



# 1978-86 Canadian Enrollment In Facilities of Agriculture

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Coincidentally, the Association of Faculties of Agriculture in Canada (AFAC) and the Resident Instruction Committee on Policy (RICOP) of the colleges of agriculture at state universities and land grant colleges in the United States began collecting enrollment data in 1978. Student enrollment in agriculture in North America rose rapidly in the 1972-1976 period, due primarily to the higher commodity prices created by the massive grain exports in 1972-73, and the increasing participation rate of female students. By 1978 there was some uneasiness in relation to future enrollment and some colleges began to experience alarming declines. Data collection systems were developed to provide annual records of changing enrollment patterns; enrollment levels have been reported annually since 1979.

This report is provided to compare and contrast the Canadian situation to that of the United States and provides a continuing report of Canadian enrollment. Previous issues of the *NACTA Journal* carry earlier versions of this annual report.

## Canadian Enrollment

### (a) Undergraduate

The AFAC data collection program, which commenced in 1978, was first reported in the *NACTA Journal* in 1981 (1). The data base categories have been revised recently and the data included in this report are for the years 1984 to 1987 inclusive with revised data from 1978 included in this report for reference purposes.

Enrollment in Canadian agricultural faculties remained steady (see Table 1) during the 1984-86 period and then declined markedly in 1987. There were notable declines at the University of Guelph and at Macdonald College where enrollment declined by 25% and 31% respectively during the 1984-87 period. There was an increase of 15% at Laval during the same period.

The proportion of female students increased from 25% in 1978 to 40% during the 1984-87 period. The portion of female students has stabilized at 40% in Canada since 1984.

Table 2 provides data on the inclusive numbers of graduates from 1978 to 1987. Similar trends are evident with a decline of 22% in the

number of graduates at Guelph and increases at Laval and NSAC. Prior to 1984, NSAC students completed their third and fourth year at Macdonald College or the University of Guelph.

Table 3 illustrates the changes in the numbers of graduates in the various areas of specialization from 1978 to 1987. There have been significant declines in Animal Science, Plant Science and in Food Science.

The publication of the AIC report "Demand and Supply Trends for Agricultural Professionals in Canada" in 1985 (2) identified Agricultural Economics, Plant Science and Food Science as areas of strongest employment demand over the next five years (1986-1990). It is expected that adjustments will occur in the distribution of enrollment amongst the various areas of study within agriculture with enrollment in Agricultural Economics eventually surpassing Animal Science and Plant Science.

### (b) Graduate

The decline in undergraduate enrollment since 1978 is in sharp contrast to the increase in the number of graduate students. Tables 4 and 5 provide enrollment and graduation data for the period 1984 to 1987. Enrollment increased 11% at the M.Sc. level and 12% at the Ph.D. level in the last three years in response to projected shortages of agricultural researchers. Grave concern for the "Ph.D. shortage" in Canada in agriculture was expressed in 1981 and again in 1982. AFAC published a report in 1981 (3) which projected a distinct shortage of Ph.D. graduates in Canada. The response of students has more than doubled in the number of Ph.D. graduates in Canada in the past three years. Less dramatic, but sizable increases have occurred in the number of graduates at the M.Sc. level. The Vancouver Forum (4) projected an annual requirement of 150 Ph.D. graduates as being an appropriate estimate of the needs in Canada. Since 1984 the number of Ph.D. graduates has increased from 55 to 124 students annually.

## Summary

There has been a general shift in enrollment from undergraduate to graduate students in agriculture. This shift has been desirable and is now being monitored in relation to the predicted increasing shortage of graduates at the B.Sc. level. The decline at the un-

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**Table 1. Undergraduate Enrollment in Faculties of Agriculture in Canada 1978-1987**

University	1978	1981	1984	1985	1986	1987
U.B.C.	398	393	379	390	363	345
Alberta	533	340	503	502	568	500
Saskatchewan	488	511	590	530	520	549
Manitoba	688	560	585	529	549	506
Guelph (Agr)	1534	1394	1171	1111	1020	880
Macdonald (Agr)	493	532	578	511	462	400
Laval	968	803	775	881	940	888
N.S.A.C.	197	181	314	321	344	306
<b>Total</b>	<b>5299</b>	<b>4714</b>	<b>4895</b>	<b>4775</b>	<b>4766</b>	<b>4374</b>
% Female	25%	36%	40%	40%	40%	40%

Notes: Enrollment declined 17% from 1978 to 1987 in total in Canada.

The major decline is at Guelph where there were 43% fewer students in 1987 as compared to 1978.

The increase at N.S.A.C. reflects the development of the third and fourth year curriculum in 1983-84.

**Table 2. Number of Graduates - B.Sc. Level Faculties of Agriculture in Canada 1978-1987**

University	1978	1984	1985	1986	1987
U.B.C.	90	74	77	80	69
Alberta	122	64	84	114	94
Saskatchewan	94	104	115	129	116
Manitoba	121	124	117	101	75
Guelph	341	383	365	300	266
Macdonald	157	183	157	205	170
Laval	169	139	193	154	214
N.S.A.C.	0	5*	48	53	51
	<b>1094</b>	<b>1076</b>	<b>1156</b>	<b>1136</b>	<b>1055</b>
% Female	26%	38%	38%	39%	39%

\* first year of graduation

**Table 3. Graduates by Area of Specialization Faculties of Agriculture in Canada 1978-1987**

	1978	1982	1987
Animal Science	275	282	195
Plant Science	251	203	184
Agr. Economics	168	192	159
Food Science	139	99	106
Engineering	83	118	88
Other	178	255	323
	<b>1094</b>	<b>1149</b>	<b>1055</b>

**Table 4. Enrollment Summary Faculties of Agriculture in Canada 1984-1987**

	1984	1985	1986	1987	Change
Undergraduate	4895	4775	4766	4374	-11%
M.Sc.	1182	1288	1272	1315	+11%
Ph.D.	488	504	535	572	+12%
	<b>6565</b>	<b>6567</b>	<b>6573</b>	<b>6261</b>	- 5%

**Table 5. Number of Graduates Faculties of Agriculture in Canada 1984-1987**

	1984	1985	1986	1987	Change
Undergraduate	1076	1156	1136	1055	- 2%
M.Sc.	285	310	362	403	+ 41%
Ph.D.	55	74	125	124	+125%
	<b>1416</b>	<b>1540</b>	<b>1623</b>	<b>1582</b>	+ 12%

dergraduate level in the United States has been more pronounced than in Canada (5) with a total baccalaureate enrollment decline of 24% from 1978 to 1985. Declines at the graduate level in the United States have been observed in recent years in sharp contrast to the significant increases in the number of M.Sc. and Ph.D. students in Canada during the 1984-87 period.

## References

1. Jenkinson, G.M. March 1981. "Canadian Enrollment - Agriculture and Veterinary Medicine - 1980." *NACTA Journal* 25:1.
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3. Kay, B.D. 1981. *Association of Faculties of Agriculture in Canada: Report on Graduate Enrollment*. Ottawa, Canada.
4. Agricultural Institute of Canada. *Proceedings of the Vancouver Forum*. July 1982. Ottawa, Canada.
5. Fall 1985 "Enrollment Report. National Association of State Universities and Land Grant Colleges." *NACTA Journal* 30:1. March 1986.

## VIEWPOINT

# Time To Knock Down Some Fences

Harold H. Haak

American agriculture needs all the help and support it can get, and it is about time that those of us in higher education knocked down those fences, or barriers, that prevent us from working together toward that end. In particular we must move beyond the uneasy truces that typically exist between universities and colleges that are members of the National Association of State Universities and Land Grant Colleges (NASULGC) and "those other agricultural programs" typically in institutions which are members of the American Association of State Colleges and Universities (AASCU). Truces need to give way to positive and productive alliances so that we can more effectively serve our various publics and especially our students.

We all have a good idea of the scope and nature of agriculture programs in our system of land grant colleges, but just what are these other AASCU-related programs? They include 65 universities and colleges offering baccalaureate degree programs in agriculture and/or natural resources. From these 65 institutions, in turn, a subgroup has been formed called the American

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