sell are native when they are not.

23. Please suggest any possible solutions to the obstacles mentioned above.

Answer Options	Response Count
	19
answered question	19
skipped question	31

Response Text

- We are planning on training more nursery growers to help fill the demand
- No suggestions.
- have the people who are making specie selection for projects have some actual experience and ground knowledge must be practical and aware of materials handling --they must be out in the field and see what sort of job that labourer does with the seed and follow up later
- Summer student funding.
- Government development should focus on market creation and advertising the uses of native seed. It is fine to develop new cultivars but really the market cannot benefit from continual development eventually it has to start doing it on its own. there are many cultivars on the market but without a market to sell to its useless for producers. Producers and the bottom level need to get a fair price and so high demand is the only solution
- Awareness
- Ask questions in percentages
- Canada has taken the correct approach in insisting seed lots be free of cheatgrass, but there is always a chance. I'd like to see some work done on both sides of the border for cheat control/mitigation.
- Educating the public about true natives as compared to other substitutes.
- Government agencies such as wildlife & highways should be mandated to require local harvest native species

  Industry should be encouraged to do the same with tax incentives

  Areas of native prairie already on public lands should have higher profile, and be signed & managed so that public can appreciate their value more. This would especially be of value along highways, urban, provincial & national parks, recreation areas, golf courses, & school grounds.
- N/A
- Request material as plugs or bare root (if plugs aren't available). Planters must be aware of cultural requirements of wetland plants, and maintain conditions after planting.

- Would like to do more sessions at the greenhouse on how to use natives in landscaping, or just introducing people to natives in general.
- 4-H program for young people who want to learn about nature, the environment and proper stewardship - start a trial program for 3 years and see where things go - lots of farm families no longer raise livestock so this type of project might breathe some life back in to some of the 4-H programs and it would make the whole 4-H experience open to urban youth. I learned a lot about different wild animals in Canada from the vignettes and Ducks Unlimited commercials on TV - media exposure of the diversity and importance of the native plant material. Since media is expensive, what about integrating modules into the public school curriculum that introduce the young people to the role native plants have played in history, medicine, art, native culture and their future potential. What about offering scholarship or prises for science fair projects etc.
- Plan on researching project
- Native species may cost more than agronomic species to produce but if you want to reclaim to native landscape then you simply have to pay the price and encourage native plant production otherwise it will die.
- Consumer education at both the commercial and private owner levels.

  Relationship building with clients.
- We are currently working with an engineer to develop equipment that fits our specific needs (permanent beds of perennial species in a monoculture). One machine to handle any seed with a pappus, and another to cut/harvest species with nutlet-type seeds.
- More Saskatchewan suppliers of native plant material, not just seed, would be wonderful!! We often look for suppliers ourselves or when people call looking for sources and have to look to Manitoba or Alberta as those suppliers that used to be available have retired or gone out of business.

24. Enter any additional comments here.

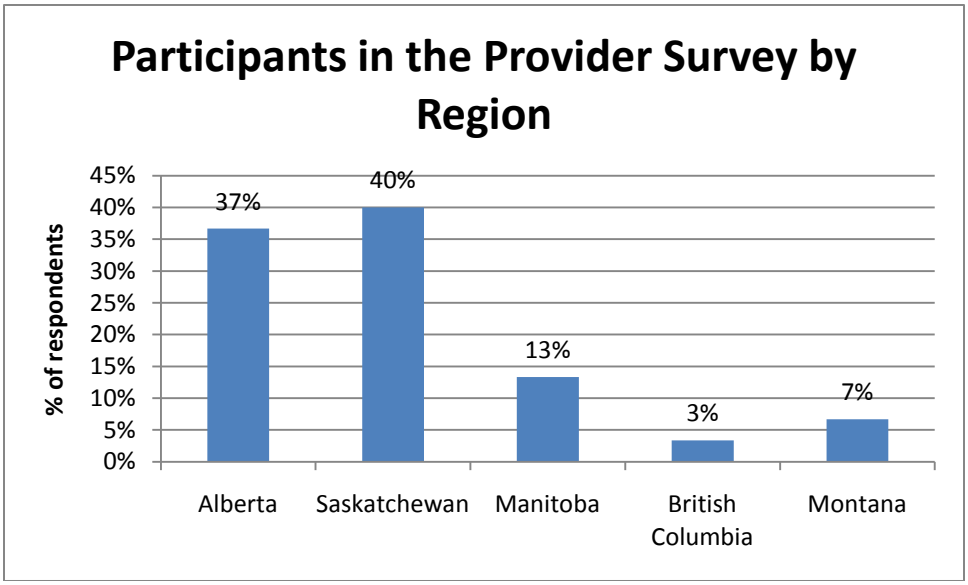
Answer Options	Response Count
	11
answered question	**11**
skipped question	**39**

Response Text

- Woody plants should only be grown from seed or cuttings - they should never be 'wild-crafted' - it creates a false economic situation - we only promote nursery grown stock from source identified locally collected seed sources
- No comments.
- Whether or not we remain producers in the future will be determined by supply and demand, not government aid.
- If you're doing research, you do it on remediation, or medicinal uses
- (formerly from Saskatchewan, and director of the Forage Council)
- As for the sections on wild harvesting, my comments relate to seed harvesting only, not plants. Wild harvesting of plants is only acceptable in areas where they are about to be destroyed anyway. We know enough about propagation of most species so as to make wild plant collection unnecessary. It also is extremely unethical.
- None
- Interest in native plants is growing. I rely heavily on the support of the Edmonton Naturalization Group and the members of the Edmonton Hort. Society.
- I learned about the native plant society of Saskatchewan from a booth at the home/garden show in Saskatoon. I had no idea of the incredible biodiversity in Saskatchewan. The whole study of plants and particularly wild plants is new to me. Those with the knowledge base need to have forums to mentor those who are interested. Those who are willing to sacrifice to

preserve natural plant habitats need to be acknowledged or compensated through tax relief etc.

- Suggestions on where to find information. Found your site through newspaper ad regarding survey
- I would be very interested in receiving a copy of your results from this survey if that is at all possible. Thanks.

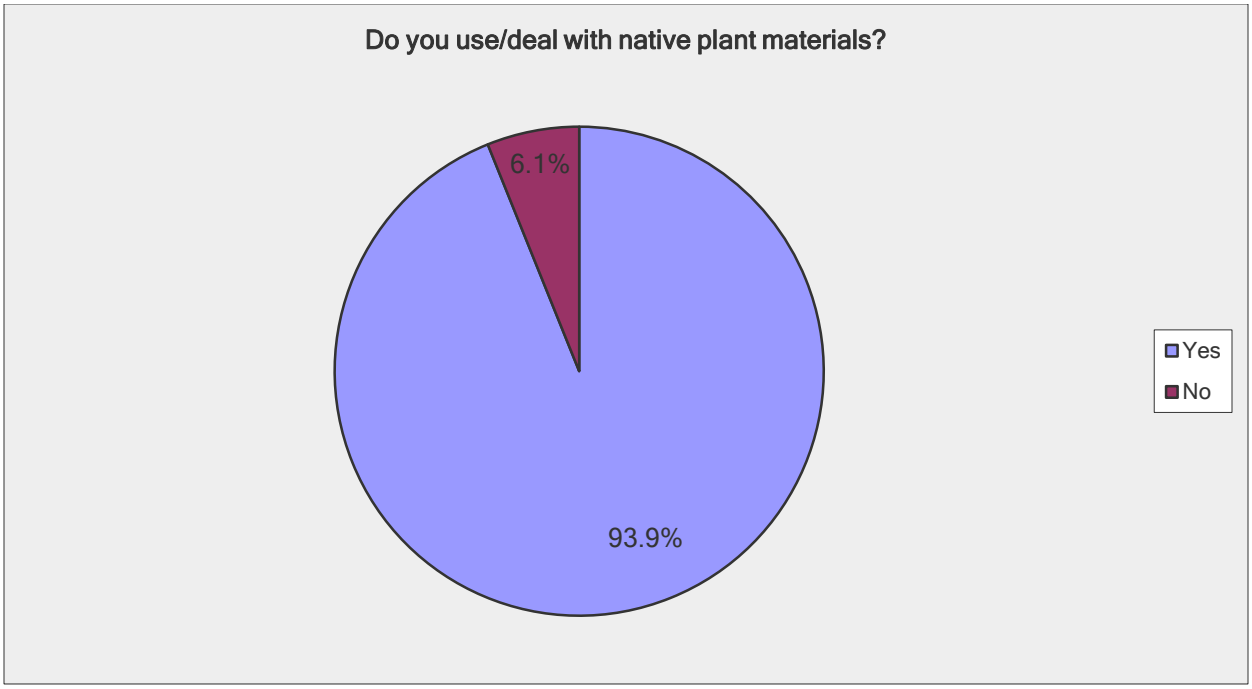


Participants from Saskatchewan and Alberta comprised the majority of native plant materials providers who participated in the survey.

Results from the Users of Native Plant Materials

The following draft document summarizes the results of the survey completed by users of native plant materials and services. In some circumstances, survey participants skipped certain questions. This could either be due to the fact that the question didn't apply to them, or that they didn't know the answer. The survey directly announced to each member of the NPSS representing a total of 200 people. A total of 83 participants completed the survey. Here are the results:

1. Do you use/deal with native plant materials?		
Answer Options	**Response Percent**	**Response Count**
Yes	93.9%	77
No	6.1%	5
answered question		82
skipped question		1

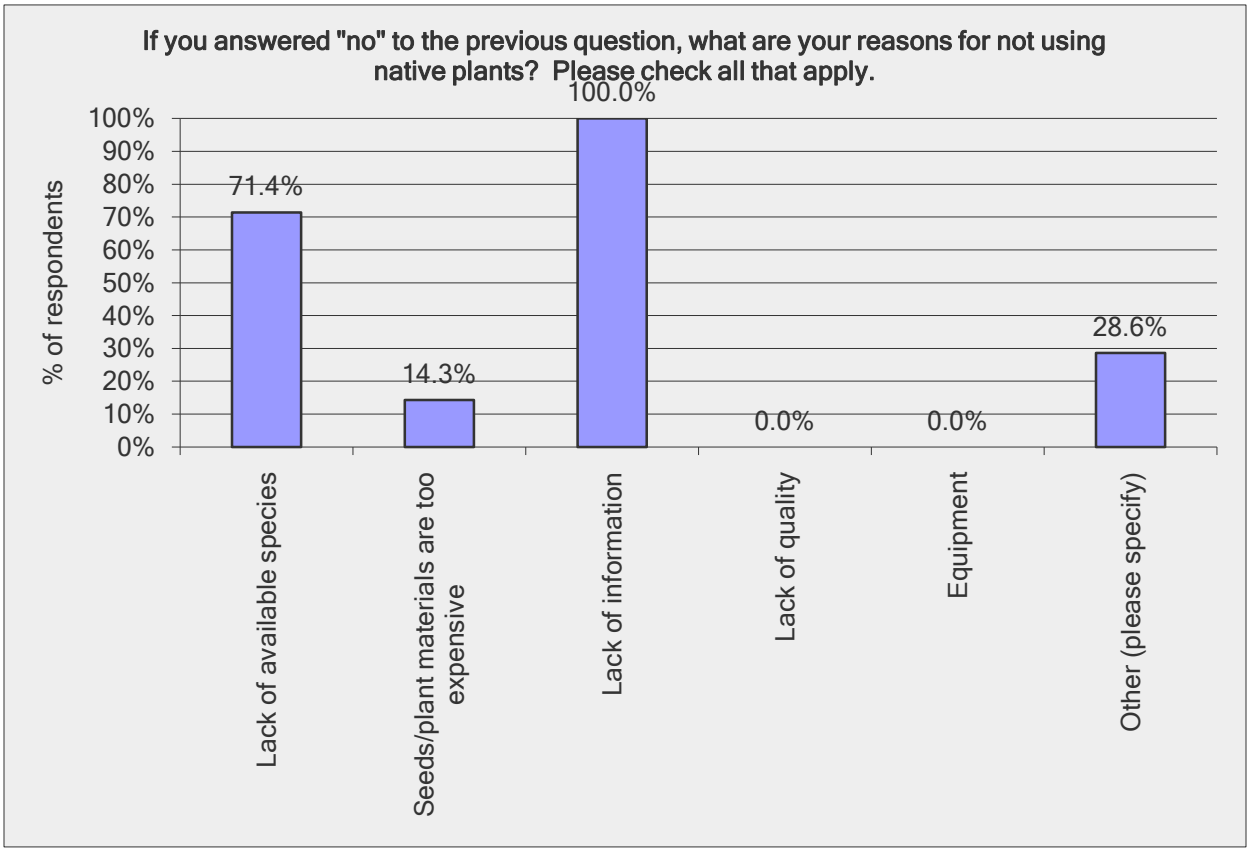


Roughly 94% of all people who completed the user survey actually dealt with native plants. The 6% that did not listed their reasons in question 2.

2. If you answered "no" to the previous question, what are your reasons for not using native plants? Please check all that apply.		
Answer Options	**Response Percent**	**Response Count**
Lack of available species	71.4%	5
Seeds/plant materials are too expensive	14.3%	1
Lack of information	100.0%	7
Lack of quality	0.0%	0
Equipment	0.0%	0
Other (please specify)	28.6%	2
answered question		7
skipped question		76

Other (please specify)

- I really don't know how to use them, where to get them, or any of the benefits of doing so and never knew where to get any information.
- Don't know where to get these.

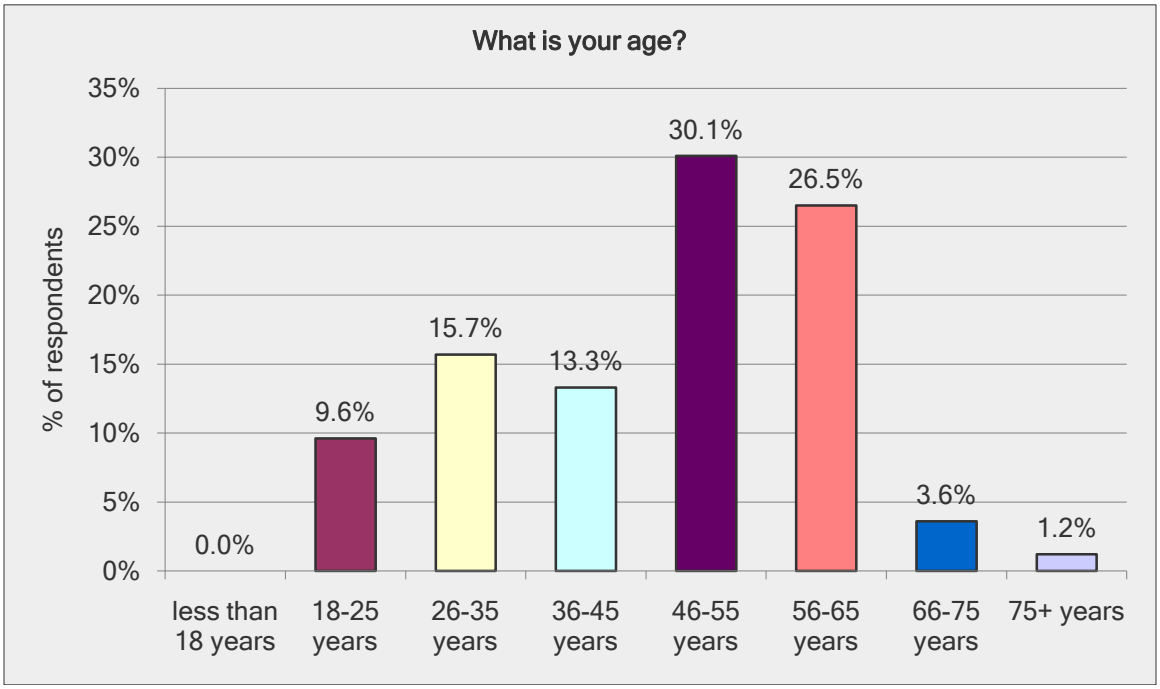


Every person who answered "no" to question 1 stated that there was, at least in part, a lack of information regarding native plants that kept people from using them. The second most popular answer was that there was a lack of available species. Other reasons included not knowing where to get them, and prohibitive costs to use them. Forum participants indicated that the lack of available species may just be a perceived problem, and that the person just doesn't know who to contact (which is in itself a

problem). Others at the forum who provide native seed agreed, stating that many native seed producers will supply anything the customer wants if given enough time and with sufficient demand. Results from the survey done in 2000 were somewhat similar, with 50% of respondents not using native plant material citing a lack of available species, 50% claiming it is too expensive, 33% citing a lack of information concerning native plant materials and 17% stating other reasons. Comparing these to the results from 2009, "Lack of available species" and "Lack of information" were still among the top reasons, but while cost was a concern in 2000 (it tied for the top reason with "Lack of information"), it was the least of the reasons in 2009. This indicates that people are becoming less concerned about the price of native plant materials and/or that the price of them is coming down. It should also be noted that in both the 2000 and 2009 surveys, "Equipment" and "Lack of quality" did not get a single vote. One can assume, then, that native plant materials in the market are of good quality, and that equipment is not an issue.

3. What is your age? (Your answers are anonymous and confidential)

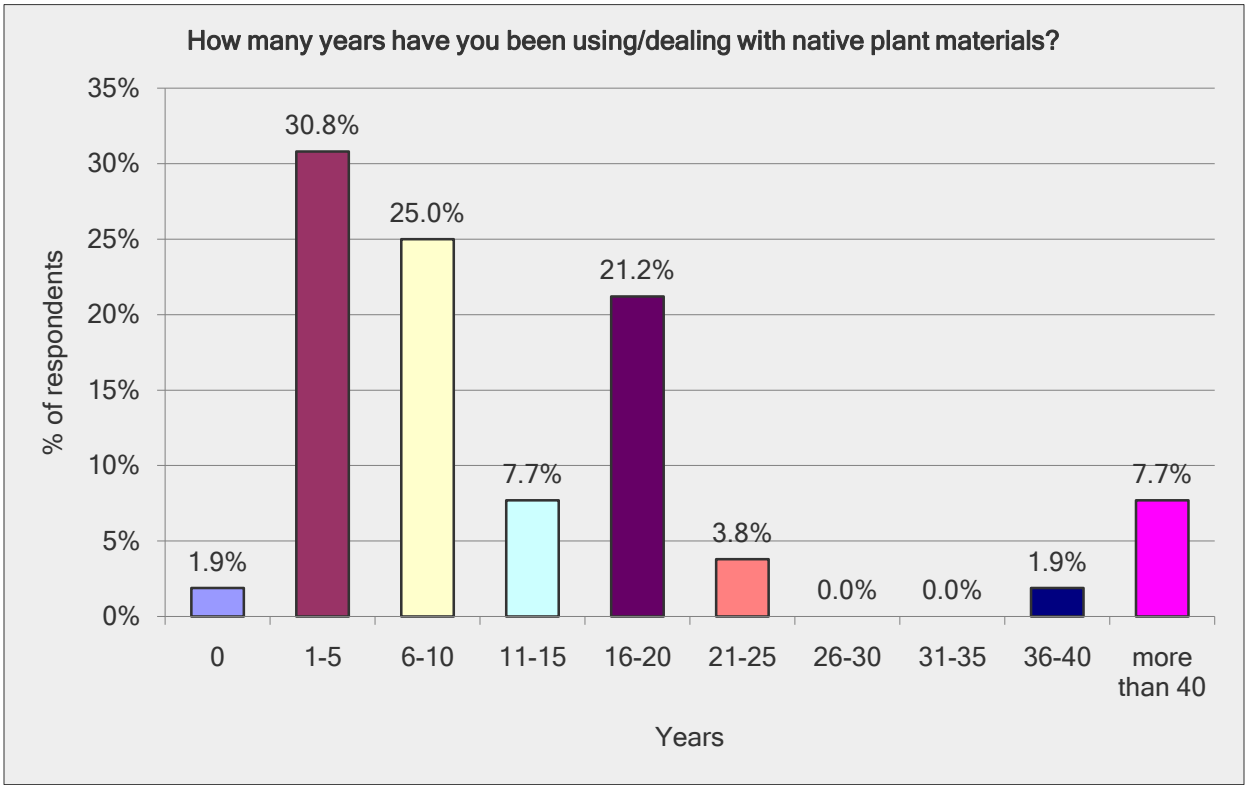
Answer Options	Response Percent	Response Count
less than 18 years	0.0%	0
18-25 years	9.6%	8
26-35 years	15.7%	13
36-45 years	13.3%	11
46-55 years	30.1%	25
56-65 years	26.5%	22
66-75 years	3.6%	3
75+ years	1.2%	1
answered question		83
skipped question		0



Those that were 46-55 years old made up the single largest age class, followed by those 56-65 years of age. The next three largest age classes were 45 years old or younger. If the graph is split at 45 years old, this represents nearly 39% of the total number of respondents in the "younger" age classes, with just over 61% in the "older" age classes. This appears to be an acceptable mix of ages as it allows for a steady stream of demand in the future, even as the consumers age. Some forum participants found that it was somewhat worrying that there was on one in the "less than 18 years" category, and that this could be addressed with native plant education activities and events for youth.

4. How many years have you been using/dealing with native plant materials?

Answer Options	Response Percent	Response Count
0	1.9%	1
1-5	30.8%	16
6-10	25.0%	13
11-15	7.7%	4
16-20	21.2%	11
21-25	3.8%	2
26-30	0.0%	0
31-35	0.0%	0
36-40	1.9%	1
more than 40	7.7%	4
answered question		52
skipped question		31



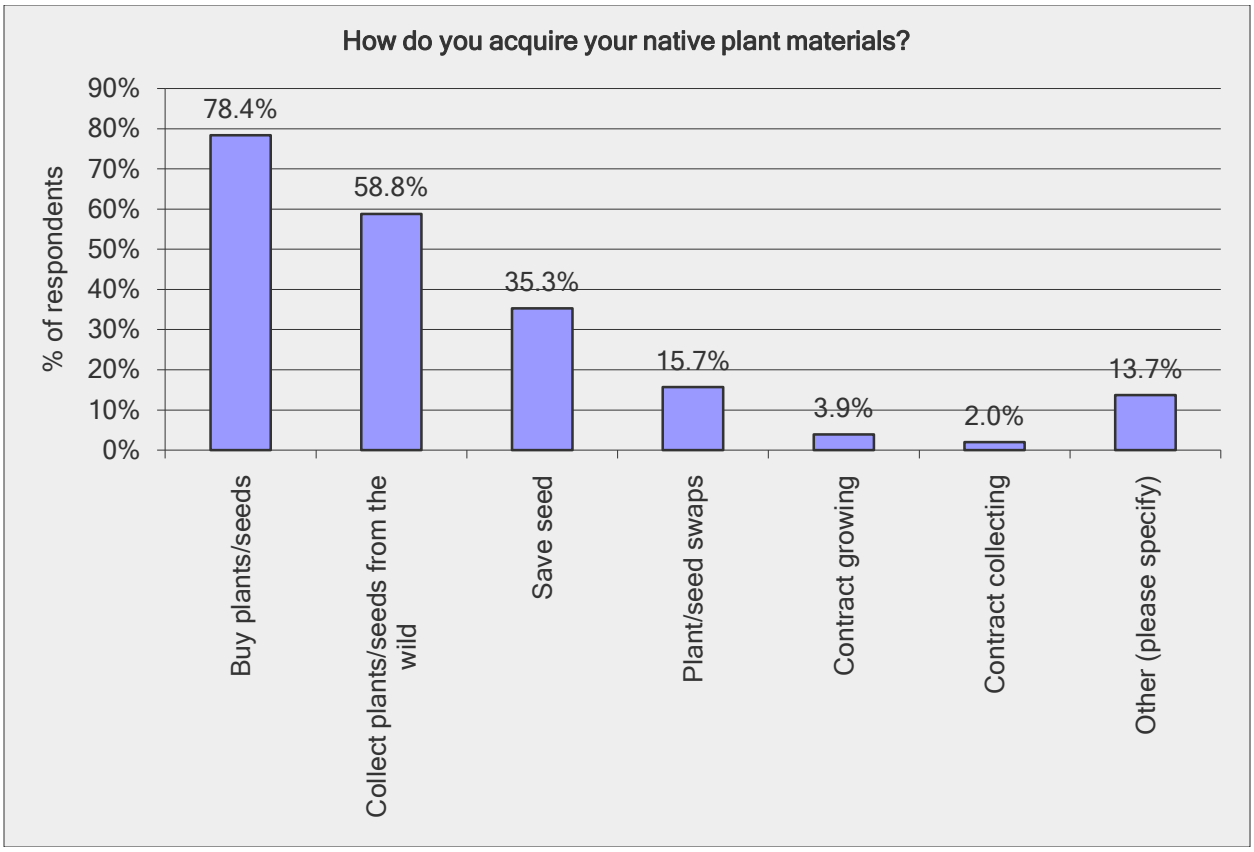
According to the survey, the top three categories regarding years dealing with native plants are 1-5 years (31%), 6-10 years (25%), followed by 16-20 years (21.2%). This shows a good mix of more experienced people and those with less experience. It may be coincidental, but the Native Plant Society of Saskatchewan was formed 15 years ago. Tracing the graph backward from that time to today, it shows a steady increase. It is the hope of the NPSS that their programming is responsible for at least a small part of this trend. Forum participants were pleased with the proportion of people who were just beginning to deal with native plant materials, as this will help to support the market in future years. Results from the survey completed in 2000 show that 18% of respondents have 1-5 years of experience dealing with native plant materials, 23% have 5-10 years, 36% have 10-25 years and 23% have more than 25 years of experience using native plant materials.

5. How do you acquire your native plant materials?

Answer Options	Response Percent	Response Count
Buy plants/seeds	78.4%	40
Collect plants/seeds from the wild	58.8%	30
Save seed	35.3%	18
Plant/seed swaps	15.7%	8
Contract growing	3.9%	2
Contract collecting	2.0%	1
Other (please specify)	13.7%	7
answered question		51
skipped question		32

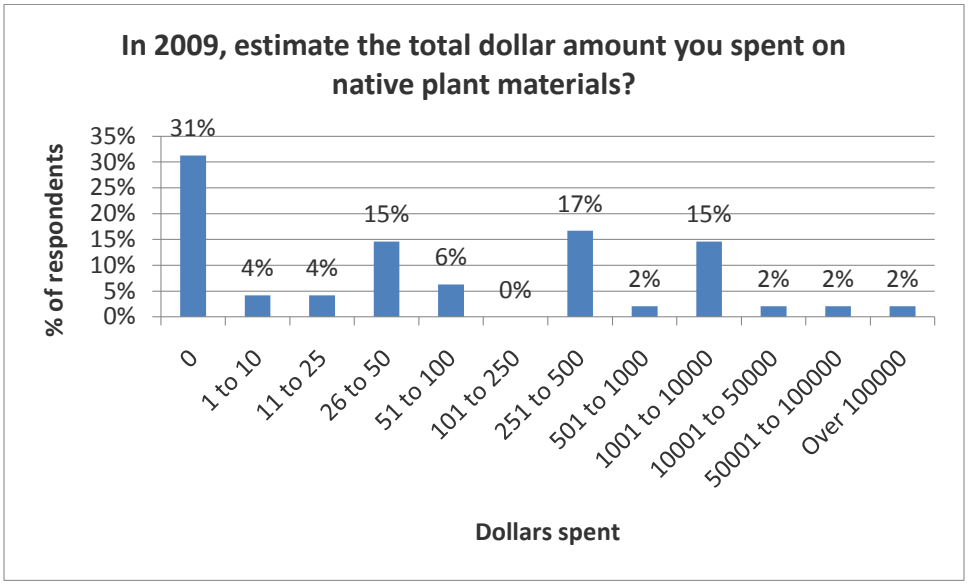
Other (please specify)

- Acquired seeds from Friends of the Grasslands
- Specify plants / seed
- We assess the native species and collect some for identification and purchase some seed for reseeding native areas.
- Tried to purchase native seed for work project in early 2010 but had trouble finding good clean seed.
- collect from disturbed sites
- I maintain them in my workplace.
- Baling plants for feed (beef production)



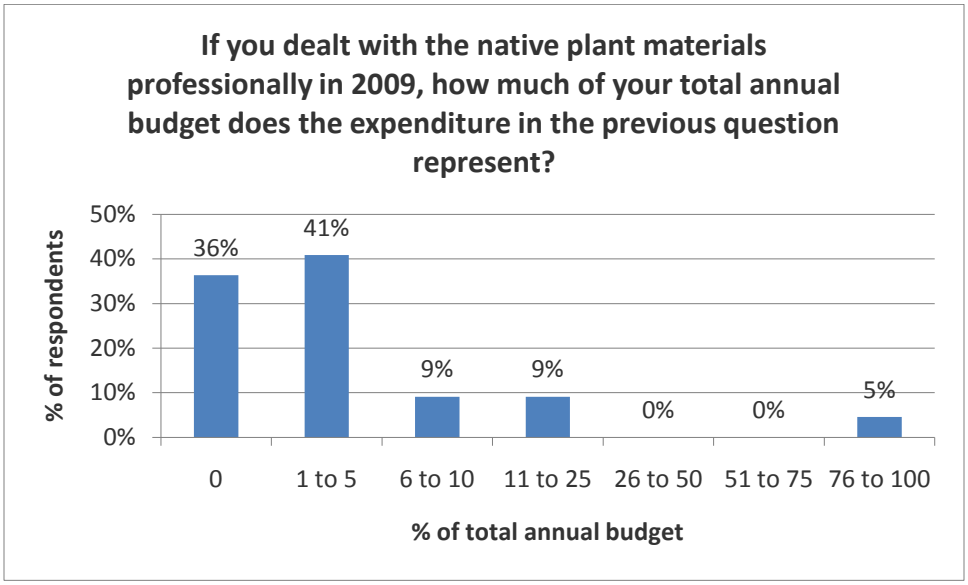
Most users (78%) said that they buy their native plants/seeds, while nearly 59% said that they wild-harvest plants/seeds themselves and 35% of people claimed that they save seed. The lowest categories were contract growing (4%) and contract collecting (2%). Especially for large orders, contract growing and/or collecting provides a reliable source of native plant material for the user and a reliable source of income for the provider.

6. In 2009, estimate the total dollar amount you spent on native plant materials?			
Answer Options	**Response Average**	**Response Total**	**Response Count**
Total spent in 2009 $	5,980.00	287,040	48
answered question			**48**
skipped question			**35**



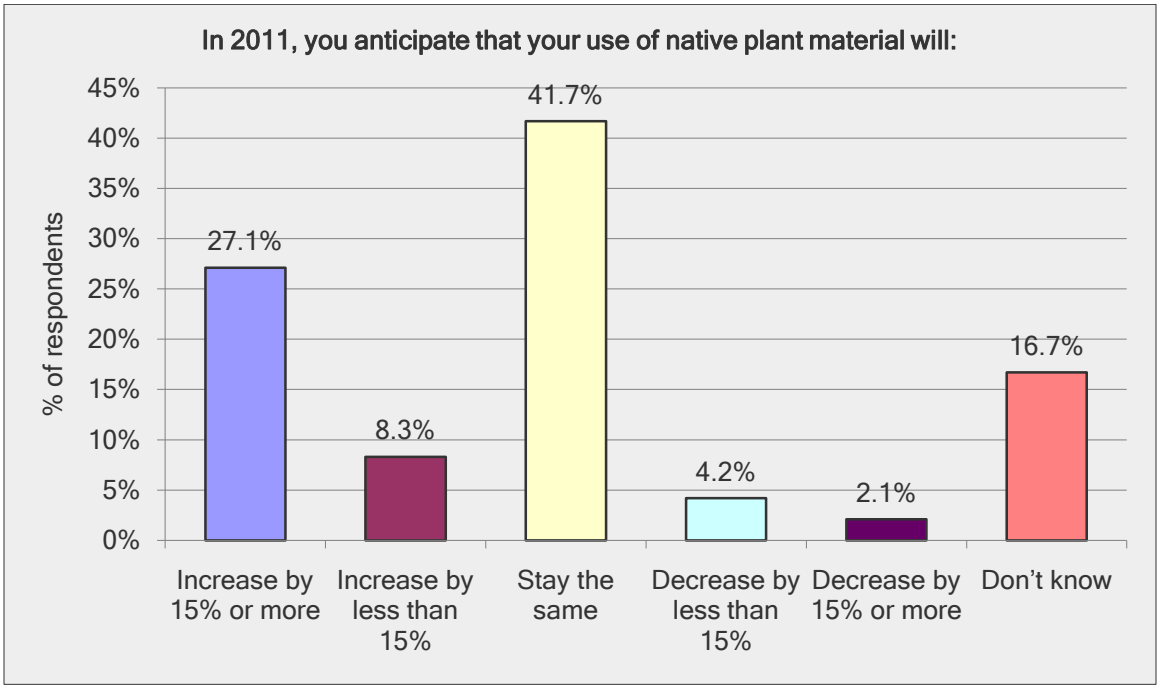
Those that spent money on native plant materials in 2009 seem to fit into two distinct classes: small users $100 or under (likely for personal use) and large users $251 and up (likely professionals). A closer look at the raw data reveals that this is the case, with 12 of the 21 people identifying themselves as professional users spending at least $251. However, the other 9 professional users spent $100 or less, with 7 of the 9 spending $0 in 2009. This suggests yearly fluctuations in demand, which most in the industry would agree with. The fact that 31% of respondents spent $0 in 2009 lends further weight to this. It also indicates that it may be hard to stimulate market demand when 31% of users don't purchase any native plant material in a given year. The most that was spent by a private individual was $500, which occurred with three survey respondents. Forum participants also commented that the average spent by a user in 2009 was high ($6,107.23), and was influenced to be falsely high by the few users that spent large sums of money.

7. If you dealt with the native plant materials professionally in 2009, how much of your total annual budget does the expenditure in the previous question represent?		
Answer Options	**Response Average**	**Response Count**
% of total annual budget	8.41	22
answered question		22
skipped question		61



Survey results show that the professional users of native plant material most commonly spent 1-5% of their total annual budget on native plant materials, with the average being just over 8% of the total annual budget. However, the second highest category was 0%, which will need to increase and remain relatively consistent from year to year in order to drive demand and strengthen the market. Roughly 25% of survey participants are professional users of native plant material (who spend more than private users).

8. In 2011, you anticipate that your use of native plant material will: (Check one only)		
Answer Options	**Response Percent**	**Response Count**
Increase by 15% or more	27.1%	13
Increase by less than 15%	8.3%	4
Stay the same	41.7%	20
Decrease by less than 15%	4.2%	2
Decrease by 15% or more	2.1%	1
Don't know	16.7%	8
answered question		48
skipped question		35



Given the current economic climate, it is encouraging that 77% of users of native plant material indicated that their use would increase or at least stay the same in 2011. Nearly almost 42% of users said that their use would remain constant, while just over 35% thought that it would increase. Only a little more than 6% indicated that their use would decrease. This is very encouraging and signals a good year for the native plant materials industry. The native plant providers in the forums confirmed that they were seeing this trend, and attribute it to a growing awareness of native plants and habitats, increased environmentally sustainable attitudes and better policy. Nearly 17% of respondents didn't know what their usage of native plant materials in 2011 would be, possibly due to the nature of their business. Regarding this, forum participants suggested that those able to predict their business better may be able to more accurately anticipate their native plant materials usage with some forward planning and budgeting, if possible. When the professional users data was filtered, only 2 professional users reported that their usage would decrease (representing 4.2% of the total respondents) while another 2 professional users didn't know what their usage would be in 2011 (representing another 4.2% of the total respondents). The rest indicated that their usage would either stay the same or increase. Given that they spend more money than private users, this will be good for the industry. Results from

the 2000 survey show that 31% of users anticipated an increase of 15% or more in their use of native plant materials, 4% anticipated an increase of less than 15% and 35% of people indicated that their usage would not change. Only 4% of people indicated that it would decrease by 15% or more. Also in the 2000 survey, 27% of people didn't know what their future usage of native plant materials would be. All of the results from the 1997 survey roughly correspond to the findings from the current survey. Results from the 2000 survey reveal that users anticipated an initial increase in their use of native plant materials from 1999 to 2000 (5,958 pounds of grass seed to 8,125 pounds and 82,530 shrubs to 512, 800), followed by a general decline in use from 2000 to 2001 (8,125 pounds of grass seed to 3,837 and 512,800 shrubs to 250,800). Although the anticipated usage in 2001 is lower than 2000, it still exceeds 1999 levels.

9. In 2009, estimate how many pounds of seed and/or number of plants you purchased?

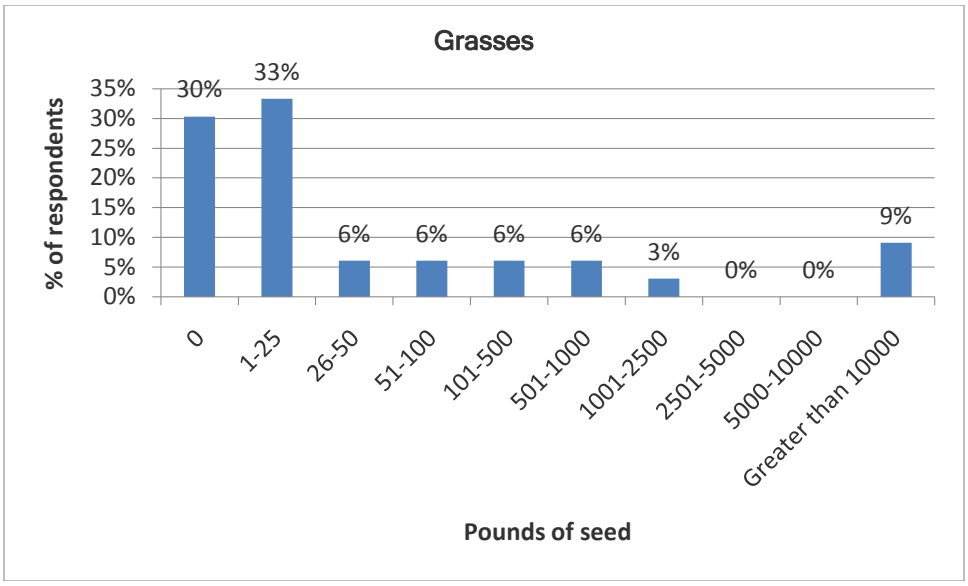
Pounds of seed

Answer Options	0	1-25	26-50	51-100	101-500	501-1000	1001-2500	2501-5000	5000-10000	Greater than 10000	Response Count
Grasses	10	11	2	2	2	2	1	0	0	3	33
Forbs	10	8	2	0	1	0	0	0	0	0	21
Shrubs	17	3	0	0	0	0	0	1	0	0	21
Trees	18	0	0	0	0	0	0	1	0	0	19
Wetland species	17	2	2	1	0	0	0	0	0	1	23

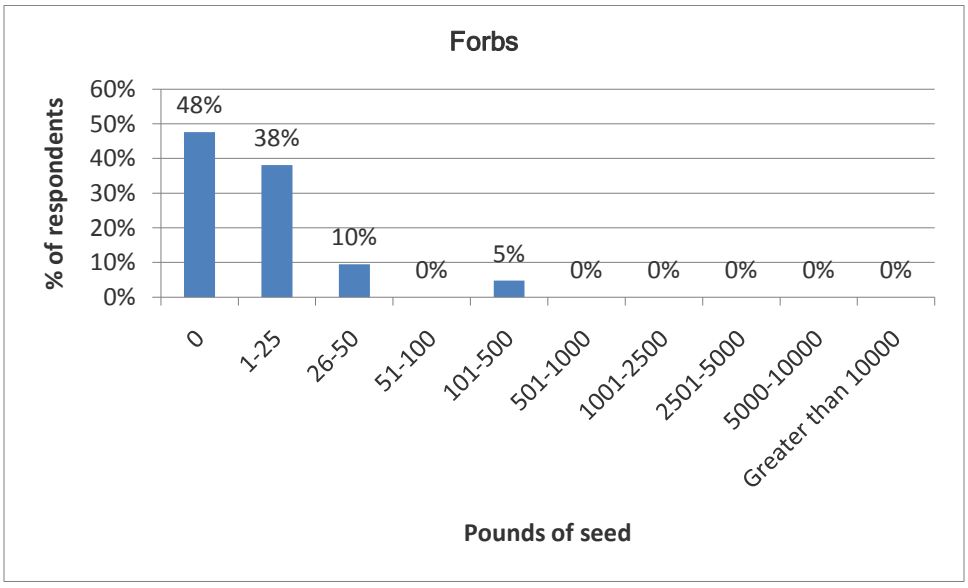
Plants

Answer Options	0	1-100	101-500	501-1000	1001-2500	2501-5000	5000-10000	Greater than 10000	Response Count
Grasses	14	7	0	2	0	0	1	0	24
Forbs	11	10	2	1	0	0	0	1	25
Shrubs	10	14	2	0	0	0	0	1	27
Trees	14	7	1	0	1	0	0	1	24
Wetland species	16	5	1	1	0	0	0	0	23

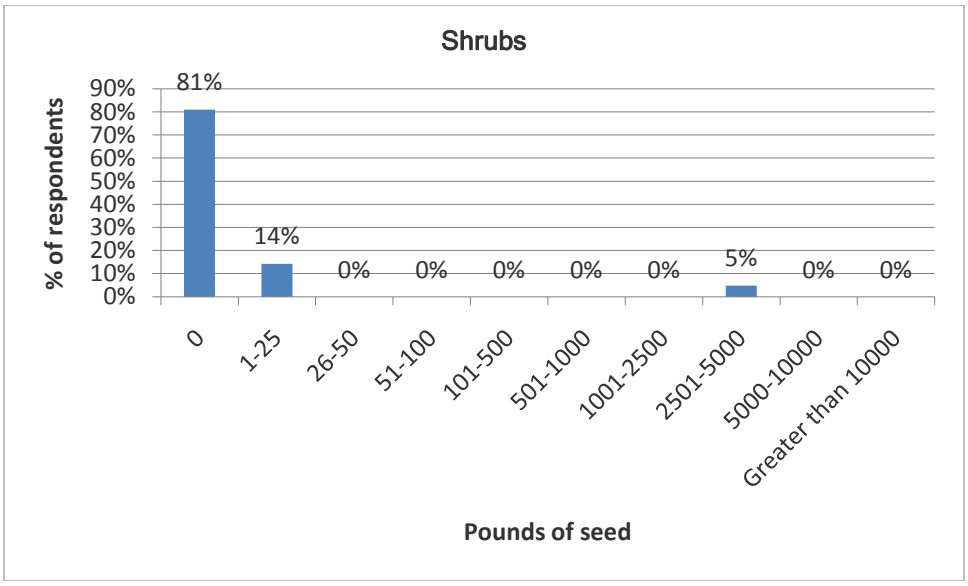
	Question Totals
answered question	40
skipped question	43



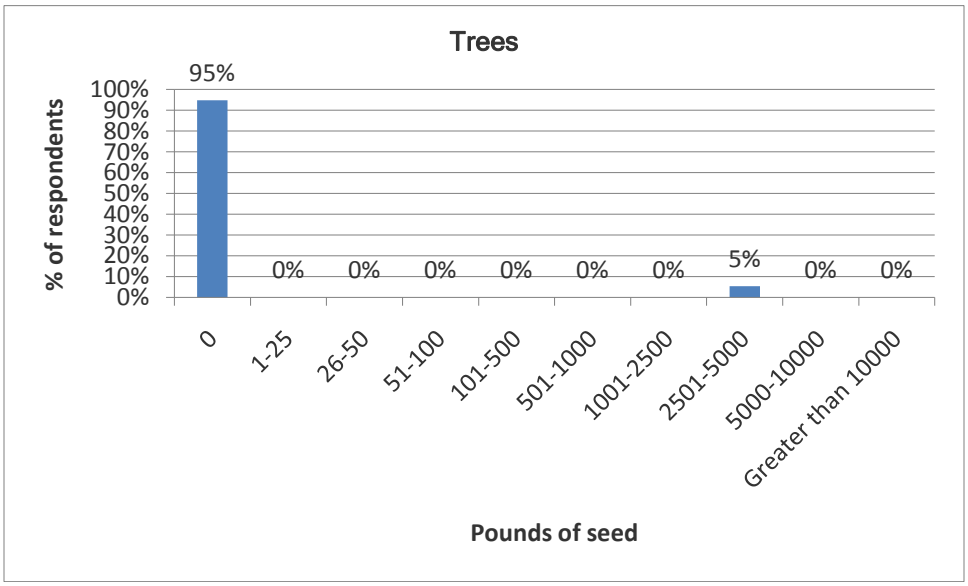
Survey results show that grass seed is the most widely used type of native seed, with a wide range of orders (0 to over 10,000 pounds). Here again, it would be the professional users requiring the large quantities, while the private users would require the smaller quantities. It is no surprise that looking back at the native plant material provider data, that grass seed is one of most popular grown as well. Results from the survey completed in 2000 show that a total of 5,958 pounds of native grass seed were purchased in 1999.



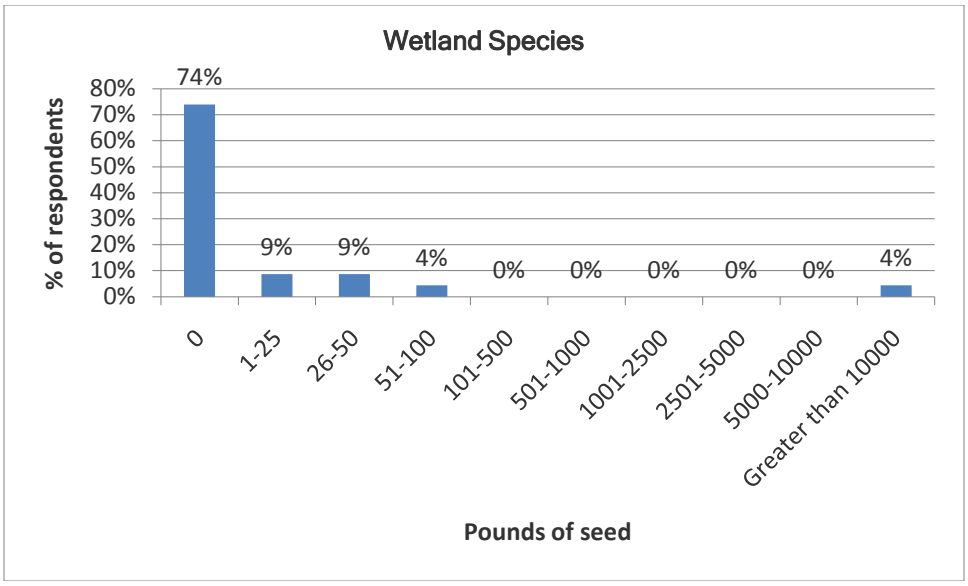
According to the survey native forb seed is the second most widely used type of native plant material, and the provider data also agrees with this (it was the second highest type of native seed produced). The cluster of responses at the lower end of the scale suggests that native forbs are used on a smaller scale.



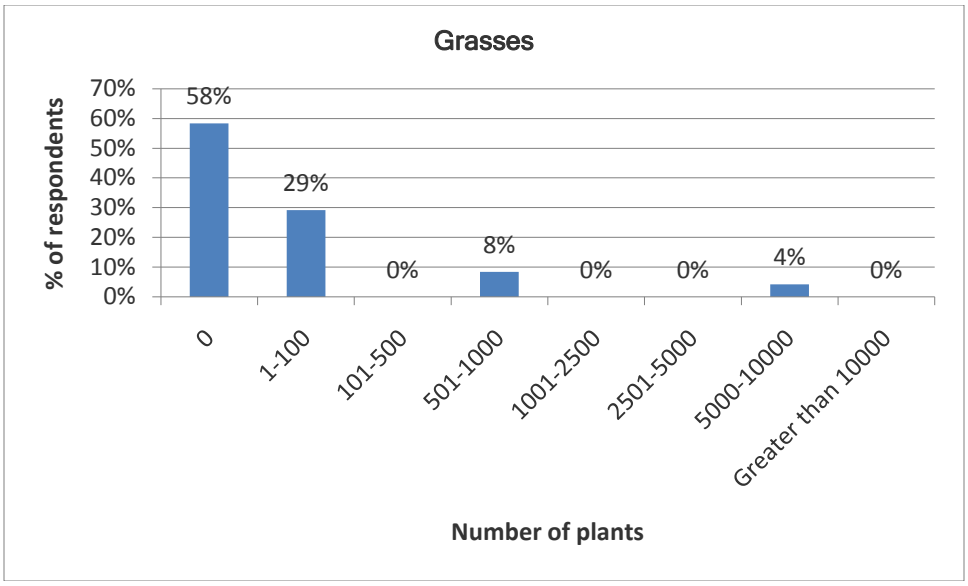
Shrub seed use seems to be very rarely used, with 81% of users not dealing with them at all. However, those that do use them can be easily grouped into two classes: small scale and large scale. By far, most that do use native shrub seed fall into the small scale use category (14%) although there is a small percentage (5%) that use it on a large scale. Native plant materials provider data seems to agree with the user pattern.



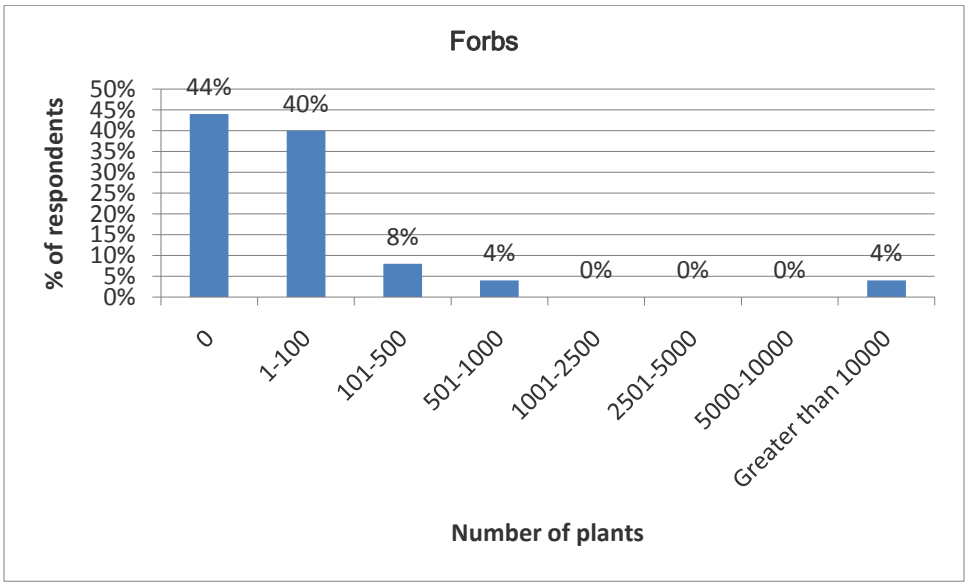
Like native shrub seed, native tree seed also is rarely used. In fact, it is the least used type of native plant material. Only 5% of survey respondents reported using native tree seed although those that did used it on a larger scale. Again, native plant materials provider data seems to agree with the user pattern.



These results show that wetland plant seed was little used as well, and that those that did use them could be grouped into two classes: small users and large users. The majority that did use wetland plant seed were small users (22%) while the large users comprised 4% of the total. Here again, native plant materials provider data agrees with the user pattern.

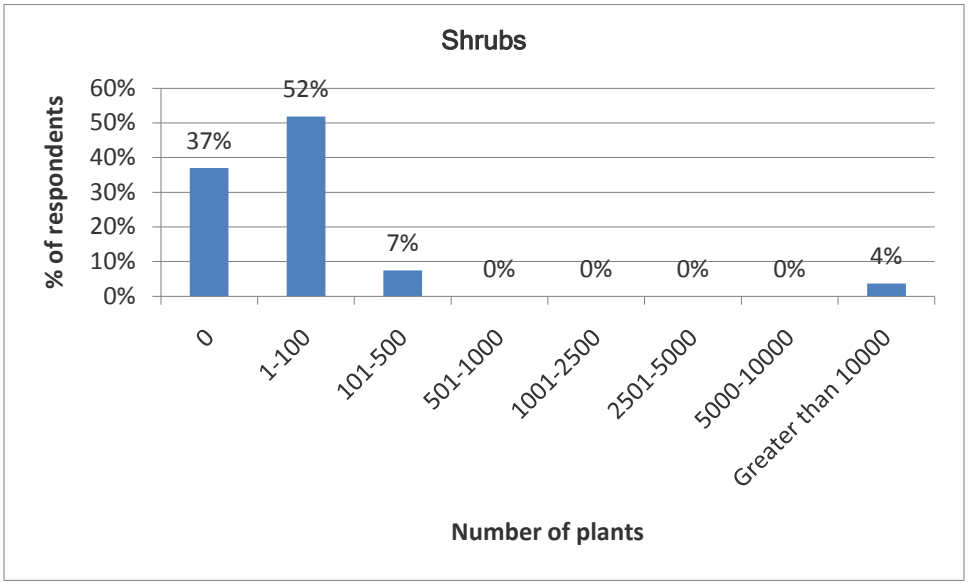


Native grass plant users can be put into three categories: small, medium and large. By far the majority of native grass plant users fell into the small category (and a full 58% purchased none at all in 2009), while 8% were in the medium-scale user category and only 4% fell into the large user category. Those that purchased between 5000 and 10,000 plants were professionals who dealt with native plant materials. When comparing the user data to the provider data, there is a clear indication that the providers have more stock than the users indicate purchasing. This could partially explain why the providers of native plant materials are unable to sell all of their stock in an average year.

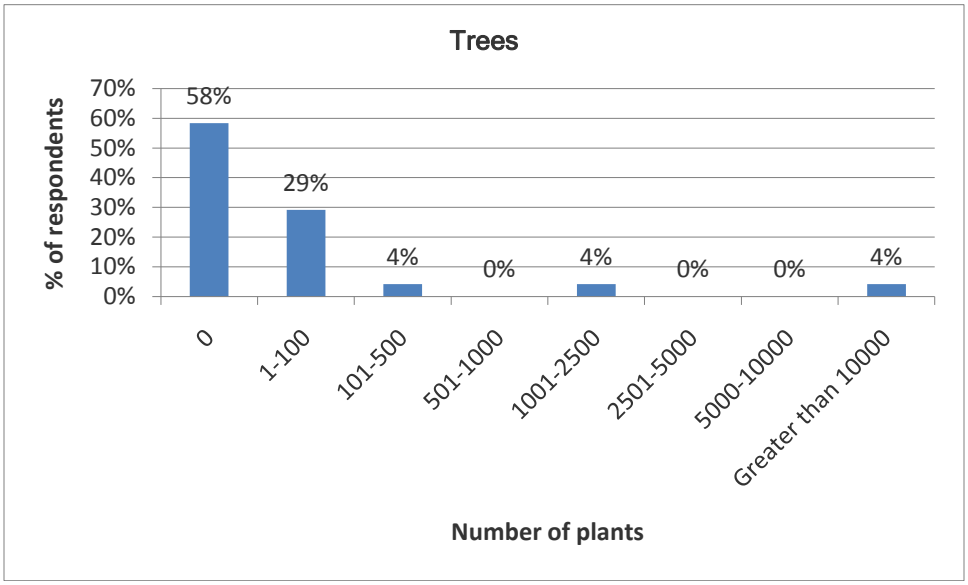


Native forbs were a more popular choice for users than grasses, with 56% of users reporting some purchase in 2009. Most were small-time users (40%) that purchased anywhere from 1-100 plants, while 12% had more moderate usage. At the other end of the spectrum, 4% of users reportedly purchased greater than 10,000 each. These large purchases are from professionals working with native plant materials. Here again, when comparing the user data to the provider data, there is a clear indication

that the providers have more stock than the users indicate purchasing. This could partially explain why the providers of native plant materials are unable to sell all of their stock in an average year.

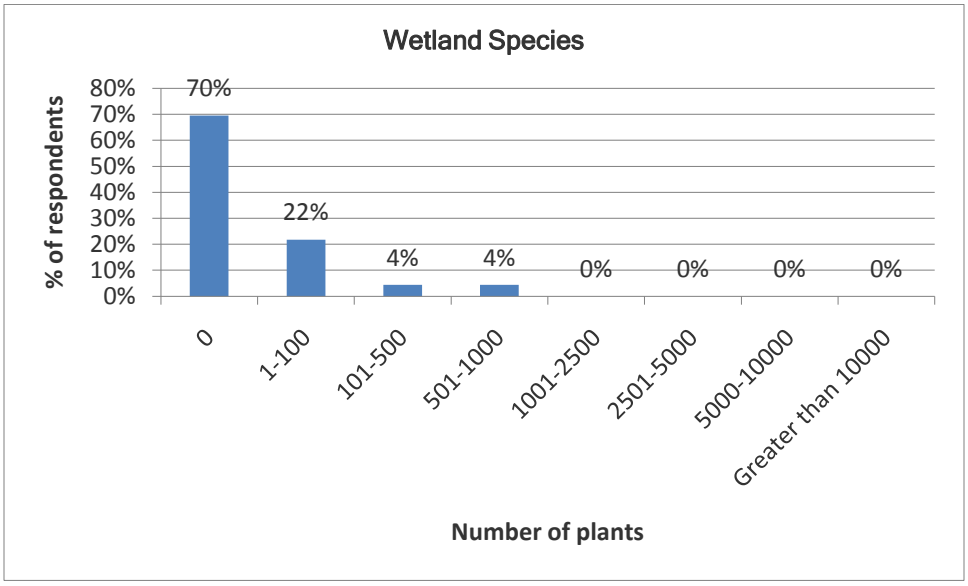


Shrubs were an even more popular commodity in 2009, with 52% of users reporting a purchase in 2009. A further 7% purchased between 101 and 500 plants while 4% purchased greater than 10,000 plants. Again, these large purchases are from professionals working with native plant materials. Like grasses and forbs, when comparing the user data to the provider data, there is a clear indication that the providers have more stock than the users indicate purchasing. This could partially explain why the providers of native plant materials are unable to sell all of their stock in an average year. Data from the 2000 survey shows that people purchased a total of 82,530 native shrubs in 1999.



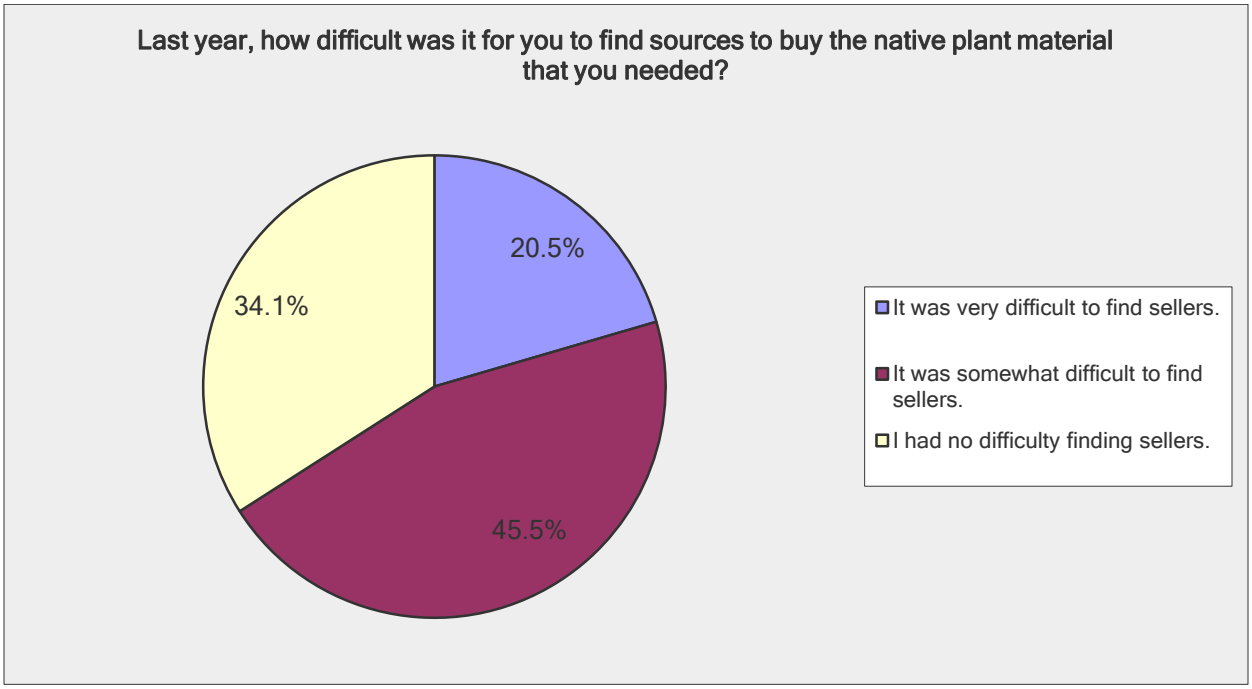
There are three basic categories for users who did purchase native trees in 2009: small, medium and large. Survey results show that of the users who bought native trees in 2009, most (29%) bought from 1-100 plants, while 8% bought from 101 to 2500 trees and 4% purchased greater than 10,000 native

trees. Here again it is clear from the provider data that providers have more stock than the users indicate purchasing.



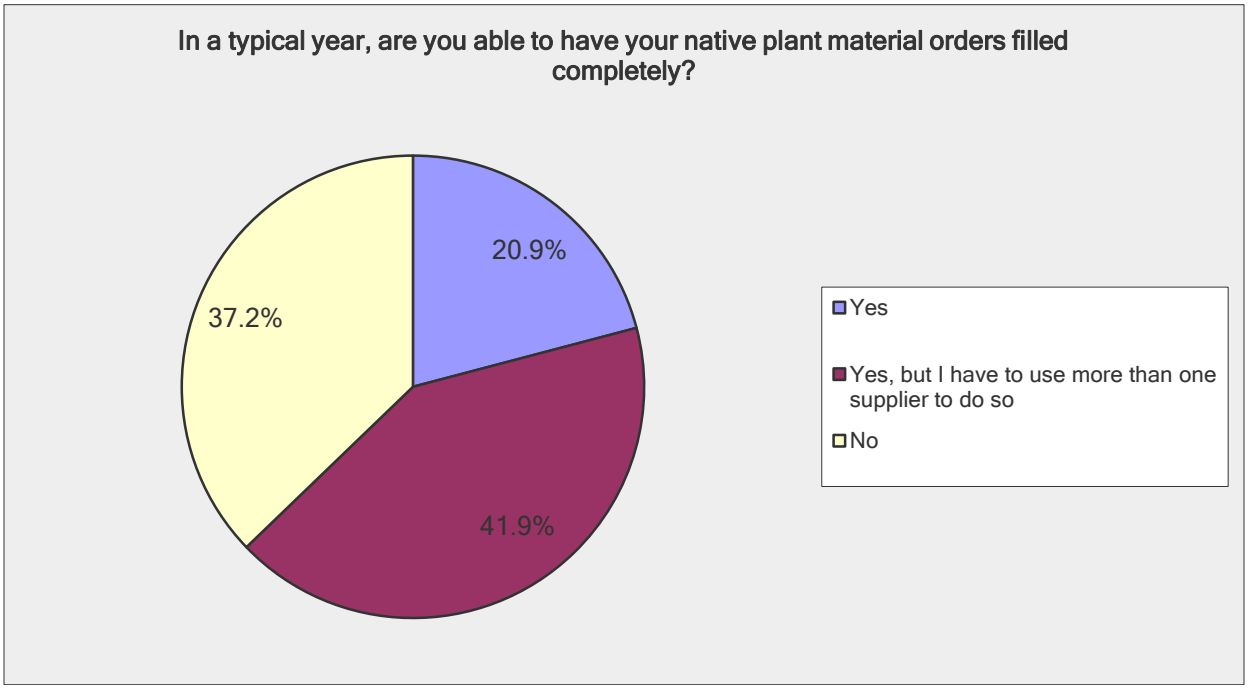
Wetland species were the least purchased type of native plant in 2009, with 70% of native plant materials users not purchasing any. Those that reported activity in 2009 did so on a smaller scale, with most (22%) in the 1-100 plant category. The most that any user reported buying in 2009 was 501-1000 plants. As with all the other types of native plants, providers indicated having more stock than the users indicated purchasing.

10. Last year, how difficult was it for you to find sources to buy the native plant material that you needed? Check one only.		
Answer Options	**Response Percent**	**Response Count**
It was very difficult to find sellers.	20.5%	9
It was somewhat difficult to find sellers.	45.5%	20
I had no difficulty finding sellers.	34.1%	15
answered question		**44**
skipped question		**39**



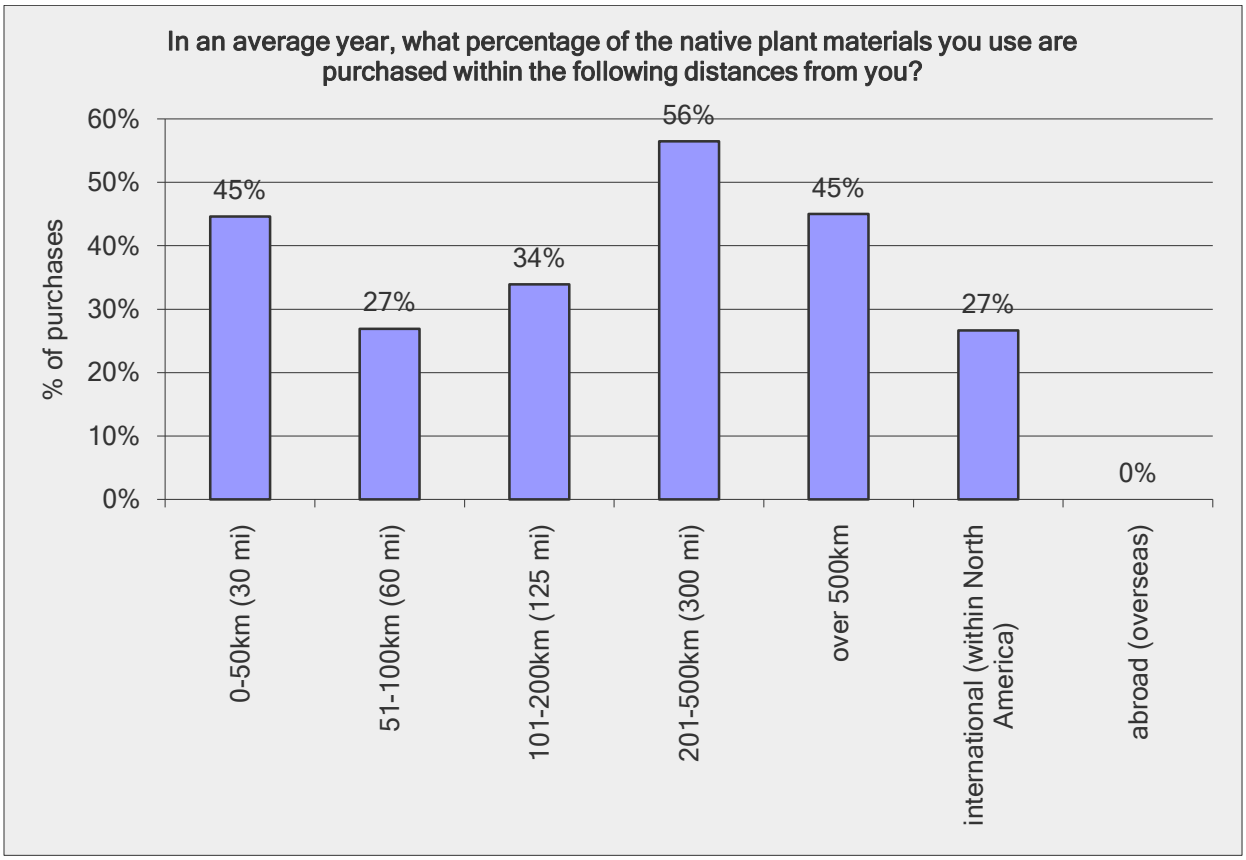
According to native plant materials users, 66% said that they had a somewhat difficult to very difficult time finding sellers. Only 34% indicated having no trouble finding sellers. Looking back at native plant material provider data, 43% reported having trouble finding buyers. These high numbers on both the user and provider ends speak to a potential disconnect in the market chain. It may also explain why native plant materials providers are left with stock on an average year. Providers of native plant materials may have to take steps such as advertising to target audiences in order to bridge the gap identified by the users. Results from the 1997 survey show that 43% of users had no trouble finding sellers, 50% had somewhat of a hard time finding sellers while 7% had a very difficult time finding sellers. This points toward a trend of users having increasing difficulty find providers for the native plant material they require.

11. In a typical year, are you able to have your native plant material orders filled completely?		
Answer Options	**Response Percent**	**Response Count**
Yes	20.9%	9
Yes, but I have to use more than one supplier to do so	41.9%	18
No	37.2%	16
answered question		**43**
skipped question		**40**



These results show that 79% either have difficulty filling their native plant materials orders or cannot get them filled at all. This is a very high number that should be a cause of concern for providers of native plant material as it is obvious that for one reason or another, users are not having an easy time acquiring the native plant materials they need. Again, it also may explain the carryover that providers experience on an average year, especially considering the fact that most providers indicated that they planted on speculation. However, forum participants also speculated other valid reason for this, such as users wanting species not commercially available, or ordering a large amount of various native species on short notice. Some forum participants also reported that sellers didn't respond back to them regarding their orders. Whatever the reason, it is not all bad news; this gap represents an opportunity for providers to target the 37% of users who weren't able to fill their native plant materials orders completely.

12. In an average year, what percentage of the native plant materials you use are purchased within the following distances from you? Please fill in all that apply and make your total add up to 100%.		
Answer Options	**Response Average**	**Response Count**
0-50km (30 mi)	45%	25
51-100km (60 mi)	27%	13
101-200km (125 mi)	34%	17
201-500km (300 mi)	56%	17
over 500km	45%	17
international (within North America)	27%	8
abroad (overseas)	0%	3
answered question		**41**
skipped question		**42**

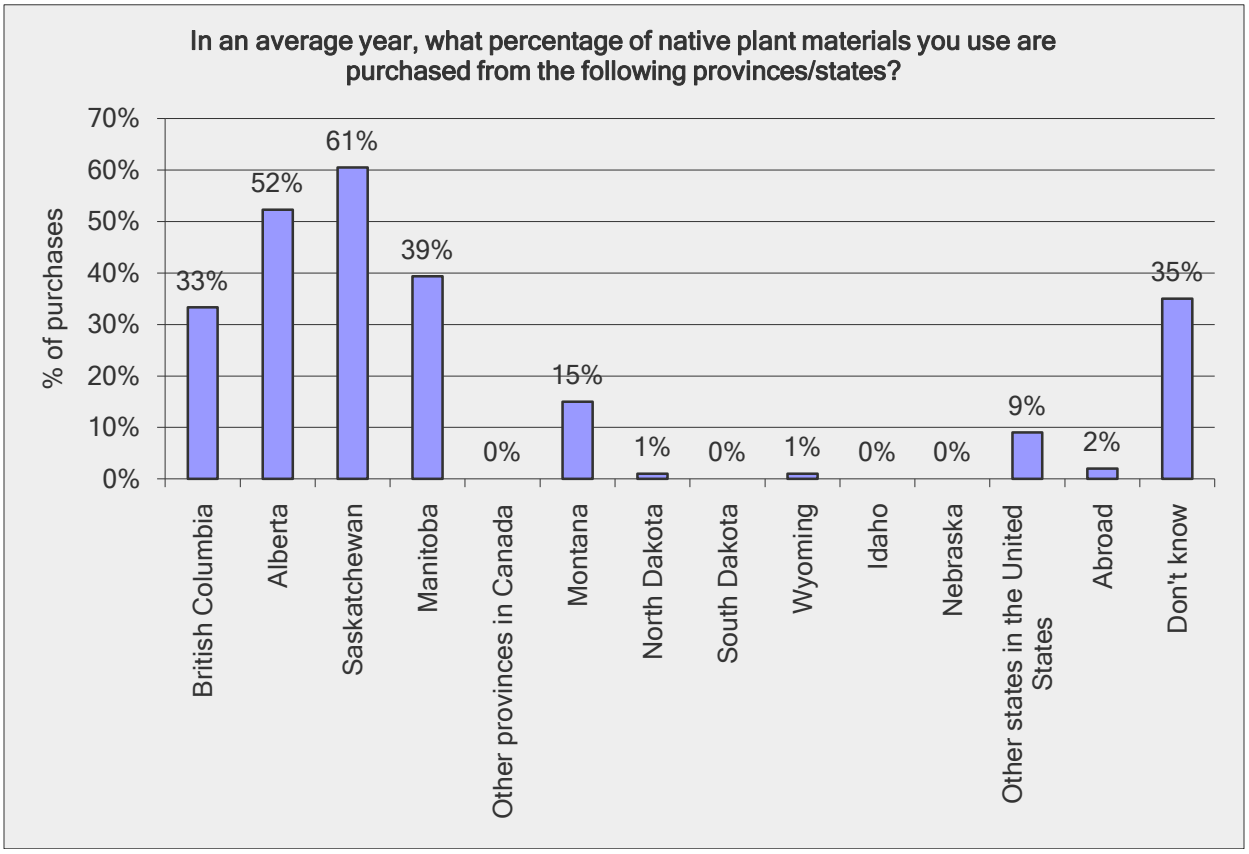


These results show that there is a range of distances that users have had to deal with in order to obtain their native plant materials. The categories on the left of the graph show that local markets exist, while the ones on the right indicate that there are also long distance markets. Between these, there should be a reasonable demand for native plant materials. The columns on the right side of the graph also show that if need be, buyers are willing to order their native plant material from relatively far distances; the 201-500km category is a good example, as it has the highest proportion of responses. If the first three categories are considered to be close distances and the last three to be far distances, the relative proportions are 106% versus 128%, respectively. In 2000, about 50% of the survey participants

purchased their native plant materials from at least 200 km away while 50% purchased their from locations less than 200 km away.

13. In an average year, what percentage of native plant materials you use are purchased from the following provinces/states? Please fill in all that apply and make your total add up to 100%.

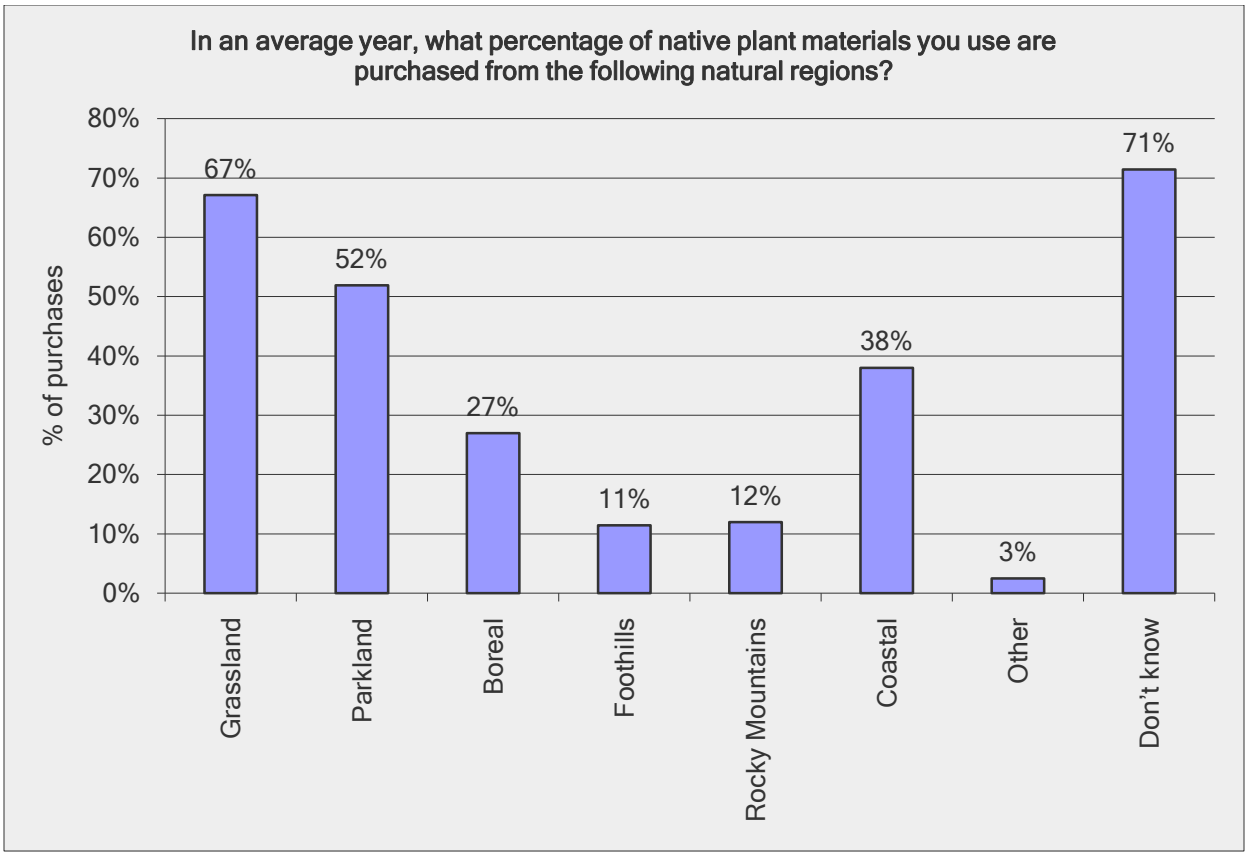
Answer Options	Response Average	Response Count
British Columbia	33%	6
Alberta	52%	21
Saskatchewan	61%	33
Manitoba	39%	16
Other provinces in Canada	0%	4
Montana	15%	6
North Dakota	1%	5
South Dakota	0%	4
Wyoming	1%	5
Idaho	0%	4
Nebraska	0%	4
Other states in the United States	9%	6
Abroad	2%	5
Don't know	35%	6
answered question		43
skipped question		40



Users indicated that they purchased most of their native plant materials in Saskatchewan (61%), with Alberta being the next most popular (52%), followed by Manitoba (39%) and British Columbia (33%). These results support that fact that a market can be maintained in Saskatchewan and the rest of Western Canada. For a surprising 35% of the orders, users didn't know where the native plant materials were purchased. This may have detrimental effects on their projects, as it is generally accepted that more local sources of native plant materials are better adapted to local conditions than those from further away. It also may point to a lack of (or a need to strengthen) native plant material user/provider relationships. However, forum participants noted that due to an increase in demand and/or decrease in supply, sometimes users can't be choosy regarding where their native plant material is coming from. Results from the 1997 survey showed that users purchased 47% of their native plant material from Saskatchewan, followed by Alberta at 16%, Manitoba at 12% and the U.S. at 7%. For 12% of the orders, users didn't know where they purchased their native plant materials. Also, in the 1997 survey there was an "other" category, which had 7% of the purchases. British Columbia was not an option in the 1997 survey.

14. In an average year, what percentage of native plant materials you use are purchased from the following natural regions? Please fill in all that apply and make your total add up to 100%.

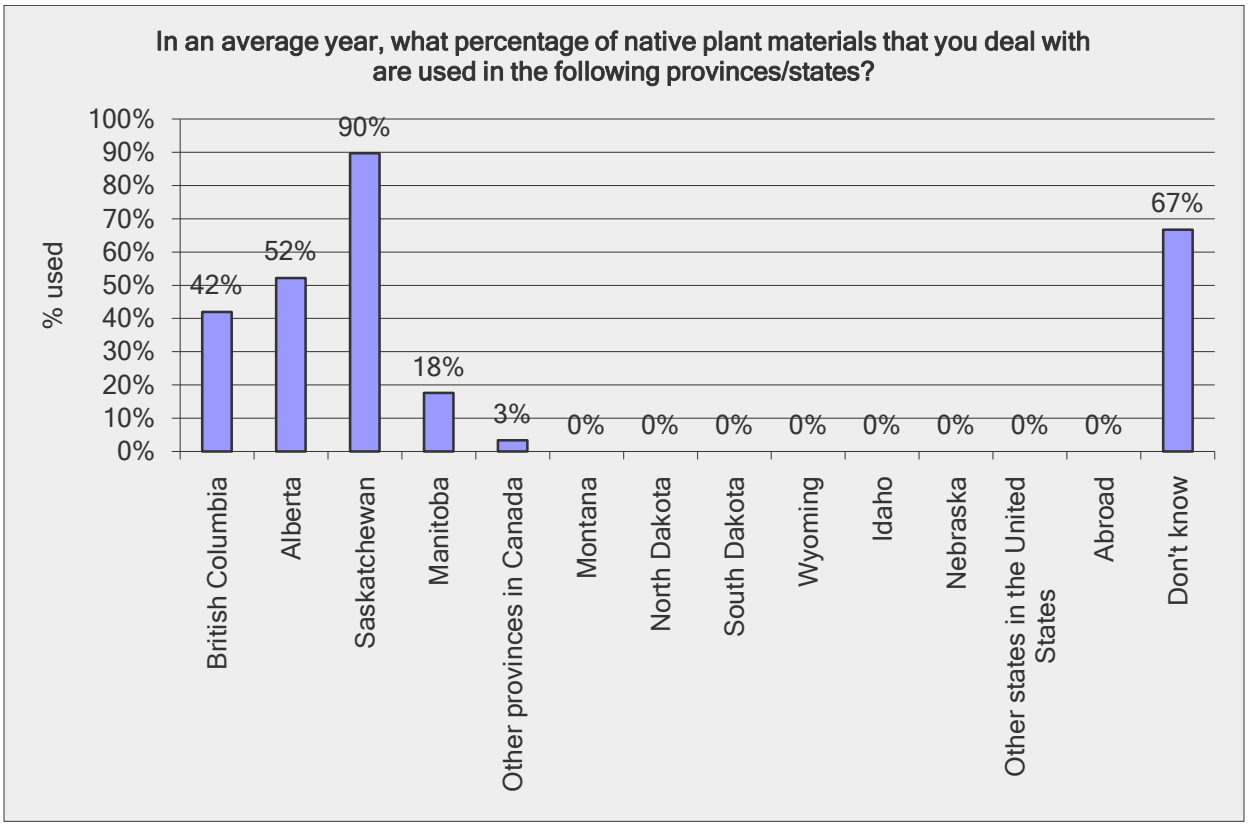
Answer Options	Response Average	Response Count
Grassland	67%	31
Parkland	52%	24
Boreal	27%	5
Foothills	11%	7
Rocky Mountains	12%	5
Coastal	38%	5
Other	3%	4
Don't know	71%	7
answered question		43
skipped question		40



Survey results show that that the grassland natural region was where the majority of native plant materials were purchased from, comprising 67% of the orders. Following that, the parkland natural region had 52% of the orders, the coastal natural region had 38% and the boreal natural region had 27%. One likely reason why the grassland natural region was the origin of so many orders could be that the extensive oil and gas activities on the grasslands are driving the demand for grassland plant species. Another significant result from this question was that for 71% of the native plant materials purchased, users didn't know their origin. This may point out a lack of knowledge on the part of users regarding their suppliers. It may also be that users may not have been given the information. Forum participants also picked up this, stating that people should know or want to know where their native plant material comes from. Educating users or having user/provider bridging activities may help alleviate this.

15. In an average year, what percentage of native plant materials that you deal with are used in the following provinces/states? Please fill in all that apply and make your total add up to 100%.

Answer Options	Response Average	Response Count
British Columbia	42%	5
Alberta	52%	10
Saskatchewan	90%	32
Manitoba	18%	5
Other provinces in Canada	3%	3
Montana	0%	2
North Dakota	0%	2
South Dakota	0%	2
Wyoming	0%	2
Idaho	0%	2
Nebraska	0%	2
Other states in the United States	0%	2
Abroad	0%	2
Don't know	67%	6
answered question		**42**
skipped question		**41**

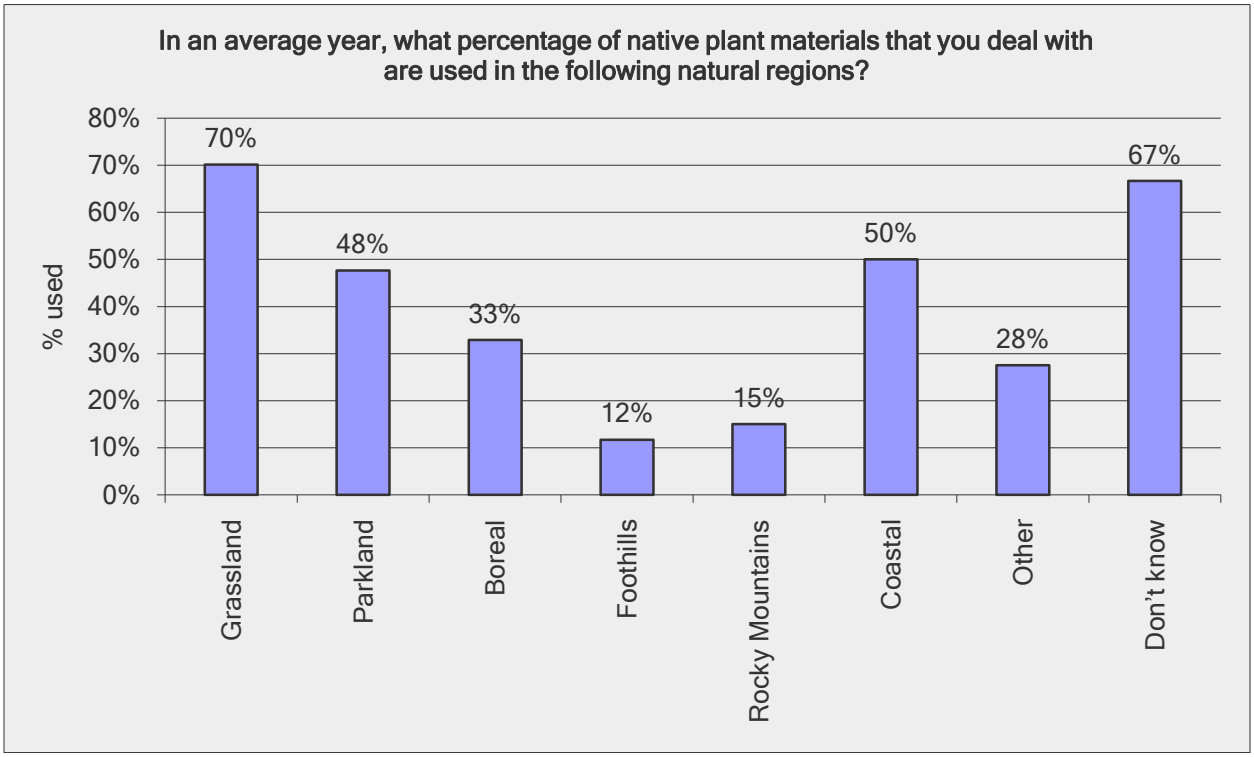


Saskatchewan was the top province that native plant material is used in, with 90% of the respondents indicating as such. This was followed by Alberta with 52% and British Columbia with 42%. These results are roughly similar to those from question 13, which would make sense. These results show that there

is sufficient demand in Saskatchewan and the rest of Western Canada to support a market. Again, there are a relatively high percentage of responses that indicated not knowing where the native plant material was used.

16. In an average year, what percentage of native plant materials that you deal with are used in the following natural regions? Please fill in all that apply and make your total add up to 100%.

Answer Options	Response Average	Response Count
Grassland	70%	30
Parkland	48%	19
Boreal	33%	7
Foothills	12%	6
Rocky Mountains	15%	4
Coastal	50%	4
Other	28%	4
Don't know	67%	6
answered question		42
skipped question		41



Results show that the grassland natural region garnered the most activity, with 70%, followed by the parkland natural region at 48%, the coastal natural region at 50% and the boreal natural region at 33%. These results are quite similar to question 14. Here again, one likely reason why the grassland natural region was the origin of so many orders could be that the extensive oil and gas activities on the grasslands are driving the demand for grassland plant species. Also, it should be noted that the response average for users who didn't know where the native plant material was used was quite high; looking into the raw data revealed that it was the same respondents from question 15 that didn't know

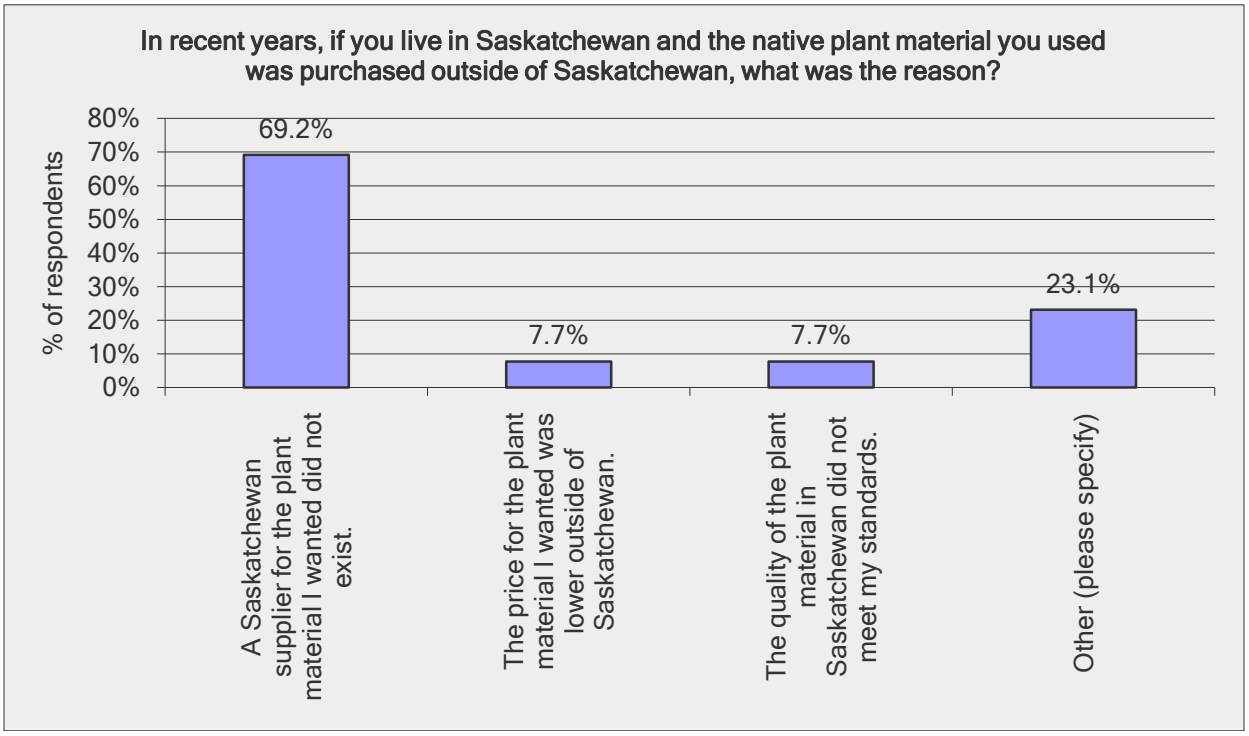
where the native plant materials were used. Results from the survey done in 2000 showed that 37% of the native plant materials was used in the grassland natural region, 18% was used in the parkland, 19% was used in the boreal, 15% was used in the foothills, 7% was used in the Rocky Mountains, and 4% of native plant material had an unknown destination. There was no "Coastal" or "Other" category in the 2000 survey.

17. In recent years, if you live in Saskatchewan and the native plant material you used was purchased outside of Saskatchewan, what was the reason? (Check all that apply)

Answer Options	Response Percent	Response Count
A Saskatchewan supplier for the plant material I wanted did not exist.	69.2%	18
The price for the plant material I wanted was lower outside of Saskatchewan.	7.7%	2
The quality of the plant material in Saskatchewan did not meet my standards.	7.7%	2
Other (please specify)	23.1%	6
answered question		26
skipped question		57

Other (please specify)

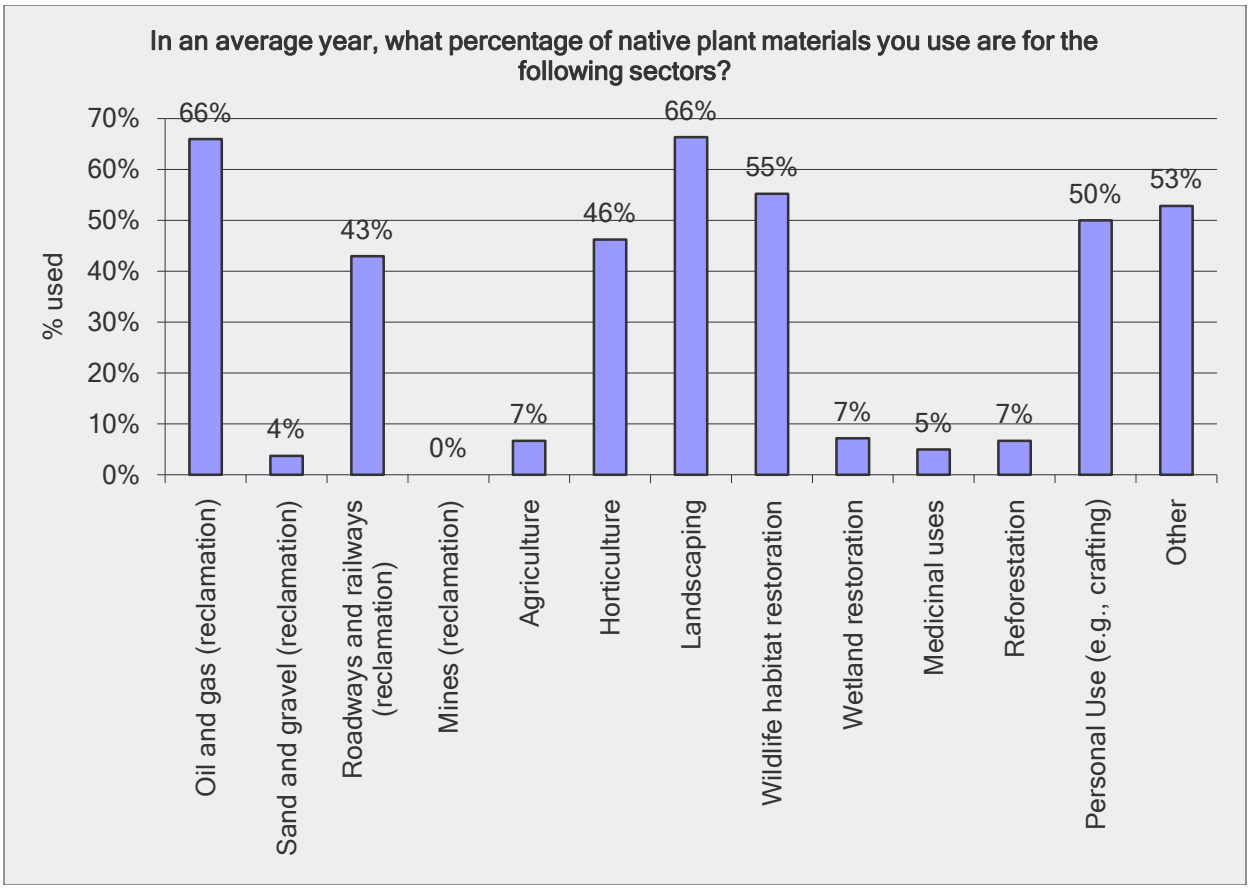
- I was in Winnipeg and I knew of reliable suppliers of native plant material
- Unaware of SK supplier
- Supplier had been cheaper on previous products
- No longer had supply
- Live in Alberta
- None



The primary reason that users bought native plant material outside of Saskatchewan in recent years is because a Saskatchewan supplier did not exist. This represents a need for more native plant material providers in Saskatchewan, or for existing providers to expand their selection. By having to go outside the province, it adds to the time and costs involved. The fact that few people had an issue with price could signal that prices are relatively constant across provinces, or that the user isn't as concerned about price as other factors. The low number of concerns regarding quality is encouraging, indicating that Saskatchewan offers good native plant material. Results from the 1997 survey agreed with these results; 47% of users couldn't find a Saskatchewan supplier, 33% had other reasons, 13% found a lower price outside Saskatchewan and 7% said that the quality wasn't up to their standards.

18. In an average year, what percentage of native plant materials you use are for the following sectors? Please fill in all that apply and make your total add up to 100%.

Answer Options	Response Average	Response Count
Oil and gas (reclamation)	66%	8
Sand and gravel (reclamation)	4%	4
Roadways and railways (reclamation)	43%	5
Mines (reclamation)	0%	2
Agriculture	7%	3
Horticulture	46%	8
Landscaping	66%	19
Wildlife habitat restoration	55%	20
Wetland restoration	7%	5
Medicinal uses	5%	2
Reforestation	7%	3
Personal Use (e.g., crafting)	50%	5
Other	53%	7
answered question		42
skipped question		41



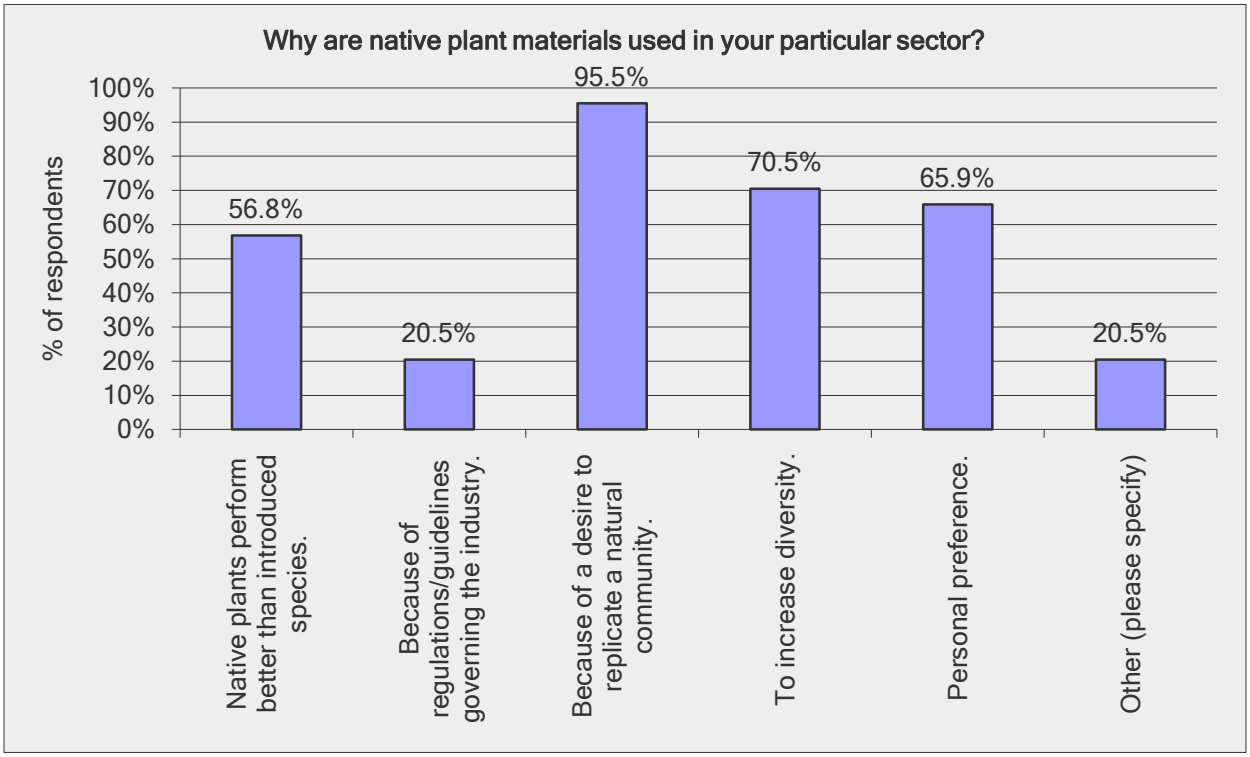
Two categories came out on top as the most popular uses for native plant materials: oil and gas reclamation and landscaping. These two categories were also the destination for most plant material as indicated by the providers of native plant materials. Two broad classes can be identified as the top uses for native plant materials: reclamation/restoration and gardening/landscaping. While reclamation has always been a destination for much of the native plant material produced, the horticulture sector is a relative newcomer and demand in this sector has been increasing in recent years. Forum participants also noticed that the horticulture sector's share of the native plant materials was high, and agreed that they see a growing number of people using native plants in horticultural settings. Results from the 2000 survey had the following results: reclamation comprised 24% of all uses (oil and gas was 14%, sand and gravel was 2%, railways and roadways was 2% and mines were 6%), agriculture accounted for 6% of the native plant material uses, horticulture was 20%, landscaping comprised 17%, wildlife habitat restoration accounted for 9% as did wetland restoration, medicinal uses were 6% and other uses accounted for 6%. Comparing these results to the ones resulting from our survey, sectors such as oil and gas, roadways and railways, horticulture, landscaping, wildlife habitat restoration and other uses show significant gains.

19. Why are native plant materials used in your particular sector? (Please check all that apply)

Answer Options	Response Percent	Response Count
Native plants perform better than introduced species.	56.8%	25
Because of regulations/guidelines governing the industry.	20.5%	9
Because of a desire to replicate a natural community.	95.5%	42
To increase diversity.	70.5%	31
Personal preference.	65.9%	29
Other (please specify)	20.5%	9
answered question		44
skipped question		39

Other (please specify)

- Low maintenance
- Research requirements
- Beauty
- Our suggestion to the client
- Aesthetic reasons
- Educational purposes
- Research
- Shorter plants for ditches, less palatable for wildlife
- Requested by landowners and customers



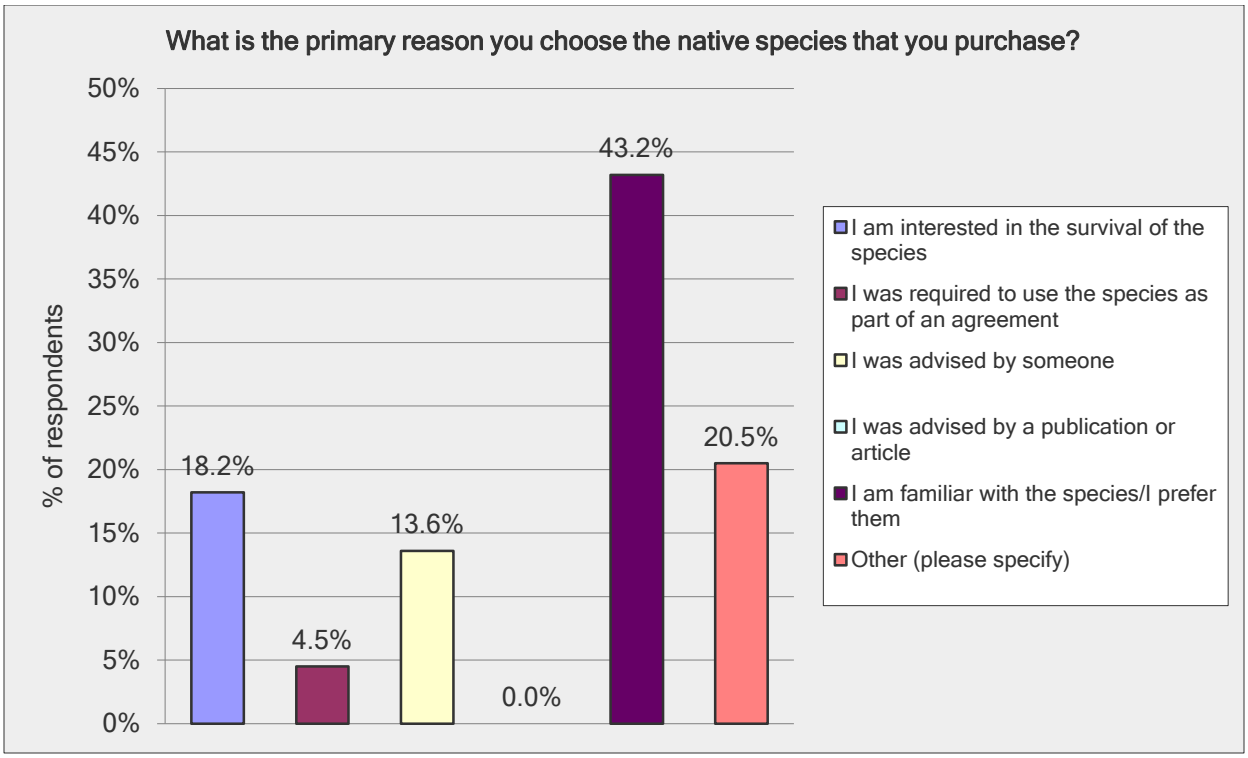
Users indicated that the main reason they use native plant material is to replicate a natural plant community. The next most popular answers included increasing diversity, personal preference and the opinion that native plants perform better than introduced species. The fact that most users of native plant material chose them due to a desire to replicate a natural community is encouraging as it shows a level of understanding and sophistication on the part of the user, and points toward native plant material user groups becoming more environmentally aware. It also indicates that people are using native plant materials because they want to, not because they have to. However, that only 20.5% of users claimed that regulations/guidelines influenced their decision may speak to a need for more policy regarding native plant materials. In a previous survey in 1997, the top single reasons for using native plant materials were to increase diversity (33% of respondents) and changing regulations (33% of respondents). 29% of respondents also claimed that they used native plant materials because, in their opinion, native plants perform better. The top category overall in the 2000 survey was "Other" (43% of respondents), which included a variety of reasons for using native plant material, including aesthetic value, conservation purposes, better forage and research.

20. What is the primary reason you choose the native species that you purchase? Check one only.

Answer Options	Response Percent	Response Count
I am interested in the survival of the species	18.2%	8
I was required to use the species as part of an agreement	4.5%	2
I was advised by someone	13.6%	6
I was advised by a publication or article	0.0%	0
I am familiar with the species/I prefer them	43.2%	19
Other (please specify)	20.5%	9
answered question		44
skipped question		39

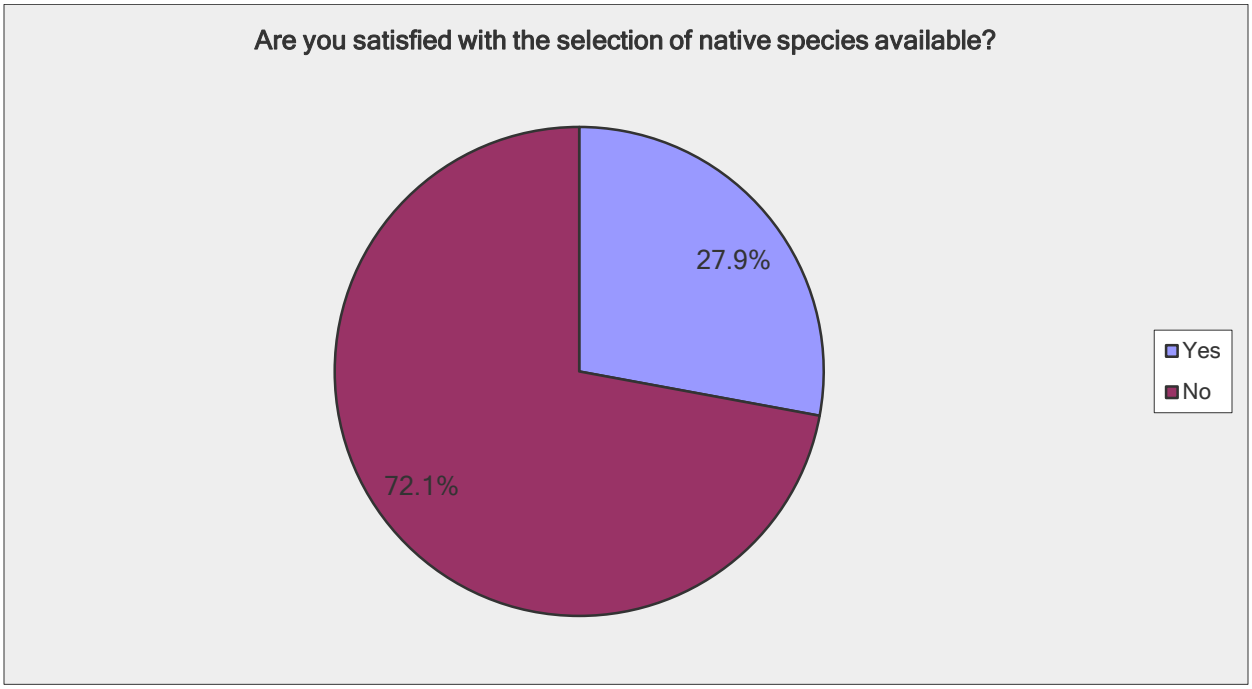
Other (please specify)

- Research requirements
- I miss the biodiversity of my youth and want to recreate at least some of it in my farm yard
- These species are native to the area i am restoring
- I choose good looking plants, and if they are rare or provide food for birds, that is better
- Perpetuate biodiversity in an urban setting
- Better performance overall; in some cases to avoid using invasive alien plants
- We use native species (at work) to increase diversity & improve wildlife habitat), I want to use natives in my garden because they are unique, beautiful, and easy to care for.
- Research
- These particular species were originally found in the area. We want to reclaim to as close to original as possible.



The majority of native plant material users chose particular native species over others was due to a familiarity or preference for them. The "Other" category was the next most popular, with a number of reasons given that include matching local species already present, a desire to enhance local biodiversity or for research purposes. Users also indicated that they chose particular native species because they were interested in the survival of the species (something that was also a popular answer with the native plant material providers in question 18 of their survey) and because they were advised by someone (not a popular answer at all with the native plant material providers in question 18 of their survey). 0% of users reported choosing certain native plant species as a result of a publication or article that advised them. This might be remedied by creating and distributing more articles on native plant species.

21. Are you satisfied with the selection of native species available?		
Answer Options	**Response Percent**	**Response Count**
Yes	27.9%	12
No	72.1%	31
answered question		**43**
skipped question		**40**



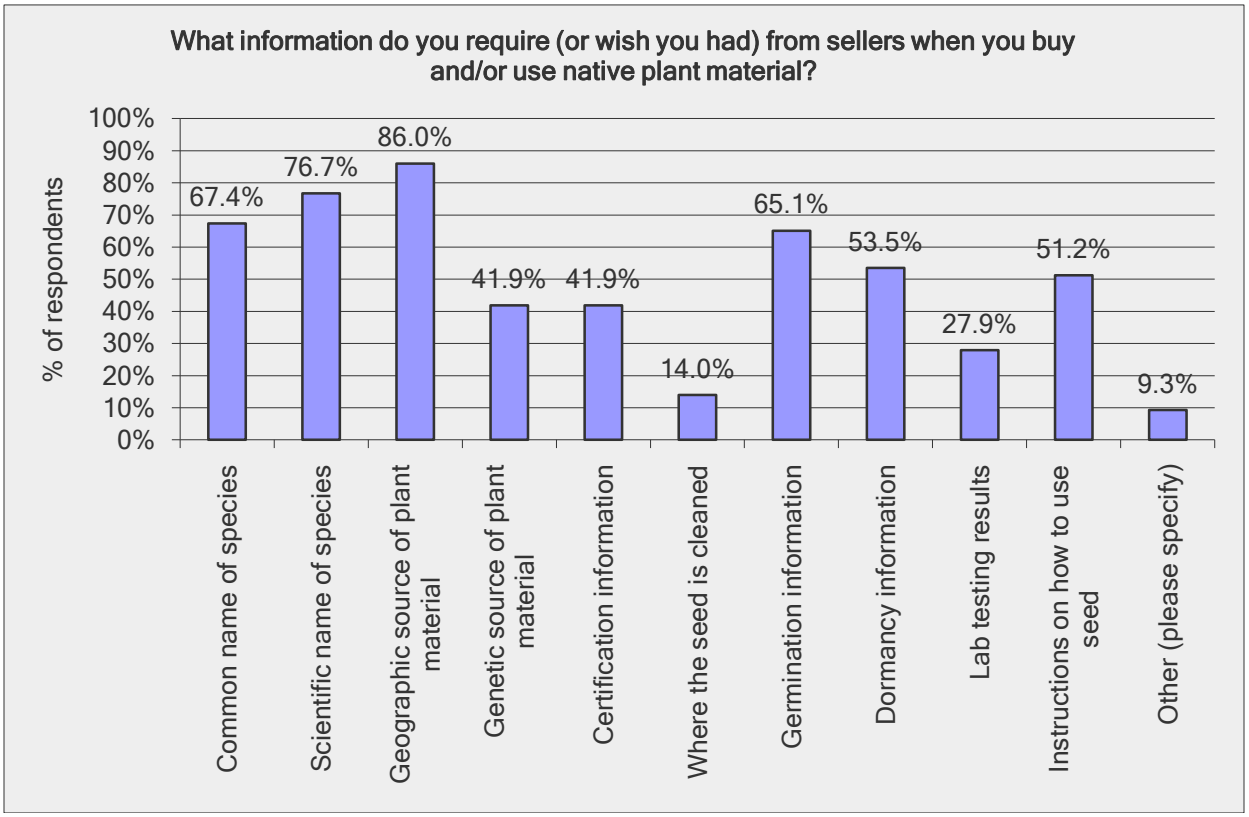
The overwhelming majority of users were not satisfied with the current selection of native plant species. While the answer to this question is decisive, the solution may not be. Results indicate that there may be an opportunity to introduce new native plant species into the market, but in order to do so, providers of native plant materials would need to be assured that their efforts would be rewarded with sufficient demand. Conversely, it is hard to drive demand without a final product to present to the users. Once again, forward contracting may alleviate this situation by creating demand for the provider through ordering a year or two ahead of time which would result in the user obtaining the exact native species that they want. There may be some ramifications from users not getting the selection of species they need, such as less diverse revegetation projects. Forum participants weighed in with many comments on the results of this question. Most said that the results didn't surprise them, as they had the same feeling. Other forum participants voiced their concerns about the need to increase the supply of existing species in some cases, and the need to create demand to drive the development of new native species and/or sources. Some native plant materials providers in the forums speculated that these results may not be as clear as they seem, and that users may just not know of the sellers who have the species that they're looking for. Other providers in the forum mentioned that with enough time and a small deposit, that they could grow almost anything a client needed, lending further weight toward the idea of forward contracting.

22. What information do you require (or wish you had) from sellers when you buy and/or use native plant material? Check all that apply.

Answer Options	Response Percent	Response Count
Common name of species	67.4%	29
Scientific name of species	76.7%	33
Geographic source of plant material	86.0%	37
Genetic source of plant material	41.9%	18
Certification information	41.9%	18
Where the seed is cleaned	14.0%	6
Germination information	65.1%	28
Dormancy information	53.5%	23
Lab testing results	27.9%	12
Instructions on how to use seed	51.2%	22
Other (please specify)	9.3%	4
answered question		43
skipped question		40

Other (please specify)

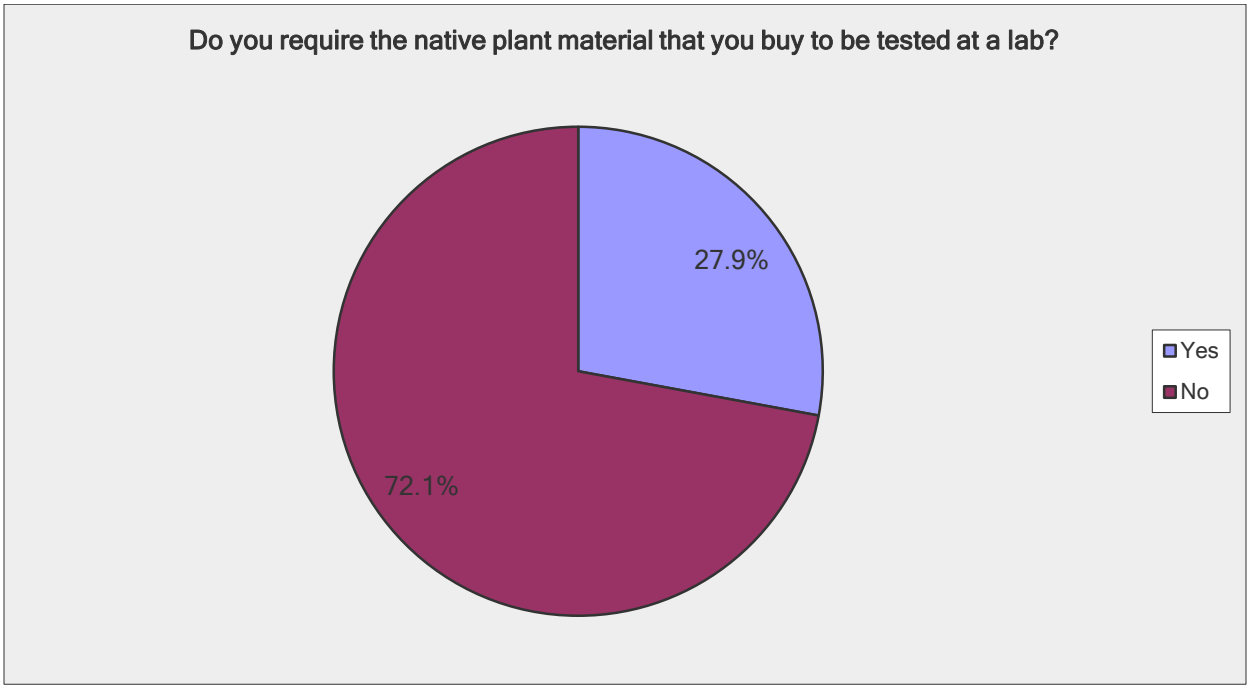
- Natural habitat and growing requirements
- Best habitat choices and how to prepare the garden area
- I want accurate and current germination & TZ tests, weed test (with actual number of weed seeds/sample), genetic source, and geographic source
- Seed tests using standard Canadian rules



The information most commonly required by native plant materials users is the geographic source of the plant material, the scientific name of the species and the common name of the species. These were followed by a number of other popular pieces of information that includes germination information, dormancy information and instructions on how to use seed. Comparing these results to question 19 of the provider survey, providers most commonly include the scientific name of the species, the common name of the species and the geographic source of the plant material. For the most part, this is where the similarity ends as while users are looking for information on how to grow these species (germination information, dormancy information and instruction on how to use seed), only 47% of providers include this information. Other top concerns for users were the genetic source of the plant material and certification information, while these were some of the lowest priorities for providers. See question 19 of the native plant material providers' survey for more results to compare. One forum participant postulated that perhaps those that indicated that they didn't know which natural region their native plant materials came from in question 14 may not have been given the information, which relates to the "geographic source of plant material" category in this question.

23. Do you require the native plant material that you buy to be tested at a lab?

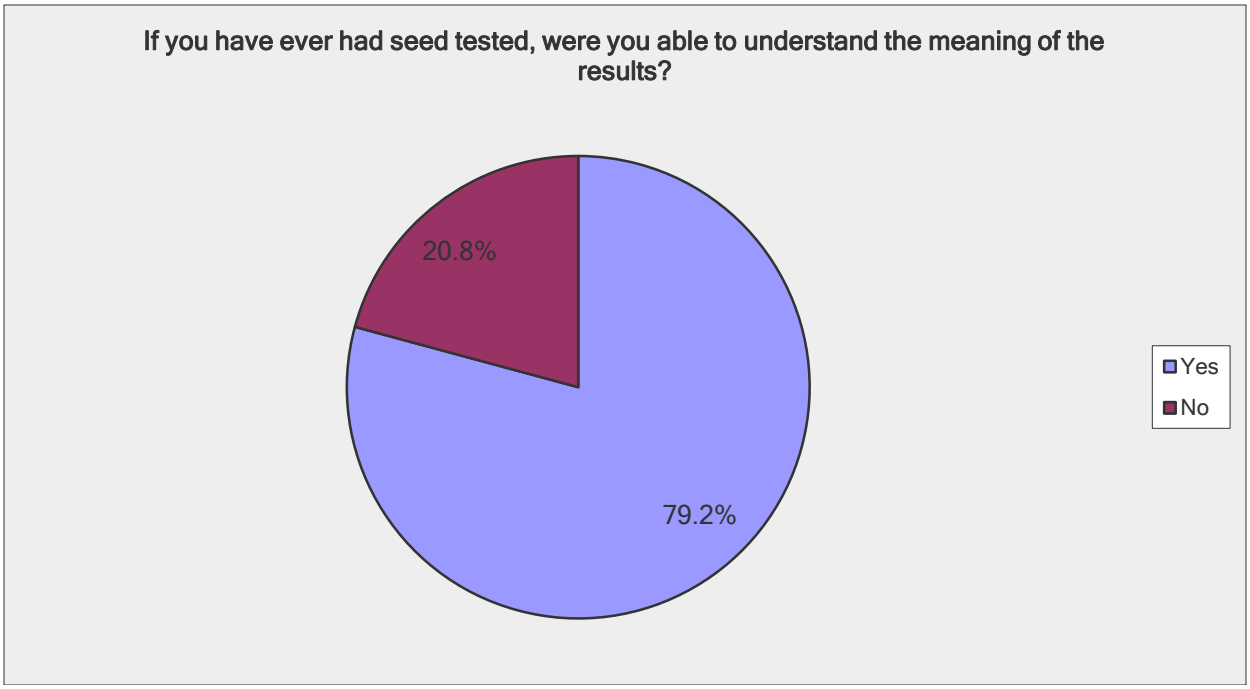
Answer Options	Response Percent	Response Count
Yes	27.9%	12
No	72.1%	31
answered question		**43**
skipped question		**40**



The majority of users don't require their native plant material to be tested at a lab. Those that do are likely large scale users, as the cost is probably prohibitive for individuals even if they wanted one. For some sectors, having the native plant material tested at a lab may be a necessity. There are inherent

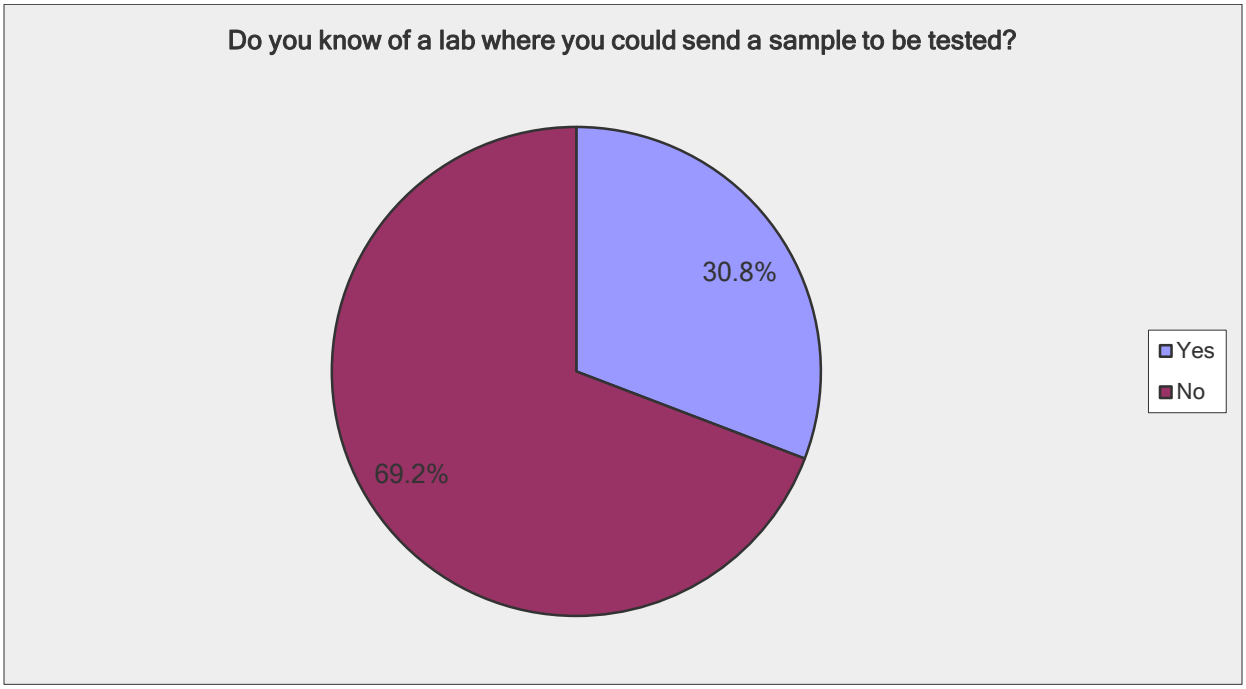
problems with not getting native plant materials tested at a lab, such as having poor seed quality or having seed of invasive alien species in the mix. If severe enough, these issues could result in project failure. Looking back at the results from the 2000 survey users were more evenly split, with 54% requiring lab testing and 46% not requiring lab testing. This points toward a negative trend; something which, if reversed, could improve individual project success and help the native plant materials industry evolve through better quality products.

24. If you have ever had seed tested, were you able to understand the meaning of the results?		
Answer Options	**Response Percent**	**Response Count**
Yes	79.2%	19
No	20.8%	5
answered question		**24**
skipped question		**59**



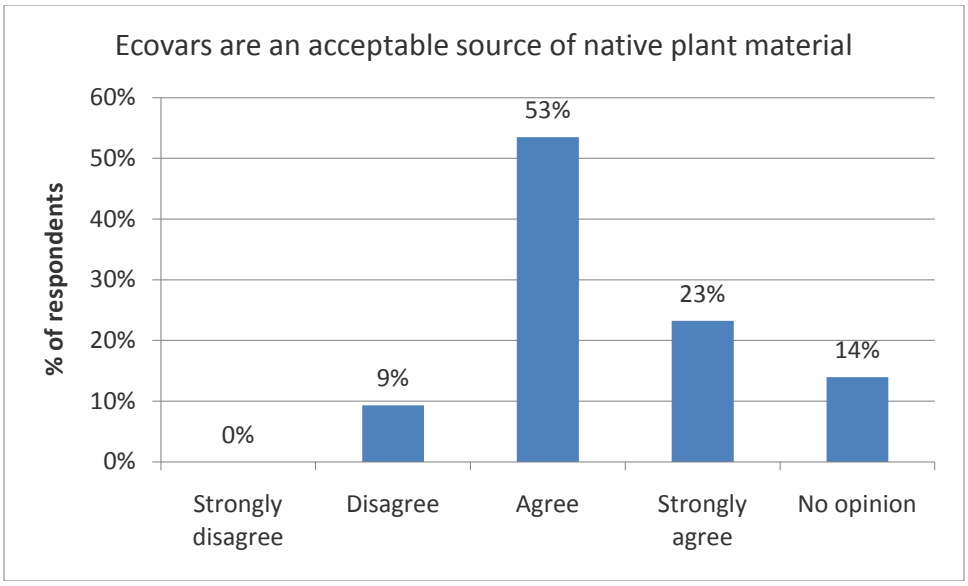
Most users who answered this question indicated that they were able to understand lab test results of native plant material samples. This suggests that, in general, the results aren't too technical for those who have had native seed tested. This news is encouraging, as it shows that there is not a large knowledge gap regarding the interpretation of lab results, and those that do use lab testing are probably able to incorporate the information to the benefit of their projects.

25. Do you know of a lab where you could send a sample to be tested?		
Answer Options	**Response Percent**	**Response Count**
Yes	30.8%	12
No	69.2%	27
answered question		**39**
skipped question		**44**

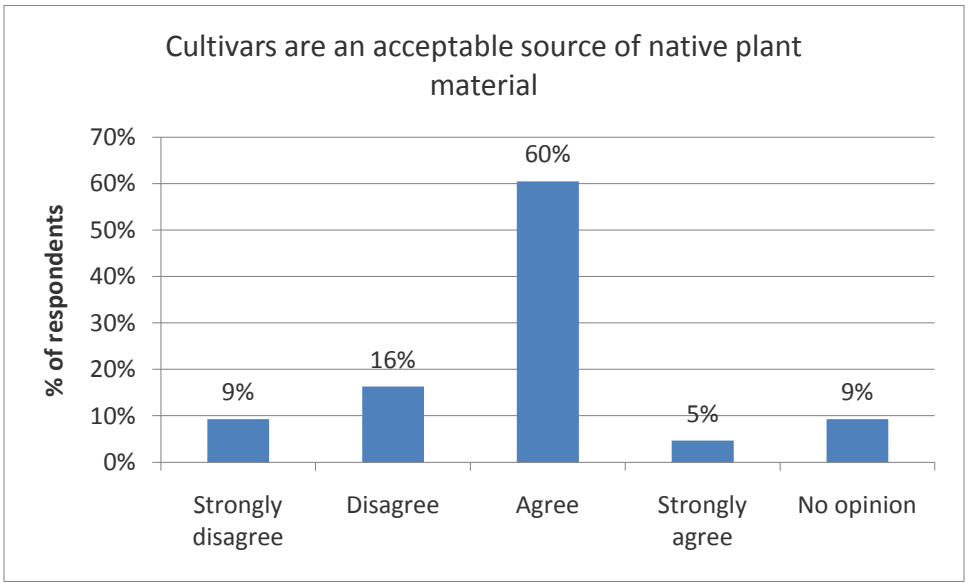


The majority of users indicated that they did not know of a lab where they could send a sample of native seed to be tested. There is a chance that these are the same people who indicated in question 23 that they don't require native plant material to be tested at a lab (73.8%). Perhaps there needs to be more information made available on the importance of native seed testing and where to send samples. Labs may also benefit from advertising their services to user groups.

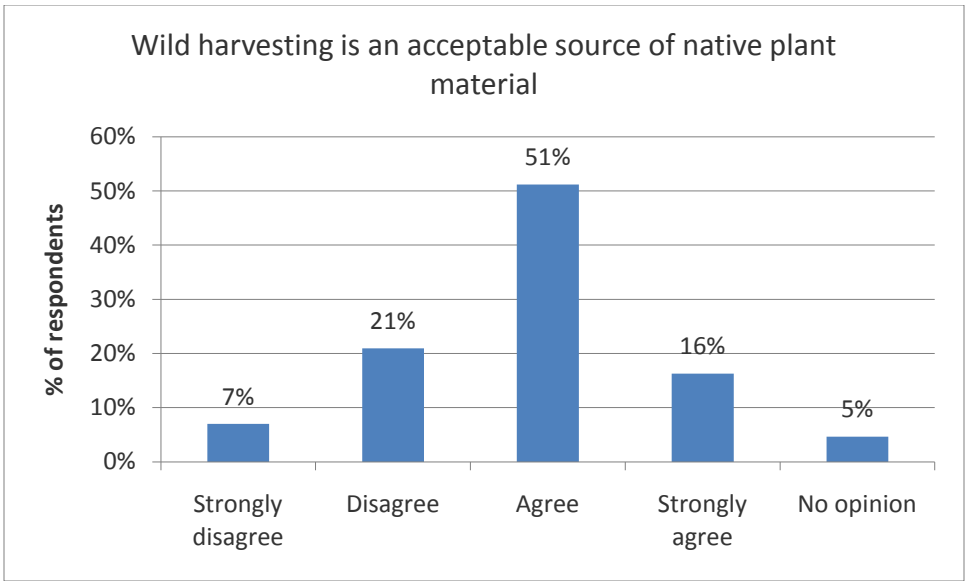
26. For each statement below, please rate your level of agreement of each statement.							
Answer Options	**Strongly disagree**	**Disagree**	**Agree**	**Strongly agree**	**No opinion**	**Rating Average**	**Response Count**
Ecovars are an acceptable source of native plant material	0%	9%	53%	23%	14%	1.00	43
Cultivars are an acceptable source of native plant material	9%	16%	60%	5%	9%	1.00	43
Wild harvesting is an acceptable source of native plant material	7%	21%	51%	16%	5%	1.00	43
answered question							**43**
skipped question							**40**



Most people in our survey agreed that Ecovars were an acceptable source of native plant material. Of those that had no opinion, some may have genuinely not had an opinion, although some may not have understood what an Ecovar was enough to form an opinion. Providers of native plant materials agreed with these results when asked the same question in their survey (question 20). Results from the 2000 survey were similar, revealing that 65% of the respondents agreed that Ecovars were acceptable and only 8% who disagreed.



The majority of respondents agreed that cultivars were an acceptable source of native plant material, while one quarter disagreed and 9% had no opinion. Providers of native plant materials more or less agreed with these results when asked the same question in their survey (question 20). Results from the 2000 survey are similar and show that 58% of the respondents agreed that cultivars were acceptable, while 21% disagreed.



Most users agreed that wild harvesting is an acceptable source of native plant material, while 28% disagreed. Providers of native plant materials agreed with these results when asked the same question in their survey (question 20). Once again, results from the 2000 survey were quite similar with 63% of respondents agreeing that wild harvesting is an acceptable source of native plant material and 26% disagreeing.

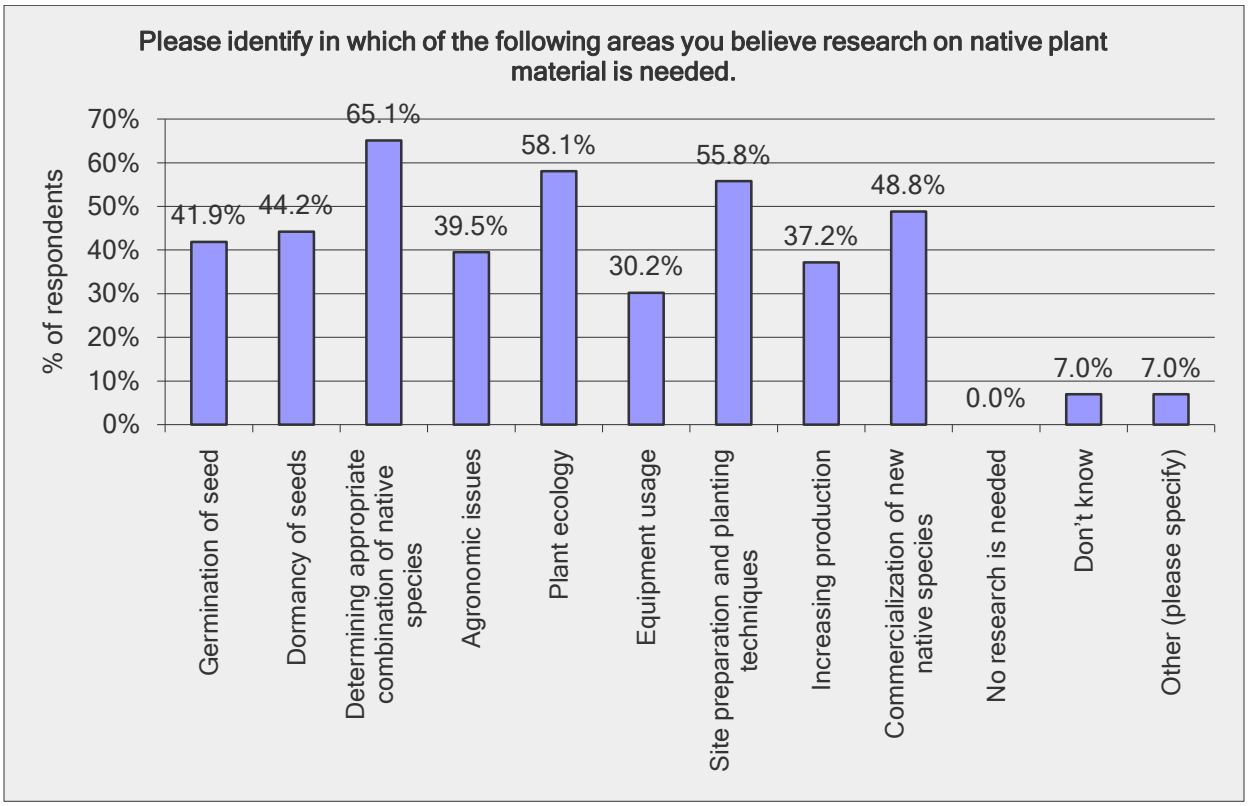
For all three of the statements above, many forum participants who indicated that they agreed with the statements clarified that they would rather use wild-type native plant materials, but that Ecovars and cultivars were acceptable alternatives to planting non-native seeds and plants.

27. Please identify in which of the following areas you believe research on native plant material is needed. Check all that apply.

Answer Options	Response Percent	Response Count
Germination of seed	41.9%	18
Dormancy of seeds	44.2%	19
Determining appropriate combination of native species	65.1%	28
Agronomic issues	39.5%	17
Plant ecology	58.1%	25
Equipment usage	30.2%	13
Site preparation and planting techniques	55.8%	24
Increasing production	37.2%	16
Commercialization of new native species	48.8%	21
No research is needed	0.0%	0
Don't know	7.0%	3
Other (please specify)	7.0%	3
answered question		43
skipped question		40

Other (please specify)

- Non-native species control in native plantings
- Possible applications, nutritive quality for cattle, role in agriculture
- How we can restore various native cryptograms (Selaginella + lichens) into native reclamation projects.



Although “Determining appropriate combination of native species” was the highest ranked area that survey participants believed that research was needed, there was no clear topic that was singled out as a priority. The indication that research is needed to determine appropriate combinations of native species may be linked to the most popular answer in question 19, that native plant materials are used in order to replicate a natural community. Also, although very little research is currently being done on native plants, survey participants clearly indicate that research is needed (no one agreed with the statement that no research is needed).

28. Please identify and briefly explain what you believe to be obstacles in the expansion of your use of native plant materials.

Answer Options	Response Count
	39
answered question	39
skipped question	44

Response Text

- Lack of local sources for seed and plants; invasive species
- Locally (Saskatchewan) sourced plants.
- Availability of seed of grassland forb species in sufficient quantities
- Limited species available.
- We can't buy them at our local garden center.
- I would like to use and recommend the use of native plant materials more often but frequently there is a lack of requirement for revegetation, especially when development occurs on previously disturbed sites. There doesn't seem to be any incentive for proponents to improve sites. There's a real lack of interest in preventing impacts to native plant communities. I try to suggest conservative conservation strategies, but frequently (almost always) the law doesn't favour conservation. And it's a rare client who wants to pay for something they're not required to do.
- Identifying sources and availability.
- Availability through contractors using nursery/greenhouses that either don't grow or supply native species.
- I don't have a storefront source of native plant materials. I buy packages of seeds in local stores but I know that they are not really native to South West Saskatchewan. I find it harder to find mail order seeds that are native to Saskatchewan. Regarding number 26 above, I realize that if we all gathered wild plants and seeds we would contribute to their disappearance; but I am often tempted! I have gathered a few wild crocus seeds and they finally produced a plant about 5 years later. It was important for me to know that crocus cannot live in soil that is regularly disturbed. I also would like to be able to buy small amounts of seed for things like needle and thread grass and bearberry. I have felt very angry when I have discovered after the fact that areas of native plants have been sprayed to remove the forbs. The case in point is the golf course in Cypress Hills. I controlled myself when I wanted to dig up some of the little flowers. You can imagine how disgusted I was when I found that they had all been spayed out of the fairways!
- To only collect wild seeds may cause decrease of wild plants.
- Two obstacles I am faced with are cost of seed and availability of local seed.
- Information and availability
- Higher cost over non-native species. Slower (at least in perception) rate of establishment. Applications that I deal with are primarily to control erosion, therefore quick establishment is necessary. Lack of understanding of performance characteristics.
- Lack of familiarity or awareness by seed suppliers and land managers. Also, higher cost of

native seed due to relatively limited supply.

- Lack of supply of nursery stock
- Native plant diversity for sale
- Public opinion. Availability of live plants versus seed. Re: question 26--although I do not think we should harvest plants from their native location, but I do collect some seeds and cuttings. (If the mice don't chew off my ribbons first). Through trial and error and just plain good luck I have managed to get most to germinate, Surviving the transplanting process is another story. I am not sure what you mean by "new native species" Is that the Ecovars you refer to?
- Limited supply of the plant seeds I need.
- There needs to be more suppliers offering a more diverse array of native plants.
- Availability of suitable product.
- Landscape Contractors feel uncomfortable using native seed. They therefore increase prices when projects go out to tender. The client isn't interested in increasing budgets. Most landscape contractors do not have specialized equipment (seed drills). Landscape architects only read seed certificates on an irregular basis. Refresher courses would be helpful. Refresher courses for seeding native grasses / native alien plants would also be helpful. We need more research into shade alternatives to city lawns with trees. I often specify plants as I would a perennial and these plants are not available in the nursery industry.
- None
- For landscaping, the only specialist suppliers are very small back-pocket operations. Bedding plants and nursery stock are rarely available.
  We are also in the preparation stage of revegetating a quarter section with natives. This is complex, time-consuming and expensive. There are few easy options for establishing diverse, flower-rich prairie, so it takes a lot of oomph to achieve a not-entirely-satisfactory result.
- Availability of local genotypes - more cultivars are required from different regional genotypes. Availability of regionally identified tree/shrub seed sources.
- (1) Lack of clearly defined outcomes from regulatory agencies that mandate use of native plant materials. (2) Lack of regulations and enforcement of a requirement to use source-identified plant materials. (3) Prohibition of non-native plants for restoration of novel, "mostly native" but fully functional plant communities.
- Almost total lack of availability of native seed other than a few common grasses and showy wild flowers
- Availability of plant material, and best practices for cultivation.
- In terms of buying seed to revegetate large areas, the buying process can be difficult if you are looking for clean, certified seed. I have run into obstacles when I try to ask questions about the genetic & geographic source of seeds. The biggest problem I had this spring was commercial seed providers sending me lab reports dated for the current year, but tests done as long as 7 years ago. Some would have TZ tests but no germination tests, or TZ tests with no weed analysis, or TZ tests with no weed analysis or germination tests. Plus, I couldn't get any information on where their common seed came from. When I asked questions about the lab results or the lots themselves, I was either ignored or told they wouldn't be able to find that information for me. It was very frustrating and needless to say I did not buy any seed from them. As far as buying seed for my own personal use, I haven't tried yet. I want to collect as much as I can myself, and purchase shrubs and grasses from a commercial seed provider. I plan to buy some this year, but I will have to buy from Manitoba because there are no local seed providers in Saskatchewan (that I know of).
- Material availability prevents development of knowledge for potential commercial seed production and utilization. Without availability research is limited, commercialization to prevented. Without information on seed production, growth requirements and potential utilization growth of a native plant industry will be limited.
- Money and time
- The obstacle for us has been dealing with the Saskatoon Lab, it seems they obstruct the process by taking too long for decisions and many inconsistencies in the application of rules. It's hard to know what they actually want and hard to get information from them until it is too late.

- The cost of the seed needs to come down so that the agriculture community can do some of the reclamation work on their own. Also, availability of some species and an understanding of others is still lacking. For instance, in the black and grey soil zones, rough fescue would be a desirable species to plant yet we know almost nothing about how or why this plant reproduces. We need to focus on these little mysteries and move forward from there. Also, tame grass research is outcompeting native grass research (in my opinion), as researchers are able to get grant money to develop new breeds of crested wheatgrass because the ag community is asking for that - we need to modify the message that native grasses are difficult to seed and grow so that we can move the agriculture community towards wanting to use these species instead of tame grasses.
- They aren't sold in enough local areas
- Cost and education
- We have a very limited budget. But more importantly, we have very limited staff and equipment. Also, staff interest in natural reclamation is not huge (except for me and a few others).
- The biggest obstacle is seed production. Demand and interest in native plants is growing in my industry.
- There seem to be a limited number of species available commercially. In my work, where increasing plant diversity is often one of the goals, it means there is a limit to the variety of species I can plant -- even if those species are usually found in those particular habitats.
- Mainly the availability of suitable plants (forbs) for local conditions (coastal BC). Many native plants offered are from the dry interior and won't survive the winter wet.
- Biggest obstacle is the lack of good quality native seed

29. Please suggest any possible solutions to the obstacles mentioned above.

Answer Options	Response Count
	36
answered question	**36**
skipped question	**47**

Response Text

- Incentives for nurseries and growers to produce and sell native species; general education for gardeners, parks administrators and landscapers; tougher rules promoting the use of native species around natural areas (e.g., acreages, cottage subdivisions); more use of native species in landscaping government properties (at all levels)
- The start-up of a business in Saskatchewan specializing in selling native plants.
- Research into the contribution of forb species to the long-term productivity of grassland communities is required to convince pasture managers and restoration technicians that including a greater diversity is worth the cost.
- Increased usage and regulation (incentives), increases the market development.
- I collect the seeds and I grow the seedlings, but I would like to have access to more species. Garden centres should start selling native species.
- Time? The continued good work of certain individuals in the EA branch? Public education? Education of clients? Gentle nudges?
- More individuals need to be made aware of the need for these species.
- I suppose if consumers (gardeners and designers) continue to pester and create a demand for native species at local nurseries, then perhaps more will be carried.
- I wish that there were some good way of informing people so that they could gather native plants from areas that are about to be destroyed by road building, preparation of oil well site, spraying for perfect fairways, etc. I am likely to remain a very minor user of native plants but I think more folks would be interested if seeds, information and plant material were more readily available. I would love to have an ethical source of the Western Red Lily since I did not qualify

for any under the Shand Power Plant program in 2005, although I certainly applied!
I bought my first native plants from the Miller Greenhouse which I discovered when I sat next to the Millers at a Native Plant Society event. I think that they are no longer in business.

- Collecting seeds from the wild is good as a start and then cultivate them.
- As the demand for more native vegetation in our everyday activities increases, the availability will increase and the price will decrease.
- Have a local seller or supplier who is knowledgeable. Could be the NPSS. Price might be a consideration.
- Identification of species/mixes with quick establishment properties.
- Better literature and information appropriate for P.Ags to promote and educate others on the use of native plants. Increased production to address the supply limitation. Increased education of regulators to require use of natives in reclamation of roads, borrow pits, mining, petroleum, and utility disturbances.
- I would suggest that more nurseries should focus on native plants, but apparently there is not yet a market. The best solution is for people (like me) to continue to promote the use of native plants in private gardens and in public parks and along road sides.
- More growers are needed
- Education, education, education and example, example, example---Like the native prairie gardens in the school yards and St. Joseph's High in Saskatoon...
- Education for producers to plant and harvest native seeds; grass and forbs.
- Maybe some kind of financial (or other) incentive to new native plant sellers to encourage more local operations to start up. Also, new types of native plants need to be commercialized by existing native plant sellers.
- Need to create a central resource/database where buyers can go to identify suppliers easily.
- Workshops for the landscape trade would be helpful. This could discuss the difference between seeding dry land grasses and native grasses. Or what equipment should they consider buying? New native seed mixes suggested in the City of Regina seed specification will require landscape contractors to use native seed. Thus the workshop should be of interest to contractors. Partner with the city to offer workshops. Nurseries should carry a native plant section just like groceries carry an organic section. Perhaps the Native Plant society should "rent" equipment to the successful bidders. We need a consultant that can be hired to identify grasses during the seedling stage. If this consultant can assist contractors in other duties such as calibrating specialized equipment.
- None
- 1. Landscaping: Support the existing native-plant sources in Saskatchewan, with an emphasis on promoting the use of native plants in landscaping -- the market and the businesses will have to grow together.
  2. Restoration: Grants in aid would be helpful. More practical research on increasing diversity of restored plots. Easier access to expertise and advice.
- Expand plant collection, selection and multiplication programs. Regional tree/shrub seed houses distributing seed of know provenance.
- Monitor and report on long-term (after 5-20 years) results of restoration projects that used native plant materials.
- Increase demand for native seed by education on how to use native material to good advantage and to recognize the differences in growing different species of natives
  Remove stigma that wild plants are just weeds, have weedy growth habits or are hard to grow
  Provide stimulus to use natives through government regulations for reclamation and restoration and encourage industry to include use of natives for restoration as part of their "best practices" operation
  Research ways and means to blend use of natives and non-natives for horticultural and landscape purposes and provide these results to educational vehicles like garden magazines, manuals seminars and other extension facilities.
- Higher profile of the industry, through collaboration among suppliers, to share information among suppliers. More research on planting and growing native plants, especially in restoration settings.

- Commercial seed providers (Viterra & Brett Young in particular) should be obligated to provide current, accurate lab reports that include both weed analysis, germination & TZ tests for all lots they sell.
- Development of a pipeline where an integrated approach occurs where potential species are identified, researched, results provided to seed industry, material produced and utilized. Material suppliers require a market which will not be there if people can grow the material or access it.
- Implement a consistent set of standard rules for importing to be followed and be sure importers are aware that they will ALWAYS be followed.
- Sell large amounts of native plants that aren't invasive in commercial locations like home depot other large company corporations.
- Influence demand so hopefully cost comes down
- We need more of a budget and increased staff resources. Plus we need funding for equipment (harvesting, planting and weed control). We also need to better educate our staff.
- Encourage more people to get into the production of native seed and plants. Assisting with the transfer of knowledge between growers. Determining what will help keep growers in business.
- Educate native plant users about the wide variety of species available and about the benefits of biodiversity in their own backyard.
- Propagate plants from locally sourced genetic material - promote use of locally native plants to increase probability of plants surviving in private gardens which would increase customer confidence in using natives. Plants should be labelled as "native to ..." coastal, interior, grassland etc.

30. In your opinion, what has to be done to increase the overall use of native species and expand the native plant materials industry?

Answer Options	Response Count
	38
answered question	**38**
skipped question	**45**

Response Text

- See 29
- Increase education and awareness on the benefits of using native species, both in small scale (yard) projects and large scale (restoration) projects. Also, more research on large scale restorations.
- 1. Regulation. There should be strict regulations to discourage/prohibit the use of non-native perennial species in restoration and pasture management.
  2. Concurrent with the regulations, there needs to be wide availability of native seed mixes at economical prices.
  3. Research into the use and production of native species is the first required step
- Regulation and incentives. Also education.
- Availability at garden centres.
- Personal initiative of many people who like plants, I think.
- Publicize the importance of growing native species plants, along with their hardiness and benefits.
- Just to keep going. Perhaps raise the profile/awareness of the industry within the nursery trade and to designers.
- I am just starting to hear from friends who are talking about native plants and that has sparked my interest in them, otherwise I have heard nothing from any type of greenhouses or government agencies about the topic.
- Education on how to use native plants and availability.

- Government has to lead the way by only using native species in its projects and provide education and incentives/assistance to people that are ranching to use native species in their operations.
- See last answer
- Educate the public about the benefits of using native plants. Encourage local nurseries to carry these plants
- A more detailed follow-up to the plant selection guide that describes growth characteristics for various species -soil types, climate, rate of growth, root system.
- Awareness of the beauty of native plants
- Promotion of planting native species in residential gardens and municipal parks
  local nurseries have to promote native plants as well.
- Make it the law
- Urban environments can regulate that native seeds be planted near creeks, sloughs, rivers and all natural areas following disturbances. Pre-disturbance assessments to create native plant seed mixes for restoration activities. Road and highway construction / disturbances should use native plant seeds in road ditches and stop using smooth brome and alfalfa seed mix that attracts wildlife to highways and roads.
- Education of the public on the benefits of native plants, and instructing them on how to use them and dispelling some of the myths and misconceptions about native plants. Also, making native plants more commercially widespread would help.
- Educate those who work in reclamation/industry on the use of native plants.
- More marketing savvy. The city of Regina now has several native seed mixes and these should be used by the industry to package the city brand (once they have been tested and proven to be successful). Nurseries should be encouraged to have a native plant display (just like the organic display in grocery stores). More workshops for various parts of the industry. Teaching landscape contractors the differences between seeding with native and non-native grasses.
  A Saskatchewan Native Plant nursery.
- Persons involved, especially landowners, must be informed of the value of and the risk of losing the native species.
- Obviously, increasing demand and supply has to go hand in hand. Public education/promotion is important. More hands-on workshops? More media how-to's?
  I don't know enough about the supply side to be able to comment, but increasing demand is probably one important key to making the "industry" viable.
- Continue research of plant establishment techniques and plant community development. Educate public on benefits of using native species.
- (1) Regulatory and/or industry-driven revisions to the definition of "reclamation success" based on long-term, multi-year data and ecosystem functionality (i.e., Rangeland Health, site stability, wildlife habitat metrics, land use requirements).
  (2) Conduct research on defining regional and local attributes of ecosystem functionality.
  (3) Encourage multi-stakeholder initiatives that address (fund and direct research) sustainability of natural landscapes.
- Education and increase numbers of display and demonstration uses of natives that work well. We have to prove to the general public and industry that natives are better alternatives in economic and aesthetic terms. Suitable native plant material has to be available to potential users when the users need it.
- More information to the general public on the advantages of growing native plants, sources of native plants, and cultivation information.
- More education and better availability of native species.
- There has to be more protected acreage. Pay to take land out of production.
- Has to be readily available material that is cost competitive with other available material.
- Simplify the process of importing from the US and Native Plants could be more included on the government websites. (as forages and grasses are) etc.
- Get the agriculture sector on board - producers and Ministers, and have the environmental community require all wildlife and oil and gas reclamation be done in native seeds.
- In my situation educate people that native species perform (outperform) non-native species in

erosion and sediment control projects

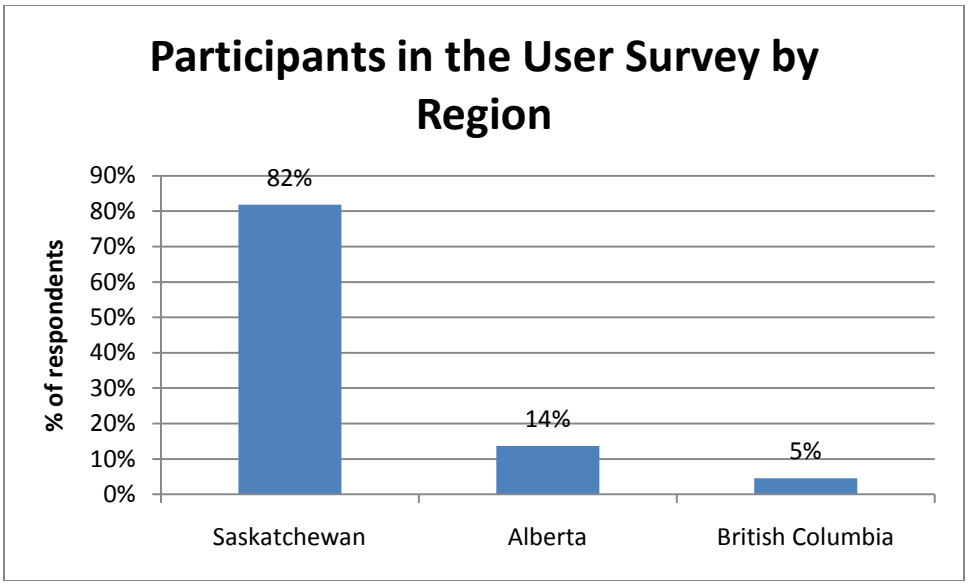
- Need to get more species of Ecovars commercially on line!
- Native plants need to become part of the urban landscape. They need to become more available at greenhouses and garden stores. This is an unfilled niche.
- Education is a start -- letting people know what native species are, why they're a great choice and what is available. Then making it easier to access native plants -- get them into place such as Home Depot and Rona. Currently, if one wants to purchase a native plant at the retail level, it takes a lot of commitment to find a nursery that offers them.
- Raise awareness of how native plants support local wildlife (food source for caterpillars, shelter), erosion control, able to cope with summer drought and/or winter wet.
- More resources towards outreach and education regarding the adaptability and performance of natives vs. tames.
  Primarily, seed supplies of diverse, quality seed lots need to be consistently available.

31. Enter any additional comments here.

Answer Options	Response Count
	8
answered question	**8**
skipped question	**75**

Response Text

- Difficult to find native plants that are often native to an area.
- I am excited to learn more and have native plants come into style!
- This survey was difficult for landscape architects to fill out. I had no native plant projects in 2009. I was involved in the RCMP campus master landscape plan in 2009. Native plants were a big part of the planning document. But according to this survey I "used / specified" 0 %. Landscape architects have input at all levels of government. In many cases they influence policy. There were no policy questions in this survey.
- I have been held back in my gardening by a lack of access to seeds and plants and lack of familiarity with the germination and dormancy of natives. I wasn't able to attend your presentation at the library, much to my disappointment, but more, more, please!
- This was a useful survey. Thanks!
- Hope my suggestions are useful
- Everybody knows what needs to be done. Fragmented bits of land don't do it. Needs to be a larger land mass.
- Many cultivars of native seed we purchase (such as western wheatgrass) appear weird. For example, western wheatgrass cultivars are more tufted/clumped than natives. The heads of these cultivars are also much larger.



The vast majority of users came from Saskatchewan, with a small portion from Alberta and even fewer from British Columbia.

Discussion and Recommendations

Positive Indicators

Overall, there are signs that the native plant materials industry is growing, albeit slowly. Most trends measured in this survey show growth. There are a number of ways that industry growth could be spurred, but it boils down to increasing supply and demand. Demand could be increased through a number of ways such as financial incentives, policy at all levels of government and by creating more awareness of the benefits of using native plants. Supply could be increased also through financial incentives as well as commercialization of new species and research.

Another positive indicator is that there is a good mix of experienced and new native plant materials providers, and good recruitment of both native plant materials users and providers which should carry the industry into the future.

In addition, currently there is good market activity and many people are actively using native plant materials or are beginning to use them. There has also been a recent increase in events that deal with native plants.

One positive indication of note is that there is the potential to expand certain sectors of the market and operations in geographical regions as well. For example, Saskatchewan has fewer native plant materials providers than other provinces, but our results show that it is the destination for much of the native plant materials produced. Add to this the fact the some users indicated that they went out of Saskatchewan to find the species that they needed because they couldn't find a local source and it strongly supports the idea that there is an opportunity for entrepreneurs to start a business providing native plant materials, or for an existing business to expand their operations. Recent developments also support this, as two new businesses have in recent months started to provide native plants to urban residents and one former native seed producer has come out of retirement in order to meet the demand.

One commonly perceived problem with the native plant materials industry is that native plant materials (particularly seed) are expensive. While native seed is generally more expensive (2-3 times on average based on discussion with forum participants and NPSS projects), the survey results don't point to cost as a major reason for not using native plant materials. Cost was more of a factor in past market assessments, so it may be that people still perceive this as a problem when in reality it may currently be less of a limiting factor. Data from professional users indicates that native plant materials comprise a very small fraction of any project (of an annual budget for that matter). It should be noted that from past NPSS projects that native plants are no more expensive than horticultural alternatives.

Another commonly perceived problem is that there is a lack of native plant materials available. While species selection may be a problem as indicated by users, availability of sufficient supplies of native plant materials may not be as big a problem as commonly thought. This can be evidenced by the high proportion of providers who had carry-over of native plant materials in an average year, some with a large percentage.

Negative Indicators

For as many positive indicators as there are for the industry, there are likely as many issues that need to be addressed. One of the largest problems revealed in the surveys was the disconnect between providers and users of native plant materials. It seems as though both groups work in their own circles until it is time to obtain native plant material. At this point, a brief exchange is made and both go their separate ways once again. While this is an oversimplified generalization, it is fairly accurate. Users and providers of native plant materials need to enhance their communication with one another. This could be achieved a number of ways, not the least of which is to have regular dialogue whether or not any business transactions may be occurring. Providers could offer an open door policy for clients to come and visit and tour their operations, while users could take the time to contact providers throughout the year to check on supply and to get a sense of what the current and future crop might look like. In a more formal setting, regular meetings or forums could be attended by both groups in order to discuss issues and opportunities from both perspectives. Such opportunities exist through NPSS annual general meetings and the recent restoration workshop, but more could be done. Also, events created to target certain groups may be also beneficial; for example, an event to target youth involvement would be beneficial to the future of the industry as it will aid in recruitment of new members.

Another gap identified by the results of the survey was that current research on almost every aspect of native plant materials is lacking. There are several factors affecting this, such as the lack of funding from government bodies (or direct research by government agencies) and the lack of an instant payoff for any research undertaken which would dissuade private research firms from delving into native plant materials research. However, survey participants clearly indicated that many knowledge gaps exist regarding native plant materials, and that research can help to remedy this. The research should be focused on real world problems and effectively communicate the results to the proper stakeholders. Providers and users alike are plagued by problems only research can solve, such as unreliable native seed production or unreliable establishment. These have negative implications not only for individual projects, but for the industry as a whole. In addition, there are other issues which are more subtle but would nonetheless erode a provider's bottom line or a user's chances of success. Only research efforts can solve these problems.

Perhaps the most overarching issue facing the native plant materials industry today is the need to mainstream native plants. Aside from being outside of the scope of this market assessment, this will be very difficult to do and take a great deal of time and money. In order to achieve the mainstreaming of native plants, a fundamental change will need to be made in the way people view native plants.

Currently, native plants and the benefits of using them are almost unknown to the general public, and even those who use them likely don't use them exclusively. There are many reasons for this but the fact remains that if native plants were more widespread, they would stand a better chance of becoming the norm. A delicate balance must be reached between supply and demand in order to grow the industry; if demand outpaces supply, people will get discouraged and avoid using native plant materials. Conversely, how does one build up a significant quantity of native plant materials without a demand?

At this point it should be noted that most of the major problems that the native plant materials industry faces today were problems that previous market assessments have identified and suggested solutions for. This means that while the industry has slowly grown, it has failed to resolve these issues over the last decade. If these issues were resolved when they were first identified it would almost certainly have

resulted in quicker growth for the industry. These issues need to be solved now in order to make the most progress possible in the coming decade. All stakeholders must make an effort to improve the native plant materials industry for a better future.

Recommendations for Users of Native Plant Materials

1. Understanding
   Through the results from both surveys and dialogue with providers at the forums, it became apparent that users need to appreciate certain factors regarding the production of native plant materials, not the least of which is the length of time involved to produce native plant materials. It takes at least one year, but typically more, to produce a native seedling or a native seed crop after planting the initial seed. Often, orders for native plant materials are made only once they are needed. While providers typically have some native plant material on hand, they may not have sufficient quantities for large projects or may be missing desired species. Native plant materials are not like other supplies that can be quickly mass produced and/or are readily available on short notice. Users need to realize this when planning large scale projects and consider their native plant material needs early on in the project. Depending on the type and species of native plant material, providers recommend a lead time of at least a year and up to five years in certain cases. While obstacles may prevent this, it should nonetheless be attempted. Certain users indicated that project timelines and project managers are not always accommodating to giving proper lead time, which speaks to the larger problem of a lack of appreciation and/or awareness of the native plant material production process. Understanding other aspects of the native plant materials supply chain would also be beneficial, such as the impacts that low seed production, hard to grow species and hard to clean seed have on cost, availability and timelines.

2. Education
   There needs to be more education for user groups regarding native plant materials. While the NPSS and other organizations have made good progress since the last market assessment was made, users are still indicating that more needs to be done. Topics could include, but are not limited to, proper species selection, planting techniques and growing information. Users can be educated in a number of ways, including workshops, printed materials, field days and analytical tools, among others. These would help them make better decisions which would ultimately lead to a better experience and a higher success rate when using native plant materials and create a positive feedback loop which would help the industry to evolve and expand. The resources that do exist need to be better utilized by users, as it is apparent that some users don't know of the information resources available to them, or don't understand their importance. It is the job of those who have this information to deliver it as quickly and efficiently as possible to a wide audience.

Recommendations for Providers of Native Plant Materials

1. Involvement
   Native plant material providers need to become more involved in the front end of the projects that they are providing their products to. Providers need to avoid the "give and go" scenario and instead insert themselves into the planning process of many of these projects, offering advice on what species to use and how much is needed. Often providers know as much or more

as the professional consultants do on aspects pertaining to the use of native plant materials. Providers should also become familiar with their customers and their professions so that they can tool their operations to better provide for their customers and anticipate their needs.

2. Cooperation
   Providers of native plant materials need to work together with other providers in order to overcome obstacles that they otherwise wouldn't be able to do alone. For example, seed supply fluctuations (and therefore prices) might be able to be stabilized somewhat if providers pooled their native seed stock and set a standardized price for each product, with each provider getting a percentage of profits according to the amount of product they contributed. This would not only make supply more reliable but it would result in users spending less time trying to source these products from multiple sources. It might also fetch a better price for the provider and help sell more product than if they were to sell it independently. One way that native plant materials providers could work together in such as way would be to form a co-operative. Aside from pooling their products, providers could each contribute a small amount of money toward a general fund. This fund could then be used to achieve a number of initiatives such as advertising or research. The power of the collective would also give providers economic advantages such as buying bulk quantities of supplies at discounted prices. Having a unified voice would also allow them to influence policy and help with lobby efforts.

Recommendations for All Stakeholders of the Native Plant Materials Industry

1. All stakeholders should do their part to either mitigate native plant material market fluctuations or buffer themselves against fluctuations. Some examples mentioned in this report that could contribute to building a degree of stability into the market include forward contracting by users and the formation of a native plant material provider co-operative.

2. Yearly native plant events need to be continued in order to maintain the momentum generated thus far. The NPSS, among others, offers regularly-scheduled annual events as well as other activities that are dependent on funding. If possible, activities related to native plant materials should not only be maintained but increased.

3. It is the recommendation of the NPSS and many of the survey and forum participants that market assessments of the native plant materials industry be performed every 5-10 years in order to continue to provide up-to-date information and monitor the progress of the industry. Where possible, future assessments should pose some of the same questions as past assessments in order to continue to identify trends.

4. More information needs to be generated and circulated on native plant materials so that stakeholders in the industry have sufficient current information to base decisions on, and to further the education of the public regarding native plants and ultimately help mainstream their use. There are potential native plant materials users out there that are lacking the information they need or those that don't even know that native plant materials exist or what the benefits of using them are. By creating awareness it will allow these people to reach their full potential when using native plant materials, which will have a positive influence on the providers of native plant materials and the industry in general.

5. There is a need for all stakeholders to develop and/or strengthen partnerships with business, industry, government, non-profit organizations, research facilities, educational institutions and other agencies in order to advance the native plant materials industry.

6. The industry needs champions who will spearhead certain initiatives. By doing so, it will encourage others to do the same, or at least join the cause. Without champions in this industry, growth and evolution will come slowly, if at all.

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