

Horticultural Labour Market Retention and Recruitment Study

Prepared for

HortEducation BC

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Executive Summary

The objective of this report has been to identify components to be incorporated into the communications aspects of a strategy to attract and retain employees and students for BC's horticulture industry.

The information presented in this study is based on:

- Workshops carried out with horticulture industry employers representing the BC Nursery, Landscape, Turf and Public Sector Parks.
- 233 responses to a questionnaire by BC horticulture students and apprentices
- Data collected in the Phase I report.

1. Student Characteristics and Perceptions

A key demographic finding is that 45% of present students are under the age of 25 and therefore in the 'Y' generation, and 46% are female. Most students indicate that they researched the offerings of various horticulture education institutions online, specifically on the schools' own websites – 33% of diploma students and 34.7% of certificate students. Apprentices, on the other hand, found out about their program from their employers, not unexpectedly. Clearly the focus for targeting of communications should be potential diploma and certificate students. Communication strategies for apprentices need to target employers.

Factors attracting students to specific educational institutions were:

- Wanting to learn about plants, botany and gardening skills
- The reputation of the school, instructors, and the course content
- Relatively short length of the program
- Opportunity for an outdoor job and the lifestyle that goes with outdoor work

Factors that initially attract students and employees to the industry include outdoor work, the environment, jobs with lots of variety, and passion for plants and beauty.

The above factors need to be integrated into marketing/communication strategies developed and implemented by the educational institutions themselves.

2 Employee Perceptions

The survey of students and apprentices (the majority work full or part time and thus were considered representative of employees at large) indicated that the desire to work outdoors, wanting to work with plants, flowers and trees, passion for horticulture and wanting physical work were the key attraction factors. The survey indicated that the major factor in a decision to stay with or leave a specific job and/or the industry was wages. Thirty-eight percent of the respondents stated that competitive wages would keep them in the industry; 23% stated that job satisfaction and 19% said job opportunities were key to keeping them in the industry. When asked what factors would make them leave the industry, 48% indicated low wages and 21% indicated injury or disability. The

perception of low wages relative to other industries is based on fact. This study and the Phase I study determined that wages in the private sector horticulture industry are low compared to similar industries.

3 Employer Perceptions

From the private sector employer workshops there is clearly an understanding that wages and human resource management practices needed to be dealt with to attract and retain employees. Several companies who started their skilled employees at a relatively high wage (\$20/hr) stated they did not have problems attracting and retaining employees. The public sector parks indicated the same and stated that they were often overwhelmed with applicants for parks positions.

4 Implications for Training Programs

○ Students

Attraction strategies need to focus on the outdoor work, the environment, plants and beauty and jobs with lots of variety. The communication medium for diploma and certificate students is primarily the web and thus both HEBC and the educational institutions need to create and maintain state-of-the-art web sites. The primary source of information for apprentices is their employers, therefore strategies must be developed to communicate the benefits of having employees indentured into the apprenticeship program.

○ Employees

Similar factors attracting students to the industry, attract employees in general i.e. outdoor work, the environment, plants and beauty and jobs with lots of variety. Thus marketing strategies must focus on these attributes of the industry. In order to retain employees the industry must deal with the low wages and human resource management practices.

○ Employers

Employers identified the need to increase wages, and train owners and managers in human resource and financial management skills. HEBC and/or the trade associations must deal with this skills deficit.

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1.0 Introduction

This report is Phase II of a three-phase research and strategy initiative commissioned by HortEd British Columbia.

Phase I undertook a literature review pertinent to recruitment for industry and educational institutions, and to the issue of retention of skilled and unskilled labour, identifying the information gaps critical to the development of recruitment and retention strategies.

Phase II, the present report, provides attitude and awareness information on labour recruitment and retention issues from the perspectives of employers, students, educators, and alumni of the various educational institutions offering horticultural education programs. The findings address information gaps identified in Phase I and the strategies presented recommend how horticultural labour needs could be more effectively pursued.

Phase III will present marketing strategies for recruitment to horticulture education and employment, and for retention of those so employed.

2.0 Methodology

Data for this report was generated from written responses of existing students, a survey, and workshops carried out with employer groups. Students were surveyed in all public sector training institutions and also those private institutions that belong to the Provincial Agriculture/Horticulture Articulation Committee. A total of 233 students responded to the surveys. Industry workshops were carried out with the nursery production, landscape and turf/parks sectors of the industry.

3.0 Labour Market Analysis

Prior to determining strategies for attracting new workers into the horticulture industry or developing educational recruiting strategies from the existing employer base, it is important to understand the current nature of the labour market.¹

The labour demand trends in the BC nursery and landscape sector are driven by a number of factors including:

- Growth in the various sectors is strongly correlated with increased construction in the BC and Canadian economies and the effects are often lagged and expressed through proxy variables, such as housing starts,
- Growth of gardening as a leisure pursuit and interest in sustainability, resulting in increased demand for landscaping and nursery products,

¹ For more detailed analysis of the BC horticultural labour market see Zbeetnoff Agro-Environmental Consulting. 2006. Baseline Study of Landscape Nursery Labour Issues, Gaps and Research Needs in British Columbia. Report prepared for HortEdBC.

- Changes in nursery management practices, for example mechanization, and certification, are changing the demand for part-time, full-time, seasonal and permanent positions, (see Phase I)
- Access to foreign seasonal agricultural workers is increasing the unskilled labour supply for nursery operations. An expansion of the foreign seasonal agricultural worker program to the landscape and retail sectors could have significant implications for future domestic labour education and supply development,
- The US economy – as reflected by changes in the number of US housing starts, the exchange rate on the US dollar, and demand for BC exports.

A labour needs model has been developed by Statistics BC². The model predicts the number of workers in each college educational catchment area in BC by National Occupational Code. The methodology used in the model has come largely from previous work on community dependencies carried out by Statistics BC.

The data provided in the BC Regional Occupations Projections Model was used in the Phase 1 Report to determine the number of workers in ornamental horticulture occupations between 2006 and 2010 and is shown in Table 1.

Table 1: BC Statistics Horticulture Occupation Projections 2006 – 2010

	2006 Total # Workers	2010 Total # Workers	Change
Nursery/Greenhouse Operators and Managers	1,138	1,206	+69
Landscape & Grounds Maintenance Contractors & Managers	414	452	+38
Supervisors, Landscape & Horticulture	1,080	1,147	+67
Nursery and Greenhouse Workers	5,029	5,341	+312
Landscape & Grounds Maintenance Labourers	5,886	6,327	+441
Landscape & Hort Technicians & Specialists	1,124	1,207	+83
Total Estimated Ornamental Horticulture Worker Force in BC, 2006 and 2010	16,676	17,691	+1,010

Based on this data, and maintaining the status quo, an increase of 1,010 workers in the ornamental horticulture workforce has been estimated between 2006 and 2010. It should be noted that in terms of demand for trained and untrained individuals this does not take into account attrition or normal turnover; it is simply the projected total number of people in the workforce. Moreover, the BC trend is reflected nationally as described in the Phase I report.³

² Statistics BC, BC Regional Occupations Projections Model, Industry and Occupations Projections 2005 - 2010

³ Zbeetnoff Agro-Environmental Consulting. 2006. Baseline Study of Landscape Nursery Labour Issues, Gaps and Research Needs in British Columbia. Report prepared for HortEd BC.

The total increase in the workforce demand for horticulture or supervisory/management skills, not including normal turnover in the workforce, has been estimated at 257 workers by 2010. Those job categories with the highest levels of skills, and therefore needing training, are:

- 69 Nursery/Greenhouse Operators and Managers
- 38 Landscape & Grounds Maintenance Contractors and Managers
- 67 Supervisors Landscape & Horticulture
- 83 Technicians & Supervisors

3.1 Estimated Size of Employer Group

Another way to look at potential demand for skilled workers is to determine the total number of companies in the industry. These figures are provided below:

3.1.1 Production Nurseries

Based on the 2001 Census of Agriculture data for BC there are:

- 1,377 farms with nursery product sales
- 801 farms with >51% of Gross Farm Receipts derived from nursery sales

3.1.2 Private Sector Landscape Companies

The following information on landscape companies and retail garden centres is based on the InfoCanada database, as provided by the BC Landscape & Nursery Association.

The total number of landscape contractors and maintenance companies listed in BC by InfoCanada is 944, with a further 95 landscape design companies.

Yellow Pages in major BC population centres list numbers of 'landscape contractors' as follows:

Vancouver	340
Victoria	235
Kelowna	159
Kamloops	83
Abbotsford	134
Coquitlam/Maple Ridge	132
Prince George	54
Kootenay area	58
Total	1,195

Thus, it can be inferred that the total number of landscape companies in major population centres lies between 944 and 1,195. This does not include small companies not listed in the Yellow Pages.

3.1.3 Retail Garden Centres

InfoCanada's database lists 276 'retail garden centres and nurserymen' in BC (our review of the nurserymen listing indicates most are garden centres).

3.1.4 Turfgrass, Golf Courses Parks

Golf courses, municipal parks, regional district parks and school districts hire trained horticulturalists and landscape employees in entry level positions. In BC there are:

- 300 golf courses
- 156 municipalities
- 28 regional districts
- 60 school districts

The minimum number of potential employers based on the above data is 2,565. Attracting one new apprentice per year from just 10% of these employers would increase enrollment in apprenticeship by 256 people per year.

4.0 Data from Employer Workshops

A workshop was held for each distinct employer sector in BC. These sectors are:

- Landscape construction and maintenance sector
- Nursery sector
- Turf and public sector

Each sector was asked an identical set of questions (see Appendix I)

- What does your sector do to attract employees?
- What does your sector do to retain employees?
- How does your sector train employees?

4.1 Landscape Workshop

The following is a summary of responses from the landscape workshop.

4.1.1 Attracting and Retaining Employees in the Landscape Sector

The group anticipates difficulty in attracting employees in all job categories from general landscape labourers to skilled supervisors and managers. Reasons for this problem included:

- Poor pay.
- No career development opportunities.
- Lack of human resource management skills by owners.
- Price competition, leading to reduced profits for the entire industry and restricting the ability to pay competitive wages.

Techniques being used to attract employees include:

- Job posting on various websites including their own.

- Word of mouth.
- Employee referral of friends.
- Employee bonuses for successful referrals.
- Local newspapers.

Some suggested solutions to attracting employees include:

- Increase public awareness of what a quality landscape and landscape professional is, leading ultimately to higher profits and the ability to pay higher wages.
- Pay higher wages. One participant in high-end residential landscaping stated “They stay because of the money, we buy them, paying apprentices \$18/hour and they can go to \$19 to \$20 per hour with full benefits.” The same participant stated that pay gets them in the door, and career paths, benefits, and good treatment keeps them.
- License landscapers, requiring them to meet a minimum standard.
- Promote and provide human resource training for landscapers.
- Communicate with parents and peers of potential employees as they play a major role in career decisions.

4.1.2 Participation in Training Initiatives

There is very little employer participation in training initiatives.

- Only one company had employees in the apprenticeship program.
- No company had employees in certificate or diploma programs, but they did hire graduates of these programs.
- One company sent employees to the Burnaby Continuing Education Horticulture Program as it was in the evening and on Saturday, allowing the employee to upgrade on his/her own time.

Reasons given for lack of employer participation in training programs:

- Employers do not want their employees away from the job for long periods of time.
- In the apprenticeship program one employer stated that he did not like the concept of employees being in school with competitors’ employees.
- Some stated that employees should get education on their own time, not company time.
- Once trained, employees want more money.
- Lack of awareness of apprenticeship program.

Suggestions to increase employer participation:

- Break the apprenticeship training into smaller modules, for example, take each course and deliver it over three consecutive Saturdays. The employee would then not have to take time off work. There was also interest in providing modules in conjunction with a passport-type program in which participants would get passports stamped upon completion of each module. Once stamps have been obtained for all modules, the student in the apprenticeship program would obtain his/her Certificate of Qualification (CQ).
- Deliver all training between December and mid-February to accommodate the seasonal nature of the industry.

- Promote apprenticeship program to landscapers.

4.2 Nursery Grower Workshop

Nursery growers have difficulty attracting employees in all categories except unskilled labour. With the introduction of the Seasonal Agricultural Workers Program (SAWP) short term difficulties in attracting unskilled labour have been alleviated to a significant extent.

4.2.1 Attracting and Retaining Employees in the Nursery Sector

Key issues in retaining horticultural workers:

- Seasonality of the industry leads to difficulty in providing full time employment.
- Work not meeting expectations, jobs not satisfying, many leave for better pay in Alberta.
- Leave industry for better opportunities, better wages, and inside work.
- Lack of advancement opportunities in smaller nurseries.
- Pay in the construction industry is \$10 per hour higher than in the nursery sector and the work is plentiful.

In the case of unskilled labour, additional issues included:

- Need to connect them emotionally with the company.
- Higher wages.
- Shortage of full-time work.

Suggestions for attracting employees into the industry include:

- Provide higher wages
- Provide more information to high school counselors.
- ‘Jazz up’ the image of the industry.
- Treat people well; word-of-mouth and friends will attract people to the industry.
- Promote working outdoors, variety of jobs, flexibility and lifestyle.
- Introduce horticulture in high school curricula.
- Involve alumni in recruiting for post secondary/apprenticeship but also to attract people into the industry.

4.2.2 Participation in Training Initiatives

None of the group had employees in training programs offered in British Columbia. They stated that there was very little participation on the part of nursery growers in horticulture training in BC.

Reasons given for lack of employer participation in training programs:

- Training not given close to home (interior nurseries).
- Course content needs to be more focused on practical skills.
- Employee resistance to training because some employers do not increase wages.

Suggestions to increase participation in training programs:

- Deliver in winter months (December to February).
- Offer courses in areas other than in the lower mainland, i.e. deliver in the Interior/Vancouver Island closer to home.
- Deliver longer courses as a series of modules.
- Provide courses with hands-on training.

4.3 Turf Operations and Municipal Parks Workshop

Parks do not have problems attracting qualified applicants to their horticulture positions due to the higher pay scale in the municipal system. The private sector turf and irrigation industry does however have difficulty attracting employees in the unskilled and skilled labourer categories and there is a significant shortage of mechanics. At the present time, golf courses do not have problems attracting superintendents or assistant superintendents.

4.3.1 Attracting Employees in the Turf and Municipal Park Sectors

Techniques being used by the industry to attract employees to their companies include:

- ‘Poaching’ from other companies in the industry.
- Paying existing employees a finder’s fee.
- Newspaper ads.
- On-site career fairs (used by golf courses).
- Industry association job posting board.

4.3.2 Retaining Employees in the Turf and Municipal Park Sectors

Key issues with respect to horticulture graduate/skilled worker retention:

- Love of the golf industry.
- There is a significant variety of work.
- Employees like the outdoor work.
- Benefits of free golf.
- Health benefit associated with exercise (older employees).
- Failure to retain workers is mostly due to the poor rate of pay.

Key issues with respect to the retention of unskilled labour:

- The benefits of the job i.e. free golf.
- In the municipal sector they stay due to the attractive wages.

4.3.3 Participation in Training Initiatives

None of the turf and parks sector workshop participants had any employees in any provincial training programs. However, the golf and municipal operations do hire graduates from diploma and certificate programs. In the golf industry, it was stated that the 2-year diploma is the minimum requirement for moving into supervisory and management positions.

All of the participants have employees attending various industry short courses, which seems to work well in terms of employee motivation and skills upgrading.

All of the participants stated that there was an overall lack of awareness of the various training programs, and of the apprenticeship program in particular.

Suggestions to increase participation:

- Implement alternate delivery models.
 - Colleges could deliver courses on-site, especially for municipalities
 - More use of the web for online delivery of courses
 - Alternate a day at the college and then a day of work
 - Look at Royal Roads model (mixed mode) combining distance learning with on-campus time.
- More promotion of what is presently available.
- Most of the workshop participants had no clear understanding or knowledge of the horticulture training programs available in BC.

5.0 Results of Student/Apprentice Survey

5.1 Enrollment by Program

A total of 233 current BC horticulture students replied to the student questionnaire⁴. (see Appendix II for copy of questionnaire). The replies included students from Kwantlen University College Apprenticeship and Diploma programs, and Certificate (Foundation) students from Capilano College, Malaspina University College, Camosen College, University College of the Fraser Valley and Thompson Rivers University. This represents virtually all students in horticultural programs in BC.

The number of student replies by program is as follows:

- Apprentices 75
- Certificate 85
- Diploma 73

5.2 Student Work Status

This survey is considered representative of the skilled horticulture workforce as 77% of the survey respondents were employed in some capacity in the horticulture industry.

The breakdown of employment is shown below:

- Year round full-time employment 30%
- Year round part-time employment 14%
- Seasonal full-time employment 30%
- Seasonal part-time employment 3%

⁴ See Appendix I for questions in the questionnaire.

- Not working 23%

5.2.1 Present Work Area

Existing students (including apprentices) were asked what type of work they were presently employed in. The responses from this question are provided below:

Landscape maintenance	18%
Landscape installation/construction	13%
Golf course	10%
Nursery production	8%
General landscaping	7%
Gardening	7%
Landscape Design	5%
Retail	4%

Other responses represented less than 4% of the respondents and have not been reported.

5.2.2 Other Careers Considered Prior to Horticulture

Respondents were asked what other careers they had considered prior to horticulture. The number and variety of careers considered included a vast number of trades and professions (total of 101 different careers were considered). The following represent the careers considered most often by the respondents.

- Teaching 10%
- Carpentry 5%
- Environmental Sciences 4%
- Construction 3%
- Self Employment 3%
- Arts 3%
- Massage Therapy 2%
- Law Enforcement 2%
- Electrical 2%
- Accounting 2%
- Mechanics 2%

All other careers represented less than 2% of respondents.

5.3 Student Breakout by Age and Sex

Age breakout of the student sample is presented in Tables 2 and 3. In the overall sample 54% of the students are male and 46% female. In the 20 to 25 year old age group, there is an equal number of male and female students.

Table 2: Age and Sex of Horticultural Students by Program

Age	Diploma		Apprenticeship		Certificate		All Programs	
	Male	Female	Male	Female	Male	Female	Male	Female
<20 Years	9	5	1	2	5	5	12	12
20 to <25	12	13	17	9	16	8	38	38
25 to <30	5	3	7	4	8	5	16	15
30 to <35	4	4	6	3	5	7	13	12
35 to <40	3	4	8	7	2	3	18	13
40 to <45	2	2	3	2	2	4	7	6
45 to <50	1	2	1	2	4	2	4	8
>49 Years	0	1	1	0	1	2	1	2
Total respondents	36	34	44	29	43	36	109	106
Note: Some respondents indicating their gender did not provide their ages								

The largest cohort of students/apprentices is the 20 to 25 age group as seen in Table 3 and Figure 1. Table 4 shows that the age breakout is similar for all programs, with the apprenticeship program having a higher proportion of older students.

Table 3: Age Distribution of Survey Respondents (All Programs)

Age	# of Respondents	% of Respondents
<20 years of age	24	10.7%
20 to <25	77	34.4%
25 to <30	33	14.7%
30 to <35	29	12.9%
35 to <40	28	12.5%
40 to <45	15	6.7%
45 to <50	12	5.4%
> 50 years of age	6	2.7%
N =	224	
Average age =	28.9 years	

Figure 1: Comparison of Student Ages by Horticultural Program

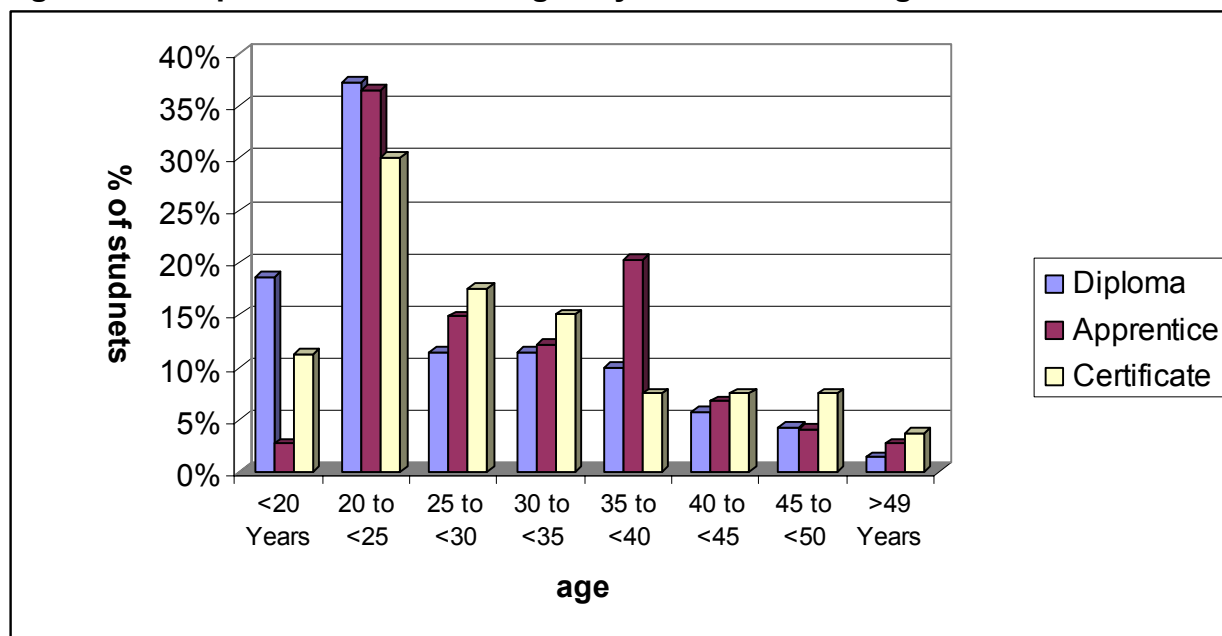


Table 4: Age of Survey Respondents by Training Program

Age	Diploma	% of students	Apprenticeship	% of students	Certificate	% of students
<20	13	18.6%	2	2.7%	9	11.3%
21 to 25	26	37.1%	27	36.5%	24	30.0%
26 to 30	8	11.4%	11	14.9%	14	17.5%
31 to 35	8	11.4%	9	12.2%	12	15.0%
36 to 40	7	10.0%	15	20.3%	6	7.5%
41 to 45	4	5.7%	5	6.8%	6	7.5%
46 to 50	3	4.3%	3	4.1%	6	7.5%
>50	1	1.4%	2	2.7%	3	3.8%
Total respondents	70	100.0%	74	100.0%	80	100.0%

5.4 Incomes of Student Respondents

The incomes of the student (including apprentices) respondents is shown in Table 5.

The average wage paid in the ornamental horticulture industry and how it compared to other trades and professions is outlined in the Phase I report to HEBC.⁵ The average hourly wage (2006) based on Statistics Canada Information for various horticulture categories was:

- Landscape workers \$14.56
- Supervisors landscape and horticulture \$14.59
- Greenhouse and nursery workers \$10.15

Almost 30% of all students did not have incomes while going to school. The median income is in the \$10,000 to \$19,000 per year range.

Table 5: Income of Survey Respondents

Income Category	# of Respondents	% of Respondents
Nil	58	29.3%
<\$10,000	34	17.2%
\$10,000 to \$19,999	33	16.7%
\$20,000 to \$29,999	32	16.2%
\$30,000 to \$39,999	25	12.6%
\$40,000 to \$49,999	10	5%
>\$50,000	6	3%
N =	198	

Wages of apprentices are shown in Table 6 and presented graphically in Figure 2. Only the apprenticeship data is provided in detail as the majority of apprentices are full-time employees whereas the diploma and certificate students are typically seasonal or part-time while attending school. The average wage of apprentices is approximately \$29,000 per year.⁶ Translating this into an hourly rate based on working an average of 2000 hours per year gives an average hourly rate of \$14.50 per hour.⁷

In comparison, average wages in other comparable sectors are: construction trades helpers and labourers at \$17.50/hr, construction supervisors at \$24.50 per hour and silviculture and forestry workers at \$25.65/hr (see Table 7).

⁵ Zbeetnoff Agro-Environmental Consulting. 2006. Baseline Study of Landscape Nursery Labour Issues, Gaps and Research Needs in British Columbia. Report prepared for HortEdBC.

⁶ Since the exact salary was not asked for in the survey, the average salary has been estimated from weighting the midpoints of each salary category.

⁷ A standard work year was one with between 1,750 and 2,400 work hours – Statistics Canada - <http://www.statcan.ca/Daily/English/060329/d060329b.htm>

Table 6: Salaries of Apprentices

Salary Category \$	% of apprentices
Nil	0%
1 - 9,999	7%
10,000 - 19,999	16%
20,000 - 29,999	30%
30,000 - 39,999	26%
40,000 - 49,000	14%
>49,000	7%
TOTAL	100%

Figure 2: Wages of Apprentices

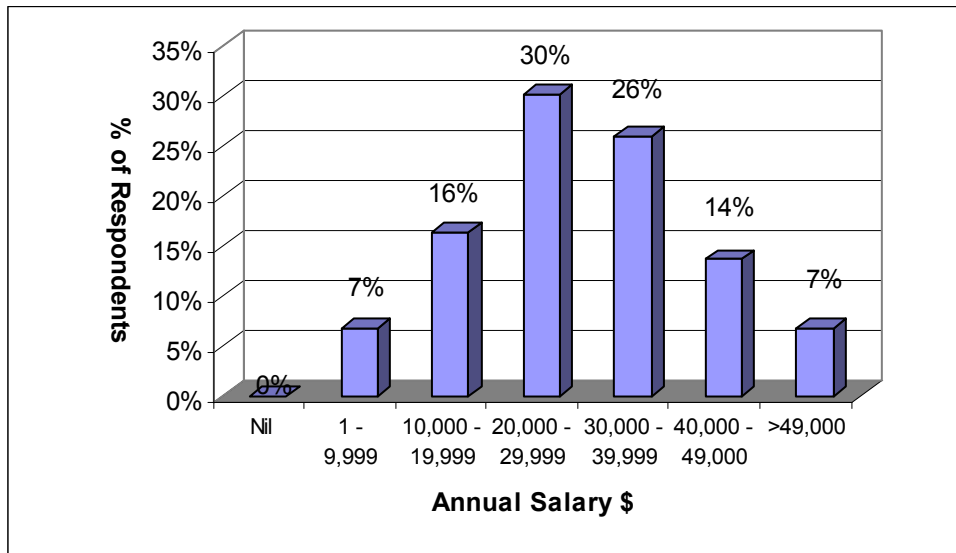


Table 7: Average Apprentice Wage Rate in British Columbia, 2005⁸

Trade	Respondents	Average Wage
Machinery and Transport Mechanics	159	\$29
Electronics and Electrical Engineering	11	\$28
Printing Press Operations	18	\$27
Electrical and Communications	94	\$25
Contractors, Supervisors Trades and Related Workers	57	\$25
Metal Forming Shaping and Erecting	46	\$25
Machinists and Related	37	\$25
Managers Construction and Transport	10	\$25
Roofer, Glaziers, Painters	20	\$24
Mechanics Heating, Electrical, Small Engine	13	\$23
Plumbers, Pipefitters, Gas Fitters	72	\$22
Scheduling, Distribution, Shipping, Dispatching	9	\$21
Automotive Service Technicians	164	\$21
Carpenters and Cabinetmakers	90	\$21
Chefs and Cooks	43	\$15
Horticulture(a)	75	\$14.50
Notes: (a) Based on the survey of 73 apprentices carried out for this project, using estimated average yearly salary, and annual employment of 2000 working hours.		

It can be seen from the data that the ornamental horticulture industry is paying substantially less for labour than comparable industries in British Columbia.⁹ In addition to the reported wage rates, the nursery industry (classified as agriculture) does not generally pay overtime and it is unusual for landscapers to pay overtime even though they are required to do so under the *Employment Standards Act*. The ongoing low wages paid in the horticulture industry will continue to restrict the ability of the industry to attract and retain employees, and the ability of educational institutions to attract students. This systemic problem in the industry must be addressed if the ornamental horticulture industry wishes to compete with other similar industries for trades employees.

5.5 Factors Attracting Students/Apprentices to the Horticulture Industry

From Table 8 it can be seen that the desire to work outdoors is the number one factor attracting students to the horticulture industry. This is followed by liking to work with plants and a passion for horticulture and landscaping, at 38% and 14% of respondents, respectively.

⁸ Industry Training Authority (2006). 2005 Apprenticeship Survey, Summary Report. Pub. BC Statistics and BC Ministry of Advanced Education.

⁹ In general, other trades positions are considered comparable to the horticultural trades since these trades recruit from the same personnel pool of the work force and require similar amounts of technical training.

Table 8: Top Ten Factors Attracting Students to the Horticulture Industry

	Factor	# of Respondents	% of Respondents
1	Outdoor job	144	62%
2	Like to work with plants, flowers & trees	88	38%
3	Passion for horticulture and landscaping	32	14%
4	Like physical work	29	12%
5	Like to work in natural surroundings	19	8%
6	Aesthetics, and creativity of the work	19	8%
7	Pay is attractive for qualified workers	19	8%
8	Lots of career opportunities	15	6%
9	Family tradition in horticulture	14	6%
10	Learn skills to start own business	14	6%

5.6 Factors Keeping Students in the Horticulture Industry

To determine the retention factors for students/apprentices in the industry two questions were asked in the survey:

- What factors could keep you in the horticulture industry?
- What factors could cause you to leave the horticulture industry?

The responses to these questions are shown in Table 9 and Table 10. From Table 9, it can be seen that wages are the most important factor to keep employees in the industry this is followed by job satisfaction and opportunities.

Table 9: Top Ten Factors for Remaining in the Horticulture Industry

	Factors for remaining in the industry	# of Respondents	% of Total Respondents (a)
1	Competitive wage rate, good income	88	38%
2	Job enjoyment & satisfaction	53	23%
3	Job opportunities	45	19%
4	Access to the outdoors	41	18%
5	Attracted to horticulture	41	18%
6	Variety of work and jobs	28	12%
7	Develop own business	22	9%
8	Opportunity for career advancement	18	8%
9	Continued learning opportunities	18	8%
10	Get exercise during work	11	5%

Note: (a) Expressed as a percent of the total of 233 survey respondents.

Table 10 indicates that the main reason the respondents would leave the industry is low wages (48% of respondents), followed by being disabled, and competing opportunity with higher pay.

Table 10: Top Ten Factors for Leaving the Horticulture Industry

	Factors for leaving the industry	# of Respondents	% of Total Respondents (a)
1	Low wages in the industry	111	48%
2	Injury or disability	48	21%
3	Competing opportunity with higher pay	20	9%
4	Loss of interest	15	6%
5	Monotonous work, boredom	15	6%
6	Weather	14	6%
7	Win the lottery	13	6%
8	Poor employer, co-worker relations	12	5%
9	Heavy physical work	11	5%
10	Absence of year round employment	10	4%

Note: (a) Expressed as a percent of the total of 233 survey responses.

5.6.1 Discussion on Attraction and Retention Factors

The attraction and retention factors identified by the respondents pertain to the industry rather than a specific employer. However, it is strategically critical that provincial or national strategies not only attract employees to the industry at large but also work with employers on strategies for retention of employees.

The top three factors that attract employees/students into the industry are:

- Working outdoors,
- Love of plants, and
- Having a passion for landscaping.

Pay rate is indicated to be the fifth most important factor attracting employees. However, once employees/students have become interested in the industry, pay becomes the number one factor for remaining in, or leaving, the industry. Low wage rate is indicated as the number one reason for leaving the industry by 48% of the respondents; this is over twice as high a frequency as concern about being injured, the #2 factor that could cause them to leave the industry (see Table 10).

Competitive wage rate is the number one factor that would keep students in the industry (38% of respondents).

Wages paid to horticultural employees (both skilled and unskilled) are substantially below similar trades and professions in Canada and British Columbia.¹⁰

¹⁰ A wages paid comparison is provided in Zbeetnoff Agro-Environmental Consulting. 2006. Baseline Study of Landscape Nursery Labour Issues, Gaps and Research Needs in British Columbia. Report prepared for HortEdBC.

5.7 Attracting Students to Horticulture Programs

Attracting students to horticulture programs is critical to providing the industry with a long term supply of trained and competent employees.

5.7.1 Sources of Information on Potential Training Institutions

The question asked to the students was “How did you find out about the program you are presently attending?” The consolidated data for this question is provided in Table 11.

Table 11: Top Ten Sources of Horticulture Program Information

Where did you find out about this program?		% Responses
1	Website	27.7%
2	Friends	22.7%
3	Employer	22.0%
4	High school counselor	6.7%
5	Advertisement	4.3%
6	School/College	4.3%
7	Parents, family	2.5%
8	Fellow employee	2.5%
9	Personal research	2.5%
10	College outreach to schools	0.7%

From Table 11 it can be seen that the number one source for finding out about the horticultural programs is the Web, followed by friends, employer, and high school counselors.

Table 12 shows that a higher proportion of diploma and certificate program students used the web, (33% of diploma students and 34.7% of certificate students, respectively), compared to apprenticeship students (15%).

Employers were also less significant as a source of information about the programs for the certificate and diploma students. The ‘employer as the source of information about the programs’ factor is skewed upward by the relatively higher proportion (44%) of apprentices finding out about the program via their employers. This would be expected since apprenticeship is still a program that requires indentureship with an employer.

Table 12: Sources of Horticulture Program Information, by Program

Where did you find out about this program?		Type of Program					
		Diploma		Apprenticeship		Certificate	
1	Advertisement	5	5.3%	0	0.0%	7	7.4%
2	Website	31	33.0%	14	15.1%	33	34.7%
3	High school counselor	9	9.6%	7	7.5%	3	3.2%
4	Employer	11	11.7%	41	44.1%	10	10.5%
5	Friends	21	22.3%	20	21.5%	23	24.2%
6	Fellow employee	2	2.1%	5	5.4%	0	0.0%
7	School/college	4	4.3%	4	4.3%	4	4.2%
8	Resource book on careers	1	1.1%	1	1.1%	0	0.0%
9	Talked to industry participants	0	0.0%	1	1.1%	2	2.1%
10	Trade show	1	1.1%	0	0.0%	0	0.0%
11	Parents, family	2	2.1%	0	0.0%	5	5.3%
12	General knowledge	1	1.1%	0	0.0%	0	0.0%
13	Personal research	4	4.3%	0	0.0%	3	3.2%
14	HRSDC (1)	1	1.1%	0	0.0%	0	0.0%
15	College outreach to schools	1	1.1%	0	0.0%	1	1.1%
16	Park advertising	0	0.0%	0	0.0%	1	1.1%
17	Just happened	0	0.0%	0	0.0%	1	1.1%
18	Experienced medicinal effect of plants	0	0.0%	0	0.0%	1	1.1%
19	CERC (2)	0	0.0%	0	0.0%	1	1.1%
Number of Responses =		94	100%	93	100%	95	100%
Number of Students =		73		75		85	

Notes (1) HRSDC = Human Resources and Social Development Canada (2) CERC = Canadian Employee Relocation Council

5.7.2 Factors Attracting Students to Specific Training Programs

Section 5.7.1 reported the sources of information that were used by students to identify horticultural programs as vocations. The next step for any student is making a decision on what training institution they wish to attend.

Table 13 lists the top ten factors that attracted students to the specific training program that they are presently enrolled in.

It is relatively important for current students to be able to access education that is close to home (21% of respondents). If factors #2 and #6 are combined (as they deal with the overall desire to improve their education and skills), this would be the top attraction factor for 32% of respondents. Other top factors include being close to home, reputation of school/program, and the short length of the program.

Table 13: Top Factors that Attracted Students to the Horticulture Program

Factor #	Factors that attracted you to the training program	# of respondents	% of respondents
1	Close to home	48	21%
2	Wanting to learn about plants, botany and gardening skills	42	18%
3	Reputation of the school, instructors, course content	40	17%
4	Relatively short length of program (apprentices)	40	17%
5	Lifestyle outdoor job	35	15%
6	Desire for general horticulture education improvement	32	14%
7	Acquire practical hands on training	24	10%
8	Wide ranging course content and career options	23	10%
9	Achieve better pay	23	10%
10	Obtain horticulture certificate or diploma	19	10%

There are substantial differences in the attraction factors between programs as seen in Table 14. Diploma and certificate students are quite closely aligned but there important differences with the apprentices. For apprentices the short length of the program, obtaining general horticultural knowledge and achieving better pay are the top three factors attracting them to horticulture training.

Table 14: Comparison of Top Factors Attracting Students to the Horticulture Training Programs, By Program

Factor	Diploma	Certificate	Apprentice
	% of Responses		
Get hort certificate/diploma (acquire trade)	7%	6%	12%
Employer encouragement/request/suggestion	4%	2%	15%
Lifestyle- outdoor job	15%	14%	17%
Length of program	11%	21%	20%
Attractive and wide ranging course content/career options	10%	16%	4%
Learn IPM	0%	0%	1%
Love of/learn about plants/botany skills/gardening	23%	22%	9%
Learn new job related skills/experience	4%	5%	13%
General horticultural education improvement	4%	9%	29%
Achieve better pay/make money	3%	4%	24%
Acquire practical/hands on training	16%	12%	3%
Reputation of school/instructors/course content	18%	26%	8%
Personal interest/self-improvement/challenge	4%	2%	12%
Seasonal timing of course/ability to work while going to school	0%	7%	12%
Interest in creativity and landscape/golf course design training	18%	1%	1%
Close to home	22%	38%	1%

5.8 Recruiting to Educational Institutions

5.8.1 Recruitment By Institutes

Our investigation indicates that little follow up of former students is conducted at any of the colleges. This is not surprising, given that alumni lists or up-to-date contact information is not kept or maintained.

There is no current institutional strategy to recruit students from families of former students that are now in the business. Yet, the influence of employers and family in the decision of current students to attend these programs is prevalent.

5.8.2 Recruitment By Employers

There appears to be a significant gap in knowledge of employers about the programs offered at BC colleges. Part of this gap is probably attributable to the fact that employers seldom think about investment in training as part of their labour recruitment strategy. The low wages in the sector suggest that few employers have a human resources plan to retain workers by providing training that might encourage them to stay.

6.0 Issues and Strategies

6.1 Strategies to Attract Students

There are two significant areas that the educational institutions and HEBC must focus on with respect to student recruitment. These are recruitment of students to specific programs which should be the focus of the specific educational institutions and recruitment to the horticulture industry as opposed to other industries. This should be the more the focus of HEBC.

The most important factors attracting students to specific programs were being close to home, wanting to learn about plants, botany and gardening, reputation of school, instructors and course content and that the courses were relatively short in length, particularly the apprenticeship technical training.

About 12% of the students actually identified their horticultural training as an avenue to achieving better pay. These students are often disappointed once they enter the work force.

6.1.1 Student Attraction to Programs

Based the survey data it is clear that both HortEducation BC (HEBC) and the educational institutions must:

- a) Have state-of-the-art websites that are in the top 10 hits on major search engines for search words such as: horticulture training, horticulture careers, outdoor careers, gardening, botany, and environment. This is particularly important for the diploma and certificate (now called foundation) programs as one-third of students found out about these programs from the web. The Phase I report identified generation Y (the under 30

age group who make up 25% of the workforce) and their use of interactive websites is a key component in any strategy to communicate with this age group.

Educational institutions should provide information on their web sites about:

- course content as it relates plants, botany and gardening as these were important in attracting students
 - reputation of the school
 - instructors.
- b) Develop and implement alumni tracking systems to update graduates on horticulture programs at their training institutions. Alumni are the best and largest source of friends that will pass information onto prospective students.
- c) Reach out to employers to inform them about the types of training programs available in BC. This is of particular importance to the apprenticeship program where the students are sponsored by their employer.
- d) Keep high school counselors informed on horticulture programs and careers as they are an important source of educational and career information.

Specific Apprenticeship Attraction Strategies - In-Person Recruiting

The private sector landscape and nursery industry is highly seasonal, is typically small family firm-based, and many tend to experience ‘communication overload’, with phone calls, faxes and emails. Therefore effective recruiting by in-person calls is critical to the success of the horticulture apprenticeship program. In-person recruiting would be facilitated by:

- a) Encouraging colleges to develop and use alumni lists to recruit students. The literature indicates that families in the business tend to generate students in the field.
- b) HEBC and or the colleges that deliver apprenticeship training should recruit by carrying out site visits to the employer’s place of business.

Strategies to attract students and employees need to be integrated since students inevitably become employees or employers once they are recruited to the industry.

6.1.2 Student Attraction to Industry

The shortage of both skilled and unskilled labour is arguably the single most serious issue facing the horticulture industry today, affecting nursery growers, landscape installation and maintenance companies, golf courses, and retailers. Thus the attraction of students into the industry to form the core of skilled labour is critical for the continued health of the industry.

The information and opinion gathered over the course of executing this research allows us to confidently make the following observations and recommendations.

Wages

Although students indicated many attraction factors, wages are still the most significant issue with respect to attraction and retention in the industry. The disparity between pay scales in horticulture and those in other comparable occupations¹¹ emerged as the top issue, again and again, throughout the process of gathering industry and student input. It is the single most fundamental concern of employees and students: the primary reason for leaving employment within the horticultural industry, *and* for not being attracted to it in the first place. The issue is not one of perception or misunderstanding on the part of those workers and students – that would be an easy communications fix. Rather it is the cold hard fact that horticultural industry pay scales, in all commodity groups, have not kept pace with those in other professions or trades.

Love of Outdoor Work

The key factor in attracting horticulture workers is their love of outdoor work. Working outdoors is also correlated with a number of other attractants such as opportunity for physical work, and working in natural surroundings. Outdoor work also has both health appeal and is attractive to a certain type of individual who simply does not thrive in an office or other confined environment.

Passion for Working with Plants, Flowers, and Trees

This is a fundamental reason why people are attracted to the horticultural industry at any level – student, employee, or owner-operator. Also closely related to this motivator are enjoyment of horticulture and landscaping, and the aesthetics and creativity of the work.

As such, ability to work with living plants is easily marketable to both students and employees and passion should play a key role in the development of Phase III, Communications Strategies.

Interest in the Environment and Related Issues

This attractant is composed of several undercurrents. Students often have a predilection not only for botany and gardening but also interest in nature, the earth, sustainability, and the therapeutic properties of plants. Employees indicate a desire to work with and save the environment.

This area is very topical, and can be embraced by HEBC and the BCLNA to joint advantage. A number of BCLNA projects are already in the works, such as the Pest Management Accreditation initiative, designed to have societal benefit. There is a huge public appetite for things environmental and healthful and it is likely that career-seekers have not been presented with the notion that sustainability is a substantive component of a career in horticulture.

Attraction strategies and communications should also make use of this ‘hook’ as a tangible and justifiable attraction. On a global basis, companies and entire countries are making decisions to combat global warming. At the industry level, sustainable horticultural systems are correlated with reduced greenhouse gas emissions.

¹¹ Other trades positions are considered comparable to the horticultural trades since these trades recruit from the same personnel pool of the work force, and require similar levels of skills.

Attraction to “The Job”

Employees indicate that the ‘job’ is definitely attractive and motivates workers in many different ways. Thus, even if outdoor weather or work is not highly regarded, there are other attractants such as:

- Hands on work,
- Variety of job and materials,
- Opportunity to use equipment and machines,
- Aesthetics and creativity of work,
- Sense of satisfaction in taking projects to completion,
- Low stress and lifestyle benefits.

So, the issue is not that employees are unattracted to the horticultural sectors. The industry’s workplace attributes need to be better packaged to instill those elements that appeal to the hearts and minds of entrants.

6.2 Strategies to Attract Employer Participation in Recruiting and Retention

6.2.1 Strategies to Convince Employers to Indenture Employees

Improve Employer Management Practice

Currently, employees mention employer encouragement only sporadically as the source of their interest in horticulture. It is suggested that employers need to have much greater involvement in promoting employment in their industry and they need to design, offer and promote employment packages that are attractive and competitive. Part of making the employment attractive is the opportunity for training and career advancement.

Provide Career Opportunity

Employees indicate that the prospect of a career opportunity is not often on the list of why they are attracted to horticultural employment. A recurring reason for either leaving, or not working in horticulture in the first place is the perception that there is nowhere to go, that is, no specified career path. Depending on the size of the employer company, particularly if owner-operated, this may be quite true. There will be a propensity to ‘keep it in the family’ in many cases, and the fact that ‘no one advances until the owner passes’ is probably the norm.

HEBC needs to work with employers to show them that trained employees increase profits by increasing efficiency in the workplace. Although trained employees will demand higher pay this should be more than offset by the efficiency gains. Part of this strategy should be offering at least some of the apprenticeship courses in either a mode where employees can be sent for training in the evening or on weekends or making some of the courses available on the web or in mixed mode (web plus some classroom or lab time)

6.2.2 Employer Strategies to Attract Employees to the Industry

The drivers that will attract employees are the same as those attracting students, these are:

- Wages
- Outdoor work
- Being able to express their passion for plants
- Hands on work
- Variety of job and materials
- Opportunity to use equipment and machines
- Aesthetics and creativity of work
- Sense of satisfaction in taking projects to completion
- Low stress and lifestyle benefits.

Employer advertising and recruitment needs to promote these factors in addition to dealing with the ongoing issue of low wages.

6.3 Strategies to Attract Employees to the Program

Quality employees needed be attracted to horticultural programs to develop their skills and once hired they need to be retained in the industry..

6.3.1 Employee Attraction Strategies

The apprenticeship program provided an opportunity to survey students that are also employed. This information has been extremely useful in gauging the factors affecting the attraction and retention of actual employees in the workforce to their work as well as the horticultural industry.

Strategies to attract current employees to horticultural programs are similar to those needed to attract students. However, employees are much more knowledgeable about the working of the industry and are currently not strongly motivated to invest time in education that has a low potential to result in a career or attractive pay.

Workers require wages and working conditions to be equal or better than other industries that compete for the same labour force. Evidence of attractive career and wage opportunities in the industry would “pull” employees to the programs to obtain the qualifications required to meet those work opportunities.

The industry as a whole needs to be made to understand that higher wages do not mean lower profits, but in fact can lead to higher profits due to increased productivity, reduced mistakes, and reduced time and costs in training. Once the industry is seen as a viable career choice, it has many other attributes that make it a preferred field of endeavour.

6.3.2 Employee Retention Strategies

Creating an improved wage, work and career advancement environment where employees are easier to retain, or where employees are eager to compete for positions, is key to creating

demand for improved horticultural skills. Opportunities to advance within the company would create a demand for training and skill sets that would enable employees to perform more productively. Technical specialization creates opportunity for higher paying employment.

Some things employers could do to improve employee retention include the following:

More Competitive Wages

Wages are not only one of the most significant issues in attracting employees to horticulture, they are the number one reason employees leave the industry. From the employer workshops it was clear that there are significant discrepancies in wages between companies. One of the employers reiterated throughout the workshop that they pay high wages to attract and retain quality employees. Their strategy of higher pay and thus higher retention paid off in productivity gains and reduced costs needed to continually retrain employees.

Improved Employer Management Practice

Today, small firm or large, a good employee is worth his/her weight in gold and should be valued. HEBC and the BC Landscape & Nursery Association (BCLNA) need to promote and possibly facilitate modern human resource practices including adequate pay and benefits as the cornerstone of the long term health of the industry.

Employees are sometimes also not being treated as well as they would like to be (quite apart from the wage issue). Complaints included the following: 1) no overtime paid even though this in contravention of the *Employment Standards Act*, 2) poor safety practices, and 3) no training opportunities. Certainly this is a holdover from the time when employees might have been more or less expendable, given the ample supply.

Additionally, issues such as working conditions, living conditions in the case of foreign workers, incentive programs, willingness to provide training and certification are some tangible benefits that could increase employee retention..

Finally, the simple appreciation and recognition of a job well done, from employer to employee, is an intangible that can make the difference between a satisfied worker who will do his/her best, and a worker who is always on the lookout for the next job.

Identify Career Opportunity

The broad scope of types of work that horticulture includes is probably not well-known – although we lack research evidence to support this theory. On the basis that there is an aspect of horticulture for everyone – outdoor physical work, indoor physical work, outdoor and indoor non-physically challenging work, design, scientific and technical work, sales, distribution and logistics, and management, the appeal of a career in horticulture if adequate wages were paid *should* include a large cross-section of the population.

In whatever capacity, once employed, it is clear that people need to know there is a clear path of progression through the company, involving increasing levels of responsibility and pay commensurate with that additional work. And they need to know precisely what they need to accomplish, and what learning they need to acquire, in order to attain those higher levels of

employment. HEBC and the BCLNA must provide resources and assistance to employers so that some fundamental structures, common within commodity groups, can be installed.

Increase Job Satisfaction

Students and employees indicate that horticultural work has many aspects that create high levels of job satisfaction. There are various other ways to further heighten job satisfaction including providing even more opportunity for variety in tasks, delegating responsibility, developing a work place culture and providing extra curricular events.

7.0 Summary of Labour/Student Attraction and Retention Strategies for the BC Horticulture Industry

This study has identified key attributes of the BC horticulture industry that are hindering the ability of employers to attract and retain employees and the success of schools in recruiting students. These attributes will provide the foundation for a detailed labour and recruitment communications strategy for the industry.

7.1 Program Implications for Attracting Students

The most important demographic factor is the age and gender makeup of the students, 45% of present students are under the age of 25 and therefore in the ‘Y’ generation, and 46% are female.

Key factors that potential students take into account when make a decision on which educational institution to choose are:

- Wanting to learn about plants, botany and gardening skills
- The reputation of the school, instructors, and the course content
- Relatively short length of the program
- Education leads to a outdoor job and the lifestyle that goes with outdoor work

Marketing strategies will need to take the above demographic and attraction factors into account to be effective.

Most students indicate that they researched the offerings of various horticulture education institutions online, specifically on the schools’ own websites – 33% of diploma students and 34.7% of certificate students. Apprentices, on the other hand, found out about their program from their employers, not unexpectedly. Clearly the focus for targeting of communications should be potential diploma and certificate students.

7.2 Program Implications for Attracting Employees

Clearly, wages are the number one issue for attraction of employees. The industry will need to develop strategies to communicate this to employers. If wages remain significantly below that of other industries than other attraction strategies will be much less effective. More attractive wages are key to developing employee attraction strategies based on the very positive attributes of the industry which include outdoor work, the environment, jobs with lots of variety, and passion for plants and beauty.

The current disconnect between employee expectations and job realities needs to be solved in a fashion that makes the industry more competitive with other sectors competing for skilled workers. This indicates a critical need to assist the industry in identifying and adopting systems that provide higher productivity and increased capacity to pay higher wages.

7.3 Program Implications for Retaining Employees

This study showed that wages, employee health and safety, job opportunities, and management practices are key to retaining employees in a specific company/organization, and in the industry at large. Strategies will need to be developed around these key factors and include access for employers to appropriate training.

Employee retention is key to creating an ongoing demand for horticultural skills in the industry.

Appendix A

Student Recruitment and Retention Survey
November, 2006

Question #1: Please checkmark the level of horticultural training you are pursuing and expected date of graduation

A) 1 Year Certificate ___ Date _____ B) 2 Year Diploma ___ Date _____

C) 4 Year Apprenticeship ___ Date _____ D) Degree ___ Date _____

E) Other ___ Date _____

Question #2: Please list the top 3 factors that attracted you to the horticultural training program you are enrolled in.

Factor #1: _____

Factor #2: _____

Factor #3: _____

Question #3: How did you find out about the program that you are presently attending? (check all that apply)

Advertisement in newspaper or magazine ___

Web Site _____

High school counsellor _____

Employer _____

Friends _____

Other (specify) _____

Question #4: Are you currently working in the horticultural industry?

Yes ___ No _____

If Yes, how many years have worked in the horticultural industry? _____

If Yes, what type of work do you do? _____

Question #5: What field of the horticultural industry would you particularly like to work in?

Question #6: Were there other career areas that you considered before you selected horticulture?

Yes _____ NO _____

What were these other areas?

Question #7: What are the top 3 factors that attracted you to the horticultural industry.

Factor #1: _____

Factor #2: _____

Factor #3: _____

Question #8: Please list the top 3 factors that are likely to keep you in the horticultural industry.

Factor #1: _____

Factor #2: _____

Factor #3: _____

Question #9: Please list the top 3 factors that could cause you to leave the horticultural industry.

Factor #1: _____

Factor #2: _____

Factor #3: _____

Question #10: Please provide us with some information on yourself (fill in all that apply)

What is your Age? _____ Male _____ Female _____

What is the Closest City to your place of work? _____

Please Indicate Your Work Schedule:	Year round full-time	_____
	Year-round part-time	_____
	Seasonal full-time	_____
	Seasonal part-time	_____
	Not working	_____

What is your Current Annual Income from Horticultural Employment? (check income category that applies)

Nil	_____
Less than \$10,000	_____
\$10,000 to \$19,999	_____
\$20,000 to \$29,999	_____
\$30,000 to \$39,999	_____
\$40,000 to \$49,999	_____
\$50,000 or more	_____

Any Other Comments?

You are Done!

Thank You for your Participation