included mastery of subject matter, use of innovative teaching techniques, and the ability to stimulate students to learn. While these attributes and activities are widely recognized, the instruction-related activities outside the classroom are often ignored by faculty aspiring to excellence. Such activities as professional improvement (e.g., leadership in teaching workshops), curricular improvement, and writing journal articles on instruction can help distinguish between those teachers who have clearly achieved excellence and those who achieved only minimum competency in teaching. Effectiveness in formal classroom instruction is a necessary condition while effectiveness in instruction-related activities is a sufficient condition in demonstrating teaching excellence.

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ENROLLMENT TRENDS

Canadian Diploma in Agriculture Programs 1983-87

John R. Peters

Since 1979, G.M. Jenkinson of the Ontario Agricultural College has annually published enrollment trends in Canadian Faculties of Agriculture in the NACTA Journal, most recently in the March, 1988 edition (Jenkinson, 1988). In his earlier reports, he included enrollment figures for Diploma in Agriculture programs offered at certain degree granting institutions (Jenkinson, 1979). More recently, his reports have included degree level enrollments only.

In Canada, Diploma in Agriculture programs are also offered at institutions other than universities. Accordingly, the earlier information reported by Jenkinson was incomplete, and a more complete reporting procedure would be in order. This report is therefore the first documentation of enrollment trends in Diploma in Agriculture programs in a more complete manner.

Table 1. Member Institutions of the Canadian Association of Diploma in Agriculture Programs (CADAP/APDAC)

Institution	Location	Institution Type[1]
1. Fraser Valley College	Abbotsford, B.C.	NDG
2. Northern Lights College	Dawson Creek, B.C.	NDG
3. Fairview College	Fairview, Alta.	NDG
4. Olds College	Olds, Alta.	NDG
5. Lakeland College	Vermilion, Alta.	NDG
6. Lethbridge Community College	Lethbridge, Alta.	NDG
7. University of Saskatchewan	Saskatoon, Sask.	DG
8. University of Manitoba	Winnipeg, Man.	DG
9. Ridgetown College of Agriculture Technology	Ridgetown, Ont.	NDG
10. Centralia College of Agriculture Technology	Huron Park, Ont.	NDG
11. Ontario Agriculture College	Guelph, Ont.	DG
12. Kemptville College of Agriculture Technology	Kemptville, Ont.	NDG
13. New Liskeard College of Agriculture Technology	New Liskeard, Ont.	NDG
14. Alfred College of Agriculture Technology	Alfred, Ont.	NDG
15. Macdonald College	Ste-Ann de Bellevue, Que.	DG
16. Institut de Technologie Agricole	St. Hyacinthe, Que.	NDG
17. Institut de Technologie Agricole	La Pocatiere, Que.	NDG
18. Woodstock Community College	Woodstock, N.B.	NDG
19. Nova Scotia Agriculture College	Truro, N.S.	DG

[1]DG = Degree granting institution
NDG = Non-degree granting institution

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Institutions and Programs

Across Canada, 19 institutions offering Diploma in Agriculture programs belong to the Canadian Association of Diploma in Agriculture Programs. These institutions are listed in Table 1. For the purpose of this report these institutions have been placed into one of two types: degree granting (DG) and non-degree granting (NDG).

Five diploma programs are offered in institutions located on regular degree granting university campuses. The remaining 14 programs are located either at regular community colleges, where they are part of a great variety of technical program offerings, or at non-degree granting college institutions which historically have concentrated on technical programs of an agricultural nature.

A wide variety of names and labels are given to various programs in the 19 institutions. For the purpose of this report, these programs have been grouped into 7 categories as can be seen in Tables 2 and 3.

Each of the 16 institutions which provided information for this report offer one or more agriculture production programs. These programs are primarily aimed at individuals who wish to prepare themselves for a successful career in farm management. Most of the other programs are designed to train individuals for off farm jobs although in some cases it could be argued that horticulture programs are also production oriented. In this report, however, all horticulture programs have been included in the "horticulture" category. The miscellaneous category "other" includes programs such as Food Service Management, Agricultural Laboratory, Environmental Sciences, etc.

This report does not include any enrollment figures for Certificate programs which are generally of shorter duration than Diploma programs. For a detailed description of what constitutes a Diploma in Agriculture program in Canada, I refer the reader to the article *Guidelines for Diploma in Agriculture Programs, page 25,* **NACTA Journal,** Dec., 1986.

Institutions have also been grouped by geographic regions of Canada. The "western" region includes the four western provinces of British Columbia, Alberta, Saskatchewan and Manitoba. The large provinces of Ontario and Quebec constitute two separate regions. The "maritime" region includes the four Atlantic provinces of Newfoundland, Prince Edward Island, Nova Scotia and New Brunswick, although Diploma in Agriculture granting institutions are located in the latter two provinces only.

Table 2 summarizes the enrollment trends during the 5 year period from 1983-84 to 1987-88 by institutional types and programs. The most notable trend for all 16 reporting institutions is the very sharp decline in students enrolling in agriculture production programs. The decline for Year 1 is 40.5%, whereas for all years the decline is 32.5%. This compares to a slight upward trend for all other programs combined (Table 4).

The enrollment decline in agriculture production programs is most noticeable at non-degree granting institutions where the percentage drop is 43.4 and 35.9 for Year 1 and All Years, respectively. Comparable numbers at degree granting institutions are 35.2 and 25.7 percent, respectively.

The declining enrollment at degree granting institutions is somewhat misleading since a relatively small decline at the Ontario Agriculture College in

Table 2. Student Enrollments by Types of Institutions and Program Categories, 1983 to 1987.

Academic	Degree Granting		Non-Degree Granting		All Institutions	
Years	Year 1	All Years	Year 1	All Years	Year 1	All Years
Agriculture Production						
	(7,8,11,15,19)		(2,3,4,5,9,10, 12,13,16,17,18)			
1983-84	494	828	898	1656	1392	2484
1984-85	422	800	857	1609	1279	2409
1985-86	396	673	656	1384	1052	2057
1986-87	345	652	572	1222	917	1874
1987-88	320	615	508	1061	828	1676
Agric-Business and Service						
	(11,19)		(3,4,5,9,17)			
1983-84	108	213	140	182	248	395
1984-85	105	174	175	230	280	404
1985-86	110	186	145	221	255	407
1986-87	91	168	150	236	241	404
1987-88	97	176	155	268	252	444
Agricultural Mechanics						
	(19)		(4,5,16)			
1983-84	10	18	100	194	110	212
1984-85	6	10	122	198	128	208
1985-86	6	10	105	190	111	200
1986-87	10	14	96	180	106	194
1987-88	6	11	89	168	95	179
Animal Health						
			(3,4,5,10)			
1983-84			117	193	117	193
1984-85			119	215	119	215
1985-86			116	213	116	213
1986-87			115	229	115	229
1987-88			133	246	133	246
Equine and Farrier Science						
			(4,5,13,17)			
1983-84			89	127	89	127
1984-85			85	144	85	144
1985-86			88	137	88	137
1986-87			83	155	83	155
1987-88			71	132	71	132
Horticulture						
	(11,19)		(3,4,16,17)			
1983-84	72	128	149	343	221	471
1984-85	72	110	138	356	210	466
1985-86	80	140	156	350	236	490
1986-87	68	136	153	337	221	473
1987-88	69	134	143	331	212	465
Miscellaneous						
			(4,5,9,10,16)			
1983-84			126	224	126	224
1984-85			132	240	132	240
1985-86			128	237	128	237
1986-87			125	266	125	266
1987-88			164	354	164	354

*Numbers in brackets refer to institutions as per Table 1.

Table 3. Student Enrollments by Geographic Regions and Program Categories, 1983 to 1987

Academic Years	Western		Ontario		Quebec		Maritimes	
	Year 1	All Years	Year 1	All Years	Year 1	All Years	Year 1	All Years
Agriculture Production								
	(2,3,4,5,7,8)*		(9,10,11,12,13)		(15,16,17)		(18,19)	
1983-84	524	836	513	921	268	572	87	155
1984-85	447	761	491	930	263	564	78	154
1985-86	389	695	354	717	234	508	75	137
1986-87	330	627	291	586	233	548	63	113
1987-88	267	547	264	486	215	515	82	128
Agric-Business and Service								
	(3,4,5)		(9,11)		(17)		(19)	
1983-84	124	151	85	150	0	0	39	94
1984-85	133	175	86	132	19	19	42	78
1985-86	117	156	80	142	12	32	46	77
1986-87	118	164	72	122	14	46	37	72
1987-88	128	192	71	142	11	36	42	74
Agricultural Mechanics								
	(4,5)				(16)		(19)	
1983-84	86	168			14	26	10	18
1984-85	95	164			27	34	6	10
1985-86	87	152			18	38	6	10
1986-87	77	136			19	44	10	14
1987-88	68	117			21	51	6	11
Animal Health								
	(3,4,5)		(10)					
1983-84	82	125	35	68				
1984-85	83	150	36	65				
1985-86	82	147	34	66				
1986-87	79	162	36	67				
1987-88	96	184	37	62				
Equine and Farrier Science								
	(4,5)		(13)		(17)			
1983-84	50	55	17	24	22	48		
1984-85	56	76	9	19	20	49		
1985-86	54	72	14	20	20	45		
1986-87	49	86	14	19	20	50		
1987-88	35	58	17	29	19	45		
Horticulture								
	(3,4)		(11)		(16,17)		(19)	
1983-84	77	143	62	108	72	200	10	20
1984-85	80	157	62	95	58	199	10	15
1985-86	94	168	69	120	62	182	11	20
1986-87	96	164	58	113	57	173	10	23
1987-88	80	159	57	112	63	172	12	22
Miscellaneous								
	(4,5)		(9,10)		(16)			
1983-84	18	29	75	140	33	55		
1984-85	26	44	70	121	36	75		
1985-86	24	37	67	111	37	89		
1986-87	26	49	68	115	31	102		
1987-88	72	141	51	105	41	108		

*Numbers in brackets refer to institutions as per Table 1.

Guelph is somewhat masked by the very high number of applications received by that institution over the years; often twice the number that could be accepted. Enrollments at that institution declined by only 10 percent. On the other hand, at the University of Saskatchewan Year 1 enrollments declined by 55.8% during the five year period under review.

A survey of over 1500 alumni in Saskatchewan gives some insight as to possible reasons for the sharp enrollment decline experienced at the University of Saskatchewan. Of the 248 graduates who responded to the questionnaire almost 80 percent (79.6) agreed that low farm prices resulting in limited incentives to farm and requiring farm youth to find off-farm employment were primarily responsible for the declining enrollments. Virtually 100% (96.9) agreed that increased farm product prices would result in higher enrollments.

Lack of program publicity and awareness were identified by some 78.7% of respondents as contributing to the low enrollments. Over seventy percent (72.2) agreed that more radio and TV advertising would increase enrollment, and 85.5% agreed that more newspaper advertising would increase enrollment. Only 4.7 percent of respondents agreed that lack of program relevancy was to blame, and 20.3% agreed

that high tuition fees were responsible for the declining enrollments. Distance to Saskatoon, the location of the institution, was thought to be a contributing factor by only 6.2% of respondents.

The devastating drought of 1988 was still an unknown factor at the time of the survey and hence was not identified as a contributing factor. However, indications are that it will contribute to a further decline, or at best, prevent a resurgence of enrollment for 1988-89.

Percent change of enrollments in other programs may be somewhat misleading due to the small number of students in any one program. It should be noted, however, that significant declines (13.6 and 15.8% for Year I and All Years respectively) occurred in agricultural mechanics programs. Many students registering in these programs return to their parental farms, and hence, it is not surprising that these programs, too, should have experienced a drop in enrollment.

Enrollments in animal health programs, offered at non-degree granting institutions only, have increased substantially. Demand for these programs has always been strong, and enrollment is basically limited by enrollment quotas. The rather sharp enrollment increase in "Other Programs" is mainly due to one institution submitting enrollment figures for this category for 1987-88 only.

Enrollment Trends by Regions

Declining enrollment in agriculture production programs was most noticeable in the western provinces and Ontario, where Year 1 enrollment declines of 49.1 and 48.5 percent, respectively, were experienced (Table 3). The enrollment decline in Quebec and the maritime provinces was much less for reasons unknown to the author. Substantial enrollment declines in agricultural mechanics programs were experienced both in the west and in the maritimes. On the contrary, enrollments at St. Hyacinthe in Quebec increased.

Conclusions

Declining enrollments in Diploma in Agriculture programs is most noticeable in those programs where the objective is to train students to become better agricultural producers. This decline has been experienced across the country but is most severe in the western provinces and in Ontario. Low farm product prices resulting in a depressed farm economy and a pessimistic outlook by the farming community are likely causes for this decline.

Enrollments in agricultural mechanics programs have declined but to a much lesser degree than in agriculture production programs. This decline can probably be attributed to the same reasons as for agriculture production programs since many students in these programs also return to parental farms after graduation. In addition, the difficult economic times experienced by farmers has led to a very depressed farm machinery industry resulting in additional disincentives being placed on individuals otherwise interested in obtaining training in this area.

Table 4. Student Enrollments in Agriculture Diploma Programs other than Agriculture Production

Academic Years	Year 1	All Years
1983-84	911	1622
1984-85	954	1677
1985-86	934	1684
1986-87	891	1721
1987-88	927	1820

Enrollments in programs such as agri-business, animal health, equine or farrier science and horticulture, which generally lead to off-farm employment, have generally remained stable or increased slightly.

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Offering a College Course in the Secondary School

Layle D. Lawrence

High schools in West Virginia, as well as other states, have, through articulation agreements with state colleges and universities, allowed academically talented youngsters to take certain college courses during their senior year. Such courses have been taught either by an itinerant faculty member or by a high school teacher or qualified community resident.

When the writer was asked by a high school vocational agriculture teacher about the possibility of such an arrangement between the College of Agriculture and Forestry, West Virginia University, and the vocational agriculture programs in the state, it appeared to be an idea with a great deal of potential. A college agriculture course presented in this manner would underscore the importance of agriculture in the state's high schools; acquaint talented students with the myriad opportunities in the field of agriculture and forestry; possibly attract additional students into College programs and thus serve as a recruitment tool; more closely ally teachers of vocational agriculture, an important clientele group, with the College; allow academically talented youth an opportunity to complete college credits prior to being on campus; and encourage capable students to continue their education beyond high school. Discussion with College administrators and faculty found enthusiastic support for the idea, and encouragement to development guidelines for its initiation and operation.

Several years before the articulation project was being considered, a new course was introduced into the College of Agriculture and Forestry at West Virginia

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