

Company, Chicago, Illinois, 1964.

Hall, Edward T., *The Silent Language*, Faucett Publications, Inc., Greenwich, Conn., 1959.

Rogers, Everett M., *Diffusion of Innovations*, The Free Press of Glencoe, The Crowell-Collier Publishing Co., New York, 1962.

INTERNATIONAL AGENCIES PROVIDING TECHNICAL AND/OR FINANCIAL SUPPORT TO COUNTRIES FOR SOCIAL OR ECONOMICAL DEVELOPMENT¹

1. The Economic Commission for Asia and the Far East (ECAFE), Bangkok, Thailand.
2. The United Nations Development Program (UNDP), New York, U.S.A.
3. The Food and Agriculture Organization (FAO), Rome, Italy.
4. The International Labor Organization (ILO), Geneva, Switzerland.
5. The United Nations Educational, Scientific, and Cultural Organization (UNESCO), Paris, France.
6. The United Nations Children's Fund (UNICEF), New York, U.S.A.
7. The World Health Organization (WHO), Geneva, Switzerland.

8. The International Bank for Reconstruction and Development (World Bank), Washington, D.C., U.S.A.
9. The World Food Program (WFP), a joint organ of UN and FAO, Rome, Italy.
10. The Agency for International Development (AID), Washington, D.C., U.S.A.
11. The Ford Foundation, New York, U.S.A.
12. The Rockefeller Foundation, New York, U.S.A.
13. The Agricultural Development Council, Inc., New York, U.S.A.
14. The Asia Foundation, San Francisco, California, U.S.A.
15. The International Committee of Mass Education Movement, Inc., New York, U.S.A.
16. The Overseas Technical Cooperation Association (OTCA), Tokyo, Japan.

¹ CHI-WEN CHANG, *Rural Asia Marches Forward — Focus on Rural and Agricultural Development* (Philippines: UPCA Textbook Board, 1969).

FRESHMEN AT GUELPH: A Profile of the 1969 Freshmen Class at the University of Guelph

D. J. Blackburn and G. M. Jenkinson

What is the background of students entering university today? How do agricultural science students differ from students in other academic programs? How do students differ in relation to their academic program?

In an effort to answer these questions a survey of freshmen students who enrolled in Arts, Science, Household Science and Agricultural Science at Guelph was conducted by the Department of Extension Education in November 1969. Each academic program requires the successful completion of 13 academic years in public and secondary school in Ontario (or equivalent) for admission.

The surveyed students were selected at random and comprised approximately 16 percent of the freshmen students who had completed grade 13 in Ontario in 1969. A response rate of 96 percent yielded 156 completed interview schedules.

Some of the students entering the B.Sc. (Agr.) or B.Sc. programs at the U of G do so in preparation for admission to veterinary medicine. Nine (or slightly more than one-quarter)

PREFACE

The Ontario Agricultural College of the University of Guelph has sole responsibility in the Province of Ontario for the formal university education of undergraduate students in agricultural science.

The OAC, OVC, (veterinary medicine) and MacDonald Institute (household science) were administered financially by the Ontario Department of Agriculture and academically by the University of Toronto until 1965. The OAC was founded in 1874 as the Ontario School of Agriculture, MacDonald Institute was founded in 1903 and the OVC located on the Guelph Campus in 1922. In 1965 the University of Guelph was established and academic programs in Arts, Science, Physical Education and Landscape Architecture were developed.

In 1965, total student enrollment was approximately 1500. By the fall of 1969 the number of students had risen to 5763 reflecting the development of new academic programs. Of this group, the OAC is administratively responsible for 967 B.Sc. (Agr.) students, 159 engineering students, 53 students in landscape architecture, 266 diploma in agriculture students — a total of 1445 undergraduates. In addition, more than 300 graduate students are enrolled in the various departments of the OAC.

NOTE: There are slightly more than 7 million persons residing in Ontario. Approximately 100,000 students are enrolled in the provincially supported universities (14).

of the 34 B.Sc. (Agr.) respondents and one of the 33 B.Sc. respondents in the survey indicated their intention to enter the D.V.M. program.

Demographic Characteristics of Freshmen

The sex distribution of students by academic program, as shown in Table 1, indicates the usual situation of no males in Household Science, more females than males in Arts and a high proportion of males in the science programs.

TABLE 1
DISTRIBUTION OF FIRST SEMESTER STUDENTS
ACCORDING TO PROGRAM AND SEX

Sex	Program				Total
	Agricultural Science	Arts	Science	Household Science	
Male	82%	41%	91%	0%	55%
Female	18	59	9	100	45
Total	100%	100%	100%	100%	100%
Number of Students	34	69	33	20	156

Data in Table 2 show that the B.Sc. (Agr.) and B.H.Sc. programs have the highest proportion of rural reared students.¹ This result was not unexpected. However, the proportion of students from rural areas entering agricultural science at Guelph has declined in recent years with a concomitant increase in the proportion of urban students. In 1941 there were 178,204 (census) farms in Ontario; in 1966 the number of (census) farms had declined to 109,887. It is essential that Colleges of Agriculture attract an increased number of urban high school graduates in light of the presently declining farm population if present enrollment levels are to be maintained or increased.

There is no apparent difference between programs in the size of high school attended by the freshmen. One might expect that rural reared students would go to smaller high schools. However, the recent school consolidation program in Ontario has likely

offset this expectation.

Home locations of students entering the B.Sc. (Agr.) and B.H.Sc. programs were more uniformly distributed over the province compared to students in Arts and Science. Inasmuch as no other university in Ontario offers similar programs, this finding was anticipated. Whitworth (1964) reported that students enrolled in Arts and Science programs tend to enroll at universities close to their home.

The proportion of Arts students (30%) from a farm or rural background is noteworthy. The corresponding figure at other Ontario universities is of the order of five percent. The large proportion of rural-reared Art students at Guelph might be explained as follows:

1. Rural students are more likely to have had contact with the U of G through participation in 4-H programs.

2. Their parents have had contact with the campus through agricultural extension programs of the O.A.C. and the Ontario Department of Agriculture & Food.

3. The "rural atmosphere" of the Guelph campus is welcomed by the rural high school students as compared to other (larger) universities located in the heart of large urban centres.

4. They are sons or daughters of alumni, many of whom live in a rural community.

The foregoing speculations might suggest that a similar proportion of the B.Sc. students would have a rural background; however, only 18 percent of the B.Sc. students were reared in rural areas. This lower figure may be explained in part by the increased emphasis in recruitment of the scientific aspects of the B.Sc. (Agr.) program. The recruitment program in agricultural science in recent years has stressed the basic scientific aspects of the curriculum and their application to the agriculture and food system.

There are no major differences in the age distribution of the students between the various programs within the University of Guelph and with other universities in Ontario. The students entering the B.H.Sc. program are younger than students in the other programs. Lyle and Ellis (1962) found that female high school students in the same grade are younger than their male counterparts; in grade 13, women are five to six months younger than men. The students' grade 13 average is highest in the B.H.Sc. program — a result of the restricted enrollment relative to the high number of qualified applicants seeking admission.

The fathers of the B.Sc. (Agr.) students in the survey tended to have a slightly lower educational attainment than in other programs. More of the B.Sc. (Agr.) students' fathers are farmers and fewer are engaged in professional or technical types of employment as compared to fathers of students in the other academic programs. A greater proportion of the fathers of B.H.Sc. students completed university. Similarly, a greater proportion are employed as managers, officials or proprietors.

It is interesting to compare the distribution of the home background of the students and the stated type of employment of the father as shown in Table 2. The combined distributions are as follows:

Percentage of Students	B.Sc. (Agr.)	B.A.	B.Sc.	B.H.Sc.
Raised in rural areas	56%	30%	18%	40%
Whose fathers are farmers	38%	14%	12%	15%

The data suggest that there are a substantial number of rural reared students whose fathers do not derive their (main source of) income from farming.

The average income of the parents of the B.Sc. (Agr.) students tends to be lower than that of the parents of students in Arts and Science: a slightly larger proportion of students in Household Science come from higher income families. A separate analysis of data comparing family income with home background of respondents showed that the family income of urban students is significantly higher than that of rural students' families.

General Attitudes of Freshmen About University

In addition to the physical characteristics of the freshmen class, their general attitudes about university and their own future employment plans as shown in Table 3 are of interest.

TABLE 2
DISTRIBUTION OF FIRST SEMESTER STUDENTS
ACCORDING TO PROGRAM AND DEMOGRAPHIC
CHARACTERISTICS

Demographic Factors	Program				Total Number (N=156)
	B.Sc. (Agr.) (N=34)	B.A. (N=69)	B.Sc. (N=33)	B.H.Sc. (N=20)	
Home Background					
- farm and/or country	56%	30%	18%	40%	54
- town less than 5,000 population	3	12	18	5	16
- community 5,000 - 20,000	6	10	18	10	17
- community 20,000 - 100,000	18	32	28	20	41
- community over 100,000	17	16	18	25	28
	100%	100%	100%	100%	156
Size of High School					
Number of Students					
0 - 499	15%	13%	6%	15%	19
500 - 999	26	35	21	30	46
1000 - 1999	50	45	67	55	81
2000 - and over	9	7	6	-	10
	100%	100%	100%	100%	156
Age in November 1969					
- 18 or less	20%	23%	21%	50%	40
- 19	56	54	40	50	79
- 20	21	17	27	-	28
- 21 and over	3	6	12	-	9
	100%	100%	100%	100%	156
Father's Education					
- grade 8 or less	29%	19%	24%	20%	35
- high school not completed	41	39	46	15	59
- completed high school	12	16	9	20	21
- university not completed	-	5	9	5	8
- completed university	9	13	3	35	20
- post-graduate training	-	1	6	5	4
- don't know	9	7	3	-	9
	100%	100%	100%	100%	156
Father's Occupation					
- professional and/or technical	6%	14%	12%	20%	20
- managers, officials, proprietors	26	28	21	45	44
- skilled craftsmen	11	13	21	-	20
- semi-skilled	2	12	12	20	17
- labourers	8	7	9	-	9
- clerical, sales	8	6	6	-	9
- farmers	38	14	12	15	30
- don't know	1	6	7	-	7
	100%	100%	100%	100%	156
Net Family Income 1968					
0 - \$ 3,999	18%	7%	3%	5%	13
\$4,000 - 7,999	24	26	21	10	35
8,000 - 14,999	35	41	55	60	70
over \$15,000	17	23	15	15	30
unknown	6	3	6	10	8
	100%	100%	100%	100%	156
County of Origin 1969 (a)					
- Southern Ontario	26%	22%	21%	30%	37
- Western Ontario	27	47	30	35	58
- Central Ontario	26	19	34	15	36
- Eastern Ontario	18	8	3	20	16
- Northern Ontario	3	4	12	-	9
	100%	100%	100%	100%	156

(a) The University of Guelph is located in the region designated as Western Ontario; however, the Southern and Central regions are within a 100 mile radius of the campus and are densely populated areas of the province.

Data show a similar distribution of students in each of the four academic programs according to their views on the main purpose of a university. Likewise, respondents' purpose for attending the University of Guelph do not vary greatly between programs. One might have expected Arts students to be far less career oriented and more interested in education as a means of broadening their personal knowledge and facilitating their personal development. It may be that generally anticipated differences between Arts students and Science students develop dur-

TABLE 3
DISTRIBUTION OF FIRST SEMESTER STUDENTS
ACCORDING TO PROGRAM AND GENERAL ATTITUDES

Attitudes	Program				Total Number (N=156)
	B.Sc. (Agr.) (N=34)	B.A. (N=69)	B.Sc. (N=33)	B.H.Sc. (N=20)	
Students' View as to the Main Purpose of a University					
Educate for society needs	26%	22%	30%	25%	39
Train students for careers	18	15	15	20	25
Facilitate the self-development of student	32	30	31	40	50
Broaden personal knowledge	21	30	24	5	37
Other	-	2	-	5	2
Don't know	3	1	-	5	3
	100%	100%	100%	100%	156
Student's Main Purpose in Attending the U of G					
To train for a career	35%	23%	31%	20%	42
To get a degree	38	36	30	35	55
To broaden personal knowledge	24	29	21	45	44
Other	3	8	9	-	9
Don't know	-	4	9	-	6
	100%	100%	100%	100%	156
Highest Degree Students Expect to Earn					
B.Sc. (Agr.)	53%	-%	-%	-%	18
B.A.	-	84	3	5	60
B.Sc.	9	-	58	-	22
B.H.Sc.	-	-	-	90	18
D.V.M.	26	-	3	-	10
M.Sc./M.A.	9	9	18	-	15
Ph.D.	3	3	9	5	6
Other	-	4	9	-	7
	100%	100%	100%	100%	156
Future Permanent Employment of Students					
Federal Government	3%	6%	3%	-%	6
Agriculture (including Vet. Med.)	44	1	9	-	19
Science	5	-	21	-	9
Medicine and Dietician	-	-	9	20	7
Social Work	-	10	3	15	11
Business	8	6	3	20	12
Education, Teaching	2	58	22	30	54
Other	9	6	-	5	7
Don't know	29	13	30	10	31
	100%	100%	100%	100%	156

ing their years on campus and are in fact a reflection of the university environment rather than a personal characteristic!

The majority of the surveyed students plan to terminate their education when they complete the program in which they are registered. Those who have indicated an intention to complete a baccalaureate degree other than that in which they are registered may intend to transfer to that program at some time in the future. A more logical explanation for this apparent interest in other programs may be due to the inability of these students to correctly identify the program in which they are registered. Nine of the 100 respondents interested in the D.V.M. program are registered in the B.Sc. (Agr.) program to complete the admission requirements to veterinary medicine. A total of 21 students (14%) plan to undertake graduate work; the B.Sc. program is the program with the largest proportion of students interested in graduate work.

Students were also asked to generally indicate the future permanent employment that they might enter upon graduation. The largest single area indicated is teaching, although only one respondent in the B.Sc. (Agr.) program is interested in that occupation. Approximately 20 percent of the students didn't know what future employment field they wished to enter. Categories overlapped somewhat in this area thus making data interpretation more difficult. For example, 44 percent of the B.Sc. (Agr.) students expect to be employed in agriculture and in so doing may be employed by the Federal Government or in (agri) business. It is often stated that students in science and agricultural science have a more definite idea of their future employment than do Arts students. Data in Table 3 do not support this view.

Although differences in the geographic background and the education and occupation of the fathers of B.Sc. (Agr.) respondents are evident, there are not substantial differences in the general purpose for attending university among respondents in the various academic programs. The authors anticipated larger differences than found in the study. The similarity in attitudes may be a reflection of the increasing number of B.Sc. (Agr.) students from urban areas and a relatively large proportion of rural-reared students in Arts and Science as compared to other universities.

REFERENCES

- Lyle, P. M., Ellis, M. D. Some Changes in Age - Grade Distribution in Ontario During the Quarter Century 1936 - 1961. *Ont. J. Ed. Res.* 5:1, (1962)
Whitworth, F. E. Student Investment in Higher Education. *Ont. J. Ed. Res.* 6:2 (1964)

¹ Rural reared students are defined as students who were raised on farms or lived in communities of less than 1000 population.

FRESHMEN AT GUELPH: Students in Agricultural Science – What Influenced Them to Enroll?

Many universities are actively engaged in informational programs in order to communicate with high school students regarding academic programs. Prior to 1965, separate programs were conducted on a modest scale by each of the colleges (O.A.C., O.V.C., MacDonald Institute). With the formation of the University of Guelph (1965) a formalized informational program was originated and developed through the Registrar's Office of the University.

The program conducted by the Registrar's Office is designed to communicate general information regarding the University of Guelph to high school students and guidance teachers. Personnel of the Registrar's Office regularly visit high schools to discuss academic programs and to make presentations to students and parents at university information sessions. New academic programs in Arts, Science, Physical Education and Landscape Architecture were established in 1965. A trimester system and an early admission program (admission in April of the student's grade 13 year prior to high school graduation) were also initiated. As a result, discussion with high school students and teachers tended to focus on these developments and did not deal to any great extent with the specific course of study of the B.Sc.

(Agr.) program.

During the early 1960's the student enrollment in the B.Sc. (Agr.) degree program was below a desired level and, as a result, many employment opportunities for agricultural science graduates were not filled. This situation, together with the need to supplement the informational service of the Registrar's Office, led to the development of a student recruitment program in the O.A.C.

The O.A.C. recruitment program endeavoured to emphasize the scientific aspects of agriculture in contrast to the popular view that agriculture is synonymous with farming. Alumni of the College, professional agronomists, faculty and students participated in the program. A publication written for high school students emphasizing the scientific aspects of the B.Sc. (Agr.) program was published and is currently being revised and updated every 18 months. A scholarship program was introduced by the O.A.C. Alumni Foundation in 1960. Co-operative programs with the Extension Branch of the Ontario Department of Agriculture and Food were developed for 4-H members who were invited to the campus for 2-3 day seminars. Alumni of the College visited high school students interested in agricultural science to discuss