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REVIEW REPORT

on the

HORTICULTURE PROGRAM

MAY, 2001

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EXECUTIVE SUMMARY

Established in 1979, the UCC Horticulture Certificate Program is now in its third decade and over that time has provided steady and unassuming service to its students. Student demand has been consistently double the intake; utilization has remained at mid-1990s levels of 115% or higher; and given the seasonality of employment opportunities in its sector, the placement rate of 73% of program graduates in full-time employment over the last five years is estimable. The program ladders well, with about 10% of its students transferring annually to the UCC Horticulture/Business Diploma and another 14% to institutions such as Kwantlen University College and Olds College, Alberta. Two unsung aspects of the program are the self-help activities undertaken by the faculty, such as the construction of their own greenhouse in 1999 and their contributions to the Friends of the Gardens Association, and the public service provided to UCC in the form of assistance with grounds maintenance and with off-campus initiatives such as landscaping the Residential Construction Program's housing project.

However, with its last program review in 1989, shifts in context outside and within the program over the last 12 years make this review a timely checklist of the changes that the Horticulture Program should address. First among these is determining the format it should assume: currently the program is a hybrid of career/technical and vocational characteristics, but is clearly neither one nor the other. Next, the Review Committee sees a need for firmer and more meaningful integration of all existing courses into a cohesive program: at present, service courses and those taught by part-time faculty seem to be delivered in isolation from the core curriculum. Third, regardless of the format to which the program moves, curricular re-design is desirable in several courses such as the Practicals (HORT 170 and 180), Soils (HORT 154), and Landscaping and Drafting (HORT 163). The Chairperson and program faculty are also encouraged to review UCC policies on evaluation, student behaviour and attendance, and to ensure that these policies are enforced consistently.

The Review Committee also endorses the case that has been made by the Chairperson and faculty for expansion of House 10 into a viable classroom and laboratory for an estimated cost of \$240,000, and encourages the Dean, Sciences and Health Sciences to carry this proposal forward to the Vice-President, Administration and Finance. An equally strong case can be made for the establishment of a permanent site for iterative instructional and learning activities such as building walls and fences, etc. This could be done near the Ginseng Research Garden on the west side of the campus. And finally, faculty, students and the Program Advisory Committee's assessments of the program's tools, equipment and audio-visual devices suggest the need for an immediate capital infusion to remedy deficiencies in these areas.

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HORTICULTURE CERTIFICATE PROGRAM REVIEW
COMMITTEE MEMBERS

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**Lian Dumouchel,
Tourism Management, UCC**

ASSISTANT CHAIR

**Howard Mayer,
Program Development Administrator,
Trades and Technology, UCC**

EXTERNAL REPRESENTATIVE

**Grant Robertson,
Owner, General Grant's**

RESOURCE PERSON

**Ernest Phillips,
Horticulture, UCC**

RESOURCE PERSON

**Kevin Scollon,
Horticulture, UCC**

DIVISIONAL DEAN

**Colin James,
Dean, Sciences and Health Sciences, UCC**

REVIEW COORDINATORS

**Alastair Watt
Director, Institutional Research and Planning, UCC**

**Dorys Crespín-Mueller, Research Analyst
Research Analyst, Institutional Research and Planning, UCC**

**Michaline Novak, Research Analyst
Research Analyst, Institutional Research and Planning, UCC**

CHRONOLOGY OF THE HORTICULTURE CERTIFICATE PROGRAM REVIEW

The Horticulture Certificate Program Review was launched on October 2, 2000. Planning meetings with members of the Horticulture faculty and Institutional Research and Planning were held to discuss program review procedures and questionnaire design on October 2, December 13 and January 8, 2001. Guidelines and examples of required documents for the program review were provided. Questionnaires were refined and finalized by January 9, 2001.

Stakeholders in the Horticulture Certificate Program were surveyed on the following dates:

Former Students (1996-00):	January 11, 2001
Faculty:	January 11, 2001
Employers:	January 17, 2001
Advisory Committee Members:	January 11, 2001
Current Students:	February 23, 2001

Reminders were mailed to non-responding former students, employers and advisory committee members on February 6, 2001. All faculty had responded by March 13, 2001. The Office of Institutional Research attempted to contact non-responding employers and Advisory Committee members by phone on February 21, 2001. Non-responding students were phoned on February 21, 22 and March 1, 2001.

Former student data from 1996-2000 were summarized from Student Outcomes Reporting System (SORS) data, as provided by the Centre For Education Information, Standards and Services (CEISS).

The cut-off date for all responses was March 19, 2001. Information binders were sent to members of the Horticulture Certificate Program Review Committee on March 21, and that committee met to analyze the data and form its recommendations on April 17 and 18, 2001.

ADMISSIONS DATA

Admission Requirements

a) Educational Requirements

B.C. Grade 12 (regular non-adjusted courses)

b) Recommendations

- 1) Applicants should be in good physical condition
- 2) Applicants should have a strong desire for hands-on work with plant materials
- 3) Persons with allergies to dust or pollen should be wary of entering the program
- 4) Applicants must attend an orientation session
- 5) Applicants should apply early in the year, as space in the program is limited to 20 seats.

Orientation Sessions

Attendance at an orientation session is a prerequisite for entry into the Horticulture program.

Promotion Policy

To enter the winter semester, students must achieve at least 70% in all courses in the fall semester. In order to graduate from the program, students must achieve at least 70% in all courses.

Course Requirements

Fall Semester: August - December

ENGL	130	Horticulture Communications English I
HORT	150	Basic Horticulture
HORT	151	Greenhouse Production
HORT	152	Diseases and Insect Pests
HORT	154	Soil Science
HORT	170	Horticulture Practical 1

Winter Semester: January - May

ENGL	131	Horticulture Communications English II
HORT	160	Weeds
HORT	161	Nursery Production and Retailing
HORT	162	Fruit and Vegetable Production
HORT	163	Landscape Design
HORT	164	Turfgrass Management
HORT	180	Horticulture Practical 2
HORT	190	Horticulture Practicum

UTILIZATION - ENROLMENT/CAPACITY: 1996 - 2001

(Source: UCC Admissions)

A. Program Capacity:

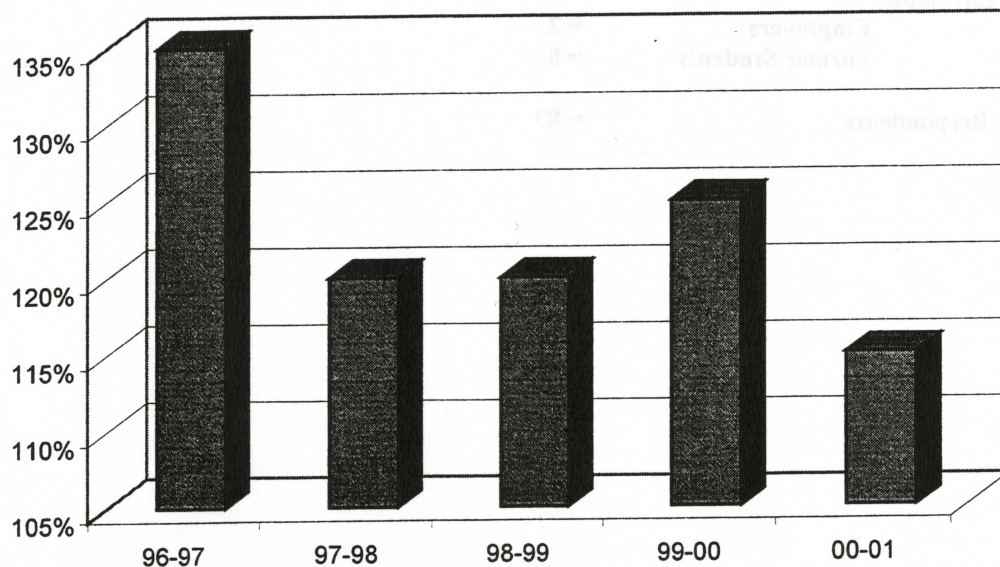
The Horticulture Certificate Program has 20 seats available per annum, but has enrolled 24 students annually for the past few years.

B. Program Demand:

Year (Aug-Apr)	Enrolled	Waitlisted	Incomplete/Denied/ Withdraw	Total Applications
1996 - 97	27	10	16	53
1997 - 98	24	12	13	49
1998 - 99	24	*12	*13	49
1999 - 00	25	11	20	56
2000 - 01	23	23	18	64

**Estimated Figures*

Program Utilization



Above graph based on 20 seat capacity and enrolment data from 1996/97 – 2000/01.

TABULAR SUMMARY OF QUESTIONNAIRE RESPONSES
HORTICULTURE CERTIFICATE PROGRAM REVIEW

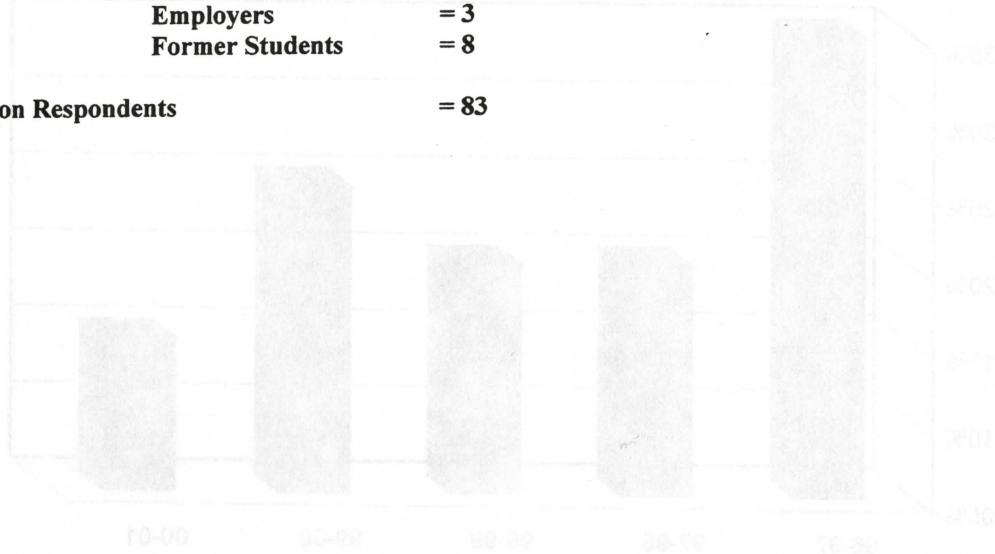
Recipient	# Sent	# Completed & Returned	% Returned
Advisory Committee	8	5	63%
Faculty	9	9	100%
Employers:	33	22	73%
Current Students:	22	20	91%
Former Students	79	32	45%
SORS (BC College and Institutes Student Outcomes Data: 1996-2000)	91	58	64%
TOTAL	242	146	63%

Returned Envelopes:

Employers = 3

Former Students = 8

Total Non Respondents = 83



SUMMARY OF QUESTIONNAIRE RESPONSES

The Review Committee used the following criteria in analyzing the questionnaire responses: on a scale of 5, ratings of 4.00 or above were considered good to excellent; ratings of 3.50- 3.99 were considered to be satisfactory to good; ratings of 3.00-3.49 were considered less than satisfactory; and ratings below 3.00, cause for concern. Subjective comments were considered on the basis of frequency, that is only if two or more respondents made the same point.

FORMER STUDENTS

Thirty-two former students for the period 1997-2000 responded for a response rate of 45%. The demographics of this group are interesting and distinct from the composition of the current student group. Whereas the current students are equally split on gender (50% male, 50% female) and are mainly young students (50% between the ages of 18 and 24), the former student group, which is more normative, was 84% female, with a mode age of 30-39.

Overall, high scores were given to the program effectiveness, content, procedures and the quality of instruction. Concern was expressed in the following areas: ENGL 130-Communications English 1 (3.41) and HORT 154-Soils Science (3.38). Dissatisfaction was also expressed with the program facilities: instructional facilities (3.47) and sufficient access to computer lab facilities (3.50).

Written comments mirrored the survey scores. Program strengths included the quality of instruction (16 comments) and the practical portion of the program (12 comments).

Areas of weakness identified by former students included lack of adequate facilities (7 responses), outdated curriculum materials (3 responses), and two responses indicating that the admissions requirements lack rigor. Dissatisfaction was also expressed with regard to the following courses and their instruction: Soils Science and Landscape Design (4 negative responses for each course).

In addition to the above, former students felt that improvements to the program could be made by adding a CADD component and computer literacy course (9 responses).

CURRENT STUDENTS

Responses by current students mirror those of former students in most areas. With regard to general program effectiveness, some dissatisfaction was expressed with ENGL 130 (Communications English 1) (2.40) and ENGL 131 (Communications English 2) (2.19). HORT 154 (Soil Science) and HORT 163 (Landscaping and Drafting) were also mentioned less than positively in the students' comments. These responses are consistent with those of former students.

Other key areas that parallel the responses of former students are related to the program facilities: instructional facilities (3.45), and sufficient access to computer lab facilities (3.45). In addition to these areas, current students have expressed dissatisfaction with the quality of audio-visual aids used in the program (2.15), indoor laboratory facilities (2.85) and tools and equipment (3.06).

Written comments support the survey scores. Current students were impressed with the quality of instruction and the practical component of the program. Five responses indicated a strong support for instructional effectiveness with a further eight responses indicating strong support for the practical component of the program.

Student comments also identified concerns related to inappropriate student behaviour and language, classroom management and etiquette problems.

PROGRAM ADVISORY COMMITTEE

Five out of eight (63%) Advisory Committee members completed questionnaires. Their responses mirrored those of both current and former students with regard to both the strengths and weaknesses of the program. The quality of instruction (4.20) and the program's ability to prepare students to meet the demands of industry (4.00) showed high scores while the program's tools and equipment, laboratory facilities, and computer access garnered scores of 3.40, 2.80 and 2.60 respectively.

Low ratings in curricular emphasis are as follows: sufficient emphasis on quality of work (3.40); sufficient emphasis on good work habits (3.00); sufficient emphasis on willingness to take direction (3.20); sufficient emphasis on initiative (3.20).

Apart from underscoring the unsatisfactory state of the program's classroom space, laboratory facilities, and computer access, advisory committee members offered several suggestions for additional competencies that should be taught in the program: computer, presentation and supervisory skills, and more emphasis on turf, floriculture, soils and container gardening.

EMPLOYERS

Of the 22 employers responding to this questionnaire, 20 or 91% have hired a Horticulture Certificate graduate from UCC in the past five years.

Overall, 15 out of 22 (or 69% of respondents) felt that graduates "met" or "exceeded" expectations. They were satisfied with the graduates' work habits (4.16) and the quality of their work (3.90), but showed some dissatisfaction with their problem solving skills (3.16) and their ability to plan and organize a workday effectively (3.37). These deficiencies may be due to the fact that recent graduates have not yet developed the maturity and self-confidence needed to take initiative in a work setting.

Written comments identified business training, computer literacy, and equipment operation as additional skills and/or competencies needed by graduates. Employers also mentioned the ability to work independently along with strong interpersonal skills as valuable competencies needed by graduates for entry-level employment.

It was interesting to note that while 36% of the respondents foresee a need for more Horticulture graduates in the next five years, 36% see labour market demand being static or declining. This may explain the calls from one or two employers to make the program more challenging so as to prevent flooding the market with too many graduates.

FACULTY

All faculty members responded to the questionnaire (n=9). Overall, faculty responses echoed those made by the other groups with regard to classroom space (2.88) laboratory facilities (3.50) and computer access (3.43).

Faculty responses regarding program goals and objectives are contradictory and merit closer examination. Although most respondents agreed that the program had explicit written goals and objectives (4.5), almost half (4) were not aware of what they were (3.38). Even so, faculty gave high scores to the clarity of these goals (4.0) and agreed that the goals and objectives are being met (4.0). The scores indicate an uneven understanding of program goals and objectives across faculty members and may necessitate their review and an examination of how they are communicated to all stakeholders. The low score (3.2) given to communication with faculty and staff regarding the program supports this observation.

Faculty did not feel that students developed sufficient problem-solving skills (3.22), good working habits (3.11) and the ability to plan and organize their day effectively (3.33). Other than working habits, these observations mirror those of employers.

Concern was also expressed regarding timeliness of information to students on their acceptance into the program (3.0), the quality of learning manuals and handouts (3.11), and the regularity of curriculum review (3.43).

The written comments supported the concerns identified by low scores. Lack of communication and coordination among regular and non-regular (part-time and service) faculty members, unprepossessing learning materials, and inadequate facilities and equipment are all areas of concern. In addition, safety concerns have been identified with regard to class sizes in courses such as Small Engine Maintenance and Repair and Carpentry.

STRENGTHS OF THE HORTICULTURE CERTIFICATE PROGRAM

The Review Committee has identified the following strengths in the Horticulture Certificate Program:

1. Demand and Utilization:

In the last five years (1996–2000), the total annual application number has consistently been double the number of places available in the program. This indicates a healthy, ongoing demand for the Horticulture Certificate program. Utilization figures have consistently been at 115% or higher, with the program enrolling 24 students while being funded for 20.

2. Graduate Employment Rates:

BC Colleges and Institutes Student Outcomes Survey Results for Horticulture for the past five years (1996–2000) show that nine months after graduation, former Horticulture Certificate students report 73% full-time employment, 13% part-time employment and 13% unemployment. Because the Outcomes Surveys are conducted every Spring, these figures may be slightly inflated by seasonal employment but nevertheless compare favourably with annual 69% employment average for all Vocational programs in the past five years.

3. Practical focus of the program and “field” laboratory:

The Horticulture Certificate program benefits from its strong practical focus and its access to the UCC campus grounds. This exceptional “field” laboratory (UCC campus) provides a unique opportunity for students to hone their skills by working in a realistic setting that exposes them to a wide variety of plants, etc., for instructional purposes.

4. Quality of instruction:

With some exceptions among part-time faculty, the quality of instruction in the program was rated highly by both former and current students.

5. “Value-Added” Contributions:

The University College of the Cariboo has benefited greatly from “value-added” contributions generated by the Horticulture Certificate program.

- For example, facilities and structures such as the large green house have been built recently (1999) by faculty and students at a fraction of the cost that would have been incurred had the project gone to tender and been undertaken by outside contractors.
- As well, the UCC grounds are maintained at a significant cost savings with the support of Horticulture faculty and students.
- UCC Horticulture faculty and students have responded to requests for landscaping projects both on and off campus—for instance, at the North Bachelor Heights Residential Construction project.
- The Horticulture faculty have also promoted community-wide interest in horticulture through their leadership with Friends of the Gardens Association, and through their co-ordination of workshops, lectures and plant sales beyond the scope of their regular duties.

AREAS OF THE HORTICULTURE CERTIFICATE PROGRAM WHICH CAN BE IMPROVED (WITH RECOMMENDATIONS)

The Review Committee identified the following aspects of the Horticulture Certificate Program as being in need of improvement.

1. PROGRAM FORMAT:

The Horticulture Program Review Committee has identified certain irregularities and departures from the vocational model that was originally adopted for this program. Specifically, the grading system, program delivery model, workload, faculty contact hours, course vectoring and course outlines deviate from the standards set for vocational programs at UCC. In many cases the program exhibits characteristics that combine vocational and career-technical program standards. In addition, the program course outlines do not reflect actual content of courses as they are presented in the student course packages sold in the UCC bookstore. While the Committee acknowledges the reasons for the development of this hybrid model in the late 1980s, it feels that those reasons are less pressing than they were and should no longer drive the organization and delivery of the program. For example, although providing some labour during the practical part of their instruction, program personnel are no longer responsible for campus ground maintenance. The Committee does not pretend that this is a simple issue; it realizes, however, that current staffing levels cannot be justified under the vocational model, whereas a career technical model could support two instructors. Faculty workload and contact hours would have to be re-allocated if the program moved to a career/technical model, and course outlines re-written; nevertheless, such a move to unity would ultimately benefit the program.

The Review Committee recommends that:

- (a) **The Horticulture Certificate Program adopt the configuration and standards set for either a vocational model or a career-technical model, but not both.**

ACTION: Horticulture Faculty; Chair, Agriculture-Related Programs, in consultation with Dean, Sciences and Health Sciences and V.P., Instruction and Student Services

2. PROGRAM INTEGRATION:

Interviews with part-time and service faculty identified a lack of integration with the core program and a lack of support and guidance from the full-time Horticulture instructors. This lack of integration may be a contributing factor to the student dissatisfaction with the service courses and those taught by part-time faculty (English, Soils, etc.). Scrutiny of the program's course outlines, however, reveals opportunities for several crossover projects.

- HORT 163 (Landscaping) and HORT 180 (Practical) both contain components in cost-estimating, which, with some juggling of schedules, could become the "hands-on" for the three weeks of bids and proposals taught in ENGL 130/131 and be incorporated into a written assignment on proposals and estimates.
- The three-day Pesticide unit (which, incidentally, should be offered during the February Reading Break to avoid disruption of service classes) could be linked to the Pesticide Use Permit application and advertisement lesson offered in ENGL 131 (Communications 2)
- HORT 154 (Soils) is, on the admission of faculty who have taught it, badly in need of re-design, but has never received the attention it deserves because it has been staffed mainly by part-time faculty who are neither paid for nor have the incentive to engage in redesigning the course. The leadership here should come from the full-time instructors.
- Complaints about the teaching skills of part-time faculty might be allayed if the full-time instructors took a more conscious role-modeling approach in mentoring part-time faculty and assisting them in improving their instructional skills.

The Review Committee recommends that:

- (b) **The Horticulture Program Coordinator provide adequate guidance and supervision to service and part-time faculty and facilitate the integration of their courses with the core courses and learning outcomes of the program.**

ACTION: Horticulture Program Coordinator

- (c) **The Horticulture Program Coordinator and the Chair, Agriculture-Related Programs, provide systematic support and guidance to part-time faculty regarding teaching methods and classroom management.**

ACTION: Horticulture Program Coordinator and Chair, Agriculture-Related Programs

3. CURRICULAR RE-ORGANIZATION:

Clearly, the format of program organization and delivery will determine curricular configurations. If the program moves back to its vocational roots, the format will be modular, with classroom theory integrated with hands-on practice for each unit of learning. If the principle of organization is career/technical, curriculum will have to be organized into vectored courses, each containing lecture time and laboratory time. But whatever the format, components of the program require re-organization.

HORT 170 and 180 (Practicals)

According to course outlines, the Practical activities courses, HORT 170 and 180 are very broad and do not demonstrate a clear link with the core courses in the program and their learning outcomes.

The review committee recommends that:

- (d) **The Practical courses HORT 170 and 180 be broken down into laboratory or field components linked to each theoretical component and to its learning outcomes. A basis for re-organization into discrete courses may be found in the Course Content sections of the two existing course outlines: on p. 3 in the HORT 170 and pp. 3-4 in the HORT 180 course lines.**

ACTION: Horticulture Program Coordinator and Chair, Agriculture-Related Programs

HORT 154 (Soil Science)

Faculty suggest that this course requires re-design so that laboratory and field components are added to it. Two hours of lecture per week are insufficient to cover the material. The Review Committee recommends that:

- (e) **HORT 154 be re-designed to include laboratory and field components to complement the lecture time.**

ACTION: Horticulture Program Coordinator and course instructor

HORT 163 (Landscaping and Drafting)

Thought should be given to introducing students to AutoCADD-Lite or LandCADD during this course to reduce the amount of repetitive hand-drafting, and given its time constraints and the fact that Certificate graduates are not expected to be designers, to set less ambitious course objectives. The Review Committee recommends that:

- (f) **Instruction in Auto CADD-Lite or LandCAAD be incorporated into HORT 163, and the course objectives be adjusted to what can be reasonably achieved in 48 hours' instruction.**

ACTION: Horticulture Program Coordinator and course instructor.

Computer Literacy:

Thought should be given to creating a short, introductory course in computer literacy, perhaps by shaving an hour from ENGL 130 (Communications 1) in the Fall Semester. The Committee recommends that:

- (g) **The Horticulture Program Coordinator consider introducing a computer literacy course into the program in the Fall Semester.**

ACTION: Horticulture Program Coordinator and ENGL 130/131 instructor

4. FACILITIES:

Currently, the Horticulture Program classroom space vies with Animal Health Technology for the most cramped learning facility on the UCC campus. Twenty-four students are shoe-horned into a classroom that was a tight fit for 20 students years ago, when the program enrolled the FTE for which it was funded, but that is now inadequate. Also, as there is no laboratory space for setting up plant identification samples, the greenhouse doubles for this function. Faculty, students and the Program Advisory Committee have identified the need for dedicated laboratory space and increased classroom space for the Horticulture program. Faculty members have drafted a proposal outlining extensions to the present Horticulture facilities (House 10) that would meet the program's needs for additional space at an estimated cost of \$240,000 (a significant savings over the construction of new facilities). The Review Committee endorses this proposal.

In addition, the Horticulture faculty have identified potential dedicated outside laboratory space for the program next to the Trades and Technology Building on the UCC campus grounds. The space is adjacent to the Ginseng Garden research grounds and the space used by Friends of the Gardens. Whether it is a covered space or not, it would allow learning projects such as landscaping and building to take place iteratively as it would be a permanent instructional site.

The Review Committee recommends that:

- (h) The proposal for extensions to House 10 be forwarded to the Vice-President, Administration and Finance for consideration.**

ACTION: Horticulture faculty, Chair of Agriculture-Related Programs and the Dean of Sciences and Health Sciences

- (i) The proposal for outside laboratory space be further investigated and implemented.**

ACTION: Horticulture faculty, Chair of Agriculture-Related Programs and the Dean of Sciences and Health Sciences

5. EQUIPMENT:

The program's landscape, audio-visual and computer equipment has become inadequate for the needs of the program. In particular, the tractor is no longer appropriate to program needs, the slide projector is in a state of permanent malfunction, and the p.c.'s need upgrading.

The Review Committee recommends that:

- (j) Corporate donations and divisional capital funds be sought for equipment replacement, particularly in the case of heavy mechanical equipment.**

ACTION: Horticulture faculty, Chair of Agriculture-Related Programs and the Dean of Sciences and Health Sciences

- (k) The Dean of Sciences and the Chair, Agriculture-Related Programs, attempt to find in their budgets sufficient funds to replace the audio-visual equipment and upgrade the p.c.'s in House 10.**

ACTION: Chair, Agriculture-Related Programs, and Dean, Sciences and Health Sciences.

6. SAFETY ISSUES:

Horticulture "shop" courses such as carpentry and small engine maintenance and repair typically assign 24 students to one instructor. Faculty teaching the use machinery and equipment in those courses expressed concerns regarding the faculty/student ratio and related safety issues. Faculty cannot effectively supervise students in such large classes and safeguard against potential accidents and injuries.

The Review Committee recommends that:

- (l) "Shop" class sizes be re-organized to comply with safety regulations.**

ACTION: Horticulture Program Coordinator, and Chair, Agriculture-Related Programs

7. PROGRAM POLICIES, PROCESSES and ADMINISTRATION:

Program policies:

The results of the review indicated that the consistent implementation of program policies regarding standards for attendance, student evaluation, appropriate behaviour and classroom management is needed. While admirable in other ways, the Horticulture Program Student Handbook is vague on items such as attendance regulations and inappropriate student behaviour, and the program's grading scheme follows neither the academic nor the vocational model.

The Review Committee recommends that:

- (m) Program policies regarding standards for attendance, student evaluation, appropriate behaviour and classroom management be reviewed and applied on a consistent basis. These policies should meet UCC policies regarding appropriate conduct (as outlined in the UCC Harassment Policies and the forthcoming Code of Student Conduct—which should be referred to), be clearly communicated to students and faculty, and their consistent application monitored regularly. Likewise, the program's grading scheme should comply with one of those approved by the UCC Education Council and accessible on the UCC Website.**

ACTION: Horticulture Program Coordinator, Faculty, and Chair, Agriculture-Related Programs

Admissions process

Faculty expressed concerns regarding the long student admission and billing process resulting in many new students joining the program just prior to the program start date in August.

The Review Committee recommends that:

- (n) A commitment fee policy be adopted for admission purposes in order to improve the efficiency of the admission process.**

Action: Horticulture Program Coordinator and Chair, Agriculture-Related Programs

Coordinator term and appraisal

As per Article 5.5.1 of the UCCFA Collective Agreement, Program Coordinators at UCC are appointed for a specified term by the relevant Dean and Vice-President of Instruction, in consultation with the Chairperson. Article 5.5.2 further states that a Chairperson may recommend that the Program Coordinator be reappointed for further consecutive terms. In addition, Article 6.3.2 outlines the annual review process for program coordinators.

The current Coordinator of the Horticulture Certificate Program has held this position for over ten years. The Program Review Committee has found no evidence that a term of appointment has been established for the Horticulture Certificate Program Coordinator and that formative review procedures have been implemented as per the guidelines set out in the UCCFA Collective Agreement. The Committee endorses the values of formative feedback and review of term of appointment and recommends that:

- (o) A term of appointment review and formative appraisal of the Horticulture Program Coordinator be implemented as per the UCCFA Collective agreement.**

ACTION: Chair, Agriculture-Related Programs, Dean of Sciences and Health Sciences, and V.P. Instruction and Student Service

APPENDIX A METHODOLOGY

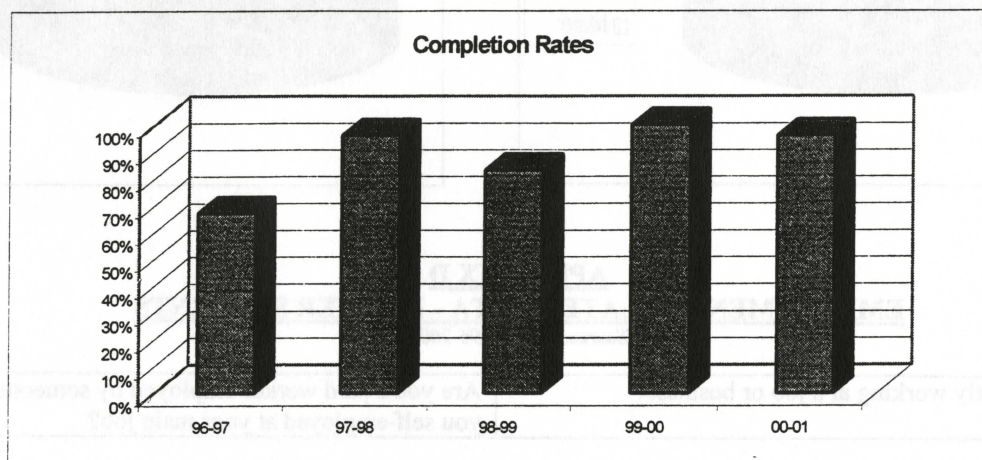
The data were collected in the following ways:

- 1) Consultation took place with members of the Horticulture Certificate Program on the design of the surveys.
- 2) Surveys were administered to Horticulture Certificate Program faculty, former and current students, employers, and Program Advisory Committee members. All data were processed using SPSS to achieve frequency rates and mean responses. Subjective comments for each group were recorded separately and anonymously. Former student data from 1996-2000 graduates of the program was summarized from Student Outcomes Reporting System (SORS) data, as provided by the Centre For Education Information (CEISS).
- 3) "Descriptive Data" on the Horticulture Certificate Program's objectives, course outlines, etc., were solicited from Ernest Phillips, Coordinator, Horticulture Certificate Program.
- 4) Data on enrolments, graduation rates, gender ratios and grade distributions were provided by the Office of Institutional Research and Planning.
- 5) The following people associated with the program participated in the review process or were interviewed:
 - Dawn Helin, former Lab Demo, Horticulture
 - Dan Hines, Horticulture part-time faculty member
 - Dennis Morin, Carpentry faculty member
 - Bronwen Scott, English faculty member
 - Dr. David Sedgman, Chair, Agricultural-Related Sciences
 - Matt Skelly, Marine, Inboard/Outboard Marine & Outdoor Power Equip. faculty member
 - Bruce Zidar, Horticulture part-time faculty member
 - Two Current Horticulture Students

APPENDIX B HORTICULTURE PROGRAM COMPLETION RATES

(Source: UCC Admissions and UCC Convocation Guides 1997-2000)

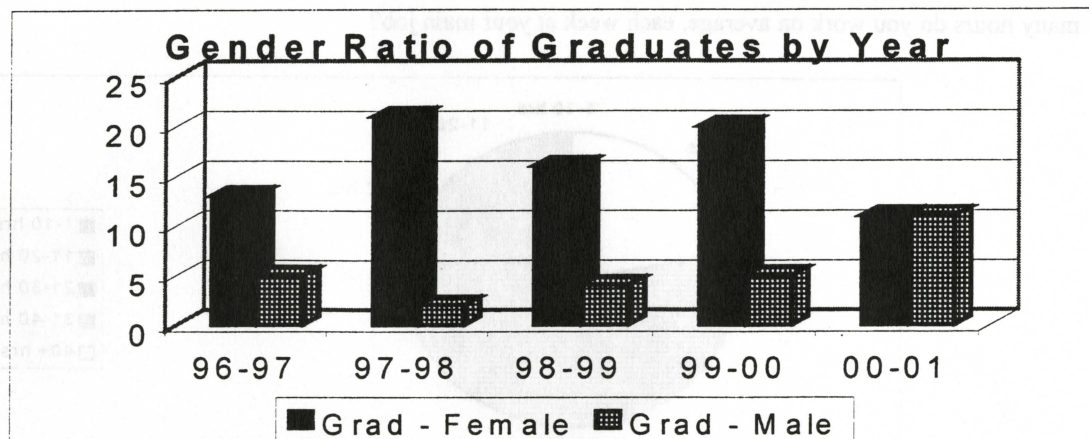
	<u>1996-97</u>	<u>1997-98</u>	<u>1998-99</u>	<u>1999-00</u>	<u>2000-01</u>
Enrolled	27	24	24	25	23
Completed	18	23	20	25	22
Completion Rate	67%	96%	83%	100%	96%



APPENDIX C GENDER RATIO OF HORTICULTURE PROGRAM GRADUATES

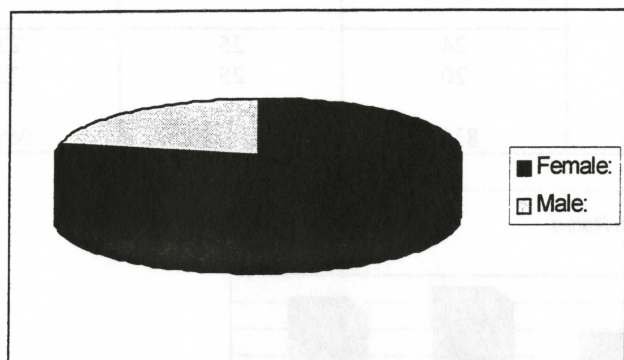
(Source: UCC Admissions and UCC Convocation Guides 1997-2000)

	PROGRAM INTAKE		PROGRAM GRADUATION	
	Female	Male	Female	Male
1996-1997	18	9	13	5
1997-1998	21	3	21	2
1998-1999	19	5	16	4
1999-2000	21	4	20	5
2000-2001	12	11	11	11



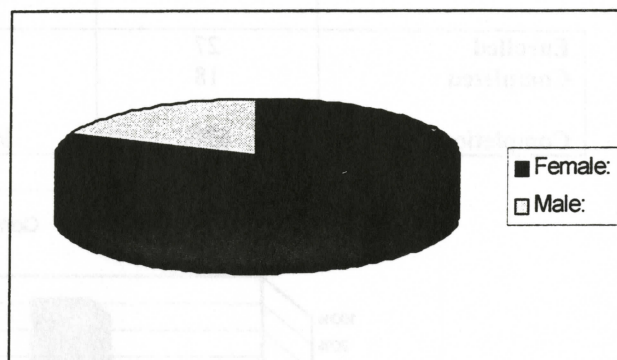
1996-2000 Program Intake

Female:	79%
Male:	21%
Total:	100%



1996-2000 Program Graduates

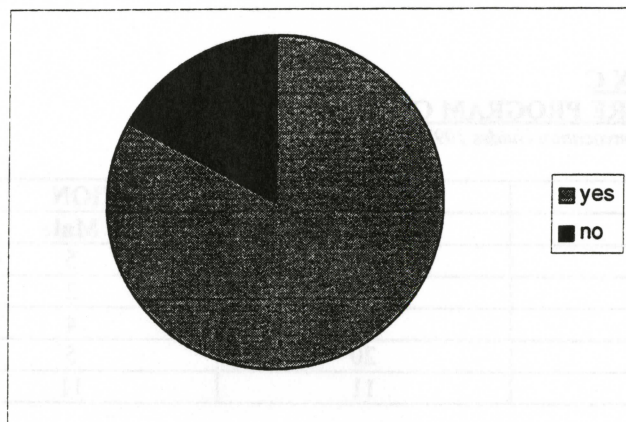
Female:	81%
Male:	19%
Total:	100%



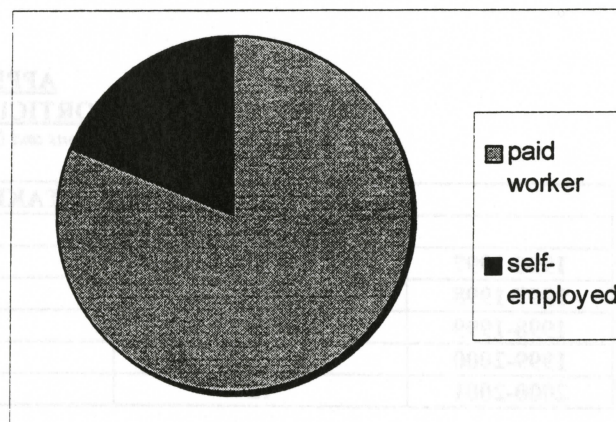
APPENDIX D **EMPLOYMENT RELATED DATA - FORMER STUDENTS**

(Source: SORS 1996-2000)

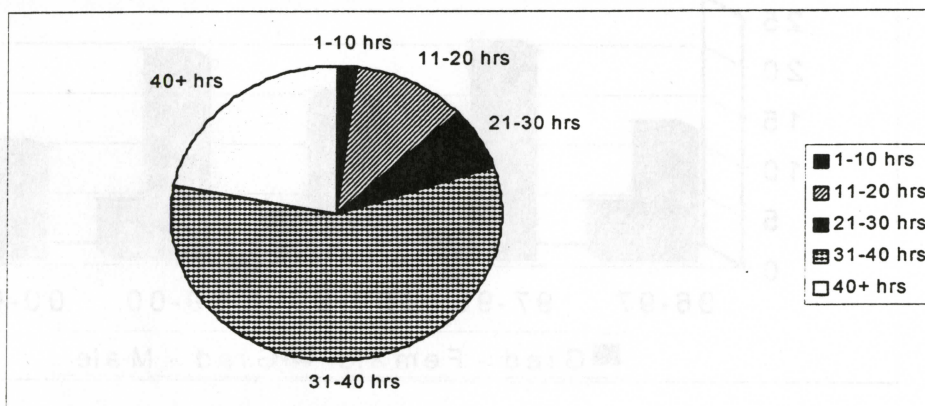
Are you currently working at a job or business?



Are you a paid worker employed by someone else or are you self-employed at your main job?



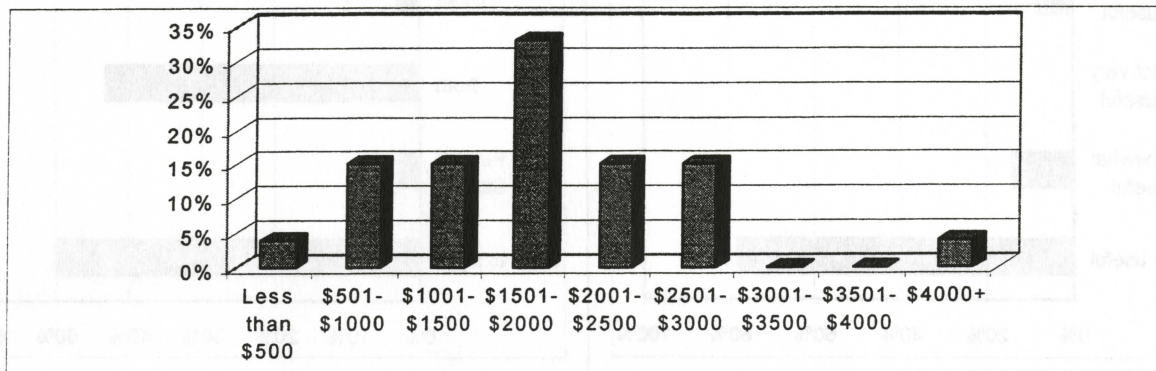
How many hours do you work on average, each week at your main job?



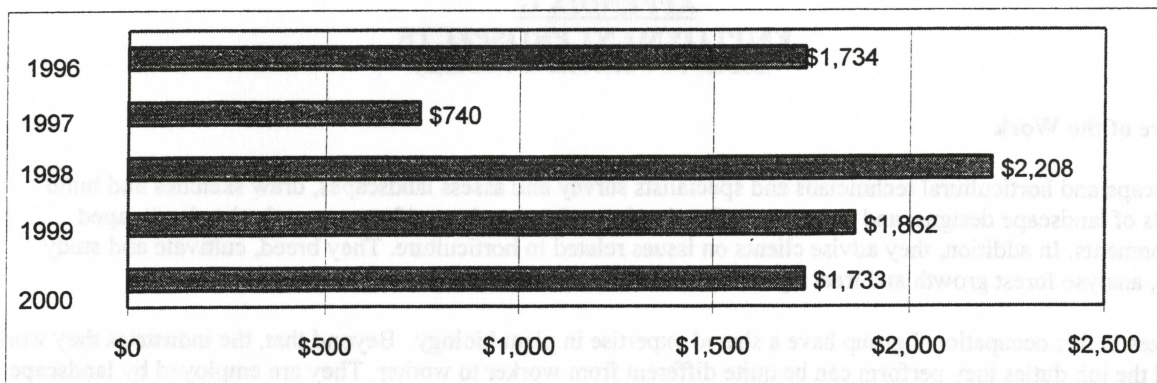
APPENDIX E SALARIES OF FORMER STUDENTS

(Source: SORS 1996-2000)

What is your gross monthly salary from your main jobs before deductions?



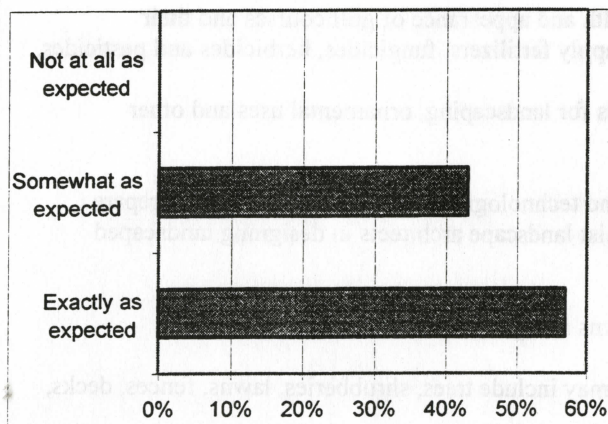
Median Monthly Salary



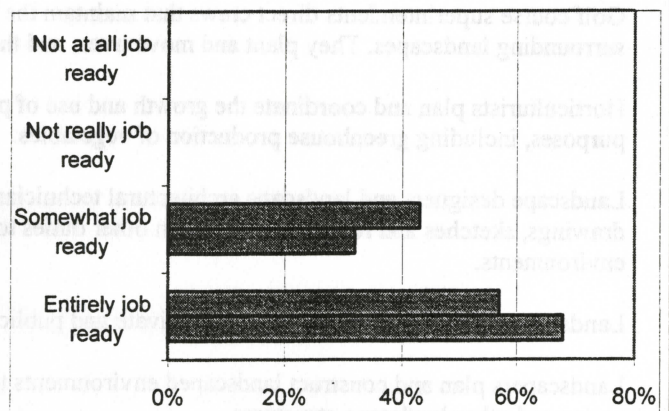
APPENDIX F RELEVANCE OF EDUCATION - FORMER STUDENTS

(Source: SORS 1996-2000)

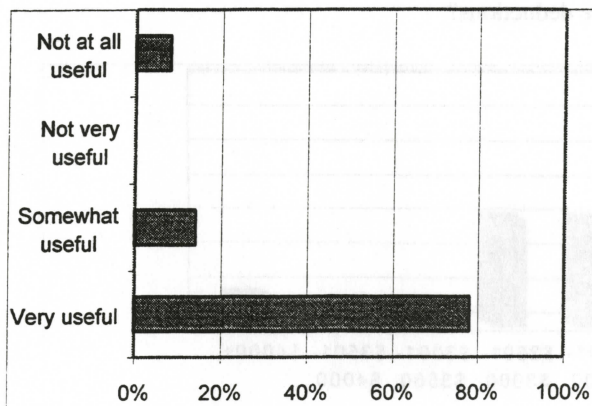
To what extent is your work in your main job what your training led you to expect?



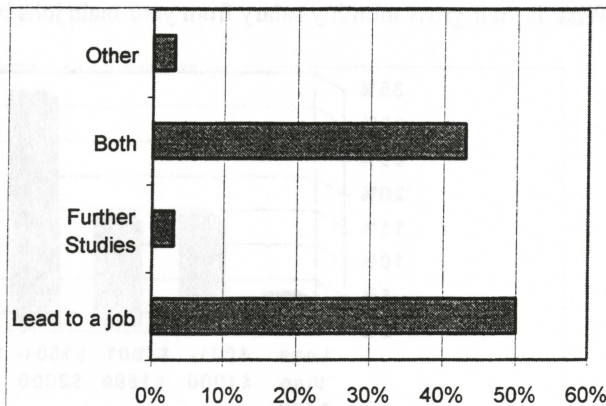
How "job ready" were you after leaving our institution?



How useful was your education at our institution in getting your main job?



Was the program at our institution intended to lead to a job, or prepare you for further studies?



APPENDIX G

EMPLOYMENT PROSPECTS

(Source: BC WORK Futures, NOC 2225)

Nature of the Work

Landscape and horticultural technicians and specialists survey and assess landscapes, draw sketches and build models of landscape designs, and construct and maintain gardens, parks, golf courses and other landscaped environments. In addition, they advise clients on issues related to horticulture. They breed, cultivate and study plants, analyse forest growth and treat injured and diseased trees and plants.

Workers in this occupational group have a shared expertise in plant biology. Beyond that, the industries they work in and the job duties they perform can be quite different from worker to worker. They are employed by landscape designers and contractors, lawn service and tree care establishments, golf courses, nurseries and greenhouses, and municipal, provincial and national parks, or they may be self-employed.

Main Duties

Arborists and tree service technicians examine trees and shrubs to diagnose problems and disease, and apply various treatments, such as pruning, spraying, repairing damaged areas and injecting with treatment solution. Certified arborists also have an excellent understanding of the delicate soil and water relationships that affect plant health.

Golf course superintendents direct crews that maintain the health and appearance of golf courses and their surrounding landscapes. They plant and move trees, and they apply fertilizers, fungicides, herbicides and pesticides.

Horticulturists plan and coordinate the growth and use of plants for landscaping, ornamental uses and other purposes, including greenhouse production of vegetables.

Landscape designers and landscape architectural technicians and technologists survey and assess sites, prepare drawings, sketches and reports, and perform other duties to assist landscape architects in designing landscaped environments.

Landscape gardeners plant and maintain private and public lawns and gardens.

Landscapers plan and construct landscaped environments that may include trees, shrubberies, lawns, fences, decks, patios and other landscape structures.

Lawn care specialists visit clients, assess the health of lawns, and apply fertilizer, pesticides and other lawn care products.

Working Conditions

The annual average earnings for all landscape and horticultural technicians and specialists in 1995 were \$21,500, 23% below the all-occupation average of \$27,900. Only 32% of the workers were employed full time for the full year, compared to 47% for the workforce as a whole. A high proportion of seasonal work contributes to the lower level of the average annual earnings. Those who did work full time, full year in 1995 earned on average \$33,000, which is still 16% below the provincial average of \$39,400. According to a survey of recent college graduates, new entrants to these occupations earned an average of \$2000 per month (\$24,000 per year).

There were about 2,480 workers employed in this group as of 1998, only slightly less than the 2,550 who worked in 1990. Self-employment, at 35%, is more than double the provincial self-employment average of 15%. At 23%, the level of part-time work for this group is just below the all-occupation average (26%). The unemployment rate is lower than the average for all occupations.

Landscape and horticultural technicians and specialists are mainly employed in construction (71%), in local government (5%), in agriculture (7%) and in amusement and recreational services (5%). Most workers are located in the Lower Mainland (56%) and on Vancouver Island (23%). These proportions are close to those representing the total workforce. However, with 19% of the workers, the Okanagan/Kootenay region is slightly over-represented, and with 2% of the workers, Northern B.C. is underrepresented.

There are fewer women (28%) in this group than in other occupations. Only 17% of the women are employed full time, full year, and they earn about 24% less than their male counterparts. This tends to be a part-time occupation for women. About 43% of the women work part time, compared to 17% for the men.

While the age distribution tends to follow that for all occupations, there are more workers aged 35 to 44 (36%) compared to the workforce as a whole (28%). The average age for landscape and horticulture technicians and specialists is 38.

Employment Prospects

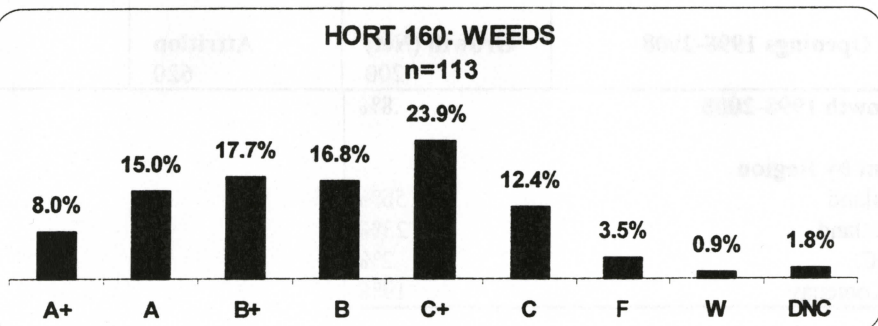
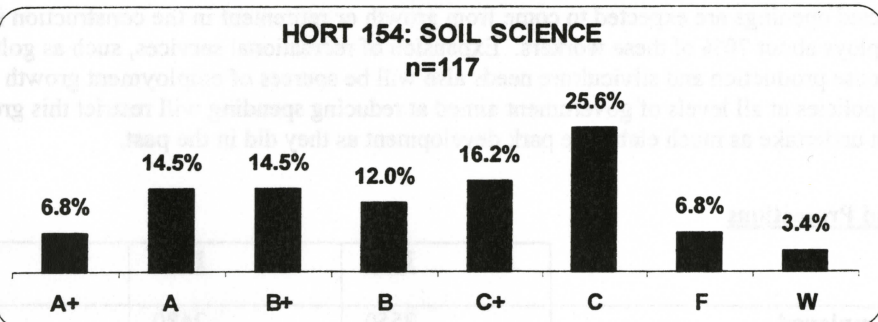
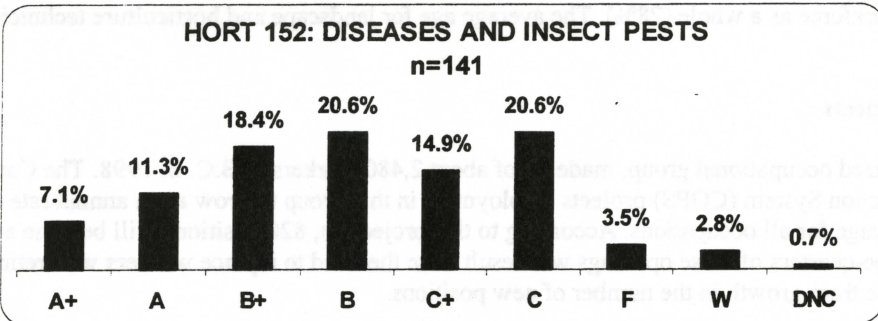
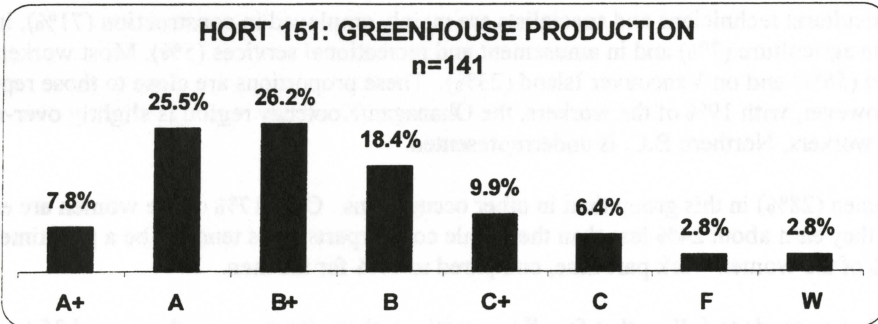
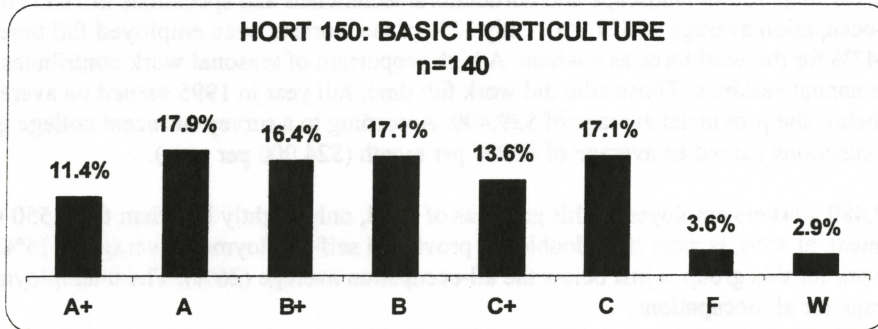
This is a medium-sized occupational group, made up of about 2,480 workers in B.C. in 1998. The Canadian Occupational Projection System (COPS) projects employment in this group to grow at an annual rate of 0.8%, slower than the average for all occupations. According to this projection, 820 positions will become available from 1998 to 2008. Three-quarters of these openings will result from the need to replace workers who retire. The remainder will come from growth in the number of new positions.

Most of these projected openings are expected to come from growth or retirement in the construction industry, which currently employs about 70% of these workers. Expansion of recreational services, such as golf courses, and the growing greenhouse production and silviculture needs also will be sources of employment growth for these workers. However, policies at all levels of government aimed at reducing spending will restrict this growth. Governments do not undertake as much elaborate park development as they did in the past.

Trends and Projections

	<u>1990</u>	<u>1998</u>	<u>2008</u>
Number Employed	2550	2480	2680
Estimated Openings 1998-2008	Growth (Net) 200	Attrition 620	Total 820
Annual Growth 1998-2008	.8%		
Employment by Region			
Lower Mainland	56%		
Vancouver Island	23%		
Northern B.C.	2%		
Okanagan/Kootenay	19%		

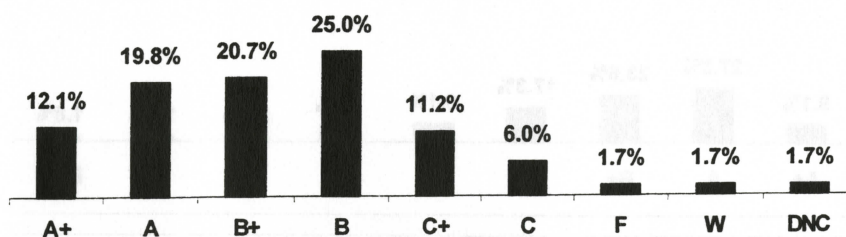
APPENDIX H
GRADE DISTRIBUTIONS: 95/FA - 00/FA



GRADE DISTRIBUTIONS: 95/FA – 00/FA

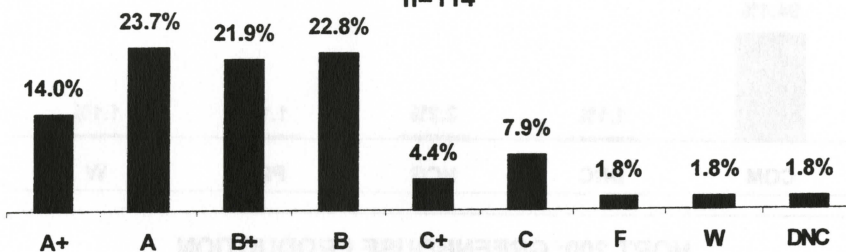
HORT 161: NUSERY PRODUCTION AND RETAILING

n=116



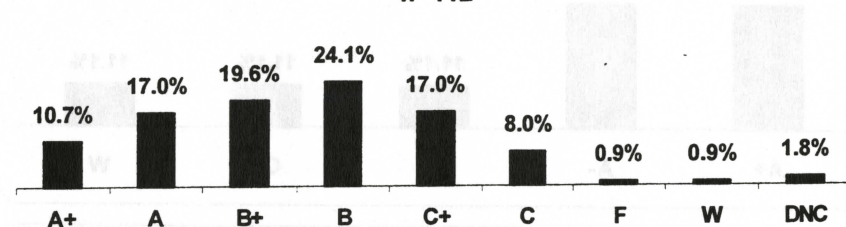
HORT 162: FRUIT AND VEGETABLE PRODUCTION

n=114



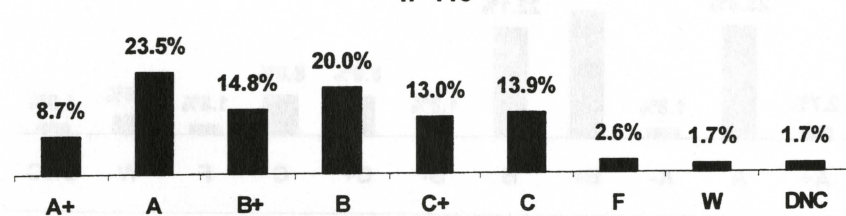
HORT 163: LANDSCAPING

n=112



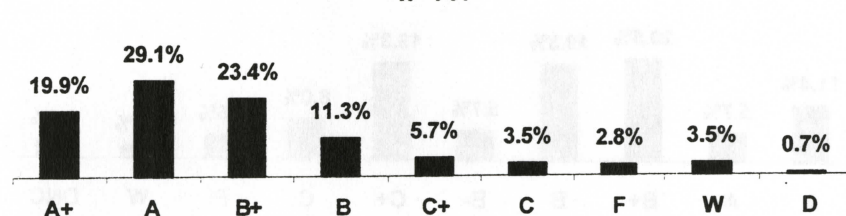
HORT 164: TURFGRASS MANAGEMENT

n=115



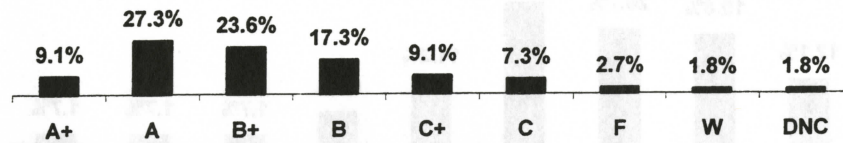
HORT 170: HORTICULTURE PRACTICAL

n=141

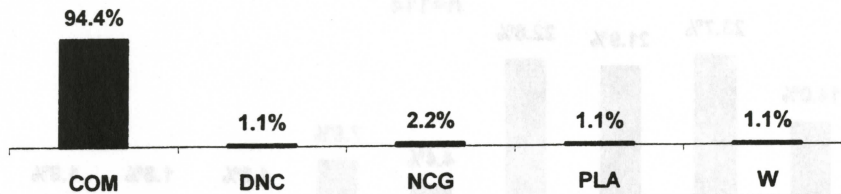


GRADE DISTRIBUTIONS: 95/FA – 00/FA

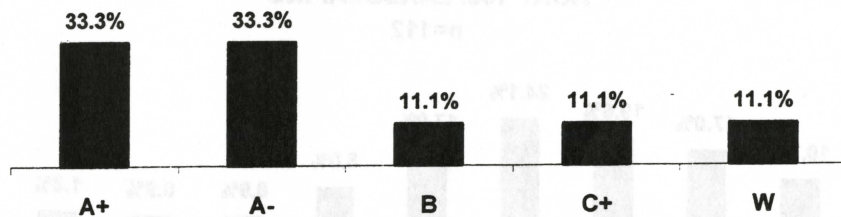
HORT 180: HORTICULTURE PRACTICAL
n=110



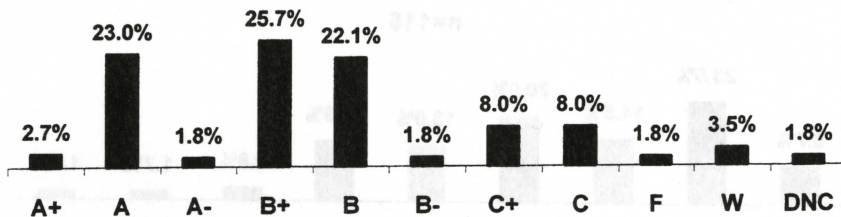
HORT 190: HORTICULTURE PRACTICUM
n=90



HORT 200: GREENHOUSE PRODUCTION
n=9



ENGL 130: COMMUNICATIONS ENGLISH I
n=113



ENGL 131: COMMUNICATIONS ENGLISH II
n=88

