

Career Options and Actions: College of Agriculture Graduates

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Abstract

In a 1987 study, College of Agriculture students indicated concern about their preparation for next steps after graduation. A follow-up study was conducted to get specific information on career experiences of graduates and to compare outcomes of graduates from two broad, general curricula with those from specialized departments. Results showed that graduates from the general curricula fared better or as well as those from specialized curricula in time necessary to locate jobs, beginning and current salaries, and in types of jobs acquired. Less than ten percent said they felt prepared for next steps after graduation and some required nearly a year to find full-time employment. Though the study is not definitive, it does permit questions about departmental and university responsibility for students' career options and actions.

In a study conducted in the spring of 1987, a number of present and past students of the University of Maryland College of Agriculture (UMCA) indicated concern about their preparation for next steps after graduation (Smith, 1988; 1989). The present study focused only on former students and was conducted as a follow up to (1) better understand their experiences in locating and choosing career options immediately following graduation from UMCA and (2) to compare responses of students of two broad, general curricula (Agricultural and Extension Education Department [AEED] and Natural Resources Management [NRM]) to those of the specialized departments/curricula within UMCA.

Methodology and Results

Sample selection and response

Attempts were made to contact 118 graduates to conduct a telephone interview. Included were all graduates for three years, 1984-86, for AEED (17) and NRM (19) and a random sample (82) of graduates of these same years of all the other departments/curricula in UMCA. The combined majors (ComMaj) sample was selected from the only list available--the UMCA Alumni group--with sufficient number to yield $\pm 10\%$ accuracy at a 95% level of confidence (Sudman, 1976). Usable responses were attained from 40 (Table 1). Only three refused to be interviewed (all ComMaj); the others were unreachable because they were out of the country or because telephone numbers were incorrect or unattainable. Letters were mailed in advance of the telephone attempt but 30% said the letter was not received. The nature of the nonresponse should not cause the results to be biased in

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terms of generalizing to all UMCA graduates for the years sampled but the small sample size does reduce the accuracy of such generalizations.

Six graduates were from the Conservation of Natural Resources (CNR) curriculum that was phased out at the end of 1984 and replaced by NRM. As the CNR and NRM curricula had similarities, these six graduates are reported separately so as not to distort data from the ComMaj group.

Career/Job Situation

Thirty-five (87%) of the graduates were employed full time; one was employed part time, and four were pursuing masters degrees (Table 2). Among those currently employed, 58% were in jobs NOT directly related to their fields of study. Out-of-field employment was highest (100%) for AEED graduates and lowest (20%) for NRM.

One AEED graduate was teaching in high school but not in vocational agriculture for which he was trained; he was in an industrial arts job which was acquired after additional college study beyond the BS in agriculture. Four AEED graduates were holding jobs where they could draw on their agriculture-related coursework, i.e., managing plant department in a department store, supervising interior plantscaping firm, ecological drafter responsible for drafting environmental impact statements, and assistant in water management district. The other two AEED graduates were administrators, one in a nonprofit organization and one in a gift shop.

Four of the five NRM graduates were employed in-field and were involved in some way with natural resources management, i.e., biologist for Critical Areas Chesapeake Bay program, soil conservation technician, environmental scientist, and research assistant for U.S. Fish and Wildlife Service. The one out-of-field was an administrator for a nonenvironmentally-related manufacturing firm.

One CNR graduate said his job was directly related to his study (horticulturalist/curator at National Arboretum); the five others had roles of typesetter, oil laboratory technician, real estate appraiser, nurse, and animal keeper at zoo.

Nearly half (44%) of the ComMaj graduates were working out-of-field in jobs very similar to those held by out-of-field workers in AEED, NRM, and CNR, e.g., office manager, nurse, restaurateur, etc. The others were in what they

Table 1. Survey of UMCA graduates: Sample and response rates.

Major	Sample		Unreachable N	Refused(R) Ineligible(I) N	Responded	
	N	%			N	N
AEED	17	14	9	1 (I)	7	18
NRM	19	16	14		5	13
ComMaj	82	70	51	3 (R)	28	70
Total	118	100	74	4	40	101

considered directly related jobs, e.g., six were laboratory technicians, and one each was a landscaping firm production supervisor, a technical manager for an animal pharmaceutical company, a sediment control inspector, and a foreman for a PMB and containerized plant material firm.

The highest starting salary (Table 2) was reported by AEED graduates (\$17,110) and the lowest by the ComMaj group (\$15,850); NRM was third (\$16,120). The two highest current salaries were by CNR graduates (\$21,900) and AEED (\$20,460); the lowest was NRM (\$18,820).

ComMaj graduates had the most longevity (32.7 months) in their present jobs and NRM, the lowest (9.0) (Table 2). When months on job was considered in relation to current salary (thousands of dollars divided by number of months), the NRM and AEED graduates appear to be doing better than the others, 2.09 and 1.33, respectively. The lowest salary:time ratio was for the ComMaj group (0.62)

Graduates working out-of-field started out making better salaries than those in directly related jobs for all groups except NRM whose in-field graduates started with just slightly higher salaries. (All AEED graduates worked out-of-field.) This trend continued to their current situations for NRM and ComMaj graduates but took a big reversal on CNR graduates. During this time, several CNR graduates had moved from hourly to salaried positions.

Time to locate full-time employment

Two students (ComMaj) had jobs before graduation and continued in these after graduation--even though the jobs were not what they considered as directly related to their college study. Two others (one ComMaj and one CRD) reported difficulty in locating jobs after graduation and decided to get second degrees in nursing: both were presently working in nursing--one full- and the other, part-time.

Among the other graduates, AEED located jobs the soonest--3.4 months--and NRM, the latest--10.2 months (Table 3). About half the graduates in these two groups were still in their first jobs compared to three fourths of the ComMaj group.

UMCA experiences that affected desired career options

Eighty-eight percent responded when asked about UMCA experiences that affected their ability to make career choices

Table 2. Present Career/Job Situations.

	AEED	NRM	CNR	ComMaj	Total
PRESENT EMPLOYMENT (N/%)					
Full time	7 / 100	5 / 100	5 / 83	18 / 82	35 / 87
Part time	--	--	1 / 17	--	1 / 3
Furthering ed.	--	--	--	4 / 18	4 / 10
Directly related	--	4 / 80	1 / 17	10 / 56	15 / 42
Out-of-field	7 / 100	1 / 20	5 / 83	8 / 44	21 / 58
SALARIES (means)					
Starting	\$17,110	\$16,120	\$16,250	\$15,850	
Directly related	--	\$16,150	\$ 9,600	\$14,860	
Out-of-field	\$17,110	\$16,000	\$16,540	\$16,960	
Current	\$20,460	\$18,820	\$21,900	\$20,220	
Directly related	--	\$17,530	\$28,000	\$18,880	
Out-of-field	\$20,460	\$24,000	\$19,840	\$21,730	
STILL IN 1ST JOB (#)	3	2	3	14	
PRESENT JOB TIME (Mos.)	15.4	9.0	24.7	32.7	
SALARY/TIME RATIO	1.33	2.09	0.87	0.62	

after graduation. Seven graduates (20%) said their overall experience in UMCA or some portion was valuable preparation for their career options (three AEED, one NRM, and three ComMaj). Five (14%) said they definitely did not feel prepared (one AEED, one NRM, and three ComMaj). Eleven (one AEED, two each NRM and CNR and six ComMaj) said counseling or placement services were unsatisfactory, e.g., "school did not provide information about job market," "no one really knew what one could do with the degree," "I had no insight...I was left on my own," "there was a lack of information on job requirements, conditions, and availability."

Courses were seen as inadequate by 15 graduates (43%)--four AEED, two each NRM and CNR, and seven ComMaj. AEED respondents said: "there was not enough coursework," or "did not get enough sciences," or "not enough basic," or that the course offerings "were far less than it needed to be." NRM respondents said "coursework was weak...(and) not focused towards a professional career," or "classes were not adequate for type of job I was hunting..." ComMaj graduates said classes were "not interesting and not applicable," "a waste of time," "not appropriate," "did not emphasize new technology (as found in jobs)"; or there was/were "a lack of sciences," "too few courses"; or "the curriculum lacked focus."

Another way of saying the curriculum was inadequate was 19 students' observation that there was not enough hands-on or practical experience. Six of these were in AEED (86% of AEED respondents), four in NRM (80% of NRM respondents), one in CNR, and the other eight in the ComMaj group (36% of ComMaj group). One AEED and two ComMaj graduates added that more laboratory type classes were needed; three AEED, one NRM, one CNR, and three ComMaj graduates said more internship opportunities would be helpful.

Recommendations for changes at UMCA

Two graduates said no changes were needed. One was an AEED graduate who said the program "is fine as it is; it provides a thorough education; it is a broad, well- rounded degree." The other was a ComMaj graduate who said that "many problems students face are dependent on their families, not on school."

Table 3. Time after graduation to locate full-time employment and number still at first jobs.

Major	Time to find job months	In same job as now?		
		Yes	Yes (other)	No
AEED	3.4	3		4
NRM	10.2	2		3
CNR	7.2*	2	1*	3
ComMaj	3.5**	11	3*	4
Total***		18	4	14

* Mean time to find job does not include the one student who failed to find a job and decided to get a degree in nursing and is now working part-time in nursing.

** Mean time to find job does not include two students who had jobs before graduation--both not in field and both who felt unprepared to look for job in field, and one who could not locate in-field job and decided to get a 2nd degree in nursing and is not working in that area full time.

*** Four were pursuing Masters degrees.

Table 4. Experiences/Feelings about UMCA preparation for career options.

	AEED	NRM	CNR	ComMaj	Total
Felt prepared				1	1
Felt fairly well prepared				1	1
Valuable experience	3	1		1	5
Did not feel prepared	1	1		3	5
Counseling/Placement unsatisfactory	1	2	2	6	11
Courses/Curricula unsatisfactory	4	2	2	7	15
Not enough practical experience	6	4	1	8	19

Other recommendations followed closely what they had indicated earlier had held them back, i.e., 19 wanted more hands-on, practical experiences; 15 suggested improvements in counseling or placement, e.g., more information about interviewing and resume preparation (as extra-curricular activity), job seminars where guest speakers come in and talk about job opportunities, bring potential employers to campus to recruit; assist students with specific career planning, more supervision and checking for matches between coursework and career intentions, interviews and tests to help students discover interests; etc.

Specific recommendations for improving the individual curricula were offered by five AEED graduates, four NRM, and six ComMaj (Smith, 1989). Only those specific to careers and placement are quoted here:

- Coursework should be upgraded and focused towards a professional career (NRM).
- Courses should be more relevant to the existing job market; more computers should be included (NRM).
- More emphasis on where the jobs are, food processing is an example--more emphasis on the processing of foods rather than production (ComMaj)
- More preparation for graduate school; grad school is required for a better job (ComMaj).

Decision about attending same college/department

All interviewees answered the question about what they would do if they could now decide about getting their degree from the same college/department: 63% said "Yes," 34% "No," and 3% were Unsure (Table 5). AEED, NRM, and CNR graduates were about equally split on their answers but the ComMaj group had three times as many "Yes" responses as "No." Follow-up comments added no new information to the statements the graduates had made to previous questions about UMCA experiences and recommendations.

Conclusions

Graduates of the more generalized curricula fared better or as well as those from specialized departments in the

Table 5. Decision about choosing UMCA, if could make decision now.

Major	Would again choose UMCA						
	YES		No		Unsure		Total N
	N	%	N	%	N	%	
AEED	3	43	4	47	-	--	7
NRM	3	60	2	40	-	--	5
CNR	3	50	2	33	1	17	6
ComMaj	16	73	6	27	-	--	22
Total	25		14		1		40
%	63		34		3		100


amount of time necessary to locate jobs and in their beginning and current salaries. Specialized degree graduates had been in their present jobs for more months, on average, but their present salaries were not higher. AEED graduates were trained for a specific vocation--teaching high school vocational agriculture--but none were working in that field. AEED graduates receive a generalized degree in terms of agriculture subject matter compared to ComMaj graduates receiving specialized subject matter degrees. However, this did not prevent the AEED graduates from being employed in jobs very similar to the ComMaj group nor did they spend more time in locating these jobs. Graduates from the specialized departments were more likely to feel positive about their UMCA experiences--three times as many said "Yes" as compared to "No" that they would choose the same department/college to get their degree if they had it do over again; graduates from the two more general curricula were about evenly split on this question.

The sample was too small to make recommendations about changes for the University of Maryland College of Agriculture. However, it does seem safe to conclude, based on this and the previous studies (Smith, 1988; 1989), that students feel they are not getting something they want and need and that is help with career decisions. The data also seem sufficient for raising some questions about what we are about with students, e.g.:

- Should a college or university feel responsible that some of its graduates were unemployed nearly a year after the students spent four years under its tutelage (Table 3)?
- Do curricula need changing
 - when half or more of a group of graduates (randomly chosen) accept jobs outside the areas for which they thought they were preparing (Table 2)? OR --when less than ten percent of a group say they felt prepared for next steps after graduation (Table 4)? OR
 - when nearly forty percent would not or are not sure they would choose their graduate department if they could do it over again?

References

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